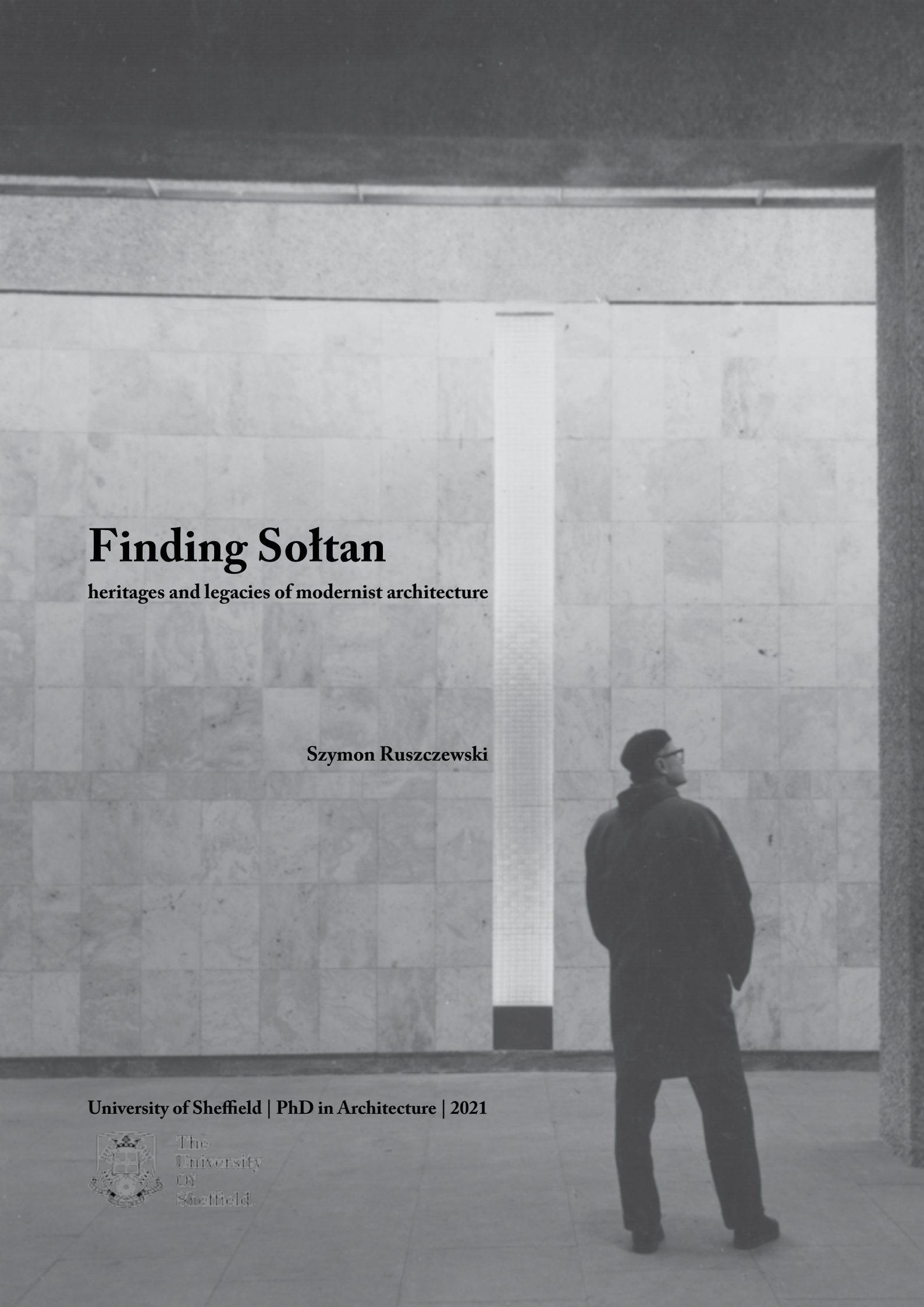

Finding Sołtan

heritages and legacies of modernist architecture

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University of Sheffield | PhD in Architecture | 2021

The University Of Sheffield.

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archive abbreviations

AASP-JS	Warsaw, Fine Arts Academy Archives, Jerzy Sołtan Legacy Collection (KD 119)
AIA-JS	Washington DC, AIA Archives, Jerzy Sołtan's Nomination
FLC-DN	Paris, Fondation Le Corbusier, dossiers nominatifs
GTA-AR	Zurich, ETH GTA Archiv, Alfred Roth Collection
GTA-JLS	Zurich, ETH GTA Archiv, Josep Lluís Sert Collection
GTA-JT	Zurich, ETH GTA Archiv, Jaqueline Tyrwhitt Collection
GTA-SG	Zurich, ETH GTA Archiv, Sigfried Giedion Collection
HGSD-JLS	Cambridge, Harvard Special Collections, Josep Lluís Sert Collection
HGSD-JS	Cambridge, Harvard Special Collections, Jerzy Sołtan Collection
HGSD-JSM	Cambridge, Harvard Special Collections, Sołtan Memorial Collection
HGSD	Cambridge, Harvard Special Collections
HNI-JB	Rotterdam, Het Nieuwe Instituut, Jaap Bakema Collection
HNI-TT	Rotterdam, Het Nieuwe Instituut, Alison and Peter Smithson Collection
ISPAN-BU	Warsaw, Institute of Art of the Polish Academy of Sciences, Special Collections, Bohdan Urbanowicz Collection
ISPAN-JS	Warsaw, Institute of Art of the Polish Academy of Sciences, Documentation of Polish Contemporary Art Collections, Jerzy Sołtan Collection
LASP	Warsaw, Library of the Fine Arts Academy
MASP-JS	Warsaw, Fine Arts Academy Museum, Jerzy Sołtan Collection
P-AW	Anne Wattenberg private archive
P-JS	Joanna Sołtan private archive
P-MKD	Marleen Kay Davis private archive
P-TH	Thomas Holtz private archive
P-UG	Umberto Guarracino private archive
RIBA-JT	London, RIBA Library, Jaqueline Tyrwhitt Papers

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abstract

The research aims to rebuild connections between modernist architecture and contemporary architectural thinking and practice. It seeks to position modern architecture, through an evaluation of the work of Polish modernist architect Jerzy Sołtan (1913-2005), as material and immaterial heritage, in order to restate its meaning and possible ongoing relevance to architectural theory and practice. Through a cross-disciplinary case study of the design, teaching, and theory of Sołtan, the thesis questions the accepted canonical vision of modern architecture from several perspectives, asking what is Sołtan's legacy. Firstly, reviewing the historiography of modern architecture, it brings attention to the often neglected discourse of Central and East European countries, whilst specifically analysing Sołtan's design activity in Poland. Secondly, analysing Sołtan's lifelong teaching and theoretical work, it reinstates, through his beliefs, the importance of ideals and values instead of forms and materials into the discourse on modern architecture. As a result, the thesis aims to answer the broader question on how the modern architecture legacy can be redefined and assessed as heritage, through the case study of Sołtan's work. It offers an alternative reading of modern architecture historiography, which calls for a reinstatement of the modern ethos, which was so misunderstood and thus criticised by late-century postmodern critics and architects. Following Sołtan's reading, modern architecture and its heritage, while connected to the past, are projected towards the future and potentially still bear answers to important issues. Sołtan's work for, and close relationship with, Le Corbusier and his direct involvement and relevance in CIAM (Congrès International d'Architecture Moderne) and Team 10 show his relevance in core places of the discussion on modern architecture throughout the second half of the twentieth century. As a result, through Jerzy Sołtan's presence, the thesis includes new insight to the dynamics of late CIAM and Team 10, as well as their influence in Poland and in the United States .

The study of Sołtan's work starts with his texts and ideas, which lay down the basis for the analysis of his teaching and designs. The emerging theoretical framework is centred on the ideals of beauty and poetics, in collaboration with other arts and with science, and on a social-political vision of architecture as a contribution to the society and to the future of human civilisation. This enables us to fully understand the meaning of his professional and academic activity. The former, though limited due to the importance of his lifelong teaching work, stands as an interesting demonstration of Sołtan's theoretical position through design work. Different design teams and projects were able to engage with a number of typologies including exhibition and interior design, religious architecture, school design, private residences, and others. In addition, the relevance and the importance of his teaching in both Poland at the Fine Arts Academy in Warsaw and the United States at Harvard Graduate School of Design enable us, through a gathering of oral histories, to understand Sołtan's ideas, reading, and vision of architecture and modernism. His teaching – recognised in 2002 with the Topaz Medallion for Architectural Education awarded by the American Institute of Architects and the Association of Collegiate Schools of Architecture – stands as an important contribution to education of new generations of architects in the spirit of modernism.

The thesis develops an original methodological synthesis of information gathered from a range of different records: researching unpublished archival documents, private archive materials including diaries, and through the taking of oral histories, both unofficial and untold, from Jerzy Sołtan's former colleagues, students, and co-workers. It combines these documents with material studies of the architecture and drawings produced. Through this approach, the research illustrates the importance of modernist architecture as a 'living heritage', tightly connected to the problems of the present-day world, recognising similar issues, and with the potential of proposing relevant solutions to contemporary issues. It reads modern architecture as a resource, necessary for the development of present-day practice, and needing recognition as a legacy to be protected.

introduction

Modern architecture was not a style; it was not a tendency which now belongs to the past; it was not a movement that was washed away by postmodernism; it was not a formalistic fever caused by new technologies and materials. On the contrary, modern architecture positioned humankind back at the centre of architectural discourse – a belief, which can still inspire across the world. Present-day architectural practice does have roots deep in the modern tradition, and the heritage of modern architecture has become our everyday life. It is safe then to repeat after architectural critic and educator Michael Spens, "modern architecture was not destroyed as a canon and it exists again in recurring pluralities".[1] Its 'heroic' foundations in the first half of the twentieth century electrified architects throughout the entire world – as was clearly testified by the large and growing attendance at the International Congresses of Modern Architecture throughout the years.[2] Entire neighbourhoods and cities were created according to modern paradigms, and many present-day issues concerning architecture are linked to modernist theory and practice.[3] As theories and models of living change and we seek to develop sustainably, the modern canon and its values continue to be challenged and updated. Therefore, to study modern architecture means to look at the past while seeking for answers for the future.

Examining the work of Jerzy Sołtan (1913-2005) – a Polish modernist architect, educator, theoretician, and artist, who worked and taught in France, Poland, and the United States – aims to look for such answers. The thesis situates his entire body of work as a case study revising the still persisting assumptions in modern architecture historiography and discourse towards the significance of modernity today. Sołtan's continuous involvement in the discussion on modern architecture, heavily influenced by Corbusian ideas due to his extended contact with Le Corbusier and to Sołtan's work in the Parisian atelier, along with his activity within modern groups such as the internationally expanded CIAM or the much smaller and friendship-based Team 10, enables us to look differently at both the history of modern architecture and its ideals. Through his extensive writings and lecturing, in addition to continuous design teaching at the Fine Arts Academy in Warsaw and at Harvard Graduate School of Design (where he was chairman of the Department of Architecture in 1967-1973), which eventually gave him the prestigious Topaz Medallion for Architectural Education in 2002, he has shown not only commitment to modern ideas, but also the capacity to influence and pass them onto his students. Thanks to this rich design and educational activity, this study aims to revise the concept of modern architecture heritage through looking at Jerzy Sołtan's work. While fully acknowledging Sołtan's activity as an artist and his notable graphic and visual production, this research concentrates on the extensive impact of his architecture-related activities. His artistic production remains as a background to many considerations present in this thesis, as an important reminder architecture was considered by Sołtan as an art and as such, "it has to be beautiful".[4]

Studying Sołtan's body of work, the thesis engages with the contemporary discourse on heritage. Whereas modern heritage is generally associated with built artefacts and with material culture, the intangible and the immaterial values present in his work bring new focus and light to the discussion. The research aims also to engage with the current heritage scholarship and to produce an original study on Sołtan's body of work, which fits into present-day research into lesser-known modernisms, and as such, it broadens the current vision of modern architecture canon. As a result, throughout an analysis of the complex contexts of his work and the comparison of the data gathered in the archives, through new oral histories, and through material culture, this research aims to identify Sołtan's legacy.[5] As his work and activity have been first limited and later often neglected (especially due to the geopolitical reasons related to the communist regime and its propaganda in Poland), it is the first complete critical analysis of his work[6] offering a revised account of modern architecture read through an example outside the iconic architects.

1 Michael Spens, 'AR Critique 1980-1995', in *The Recovery of the Modern: Architectural Review 1980-1995*, ed. by Michael Spens (Oxford: Butterworth Architecture, 1996), p. 23.
2 Whereas CIAM started as a meeting of an "intimate group of friends" in La Sarraz in 1928, it took the *ampleur* of a world movement after the war, starting with the CIAM at Bridgewater in 1947, see: Jaqueline Tyrwhitt, 'CIAM and Delos', in *Ekistics*, vol. 52, n. 314/315 (1985), 470-472.
3 Eric Mumford, *The CIAM Discourse on Urbanism, 1928-1960*, (Cambridge: MIT Press, 2000), p. 267.
4 Sołtan recalls this statement by Le Corbusier multiple times, as for example in the article 'Working with Le Corbusier' and published in *Le Corbusier: the Garland essays*, ed. by H. Allen Brooks (New York: Garland, 1987).
5 Examples of oral histories interviews and private collection drawings and photographs are illustrated in the appendix.
6 The existing publication, *Jerzy Sołtan*, ed. by Jola Gola (Warsaw: Wydawnictwo Akademii Sztuk Pięknych, 1995), is mainly a biographical collection of data, archive entries and some drawings and artworks, but does not give a broader understanding of the context of his work, nor any analysis that underlines the most important aspects of his work. Subsequent studies, which include Jerzy Sołtan's work, were mainly interested in the history and activity of the Fine Arts Academy in Warsaw (Chapter 4). Only in 2020, Centrum Architektury from Warsaw translated and published the book Jerzy Sołtan, *On i ja: o architekturze i Le Corbusierze* (Warsaw: Centrum Architektury, 2020) based on Jerzy Sołtan's memories of Le Corbusier, their contact and collaboration, as well on Jerzy Sołtan's vision of architecture. The original text was typed between the 1990s and 2000s.

finding Sołtan – research methods and structure

The research offers an alternative method for studying architectural history, refusing the traditional approach which is usually limited to archival research. Instead, a more inclusive model is proposed, consisting of new oral histories and material culture analysis to complement archival and bibliographical research. Such methodology is claimed to be transitively applicable in future research. This cross-method approach has been dictated by the limitations of a research based on archival data: due to how they were managed in the past, to what documents were being conserved or rejected, archives are often partial and subversive, as in Sołtan's case. Their incompleteness is then a difficulty to be faced, and the void of material has been partially filled by secondary literature and by the collection of oral histories, which have given a more complete image of the past. As a result, they have been a crucial element of the research aimed to re-interpret the events and re-evaluate the canon. Along with the analysis of material culture – observations, readings, and analysis of existing buildings and drawings – these testimonies stand as one of the pillars of this different approach to architectural history.

The focus on Jerzy Sołtan's work as an example of modernist theory and practice, examining his legacy today follows a clearly oriented line of questioning. It aims to answer the broader question on how modern architecture legacy can be redefined and assessed, through the case study of his work. At the basis of this issue lies the assumption that Sołtan's life-work is exemplary of a better and revised understanding of the modern canon and its values. In order to proceed with this main problem, the thesis follows an organised reflection, which aims to answer several questions related to Jerzy Sołtan's activity. First, it analyses what the modern architecture canon is and, through the analysis of the geopolitical and architectural context, what Jerzy Sołtan's position is within this canon. The following part of the research analyses what his legacy – as evidenced in his architectural theory, teaching, and design – is in the light of the changing values and needs within architecture and within society.

The reflection is structured in eleven chapters, which look at different aspects of the context or of Sołtan's work. The first chapter sets out the broader context of the scholarship concerning heritage studies throughout a literature review, and it is structured in three parts: starting with the understanding of history and heritage, of the relation between them, and of their importance and meaning. In the process, it illustrates the idea of heritage as a construct and it exemplifies recent developments in heritage practice towards immaterial elements. Secondly, it narrows the field and it concentrates on the issues of the modern architecture heritage, referring to its importance for present-day practice and to its criticism. The second chapter concentrates on the methodology used in the research. It discusses the research process, explaining how different methods were able to provide different types of data and information complementing each other. In addition, it analyses the validity and the broader applicability of the undertaken approach.

The third chapter concentrates on the analysis of the canonical understanding of modern architecture, based on the teaching practices today and the key texts, which continue to inform new architects. It examines critically the approach to modern architecture historiography by analysing the global extent of the scholarship and it positions Sołtan's work in this context clearly dominated by Western European and American examples even if more recent research into modern architectures indicates a revision of a limited and traditional vision based on key figures and buildings. Secondly, it analyses Sołtan's own reading of modern architecture and provides nomenclature related to modern architecture based on his texts and lectures, which is used throughout the thesis. The fourth and fifth chapters analyse Jerzy Sołtan's biography in the light of the architectural and geopolitical context. This analysis stands as a necessary background to understanding the meaning of his contribution to architecture and to contextualising his own theory and design work. The analysis is divided into two parts – the first (Chapter 4) concentrates on his early years and formation (at the Polytechnic of Warsaw and during his work at Le Corbusier's atelier in Paris), and on his activity in Poland when struggling with the political and cultural context, which was not favouring developed reflection on modern architecture. The second part (Chapter 5) concentrates on the international dimension of Jerzy Sołtan's involvement in the discussion on architecture, particularly in his role in the re-organisation of CIAM, in his participation in Team 10's discussions on architecture, and in his contribution to the architectural teaching at Harvard. Through these considerations, it is possible to understand not only Sołtan's role, but also the reasons for his work to have been marginalised.

The sixth and seventh chapters analyse Sołtan's texts and lectures explaining his architectural ideas and theory. Providing a theoretical background both for his teaching and design analysis, these chapters aim to illustrate the continued validity of many of the modern ideas, which have been present in his texts, and which are illustrated by his designs. The first part (Chapter 6) concentrates on the relation between art and architecture, modularity (in particular, the interest in the Corbusian concept of the Modulor), and on the concept of synthesis of arts and sciences within architecture. The second part (Chapter 7) is interested in more social-political and anthropological questions related to housing and mass production of dwellings, to systematic design and the importance of the programme, and to the cross-historical values present in modern architecture. The eighth chapter concentrates on Sołtan's teaching, and it takes as the case study his pedagogical activity at Harvard Graduate School of Design, both concerning theoretical and design teaching. It analyses Sołtan's role in the curriculum, and through an analysis supported by the briefs, reading lists, and student testimonials, it examines the impact and the legacy of his teaching. The ninth and the tenth chapters analyse Sołtan's design activity, considering both built and unbuilt designs. They point to the continued themes and to the consistency of the vision of architecture, which were present throughout his design work. The analysis includes architectural, spatial, tectonic, and social issues, and comments on the design concept, use, and later maintenance and evolution. The first part (Chapter 9) concentrates on Sołtan's work in Poland within the group of artists and architects from the Artistic and Research Workshops at the Fine Arts Academy in Warsaw. The second part (Chapter 10) helps in understanding the consistency of the themes, as it illustrates his design activity outside the Workshops and developed in different groups and teams at the time when he was teaching at Harvard. The eleventh chapter stands as a conclusive reflection on the research, which collects the previously gathered evidence on the importance and relevance of Sołtan's work, in a definition of his legacy. Through this analysis, which refers to all of the previously discussed aspects, the thesis is also presented as an exemplary application of a critical and historical research in the heritage conservation process. As such, it forms an opening of the previous research results towards the application of their findings.

towards a modern architecture heritage

to be "eternal" implies that the city has always conserved its identity

– Christian Norberg-Schulz[1]

In ancient Rome, a spirit called *genius loci* was a minor supernatural being closely tied to a specific place, as the embodiment of its character, its identity, and its history. It had a protective role for a house, a village or a community. This idea was taken by Norberg-Schulz in his essay *Genius loci*, suggesting that an understanding of the place's history and its characteristics was necessary in order to grasp its identity.[2] Not only a place's history, but also heritage is crucial to the definition of human memory and identity: an idea, which is indeed the starting point of a reflection on the relation between heritage and history. It deals with their importance and their role in today's reality. Through this reflection, this chapter concentrates on the theoretical framework to historiographical research today, with its application to modern architecture history and heritage in particular. As a result, it provides scholarship context for the following research on the legacy and heritage of modernist architect Jerzy Sołtan.

In order to develop the discussion on the meaning of heritage and history, this chapter tries to define them in the first place by asking the question: what are heritage and history today? The first part of the text concentrates on the concept of heritage as a construct and its evolution, depending on the values praised by the society. The discussion then moves to the second question: what is the importance of heritage for human memory and identity? Such analysis of the importance of heritage leads towards questions on how to conserve what is important for humanity. Finally, the chapter engages with the discussion on the issue of modern architecture heritage and its conservation: it identifies briefly how modern architecture heritage is understood today, why it is important, and how it may be protected.

finding heritage – what does heritage mean today?

the traditional meanings of heritage

In order to examine the value of heritage, it is necessary to consider the historiographic changes this concept has undergone. The traditional and canonical understanding of what heritage means is shown in its definition from the Oxford Dictionary using words "property" and "things of value", and giving the concept a clearly tangible meaning.[3] It ties heritage to a physical dimension and points to what Laurajane Smith calls a "discrete site, object, building or other structure with identifiable boundaries".[4] The early definition of heritage converges around the concept of an artefact, a physical and tangible object. Such an idea has long dominated the institutional vision of heritage within organisations like UNESCO or ICOMOS (International Council on Monuments and Sites). Until the 1970s, the most visible current in the institutional discussion on heritage was dominated by its tangible elements,[5] such as historical buildings, artefacts, and manuscripts. Only later, at the break of the twenty-first century, did this official discourse introduce intangible elements to the earlier position, then criticised by scholars and professionals.[6]

In fact, the traditional standing was flagged by Smith as Authorised Heritage Discourse (AHD), which she defined as the position accepted and most visible through the international organisations.[7] The AHD, according to Smith, "privileges monumentality and grand scale, innate artefact/site significance tied to time and depth, scientific/aesthetic expert judgement, social consensus and nation building".[8] The value of heritage sites would then be a top-down concept that is being defined by highly qualified experts and scholars who have the knowledge to declare what is worth being considered as heritage. This model criticised by Smith relies mostly on the traditional vision of heritage, inherited from the nineteenth century, where it is mostly tangible and

1 Christian Norberg-Schulz, *Genius loci* (New York: Rizzoli, 1980), p. 138.
2 Norberg-Schulz, p. 23.
3 'Heritage', *Oxford Dictionary* (2019) <https://en.oxforddictionaries.com/definition/heritage> [accessed on June 7th, 2019].
4 Laurajane Smith, *The Uses of Heritage* (London-New York: Routledge, 2006), p. 31.
5 Whereas the path was laid by the 1972 UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, the aspects of intangible heritage were clearly defined much later, in the 2003 UNESCO Convention for the Safeguarding of Intangible Cultural Heritage, see: Michael Di Giovine, 'UNESCO's World Heritage Program: the Challenges and Ethics of Community Participation', in *Between Imagined Communities of Practice – Participation, Territory and the Making of Heritage*, ed. by Nicolas Adell, Regina F. Bendix, Chiara Bortolotto and Markus Tauschek (Göttingen: Universitätsverlag Göttingen, 2015), pp. 84-88.
6 'Conservation of intangible heritage', *ICOMOS* (2018) <https://www.icomos.org/en/the-researcher-s-corner/thematic-bibliographies/43619-nouvelle-bibliographie-conservation-du-patrimoine-immateriel-4> [accessed on January 24th, 2021].
7 Smith, p. 4.
8 Smith, p. 11.

tightly fitted to the cultural canon, based on the European and American realities. In this context, knowledge of a scholar would be an element of power enabling one to gain control over space and time – the control over what heritage is, and over what becomes and stays durable. According to Michael Thompson's "rubbish theory", the most desirable state for material goods is in fact their transition from transient to durable and cemented recognition as such.[9] He claims that in order to make this transition, the key factor is knowledge: "the power to make things durable is a function of the relative extents of this control over time and space, and the control over time and space is secured by gaining control over knowledge".[10] In agreement with Smith's view on the AHD, such a knowledge-controlling position is indeed depicted by scholars, who have qualifications and data, thus power. This idea of technocratic and specialist heritage dominating in the institutional discourse resulted in the initial and well-anchored conception of heritage as a monument – a clear reminiscence of the past, strongly marked by the ideas of aesthetics, nation, and symbolism.

heritage as a construct

However, the monument-based traditional vision of heritage discourse is misleading. Smith and other academics have further criticised the rigid institutional model. For example, Susie West points out that there are two types of heritage: official and unofficial.[11] The latter is most commonly linked to bottom-up processes, starting inside the community, as they tend to protect what is important to its members. There would be a clear difference between what the experts and the people who interact with heritage mean by that word. As the discussion started with criticism of Smith and other scholars continues, the initial institutional meaning has been enlarged. Heritage has become increasingly centred around people rather than around artefacts.[12] As John Schofield implies, the discourse around heritage and its identification needs both of them – the scholars as more educated "thinkers" and the users as more emotionally involved "feelers".[13] The latter are actually crucial in order to perceive and to appreciate the elements that are important to the community and to its identity. Thanks to their insight based on feelings and personal experiences, such elements would become heritage for the sake of the respect of the communities. Those experiences are nowadays becoming part of the communities' identities and they start being transformed into history that may be shared by the society as a whole. This attitude reflects well what happens today in Poland: bottom-up initiatives emerging from the community and certain groups aim to save the memory and conserve local landmarks.[14] Those initiatives may be linked to various reasons: the features in question may have no legal protection,[15] they may be poorly present in official, publicly acclaimed collections, or simply they do not respond to the 'canon's values'.[16] The particular example of such bottom-up initiatives will be talked about more broadly afterwards, in reference to the heritage canon.

Various historians and researchers actually tend to include in heritage more intangible aspects: Raphael Samuel for instance urges us to consider heritage in its social role[17] and West and Marion Bowman propose to consider also performances, behaviours, rituals, and practices as heritage.[18] It leads to a claim by Smith and Urry that "all heritage is intangible"[19] and that it is "not so much a thing as a set of values and meanings" that may be generally applied to heritage globally.[20] These proposals tend to undermine the initially institutionally accepted definition of heritage as "physical". Indeed, related to one of research projects amongst the indigenous population, Smith claims the "act of passing on knowledge" was the actual heritage.[21] This suggests a major shift in understanding of heritage as a construct: from the solid, material-based traditional understanding towards a more inclusive concept including immaterial and unofficial elements. It shows that the understanding of what heritage is, depends on the evolution of the society and becomes more concerned with the "feelers".

The connection between the changes in the society and heritage leads to the idea of the latter as a process. Moreover, an ever evolving society means that the concept of heritage will continue to change. Its understanding passed from the idea of a monument to that of a historical site, with a wider meaning, but then it has been transforming towards setting[22] – and the interaction with society pushes it towards new boundaries. It is thus not only a process and a dynamic concept, but it dialogues with the community: it is interactive. The role of performances 'in' and 'with' heritage is here crucial. For example, re-enactment of battles or historical events require the participation of a society. An action 'with' or 'in' heritage may then become heritage itself: some periodic manifestations and festivities that were bound to celebrate local heritage have now become heritage themselves. Through repetition of actions, it is possible then to invent new traditions that will create heritage. Such invented traditions are "responses to novel situations which take the form or reference to old situations".[23] The present-day construction of a castle in Guédelon in France, with medieval methods deeply enrooted in the historical context of a given period, is a clear example where re-enactment may start from scratch and become a significant cultural initiative (ill. 1.2). The initial heritage of Guédelon is in fact far from being tangible – it is the use of medieval methods of construction and the reconstruction of what the daily life of the workers looked like. After over twenty years of construction, started in 1997, it has become itself a commonly renowned and willingly visited part of the local cultural sites network.[24] It becomes clear then that heritage is not something we are given – it is something we choose from the existing past and that we create: heritage is a construct.[25] Furthermore, more recently heritage is defined as "historic environment",[26] an inclusive concept where the environment modified by humanity is linked to a broader network. Such a broad definition of heritage seems to be more widely accepted. Today, the Cambridge Dictionary defines it as "features belonging to the culture of a particular society, such as traditions, languages, or buildings that were created in the past and still have historical importance".[27] The very same concept of "cultural significance" is associated with the places of heritage in the ICOMOS Burra Charter from 2013.[28] Those places of heritage may be both tangible and intangible, and they together create a pattern, an interconnected network that defines the culture of a given society. This definition is in fact very different from the previously quoted one from the Oxford Dictionary. Understanding of heritage as a construct so tightly linked to the society and its constantly changing values leads to the idea that heritage is constantly revised through the society itself, through the knowledge it holds, and through the understanding of the past. It links inseparably the question of heritage to history.

history and heritage

The relation between heritage, society, and the knowledge of the past leads towards understanding what history is. According to its Greek origins, the word "*historia*" is defined as "inquiry, the act of seeking knowledge".[29] With time, the word gained meaning connected particularly to the investigation of the past and took distance from a broader concept of research. Since then, the discussion on what history is, has been carried on by historians throughout time and, as Edward Carr underlines it, the answer to this question depends on one's background and context.[30] More recently, the discussion became more vivid. It became clear that there is a distinction between "what happened in the past" and "history" (one may simply quote Carr's difference between a "fact" and a "fact of history" – the former being common with no real significance, whereas the latter having

9 Michael Thompson, *Rubbish Theory* (Oxford: Oxford University Press, 1979), pp. 8-10.
10 Thompson, p. 52.
11 Susie West, 'Introduction', in *Understanding the politics of heritage*, ed. by Rodney Harrison (Manchester: Manchester University Press, 2010), p. 1.
12 Susie West and Jacqueline Ansell, 'A history of heritage', in *Understanding heritage in practice*, ed. by Susie West (Manchester: Manchester University Press, 2010), p. 42.
13 John Schofield, 'Thinkers and Feelers: a Psychological Perspective on Heritage and Society', in *The Palgrave Handbook of Contemporary Heritage Research*, ed. by Emma Waterton and Steve Watson (Houndmills: Palgrave Macmillan, 2015), p. 423.
14 One may refer to the bottom-up groups interested in modern heritage in Warsaw. One of those groups is the 'tu było tu stało' association interested in preserving built modern heritage and keeping the records of the demolished modern buildings, see: 'Tu było, tu stało – zachowujemy od niepamięci', *Association 'tu było tu stało'* (2019) <http://www.tubylotustalo.pl/o-nas> [accessed on March 19th, 2019].
15 Małgorzata Korpała, 'Ochrona substancji czy formy w zabytkach epoki modernizmu', *Wiadomości Konserwatorskie Journal of Heritage Conservation*, 49 (2017), 51-62. It was only in 2016, with an official document from the Principal Conservation Officer send on February 15th, 2016 to the regional conservation officers, that the possibility of listing as heritage building built in the 1960s and 1970s was introduced (before they were limited to those built in the 1950s and prior to that decade), see: 'Szansa na ochronę zabytków architektury modernistycznej - Pożegnanie Emilii' , *Ministerstwo Kultury i Dziedzictwa Narodowego* (2016) <http://www.mkidn.gov.pl/pages/posts/szansa-na-ochrone-zabytkow-architektury-modernistycznej---bdquopozegnanie-emiliirdquo-6292.php> [accessed on June 8th, 2019].
16 In particular, the question of modern heritage in Poland is a delicate one, since those buildings were built during the communist regime era and there is a visible opposition to consider them heritage as reminiscences of the 'unwanted times', see: Filip Springer, *Źle urodzone. Reportaże o architekturze PRL-u* (Cracow: Karakter, 2011).
17 Cited in Rodney Harrison, 'Heritage as social action', in *Understanding heritage in practice*, p. 241.
18 Susie West and Marion Bowman, 'Heritage as performance', in *Understanding heritage in practice*, p. 278.
19 Smith, p. 3.
20 Smith, p. 11.
21 Smith, p. 46.
22 Graham Fairclough, 'New Heritage, an Introductory Essay – People, Landscape and Change', in *The Heritage Reader*, ed. by Graham Fairclough et al (London-New York: Routledge, 2008), p. 298.
23 Eric Hobsbawm, 'Introduction: Inventing Traditions', in *The Invention of Tradition*, ed. by Eric Hobsbawm and Terrence Ranger, 3rd edn (Cambridge: Cambridge University Press, 2000), p. 2.
24 As of 2018, about 300,000 visitors a year – the second most visited cultural site in Burgundy. 'Les héros du patrimoine: zoom sur les plus grands sites de Bourgogne-Franche-Comté', *France 3 Info* (2018) <https://france3-regions.francetvinfo.fr/bourgogne-franche-comte/heros-du-patrimoine-zoom-plus-grands-sites-bourgogne-franche-comte-1539660.html> [accessed on March 19th, 2019].
25 Smith, p. 31.
26 Fairclough, p. 298.
27 'Heritage', *Cambridge Dictionary* (2019) <https://dictionary.cambridge.org/dictionary/english/heritage> [accessed on March 19th, 2019].
28 'The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance', *ICOMOS Australia* (2013) <https://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf> [accessed on June 7th, 2019].
29 Katy Steinmetz, 'This is Where the Word History Comes From', *Time* (2017) <http://time.com/4824551/history-word-origins/> [accessed on March 19th, 2019].
30 Edward Carr, *What is History*, 2nd edn (London: Penguin, 1987), pp. 7-8.

more importance and influence).[31] In Carr's discourse only the "facts of history" are studied by historians as they have repercussions on the present. Nonetheless, as he underlines, history is not about "pure facts", but also about their interpretation and selection. Whereas in the nineteenth century historians were more interested in the historical facts rather than their interpretation, Carr points out that such a purist attitude and a mere collection of facts would be incomplete and not beneficial.[32] He claims that gathering of a growing number of facts will lead only to "a vast and growing mass of dry-as-dust factual histories, of minutely specialised monographs of would-be historians knowing more and more about less and less, sunk without trace in an ocean of facts".[33] This metaphor leads to another argument in the discussion on history: the context and the selection of those facts depend on the historian in the beginning, even before one starts the interpretation. It is thus clear that David Lowenthal's claim that history is objective[34] is easy to criticise. Carr compares history to an ocean where the historian fishes, takes available facts and chooses those that seem to be relevant. Whereas the introduction of uncontrolled subjectivity would have been dangerous in history and may lead to historical negationism, Carr's point is different though. He states that history is more about interpretation rather than fact collection.[35] If one comes back then to the original meaning of the Greek word based on the aspects of "inquiry" and "seeking knowledge" about the past, there would be an important aspect to add – "interpretation". History would not be only looking for information, but also giving it a hierarchy, and understanding relations between the facts.

That leads to interrogating the connection between history and heritage. Since history is based on interpretation of the past, and the understanding of what happened builds society's identity, and since heritage depends on the evolution of society, then the evolution of heritage as a construct is by consequence influenced by the changes in the perception of history.

the quest for heritage – why is heritage important?

the heritage fever

The connection between heritage and history makes it necessary to understand the problematics of the latter. According to Lowenthal, the past is based on the awareness of three aspects: it is different from the present, it is indispensable for human identity, and it is disappearing.[36] According to those three axioms, there is then a tragic dimension in the study of history and heritage: they are both indispensable for us, while the past is disappearing at the same time. We both need and lose the past.

In fact, some historians (Carr and John Tosh, for example)[37] claim that history is no more an aim in itself as it was considered during the positivist period – but it is strictly linked to the actual human condition, to the present and to the future. The tragic dimension of history given by Lowenthal leads to the concept developed by Jacques Derrida framed as "archive fever" – an urge to conserve archivable things to counter the psychoanalytic death drive, the unstoppable decay of all things, and to establish a place where the archived material would be held.[38] Derrida claims that as everything is doomed to disappear, one tends to salvage what is salvageable. Such psychological propulsion to conserve is said to be a part of the Freudian urge to know the origin and the beginning of the things, yet the concept is metaphorical and it has a deeper meaning.[39] It is not only a fear of losing what the past has left, but it is also an urge to give sense to it, to study it – to interpret it. It goes then beyond the "archive fever" claimed by Derrida: it is not about the archives or origins, but about history, and the urge becomes a general 'history fever' that nourishes such kind of research – it is an act of responsibility in studying the past and in making sense of it. In the process of making sense of it and of looking for significance in the past, one ends up actually studying heritage. In fact, the definition of heritage as elements of cultural significance enables us to push this concept even further: that fever is not only an urge to interpret and study history, but an urge to understand its significance and to study heritage. Then, what was "archive fever" for Derrida becomes a 'heritage fever': the final drive of heritage research. While facing the threat of destruction of some parts of the existing traces of heritage, while coping with the death drive, it seems unavoidable to study it to understand and to protect it better.

31 Carr, pp. 10-11.
32 Carr, p. 22.
33 Carr, p. 23.
34 David Lowenthal, *The Heritage Crusade* (Cambridge: Cambridge University Press, 1998), p. 121.
35 Carr, p. 29.
36 *Our past before us – why do we save it*, ed. by David Lowenthal and Marcus Binney (London: Temple Smith, 1981), p. 17.
37 Carr, p. 9, and John Tosh, *The Pursuit of History*, 4th edn (Harlow: Longman, 2006), p. 178.
38 Jacques Derrida, 'The Archive Fever', *Diacritics*, 25 (1995), 9-63 (p. 19).
39 Whereas Derrida himself writes about a physical structure for the archives, according to Carolyn Steedman in "archive fever" there would be actually no archives, see: Carolyn Steedman, *Dust* (Manchester: Manchester University Press, 2001), p. 9.

ill. 1.1 (chapter cover) - drawing of Polish 1958 EXPO pavilion in Brussels, design by Jerzy Sołtan and the Workshops
ill. 1.2 - photograph of the construction site of a castle in Guédelon, France, following medieval methods as an example of re-enactment and its importance in creating new heritage; the interest in the site does not lay in the value of the building, but in learning about the craftsmanship
ill. 1.3 - photograph of a detail of a column basement in San Lorenzo church in Milan, Italy, as an example of the reuse of old construction materials in a different context and a different role - illustration of the idea of 'undying heritage' referring to Carloyn Steedman's *Dust*
ill. 1.4 - photograph of the horse race *palio* in Siena, Italy, which is an important event in the local community life and a manifestation of the group identity and of the sense of belonging

remembering identity

The concept of 'heritage fever' leads towards the connection to human identity and memory. There is a very strict connection between heritage and memory, as "monuments and heritage sites can work [...] as memory prompts"[40] – and the existence of heritage has been quoted as a benevolent factor for remembering the past. It not only gives meaning, but also builds the idea of values and lineages nourishing one's identity and opposing the death drive.[41] Landscape and physical environment may help to preserve memory: "people who move through landscape where they have lived or spent time in the past inevitably encounter traces of themselves there".[42] The very aspect of "traces of themselves" leads to the idea of identity. By nourishing memories, heritage strengthens one's identity. This applies not only to the built environment, but following the evolution of heritage as inclusive towards immaterial elements, it includes intangible aspects too. One of the oldest traditional manifestations in Italy, the *palio* of Siena, is an example of how intangible heritage is vital for the collective memory and for the sense of belonging (ill. 1.4).[43] The horse race taking place twice a year is only the culmination point of a vibrant local life centred on belonging to one of the city's boroughs – *contrade* – and to their community. The very existence of *palio* strengthens local bonds between the community members and boosts their sense of identity.

At the same time, it has been noted that lack of memory is treated as a disability: one may refer for example to patients ill with Alzheimer's disease or with dementia, who require constant help from others and in the final stages of the disease, even have no recollection of who they are – they lose their own identity. The relation between memory and identity is crucial here: as Smith points out, "memory is an important constitutive element of identity formation, unlike professional historical narratives, it is personal and [...] has a particular emotive power".[44] It is similar when looking at literature. In Gabriel García Márquez's *One Hundred Years of Solitude* the inhabitants of the village of Macondo lose their memory of everyday words and uses of daily-life objects, making them unable to live normally – they lose their personality and the meaning of their lives.[45] The reason for 'heritage fever' lies thus in the fear of such loss of memory and the consequent loss of identity. As the feverish search for the past continues, it has been noted that when references are being destroyed, one tends to turn rapidly towards the past in order to look for other past references in a desperate need to stick to what is familiar.[46]

While the connection between heritage and identity is evident, West points out that the difference between unofficial and official heritage lies in the fact that official heritage is often granted such status in order to reinforce a group's or a community's sense of identity.[47] Differently, the unofficial heritage comes from the very sense of identity of a group believing that a certain aspect of their lives should be recognised and protected.[48] There is thus a dual issue: firstly from heritage to identity following a top-down process, most visible in the nation-forming moment of the nineteenth century; and secondly, from identity to heritage following a bottom-up tendency to recognise what counts for the community.

Furthermore, Smith claims that "heritage is about a sense of place".[49] This idea brings the discussion back to the starting point and the concept of *genius loci*, the identity of a place. In the ongoing discussion on place and space, one position states that a place is a physical space that is charged with identity.[50] The connection between the concept of place and identity was explicit even in the Roman Empire: Servius writes in his comments to the *Aeneis*, "*nullus locus sine genio*" – no place without a genius, no place without identity, and without its own history.[51] A place charged with identity may be a reference point for the community, as was shown in Kevin Lynch's research on the imaginary city maps.[52] During his research he asked the participants to draw mental maps of a city – based on their perception of space and their own memories – and mark on them some

40 Tim Benton and Clementine Cecil, 'Heritage and public memory', in *Understanding heritage and memory*, ed. by Tim Benton (Manchester: Manchester University Press, 2010), p. 23.
41 Brian Graham, Gregory Ashworth and John Turnbridge, *A Geography of Heritage: Power, Culture and Economy* (London: Arnold, 2000), p. 41.
42 Denis Byrne, 'Heritage as Social Action', in *The Heritage Reader*, p. 155.
43 Alan Dundes and Alessandro Falassi, *La terra in piazza: Un'interpretazione del palio di Siena*, 4th edn (Siena: Nuova Immagine Siena, 2006), p. 21.
44 Smith, p. 60.
45 Gabriel García Márquez, *Cien años de soledad*, trans. by Gregory Rabassa (London: Penguin, 2014), pp. 47-50.
46 David Lowenthal, *The Past is a Foreign Country* (Cambridge: Cambridge University Press, 1985), p. 38.
47 Rodney Harrison, 'What is heritage', in *Understanding the politics of heritage*, p. 11.
48 Susie West, 'Introduction', in *Understanding the politics of heritage*, p. 1.
49 Smith, p. 75.
50 Throughout the vibrant discussion on the relation between space and place in architecture, the clear distinction between the physical (space) and the humanistic (place) is particularly clear in Yi-Fu Tuan, *Space and Place: the perspective of experience* (London: Edward Arnold, 1977), p. 4.
51 Servius, *Commentariorum Servii G. in Aeneidos Vergilii Libros*, Liber Quintus, 85 (4th – 5th century).
52 Kevin Lynch, *The Image of the City* (Cambridge: MIT Press, 1960), p. 48.

identifying places. Some elements were recurrently evoked by them: those have become in Lynch's analysis "the landmarks". They are "frequently used clues of identity and even of structure" that "seem to be increasingly relied upon as a journey becomes more and more familiar".[53] Those are the places charged with meaning and identity, which constitute heritage for the community, at a local or a larger scale, based on how vast is the recognition of the reference. Whereas Lynch's studies are already sixty years old, the very idea of perception mapping may be particularly persistent in studying unofficial heritage and recognition of the official one. It enables us to identify where the identity of the community resides and therefore – where the unofficial heritage lies.

Given those connections to memory and identity, heritage seems much more nuanced and vital than it was understood initially. Moreover, if heritage is an expression of a community's identity, it is a necessary condition for it to persist in the future. Smith claims that heritage is "about using the past, and collective or individual memories, to negotiate new ways of being and expressing identity".[54] It helps the identity to evolve, to adapt, and to position itself in the discourse in relation to the past. Heritage is not only then a question of where one comes from, but also of where one is going. Heritage is a journey.

back to the future

In fact, as Alistair Thomson claims, the first duty of historians "is to hear [...] stories and understand what they meant in their own time".[55] By adapting this assumption to architecture, one may claim that the first duty of architects and architectural historians is to hear buildings and to understand what they meant in their own time, and to preserve the best of them. This assumption is vital to the understanding of heritage not only as an object of historical study: yet it comes from the past, it does affect the present and it is easily projected into the future. Some claim that it is there, where the most important difference between history and heritage lies: whereas history is concerned with the past only, heritage is concerned with the present and the future too.[56] History would be therefore a means to heritage that is more pragmatic: "history can contribute to heritage studies by developing a more historically situated and therefore contextualised form of study which views its present-day with a sense of perspective".[57] The very idea of heritage as projected into the future connects it to giving the purpose and giving a reference to what may come. It becomes closely linked to the idea of a 'future consciousness', of what the role of heritage will be.

Furthermore, another issue arises concerning heritage and its connection to the future. Since history continuously moves forward, what is now present becomes obviously the past of tomorrow. The past grows continuously and it becomes quite evident that heritage too is constantly increasing: as the past is more and more, the same happens with its traces. The increase of the past and, alongside, the increase of its cultural significance leads to the fact that the concept of heritage is unlimited. It has been suggested that whereas a single object may be indeed forever lost, new heritage is created as new pasts come and therefore, there is a constant creation of new heritage.[58] This theoretical aspect of endless resources of heritage contradicts the widely accepted idea that most of the resources we use are finite. Moreover, according to Carolyn Steedman, the existence of tangible objects cannot be simply ended and things cannot be simply destroyed: they may continue to exist as dust and they will be inhaled by those who come afterwards making the whole process circular – "it is about circularity, the impossibility of things disappearing, or going away, or being gone".[59] It is reassuring: compared to Lowenthal's tragic vision of the past, Steedman's ideas are optimistic. Following her ideas, it would be impossible to lose heritage, since it will continue to live in another form or another memory, under other circumstances. Even though her stand may seem theoretical, the idea of heritage not dying and being reused may be compared to the actual reuse of construction materials coming from unused ancient Roman remains for new buildings in medieval Italy (ill. 1.3).[60] However, the de-contextualisation of heritage in that case makes it lose its initial meaning. Therefore, even if Steedman's ideas may seem more appealing, they do not seem to apply to practical examples: heritage may not die, but it will lose its significance.

53 Ibid.
54 Smith, p. 4.
55 Alistair Thompson, 'Life Stories and Historical Analysis', in *Research Methods for History*, ed. by Simon Gunn and Lucy Faire (Edinburgh: Edinburgh University Press, 2012), p. 101.
56 For instance, Smith, p. 84. Cornelius Holtorf and Anders Högberg, 'Contemporary Heritage and the Future', in *The Heritage Reader*, pp. 510-511. Carr, p. 132.
57 Jessica Moody, 'Heritage and History', in *The Heritage Reader*, p. 125.
58 Cornelius Holtorf, 'Is the Past a non-renewable resource', in *The Heritage Reader*, p. 130.
59 Steedman, p. 164.
60 The so-called "*materiale di spoglio*" refers to the ancient construction materials, which were used in later periods in new buildings, a common practice in the Middle Ages in Italy. Definition of "spoglio", see: 'Spoglio', *Treccani Dictionary* (2019) <http://www.treccani.it/vocabolario/spoglio2/> [accessed on April 25th, 2019].

However, changes to the signs of the past and to heritage are unavoidable: according to Lowenthal, "we cannot avoid altering our inheritance; modern perspectives are bound to reinterpret all relics and recollections. Seeing the past in our own terms, we necessarily revise what previous interpreters have seen in their terms, and reshape the artifacts accordingly".[61] On the other hand, referring to previous conclusions, heritage holds values of cultural significance and for the sake of human memory and identity, it should not be lost. It leads to the questioning on what should be done with heritage if something is bound to be done anyway.

conserving heritage – how to conserve what counts?

As claimed by Lowenthal, it is impossible not to alter the past, since the present-day vision of it is much influenced by a growing difference between the past and the present.[62] There is much less past in the present, and what remains is bound to be modified due to that different perception of it. He claims that at the beginning of the twentieth century, the cultural shift made the past more distant and more alien in relation to the present, and due to that difference – due to the past looking more and more as something presumably lost and mysterious, as a 'foreign country' – it becomes tempting to rush towards it and to reject the present.

debris of nostalgia

Lowenthal describes 'nostalgia' as an expanding and growing phenomenon of looking back that makes it more common and easier to dive into the past.[63] The word – initially medical – has a Greek origin and it connects *nosos* (return to native land) and *algos* (suffering, grief), leaving it a rather negative aspect. Today's understanding of nostalgia is slightly different. Vintage fashion and design, alternative shops and restaurants that are on purpose designed in order to evoke the past epochs are only some of its manifestations. Today nostalgia is not negative – also because it makes the present more familiar and more bearable while the future is uncertain.[64] It gives at the same time more security: the flaws and drawbacks of whatever may have happened in the past are well known and it is natural to think that coping with them would be easier than having to face something unknown.

However, the growth of nostalgia has negative effects since it "is blamed for alienating people from the present".[65] Whereas the reference to the past is – as it has been previously illustrated – necessary for one's identity, an excessive connection to the past limits the creativity and the progress in the present. Michel de Certeau claims that it is only thanks to forgetting that people may actually live their own lives.[66] In practice, one of the most tangible effects of nostalgia is the phenomenon of recreating the past in the present – for example through reconstruction, recreation, and re-enactment[67] – and through such practices, it is possible to bring back the past that is no more and to revive it in the present. Beth Goodacre and Gavin Baldwin quote two main approaches to such an attitude: the first one being the presentation of the past (in a scientific manner – such as in museums), and the second one bringing the past to life as 'living history' (for example, manifestations).[68] Whereas the former has a long tradition since the very beginning of the discussion of heritage (the concept was created at the time where the first national museums were created), the latter has been often accused of being "trivialisation of the past", as an example of excessive Disneyfication.[69]

Another visible effect of nostalgic tendencies is the preservation of heritage and restoration of the past. Whereas the first one accepts the evolution of a site and evaluates the accumulated layers of significance, the second refers to freezing it at a given moment of time, making it ideally an authentic and original example of the past – contrarily to the recreation of the past in the present. Such policy carries with itself a very important question of authenticity. Whereas the previous ideas were based on analysis and recreation of something that exists no more, preservation consists in maintaining the past as much original as it is possible: as much authentic as possible. In fact, the value of authenticity is important in the institutional meaning of heritage: the Venice Charter, points to the issue of authenticity: "monuments are to be conserved not only for their aesthetic values as works of art but also as historical evidence".[70] However, the official position and views of some scholars on authenticity have been criticised as "an authenticity craze".[71] It is a generally acclaimed truth in the Western countries

61 Lowenthal, *The Past is a Foreign Country*, p. 325.
62 Lowenthal, *The Past is a Foreign Country*, p. 233.
63 Lowenthal, *The Past is a Foreign Country*, p. 4.
64 Lowenthal, *The Past is a Foreign Country*, p. 39.
65 Lowenthal, *The Past is a Foreign Country*, p. 13.
66 Benton and Cecil, p. 17.
67 Lowenthal, *The Past is a Foreign Country*, pp. 265-324.
68 Beth Goodacre and Gavin Baldwin, *Living the Past* (London: Middlesex University Press, 2002), p. 9.
69 Goodacre and Baldwin, pp. 20-21.
70 Rodney Harrison, 'What is heritage', in *Understanding the politics of heritage*, p. 27.
71 Helaine Silverman, 'Heritage and Authenticity', in *The Palgrave Handbook of Contemporary Heritage Research*, p. 69.

that something authentic is also good, even though the concept is less evident within other civilisations.[72] Although this agenda has been introduced widely in the World Heritage Committee Operational Guidelines stating, "the properties must pass a test of authenticity",[73] it has no clear origins nor long tradition.[74] Randolph Starn claims that it was mainly influenced by the significant losses during the Second World War – and then it was widespread as a slogan through the Venice Charter. However, more recent statements, such as the ICOMOS Nara Document on Authenticity from 1994, claims, "all judgements about values attributed to cultural properties as well as the credibility of related information sources may differ from culture to culture, and even within the same culture. It is thus not possible to base judgements of value and authenticity on fixed criteria".[75] Nonetheless, the question of authenticity is still present in the official position, since it is one of the mandatory requirements for presenting nominations for heritage sites.[76]

changing the past

Apart from the doubts on the legitimacy of authenticity in heritage conservation, restoration of the past may be seen as a negative aspect – it may cause its segregation, the loss of its purpose, of its context and of the signs of the passage of time.[77] In particular, it may be an inhibiting factor for the currently functioning buildings. For example, one may refer to the Säynätsalo Town Hall in Finland by Alvar Aalto, which since 1992 does not have to sustain its original function. Since the building is one of the most important architectural works by Aalto, both the local authorities and the Alvar Aalto Foundation work towards the conservation of its original character, although it has been problematic to find a viable function for the building that would not alter it.[78] The general suggestions laid during the seminar concerned with the issue may be summarised in David Fixler's words closing the workshop: "to have a life, this building has to work for the community, not be a museum".[79] Many claim indeed that "a fixed past is not what we really need, or at any rate not all we need. We require a heritage with which we continually interact, one which fuses the past with the present".[80] The very connection between heritage, the present, and the future leads to the discussion on the means of conservation. The UNESCO manual *Managing Cultural World Heritage* considers conservation as management of change rather than management of continuity.[81] The idea of continuous interaction – of a process – leads to the concept of the sustainability of heritage. Since we are interested in the past "for our sake or our children's",[82] the discourse on the conservation of heritage seems particularly aligned with the definition of sustainable development given by the Brundtland Commission of the United Nations in 1987. It calls for a "development that meets the needs of the present without compromising the ability of future generations to meet their own".[83] Applied to the concept of heritage conservation, it means that heritage should be accessible at the present time, but it should not be altered so that it would lose its value for the future generations.

Therefore, the discussion and the decision on the policies concerning heritage cannot be taken with haste: since it is an important issue for us and for the future generations, they must be taken after a thorough study of the matter and identifying the the values it represents, as well as after thorough considerations of various possibilities of its management. The model taken by UNESCO leads towards such a strategy: in order for a site to be listed as World Heritage, it must have its own long-term Conservation Management Plan aimed to protect its values. It would be logically composed of three parts, where the first and the longest one consists in the historical analysis and study of a given site: it is the description of the site and of its importance. The second part would be concerned with the conservation policies, whereas the third with the implementation of the

72 The issue of authenticity is a very complex matter when it comes to different cultures. In Asia, for instance, the concept of authenticity is in contradition to some religious practices, see: Gamini Wijesuriya and Jonathan Sweet, 'Introduction', in *Revisiting Authenticity in the Asian Context*, ed. by Gamini Wijesuriya and Jonathan Sweet (ICCROM, 2018), p. 12.
73 Silverman, p. 73.
74 Randolph Starn, 'Authenticity and historic preservation: towards an authentic history', *History of the Human Sciences*, 15 (2002), 1-16 (p. 9).
75 Art. 11, 'The Nara Document on Authenticity', *ICOMOS* (1994) <https://www.icomos.org/charters/nara-e.pdf> [accessed on June 7th, 2019].
76 Wijesuriya and Sweet, p. 12.
77 Lowenthal, *The Past is a Foreign Country*, p. 404.
78 The study of the possible functions and the basis for the building's Conservation Management Plan were laid out during the seminar 'Säynätsalo Town Hall Workshop – Modern Masterpiece in Contemporary Society' in 2017.
79 'The new life of a modern masterpiece – what next for Säynätsalo Town Hall?', *Museum of Finnish Architecture* (2017) <https://www.finnisharchitecture.fi/2017/06/the-new-life-of-a-modern-masterpiece-what-next-for-saynatsalo-town-hall/> [accessed on March 19th, 2019].
80 Lowenthal, *The Past if a Foreign Country*, p. 410.
81 'Managing Cultural Heritage', *UNESCO* (2013) <https://whc.unesco.org/en/managing-cultural-world-heritage/> [accessed on December 2nd, 2019].
82 Graeme Davison, 'Heritage: From Patrimony to Pastiche', in *The Heritage Reader*, p. 35.
83 Report of the United Nations World Commission on Environment and Development, see: Brundtland Commission, *Our Common Future* (Oxford: Oxford University Press, 1987).

latter.[84] The aims of the Conservation Plan are thus on one hand to understand what universal values should be shared through the listing, and on the other one to make protection and conservation possible. Such a model follows the scheme laid down by the ICOMOS Burra Charter. It foresees in the first place understanding the place, assessing its cultural significance and identifying all factors and issues. Secondly, it moves towards developing policies, preparing management and finally implementing the plan and monitoring the results.[85] Following such a model, it is clear that the logics of conservation policies cannot be defined without prior study of the case and deep understanding of the singular site, item or other aspect of heritage.

modern architecture and its heritage

This introductory discussion on the meaning, importance, and conservation of heritage in its global context may be then narrowed to the area of modern architecture. The analysis concentrates on the position of modern architecture heritage, both through the institutionally recognised modern heritage by UNESCO and ICOMOS, and through the scholarly recognised heritage by the "thinkers" – such as in the case of Docomomo.

defining modern heritage

If one considers the institutional recognition of modern architecture, it has little importance in the overall number of the cultural sites enlisted by UNESCO. With 869 cultural sites on the UNESCO list, only around fifty are examples of modern architecture, almost all of them nominated after 2000.[86] Within those entries, one may identify three categories of listings – single iconic buildings designed by well-known modern architects, larger areas – entire districts or cities, and group entries of several sites tightly connected between them. Amongst the iconic sites, there are single buildings designed by such architects as Mies van der Rohe, Luis Barragán, Gerrit Rietveld or Walter Gropius – but the nominations trend shows that such applications are less frequent in recent years. The last one of those was the Fagus Factory by Gropius enlisted in 2011. On the other hand, the larger areas nominations are in constant development with the most recent ones being the Modernist City of Asmara in Eritrea (2017, ill. 1.6) and the Industrial City of Ivrea in Italy (2018, ill. 1.5). Similarly, the interest in the group entries seems to be growing with the two last ones being the nominations of seventeen sites designed by Le Corbusier in 2016, and of eight sites designed by Frank Lloyd Wright in 2019. Moreover, a new group entry of thirteen sites designed by Alvar Aalto has been included in the UNESCO tentative list in 2021 (ill. 1.7 to 1.19).[87] The growth of those two types of nominations is interesting, since it refuses the oversimplification of modern architecture down to a handful of iconic buildings that are only loosely connected between them. Furthermore, according to UNESCO, the value of such a series is more important than the one of singular entries. It is connected to the fact that in recent years, there is a tendency to avoid the criterion (i) for the modern architecture nominations, that is "to represent a masterpiece of human creative genius". For example, the Frank Lloyd Wright listing is classified as criterion (ii), "to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design", and the nomination of Aalto's architecture was advised to avoid the criterion (i) during the working seminar in 2019. Along with the interest in the serial nominations, the use of criteria other than (i) stresses the attention on the issue of narrative within the nomination itself. Especially within the serial nominations, the importance of the narrative is crucial. It not only explains the reasons behind the nomination, but also it links different elements providing reasons for the presence of single sites within the series and their interconnections, adding to the nomination's integrity and cohesiveness.

Furthermore, the interest in the group entries and larger areas finds correspondence in the policy and activities of modern inclined Docomomo. Founded in 1990, Docomomo's aim is to document and inform on the modern architecture heritage that is often not sufficiently recognised or protected.[88] Whereas modern UNESCO heritage sites are spread in less than twenty countries, there are around seventy national cells of Docomomo, giving the possibility to open the discussion on modern architecture not only to the less-known architecture, but also to the countries underrepresented in the official UNESCO heritage list.[89] With emerging chapters of Docomomo in countries like Angola, Thailand, Iran, Puerto Rico or others, the organisation may be able

84 James Semple Kerr, 'The Conservation Plan', in *The Heritage Reader*, p. 322-323.
85 'The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance'.
86 'World Heritage List', *UNESCO* (2019) <https://whc.unesco.org/en/list/> [accessed on December 2nd, 2019].
87 The tentative list includes thirteen sites designed by Alvar Aalto, see: 'The Architectural Works of Alvar Aalto, a Human Dimension to the Modern Movement', *UNESCO* (2021) <http://whc.unesco.org/en/tentativelists/6509/> [accessed on March 18th, 2021].
88 'Mission', *Docomomo* (2019) <https://www.docomomo.com/mission> [accessed on June 7th, 2019].
89 List of the Docomomo national sections, see: 'Chapters Worldwide', *Docomomo* (2019) <https://www.docomomo.com/chapters_worldwide> [accessed on June 7th, 2019].

ill. 1.5 - photograph of workers' lodgings 'Talponia' designed by Gabetti and Isola in Ivrea, Italy, a fragment of the industrial site of the Olivetti factory, which became part of UNESCO heritage in 2018; the listing includes normal buildings, like these lodgings, recognising the importance of the 'ordinary' buildings
ill. 1.6 - photograph of Fiat-Tagliero gas station designed by Giuseppe Petazzi in Asmara, Eritrea, a fragment of the larger modern part of the city of Amsara, which became part of UNESCO heritage in 2017 following the tendency to enlist modern heritage outside the Western countries and recognising the importance of the 'ordinary' buildings

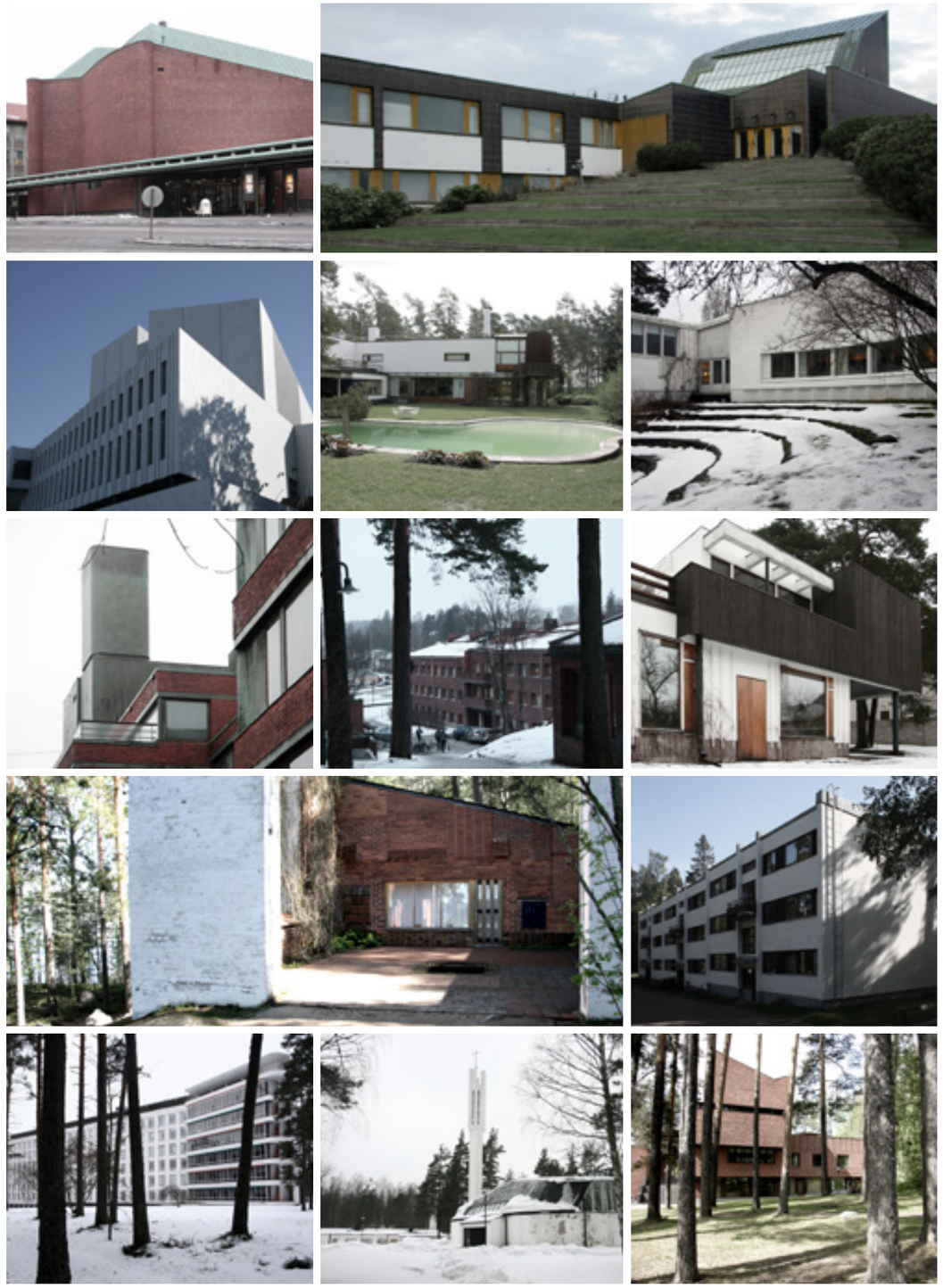
to open up new discussions on modern architecture throughout the world. Moreover, during the Docomomo conference in Ankara in 2006 the member countries were to prepare lists of buildings that would follow the theme of 'Other Modernisms'.[90] It brought attention firstly to the fact that the official discourse on modern architecture became aware of the non-iconic examples of modern heritage. Moreover, it reinforced the tendency in recent years to enlist as heritage not only elements of "exceptional universal value", but also of "exceptional universal ordinary value" – series of elements that together have a more significant value and importance than separately.[91] As stated clearly by Richard Longstreth: "a few major monuments may symbolise an era, but they do not define it".[92] Through their publications and activities, the national sections of Docomomo work towards the broadening of the understanding of a broad range of architects and buildings within modern architecture. For example, the Italian section in collaboration with the Ministry of Cultural Heritage and Activities prepared a series of itineraries and an interactive map of modern sites across the country.[93] Another example of Docomomo initiatives may be activism towards the protection of endangered modern buildings, such as in the case of Pier Luigi Nervi's stadium in Florence or the garden city of La Butte Rouge in France.[94] The influence of Docomomo on the perception of modern heritage would have thus three main effects: firstly, opening towards minor modern architects and non-iconic examples of architecture; secondly, refusing the idea of a building being a stand-alone statement, understanding modern architecture as an interconnected network and looking for those underlying connections throughout one architect's work or within the work of more; and finally, opening towards new geographical areas.

Yet another tendency may be found in the recent scholarship concerning modern architecture nominations. The importance of the narratives within the nominations and listing leads to the importance of theoretical stands and ideas within UNESCO heritage lists of modern architecture. During the seminar 'Humanistic Modernism' on the works of Alvar Aalto in the context of World Heritage, one of the workshops concentrated on the importance of the theories and ideas of Aalto. Within the conclusion of their work, it was stated, "the aims of the nomination should be to give a thematic idea of Aalto – to understand what the key themes that appear in his texts are and what his buildings illustrate. It is interesting to consider the nomination as a presentation of Aalto's principles and ideas, and use buildings as illustrations. It is important to understand how to guarantee the coherence of the nomination and the integrity of its narrative". As a proposal for those aims, it was suggested:

> "It is important to concentrate on the ideas, on the intangible: some buildings should be considered including an extra layer, referring to them as theoretical statements, as ideas. In fact, heritage also consists in the values reflected in Aalto's buildings, not only in the buildings. It is strictly connected to the fact that the values that will be illustrated should seem relevant and (?) universal. An official recognition may mean that they are still valid in architectural practice of today".[95]

The attention given to the immaterial aspects of Aalto's work show that the understanding of modern architecture moves towards a more inclusive and global image, and the inclusion of the intangible as heritage does apply also to modern architecture. However, whereas the official understanding for modern heritage is broadening, and the position of the "thinkers" becomes more inclusive towards new geographical areas and immaterial elements, as they become aware of a more nuanced position of modern heritage, based on the "exceptional universal ordinary values" and the importance of the narratives, the position of the "feelers" is much more complex when modern architecture is concerned.

90 Emilie d'Orgeix, 'Modern Heritage: the Challenge of Serial Sites', in *Modern Architectures – The Rise of a Heritage*, ed. by Mariastella Casciato and Emilie d'Orgeix (Wavre: Mardaga, 2012), p. 31.
91 D'Orgeix, p. 28.
92 Richard Longstreth, 'What to save? Mid-century Modernism at risk', *Architectural Record*, 188 (2000), 59.
93 It ranges from such well-known buildings are the Riola Church by Alvar Aalto or the Casa del Fascio in Como by Terragni, to the underestimated examples, such as the Sant'Anna Resort on the Elba Island by Gabetti and Isola, see: 'Atalante Architettura Contemporanea', *Ministero dei Beni e Attività Culturali* (2019) <http://www.atlantearchitetture.beniculturali.it/> [accessed on June 7th, 2019].
94 'Appeal from architects and town planners: Oppose the demolition of the Garden city of La Butte Rouge', *Docomomo France* (2019) <https://www.docomomo.fr/actualite/appeal-architects-and-town-planners-oppose-demolition-garden-city-la-butte-rouge> [accessed on June 7th, 2019]. 'Les signataires de la lettre ouverte de Docomomo France pour la sauvegarde de la Maison du people de Clichy', *Docomomo France* (2018) <https://www.docomomo.fr/actualite/les-signataires-de-la-lettre-ouverte-de-docomomo-france-pour-la-sauvegarde-de-la-maison> [accessed on June 7th, 2019]. 'Salviamo lo Stadio Franchi di Firenze', *Docomomo Italy* (2021) <https://www.docomomoitalia.it/salviamo-lo-stadio-franchi-di-firenze/> [accessed on February 6th, 2021].
95 Szymon Ruszczewski, 'The importance of theory in Alvar Aalto nomination', in *Workshop 3: Aalto's Texts and Ideas*, ed. by Anni Vartola, proceedings of the 'Humanistic Modernism – Works by Alvar Aalto in the World Heritage Context' Seminar from October 9th-10th, 2019.



ill. 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, 1.13, 1.14, 1.15, 1.16, 1.17, 1.18, and 1.19 - photographs of thirteen buildings designed by Alvar Aalto in Finland (House of Culture in Helsinki, Seinäjoki Civic Centre, Finlandia Hall in Helsinki, Villa Mairea, Studio Aalto, Social Insurance Institution Main Office in Helsinki, Aalto Campus at the University of Jyväskylä, Aalto House, Muuratsalo Experimental House, Sunila Pulp Mill Housing Area, Paimio Sanatorium, Church of Three Crosses in Vuoksenniska, and Säynätsalo Town Hall), which are in the tentative list proposed by Finland in 2021 to include in the UNESCO heritage list as an example of serial inscriptions, which recently have become more frequent for modern architecture work

Modern architecture – due to its very roots in the rejection of the Beaux-Arts model (itself based on the aesthetics and the form) – has been rejected by many as unfitting the aesthetic canons and an average passer-by often calls it simply "ugly".[96] The functionalist architecture of the 1930s, concerned mainly with housing, whereas the pressing issues of human habitat were undeniable, seemed to consider aesthetics as secondary.[97] Such a tendency to give more importance to the functional dimension of architecture was easily identifiable throughout the first years of functionalism, as for example in the work of Hannes Meyer. However, these limits were overcome and rationalist ideas, including a broader social and cultural dimension, were present in many buildings designed by the Team 10 members. One may quote for example Alison and Peter Smithson's Robin Hood Gardens (1972, ill. 1.20) destroyed in 2017-2018. In spite of the massive voice of the architects to preserve the buildings as valuable examples of brutalist architecture of Team 10 members,[98] the London council of Tower Hamlets decided to proceed with the demolition in August 2017. Robin Hood Gardens though is only one of many modern designs that has suffered criticism. Boston City Hall (ill. 1.21) built in 1968 and designed by the Kallmann McKinnell & Knowles practice for an international competition receives constant criticism, and voices urging demolition still persist – as recently as in 2013, *California House + Design* magazine included it in the "25 Buildings to Demolish Right Now".[99] On the other hand, it has been claimed to be one of the most influential brutalist buildings standing.[100] Similar hostility towards modern architecture may be encountered throughout the globe. The Supersam Pavilion in Warsaw[101] – claimed to be a masterpiece of Polish modern architecture – was destroyed in 2016 in spite of protests of the architectural society in Poland.

However, the criticism of modern architecture is also present in the academic discussion and scholarship, as in James Stevens Curl's recent publication, *Making Dystopia: the Strange Rise and Survival of Architectural Barbarism* (2018). He criticises modern architecture for being unsustainable, disconnected from the users and for refuting history, and he blames it for the faults of twentieth architecture mistakes. In his discourse, modern architecture becomes a "manipulation, a programme of destruction, a fanatically held belief in a cult, and a burning desire to change the world",[102] underlining the negative and doctrinal aspect of modern ideas. He claims that people actually were seduced by modern architecture "to abandon emotional comfort and healing environments for cold, sterile ones that create anxiety and might even make them sick".[103] Such fierce criticism met resistance – and several reviewers took a very different position on the matter. In a review of Curl's ideas, Witold Rybczynski calls the author "an eighty-one-year-old traditionalist who has seen his world overturned by what he perceives to be a malevolent force", whereas the book itself is qualified as "jeremiad".[104] He criticises for example the absence of "humanising" architects in Curl's arguments, such as Aalto or Louis Kahn, claiming that the neutrality of his discourse is heavily corrupted. Similarly, Andrew Higgott criticises his arguments, calling the idea of a cult "a gross overstatement and one of the ways in which this is a less than credible book, despite claims to academic depth and rigour".[105] Whereas they concentrate on the selectiveness and overly polemical argument within Curl's publication, Alan Powers draws attention to another issue: "the appearance of another [anti-modern book] suggests that its predecessors have been largely unsuccessful in their effort to shift opinion".[106] He claims that the criticism of modern architecture – a recurring attitude since the birth of postmodernism – has never brought many new arguments, showing its limits and its lack of actuality.

The fierce discussion and defence on behalf of modern architecture however does not apply only to publications

96 For instance, the Boston City Hall was described as "mildly oppressive", "ugly as hell" or "like a jail", 'Boston City Hall at 50. From World's Ugliest Building to Brutalist Masterpiece' , *WGBH Radio News* (2018) <https://www.wgbh.org/news/local-news/2018/11/14/boston-city-hall-at-50-from-worlds-ugliest-building-to-brutalist-masterpiece> [accessed on April 25th, 2019].

97 Quotation comes from the prologue for the drama *Lilla Weneda* by Juliusz Słowacki. Sołtan recalled that these words was written on the walls of the architectural practices he worked in Poland before the Second World War.

98 A publication was issued with contributions by several architects, including Richard Rogers and Zaha Hadid, calling to preserve the building, see: *Robin Hood Gardens Re-Visions*, ed. by Alan Powers (London: Twentieth Century Society, 2010).

99 The reference to the original article and the complete list in '25 Buildings To Demolish Right Now', *Huffington Post* (2012) <https://www.huffpost.com/entry/25-buildings-to-demolish_n_1619139?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAGIi4yvBLQ4lAg4uPAz2eOOtlanFYTdmnbYAyMslhBdsjZPj6tf2Lx049Iu6l-ckk8cxpKB95AVsa7P8UqE3_UBkpXyxfeavN96sQW9Fyjr-dWb4oqJag5jWDiNqisoIJ8NFskLPwlyaC2EJhW2k17QjNsLnHvHR5-hXyAZ7bfB_> [accessed on June 8th, 2019].

100 'Boston City Hall at 50. From World's Ugliest Building to Brutalist Masterpiece'.

101 Tadeusz Przemysław Szafer, *Współczesna architektura polska* (Warsaw: Arkady, 1988), p. 227.

102 James Stevens Curl, *Making Dystopia: the Strange Rise and Survival of Architectural Barbarism* (Oxford: Oxford University Press, 2018), p. 315.

103 Nikos Salingaros, 'Book Review: Making Dystopia – the Strange Rise and Survival of Architectural Barbarism, by James Stevens Curl, Oxford University Press, 2018', *ArchNet-IJAR*, 12 (2018), 327-332 (p. 329).

104 Witold Rybczynski, 'Modernism and the Making of Dystopia', *Architect*, 148 (2018), 63 (p. 63).

105 Andrew Higgott, 'It was better in the old days', *History Today*, 68 (2018), 98-99 (p. 99).

106 Alan Powers, 'Blast on the past', *Architectural Review*, 1458 (2019), 56-57 (p. 56).

ill. 1.20 - photograph of the closed to public estate Robin Hood Gardens in East London taken after the eviction of the inhabitants to temporary lodgings; the brutalist complex by Alison and Peter Smithson was demolished in spite of attempts to list the building and to save it from demolition
ill. 1.21 - photograph of the Boston City Hall, which is both a brutalist icon and a building despised by the public and some politicians
ill. 1.22 - historical photograph of the demolition of the Pruitt-Igoe residential complex in St. Louis, MO; demolition of the buildings was aired live and was acclaimed to be "the day when modernism died" by Charles Jencks, whereas recently the myth of its 'evil' architecture has been revised as many faults are now being given to bad management

and the academic world. Such heavy criticism of modern architecture and the lack of action from public institutions (in the case of Robin Hood Gardens, it was the council – as owner – that initiated the demolition) cause the emergence of many bottom-up initiatives. These seek to preserve memories of modern architecture and to act in order to protect it. One of the leading ones, SOSBrutalism, collects a database on modern buildings, gathers information on those endangered by demolition or alterations,[107] and it organised the first exhibition on brutalism in Frankfurt in 2017.[108] More locally, the Warsaw association 'tu było tu stało' aims to conserve modern historical buildings through a series of informative conferences, architectural walks, publications and workshops. Similarly to other initiatives around the world, it was born while Warsaw modern architecture was – again – being destroyed in spite of protests.[109] This activism also shows problematic modern designs in a different light. For example, the spectacularly demolished and widely criticised residential complex Pruitt-Igoe in St. Louis has been recently cleansed of some of the long-accepted myths of 'evil architecture' (ill. 1.22). A recent documentary claims that most of the fault for the failure of the buildings lies in the insufficient economic resources, lack of maintenance, and short-sighted public administration management rather than in design's faults.[110] Similarly, in the case of Robin Hood Gardens, the lack of maintenance was one of the main causes for its deterioration.[111]

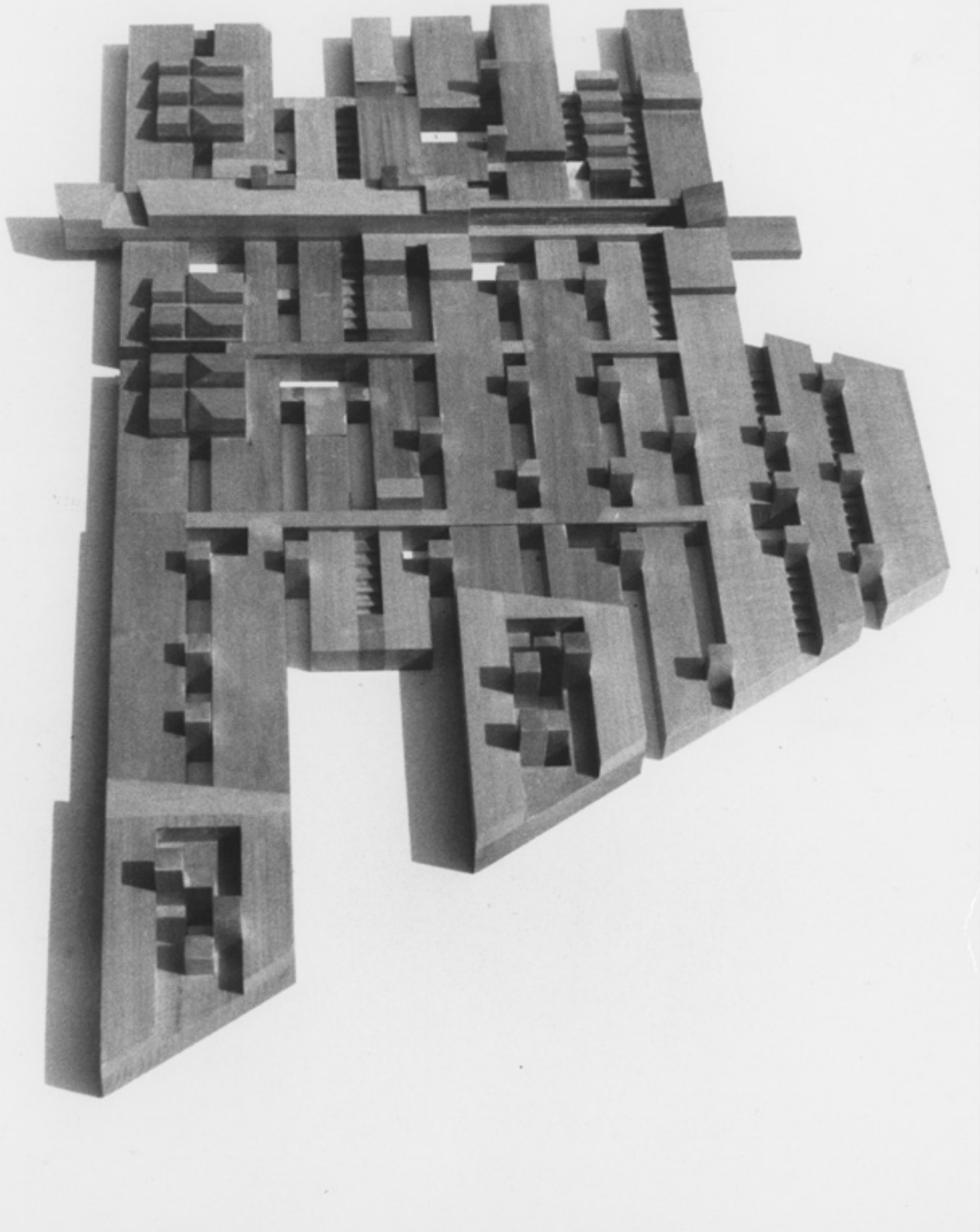
Such new positions to give absolution to modern architecture nourish interest in it even more. The area of influence of modern architecture was global, and arguably bigger than any other tendency. Unlike any other tendency, it is present worldwide in all the continents – and the Docomomo sections in Europe, Asia, America, Africa, Australia, and Oceania prove that. Furthermore, despite the criticisms we may aim at the homogeneity of the International Style, modern architecture influenced various aspects of architectural practice that are important today. For example, within the heritage of Team 10 and within the thick cultural dimension of their work, there are many important aspects of them in present-day architectural practice – interdisciplinary migration between various fields, research of new materials, and participative design are only few to be named. With the vivid exchange of experiences and discussions amongst the members of Team 10, together with other modern architects, they contributed to the development of architectural practice in the ensuing decades.[112]

towards a modern architecture heritage

The recent development of understanding the concept of heritage shows that it has shifted from the traditional, material, and tangible monument-based aspect towards a more inclusive one, comprehensive of intangible and immaterial elements. Yet where its definition changed, the importance of heritage has stayed undoubtedly vital for human memory. Based on the relevance of heritage to identity, this research pleads in favour of conservation of heritage, with emphasis on maintaining its cultural significance contribution to existing scholarship. However, even though modern architecture heritage seems still valid in the light of present-day practice, public reception and some academics may be hostile. Engaging the public with stories on modern architecture and clarifying the misconceptions and misunderstandings made possible by ongoing research seems necessary, and with the discussion on modern architecture and its values vividly present in today's scholarship and general discourse, there is a need to study and better understand modern heritage, its values and its importance today. As a result, through the study of modern architecture history, one contributes to its better understanding and to its broader recognition as heritage. Whereas recognised modern heritage is limited, much of its production has no institutional protection and has to cope with lack of interest, conservation, and also with refusal. Therefore, this research contributes to the recognition of modern architecture values by improving its better understanding.

Following this theoretical framework for understanding the reasons behind the research on the architectural heritage of a modernist architect Jerzy Sołtan, it is possible to relate in the forthcoming chapters the understanding of his legacy to the current understanding of modern architecture heritage in relation to his ideas, design, and pedagogy. By looking for a definition of Sołtan's legacy, this research follows the idea of history as something indispensable and crucial for understanding heritage, and it projects it towards the future.

107 'SOS Brutalism', *SOS Brutalism* (2019) <http://www.sosbrutalism.org/> [accessed on April 25th, 2019].
108 Exhibition 'SOS Brutalism – Save the Concrete Monsters' from November 9th, 2017 until April 2nd, 2018 at the Deutsches Architekturmusem in Frankfurt am Mein, and from May 3rd, 2018 until August 6th, 2018 at the Architekturzentrum in Vienna.
109 'Tu było, tu stało – zachowujemy od niepamięci'.
110 Beata Chomątowska, *Betonia* (Wołowiec: Wydawnictwo Czarne, 2018), pp. 40-41.
111 *Robin Hood Gardens Re-Visions*.
112 Michael Spens, 'AR Critique 1980-1995', in *The Recovery of the Modern: Architectural Review 1980-1995*, ed. by Michael Spens (Oxford: Butterworth Architecture, 1996), p. 23.



methodology

great images have both a history and a prehistory; they are always a blend of memory and legend. [...] it is not until late in life that we really revere an image, when we discover that its roots plunge well beyond the history that is fixed in our memories

– Gaston Bachelard[1]

With these words from *The Poetics of Space* (1964), Gaston Bachelard explains the imagery of a house as a part of a larger discussion linked to the issues of dwelling and history. In his text, he alludes often to dreams, images, and almost legendary aspects of a house, of its characteristics, and of its primal role and beauty. Throughout such a discussion on dwellings, the past, the present, and the future interchange and interfere. As Bachelard put it in the introduction to its first edition, "the distant past resounds with echoes, and it is hard to know at what depth these echoes will reverberate and die anyway".[2] Whereas these ideas are aligned with Sołtan's theory – especially with the concept of the "grassroots" architecture (Chapter 7) – and teaching – as Bachelard's text was one of the core readings for his architecture students (Chapter 8) – they also explain the theoretical grounding of this thesis approach. They dwell on the idea of a history having a direct connection with prehistory: with legends and myths, with dreams and images. Even further, Bachelard claims that history, if connected to its own roots, has far greater significance and meaning. Similar ideas were followed later by other scholars, such as Julia Robinson, who underlines that "the discipline of architecture must develop out of its roots; the already existing tacit knowledge is a sound basis for action, but, if supplemented by the development of explicit architectural knowledge, both scientific and mythopoetic, it will be far more powerful".[3] A legend – a myth – in architecture is crucial due to the embodiment of myths present in a given society at a certain time. Moreover, such a mythical side of architecture is, according to Robinson, crucial for the understanding of its own integrity. She adds that in architectural research, in order to understand the reasons behind designs and buildings, one has indeed to look not only for rational explanations, but also for the mythical ones. Both concern different aspects of the same issue and together they deliver a more complete image. Following the idea of the myth, the chapter explains how this architectural research has roots in both mythical and rational elements, and it aims to analyse the relation between them in order to establish methods to present an interdisciplinary humanities approach to architectural research.

Within the research into modern architecture history and heritage, and more specifically, within the search for Jerzy Sołtan's legacy, through the mode of history and conservation approaches to modern architecture, it has been important from the very beginning that methods used should not limit the possible conclusions, making thus the results partial and much more incomplete. Therefore, the main question this chapter aims to answer is: how can we research modern architecture in order to understand its legacy? The preliminary part explains the theoretical position and the reasons standing behind an approach that includes mixed methods. Secondly, it analyses the methods used, explaining their limitations and benefits, pointing to the transitive value of the method to be applied more widely in architectural research. Finally, it explains and analyses the process followed during the research.

following the myth

Bachelard's, Robinson's, and others' ideas individuate the mythical description of architecture as "continuous, holistic, divergent and generative".[4] Considering architectural research as a myth prioritises its subjectivity, and while a researcher interacts with what is being researched, the entire process is inductive. Such an attitude seems to be particularly relevant in the case of Sołtan's legacy. From the start the research did not want to preclude at the beginning any elements from consideration, aiming for the concept of legacy and heritage to be flexible enough to include various elements, such as design, built architecture, theory and teaching, although the importance of each one of them was only conjectured, and the balance between them had to be adaptable. The very research question does not give in fact more importance to one over another. Such flexibility of the research question implies flexibility of the methodological approaches. Ascertaining Sołtan's legacy requires a mixed methods approach enabling counter-verification of data and reaching more elaborate conclusions.

Such a mixed method approach, particularly the use of oral histories, remains indeed at the very origin of history, at the very grassroots of it. If one examines the work of Herodotus or Thucydides, it becomes immediately clear

1 Gaston Bachelard, *The Poetics of Space*, 2nd edn (Boston: Beacon Press, 1994), p. 33.
2 Bachelard, p. xvi.
3 Julia Robinson, 'Architectural Research: Incorporating Myth and Science', *Journal of Architectural Education*, 44 (1990), 20-32 (p. 31).
4 Linda N. Groat and David Wang, *Architectural Research Methods*, 2nd edn (Hoboken: Wiley, 2013), p. 68.

that Herodotus used several methods – personal observation, oral hearsay, literary sources, and documents,[5] giving much attention to the qualitative approach. Modern historians underline for example the weight of oral testimonies gathered by Herodotus, as he quoted inhabitants of around forty Greek city-states and almost the same number of foreign countries. Due to the importance of others' accounts, one may claim that in his work, "oral evidence was paramount" and written sources were less important.[6] Actually, such an approach was linked to the fact that in ancient Greece, oral traditions were much more developed than we may appreciate them today. Epic poems such as *Iliad* and *Odyssey*, associated with Homer, come from this very oral tradition. Huge interest and the civic importance of debates in the life of a *polis* was crucial for citizens, and it could have influenced the role of oral accounts in Herodotus's work.[7] As a result, the oral account, together with his own experiences and travels, lies at the core of his work. His travels across the Mediterranean to many countries "cannot be equalled in the centuries to come",[8] and his direct accounts of foreign lands were thus a reference for many. In his approach, "the object of all travelling was to learn, and it was the spirit of inquiry, revealed in a hundred passages, which gave 'history' its modern meaning".[9] Similarly, Thucydides was cross-analysing many methods: personal observation, written documents and inquiries with others. Whereas it is not clear, as in the case of Herodotus, where specific information was coming from, one may recognise however that his approach was focussed on the synthesis of different sources and the disputable claim to be objective – or at least closer to objectivity.[10] According to the Enlightenment philosopher David Hume, it was "the beginning of all true history".[11]

The example of the ancient historians brings attention to the fact that the later distrust in qualitative methods was not proper to early history. It strengthened mainly due to the positivist thought that appeared in the nineteenth century and was much more favourable towards written words than towards oral traditions. Some modern historians have become somehow fixated with archival and document-based research and they misjudge interviewing as unworthy and a less reliable method of gaining information.[12] However, since the Second World War, we are starting to recognise once again that oral histories are a valid method of historical research, which is "compatible with scholarly standards" with new emerging pieces of scholarship related specifically to architecture, like discussed by Janina Gosseye, Naomi Stead, and Deborah van der Plaat (2019).[13]

In Antiquity, the first historians had to cope with something new, with something raw that had yet to be defined. Their history was mainly experience-based – they had no rules to obey, and their approach was coming from their own consciousness and will to narrate history. They had no professional code to respect. In Herodotus's case, the interest in creating narratives was determining for his research. His history was often compared to narration and it was called a "succession of pictures of historical or quasi-historical events and episodes".[14] Thanks to such narratives, he was able to explain and to describe something new and emerging. Through these narratives it was possible to explore and explain a new subject. Whereas for Herodotus and Thucydides the very subject of history was something new, nowadays too, the issue of modern and contemporary architecture is aimed at building a narrative around something, which is evolving and still is under construction. Many critics indeed claim that modern architecture as a period has not yet ended and that therefore it still has a huge impact on us (Chapter 3). Modern architecture research, as in case of the earliest historical studies, deals with something complex, complicated, and probably still changing. To research modern architecture following a similar narrative-based approach and more complex questioning means to understand something new – to better understand its underlying theories, ideas, and designs. Similar to the ancient Greek historians, modern architecture is very much linked to contemporary questions and to the understanding of their complex realities. Herodotus' history was an account of his contemporary nations, countries, and cities: it was an image of the world contemporary to his own lifetime. Modern architecture – still a recent phenomenon in the lifespan of humanity – has a similarly continuous influence on today's world. To research its history means looking at realities, ideas, and narratives.

To understand the complexity of modern architecture, it seems therefore that one has to go back to the grassroots of historical research. Following the idea of Bachelard's legend or myth, the thesis aims to recognise the initial approaches to history, recognising not only 'facts', but also "facts of imagination" as memories of the past events.[15] It is insufficient to study the material buildings and archival documents surviving until today. It is also important to understand the underlying logic and ideals that made them to be, through the direct testimonies gleaned from oral histories. Therefore, the research aims to study modern architecture through a cross-analysis and comparisons between different types of data: archival documents, collections of oral histories, and material studies.

methodology – reasons behind interdisciplinary methods

archives – between the pathos and the bias

Archives do inspire and they undoubtedly continue to attract attention since the creation of the oldest public archive, the Archives Nationales in Paris in 1790. One may refer for instance to the recent financial problems of privately owned yet publicly accessible Archivi Alinari in Florence – a rich and the oldest-in-the-world repository of historical photographs founded in 1852. The threat of selling their collection via auction into private hands, has urged the local authorities to buy it and to guarantee its continuity and public access. In the commentary to the authorities' decision, they stated, "we will save a historical institution of enormous importance and we will try to give it a future".[16] Through this action, it seems clear that what was electrifying in the archives in the nineteenth century – the will to create and to reinforce nations' identities relating closely to the etymology of the word, Greek "*arkheia*" meaning "public records" – is still a clearly visible aspect of archival collections.[17] They should be still considered as a sanctum of identity and memory of a nation. In this sense, archives may be considered a cornerstone of heritage, which contribute and are necessary to define and consolidate a community's identity. As such, it appears as an obvious resource to study the past. Indeed, some researchers claim, "behind all scholarly research stands archive".[18] The archives of the Cité d'Architecture in Paris for instance are claimed to have played an important role in the definition of modern heritage, while their collection remains accessible for teachers from architecture schools for educational purposes.[19] In this manner, the archives and the research work based on their collections continue to have influence on the very education of new generations of architects.

Moreover, some researchers underline the specificity of the archives, claiming that the fact of working there influences research reliability, referring to the fact that history has "placed a premium on archival credibility".[20] What is found in the archives or what is concluded through the archives seems to be easily accepted as well-founded data or ideas. However, it is important to note, "the archive is the potential place of discovery, yet this discovery, the constitution of significant facts, or historical events, depends upon the contingent status of the fragments that found their way into the archive, while much of the everyday life from which it arose as imperfect recordings, lies destroyed or at best undiscovered".[21] This idea deconstructs the concept of archives as the place of ultimate knowledge and objectivity. The very constitution of an archive presupposes selection and cataloguing of its collections. One may argue therefore that there is "an almost infinite number of collections to be gathered",[22] and the budget, physical space, and computer storage are an important practical issue in determining whether some materials are accepted or not into repositories. This underlines also that while one may criticise archives for being partial, it is simply impossible to include and to represent the entire reality of the past. It is clear also in Sołtan's case – for instance the Harvard Graduate School of Design archives and the Museum of the Fine Arts Academy in Warsaw do not hold the complete records of Sołtan's activity, as part of materials concerning Sołtan's work is kept by his relatives – those documents were not taken to the archives in Warsaw nor in Cambridge, and at present, they are not publicly accessible.

5 Michael Grant, *The Ancient Historians* (London: Wiedenfeld and Nicolson, 1970), p. 62.
6 Grant, p. 63.
7 Geoffrey E. R. Lloyd, *The Ideals of Inquiry: An Ancient History* (Oxford: Oxford Scholarship Online, 2014), p. 137.
8 Grant, p. 61.
9 Grant, p. 59.
10 Actually, both Herodotus and Thucydides were not objective in their research. Herodotus was referring to mythical creatures in distant lands and he was relying extensively on hearsay. Thucydides on the other hand was using the historical account for political purposes and his account was often willingly biased, see: Grant, pp. 64, 121-122.
11 Grant, p. 121.
12 Jody Miller and Barry Glassner, 'The "inside" and the "outside" – Finding realities in interviews', in *Qualitative research: Theory, Method and Practice*, ed. by David Sherman, 2nd edn (London: Sage Publications, 2004), p. 125.
13 Paul Thompson, 'Voice of the past', in *The Oral History Reader*, ed. by Robert Perks and Alistair Thomson, 2nd edn (London: Routledge, 2006), p. 26. For more recent attention given to oral histories in architectural research, see: Janina Gosseye, Naomi Stead, and Deborah van der Plaat, *Speaking of Buildings: Oral History in Architectural Research* (Hudson: Princeton Architectural Press, 2019).
14 Grant, p. 60.
15 Bachelard, p. 116.
16 Lisa Ciardi, 'Archivio Alinari, pronti 14 milioni', *La Nazione*, 3 October 2019 <https://www.lanazione.it/firenze/cronaca/alinari-mibac-toscana-1.4816313> [accessed on December 11th, 2019]. Translation from Italian (SR).
17 Mike Featherstone, 'Archiving cultures', *British Journal of Sociology*, 51 (2000), 161-184 (p. 168).
18 Mike Featherstone, 'Archive', *Theory, Culture & Society*, 23 (2006), 591-596 (p. 591).
19 David Peyceré, 'Le centre d'archives d'architecture du XXe siècle', *Sociétés et Représentations*, 30 (2010), 181-193 (p. 192).
20 Featherstone, 'Archiving cultures', p. 169.
21 Featherstone, 'Archive', p. 594.
22 Peyceré, p. 193. Translation from French (SR).

Through this example, it is worth underlining here that "the silences and the absences of the documents always speak"[23] to the historian: they are a proof of what was considered worth remembering (or what is less pressing to become part of the archives) at the time of their creation. Archival research must not only take into consideration the physical and financial limitations of the archives, but also the underlying ideology behind them. As the first public archives were created at the time when new nations were being formed or needed stronger identity, the agenda of those institutions was closely linked to such social and political context. The very act of archiving may be then seen as a result of the context and its influence, and therefore "archives are not just a collection of historical records; they are active in constructing meanings that depend upon the power-laden interplay of past and present frames of interpretation". Such an idea presupposes a strong bias that the archives are susceptible to – as for example the records held by the Fine Arts Academy in Warsaw from the era of socialist realism (1949-1956) in communist Poland. The archives may thus be used "as prosthetic memory devices for the re-construction of identity, to invent a place to be at home".[24] It leads to the idea that archives are not only partial, but also subversive, and as such, they should be considered as "manufacturers of memory and not merely the guardians of it".[25]

However, it is important to understand that not only the archives as an institution may be biased, but also the very documents and collections that they are holding. As Alistair Thomson states, "every historical source – a legal transcript, a probate record of life story – is shaped by narrative conventions".[26] Archival documents, whether letters, transcripts, notes or drawings, should be analysed considering the possible audiences and author's perspective. To understand their bias, one has to identify whom they talk to, to understand an author's judgment, theoretical positioning, and their use of rhetorical devices. In the case of Sołtan, it is important to consider for instance the bias of the censorship even in personal letters in communist Poland or in the prisoner of war camp in which he was interned in Nazi Germany during the war. Moreover, one has to refer to the changing meaning of the code – whether written or graphic – as it may change throughout time. When reading texts coming from communist Poland, and especially from the socialist realist period, one must be aware that the era influenced the language considerably and a number of words had a specific meaning when used in public. For instance, the word "righteous" in addition to its normal meaning of "morally correct",[27] in the public sphere very often commonly refers in Poland also to 'aligned with the official communist ideology'. Similar shifts in the meaning should be also considered when analysing graphic documents, as they refer to the conventions of a given time.

These considerations on the limitations of the archives and the apparent objectivity that actually results being equally biased as other sources, has led researchers to question the absolute authority of archival research. Indeed, "driven by the influences from linguistic and cultural studies, scholars have since the 1970s questioned the dominant modes of historical research and writing".[28] The interest in other approaches coincides with the previously mentioned origin of historical research based on various methods, including interviews and observation. In addition to the shift in the perception of the archives, the interest in understanding underlying mechanisms and tendencies within history makes it difficult to base such knowledge on archival data. The very structure of archival records is focussed on details: "archive reason is a kind of reason which is concerned with detail, it constantly directs us away from the big generalisation, down into the particularity and singularity of the event".[29] This focus on details and a simultaneous driving of attention away from the bigger picture suggests that archival data should be used together with other methods. The lack of certain knowledge and incompleteness of the archives therefore should be seen "not as an impediment, but rather as an opportunity".[30] It leaves more space for integration of such information with data coming from other sources and conclusions synthesised from cross-analysis of different research methods results: hence the need to complete the lacking information and to balance the archive bias through both direct testimonies and material studies interpretation conducted during the research.

23 Carolyn Steedman, *Dust* (Manchester: Manchester University Press, 2001), p. 151.
24 Featherstone, p. 594.
25 Richard Harvey Brown and Beth Davis-Brown, 'The making of memory: the politics of archives, libraries and museums in the construction of national consciousness', *History of the Human Sciences*, 11 (1998), 17-32 (p. 22).
26 Alistair Thomson, 'Life Stories and Historical Analysis', in *Research Methods for History*, ed. by Simon Gunn and Lucy Faire (Edinburgh: Edinburgh University Press, 2012), p. 111.
27 'Righteous', *Cambridge Dictionary* (2021) <https://dictionary.cambridge.org/dictionary/english/righteous> [accessed on June 10th, 2021].
28 Michelle T. King, 'Working With/In the Archives', in *Research Methods for History*, p. 16.
29 Featherstone, 'Archiving cultures', p. 161.
30 Francesca P. L. Moore, 'Tales from the archive: methodology and ethical issues in historical geography research', *Area*, 42 (2010), 262-270 (p. 263).

Oral histories actually form a symbiotic relation with archival research, as they provide different types of understanding and information. Whereas some claim that "oral evidence makes it possible to escape from some of the deficiencies of the documentary record",[31] and treat them only as an addendum to the solid documentary work done based on more trustworthy sources, their role seems to be more important. Of course, one aspect of the oral histories is to complete the archival records, their faults and voids as "the more personal, local, and unofficial a document, the less likely it was to survive".[32] Especially in a reality as the communist Poland of the 1950s, where the political and cultural agenda was dominated by the authorities' propaganda based on socialist realism, the objectivity of the archival records and the integrity of them may be easily argued. The heavy political pressure of that time on the world of culture and the attempts to ostracise modern architecture could have influenced heavily the choice of which documents should be conserved or not during that time. In such cases, oral histories help to uncover the unofficial account of history and they help to preserve and to know formerly politically oppressed ideas. However, in even more recent and open situations, interviews may still unveil a different perception of reality. In a recent study amongst inhabitants of the suburban areas of Helsinki on their life in modern housing, their testimonies showed a perspective much different from how it was presented in the media.[33]

Other important characteristics of oral histories lie in their narrative aspect: they are more about understanding than knowing. Coming back to Edward Carr's idea of a historian fishing facts within an ocean, one may argue that whereas archival data is the actual fish that is being caught, oral history is what afterwards enables to cook a tasty *bouillabaisse*. Steinar Kvale draws a less culinary comparison – he calls the interviewer a traveller who gathers experiences through journeys, and through talking to various people without producing new knowledge, induces a process of understanding.[34] Thanks to oral histories, it is easier to understand often complex processes within history, architecture or other disciplines, at the same time when archival research mostly provides separate jigsaw puzzle elements. Thanks to the narrative aspect of oral histories, those single elements may be related one to another and patterns may be drawn. Through this pattern drawing and better understanding, the crucial aspect of interviews lies within making meaning of the facts or providing clues on the relation between the past and the present.[35] Actually, one may state that "the first thing that makes oral history different, is that it tells us less about events than about their meaning".[36] And even if these considerations are made by historians or geographers who are not interested in architecture, the very same applies to research in architectural history. A recent research project including a series of interviews with Italian architects from the 1960s and 1970s has shown that oral history may be treated as a way to question incomplete study of a given period. Silvia Micheli claims that "this unsettled the very foundations of the existing historiography and obliged researchers to find new interpretations", and she refers to the oral history project as giving "a complete picture".[37] The same study shows also that even if interviews may be local and refer to particular aspects of the past, they may point to similar general qualities. Micheli called the project "an extraordinary network of subjective histories, converging on the same cultural ground".[38]

However, one should look critically at data gathered through oral histories. Their narrative aspect makes it possible to better understand the context and the meaning of facts, but one may rightly argue that what they in fact illustrate, is the meaning of facts according to the interviewee: they are not about the truth, but about what is true to them. Studs Terkel underlines that it is impossible for people to tell the truth during interviews: he calls the very concept of truth an abstraction.[39] Instead, the information one gets is influenced by someone's subjective opinions, views, and memories. Alessandro Portelli builds on this idea claiming that an interviewer does not tell what they did, but what they thought to do.[40] Hence the criticism of oral histories by many researchers claiming that they are "partial, selective and purposeful"[41] and that they depend on the bias of both the interviewee and the interviewer. Others point to the fallacy of memory and the fact that the same event

31 Raphael Samuel, 'Local history and oral history', *History Workshop*, 1 (1976), 191-208 (p. 199).
32 Thompson, p. 27.
33 Kirsi Saarikangas, 'Sandboxes and Heavenly Dwellings', *Home Cultures*, 11 (2014), 33-64.
34 Steinar Kvale, *InterViews: an Introduction to Qualitative Research Interviewing* (London: SAGE Publications, 1996), p. 4.
35 James A. Holstein and Jaber F. Gubrium, 'The active interview', in *Qualitative research: Theory, Method and Practive*, p. 143.
36 Alessandro Portelli, 'What makes oral history different', in *The Oral History Reader*, p. 36.
37 Silvia Micheli, 'Reassessing 1960s and 1970s Italian Architecture', *The Journal of the Society of Architectural Historians, Australia and New Zealand*, 24 (2014), 198-213 (pp. 210-211).
38 Micheli, p. 199.
39 Studs Terkel and Tony Parker, 'Interviewing an interviewer', in *The Oral History Reader*, p. 125.
40 Portelli, p. 36.
41 Thomson, p. 103.

described by the same person will appear very differently over the years. In a study by Fred Allison interviewing Vietnam War veterans over time, he observed that whereas early interviews were mainly "disjointed, narrow and excruciatingly detailed" descriptions, the later ones were taking forms of an "understandable story, with a beginning, middle and end".[42] He analysed those results claiming that people tend to give context and logics to their account over time through a process Charlotte Linde describes as the "creation of coherence".[43] It suggests that any retrospective interview cannot be taken as a faithful representation of the reality, and it is biased by the experiences made by the interviewee between the moment the story was taking place and the very moment of the interview. It is connected to the desire to tell a story – as it was in the case of Herodotus. An interviewer may want to be a good storyteller and may want the history to be interesting for the listeners, and in such cases narrative takes over the reality and the rules of storytelling take over objectivity. All those limitations to the objectivity of oral histories suggest that, similar to archival research, they cannot constitute a research methodology on their own.

material culture – working with the buildings

Whereas while writing about oral histories Thomson claims, "our first duty as historians is to hear those found stories and understand what they meant in their own time",[44] we can apply this assumption to architecture. Arguably, one may state that our first duty as architects and architectural historians is to hear the buildings and to understand what they meant in their own time – and to preserve the best of them. Similar to listening while interviewing, it is impossible to write architectural history without listening to buildings themselves. They too have stories to tell about past events, experiences, their inhabitants, long gone traditions and construction methods, lifestyles, social structures, political contexts, and many others. Buildings can actually be considered as "emblems for larger stories of social and political relationships",[45] as living testimonies of the past, of the ambitions and aspirations for the future.[46]

Carl Lounsbury describes buildings as storytellers who have their own implications on – and meanings through – the context. He adds, "most buildings have multiple meanings. We can think of them abstractly, as ideas, symbols, or elaborations of our imaginations".[47] In architecture, such meanings and interpretations are more than common. Some themes and symbols penetrate buildings and they continue to be renewed. One may refer to the inspiration of the first early Christian basilicas by the Roman ones. Roman basilicas, with the first ones dating back to the age of the Republic, were public buildings with no religious connotations, and therefore they were more convenient for the early Christianity to be taken as a model, rather than pagan temples.[48] The very same model has been repeatedly used in churches since then, and the very word "basilica" has today a different meaning. Buildings however are not only manifestations of inspirations and meanings, but also symbols and illustrations of theories. One may refer to Unité d'Habitation as the first built example of Le Corbusier's ideas expressed within *La Ville Radieuse* (even if reduced when compared to the theoretical concept) and similarly, some designs of Sołtan, such as the 1958 EXPO pavilion, are themselves statements of his architectural and artistic creed concerning the unity of various artistic disciplines (Chapter 9). These examples indicate that the relation between the buildings and the context is very much iterative. Not only the buildings influence the context, but also the context influences the buildings.[49] On one hand, recent anthropology studies show that social and cultural context is crucial to understanding buildings and its influence is bigger than mere functions, materials and technology.[50] However, on the other hand, "material things index the human productive activity that went into them", meaning that buildings make it possible to understand their context better.[51] It requires thus a continuous back-and-forth movement between understanding of the context and the analysis of the buildings and their observations, and one influences another, making the research a cyclical and non-linear process. One may also point to the ambiguity and malleability of material culture studies applied to buildings and architecture. Lounsbury refers for example to shaping a new reading of the architectural reality of Santa Fe,

42 Fred H. Allison, 'Remembering a Vietnam war firefight – Changing perspective over a time', in *The Oral History Reader*, p. 223.
43 Allison, p. 226.
44 Thomson, p. 101.
45 Jo Guldi, 'Landscape and Place', in *Research Methods for History*, p. 71.
46 Carl E. Lounsbury, 'Architecture and cultural history', in *The Oxford Handbook of Material Culture*, ed. by Mary C. Beaudry and Dan Hicks, (Oxford: Oxford University Press, 2010), p. 484.
47 Lounsbury, p. 484.
48 Richard Krautheimer, *Early Christian and Byzantine Architecture*, 3rd edn (Harmondsworth: Penguin Books, 1979), pp. 40-42.
49 Marvin Trachtenberg and Isabelle Hyman, *Architecture: From Pre-history to Postmodernism* (New York: Prentice Hall, 1986), p. 41.
50 Lounsbury, p. 489.
51 Webb Keane, 'Subjects and Objects', in *Handbook of Material Culture*, ed. by Christopher Tilley, Webb Keane, Susanne Küchler, Michael Rowlands and Patricia Spyer (London: SAGE Publications, 2006), p. 201.

ARCHIVE	APPROX. NUMBER OF DOCUMENTS (1)	TYPE OF DOCUMENTS	RESEARCH-RELATED INFORMATION
Fondation Le Corbusier, Paris	110	articles, correspondence, design-related texts, notes	context, theory
Archives of the Institute for the History and Theory of Architecture (GTA), Zurich	75	articles, correspondence, notes	context, theory
Museum of the Fine Arts Academy, Warsaw	1465	articles, correspondence, design-related texts, drawings, notes, photographs, press	context, design, teaching, theory
Institute of Art of the Polish Academy of Sciences, Warsaw	60	correspondence, drawings, press, teaching materials	context, design, teaching, theory
Archives of the Fine Arts Academy, Warsaw	75	articles, correspondence, notes	context, teaching, theory
Harvard Special Collections, Cambridge	590	articles, correspondence, drawings, notes, photographs, negative slides, teaching materials	context, design, teaching, theory
Sołtan family private collection	140	audio recordings, design-related texts, drawings, photographs, teaching materials	design, teaching, theory
Archives of Het Nieuwe Instituut, Rotterdam	75	articles, audio recordings, correspondence, notes	context, theory
Archives of the Mediterranean Garden Society, Athens	55	photographs	design
Archives of the American Institute of Architects, Washington DC	15	correspondence	teaching
(1) multiple-page documents counted as one			
NB. Additional documents have been retrievd from private collections of Marleen Kay Davis, Umberto Guarracino, Thomas Holtz, Simon Smithson, Anne Wattenberg, and Richard Wesley			

ill. 2.1 (chapter cover) - model photograph of the Berlin Museum of Art by Jerzy Sołtan
ill. 2.2 - approximative identification of the archival materials directly related to Jerzy Sołtan's work collected and analysed during the research
ill. 2.3 - mapping of the organised interviews in relationship to Jerzy Sołtan's work, showing that majority of the interviews were related to his teaching activity at Harvard

New Mexico, as coming from a long-lasting tradition of fusion between indigenous and Hispanic traditions.[52] Analysis based on material buildings only would be also incomplete and therefore, similarly to archival data and oral histories, material cultures studies in architecture have their own flaws and may deliver a biased and incomplete image, which is illustrated in the analysis of the research process.

methods and research process

Following previous considerations, the research process is initiated with archival and bibliographical research, which provides raw data necessary to frame oral histories interviews and material culture analysis. Through analysing the research process, the aim of this part is to illustrate and analyse the challenges and solutions given by the methodological approach, which makes connections between different types of information and to provide a relevant and critically analysed data for the research

The archival research concentrates on several institutions in Poland, in the United States, in France, in Switzerland, and in the Netherlands, giving insight into Sołtan's teaching, designs, and theory, with two main sites: Warsaw and Massachusetts. In Warsaw, the Archives of the Fine Arts Academy, and the collections of the Institute of Art of the Polish Academy of Sciences held some official documents concerning Sołtan's teaching activities and changes to the curriculum in the school, whereas the Museum of the Fine Arts Academy holds in their collections drawings and photographs of designs developed within the Workshops, as well as Sołtan's personal correspondence and writings. In Massachusetts, Harvard Special Collections holds information on Sołtan's teaching at the GSD, including teaching programmes, assignment briefs, student lists, and examples of student works, but also slides used by Sołtan for lectures, personal writings, and correspondence, whereas drawings and photographs of designs developed after Sołtan's departure from Poland are kept in a private family archive. Additional institutions proved to be necessary to understand the context to Sołtan's work: Fondation Le Corbusier in Paris holds in their collections his correspondence with Le Corbusier and information on his involvement in the atelier, archives of the Institute for the History and Theory of Architecture in Zurich give insight into Sołtan's involvement in CIAM and its reorganisation, whereas the New Institute (Het Nieuwe Instituut) in Rotterdam holds documents concerning Sołtan's involvement in Team 10. Due to the ample extent of archival materials, and lack cataloguing in some of the institutions (for example written documents in the Museum of the Fine Arts Academy), the activity within the archives concentrated mainly on acquiring documents and cataloguing them for research purposes, developing an autonomous archiving system, which was applied to all documents.[53] Thanks to this approach, it was possible to acquire extensive archival documentation, making it possible to cross-analyse easily acquired documents at later stages. Following the acquisition, the management of the amount of data required to flag them with key words and key names, aiming to facilitate further research through a spreadsheet.[54] Followingly, the analysis of the documents was developed in a typed text, one per archive institution, which made it possible to retrieve necessary materials for the later stages. This system, although mechanical at the very beginning, made it possible to navigate easily within the vast number of documents collected in different institutions in later stages, becoming the crucial element in the management of collected data during the research (reaching over two thousand and five hundred different drawings, photographs, and texts, ill. 2.2). As a result, this data was fundamental to analysis regarding the context (Chapter 4), Sołtan's theory and his own reading of modern architecture (Chapters 3, 6, and 7), and in analysing Sołtan's designs (Chapters 9 and 10). It was also important in analysing his teaching (Chapter 8).

Using this basis as a foundation, archival and bibliographical research data was used to prepare oral history interviews and to identify participants. The empirically structured process was based on the experience from previous research, where a selection of 'specialist' participants were interviewed, and the interviews were followingly transcribed and validated.[55] Following a similar logic, the process was interested in specialist-type of knowledge, aiming for co-workers, colleagues, and students, without considering the present-day users, a choice dictated by experience and lower interest of such category to participate. The participants were identified firstly though through bibliographical information (information on co-workers, memories and articles mentioning

52 Lounsbury, p. 500.

53 The system follows the pattern A-T-NNN-YYYY, where "A" stands for identification of a specific archive institution (for example "M" for the Museum of the Fine Arts Academy), "T" for a type of a document (for example "L" for letters and correspondence, "A" for articles), "NNN" for the unique number of the document, and "YYYY" for the year it comes from. For example, "H-L-003-1976" would refer to a letter from Harvard Special Collections, third in cataloguing order, and coming from 1976. For consistency, the same system was applied to the documents, which had been catalogued following each archives' specific system, keeping however the original reference.

54 Each document, with its specific catalogue number, was classified indicating the themes it dealt with, designs it regarded, and people mentioned in it. The spreadsheet remained a fast manner of navigation and information identification tool during the process.

55 Interviews aimed to reconstruct the history and to analyse Alvar Aalto's unbuilt design for a cultural centre in the fortress of Siena, Italy, see: Szymon Ruszczewski, *The Finn, the Fortress and the Old City* (Siena: Nuova Immagine, 2017).

Warszawianka Sporting Centre, Warsaw (1954-1972)

Raymond Elementary School, Brockton (1972-1976)

'Wenecja' Bar, Warsaw (1959-1961)

Davis Elementary School, Brockton (1972-1976)

Warsaw Midtown Railway Station, Warsaw (1960-1962)

Carney Academy Elementary School, New Bedford (1975-1976)

Jaqueline Tyrwhitt House, Sparoza (1963)

Hayden-McFadden Elementary School, New Bedford (1975-1976)

Salem High School, Salem (1970-1976)

Breed Middle School, Lynn (1977)

ill. 2.4 - illustration of the visited and directly analysed existing buildings by Jerzy Sołtan, to be compared to ill. 11.2 with all of the existing buildings, showing a variety of examples coming from different periods of work

Sołtan) and then through archival data (student lists, correspondence, and assignments), but at a later stage, some contacts were initiated by previous interviews.[56] Through different sources and connections, a list of nearly two hundred potential interviewees was established, with a clear majority of former students from Harvard Graduate School of Design (one hundred and seventy-six). They were gradually approached, based on considerations including diversity (different courses attended, different years and levels of study, different backgrounds) and potential specific knowledge (involvement in a specific design, attendance of a specific course, potential connections with later professional or pedagogical activity, ill. 2.3). Out of fifty-two potential participants approached, twenty-six resulted in recorded interviews, four released written statements, fourteen declared availability and participated in an informal conversation, two refused to be interviewed pledging lack of sufficient information, and six did not answer, with the positive answer rate at 85%, suggesting huge interest. The participants were contacted first – if possible – by phone in order to establish a closer relationship, and in other situations via email or social media.[57] This was suggested by the positive outcome of the previous research, during which direct communication on the phone was appreciated by the participants, some of which were not accustomed to the use of computers.

The content of the interviews included information regarding the context, Sołtan's teaching, his vision of architecture, and some of his designs based on the involvement of the participants in the design process. In order to prepare for these, prior to the interview, relevant archival information was studied in order to prepare a draft version of questions, which then were non rigidly followed during the conversation, open to changes based on the unforeseen contents.[58] During this preparation phase, Sołtan's texts on his reading of modern architecture, theory, and comments to his own design work were of prime importance, as well as drawings and teaching documents, such as briefs, assignments, and student papers from the Harvard archives. Together, they formed a framework to initiate conversations, to understand connections between these elements, and to interpret archival data in the light of the context. The interviews started with more specific questions to stimulate memories from the past – for example referring to a specific course, a specific assignment, and then moved to more general considerations, and letting the interviewees determine the direction of the conversation. In some cases, especially in case of face-to-face interviews, during the conversations the interviewees interacted with drawings and photographs of designs, some of which they had not known before, and in one case, an interview took place at the design site (interview with Edward Lyons was partially organised in Brockton in Massachusetts, where Sołtan designed two schools).[59] Given the natural and unexpected outcomes of some of the interviews, the following transcript validation proved to be an important phase of the process. After the interview, the relevant content was transcribed, removing significant signs of oral conversation and merging some pieces to assemble divided answers, aiming to improve clarity and readability without changing the content of the text, which was then sent for approval and amendments by the interviewees themselves.[60] Save for two exceptions due to personal issues, all the transcribed interviews were edited and returned to the researcher showing that the project not only met great interest amongst the participants, but also "awakened their sense of belonging" Micheli referred to in a similar project.[61] The transcriptions, assembled in a unified document, became also a useful tool to quickly identify information and to search for data much more effectively compared to audio recordings.[62] Due to the amendments and the audio quality of many interviews, the audio recordings – differently from the initially planned approach – will not be deposited in any archive, but in their stead, the transcripts along with a commentary and data statistics have been deposited at the Online Research Data at the University of Sheffield making them available for further researchers. For this research purpose, the interviews proved to be invaluable concerning the context of Sołtan's teaching and his teaching approach, which was not deducible from the archival documents. They proved to be much more important in analysing the legacy of his teaching (Chapter 8) and in analysing some of the designs (Chapters 9 and 10).

56 In particular, the initial identification of participants was possible thanks to the existing publication, *Jerzy Sołtan*, ed. by Jola Gola (Warsaw: Wydawnictwo Akademii Sztuk Pięknych, 1995), which served as the starting point for the research.
57 Telephone contact was favoured also as more accurate and certain to reach the right person.
58 Due to the 'specialist' aspect of knowledge of the interviewees, it would have been limiting to follow the previously established list of questions rigorously, losing the natural aspect of conversation.
59 Interview with Edward Lyons.
60 The approval was ethically an important aspect of the interview, as the questions were not all established before the conversation. Thanks to the possibility of amendments, the participants were able to clarify doubts, erase and modify information they were not comfortable with sharing, and add some additional information as a post-interview reflection.
61 Micheli, p. 206.
62 In case of the five interviews conducted in Polish, in the mother language of the interviewees, all the preparatory documents and consent were translated into Polish, the transcription was in Polish, and only the final edited version was faithfully translated.

Finally, thanks to the information gathered in the archives, especially drawings and text descriptions of the designs, it was possible to confront them with the present-day state of the buildings. During the research, it was possible to visit ten out of fifteen existing buildings (ill. 2.4) and to document their conservation level and grade of originality compared to the design through photographs and observations (the latter of which were written down and stored for further research development).[63] This provided a series of information, which was both practical (conservation, alterations, originality), but also empirical (experience of the concept, analysing the buildings against Sołtan's interests and ideas). For example, it was possible to document the decay of 'Warszawianka', but it was also possible to document and understand the relation of the Salem High School with the landscape. Together with other data sources, through cross-analysing the observations and photographs with drawings and theory texts, material culture analysis enabled to analyse Sołtan's design work and to understand its connection with his theory of architecture and to assess the state of conservation and the relevance of these buildings as a part of his legacy (Chapter 11).

on mixed methods, Sołtan, and beyond

The initial assumption that the research should be based on a mixed methods approach seems to be verified by the characteristics of these different approaches and through different types of data they provided for the research. Archival research, oral histories, and material culture studies brought different aspects to the research question, while at the same time they overlapped in some areas. The continuous relating of one to another – particular information found in the archives related to the interviews, or the buildings' layout related to the theoretical ideas expressed by the conference speeches, transcripts, and articles – enabled the triangulation of the facts and their interpretations in order to reach more complete and accurate conclusions. For example, whereas archival data provided basic information on Sołtan's contacts, teaching assignments, and designs, one can only understand the broader context and the atmosphere in a classroom through interviewing his former students, and the application of his theories into architecture by studying the buildings. It seems that defining and broader understanding of Sołtan's legacy was almost necessarily achieved through an integral and consistent synthesis of these three approaches. Whereas the connection to Bachelard and the idea of myth is close to Sołtan specifically, it is worth underlining that such an approach does not relate to himself or to modern architecture only. Certainly, it is impossible to conduct interviews where the interest goes further backwards in time, but arguably such a mixed methods approach is a well-balanced alternative to more single-minded approaches based on one of these methods only. The complexity of Sołtan's case, with the archival materials and oral history participants scattered around the world, makes it genuinely adaptable to more local and reduced case studies. Such an approach therefore, aimed to analyse and evaluate a single architect's legacy as an example of larger processes within modern architecture – or within architecture in general – may be successfully proposed in other case studies, constituting an important part of the contribution of the present research.

63 Due to the international situation, it was necessary to cancel the travels and the visit of further five remaining building sites. Visited sites: 'Warszawianka' sporting centre, Warsaw; 'Wenecja' bar, Warsaw; Warsaw Midtown railway station, Warsaw; Jaqueline Tyrwhitt House, Sparoza; Salem High School, Salem; Raymond Elementary School, Brockton; Davis Elementary School, Brockton; Carney Academy Elementary School, New Bedford; Hayden-McFadden Elementary School, New Bedford; Breed Middle School, Lynn.

Sołtan and history of modern architecture

it [Sigfried Giedion's Space, Time and Architecture*] gained enormous popularity amongst architects in Western Europe, both Americas, and a huge part of Asia – and it is in the reading lists in architecture schools in many countries [...], and it seems that hours spent with his book may not only be interesting for many readers, but also fruitful for the development of architecture*

– Jerzy Sołtan[1]

Sigfried Giedion's publication was one of the first mid-twentieth-century histories of modern architecture yet it has remained, according to Panayotis Tournikiotis (1999), an influential text.[2] Even though its first edition is eighty years old, newer texts refer to it and they are the basis of formation for younger generations of architects and architectural historians. Together with others, Giedion's history has formed our common understanding of what could be called the 'canon of modern architecture'. Authors such as Leonardo Benevolo, Kenneth Frampton or William Curtis are still present in reading lists for architectural students and their ideas continue to influence young architects – even while emerging tendencies in the scholarship tend to open the discussion to new areas.

As an overview of today's discussion on modern architecture, this chapter sets out to answer the question: what is Jerzy Sołtan's place in, and his own reading of, modern architecture? The first section dwells on the relevance of key texts in understanding the canon of modern architecture. The following two sections concentrate on what is being discussed in modern architectural historiography, and how this discussion is delivered. Sołtan's place in modern architecture historiography is illustrated and analysed with precise examples based on the issues raised by the canon. Finally, using Sołtan's own texts, and in order to guarantee consistency of discussion, the chapter analyses his own reading of modern architecture and it proposes re-definition of the core terms connected to it.

studying the modern architecture canon

In 2019, during the workshop working on Alvar Aalto's ideas as part of the preparation of the candidature of his works for the UNESCO nomination list, the key problem of the discussion was to take a step backwards and to consider neither the so-called 'received knowledge' nor the stereotypical view of Aalto's ideas, but to study in their place his actual writings.[3] Understanding the canon of modern architecture puts one in front of a similar problem. Whereas in Aalto's case, the stereotypes converge around repeated slogans, such as "the little man" or "one millimetre module", in the case of modern architecture there are multiple positions and points of view making the very terms one uses ambiguous and unclear. However, similarly as during that workshop, the actual understanding of what is the state-of-scholarship in the discussion on modern architecture may be achieved throughout the texts and the key narratives that have been used as foundations for formation of new generations of architects. As such, these texts have had a crucial influence on the vision of modern architecture. An examination of the most influential histories would start with Tournikiotis' *Historiography of Modern Architecture*, whose critical study of the most influential modern history texts, including Henry-Russell Hitchcock, Nikolaus Pevsner, Giedion and others, is a selection based on their historical, social, and architectural dimensions, and on the continuous influence in education of new generations of architects.[4] However, even though his work is claimed to have given "more ambitious and useful than any other contribution to the field" with the succeeding works having "no chance of replacing it",[5] after twenty years of scholarship this now requires a broader analysis of texts that takes into consideration new tendencies and directions taken by modern architectural history. Some of those presented by Tournikiotis are still very influential and kept up-to-date – such as Benevolo, whose *Storia dell'architettura moderna* has reached its twenty-sixth edition and it includes examples of architecture from the last decade of the twentieth century. Other texts however, have not been recently rewritten: whereas Benevolo or Bruno Zevi were revised not more than fifteen years ago, Pevsner's and Reyner Banham's texts are almost fifty-years-old and do not take into account the subsequent criticism

1 Jerzy Sołtan's introduction to the first Polish edition of *Space, Time and Architecture*, see: Jerzy Sołtan, 'Przedmowa do wydania polskiego', in Sigfried Giedion, *Czas, przestrzeń i architektura*, trans. by Jerzy Olkiewicz (Warsaw: Państwowe Wydawnictwo Naukowe, 1968), pp. v, x. Translation from Polish (SR).
2 Panayotis Tournikiotis, *The Historiography of Modern Architecture* (Cambridge: MIT Press, 1999).
3 *Workshop 3: Aalto's Texts and Ideas*, ed. by Anni Vartola, proceedings of the 'Humanistic Modernism – Works by Alvar Aalto in the World Heritage Context' Seminar from October 9th-10th, 2019.
4 Tournikiotis, p. 3.
5 Macarena de la Vega de León, 'Historiography of Modern Architecture: Twenty-Five Years Later', *Athens Journal of Architecture*, 1 (2015), 97-110 (p. 109).

of modern architecture and the wake of postmodern. It surely compromises them as up-to-date readings for architecture students and their influence is lesser than thirty years ago when Tournikiotis was defending his doctoral thesis. Therefore – differently from his approach – this research takes into consideration especially the last editions of publications and examines the evolution of how the discourse on modern architecture is presented and of what examples are included. Moreover, it takes into consideration more recent texts, for instance such authors as Curtis, Frampton, Charles Jencks or Peter Blundell Jones, and it acknowledges the most recent tendencies in modern architecture scholarship.

being modern – how is the modern architecture canon changing?

In his *Modern Architecture*, Frampton criticises previous publications for being too Eurocentric[6] – however it is worth underlining that his and others' interest has never lain in the entirety of Europe. In fact, if one considers the focus of modern architecture histories throughout time, it is clear that they are centred on Western Europe and the United States. Many modern architecture histories are limited to that area, as in the case of Pevsner's *Pioneers of Modern Design* from 1975, or Blundell Jones' much more recent two-volume edition of *Modern Architecture through Case Studies* from 2002 and 2007. Similarly, Banham and Hitchcock follow the same direction, adding just a few examples from the URSS, Czechoslovakia, and Japan.

the Western origins of modern architecture

Of course, since modern architecture history was born in Western Europe, it is clearly Western Europe-centred. Amongst the authors of the first attempts to build a discourse around burgeoning modern architecture Anthony Vidler lists Adolf Behne, Adolf Platz, Giedion, Bruno Taut, Hitchcock, Walter Curt Behrendt, and Pevsner, all of whom were German or Swiss, with the exception of Hitchcock, who followed the trail laid by the others.[7] In his *International Style*, Hitchcock lists as the "masters" of modern architecture the Europeans: Walter Gropius, Mies van der Rohe, Le Corbusier, and Jacobus Oud. Similarly, in the first editions of one of the most influential histories of modern architecture, Giedion names only Gropius, Le Corbusier, and Mies. Only in the following editions, would he add the chapters on the work of Alvar Aalto and Jørn Utzon in order to illustrate new trends in modern architecture, moving away from the rigid functionalism of the first years.[8] More recently, development on modern architecture history shows the scholarship becoming more interested also in other figures in countries like Germany, France or the Netherlands – in the very crib of modern architecture. In some cases, their work is included in the canonical histories of Curtis, Benevolo, Manfredo Tafuri or Frampton. The narration does not stop in fact with different generations of masters of modern architects, but becomes more inclusive. Architects from the Western countries who were previously omitted in architectural histories start to be included in the analysis. It may be for instance the case of Hugo Häring in Germany, Adalberto Libera in Italy or Marcel Lods in France.[9] Moreover, some publications give more space to such architects than to the canonically recognised ones. One may refer for instance to Edward Ford's analysis of architectural details of modern buildings. His *Details of Modern Architecture* (1990) includes a series of case studies of several architects and their work.[10] The choice is particularly interesting, as it includes the so-called masters, other modern architects, and those who operated at the early boundary between modern architecture and previous tendencies, such as Eliel Saarinen or Gunnar Asplund: a selection that seems to be impossible in Pevsner or Hitchcock. A similar approach may be also found in Blundell Jones' modern architecture history. He avoids using iconic buildings to illustrate the most important modern ideas, and therefore he concentrates again on other modern architects. For instance, while describing the Weißenhofsiedlung, he analyses all the buildings, while most of the modern architecture histories are limited to those by Le Corbusier and Mies. In a much more inclusive analysis of the area, Blundell Jones includes works of Adolf Rading, Josef Frank, Häring, Mart Stam, and Adolf Schneck who usually fade behind Gropius, Mies, Le Corbusier, and Oud. In addition to studying lesser-known figures of modern architecture – Sigurd Lewerentz and Jan Duiker – he also chooses as case studies lesser-known buildings or designs. For example, instead of choosing the Berlin Philharmonics among Hans Scharoun's buildings, Blundell Jones studies the unbuilt design for the National Theatre in Mannheim. Similarly, in the second volume from 2007, he includes works of such architects as Karljosef Schattner, Egon Eiermann, and Helmut Striffler. Following the same trend, lesser-known modern architecture figures in different countries become more studied in separate monographs – for instance in Finland it may be Erik Bryggman, and in Italy Emilio Isotta,[11] but there are numerous other examples showing the vivacity of modern architecture in Europe and in the United States. Alan Colquhoun's history of modern architecture may be an example of a broader narration that includes such architects in the general context. For example, while analysing Finnish architecture, he mentions apart from Aalto several other architects usually omitted in modern architecture histories.[12] However, his interest lies again mainly in Western Europe and America, leaving almost no space for modern architecture from elsewhere. In fact, the focus on these areas continues to persist even after modern architecture expanded around the world, even though some examples from other areas started to be included in the history books.

expansion of modern architecture

Expansion of modern architecture started initially with the expansion of work of Western European and American architects towards Africa, South America, Asia, and Australia. Due to Le Corbusier's work in Algeria and ATBAT's designs in Morocco, the first examples from Africa began to appear in the modern canon. A similar situation can be seen in India and present-day Bangladesh, with designs in Chandigarh, Ahmedabad, and Dhaka by Le Corbusier and Louis Kahn. These examples are analysed in the publications of most of the modern architecture historians – they are included in texts by Giedion, Curtis, Tafuri, Frampton, and Zevi. The contents of these publications, as far as architects and buildings are concerned, is illustrated in a series of maps showing countries whose architecture is discussed (ill. 3.2 to 3.15). An interesting situation may be observed in Latin America. Whereas the early editions of modern architecture histories concentrate mainly on Le Corbusier's urban designs for Brazil, Colombia, Argentina, and Uruguay, they also include Brazilian architects. Furthermore, in the most recent editions, they include other Latin American local architects from Mexico and Venezuela. Their work is mentioned in the most recent modern architecture histories by Zevi, Benevolo, Tafuri, Frampton, Curtis, and Richard Weston. As a result, architecture of Oscar Niemeyer, Lucio Costa, and Luis Barragán has since entered the modern architectural canon, and their work corresponds to what Frampton names "critical regionalism". It alludes to the formation of local tendencies in modern architecture – not in the vernacular sense, but referring to some national identity in several countries in Europe, both Americas and Asia.[13] However, the very idea of regionalism in culturally more remote areas was growing slowly. In 1977, Benevolo was describing local architecture in India, Syria, Iran, and Venezuela as "marginal" alluding to the illegal and precarious aspect of settlements, with no reference to the development of modern architecture. However, more recently, Colin Davies included in his history of modern architecture parts on Sri Lankan, Malaysian, Egyptian, Indian, and Saudi architects.[14] Following this path, separate studies in recent scholarship tend to evaluate the work of architects in countries considered as the outskirts of modern architecture, such as Chile, Colombia, Taiwan, India, Tanzania or Sri Lanka.[15] This tendency shows that modern architecture did not consist only of the 'incoming wave' of architects who worked in Europe and the United States and occasionally designed buildings beyond. The architectural canon and scholarship starts to be informed also by research on local – regional – architects who were influenced by the 'incoming wave', and created their own response at the backstage of the main discourse. It reveals that modern ideas penetrated more thoroughly in new areas creating "the other modern movement", as it was called by Frampton.[16]

the other modern Europe

As a part of the regionalisms in modern architecture, the example of Central and Eastern European countries is a particular case: it has been for a long time a dead-end. If one draws maps picturing the reach of architectural analysis of different countries' modern architecture, in most cases the countries of the communist bloc in

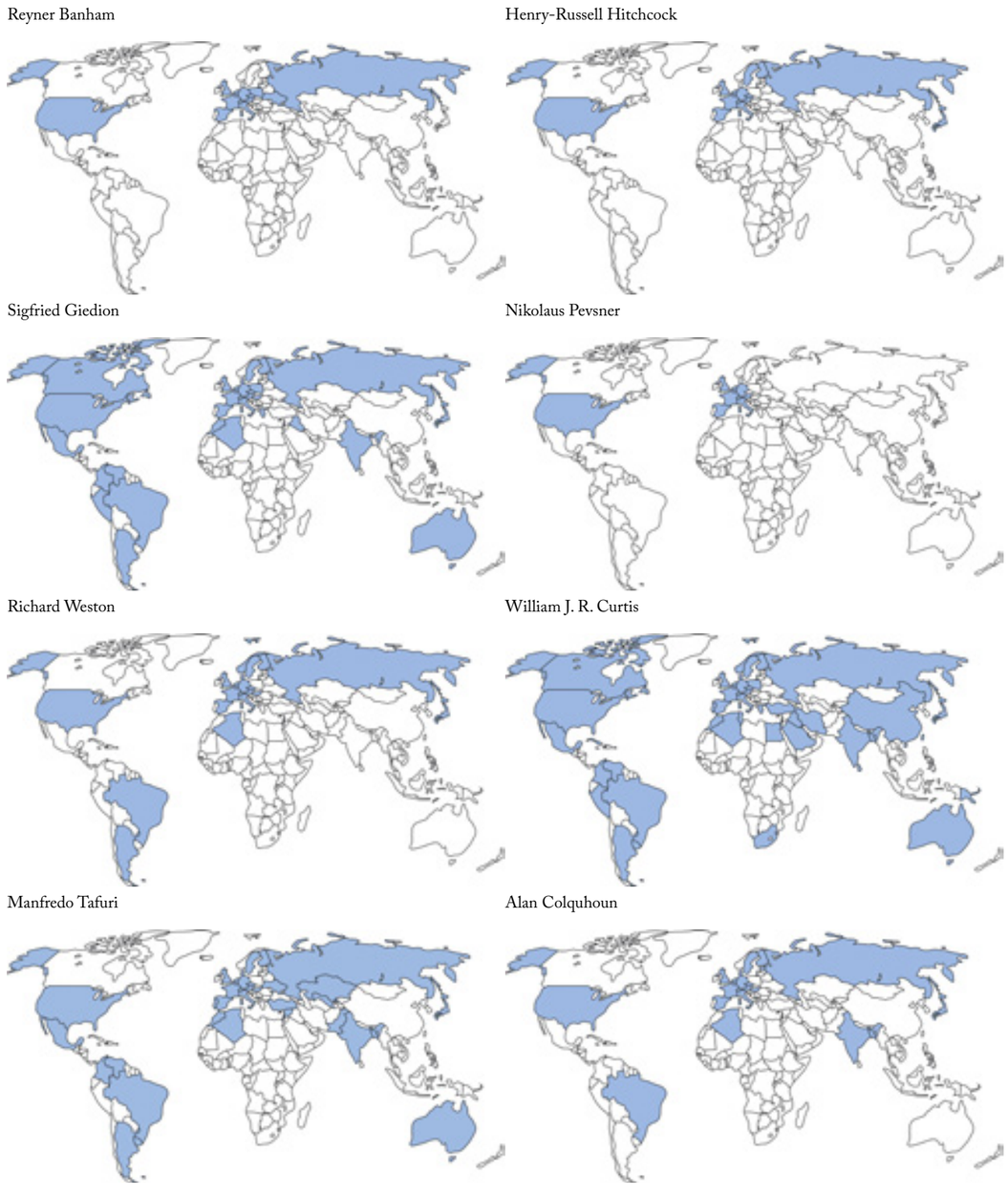
6 Kenneth Frampton, *Modern Architecture: A Critical History*, 4th edn (London: Thames & Hudson, 2007), p. 7.
7 Anthony Vidler, *Histories of the Immediate Present: Inventing Architectural Modernism* (Cambridge: MIT Press, 2008), pp. 5-6.
8 Giedion added the chapter on Alvar Aalto in the third edition (1954) and the chapter on Jørn Utzon in the last, fifth edition (1967).
9 Their work is mentioned for instance by Frampton, Benevolo, Zevi or Curtis in more recent editions.
10 Edward Ford, *The Details of Modern Architecture, Volume 2, 1928 to 1988* (Cambridge: MIT Press, 1996).
11 On Bryggman: Mikko Laaksonen, *Erik Bryggman – Works* (Helsinki: Rakennustieto, 2017). On Isotta: Francesca Privitera, *Emilio Isotta – architettura all'Isola d'Elba 1948-1968* (Florence: DiDA Press, 2019).
12 For instance, Viljo Revell, Aulis Blomstedt, Aarno Ruusuvuori, Pekka Pitkänen, Reima Pietilä or Kirmo Mikkola, see: Alan Colquhoun, *Modern Architecture* (Oxford: Oxford University Press, 2002), pp. 200-207.
13 Frampton, 4th edn, pp. 314-328.
14 Colin Davies, *A New History of Modern Architecture* (London: Lawrence King Publishing, 2017). He mentions the work by Ken Yeang, Geoffrey Bawa, Hassan Fathy, Abdel-Wahed El-Wakil, Balkrishna Doshi, and Charles Correa.
15 Examples of recent articles on modern architecture outside Europe or Northern America. On Chile: Pablo Fuentes Hernández, 'The founding story of the avant-garde in Chile: Art, architecture and urbanism in the genesis of a comprehensive debate', *Arquitetura Revista*, 2 (2018), 124-135. On Colombia: Edwar Calderón, 'The endurance of the modernist planning program: The functional city in contemporary planning in Medellín, Colombia', *Journal of Architecture and Urbanism*, 3 (2017), 234-252. On Taiwan: Meng-Ying Shen, Chao-Ching Fu and Chun-His Wang, 'Minimum Habitable Dwelling and the Transformation of Public Housing Design in Taiwan from 1920 to the 1960s', *Journal of Asian Architecture and Building Engineering*, 2 (2015), 247-253. On India and Tanzania: Andrew Friedman, 'The Global Postcolonial Moment and the American New Town: India, Reston, Dodoma', *Journal of Urban History*, 3 (2012), 553-576. On Sri Lanka: Anooradha Siddiqi, 'Crafting the archive: Minnette De Silva, Architecture, and History', *The Journal of Architecture*, 8 (2017), 1299-1336.
16 Kenneth Frampton and Ludovica Malo, *L'altro movimento moderno* (Mendrisio: Mendrisio Academy Press, 2015).

Europe are a blank space (ill. 3.2 to 3.15). Some historians though – especially in the later years – give more space to this area. However, it was a gradual process. Countries like Czechoslovakia or Hungary were the first to gain attention due to their close historical relation to Austria and Germany. One may think for instance about Adolf Loos – born in Brno, but working mainly in Vienna – or about Mies' Villa Tugendhat (1930). As a result, modern architecture in Czechoslovakia stands as a valid example of early modern architecture in Tafuri's analysis. He claims in fact that the changes in Czech culture were happening in parallel to those in the Western countries.[17] Similarly, Curtis mentions Czechoslovakian architecture as a local interpretation to modern architecture already in the first edition.[18] Other countries however had fewer connections with the West, and their presence in modern architecture discourse was much less evident, especially with the expansion of the communist ideology in Eastern and Central Europe. In many cases, there was the missing link of the 'incoming wave' of modern architects. Whereas modern architecture in the USSR is often quoted as one of the important examples of modern avant-garde from before the Second World War, it is connected to contact with architects like Ernst May or Le Corbusier. In most other countries of the communist bloc, the narration shows no such connection between Western European architects and local ones. After the war, the political situation, the influence of the Stalinist doctrine and the lack of economic means made it difficult to appeal to Western architects (Chapter 4). Thus, even though Frampton and Curtis broaden the area of influence of modern architecture to many countries in Africa, Asia, Oceania and South America after the first editions of their histories,[19] there is almost no mention of Central or Eastern European countries other than Czechoslovakia and Hungary. Designs within present-day Poland are mentioned briefly by Banham only because of the pre-war involvement of German architects, such as Gropius or Hans Peolzig.[20] Similarly, the recent study by Davies mentions only three buildings in Poland that were connected to the work of Mies, Poelzig, and Max Berg at the time when those areas belonged to Prussia and later to Germany, with no mention of the Polish architecture between the wars of after the Second World War.

The only classical modern histories to explicitly mention architecture of these countries are those by Giedion, Benevolo, Zevi, and Tafuri. Whereas Giedion's text refers mainly to the discussions within the CIAM including some of the Polish members (he named Sołtan, Helena and Szymon Syrkus),[21] Benevolo gives a much clearer picture of architectural tendencies in the communist bloc countries, including Poland, Romania, Bulgaria, and the Ukrainian SSR. He does not concentrate though on the actual modern architecture, but on the Stalinist tendencies of socialist realist architecture and planning that were in contradiction to modern ideas.[22] Buildings of that period had to follow strict ideological and aesthetic patterns fixed by the ruling parties in each country: they referred to classical schemes and thus they were far removed from modern planning standards. According to Benevolo, "as designer's attention was diverted towards fictional problems, there was more space left for control. The supposed proximity to ancient traditions and folk habits was a conventional discourse aimed to avoid a more concrete discussion capable of interfering with the authorities' directives and it guaranteed to frame all the initiatives in well-known cultural forms".[23] Even though architecture of those countries is present in his discourse, it is present in its most anti-modern form, leaving modern architecture in Central and Eastern Europe again as unchartered territory. The difficulty of the argument on modern architecture in Eastern Europe is further developed by Lewis Mumford: he claims that due to the ideological struggles against the imposed architecture of socialist realism, many CIAM members had to accept lesser assignments, to face official prosecution or to flee to the West.[24]

With the general discourse on modern architecture so pessimistic when speaking about Central and Eastern Europe, it may seem that the region was a barren land for modernism. Instead, after the fall of the socialist realism ideology from the mid-1950s, the cultural and architectural climate was milder and many publications were offering a showcase of local modern architecture. In Poland for instance, texts such as *Polska architektura współczesna* by Przemysław Szafer (1977), professor of architectural history at the Fine Arts Academy in Warsaw, showed how modern functionalist architecture was present in various domains. As the country was abandoning the socialist realism ideology, during the 1970s and 1980s, more publications on Polish modern architecture appeared, although they still lacked critical analysis. More recently, after the fall of communism, local Polish

17 Manfredo Tafuri and Francesco Dal Co, *Architettura contemporanea*, 2nd edn (Milan: Electa, 1998), p. 238.
18 William Curtis, *Modern Architecture since 1900*, 1st edn (London: Phaidon, 1982), pp. 196-197.
19 Curtis for instance mentions modern architecture in Brazil, South Africa, Egypt, Algeria, Morocco, Mali, Saudi Arabia, Iran, and Papua New Guinea since the first edition, but modern architecture in the developing countries was more thoroughly analysed in the later editions.
20 Reyner Banham, *Theory and Design in the Third Machine Age* (London: Architectural Press, 1960), pp. 61, 82.
21 Sigfried Giedion, *Space, Time and Architecture*, 5th edn (Cambridge: Harvard University Press, 1967), p. 704.
22 Leonardo Benevolo, *Storia dell'architettura moderna*, 26th edn (Rome: Laterza, 2005), pp. 772-775.
23 Benevolo, 26th edn, p. 772. Translation from Italian (SR).
24 Lewis Mumford, 'CIAM and the Communist Bloc 1928-1959', *The Journal of Architecture*, 14 (2009), 237-254 (p. 249).



ill. 3.1 (chapter cover) - detail of the Carney Academy, New Bedord by Jerzy Sołtan
ill. 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, and 3.9 (following next page) - mapping of modern architects and modern designs mentioned in histories of modern architecture taking into account countries of provenance of architects and sites of their buildings, showing concentration on Western Europe and Northern America, with gradual expansion towards other areas; publications examined: 1) Reyner Banham, *Theory and Design in the Third Machine Age* (London: Architectural Press, 1960); 2) Henry-Russell Hitchcock and Philip Johnson, *The International Style* (New York-London: W. W. Norton & Company, 1966); 3) Sigfried Giedion, *Space Time and Architecture*, 5th edn (Cambridge: Harvard University Press, 1967); 4) Nikolaus Pevsner, *Pioneers of Modern Design from William Morris to Walter Gropius*, 3rd edn (Harmondsworth: Penguin Books, 1975); 5) Richard Weston, *Modernism* (London: Phaidon, 1996); 6) William J. R. Curtis, *Modern Architecture since 1900*, 3rd edn (London: Phaidon, 1996); 7) Manfredo Tafuri and Francesco Dal Co, *Architettura contemporanea*, 2nd edn (Milan: Electa, 1998); 8) Alan Colquhoun, *Modern Architecture* (Oxford: Oxford University Press, 2002); 9) Leonardo Benevolo, *Storia dell'architettura moderna*, 26th edn (Rome: Laterza, 2005); 10) Josep Maria Montaner, *Dopo il movimento moderno*, 2nd edn (Rome-Bari: Laterza, 2006); 11) Peter Blundell Jones, *Modern Architecture through Case Studies* (Oxford: Architectural Press, 2002), Peter Blundell Jones and Eamonn Canniffe, *Modern Architecture through Case Studies: 1945-1990* (Oxford: Architectural Press, 2007); 12) Kenneth Frampton, *Modern Architecture: A Critical History*, 4th edn (London: Thames & Hudson, 2007); 13) Bruno Zevi, *Storia dell'architettura moderna*, 10th edn (Turin: Einaudi, 2010); 14) Colin Davies, *A New History of Modern Architecture* (London: Lawrence King Publishing, 2017)

publications and journalism tend to attract public attention to the importance of this architecture, for example in Anna Cymer's *Architektura w Polsce 1945-1989* (2019), in Filip Springer's journalistic essays on modern architecture in Poland or in publications on local architects or buildings.[25] Today, it seems that the situation is indeed changing and that there is a growing concern for modern architecture in the Central and Eastern European countries because "modernist structures were the very best of their times that cities had to offer: functional, modern, avant-garde. Many of the architects and designers of these buildings are now recognised as architectural gurus".[26] However, even though the local scholarship and the interest in modern architecture may have grown in Poland and in other Central and Eastern European countries as part of the regionalism tendency, it is still little present in the global discourse on modern architecture. Even the most recent histories, like Davies' and Colquhoun's, do not give credit to those countries' modern architecture importance in the general discourse. However, more area-specific studies started to appear recently, as the role of Central and Eastern European architects within CIAM and their global involvement.[27] Furthermore, whereas it is certain that the scholarship in modern architecture opens towards new themes and new architects, these changes do not occur only in the contents of the discussion on modern architecture, but also in how the arguments are proposed.

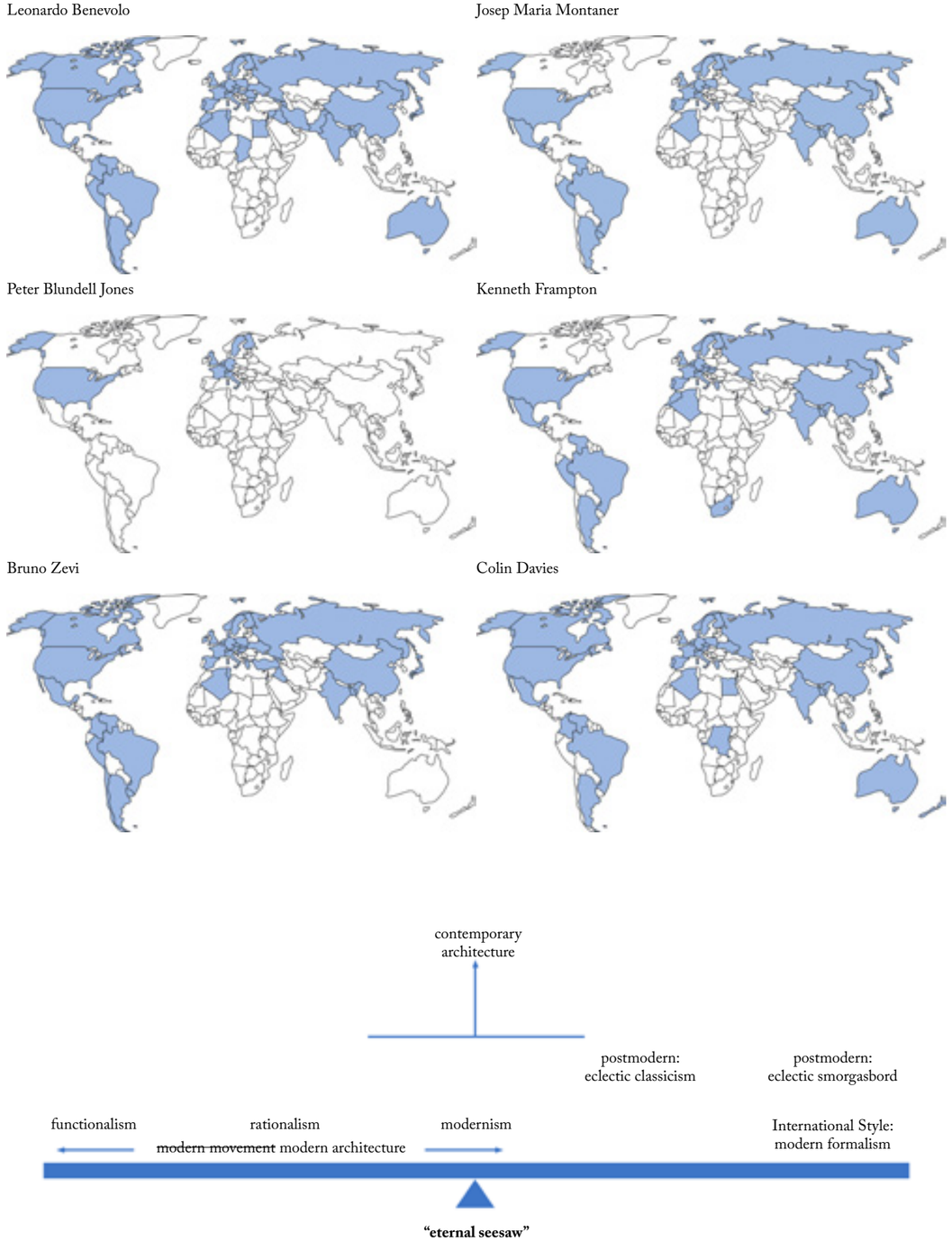
modern talking – how is the discourse on modern architecture presented?

The question on how the discourse on modern architecture is presented makes it worth coming back to the initial reflection on history, and recalling Edward Carr's idea of a historian looking and choosing relevant facts in an ocean of what is available. This idea on the one hand refers to the broadness of the reality and the practical impossibility of describing all of it, and on the other one, it suggests that historians' work and the choice of facts is biased. It applies of course also to architectural historians. Giedion himself admits, "history is not a compilation of facts, but an insight into a moving process of life", adding that a good manner to work on history is to isolate and analyse some specific case studies more thoroughly, making it possible to understand the whole.[28] This statement shows clearly the awareness that architectural historians have to interpret architecture, analyse it, and construct their narration around a selection of examples within a much broader range of buildings, architects, and designs. According to Curtis, such attitudes come from the assumption that some buildings have "high visual and intellectual quality" and "a tradition is formed from a sequence of such high points which hand on their discoveries to lesser followers".[29] Both of those ideas lead to the bias of the eyes of the architectural historian: it is left up to the latter to analyse and decipher the connections between architects and buildings, and finally to decide which ones are the most important or worth mentioning. Whereas the impossibility of illustrating the totality of modern architecture seems reasonable given the extent of its reach, the way in which the examples are chosen is very often biased by the author's education and location, and the choice of buildings is often made in order to meet the historians' purposes. Tournikiotis indicates that there is a particular affiliation of architectural historians to particular architects: Pevsner towards Gropius, Giedion towards Le Corbusier and Gropius, Peter Collins towards Auguste Perret and Zevi towards Wright. As a result, Zevi's narration is orbiting towards organic architecture and it is more inclusive for such architects than – for instance – Pevsner or Hitchcock. He dwells on the influences of Wright on European architects, such as Hendrik Petrus Berlage, Loos, Oud, Erich Mendelsohn, Häring, Aalto, Charles Robert Ashbee, Willem Marinus Dudok, and Robert van't Hoff, and he claims that the importance of Wright for modern architecture is comparable to the one of Dante or Shakespeare for Italian or English language.[30] As a result, Zevi leaves a lot of space to the architects who follow this path.

rise and fall of the unified "modern movement"

The epitome of such a biased vision of modern architecture may be seen in the first publications by Pevsner, Hitchcock, and Giedion. In the foreword to the first edition of *Space, Time and Architecture*, Giedion admits, "I have attempted to establish [...] that in spite of the seeming confusion there is nevertheless a true, if hidden, unity, a secret synthesis, in our present civilisation".[31] Similarly, Pevsner admits that his aim is "to prove that

25 For instance, publications on modern architecture in Krakow or in Katowice edited by Andrzej Szczerski.
26 Mariusz Czepczyński, 'Representations and images of recent history', in *The Post-socialist City*, ed. by Alfrun Kliems and Marina Dmitrieva (Berlin: Distributed Art Pub Incorporated, 2010), p. 26.
27 Martin Kohlrausch, *Brokers of modernity: East Central Europe and the rise of modernist architects, 1910-1950* (Leuven: Leuven University Press, 2019). Łukasz Stanek, *Architecture in Global Socialism: Eastern Europe, West Africa, and the Middle East in the Cold War* (Princeton: Princeton University Press, 2019).
28 Giedion, 5th edn, p. vi.
29 Curtis, 3rd edn, p. 7.
30 Bruno Zevi, *Storia dell'architettura moderna*, 10th edn (Turin: Einaudi, 2010), p. 307.
31 Giedion, 5th edn, p. vi.



ill. 3.10, 3.11, 3.12, 3.13, 3.14, and 3.15 (following from previous page) - mapping of modern architects and modern designs mentioned in histories of modern architecture taking into account countries of provenance of architects and sites of their buildings, showing concentration on Western Europe and Northern America, with gradual expansion towards other areas
ill. 3.16 - scheme summarising different aspects of modern architecture reviewed according to Jerzy Sołtan's reading and trying to organise different approaches in relation to a more scientific or a more poetic vision of architecture

the new style, the genuine and legitimate style of our century, was achieved by 1914".[32] Such attitudes were understandable as the first histories of modern architecture were to establish the foundation of a new tendency that was burgeoning. Modern architecture historians were writing about the age of the machine, about pioneers, and about a new era beginning – a new era that they felt needed new architecture. The aim of the first modern architectural historians was then clear – to lay the path for architecture that should have been the built image of those great changes. Yet whereas science, literature, and arts were moving forward more quickly, in the late 1920s, academicism and eclecticism were standing still as the main tendency in architecture, as it was shown by the competition for the League of Nations headquarters where Corbusier was ruled out from the work on the design. In fact, according to Curtis, "in its early days the modern movement, like any other young movement, was a minority. The majority of buildings constructed in, say, the year 1930 were continuations of earlier traditions and vernaculars".[33] In such an atmosphere, where a new tendency was to face the dominant academicism, it had to appear strong and united. Modern architecture historians tended thus to chisel their narration by showing its unity and integrity even though there were differences amongst the authors of the first texts. Where Giedion urged for the universality of this modern architecture, Pevsner called it a "modern movement" claimed to be the style of the century – an expression that *per se* suggests an underlying unison of its components, and successful enough to be used later by Frampton or Benevolo. The very choice of such vocabulary was meant to build a united image of modern architecture as a project. Hitchcock in *The International Style* on the other hand, tends to concentrate on the visual aspects and aesthetics of modern architecture leaving aside social and technical issues. By describing them in an axiomatic and dogmatic way, he offered what Tournikiotis called a "guidebook for modern architecture"[34] with a ready-made repository of elements that can be freely used in order to make the new architecture modern. Such a limited point of view, constrained to the formal aspects only, made it possible for Hitchcock to reach general conclusions that were accessible and easily understandable, and they helped the success of the International Style tendency, adding to the visual unity of the "modern movement". Moreover, through the iconographic material based on photographs and not on plans, it was easier to indicate the formal elements in modern buildings.

In fact, the idea of a unified "modern movement" proved to be a persistent one – it was re-used by other historians. Benevolo for instance aims to confirm the integrity of the "modern movement" by underlining unifying elements, such as the cementing role of Gropius and the creation of the Bauhaus as its origin.[35] He concentrates on the aspects that unified modern architecture throughout many countries, as for example the common need of creating CIAM after the League of Nations competition and the reunion of many modern architects within the Weißenhofsiedlung in Stuttgart. According to Curtis, there was indeed some common ground amongst modern architects, but it remained at a deeper level and it could not be referred to as an aesthetic tendency or as formal elements.[36] As a result, the idea of a unified "modern movement" was heavily criticised by architects and historians in the later years. Many refuted the idea of a unified tendency – such as Curtis, Blundell Jones or Jencks – claiming it was an oversimplified construct that needed to be revised.

Tournikiotis states that since the sixties, new historians started to undermine the established dogma of the unity and origin of modern architecture: they doubted the first modern histories, and they developed their own points of view dismantling the idea of a united "modern movement".[37] For instance, according to Blundell Jones, the idea of modern architecture given by Hitchcock was too dogmatic and a new reading of it should include de-unifying and dismantling the enforced unity given by the International Style that was "too full of shortcuts".[38] He uses case studies to exemplify various tendencies in modern architecture and to show that it was not a unified movement, and that modern architects often did not blindly follow the most-repeated slogans and dogmas built by Pevsner or Hitchcock. Similar criticisms towards the unified idea of the "modern movement" may be found in Curtis' *Modern Architecture since 1900*. He denounces the oversimplification of the modern architecture discourse and he claims that the differences were patched, in order to preserve a unified façade of the entire tendency beyond the models of Le Corbusier, Mies, Gropius, Oud or Gerrit Rietveld. Furthermore, Colin St John Wilson underlines the diversity of the very first years of modern architecture pointing, "there was never a moment in history of architecture so rich in the variety of building forms and so violent in the polarity of ideological affirmations as that which prevailed ten years after the end of World War I".[39] Whereas Blundell Jones or St John Wilson underline the lack of unity in modern architecture, Jencks in his analysis underlines the ignorance of the omission in the "modern movement", calling Pevsner's narration "conservative, elitist and prophetic", and adding that such tendencies as expressionism and futurism were artificially removed from the common understanding of modern architecture for thirty years.[40] Instead, he urges historians to recognise "the plurality of creative movements and individuals".[41] In a similar manner, Zevi denounces the works of Pevsner, Giedion, and Behrendt, as they did not recognise "the essential passage from the functionalist phase of the 1930s towards an organic tendency centred on the spatial creativity".[42] Therefore, the idea of the unified "modern movement" has to face two major tendencies – de-unification of the discourse and a broadening of interest to other tendencies.

between case studies and continuous narration

The criticism of the "modern movement" idea is connected also to the manner in which the discourse is presented. Following the thread laid down by Giedion, one of the approaches to modern architecture is through case studies. In the first edition, Giedion concentrates on the work by Le Corbusier, Gropius, and Mies in order to illustrate the general tendencies within modern architecture, adding in the later ones chapters on Aalto and Utzon. Only in the last edition does he recognise that modern architecture has expanded its reach, claiming that it would be interesting to study modern ideas spreading through different countries, such as Japan or Brazil.[43] Nonetheless, his presentation of modern architecture is limited to a number of heroic episodes of several architects who are shown to have widely influenced their contemporaries. Through a "from the particular to the general" approach,[44] he tends to generalise and thus to simplify the complexity of modern architecture realities. Indeed, he admits, the "historian is not solely a cataloguer of facts. His judgment must, however, spring directly from the facts",[45] underlining the importance of critical analysis and reflection based on the selected case studies.

However, whereas for Giedion his examples were chosen explicitly and willingly amongst other ones as an illustration in order to give a clear image of a more general process, it seems that the focus on those architects was transferred into later histories of modern architecture as the core of modern architecture. Along with the importance of Gropius, Le Corbusier, and Mies in other early histories, such as Pevsner, Emil Kaufmann or Hitchcock, these architects became easily associated with the first canon of modern architecture, and such dominance started to be contested by other critics. Zevi for instance claims that such a vision of history based on individuals became obsolete. He calls for history as a dynamic and collective process, along with a limited influence of individuals, undermining the approach based on the "procession of proud and isolate demiurges".[46]

According to Zevi, the modern architecture vision inherited from the first histories concentrated thus too much on the heroic aspects of it, and it did not correspond to the broader spectrum of modern tendencies of the time. The first modern architecture historians may appear as "mythographers" or "high priests", as they are called by Curtis and Blundell Jones.[47] The global acceptance of modern architecture after the Second World War did not require from its historians concentration on building its foundations or showing its importance. It was possible to analyse and criticise it internally, with no threat of academicism or eclecticism. In fact, once its position was established, modern architecture historians often followed the very same path and ideas expressed by Zevi. Benevolo, Curtis, Frampton or Josep Montaner do not base their work on "from the particular to the general" model inherited from Giedion or Pevsner, but they propose a complex narration and a broader panorama of modern architects and buildings. Even though Curtis admits concentrating on definite examples of architecture, the reading of his text still offers a continuous narration of a broad range of modern architects' works.

However, given the expansion of modern architecture interest to new areas and new architects, the coherence of such a continuous narration model of history becomes unsustainable. They risk becoming extensive descriptions of numerous architects, buildings and designs, with their inner logics and narrative retreating in front of a number of examples and facts. An architectural historian indeed risks ending up with a collection of facts with

32 Nikolaus Pevsner, *Pioneers of Modern Design from William Morris to Walter Gropius*, 3rd edn (Harmondsworth: Penguin Books, 1975), p. 38.
33 Curtis, 3rd edn, p. 287.
34 Tournikiotis, p. 140.
35 Benevolo, 26th edn, p. 854.
36 Curtis, 3rd edn, p. 275.
37 Tournikiotis, p. 167.
38 Peter Blundell Jones, *Modern Architecture through Case Studies* (Oxford: Architectural Press, 2002), p. 45.
39 Colin St John Wilson, *The Other Tradition of Modern Architecture – the Uncompleted Project* (London: Academy Editions, 1995), p. 13.
40 Charles Jencks, *Modern movements in architecture* (Harmondsworth: Penguin Books, 1973), pp. 12-13.
41 Jencks, p. 27.
42 Zevi, p. xv. Translation from Italian (SR).
43 Giedion, 5th edn, p. 706.
44 The quote refers to a design approach in Le Corbusier's office often cited by Sołtan, which was referred to a design approach rather than analysis of modern architecture historiography, but it seems suitable here.
45 Giedion, 5th edn, p. 18.
46 Zevi, p. 49. Translation from Italian (SR).
47 Curtis, 3rd edn, p. 13. Blundell Jones, p. 61.

no or little clue of what is relevant. One may feel lost in front of narrative histories of modern architecture, such as Benevolo or Curtis, where many tendencies and architects are analysed, compared to a much clearer discourse proposed by the early versions of Giedion, Pevsner or Hitchcock. Furthermore, Weston's narration is not only continuous, but also well anchored in the cultural and artistic background of the era giving a broader picture of modernity in architecture and in the arts in general. Such extensive narratives may be simply overloaded with data and names, making it harder to understand the underlying logic. One may thus claim that the alternative lies between the extremes: between the analysis of single and isolated cases on one hand, and the broader 'all-inclusive' narrative making the logical construction of modern architecture particularly obscure on the other one. Both of them seem to be ineffective or susceptible to misinterpretation. One may find a viable compromise in Blundell Jones' work and case studies. Differently from Giedion, Blundell Jones does not pretend to build a general theory or discourse based on the case studies: he does not use the case studies as illustration to theorised tendencies. Instead, the choice of a case studies methodology is dictated by their clarity and accessibility, and its social anthropological approach lets them create a more nuanced image.[48] Instead of a one-directional process in Giedion's work, "from the particular to the general", Blundell Jones' approach proposes a more complex model, "from the general to the particular and from the particular to the general". Each work is analysed against the context and background, whereas through the analysis of specific buildings, one is able to understand specific standing points on modern architecture. Following such logics, a case study is not the aim *per se* of the research, but a tool for a better understanding of transitive concepts – making the choice of the case studies an extremely important passage in the construction of the discourse and a core argument in the approach to the research on Sołtan. Case studies should be clear enough to understand their architecture on the one hand, and transitive enough to be able to apply similar reasoning in different situations on the other one.

modern architecture history as construct

The impact of the architectural historian's decisions on the outcome – on modern architectural history – underlines that the latter is a construct based on the former's ideas and background. Jencks accuses those first histories of being biased by the authors' ideas, claiming that historians follow a script loaded with their own ideology.[49] Tournikiotis in fact calls the first histories of modern architecture "manifestos" and not critical analysis, as they were concerned with their contemporaries and not with past events.[50] The very title of Vidler's historiography of modern architecture – *Histories of the Immediate Present* (1987) – shows clearly that first modern architecture historians were concerned mainly with their present. As they cannot reach the thoroughness of retrospective analysis, they continue to rely on the period's own idea of itself – which according to many is faulty. Banham claims that the search for mainstream modern architecture was mistaken in the very assumption of what should be looked at: "the mainstream is not the common denominator of all the various streams present in the given era, nor [is it] produced by the historian, who from his contemporary point of view traces out the conductive thread of historical evolution".[51]

However, whereas those accusations are aimed at the first modern architecture historians who have contributed to the idea of a unified "modern movement", such criticism may be actually applied more generally. Giedion for instance makes a general statement claiming that whereas it is impossible to write history without altering it, it is a price to be paid for the history to be the most accurate. He claims, "the historian detached from the life writes irrelevant history".[52] Furthermore, Vidler shows that the relation between the reality and history that is being written is a very complex one: not only the reality influences the architectural historians while they read and analyse it, but then the very same history – as for instance those written by Giedion, Pevsner or Hitchcock – influences the reality and architectural practice.[53] Those complex relations may be perhaps better understood while considering a hypothetical architectural history of the 2010s. At first thought, one may be confused by the multitude of architects and tendencies that diverge in various directions in the most recent years, as such complexity seems to be in a flagrant contrast to the well-organised and well-structured discourse of modern architecture. However, as it was discussed, such unity and cohesiveness of modern architecture represented in its first histories was a construct – an idea biased by the authors. In the midst of architectural tendencies, the first historians followed a similar path that may be followed today in order to organise and structure a continuous narrative of contemporary architecture. Firstly, one has to have a good understanding of their own present and take a position within it. Then, one follows this position by selecting arguments, examples

48 Blundell Jones, p. 5.
49 Jencks, p. 11.
50 Tournikiotis, p. 2.
51 Tournikiotis, p. 161.
52 Giedion, 5th edn, pp. 5-6.
53 Vidler, p. 3.

and architects in order to illustrate it, and finally one organises them in a comprehensible discourse. It seems then almost inevitable that generally, architectural history of one's own age is biased by the surrounding reality and the author's own ideas. Ironically, the bias Jencks criticises in the first histories of modern architecture is the very same process he uses to build the idea of postmodernism. He tends to illustrate the crisis of modern architecture and the origins of a new tendency in a more coordinated way than it was in reality. One may argue thus that not only the "modern movement" was a construct, but postmodernism too. Indeed, Jencks' following publication, *The Language of Post-Modern Architecture* (1977) uses the same logic of a construct of a movement, as he criticised in Pevsner or Giedion.[54] In such a hypocritical attitude, he tends to simplify and fit examples of architecture into his logical process. For instance, he presents Team 10 as a group whose work concentrated on the issue of urban identity and he links their ideas to the criticism of the curtain wall,[55] which actually was not at the core of their discourse. He seems also to lose track of Team 10's ideas by omitting the importance of the thick cultural dimension of their work and a much larger social political context of the issues related to the habitat. Instead, Jencks refutes this model, by labelling their architecture according to an artificially constructed code.

Such oversimplifications strengthen the contrast between broader narratives on one side and diversity and complexity of modern architectural production on the other one. Indeed, in the preface to the third edition, Curtis claims, "while the polemical oversimplifications of the earlier histories have become less and less tenable, the need remains for texts charting large-scale developments. It is increasingly clear that modern architecture combines numerous positions and inflections which evade monolithic descriptions of either a stylistic or an ideological kind".[56] Such a position approaches Blundell Jones' position in using well-detailed case studies to explain a diversity of tendencies without generalising the discourse to form a common narrative.

Sołtan and the modern canon

Following the thread of Blundell Jones' reasoning, interest in the work of the Polish architect Sołtan provides also an illustration of modern architecture distanced from the core of the canon. His design work and teaching on both sides of the iron curtain seems to elude most of the critical analysis of modern architecture. Referring to the visible gap in modern architecture history concerning post-communist European countries, this study aims to reject these difficulties and to review this tendency. In addition, the theoretical aspect of a huge part of his heritage through ideas and pedagogy adds to the challenging revision of modern architecture discourse, where most of the discourse concentrated on more tangible and visible manifestations of architecture.

Sołtan in modern architecture histories

In fact, whereas the histories of modern architecture do not include Sołtan's designs, he is mentioned mainly as a member of CIAM or Team 10. Benevolo lists him as of the attendants of the Team 10 Otterlo meeting in 1959, and Montaner includes him among the architects of the "third generation" connected to Team 10's work.[57] Giedion on the other hand includes Sołtan as a member of the Polish section of CIAM.[58] These connections show – especially in the case of CIAM that in the last phase did become a truly mass movement – that Sołtan's work was standing out of the crowd. Even though he was not able to attend the first Team 10 meetings and he met the Smithsons and other group members for the first time during the CIAM 10 in Dubrovnik in 1956, he was still considered a member of the group by the others. Even though coming from outside of the canonically modern countries, Sołtan was keeping close to the organisations and tendencies where discussion on the issues of modern architecture was the most vivid.

This particular aspect of Sołtan's work seems relevant to the recent tendencies and to the importance of the immaterial in the modern architecture canon. One may refer to Benevolo's analysis of the importance of Walter Gropius. He calls him "the moral leader of the modern movement fifty years ago", and he gives to Gropius the merit of union and consistency within modern architecture, even if he was not the greatest architect of the time. According to Benevolo, Gropius' importance comes from education, and from the awareness that "one has to find an agreement, to bring together many people's efforts and to resolve the problems of our environment".[59] The importance of Gropius' educational activity, first in Germany and later in the United States, points towards the recognition of intangible aspects of architectural heritage even before the physical or

54 Elie Haddad, 'Charles Jencks and the historiography of Post-Modernism', *The Journal of Architecture*, 14 (2009), 493-510.
55 Jencks, pp. 42, 302.
56 Curtis, 3rd edn, p. 9.
57 Josep Maria Montaner, *Dopo il movimento moderno*, 2nd edn (Rome-Bari: Laterza, 2006), p. 31.
58 Giedion, 5th edn, p. 704.
59 Benevolo, 26th edn, p. 854.

designed work. Putting the importance of Gropius' theory and education in front of everything else can find a parallel in Sołtan's work. In addition to the latter's involvement in Team 10, Curtis underlines that together with Shadrach Woods, Sołtan was one of the group's members who helped to propagate the group's ideals in America through their teaching at the Harvard Graduate School of Design.[60] His teaching seems also to be an important element in Giedion's text, who recalls Sołtan's joint teaching with Jaqueline Tyrwhitt and Fumihiko Maki in the 1964 Urban Design Master Class at Harvard.[61] Their assignment, "how can a new city for 50,000 people be built between Baltimore and Washington in such a way that its initial community structure will not be destroyed by its subsequent growth?" referred to the importance of the human factor in planning, lost in the interpretations of the *Athens Charter*. However, the most accurate observation of his theoretical insight was given by Montaner, claiming that Sołtan, as "the most theoretical and interested in history of the [Team 10] group, the one who in his writings gives the broadest vision of the contemporary architecture situation".[62] However, whereas histories of modern architecture give credit to these two aspects of Sołtan's work – education and theory, Sołtan was also a practicing architect. His participation in the Team 10 meetings and in the CIAM congresses involved presentations of his designs that went unseen in the histories of modern architecture, even by those architectural critics who were closest to him, such as Curtis or Frampton.[63] Nonetheless, they make part of some publications including the work of Team 10, such as for instance the *Team 10 Primer* (1962).[64]

The connection to Team 10 seems particularly relevant here. Sołtan's work is not only inscribed in the larger picture of expanding modern architecture scholarship, including interest in the post-socialist countries, in the lesser exponents of modern architecture, and in recognising the immaterial contributions, but it also follows recent scholarship in the architecture of Team 10. Whereas the first publications on the group were mainly managed by its self-appointed chronicler, Alison Smithson, starting from the article in *Architectural Design* that formed afterwards the stand-alone *Team 10 Primer*, recent scholarship shows more interest into the work of the group as part of the canon of modern architecture. Benevolo states indeed, "for at least ten years the members of Team 10 remain as the avant-garde of architectural research and the collection of their results – independent but comparable – represent a new phase of the modern movement".[65] However, whereas the importance of the group has been quite unanimously established in modern architecture histories by Benevolo, Zevi, Curtis, Frampton, Jencks or Blundell Jones, the actual monographic research into the group's architecture has come into light only quite recently. The key publication *Team 10: In Search of a Utopia of the Present 1953-1981* (2005) brings a deeper understanding of the group members' architecture, of its complex dimension, and it offers an organised overview of Team 10 meetings attendance. Recent scholarship follows the path laid by this publication and tends to dismantle the biased discourse around Team 10 created by Alison Smithson's editing,[66] and to concentrate on the members left aside in the original narration, such as Charles Polónyi, Oskar Hansen or Pancho Guedes.[67] One example of such scholarship is Łukasz Stanek's *Team 10 East* – an attempt to analyse the work of Central and Eastern European members of the group by decentralising the discourse from the "inner circle" ideas of Aldo van Eyck, Jaap Bakema or the Smithsons. Stanek aims to understand this through the difficult background of the countries of the communist bloc – both political and economic. The present research on Sołtan in particular continues to question the bias within the discourse on Team 10, and it informs further rewriting of the group's architectural history.

From this analysis of modern architecture histories, Sołtan appears thus – even though he is little visible – as an active protagonist of modern architecture. He is an educator and a theoretician – perhaps primarily – but also as a practitioner, and research in his work does fit into the recent scholarship's interest in Central and Eastern European modern architecture. However, before analysing those different aspects of his work, it is necessary to redefine some notions based on his own analysis of modern architecture.

60 Curtis, 3rd edn, p. 557. The reference to Sołtan is also present in the first edition, p. 349.
61 Giedion, 5th edn, pp. 868-869.
62 Montaner, p. 28. Translation from Italian (SR).
63 Interview with Joanna Sołtan.
64 *Team 10 Primer*, ed. by Alison Smithson (Cambridge: MIT Press, 1974).
65 Benevolo, 26th edn, p. 835. Translation from Italian (SR).
66 Anne Pedret, *Team 10: an archival history* (London: Routledge, 2013).
67 On Charles Polónyi: Ákos Moravánszky, 'Peripheral modernism: Charles Polónyi and the lessons of the village', *The Journal of Architecture*, 22 (2017), 662-688. On Pancho Guedes: Ana Tostões, 'La fantasia debe ser devuelta a la arquitectura', *Revista de Arquitectura*, 19 (2017), 19-24. On Oskar Hansen: Filip Springer, *Zaczyn: o Zofii i Oskarze Hansenach* (Krakow: Karakter, 2013).

redefining modernism

Many of the terms used to describe modern architecture and its various tendencies may today appear deprived of their initial meaning in the present-day context. Blundell Jones claims that words such as "functionalism", "rationalism" or "the International Style" have lost their significance and they need to be redefined.[68] It seems at the same time inadequate and too generic to agree with Colquhoun to equal "modern movement", "functionalism", "rationalism" or "Neue Sachlichkeit" and to claim that they mean the same tendency.[69] They illustrate different aspects of modern architecture, and the popularity of one over another have heavily influenced the perception of the whole, as it may lead to some disastrous misconceptions of modern architecture, even in the most recent scholarship, as for instance in James Stevens Curl's *Making Dystopia: the Strange Rise and Survival of Architectural Barbarism*.[70]

Moreover, in order to analyse Sołtan's work, it is indispensable to have a clear understanding of his reading of modern architecture. In his lectures and articles, he often argued in favour of a revision of some aspects of modernism and he wished to straighten its criticisms. Therefore, for the sake of the integrity of this research, and in order to make further discussion on Sołtan's ideas and texts understandable, those terms are re-defined, and the definitions are based on his reading of modern architecture (that is, using Sołtan's meaning) compared to the canonical narration.

functionalism as matchbox architecture

The theme of functionalism (or "matchbox architecture") is often quoted by Sołtan when he refers to his education in Poland at the Polytechnic of Warsaw or while he analyses the early years of modern architecture, based on a functional analysis of human needs.[71] Given that he referred to this issue numerous times over a long period while talking about modern architecture, it seems that understanding what he meant by functionalism is very important for further analysis of his ideas. The origins of such tendencies lie according to him in the profound change in culture, science and society from the mid-nineteenth century onward. Quoting Claude-Lévi Strauss and his thesis on the revolutionary aspect of these changes, Sołtan claims that such new times require new spirit.[72] The heroic idea of modern architecture as the image of a new epoch is also very much present in the first histories of modern architecture. One can for instance consider the subtitle of Giedion's work – *Growth of a New Tradition* – as referring to the industrial or machine revolution claimed by other historians or architects. Therefore, functionalism, as seen by Sołtan, refers to the mottos "do not grieve for roses while the forests are burning"[73] or "form follows function" – meaning that functionalist architecture was not interested in aesthetics and formal aspects. Instead, the functional issues were much more pressing due to the growing population and the need for shelter (which Sołtan underlined much more since the 1970s). Indeed, the pressing need of creating new homes at the early stage of modern architecture is, according to him, one of the very reasons why functionalism became important. He claims that the resulting rush towards quantity and the focus on building as fast as possible was inhibiting better expression of new architectural forms.

As a result, Sołtan gives as examples of functionalism Neue Sachlichkeit or Bauhaus architecture, especially under the leadership of Hannes Meyer. Indeed, Sołtan often quotes Meyer in order to illustrate the functionalist point of view, according to which form would emerge after a process of rational designing and building.[74] Following the functionalist *credo*, to think about the form before that would mean to undermine modern architecture foundations. Sołtan also claims that for some functionalists, Vitruvian *venustas* became "a necessary evil", something that one unfortunately had to deal with. Because of the idea that architectural forms take a secondary place in functionalist architecture, Sołtan baptised such buildings "matchbox architecture", as deprived of aesthetic consideration. Such "barracks architecture" refers to Le Corbusier's disinterest in the architecture of

68 Blundell Jones, p. 241.
69 Colquhoun, p. 109.
70 James Stevens Curl, *Making Dystopia: the Strange Rise and Survival of Architectural Barbarism* (Oxford: Oxford University Press, 2018).
71 The issue of functionalism and the matchbox architecture appears through a number of texts by Sołtan, as for instance article 'Modernizm kołtuński', *Przegląd Kulturalny*, 19 November 1959; lecture 'The Eternal Seesaw' at Harvard in April 1965; lecture at ICSID in Mexico in October 1979; lecture at the ACSA conference in 1984; lecture at the Miami University in Oxford, OH in March 1984; draft of article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985; lecture in Saint Louis in September 1987; notes on religious architecture in Poland from June 1990; lecture at Harvard in July 1990; lecture in Montreal in September 1990; notes on Le Corbusier from March 1995; lecture at the Fine Arts Academy in Warsaw in 1995; draft of a book *On Architecture and Le Corbusier* from November 1995; lecture at the Université Laval in Montreal in June 1996. For the notes on Le Corbusier from March 1995, see: HGSD-JS, AC007. For the lecture 'The Eternal Seesaw', see: HGSD-JLS, SA503. For all the rest, see: MASP-JS.
72 Claude Lévi-Strauss, *Race and History* (Paris: UNESCO, 1958), p. 35.
73 Quotation from the prologue for the drama *Lilla Weneda* by Juliusz Słowacki. Sołtan recalled that these words were written on the walls of the architectural practices he worked in Poland before the Second World War.
74 Draft of a book *On Architecture and Le Corbusier* from November 1995, p. 65, see: MASP-JS.

"*boites à savon*" – soapboxes – or to Giedion's criticism of "cardboard architecture",[75] and shows the importance of form in architecture for Sołtan himself. He criticises such buildings as too shallow and too simple: he argues that such simplified constructions should rather be identified as "buildings" and not "architecture" (Chapter 6), since they do not include any artistic considerations. He adds also that the popularity of the "matchbox architecture" amongst modern architects was due to the easiness of the scientific approach for less talented individuals, which resulted in a higher number of poorer quality buildings and designs. In his criticism, he connects the broad outreach of early functionalism and the interpretation of modern architecture through generalisation of its ideas as one of the main reasons for the growing criticism of the very concept of "modern".

Whereas the identification of functionalism as the early stages of modern architecture is common amongst historians, the criticism of it as leading to "matchbox architecture" does not appear to be so. For instance, Blundell Jones claims that functionalism does not imply simplicity, leaving a broader understanding of the term[76] and actually, the persistence of Sołtan in this matter may be a response to such a broader meaning and to its negative effects on the entire modern architecture perception. Another issue rises from Hitchcock's reading of the term. He disapproves of pure functionalism while defining the International Style. Not only does he criticise the German functionalist Siedlungen (ill. 3.17, 3.18), as according to him, their architects misunderstood the needs of society, but he also claims that modern architecture may be limited to a number of spatial elements, without considering the reasons standing behind them.[77] Such criticism opens towards a discussion on the difficult relation between functionalism and the International Style.

International Style as faulty modern mannerism

The very term "International Style" was first introduced by Hitchcock and Johnson at the occasion of the modern architecture exhibition at MoMA in New York City in 1932. In the exhibition catalogue (ill. 3.19), they concentrate on three main characteristics of the new style. First, they identify modern architecture with volumes, as defined by plane surfaces, such as flat roofs or transparent walls. Second, they underline the importance of regularity in the new style, referring to the rhythms of vertical structural elements, and to the lack of decoration. They claim that few architectural details should replace elaborate decorations.[78] Hitchcock and Johnson's position concentrates therefore exclusively on aesthetics and it leaves aside the social and technical issues important for functionalist architecture. Such focus on these formal issues was then one of the reasons for Sołtan's vivid criticism of the International Style to the point where he claims that there was an abyss between an aesthetics-based tendency and the foundations of modern architecture. Moreover, as the former means to him a degenerated and deviant superficial reading of functionalist or modern architecture, he claims that it results in the expansion of modern-looking architecture on a worldwide scale, but without understanding its foundations.

In Sołtan's criticism of formalism in modern architecture we often encounter the expression "bad modernists" or "false modernists" referring to architects who follow formal schemes[79] established thanks to the International Style, without adhering to the modern spirit. Sołtan started to mention such issues very early in his career, starting in the late 1940s, and he claimed that the propagation of such attitudes was one of the main causes of the criticism of modern architecture as a whole in later years. Whereas his early criticism of this phenomenon is clearly aimed to neutralise and to fight against modern formalism, in the later texts, he refers to it as a misinterpretation of modern architecture that led to its fall. His emotional speech about those "false modernists" at the Otterlo meeting in 1959 was a very powerful explanation of this issue. He claims:

> "A certain revolution happened in the last years. Ten years ago, CIAM was fighting against those who represented the past [...]. It was clear once – it was a fight of those who felt the need of forming new life, new form, etc. [...]. It was a fight against an enemy who was outside, whereas now I believe that the situation is slightly different, as the enemy is inside. Yes – because everyone claims to be modern [...]. Rationalist ideas have gained importance that has not existed before, when decoration and classicist

75 Giedion, 5th edn, pp. xxxiii.
76 Blundell Jones, p. 72.
77 Henry-Russell Hitchcock and Philip Johnson, *The International Style* (New York-London: W. W. Norton & Company, 1966), p. 93.
78 Hitchcock and Johnson, pp. 69-70.
79 The issue of the "false modernists" and modern formalism in architecture appears through a number of texts by Sołtan, as for instance lecture at Klub Młodych Artystów i Naukowców in Warsaw in March 1948; inauguration lecture at the Fine Arts Academy in Warsaw in October 1958; interventions during the CIAM/Team 10 meeting in Otterlo in 1959; article 'Modernizm kołtuński', *Przegląd Kulturalny*, 19 November 1959; lecture at AICA in September 1960; lecture at ICSID in Mexico in October 1979; lecture in Saint Louis in September 1987; draft of a book *On Architecture and Le Corbusier* from November 1995. For the inauguration lecture at the Fine Arts Academy, see: AASP-JS. For the audio recordings from the Otterlo meeting, see: HNI-JB. For all the rest, see: MASP-JS.

ill. 3.17 and 3.18 - photographs of examples of architecture, which was considered by Jerzy Sołtan as "matchbox architecture", mostly interested in providing dwellings for as much population as possible with less attention given to the aesthetic issues, according to the motto "do not grieve for roses while the forests are burning" (ill. 3.17 - photograph of the Werkbund exposition residential buildings designed by Gustav Wolf (front) and Adolf Rading (back) in Breslau from 1929; ill. 3.18 - photograph of the Werkbund exposition residential building designed by Mies van der Rohe in Stuttgart from 1927)
ill. 3.19 - cover of Henry-Russel Hitchcock and Philip Johnson's publication The International Style, which presented modern architecture in a formalist manner, increasing the numbers of "false modernists" who followed modern visual canons without understanding the research behind them
ill. 3.20 - photograph of Peter Eisenman's design House III as an example of formalist approach to modern architecture without its original meaning and research

> style was dominating. Today modern ideas are appreciated, and they are even very fashionable... but the people have not changed. Architectural offices have not changed their staff. Our brothers, architects, have only gone over a day from a classicist and decoration-based attitude to a rather rational attitude, called the modern one".[80]

With these words, Sołtan alludes to the lack of change of mentality of architects who not only had Beaux-Arts education and design methods, but who also before that followed classicist models and found themselves in a modern-dominated world. Even though in his criticism of modern formalism or mannerism during the Otterlo meeting he did not quote the International Style, the connection here is immediate. Due to Hitchcock and Johnson's focus on aesthetics, the new style was presented as something that was to be achieved through formal procedures. The exhibition catalogue, with its artificially uniform buildings (for instance, with no importance given to the colours used) easily became a handbook of the International Style, making the latter the very reason why the "false modernists" may have appeared. Hitchcock and Johnson's focus on some modern details did not explain the very reasons underpinning their conception, and as a result, many of modern elements became misused and improperly included in designs. Sołtan for instance criticised the use of brise-soleil in the northern façade or positioning of buildings inspired by Le Corbusier's Unité d'Habitation distanced one from another by just a few metres – not giving the access to fresh air and light, and limiting the view. Such examples are for him the sign of modern formalism – that is to say the use of modern architecture elements without understanding their real origin, just as stylistic elements.[81] Such superficial design attitudes meant to Sołtan not only a lack of coherence in modern architecture, but also a concrete danger for it. According to him, modern mannerism of the "idea-deprived neophytes" loses the rationality and poetics of rationalism and instead gains decorations that suffocate the space. In order to fight such corruptive tendencies, Sołtan was continuously underlining that CIAM or Team 10 should take a position concerning the matter. In his correspondence with Bakema before the Otterlo meeting, he wanted to convince him to denounce the "false modernists" and to make of the criticism of formal mannerism one of the main aims of the new CIAM, as it was the biggest threat to rationalist architecture.[82]

Such a clear definition of the International Style as modern mannerism or modern formalism deprived of a rational or functional background is not unsupported by architectural historians. Of course, some follow Hitchcock's lead and do not reject the idea of the International Style or a modern style, such as, for instance, Weston or Pevsner.[83] However, others point to the fact that his ideas were oversimplifying and selective. For instance, Curtis criticises the removal of the work of Frank Lloyd Wright or expressionist architects, such as Mendelsohn, from Hitchcock's publication.[84] Blundell Jones also claims that the very idea of being international is "too full of shortcuts", as it has, according to him, a negative aspect of having no native country.[85] A similar reading may be found in Frampton, who calls the International Style "deceptive" as it deprives architecture of different cultural conditions.[86] Such a view is wholeheartedly shared by Sołtan, as he claims that many different tendencies emerged from CIAM-driven rationalism.[87] Whereas Benevolo recognises the existence of the so-called "false modernists" by admitting that a number of architects formed by the previous, rigidly academic system started to work on modern forms,[88] the closest reading of the International Style to Sołtan's criticism of formalism lies however in Zevi and Giedion. The first claims there is a clear difference between modern architecture and the International Style, which he calls a "corrupted classicist version" of the former.[89] Such unreasonable use of modern schemes and the lack of understanding of the syntax proposed by Hitchcock leads, according to Zevi, to dysfunctional architecture, such as glass walls in hot areas. Giedion too is opposed to the very idea of calling modern architecture "a style", as it suggests a form-based approach, and he refers to the architects following modern schemes just for fashion as a "romantic orgy".[90]

80 Sołtan's speech in Otterlo, see: HNI-JB, AV49, audio 7, and AV36, audio 11. Translation from French (SR).
81 A similar attitude was possible to be seen in Poland after the abandonment of socialist realism, as in a handbook for students in technical schools from 1963, verified by the ministry, which showed modern architecture only as another style linked to its visual elements, and as a result, representing Sołtan's 'evil incarnate' of modern formalism. Whereas the handbook included historical styles, it presented modern architecture only as another tendency, another style, born mainly out of new technologies. Moreover, the use of elements in facades is shown as crucial factor to good architecture, with the book concentrating on the elevation composition following a traditional Beaux-Arts approach, see: Edward Charytonow, *Historia architektury i formy architektoniczne* (Warsaw: Państwowe Wydawnictwo Szkolnictwa Zawodowego, 1963).
82 Sołtan to Bakema from February 28th and June 23rd, 1959, see: HGSD-JS, AD001.
83 Richard Weston, *Modernism* (London: Phaidon, 1996), p. 139. Pevsner, p. 38.
84 Curtis, 3rd edn, p. 257.
85 Blundell Jones, p. 45.
86 Frampton, 4th edn, p. 248.
87 Article 'Modernizm kołtuński', *Przegląd Kulturalny*, 19 November 1959. Translation from Polish (SR).
88 Benevolo, 26th edn, p. 499.
89 Zevi, 10th edn, p. 444.
90 Giedion, 5th edn, p. xxxii.

ill. 3.21 and 3.22 - photographs of Alvar Aalto's Säynätsalo Town Hall, which illustrates the broader concept of rationalist architecture with emotional and poetic aspects of design, in addition to the attention to the more pragmatic and practical considerations on the users' well-being
ill. 3.23, 3.24, and 3.25 - photographs of examples of Team 10 architecture, which - with its broader dimension of the architectural discussion and diverse interests amongst its members - illustrates a balanced position between the form and the content, as a viable alternative to the function-centred "matchbox architecture" from the 1920s and 1930s; related to the "eternal seesaw" scheme, Team 10's work would be positioned between rationalism and modernism (ill. 3.23 - Alison and Peter Smithson's Robin Hood Garden residential estate in London, which builds on the Corbusian tradition of the Unité d'Habitation; ill. 3.24 - Aldo van Eyck's Nieuwmarkt playground in Amsterdam with its formal references to essential forms; ill. 3.25 - Free University of Berlin designed by Woods, Candilis, and Josić as an example of systematic design)

Compared to other issues, the idea of rationalism in the historical canon does not seem to have a common sense amongst the leading architectural historians. Whereas Curtis seems to understand rationalism as related to reason, Colquhoun refers to the "purification [of art] and the discovery of its psychological and formal laws"[91] as the first task of the rational architects. Zevi on the other hand, understands rationalism only in contrast to organic architecture and he criticises the overemphasis on rationalism in its more rigid form.[92]

Similarly to the lack of common meaning of rationalism, Sołtan's understanding of the term also seems to be less immediate. Whereas his ideas concerning functionalism and the International Style seem to be unequivocal throughout his career, the concept of rationalism balances between the rational and the emotional.[93] The difference lies in the fact that the concept of rationalism may or may not include emotional issues. However, even if the very definition may be loose, he firmly and continuously believes that both rational and emotional elements are needed in architecture. Indeed, he claims, "it would be helpful for an architect to assume that rationalism and logical thinking are tools and helpful methods in his work and that another source of help is however... imagination, intuition, [and the] ability to dream".[94]

Even if he may dwell on the coexistence of rational and poetic reasons in architecture (and thus on the distinctive aspect of both the rational and the emotional), claiming that the former "are not antagonistic to human values – they are indifferent to them",[95] maintaining such divisive understanding of the matter does not seem to fit his cross-disciplinary or syncretic ideas. He expresses clearly his beliefs on broader rationalism in a discussion with Fernando Távora at the Otterlo meeting in 1959, claiming that there are both rational and poetic "reasons" in architecture and that the former ones are not to be defined as "irrational".[96] In fact, he adds that the separation of thinking and feeling is an example of bad rationalism, or an incomplete one. However, such understanding amongst many architects was due to the overestimation of thinking over feeling. He illustrates this point of view in a very clear manner in a lecture at Harvard in 1967 referring to the retrospective analysis of Gropius. He repeats after him that the idea of rationalism relied on the fact that the most common understanding of rationalism amongst modern architects concentrated only on one aspect of it – that is the purifying force of reason. He claims that the other aspect of rationalism, "the satisfaction of the human soul, is just as important as the material [one]" – an approach he included in his design teaching (Chapter 8).[97] He urges thus for rationalist architects to be "rational enough" to let the emotional into their design process – a similar stand that can be compared to Aalto's idea of the "extended concept of rationalism" in the 1930s.[98]

Following such a definition, rationalism would include many examples of modern architecture, from Aalto's work (ill. 3.21, 3.22) to Mies' earlier designs, such as the Barcelona Pavilion or the Tugendhat House, and it includes different local tendencies that emerged after the Second World War – such as the regional and local variations of modern architecture. It is in contrast with the early and reductive functionalist designs, such as those by Russian modern architects or Meyer. This concept of broader rationalism, including both rational and emotional elements, seems to be most relevant for analysing Sołtan's work. It is also connected to Team 10's thick cultural dimension, which is an example of such "broadening of rationality" towards a more inclusive and more complete image of design practice. However, the group's work seems to move even further and their ideas navigate between rationalism and modernism, thanks to the interest of many of its members like Aldo van Eyck and Shadrach Woods in other cultures and connections between them (ill. 3.23 to 3.25).

91 Colquhoun, p. 122.
92 Zevi, p. xv.
93 The idea of the rationalism and its position between the rational and the emotional appears through a number of texts by Sołtan, as for instance lecture at Klub Młodych Artystów i Naukowców in Warsaw in March 1948; lecture for the artistic high school teachers in November 1958; interventions during the CIAM/Team 10 meeting in Otterlo in 1959; lecture 'The Eternal Seesaw' at Harvard in April 1965; lecture 'Architecture Today' at Harvard in October 1976; lecture at the Miami University in Oxford, OH in March 1984; draft of article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985; draft of a book *On Architecture and Le Corbusier* from November 1995. For the lecture for the artistic high school teachers, see: AASP-JS. For the audio recordings from the Otterlo meeting, see: HNI-JB. For the lecture 'The Eternal Seesaw', see: HGSD-JLS, SA503. For all the rest, see: MASP-JS.
94 Draft of article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, see: MASP-JS.
95 Lecture 'Architecture Today' at Harvard in October 1976, see: MASP-JS.
96 HNI-JB, AV31, audio 4.
97 Lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.
98 Alvar Aalto, 'Rationalism and Man', in *Alvar Aalto in his own words*, ed. by Göran Schildt (Helsinki: Otava, 1998), p. 92.

The discussion brings us then to explain the difference between "modern" and "modernist". While Sołtan does not seem to use these terms as different,[99] this chapter proposes to differentiate the meaning of these for clarity purposes, and the term "modernist" will be associated with the very ideals of modernism according to Sołtan. In order to understand them, one has to go back again to Lévi-Strauss' claim on the revolutionary aspect of the times when modern architecture was being formed.

As Sołtan believed in the profound change in society, culture, science, and the arts in comparison to the mid-nineteenth century, he also believed that the raw, burgeoning origin of the new culture was close to the beginnings of other cultures (Chapter 7).[100] Those "grassroots" of new cultures were to form a common ground and a shared essence amongst those different epochs. Sołtan dwells on the parallelism of the births of different cultures, as according to him, modernism was not the first to be new and primitive. Therefore, the interest and inspiration with those cultures leads towards the truly modernist architecture, such as the early work of Ivan Leonidov (before his work was limited by socialist realism), Le Corbusier, Giuseppe Terragni, Berthold Lubetkin, and Kahn (ill. 3.26 to 3.29), all of whom Sołtan quoted as architects interested in researching the common ground with origins of other cultures. In addition to them, one can surely quote some members of Team 10, who followed similar ideas. Sołtan claimed that such modernist designs and "the discovery of some visual links bridging our experiences with the most distant *époques* is obviously particularly important and thrilling" for architects.[101] Therefore, the word "modernism" will be kept to define this "grassroots architecture", inspired by the beginnings of burgeoning cultures and the urge to contribute to the 'terraforming' architecture of the new epoch, as a more visual and poetic branch of a more generic rationalism. In fact, the focus on the new aspect of architecture is very important for Sołtan's understanding of "grassroots architecture". He urges that it is necessary and inevitable to go forward, and looking for the common ground does not mean to go backwards in time or to look for past forms: "it's impossible to go back. The weak wish to go back as they cannot cope with the present-day".[102] Instead, Sołtan claims that modernist architecture looks for principles and universal patterns projecting towards the future. This very idea is clearly stated by St John Wilson. He compares modern architecture to the ancient Greek one, claiming that the latter was deprived of its initial meaning that was much closer to the modern ideals. He claims that the Greek classified architecture as "Practical Art", referring to Aristotle's understanding of the virtues as coming from the proper functions and the fulfilment of the purpose. He claims, "Classical ethos requires of architectural design a strict linear sequence that proceeds from the discovery of what is desirable to the invention of an appropriate form and then to the elaboration of the technical means to make it possible".[103] With the argument of the vicinity of the Greek ideals to the modern ones, his reading of modern architecture is aligned with the very idea of the "grassroots architecture" as a true essence and principle shared by modernist architecture and the burgeoning new cultures.

Such an understanding of modernism brings Sołtan closer to the "eternal" aspect of architecture. When talking about Le Corbusier's architecture as the epitome of modernism, Sołtan underlines the former's interest in origins and the idea of 'becoming young'. Amongst Sołtan's papers, one may find a quote by Le Corbusier: "the problem – evidently – is throughout the complexities to attain simplicity, throughout the destructions of life to pursue a wondrous dream: not the one to stay young, but the one to become young".[104] Such a different reading of modernism, which was often considered as a *tabula rasa* cut off from history, was a very important issue for Sołtan. In fact, one of his former co-workers, recalls that Sołtan tried to "straighten faulty judgments and assaulting opinions treating modernism superficially and without a proper knowledge and understanding [of] its essence and historical background".[105]

99 Sołtan often referred to the generic "modern architecture" as "modernism".
100 The idea of the "grassroots architecture" in modernism appears through a number of texts by Sołtan, as for instance lecture 'O syntezie architektury, malarstwa i rzeźby' in Warsaw in February 1948; lecture 'Impresje Paryskie' at the National Museum in Warsaw in March 1948; diary entries from 1951-1956; lecture at ICSID in Mexico in October 1979; lecture at the Miami University in Oxford, OH in March 1984; draft of article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985; lecture in Saint Louis in September 1987; notes 'Can tradition, history and modernism be... friends?" from 1988; lecture in Montreal in September 1990; lecture at the New Jersey Institute of Technology in April 1992; lecture at the Fine Arts Academy in Warsaw in 1995; draft of a book *On Architecture and Le Corbusier* from November 1995. For all the documents, see: MASP-JS.
101 Notes 'Can tradition, history and modernism be... friends?" from 1988, see: MASP-JS.
102 Lecture 'Impresje Paryskie' at the National Museum in Warsaw in March 1948, see: MASP-JS. Translation from Polish (SR).
103 St John Wilson, p. 41.
104 Note with Le Corbusier's quote in Sołtan's papers, see: MASP-JS.
105 Włodzimierz Wittek, opinion on Sołtan for the procedure of awarding him the *honoris causa* doctorate at the Warsaw Polytechnic in 2000, see: MASP-JS.

However, the connection to history, especially if very carefully defined as in case of Sołtan's understanding of modernism, was not uncommon in the canon of modern architecture history. Vidler for instance claims that modernism was not cut off from history, and did not refute it. Furthermore, he adds, "never was history more alive than in its so-called modernist rejection",[106] in a clear contrast with the postmodern criticism of modernist architecture. Even earlier, Giedion claims, "a connection with the past is a prerequisite for the appearance of a new and self-confident tradition", while he was looking for the roots of modern architecture (or perhaps modernist architecture) amongst the early Renaissance artists in Florence.[107] However, the definition closest to Sołtan's ideas is given by Weston – "being modern means being up to date, but being a modernist is an affirmation of faith in the tradition of the new".[108] The very expression "tradition of the new" may find a very close correspondence in the "grassroots architecture" of the origins of new cultures. It is striking though that the united voice of several architectural historians does not reflect the common sense understanding of modernist architecture, which is often claimed to be cut off from history. In its simplifying definition, Wikipedia equals modern with modernist and states, "modern architecture emerged from [...] a desire to break away from historical architectural styles and to invent something that was purely functional and new".[109] The generalisation and misconception in this definition, clearly opposing the voices of architectural historians and of Sołtan himself, shows the need to redefine modernism as an architecture intent on looking for the principles and common elements in the beginnings of burgeoning cultures as the expression of the new era.

"modern movement" or modern architecture

The reflection on different modern tendencies according to Sołtan brings this discussion to the question of the "modern movement". Whereas Sołtan sometimes occasionally uses the expression "modern movement" meaning modern architecture as a whole, he does not stick to the idea of uniformity that was so dear to Pevsner or Benevolo. His own criticism of "matchbox architecture" or the International Style, as opposed to rationalism and modernism gives a polychromatic and polyvocal image of modern architecture. He arguably never gave an image of modern architecture as a unified and solid block. Instead, he pictured the general tendency in architecture as a continuous seesaw movement, where a more functionalist tendency is followed by a more emotional one. He illustrates this for instance in 'The Eternal Seesaw' lecture at Harvard in 1965: such pendulum movement is presented as a natural process in the course of architecture. In this sense, in Sołtan's understanding, "modern movement" becomes a crafted concept, since modern architecture includes various positions within this oscillating process. Therefore, it does not differ from the previous conclusions on the constructed and artificial aspect of the term.

Indeed, while referring to a very definite "modern movement", he means exactly the attempts of architectural historians to deliver an artificial vision of a unified tendency.[110] In Otterlo, he refers to it as a past event: "ten years ago, CIAM was fighting against those who represented the past: it was then the modern movement".[111] However, he claims that such a notion had sense only while modern architecture was opposed by traditional academicism. Due to the general climate worldwide immediately after the Second World War, the shift towards modern architecture deprived the "modern movement" of its sense. As it became globally the most visible and almost the only way of design, there was no need of further showing its strength in unity – therefore modern architecture lost its interest in being also a "modern movement".

Following this idea, the "modern movement" remains thus the ideological attitude of modern architecture historians and theoreticians to build its strength in unity. At the same time, the correct term to describe the general tendency, inclusive of functionalism, rationalism, and modernism, is "modern architecture". It does not bear the burden of theorised unity, but it simply englobes different tendencies that had a common origin – Lévi-Strauss's revolutionary change in culture, society, and science.

106 Vidler, p. 192.
107 Giedion, 5th edn, p. 30.
108 Weston, p. 7.
109 'Modern architecture', *Wikipedia* (2019) <https://en.wikipedia.org/wiki/Modern_architecture> [accessed on November 26th, 2019].
110 The idea of "the modern movement" as an attempt to build unity of modern architecture appears through a number of texts by Sołtan, as for instance interventions during the CIAM/Team 10 meeting in Otterlo in 1959; lecture 'The Eternal Seesaw' at Harvard in April 1965; lecture 'Where do we go from here...?' at the Virginia Polytechnic Institute and State University in December 1978. For the audio recordings from the Otterlo meeting, see: HNI-JB. For the lecture 'The Eternal Seesaw', see: HGSD-JLS, SA503. For the lecture 'Where do we go from here...?', see: MASP-JS.
111 HNI-JB, AV49, audio 7. Translation from French (SR).

ill. 3.26, 3.27, 3.28, and 3.29 - photographs of examples of buildings by architects, who were considered by Sołtan as true modernists working with the "grassroots" of architecture, referring to the origins and essential elements shared by different cultures (ill. 3.26 - Le Corbusier's chapel in Ronchamp, which relates to the memories of the first Christian churches and cave or catacomb meeting places in the first years of Christianity; ill. 3.27 - Giuseppe Terragni's Casa del Fascio in Como, which illustrates a design drawn through the regulating lines principles; ill. 3.28 - Giuseppe Terragni's unbuilt design for 'Danteum', a memorial in Rome illustrating Dante's poem *The Divine Comedy* and relating to the nearby ancient Roman forums; ill. 3.29 - Louis Kahn's Dhaka Parliament illustrating the importance of the basic geometrical forms)

"Parasite on modernism", "birth contraction of modernism", "shiver annunciating death of culture", "dead-end", "caricature", "thumbing nose", and then "deformed", "absurd", "perverse", "nihilist", and "mocking": amongst all the comments by Sołtan on postmodernism, the word "pessimist" is perhaps the lightest.[112] He was thoroughly contrary to its very ideas – not only the results – and his students claim that listening once to his criticism of postmodern ideas was not something one could have forgotten. Urs Gauchat recalls, "he would rant for hours about the evils of postmodernism and how that was a corrosive force that meant architecture was going back to decoration and superficial mood, and it had no basis... [...] A rant. An hour long rant without taking a breath".[113]

However, in order to understand this profound animosity, one has to understand what Sołtan means by "postmodern" or – as he sometimes refers to it – "eclectic smorgasbord". At this point, his very understanding of various aspects of modern architecture is very important. He claims that postmodern criticism was based on a *pars pro toto* reasoning assimilating the entire modern architecture to the early functionalism or the International Style – the shallowest modern tendencies, and the least successful as far as their results are concerned. The former was simplifying and raw in its lack of consideration of architectural forms, whereas the latter was a formalist deviation, which neglected the very reasons behind modern architecture. Both of them, according to Sołtan, attracted less talented architects as they either assumed that architecture was a logical process (and thus no talent was required) or it was a product of a catalogue of modern elements and forms one can choose from. Since such criticism – whether by Jencks or Robert Venturi – was based on an incomplete understanding of modern architecture, they were pointing to the lack of meaning and the complete negation of history. Sołtan underlines that the main idea in postmodernism was indeed "meaning", as theoretically postmodern architecture was to give back to the users the meaning that was absent in modern buildings.

The manner in which postmodernism aimed at giving back the meaning to architecture was according to Sołtan another important issue. He claims that postmodern architecture was very much influenced by the spirit of the time and by its overcoming pessimism (as opposed to modern architects' optimism – whether naïve or not – and the will to contribute to the new epoch). He quotes not only the disillusion with modern architecture amongst the first postmodernists, but also some events that marked society and culture. He refers to the Second World War, Nazism, and the atomic bomb as elements that nourished the pessimist vision of the future. He claims that such negativity left by those disasters entered the postmodern mood, as it was "exuding gloom". He refers for instance to Samuel Beckett as one of the artists who gave a very clear image of pessimism in the arts: "there is nothing to express, nothing with which to express, nothing from which to express, no power to express, no desire to express, together with the obligation to express".[114] In architectural terms, Jencks illustrates this attitude while claiming, "schizophrenia is the only intelligent approach [to architecture]" positioning the architect in a torn position, in-between grounded tradition and transitory fashion.[115] Such desperation was in Sołtan's reading of postmodern one of the reasons why it turned towards "historical nonsense" and reductive neo-eclecticism in its research of the meaning. The will to move meaning closer to the users was meant to be achieved thanks to a catalogue of past memorabilia or through "skimming history books",[116] but eventually resulted in the disguising of an old building as a new one – in presenting the past as if it was present. The indiscriminate use of the past was thus again easily accessible for mediocre architects who did not have enough talent. Copying the past, as Sołtan claims, is indeed easy and intellectually non-committing. This attitude leads him to criticise heavily postmodernism – calling it indeed a caricatured, nihilist, deformed, absurd or mocking vision of history.

His reproach to postmodernism was not only the instrumental use of the past and tradition, but also the incompleteness and fragmentation of its architecture. The concentration on formal aspects brutally taken from the past was aimed at giving meaning to architecture, while much more essential issues were neglected. Indeed, even before postmodernism began, Sołtan was claiming that the poetic reasons in architecture could not stand

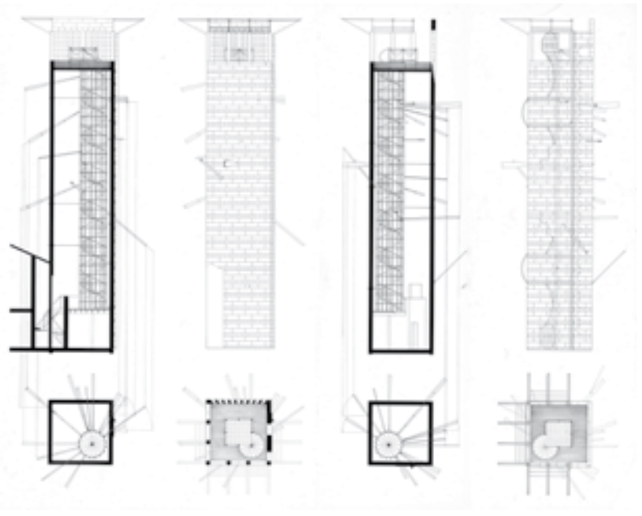
112 The criticism of postmodernism and the analysis of its origins appears through a number of texts by Sołtan, as for instance lecture 'Where do we go from here...?' at the Virginia Polytechnic Institute and State University from December 1978; notes on postmodernism from 1982; lecture at the Miami University in Oxford, OH in March 1984; lecture at the Académie d'Architecture in June 1984; draft of article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985; lecture in Saint Louis in September 1987; lecture in Montreal in September 1990; lecture at the New Jersey Institute of Technology in April 1992; lecture at the Fine Arts Academy in Warsaw in 1995; draft of a book *On Architecture and Le Corbusier* from November 1995. For all the documents, see: MASP-JS.

113 Interview with Urs Gauchat.

114 Samuel Beckett, 'Three Dialogues', *Transition*, 5 (1949).

115 Charles Jencks, *The Language of Post-Modern Architecture* (London: Academy Editions, 1977), quoted in: *Architecture Theory since 1968*, ed. by Michael Hays (Cambridge: MIT Press, 2000), p. 313.

116 Lecture at the Académie d'Architecture in June 1984, see: MASP-JS.



ill. 3.30 - sketches by Robert Venturi and Denise Scott-Brown for *Learning from Las Vegas*, which illustrate well the caricature aspects of "eclectic smorgasbord" despised by Sołtan, which led to the fierce criticism of postmodern ideas and forms
ill. 3.31, 3.32, and 3.33 - examples of less radical examples of postmodern designs, which were appreciated by Sołtan and quoted as interesting formal results in architectural research from the 1980s and labelled as "eclectic classicism" (ill. 3.31 and 3.32 - drawings for the unbuilt design of a tower in Leonforte, Italy by Rodolfo Machado and Jorge Silvetti with a historically inspired form, yet with connection to the surrounding historical context; ill 3.33 - Aldo Rossi's monument honouring former President of the Republic of Italy Sandro Pertini as an example of Rossi's architecture, whose formal research was often appreciated in the 1980s by Sołtan)

on their own, if there were no more rational ones. Thus, postmodernism meant for him not only a pastiche of history, but it was also a very hermetic phenomenon, based on subjective understanding of poetics – hence the description of it as "private jokes in public places" by Moshe Safdie,[117] whom Sołtan wholeheartedly agreed with on the matter. Furthermore, another issue moving postmodernism away from the essential issues is according to Sołtan the increasing importance given to the exploration of words instead of the exploration of reality.

Therefore, since Sołtan's understanding of postmodernism depicts it as an "eclectic smorgasbord" tendency of a decontextualized and deformed use of the past based on a pessimist vision of the world in a response to modern architecture's complete refusal of history, it seems quite understandable that he claimed in the mid-1990s that postmodernism had ended. Indeed, Sołtan underlines that it was based on the wrong reading of modern architecture and it was based on the incomplete analysis by the leading postmodernists, such as Jencks. As the assumption claiming that modern architecture was cut off from history was wrong, then the very idea of postmodernism was a simple mistake that was deprived of logic. Moreover, he adds that the very idea of basing postmodernism on pessimistic and negative sentiments was not sustainable to look towards the future – and therefore it was normal that it proved to be a "dead-end".

Such negative opinion and reading of postmodernism is found with similar thoughts amongst modern architecture historians. Whereas Curtis refers to it as "one of the tendencies in the 1970s",[118] Benevolo calls it an "impasse" within modern architecture development. In such critical analysis, they seem to agree upon the short-lived and limiting application of postmodernism, as opposed to modernism that continues to have influence. Frampton criticises also the populist aspect of postmodernism research into the meaning that should be brought closer to the users. He also denounces the faults of the focus on formal elements only, as opposed for instance to the socio-cultural ideas forwarded by Team 10.[119] Together with Vidler, they agree on the negative aspects of this limiting focus. Frampton refers to it as "folly", "ruination of style" and "cannibalisation of architectural form",[120] whereas Vidler claims, "to think as a postmodernist [...] would be to ignore everything that makes history, and selectively pick and choose whatever authorising sign fits the moment. History is used and abused in postmodernism".[121] The absurd, caricatured, and perverse character or postmodernism pointed out by Sołtan comes here into the light. Moreover, Vidler underlines the pessimistic attitude in postmodern architecture, as it was signalled by Sołtan. He claims that postmodernism used history "as an empty sign of itself, deprived of its force and discomforting violence, combined in a luminous vision of a world without change" in a "world as an image of its past and an illusion without future".[122]

from "eclectic classicists" and modernism into the contemporary

While the discussion on Sołtan's understanding of different tendencies within modern architecture and postmodern may leave a sensation that he was not objective regarding the latter, some of his texts show that his reading of postmodernism was not following the *pars pro toto* reasoning he was reproaching in Jencks and other postmodernists. He claims that the "good ends meet", as for instance Danteum by Terragni and Ronchamp – examples of actual modernism – were recognised by the 'better' postmodernists, and the Torre Leonforte by Jorge Silvetti (ill. 3.31, 3.32) – a Harvard-based eclectic architect – goes "beyond the cynicism of the regular postmodern".[123] As further examples, he quotes the work of Aldo Rossi or Hideo Sasaki (ill. 3.33).[124] Called by Sołtan "eclectic classicists", their work is much different from "eclectic smorgasbord". These architects, according to him, do not follow Jencks' radical ideas. Instead, their work is capable of emotional and social contact with people through the eclectic research of the meaning as an anti-radical version of postmodernism. Following the idea of ends that meet, the sensitivity within both modernism and "eclectic classicism" may thus merge according to Sołtan in contemporary architecture.[125] In such a way, he sees contemporary research as a continuation of modernist ideas that should still be looking at the origins – referring clearly to the "grassroots architecture" of new cultures. He does not give though any clearer definitions or examples of such attitudes – he claims that the development of the new contemporary architecture is a slow process, similar to the slow development of modernist architecture that was interrupted by the appearance of postmodernism. With such a positive attitude – a reversal from the pessimist postmodern mood – he claims thus that contemporary architecture will slowly become beautiful.[126] These considerations lead to the attempt to visualise Sołtan's understanding of previously mentioned terms in a 'seesaw scheme' (ill. 3.16), based also on diagrams he used in his teaching at Harvard (Chapter 8). They could be all positioned somewhere between a 'logical' approach related to the content on the one hand and an 'emotional' approach based on the form on the other one. Starting from the most logics-based functionalism, the more attention is given to emotions or form, the further the tendency moves towards the right in the scheme (ill. 3.16). At the very end, the International Style is represented not as a part of modern architecture, but as a fashion-dictated idea emerging from the Beaux-Arts attitude. Even though a more recent tendency, postmodernism with its smorgasbord version is a dead-end direction standing as the most emotional and formalistic approach, deprived of the logical reasons and turned to irrationality. However, following the latest considerations, a less radical "eclectic classicism" together with modernism and a balanced vision of poetic and rational elements could lead towards a new definition of contemporary architecture, which could eventually halt the eternal pendulum movement between the form and the contents.

Sołtan and modernity

Sołtan's reading of modern architecture puts modernist ideas at the core of the development of present-day research. Through overcoming the difficulties of the limiting functionalist "matchbox architecture", the deviations of the International Style and the postmodernist eclectic perversion, he claims that modernism is tightly linked to the future of architecture – meaning also to the future of its users. Integrity and consistency in Sołtan's understanding of modern architecture issues helps to draw a clear picture of the twentieth century history of architecture. His ideas underlining the persistent importance of modern architecture are aligned with the general feeling of architectural historians such as Curtis, Frampton or Weston who claim that it still has a strong influence on present-day lives. Curtis states boldly, "the epic adventure of modernism is clearly not over, especially in a world of a global economy, the universalisation and technology, the redefinition of identities and territories".[127] Others agree with him that the modern has not ended; Weston for instance claims that the voices announcing the death of modern architecture were "greatly exaggerated".[128] The continuity of modern ideals though has yet another very important consequence on the very scholarship of modern architecture history. Vidler claims, "historians of the modern movement might then be seen not only as contributing to our historical knowledge of earlier phases of the modern, although this is important, but equally as instances of the processes of modernity's self-reflection, themselves to be opened up as unanswered questions".[129] Modern architecture is thus not only something still alive, but it is vital for the development of future architectural practice. Such projection of modernism towards the future links this argument to yet another idea – of approaching modernity and building a new civilisation, an ideal that is remembered by some of his students.[130] In an early lecture of Sołtan's from 1946 he claims, "to express oneself equals to express modernity".[131] Modernity would mean then 'us' and 'now', and through bringing modernism closer to both of them, within the syncretic contemporary architecture, its role and importance appear even clearer. In this sense, understanding Jerzy Sołtan's vision of modern architecture and analysing his ideas seems to be a vital part of the present-day discussion of architecture. In addition, looking at his designs, ideas, and teaching as a broader case study, challenges the present-day sometimes generalised image of modern architecture. Fitting into the tendency of avoiding generalising narrations, but a rather "from the general to the particular and from the particular to the general" example of attitude,[132] a study of Sołtan's work helps to bring light to, and revise sometimes misunderstood, or simply missed aspects of modern architecture, and to illustrate the presence of modern ideas in different realities. On the one hand, through looking at his ideas and theory, one can point to the present-day importance of modern values and their continued presence in architectural practice. Through his teaching and designs, on the other hand, one can point to the reach and to the practical application of these ideas and the means of forming a legacy. Centred on the groups crucial to the development of modern architecture – CIAM, Team 10, and Harvard – a study on Sołtan's work and life becomes also a commentary to modern architecture history, looking at the established historiography and the past events through the lens of his own terminology and ideas, as an example uniting academic interest in the understudied Central and Eastern European architects, and the recent scholarship on Team 10.

117 Notes on postmodernism from 1982, see: MASP-JS.
118 Curtis, 3rd edn, p. 605.
119 Frampton, 4th edn, p. 305.
120 Frampton, 4th edn, p. 307.
121 Vidler, p. 193.
122 Vidler, p. 197.
123 Lecture in Saint Louis in September 1987, see: MASP-JS.
124 Andrzej Bulanda, *Rozmowy o architekturze* (Warsaw: Muzeum Akademii Sztuk Pięknych, 1996), p. 22.
125 Article for *San Francisco Bay Architects' Review* from November 1982; lecture in Saint Louis in September 1987, see: MASP-JS.
126 Lecture 'Where do we go from here...?' at the Virginia Polytechnic Institute and State University in December 1978, see: MASP-JS.
127 Curtis, 3rd edn, p. 686.
128 Weston, p. 229.
129 Vidler, p. 200.
130 Interview with Christopher Benninger.
131 Lecture at YMCA in Paris in 1946, see: MASP-JS.
132 Quote referred to by a number of Sołtan's students as used by their teacher, see for example: interviews with Urs Gauchat, with Thomas Holtz, and with Ataf Tabet.

Sołtan's *essor*: between Poland and the West

the human life, probably any human life can be divided in relation to the place – area – in which the person resided. In my case, an important role was played by Western Europe

– Jerzy Sołtan on his early years[1]

It may seem strange to read such words by Sołtan, as he was a Polish-born architect, who first studied in Poland and then designed and taught there for around fifteen years after the Second World War. Yet he was much more attached to experiences, contacts, and ideas connected to his stay and work in France and Belgium. He was attached to Le Corbusier, to his theories and ideas, and to the company of visual artists such as Fernand Léger, Georges Braque, Henri Laurens, and many Polish artists who were imprisoned along with him during the war. These contacts with various artists, intellectuals, and writers were doubtlessly inspiring and mind-broadening, and were neatly in contrast with his earlier education at the Polytechnic of Warsaw, which he disregarded as simplistic and limiting. The very same ideas accompanied Sołtan even after his return to Poland, where most of the environment was politically and culturally hostile towards modern architecture. Struggling with the influences of the pre-war functionalist vision of architecture, with the regime's empty propaganda focussed first on socialist realism and total rejection of modern ideals, and later with a centrally planned and time-and-cost-based functional vision of architecture, the relevance of Sołtan's teaching and designs in Poland can be fully understood only through acknowledging the contrast between his vision of poetic modernism and the officially established direction in Polish architecture. Through illustration of cultivating modern ideals and staying in contact with Western European architects against all political, ideological, and economic odds, this chapter shows how all of these contributed to Sołtan's further life and that they are crucial to understanding his reading of modern architecture, his ideas, and designs.

Where most of the very limited attention given to Sołtan's work concentrated on his designs in Poland and on his activity within the Fine Arts Academy,[2] this chapter aims to illustrate a more general image of the early years in addition to the relevance of the situation in Poland to his architectural ideas. Through a discussion on the context he was operating in, it is possible to give meaning to his theory and to his reading of modern architecture history. Together with the following one, this chapter explains how Sołtan's life is important in understanding his intellectual evolution and of his architectural work. Through critical analysis of the context, it aims to answer the question on the importance of Sołtan's early life and of his activity in Poland to understand his legacy. First, it concentrates on the early years of his education at the Polytechnic of Warsaw, later imprisonment in a prisoner of war camp, and his work in Le Corbusier's Parisian atelier. Secondly, it shows the persistence of the ideas he brought with him from this first period, when designing and teaching at the Fine Arts Academy in Warsaw while struggling with the communist regime and propaganda. Consequently, this analysis forms a solid background for understanding of Sołtan's later international career, which continues in the following chapter. Together, these detailed pictures of his life enable us to interpret Sołtan's theory, teaching, and design work.

early years

Sołtan's education – or rather formation – laid the basis, which would persist in his work until the last years. His contacts with Le Corbusier and with visual artists, whether in Paris or in the war camp, were significantly relevant to determining the course of his own architectural thoughts and designs. His official education, on the contrary, he rejected as too limiting and simplifying. As a result, these early years explain very well and provide background to the ongoing discussion in Sołtan's texts on the relation between architecture and art, or architecture and beauty (Chapter 6).

education – disenchanted functionalism

After the 1920s, when Polish architecture was still influenced by classicism of Beaux-Arts, the 1930s cemented the influence of modern architecture, new materials, and technologies in a period of economic and political stability under the authoritarian rule of the Sanation movement.[3] These modern tendencies were linked to the urgent need of developing Polish infrastructures and of building new dwellings – both dire after one hundred and twenty-three years of occupation and division of Poland into three parts governed independently one

1 Article on Claude Laurens from May 2001, see: MASP-JS.
2 For example, exhibition 'Ineffable Space – Jerzy Sołtan, Lech Tomaszewski, Andrzej Jan Wróblewski' organised in 2018 at the art gallery Zachęta in Warsaw and latest publication *Wzornictwo na Myśliwieckiej*, ed. by Agata Szydłowska (Warsaw: Akademia Sztuk Pięknych, 2018).
3 Sanation was a political movement in Poland, which came to power after the May Coup in 1926, in which the existing government was overthrown and a new one was formed from within members of Sanation, see: Wojciech Leśnikowski, 'Functionalism in Polish architecture', in *East European Modernism*, ed. by Wojciech Leśnikowski (New York: Rizzoli, 1996), p. 215.

from each other by Russia, Prussia, and Austria.[4] This urgent situation in Poland let architecture be influenced by what Sołtan called "matchbox architecture" functionalism (Chapter 3) coming from the neighbouring countries: either Germany or Russia. The slogan "do not grieve for roses when the forests are burning" was said to be hung up on the walls of such practices in Poland, pointing to the most pressing issues back then: planning and housing.[5] These ideas were shared by the most avant-garde leftist groups in Polish architecture in the 1920s, for example BLOK (1924-1926) and Praesens (1926-1930), whose members, through their studies, brought European influences to Poland.[6] Whereas BLOK was interested in studying art and modern technology, and its programme praised constructivism, functionalism, and supremacism,[7] Praesens (the Polish branch of CIAM) emerged from the former and developed its ideas, concentrating among other issues on standardisation and on mass housing production. The importance of the latter was significant, as some of Praesens members were actually at the core of the emerging CIAM's organisation (especially the couple Szymon and Helena Syrkus, ill. 4.1, 4.2),[8] and the group members shaped architectural education in Poland after the war when teaching in the 1940s in Warsaw.[9] Even though they started teaching only after Sołtan's own studies were complete, the influence of Praesens and its members was already perceived at the Polytechnic of Warsaw when Sołtan started architecture studies there in 1931. Due to the reigning "matchbox architecture" and pedagogy based on a rather engineering approach deprived of creative and imaginative designing,[10] Sołtan recalls his scepticism concerning modern architecture during his studies. He recalls that one of the most 'artistic' modules he attended, drawing taught by Zygmunt Kamiński, was based on routine and lack of imagination without creative artistic approach.[11] Routine and prescriptive character of architecture was not accepted by Sołtan, whose friends recall that "he just dismissed that altogether".[12] As a result, he did not find his studies interesting or engaging – not only because he was politically neutral and thus further from the socialist or communist circles dominating the Polish avant-garde – but also his education was far less creative than he had wished for. He recalls: "some modernist and social slogans were for me not only clear and obvious, but also... close [nearby]. However, the main magnet attracting me to modernism was visual commotion, poetic ideas, which was basically absent amongst Polish earliest modern architects".[13] Therefore, even though he was accepting of the social implications of architecture, other issues were for him more important, making him more distant from mainstream Polish architecture.

In order to counterbalance his discontent, it is necessary to understand his interest in Le Corbusier. Even if the main avant-garde trends in modern architecture in Poland were centred on German and Soviet influences, Le Corbusier's ideas were still visible, but they were often restricted to the reductive and simplifying concepts like "five points of architecture".[14] Even though BLOK and Szymon Syrkus were interested in some Corbusian ideas (architect Wojciech Leśnikowski claims that Syrkus considered Le Corbusier "a genius", as he was called by some "Polish Le Corbusier"), they were mainly connected to the radical reading of the "age of the machine".[15] According to Sołtan, this attitude made it difficult for the more poetic and intangible ideas of Le Corbusier's architecture to be dwelt upon, and in a general comment on the cultural situation, he adds that after a succession of patriotic and socially inclined painters from the nineteenth century, "Poland was not ripe

4 Zbigniew Kadłubek, 'Wstęp', in *Modernizmy. Architektura nowoczesności w II Rzeczpospolitej – Tom II, Katowice i województwo* śląskie, ed. by Andrzej Szczerski (Krakow: DodoEditor, 2015), p. 11.
5 Lecture at the Université Laval in Montreal in June 1996, see: MASP-JS.
6 Katrin Steffen and Martin Kohlrausch, 'The limits and merits of internationalism: experts, the state and the international community in Poland in the first half of the twentieth century', *European Review of History*, 5 (2009), 715-737 (p. 722).
7 Leśnikowski, p. 204.
8 Szymon Syrkus was among the twenty-eight signatories of the La Sarraz Declaration from 1928 bringing CIAM to life. After the initial invitation to La Sarraz due to his modern proposal in the League of Nations competition, his role in CIAM rose quite quickly and he became member of the CIRPAC – CIAM's elected executive body. He was "perhaps the most foremost exponent of functionalism anywhere in Eastern Europe", see: Anders Aman, *Architecture and Ideology in Eastern Europe during the Stalin Era* (Cambridge: MIT Press, 1992), p. 173.
9 Praesens members Barbara Brukalska (1899-1980), Stanisław Brukalski (1894-1967), Helena Syrkus (1900-1982), Szymon Syrkus (1893-1964), Bohdan Lachert (1900-1987) were Polish architects, members of Praesens and teachers at the Polytechnic of Warsaw: Barbara Brukalska since 1948, Stanisław Brukalski since 1949, Helena Syrkus since 1955, Szymon Syrkus since 1949 and Bohdan Lachert since 1949. Their colleague, Józef Szanajca (1902-1939), died during the Second World War.
10 For example, in 1932, architectural instruction suggested, "for old architecture, an architectural problem was focussed mainly on designing a beautiful façade, but today's architect starts solving a given task with the correct interior organisation", see: Tadeusz Michejda, 'O zdobyczach architektury nowoczesnej', *Architektura i Budownictwo*, 5 (1932). Quoted in Irma Kozina, 'O stylach w katowickiej architekturze międzywojennej', in *Modernizmy. Architektura nowoczesności w II Rzeczpospolitej – Tom I, Kraków i województwo krakowskie*, ed. by Andrzej Szczerski (Krakow: DodoEditor, 2013), p. 25. Translation from Polish (SR).
11 Andrzej Bulanda, *Rozmowy o architekturze* (Warsaw: Muzeum Akademii Sztuk Pięknych, 1996), p. 43.
12 Interview with Urs Gauchat.
13 Bulanda, p. 40. Translation from Polish (SR).
14 Andrzej Szczerski mentions that many buildings followed the "five points", see: Andrzej Szczerski, 'Modernistyczne Zakopane', in *Modernizmy. Architektura nowoczesności w II Rzeczpospolitej – Tom I, Kraków i województwo krakowskie*, p. 282. Such tendency reflects Sołtan's later criticism of the International Style as modern formalism: accepting modern forms as stylistic elements to take the place of classicist ones (Chapter 3).
15 Leśnikowski, pp. 204, 210.

ill. 4.1 (chapter cover) - present-day state of the tribunes of 'Warszawianka' sporting centre designed by Jerzy Sołtan and the Workshops
ill. 4.2 and 4.3 - examples of modern architecture built in Poland in 1918-1939 showing influences of early functionalism amongst the members of Praesens with simple forms and limited number of used materials (ill. 4.2 - residential building in Rakowiec in Warsaw as part of the urban plan designed by Szymon and Helena Syrkus in 1930-1936; ill. 4.3 - small hotel building in Skolimów designed by Szymon and Helena Syrkus in 1931)
ill. 4.4 - present-day photograph of the building of the Social Insurance Company in Vilnius designed by Jerzy Sołtan and Stanisław Murczyński in 1938-1939, showing simple forms similar to the mainstream Polish architecture in the 1930s, but with the use of some traditional materials, like stone; the building has undergone limited modifications outside: for example, the portico has been partially closed and is now used as café space

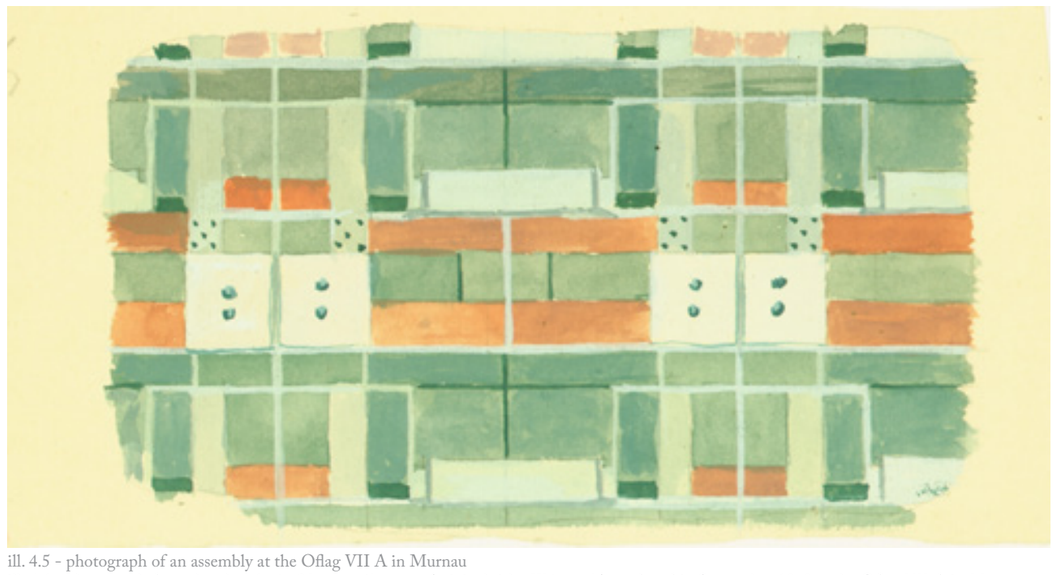
to follow in the steps of cubism".[16] As a result, he recalls that his discovery of Le Corbusier was independent from his taught education process: he underlines that there was no trace of Le Corbusier's ideas or designs during his official studies and that he discovered them alone, through skimming architectural magazines in the library: "apart from Maciej Nowicki and his wife Stanisława, Zygmunt Skibniewski, myself and some other students, who started looking around on their own, not a soul understood back then Le Corbusier".[17] Instead of his studies, Sołtan recalls as important experiences his trips abroad when he was able to see the Weißenhof area in Stuttgart and Le Corbusier's works in Paris – the Swiss Pavilion and the Salvation Army building. His growing interest in poetics and artistic values can be clearly seen in these first contacts with Le Corbusier's work, which he believed much more elaborate than "the amorphous white-and-greyish plaster, metal and glass required from the orthodox modern architecture of that period".[18] Another informal contact with Le Corbusier consisted of reading the freshly issued *Quand les cathédrales étaient blanches* (1937). He recalls, "I fell in love both in its form and its content. I was not able to judge well the value of what I was seeing. Those values that I was able to define though, the poetics of the era, and the poetics of life in general, the ability to see qualities that were for me unknown and new, and the very use of such particular language full of neologisms... it was actually a source of some fascination. My enthusiasm ended up in an attempt to translate the book into Polish".[19]

At the same time, he had first professional experiences, collaborating on a design for the Polish Radio headquarters under architects Skibiniewski and Kazimierz Marczewski, and working together with another young architect – Stanisław Murczyński – with whom he participated and won two competitions: for the League for the National Air Defence headquarters in Warsaw and for a social insurance building in Vilnius, the latter one built in 1938-1939 (ill. 4.4).[20] However, the period of Sołtan's studies and work in Polish practices before the beginning of the war was often dismissed by him, as he denied its importance in his formation as an architect. These first years of contact with modern architecture, dominated by functionalist tendencies did not correspond to his vision of architecture centred on artistic and poetic values. This refusal of prescriptive and mechanical thinking remained with him for a long time, as illustrated in many discussions on the differences between "architecture" and "building" (Chapter 6). Similarly, his interest in Le Corbusier's architecture endured even during his imprisonment in Murnau during the war in the following years and lasted throughout his life.

Murnau imprisonment – artists and broadening horizons

Towards the end of August 1939 Sołtan was mobilised into the Polish army as a second lieutenant in the cavalry, but he ended up quite soon in German captivity, in one of the Oflags for higher-rank soldiers – and spent most of the war in the Oflag VII A in Murnau in Bavaria (ill. 4.5).[21] The very specific position of the Murnau camp enabled Sołtan to pursue his artistic and architectural interests even during the war. Even though the captivity was dire, marked by famine, shortage of space and basic equipment, and with the barracks very crowded,[22] these conditions were still better than in other Oflags and far better than in the Stalags. It can be explained by the fact that the camp was a *Musterlager*, a sample camp used by the Germans as a display to be visited by the officials from the International Red Cross.[23] As a consequence, the camp authorities gave more liberties to organise educational and cultural events for the prisoners as, through better conditions, they wanted to show they were respecting the Geneva Convention on the treatment of prisoners of war.[24]

16 Lecture on Polish art in Washington DC (marked "Tapes Washington DC"), see: MASP-JS.
17 Bulanda, p. 40. Translation from Polish (SR). It is interesting though that Leśnikowski claims that a Praesens member Roman Piotrowski was lecturing his students at the Warsaw Polytechnics on Le Corbusier's *Vers une architecture* admitting, "this revolutionised teaching and students' activities in this school", see: Leśnikowski, p. 210. Sołtan might have never had contact with him, as he arguably never mentioned Piotrowski in any of his texts, memories or lectures.
18 Bulanda, p. 39. Translation from Polish (SR).
19 Ibid. For the excerpts of translation, see: Jerzy Sołtan, 'Drapacze chmur są za małe (wybór i przekład pism Le Corbusiera – Jerzy Sołtan)', *Arkady*, 6 (1939), 256-267.
20 Competition entry for the League for National Air Defense Headquarters (1937), and competition entry for the Social Insurance building in Vilnius (1938) were designed together with Murczyński (1906-1974). The latter was built in 1938-1939. Competition entry for the Polish Radio building in Warsaw (1938) was prepared in collaboration with Skibniewski (1905-1994) and Marczewski (1903-1977).
21 As a second lieutenant, he was to be kept in officers' prisoner of war camps – Oflags (Offizierslagern) – and not Stalags (Stammlagern). At the beginning of his captivity, he was sent to the Oflag VII-C in Laufen an Salzach, which was located in the Laufen Castle, see: Bulanda, p. 42. However, his stay in Laufen was short, as on May 27th, 1940, he arrived at the Oflag VII-A in Murnau within a group of 648 officers, where he was held until the liberation of the camp by the American army on April 29th, 1945, see: Danuta Kisielewicz, *Oflag VII A Murnau* (Opole: Centralne Muzeum Jeńców Wojennych, 1990), pp. 28, 169. In Sołtan's memories, the liberation date is sometimes mistakenly given as April 27th, 1945.
22 The site of the camp was a former military area, designed to host around 800-1000 soldiers. Nonetheless, in the camp around 5000 Polish officers were kept, making the cells overpopulated. They had around thirty-five square metres, and there were eleven to thirteen officers in each cell. The furnishing was basic, consisting of bunk military beds, small wardrobes (one per two or three officers), a table and one stool per officer. The cells had little light – one 40W bulb was illuminating the entire room, and the basement and attic cells had no natural light, see: Kisielewicz, pp. 16-18.
23 Murnau is located close to Switzerland, where the headquarters of the International Red Cross were located, so the visits to this camp were more convenient and more plausible rather than in other camps.
24 Kisielewicz, p. 20. Translation from Polish (SR).



ill. 4.5 - photograph of an assembly at the Oflag VII A in Murnau
ill. 4.6 - photograph from the play *Azais, Oh tranquil country* (original title: *Wsi wesoła*) produced in September 1943 at the Oflag VII A in Murnau as an example of the cultural life in the camp (set design by Bohdan Urbanowicz and Jerzy Sołtan)
ill. 4.7 - Jerzy Sołtan's sketch for the set design for the play *Judas from Cariot* in Murnau
ill. 4.8 - Jerzy Sołtan's elevation sketch for the competition for a residential family building in the war-destroyed regions organised by Aide Internationale aux Prisonniers de Guerre for war camp prisoner, as an example of design work in the camp (the competition entry submitted together with Zbigniew Ihnatowicz was awarded the first prize)

The educational activities were particularly vibrant in the camp, which was related to its character: amongst the prisoners (most of them Polish), there was a high number of former administrative employees (35%) and teachers (22%). This all meant that they were acting more easily as a united group, having much more in common as opposed to a mixed-nationality and socially diverse camp. Thanks to the collective engagement of the teachers and others in educational activities, for many – including Sołtan – the years of imprisonment, against all the odds, were "years of higher education, a true university". For Sołtan, they were crucial for his later career, much more important than the earlier "perfunctory education" at the Polytechnic.[25] This "prisoner university" had its self-government structure, and a Scientific Council supervising educational activities and courses organised in the camp aimed to expand their general culture and improve their abilities.[26] Thanks to the variety of courses provided,[27] and thanks to adapting various spaces for their delivery, it was possible to organise around 170-300 hours of courses per week. As a result, in 1939-1944, there were two hundred and seventy-one courses organised within the technical area only.[28] Traces of various educational activities may be found also in Sołtan's papers from the period: writings and notes on industrial design, lighting, physics, and electrical current might refer to the courses he attended in the camp.[29] The validity of such training was subsequently underlined by the fact that it was recognised after the war by the Polish authorities as a normal higher education degree.[30]

In addition, many prisoners were reading and studying on their own thanks to the materials available in the camp library.[31] In Sołtan's writings there are traces of notes and quotations from architecture books: some in English, and other ones in German or in Polish. He was studying the work of Mies van der Rohe, Walter Gropius, Bruno Taut, Frank Lloyd Wright, and some architects working in France and influenced by Le Corbusier.[32] The notes show in particular that he was reading Le Corbusier's texts and studying his designs, with a clear reference to the "five points" of architecture and to the importance of nature in some private houses – Maison La Roche, Villa Savoye, and Villa Stein.[33] The contact with Le Corbusier however was more direct than through reading alone. Regardless of the regulations concerning correspondence with the outside world, Sołtan was in contact with him through letters.[34] When Sołtan asked how not to lose time at the camp, Le Corbusier answered, "imagine in front of you a normal man, his wife and his children, and try to live and create – as you understand it – a new setting for him. Every architect should go through such work".[35] Such mentoring at a distance was very valuable for Sołtan and it prepared him for direct confrontation with Le Corbusier and the tasks undertaken when working with him.[36]

The artistic development and training in Murnau were equally important for Sołtan's future professional life. Among the prisoners, there were a number of artists and intellectuals, who influenced Sołtan's professional life in the following years. With some of them, like architect Zbigniew Ihnatowicz, he collaborated closely as a fellow faculty at the Fine Arts Academy and a fellow designer in the Workshops.[37] Close contacts and discussions offered a much broader vision than the architecture-specific education Sołtan was given at the Polytechnic of Warsaw. It was also an important experience leading eventually to Sołtan's ideas depicting architecture as synthesis of different experiences and to his working methods consisting of close cooperation with different disciplines (Chapter 6). The artistic exchange was offering what was missing in Sołtan's Polytechnic education: poetics and visual sensitivity, which gave him a new perspective: "there were brand new thinking paths and

25 Bulanda, p. 42. Translation from Polish (SR). Sołtan also mentions this in a video interview from 1997, see: HGSD-JSM.
26 Kisielewicz, p. 27.
27 The courses were structured into seven main categories: technical, economic, agricultural, pedagogic, Catholic studies, foreign languages, and general culture, see: Kisielewicz, p. 82.
28 Kisielewicz, pp. 85-86.
29 Handwritten notes from Murnau, see: MASP-JS.
30 Kisielewicz, p. 103.
31 Even though the collection at the camp library was rudimentary and it was limited by the censorship from the German authorities. There was a possibility to order books through the Aide Internationale aux Prisonniers de Guerre, an organisation of the Red Cross.
32 For example, André Lurçat, Charlotte Perriand, Adrienne Gorska, Gabriel Guévrékian, and Georges Bourgeois.
33 This does not mean that he was not interested in other buildings or other theoretical issues forwarded by Le Corbusier. The notes from Murnau possessed by the Museum of the Fine Arts Academy are only partial. A collection of papers from Murnau is still kept in the family archive by Joanna Sołtan.
34 Each prisoner was able to send two postcards, two letters, two coupons for food parcels, and one coupon for a clothing parcel per month, and it was possible to write letters back to Poland and to other countries, but only to relatives and friends. Moreover, the letters were to be written on the space-limiting official paper and they had to go through the camp censorship control, see: Kisielewicz, pp. 68-69. In such a situation, it appears evident that Sołtan's contact with Le Corbusier was a sign of his profound interest: sending a letter to him meant renouncing a letter to home.
35 Lecture at Zachęta National Gallery of Art in Warsaw after Le Corbusier's death, see: MASP-JS. Translation from Polish (SR). See also: Bulanda, p. 43. This basic design exercise was later proposed to the students at Harvard, see: interview with Joanna Lombard.
36 Bulanda, p. 44.
37 Sołtan recalled, "in the camp, I entered the world of Polish intellectuals. The most important ones were art historian Juliusz Starzyński, astronomer Włodzimierz Zonn, musicologist Stefan Jarociński, poets Bronisław Przyłuski and Tadeusz Sulkowski, painter and theatre maker Czesław Szpakowicz". He added, "those people opened my eyes to the world", see: Bulanda, p. 42. Translation from Polish (SR).

matters that were inaccessible for me when I ended up amongst my new friends in the camp. Logics and rationalism, imagination and intuition – I knew the sound of those words. They were levitating around me, but I had nothing or very little in common with them".[38] In the camp, many artists – including also architects – were painting portraits, landscapes, and scenes from daily life at the camp, often despite harsh conditions. It was actually in Murnau that Sołtan started to paint extensively, and he is mentioned amongst prisoners who exhibited their work.[39] In addition to painting, artists were allowed to work on decorations and set designs in the camp theatre. As a result, the prisoners produced thirty-two plays,[40] and Sołtan successfully designed sets for some of them (ill. 4.6, 4.7).[41] In his recollection of those experiences, he comments that through the work with painters on theatre productions, he saw "how one may think about art".[42] It was yet another example of broadening his horizons in relation to his previous education. However, taking part in the stage productions in the camp was not the only activity of the architects in Murnau. There was a group of around twenty in the camp, and together they "were discussing the matters of urbanism, painting, graphics and history of art".[43] The vivacity of those discussions, as well as the quality of their ideas may be testified by the competitions. When Aide Internationale aux Prisonniers de Guerre organised a competition for a residential building for countries destroyed by the war, the prisoners from Murnau won first, second, and fourth prizes, along with three honorary mentions.[44] The proposal by Sołtan and Ihnatowicz (ill. 4.8) won the first prize, and the pair won another competition organised by the same association for a small agricultural centre.[45] Those two competitions were also the first opportunity for Sołtan to collaborate with Ihnatowicz, his partner within the Artistic and Research Workshops at the Fine Arts Academy in Warsaw since 1954.

The experience of Murnau was fundamental for Sołtan. It completed his education at the Polytechnic of Warsaw by giving him the possibility to exchange ideas with artists, to broaden his horizons towards art and its different aspects: painting, design, and architecture. He was able to get into touch with diverse intellectuals whom he kept in contact with, and whom he was collaborating with when he was teaching at the Fine Arts Academy in Warsaw. These experiences are also crucial to understanding his *mode d'emploi*, the importance of teamwork, and his interest in visual arts. As such, the captivity in Murnau prepared the ground for Sołtan's stay in Paris.

towards Le Corbusier

Sołtan's collaboration with Le Corbusier in 1945-1949 was another very important period in his life. The 'solitary' discovery of his work while studying at the Polytechnic in Warsaw and the correspondence with him during the captivity in Murnau already showed Sołtan's determination and deep interest. Shortly after the liberation of the camp, not much more than two weeks, he wrote a postcard to Le Corbusier,[46] went directly to France, and as a result, on July 31st, 1945, he met Le Corbusier for the first time in his studio apartment in rue Nungesser et Coli in Paris. He started to work for him on the following day. It is important to mention that in the first months of his work, the atelier did not look like one of the world's leading architects. When Sołtan arrived, apart from Le Corbusier, there was only one co-worker, and when he left, Sołtan remained alone.[47] At the same time, there was still much resentment after the war, and Le Corbusier was not regarded positively.[48]

38 Bulanda, p. 43. Translation from Polish (SR).
39 Kisielewicz, p. 115.
40 Most of them overseen by artists such as Szpakowicz, Starzyński, Bohdan Bocianowski, and Bohdan Urbanowicz, see: Kisielewicz, p. 87.
41 He designed the set for *Revenge* based on the text by Aleksander Fredro, claimed to be one of the turning points in the camp theatre, as well as sets for *Azais*, *Oh, tranquil country*, and *Judas from Cariot*. *Revenge* (original title: *Zemsta*) was produced in January and February 1943, with the set design by Urbanowicz and Sołtan. The play was staged thirteen times, reaching a total audience of 4812. *Azais* was produced in September 1943, with the set design by Bocianowski and Sołtan. The play was staged thirteen times, reaching a total audience of 5134. *Ah, tranquil country* (original title: *Wsi wesoła*) was produced in October 1943, with the set design by Sołtan. The play was staged six times, reaching a total audience of 2141. *Judas from Cariot* (original title: *Judasz z Kariotu*) was produced in March 1944, with the set design by Urbanowicz and Sołtan. The play was staged eleven times, reaching a total audience of 4042, see: Kisielewicz, pp. 111, 188-189.
42 Bulanda, p. 43.
43 Kisielewicz, p. 87. Translation from Polish (SR).
44 Kisielewicz, p. 105.
45 *Jerzy Sołtan*, ed. by Jola Gola (Warsaw: Wydawnictwo Akademii Sztuk Pięknych, 1995), pp. 100-101.
46 Sołtan to Le Corbusier from May 16th, 1945, see: FLC-DN, R3-4-538-001. Translation from French (SR).
47 Draft of the book *On Architecture and Le Corbusier* from November 1995, p. 12, see: MASP-JS.
48 Le Corbusier had not been engaged with the resistance, and he was suspected by the left of rightist sympathies as he tried to work for the Vichy government (although without success): it is reported that Le Corbusier was sent by the Vichy government to Alger in order to work on the planning of the city, but the design was rejected by the local authorities. After the rejection, "he relied then on theoretic reflection", see: René Jullian, *Histoire de l'architecture en France de 1889 à nos jours: un siècle de modernité* (Paris: Sers, 1984), p. 182. Translation from French (SR). Sołtan's friend and a fellow co-worker at Le Corbusier's practice, Roger Aujame, in a letter to Sołtan described Le Corbusier's contact and work with the Vichy's authorities as "a total miscomprehension, pushed to ingenious levels, of the political problems". Aujame to Sołtan from March 28th, 1978, see: HGSD-JS, AB010. Translation from French (SR). Sołtan commented on Le Corbusier's attitude during the war claiming that he remained apolitical and that he approached different factions, see: Bulanda, p. 44.

In addition, he was being attacked by the French academic environment and the Beaux-Arts *milieu*, one of the strongholds of academicism, which led to the situation where most of French architects had traditional and not modern architecture-oriented education.[49] There were no modern architecture schools in France before the war, Sołtan argued, and therefore, with no tools to understand technique and no encouragement to be interested in painting or sculpture for young architects, it was impossible for them to understand and to accept modern ideas.[50] As such tendencies opposed Corbusian ideas, Sołtan sided against the Beaux-Arts approach – for him "surface stuff", which did not deal with the essence of architecture.[51] However, despite the inhibiting tendencies of the academic environment, French architecture seemed to turn towards modern ideals – which coincided with the same need for reconstruction that pushed Polish architects towards functionalism in the 1930s. France was devastated by the war and many cities needed reconstruction, and modern architecture seemed again to guarantee much more functional and faster schemes than a classicist approach.[52] Along with political interest and economic resources from the Marshall Plan, the general attention was turning towards modern architecture, and Le Corbusier for example was charged with several reconstruction plans, including Saint-Dié, Saint-Gaudens, and La Rochelle (ill. 4.9), not to mention the design of the Unité d'Habitation in Marseilles – all the designs in which Sołtan was involved. Eventually, Le Corbusier and fellow CIAM architects were involved in the design of the headquarters of the United Nations in New York, which marked widespread acceptance of the modern approach.[53] Within such a favourable context, the Beaux-Arts classicists eventually yielded and followed new schemes: in the late 1940s, the school accepted modern ideals. For example, a French member of CIAM, Marcel Lods started teaching there in 1948, and he involved Sołtan as his assistant.[54]

Whereas the assistant work in 1948 at the Beaux-Arts under Lods was Sołtan's beginning of an educational career, he mentions the Parisian period as, above all, his true architectural and artistic baptism, referring to his connections with Pierre Jeanneret, Claude Laurens, Léger, Braque, and Constantin Brancusi.[55] He was in contact with many of them through Le Corbusier and following the latter's suggestion, Sołtan studied painting as a 'visual reflection' tool under Léger (ill. 4.13), and he continued to work art in his later life.[56] All these contacts followed up on the connections with painters and other artists at the prisoner of war camp, but it also became a constant reference in his later professional work. These artists' work and ideas became a recurrent element of his lectures. Many times Sołtan quoted Picasso or Brancusi when considering the relation between the arts and architecture, or the very nature of art itself.

In addition to his main collaboration with Le Corbusier, Sołtan was also involved with other architects who followed the same ideals, such as Louis Miquel, Jean Bossu, and Pierre Dupré, former Le Corbusier's co-workers, and later Pierre Jeanneret, Le Corbusier's cousin.[57] To work with them helped him not only to follow his interests in modern architecture, but also to be able to maintain himself in Paris.[58] Later, in 1949, he was also working for Jacques Gauthier in his Parisian practice on miners' housing in Saint-Dié and on a tropical research centre near Paris.[59] Another very important collaboration was with the French architect Laurens in his atelier in Brussels in 1948-1949, following a very similar architectural worldview, especially concerning the interest in visual resulting in a very inspiring atmosphere recalled by Sołtan – relating to meetings with many

49 Article 'Joseph Rykwert – a bridge to my personal Europe' from 1996, see: MASP-JS. Sołtan drew a very graphic image of the cultural debate, referring to "face-squashing combat at conferences" in a draft for a lecture 'BOS' in February 1948, see: MASP-JS. Translation from Polish (SR).

50 The same idea is repeated by historian René Jullian in his account of history of French architecture: "[modern architecture] still faced academic conservatism, whose retarding action, along with bureaucracy, prevented the most authentic manifestations of modernism. Post-war architecture was then often marked by an attenuated version of it", see: Jullian, pp. 178-179. Translation from French (SR).

51 Interview with Urs Gauchat.

52 In addition to the need for reconstruction, the French population was increasing and between 1945 and 1967, about 3,400,000 new dwellings were built around the country. Classicist models, with decorations and more traditional building materials, would not have enabled such a rapid development. In fact, the post-war reconstruction profited largely from industrialisation and standardisation of the building process, and at the same time, the use of concrete, steel and plastic became much more common than before, see: Jullian, p. 178.

53 Eric Mumford, *CIAM Discourse on Urbanism 1928-1960* (Cambridge: MIT Press, 2000), p. 6.

54 According to the Comité Consultatif de l'Enseignement de l'Architecture meeting records, at the beginning of his work at Beaux-Arts, Lods' position at the school was not strong – he had little support and he was rarely taking part in the discussions, see: Pierrefitte-sur-Seine, National Archives, Beaux-Arts Collection, AJ/52/1030. Sołtan refers to the "atelier Lods under the Beaux-Arts with all his very enthusiastic students and his teaching staff that I was part of". Lecture at the Académie d'Architecture in June 1984, see: MASP-JS. Translation from French (SR).

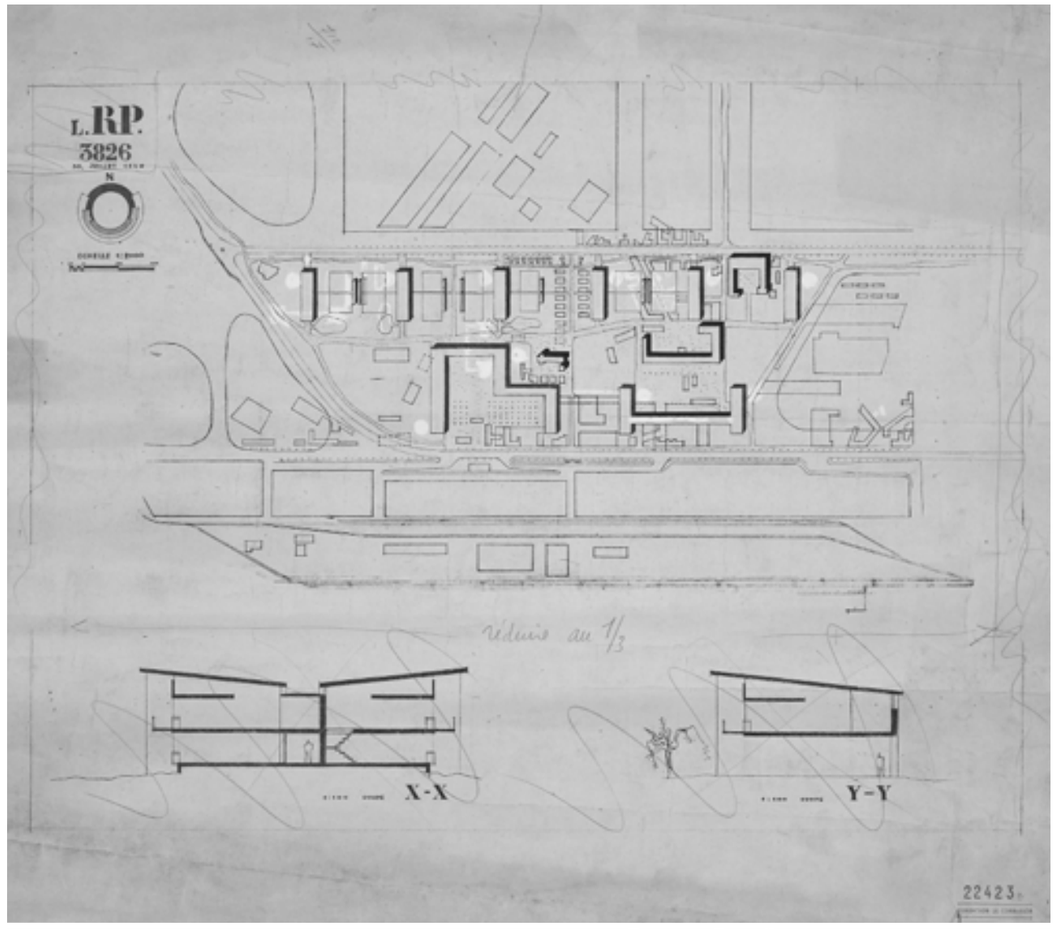
55 Lecture at the Académie d'Architecture in June 1984, see: MASP-JS.

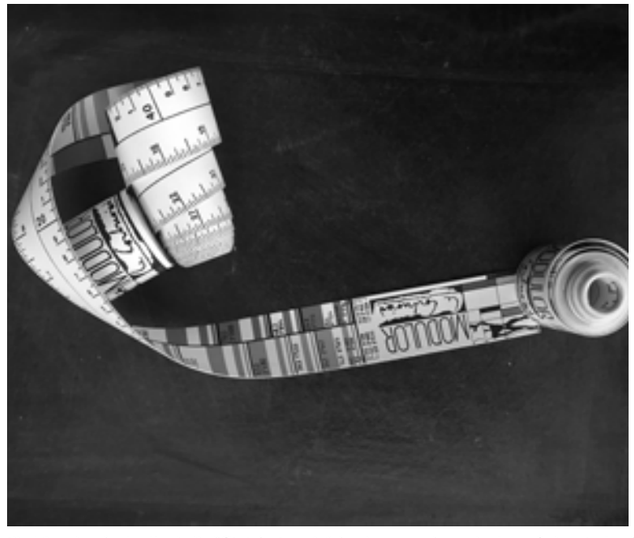
56 Sołtan recalls for example discussions at dinner at Le Corbusier's apartment where he was invited from time to time, and which were attended by other artists and architects, such as Jean Badovici and Pierre Guéguen in a draft of the book *On Architecture and Le Corbusier* from November 1995, p. 51, see: MASP-JS.

57 Bulanda, p. 44.

58 Le Corbusier, with almost no commissions, was not able to pay Sołtan, so the latter was forced to look for other means to maintain himself, see: Jerzy Sołtan, 'Working with Le Corbusier', in *Le Corbusier: the Garland essays*, ed. by H. Allen Brooks (New York: Garland, 1987).

59 Sołtan collaborated with Gauthier on the following designs: miners' housing in Saint-Dié (1949), tropical research centre near Pars (1949), see: *Jerzy Sołtan*, ed. by Jola Gola, pp. 112-113.





ill. 4.9 - plan for La Rochelle "Cité Artisanale" development drawn by Jerzy Sołtan in Le Corbusier's atelier in July 1946 as an example of Sołtan's involvement in the designs of the practice
ill. 4.10 and 4.11 - copy (from Jerzy Sołtan's belongings) and original (from Le Corbusier Foundation) Modulor tape used for measurements according to the system invented by Le Corbusier, which was one of Sołtan's main projects he was leading in the first months in the atelier and became an important element of Sołtan's theory and teaching (Sołtan's students recall him having a Modulor tape and others recall that he was giving copies of it in order to promote their studies of the Corbusian system)

artists and similarly thinking architects at Laurens' studio.[60] Within the practice, he worked on the designs for a private house in Uccle near Brussels, for a YMCA camp in Ardennes, and for a contagious diseases hospital.[61] Even though he quoted Laurens' work much less than Le Corbusier's, he maintained a close relationship with him. Sołtan's daughter recalls, "it was a friendship, which continued till Claude Laurens' death".[62]

However, it was the work in Le Corbusier's atelier (ill. 4.12), which marked most of Sołtan's permanence in Paris. He was very much keen on giving detail about his work in Le Corbusier's practice, and thanks to his testimony, one can understand not only his interest, but also the layout of the atelier and the daily routine of the Swiss-French architect. He described it in detail in an article 'Working with Le Corbusier', written in the 1980s and since published several times. He gave testimony of how Le Corbusier was communicating, and of how design work proceeded. From his account, one may conclude two facts – his uttermost interest and dedication to the ideas and designs of Le Corbusier, and his devotion to the work, in spite of the required effort and sometimes missing repayment.[63] According to the archive records at the Fondation Le Corbusier, Sołtan was working and made drawings for several designs, including the plans for Saint-Dié, Saint-Gaudens, La Rochelle, Izmir, the design for Unité d'Habitation, and the theoretical development of Modulor.[64] In particular, he was in charge of the design in La Rochelle, since much technical and administrative correspondence concerning the design arrived at the practice addressed to himself.[65] His involvement in the Modulor was also a sign of Le Corbusier's trust and it was revealed to be a recurring element in his writings and teaching.[66] The influence of the collaboration with Le Corbusier was long-lasting and it can be easily seen in Sołtan's designs, which relate to Corbusian forms and ideas, as for example the church designs for the 1950s in Poland (Chapter 9). It was also present in his teaching, as one of his Harvard students recalls, "Sołtan was totally, totally about "*Corbusier this, Corbusier that*" [...]. For Sołtan, it was his life. Every comment made to his students about their work was seen through a Corbusian prism".[67] This overlapping of ideas is clearly illustrated in further analysis of Sołtan's theory (Chapter 6) and the impact and the meaning of these ideas in Sołtan's teaching is further discussed when illustrating his pedagogical involvement at Harvard (Chapter 8).

Their contact endured until Le Corbusier's death in 1965. They had been exchanging letters quite regularly, even though Sołtan had difficulties with the contacts with Western Europe under the socialist realism cultural dictatorship of Poland. Once Sołtan started to travel to the United States as a visiting critic at Harvard, he was freer to visit Le Corbusier in Paris, so they met at least in 1959, 1960, 1962, and 1965. Their postal correspondence consisted often of exchanging news on the most recent projects or works.[68] Some of the letters Sołtan was sending to Le Corbusier seem as if he wanted to show that he did not abandon the ideas that they shared during his stay in Paris. In 1950, he mentioned, "I work a lot – and some things I do will seem to you to be not bad at all (I believe). I will make sure to send you some photographs one day. I make sure to paint a lot. I will probably be also doing industrial furniture. I also read as much as I think".[69] Sołtan also referred to contact with Le Corbusier as a soothing cure for the difficult times of socialist realism in Poland. In the same letter, he wrote, "I do not write to you as much as I wish to – it is because of the conditions our world is in today. However, I would like you to know that I think much about yourself, about your work, about everything

60 Amongst some of the connections were Claude Laurens' father, Henri, a sculptor, and his godfather – the painter Braque. Thanks to such contacts, along with occasional guests and visitors, the atelier in Brussels was another vivid circle of artists, which contributed to Sołtan's formation as an architect and an artist. Article on Claude Laurens from May 2001, see: MASP-JS.

61 Sołtan collaborated with Laurens on the following designs: private house in avenue du Gui in Uccle near Brussels (1948-1949), YMCA camp in Ardennes (1948-1949), contagious diseases hospital (1949), see: *Jerzy Sołtan*, ed. by Jola Gola, pp. 112-113.

62 Interview with Joanna Sołtan. There are also personal letters from and to Laurens. In one of them, from January 28th, 1969, he calls Sołtan "my dear child", see: MASP-JS.

63 The complete account of Sołtan's work in Le Corbusier's atelier may be found in his article, 'Working with Le Corbusier', in *Le Corbusier: the Garland essays*.

64 Sołtan's name is mentioned next to the drawings of all these projects, apart from Unité d'Habitation, according to the table of all the drawings with the names of draughtsmen, see: Paris, Fondation Le Corbusier. Le Corbusier mentions Sołtan's work on the Unité in a letter to Sert from March 15th, 1961, see: MASP-JS.

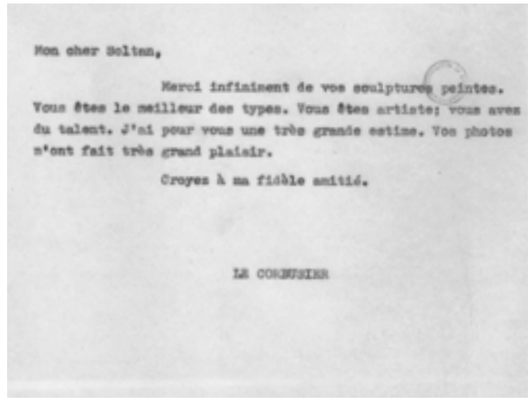
65 For example, there are letters concerning urbanism regulations, hygiene of the buildings, as well as technical installations such as electricity and gas addressed to Sołtan. Drawings and documents concerning the plan for La Rochelle, see: Paris, Fondation Le Corbusier, Urbanisme – France – La Rochelle, Q2-2-121, Q2-2-124, Q2-2-166, Q2-2-211, Q2-2-212, Q2-14-159, Q2-14-359, and Q2-14-366. In addition, according to Sołtan's own recollection, he was the one to present the final design at La Rochelle to the local authorities, which however was not received positively, as the modern vision of the city was not accepted, and the project was halted, as he recalls in a draft of the book *On Architecture and Le Corbusier* from November 1995, p. 47, see: MASP-JS.

66 Le Corbusier to Sert from March 15th, 1961, see: MASP-JS.

67 Interview with Paul Krueger.

68 Series of letters between Le Corbusier and Sołtan, dating from 1951, 1952, 1954, 1955, 1956, 1957, 1961, and 1965, see: FLC-DN, R3-4-242 to 246, and R3-4-538 to 573. Sołtan, for example, sent to Le Corbusier photographs of his polychromic sculptures and of the adaptation of the design of the typical exhibition pavilion 'Tropik' for the fair in Damascus in 1955. Sołtan to Le Corbusier from October 1955, and from September 8th, 1958, see: FLC-DN, R3-4-557-001 and R3-4-548-001.

69 Sołtan to Le Corbusier from April 27th, 1950, see: FLC-DN, R3-4-242-001 to 002. Translation from French (SR).


Mon cher Soltan,

Merci infiniment de vos sculptures peintes. Vous êtes le meilleur des types. Vous êtes artiste; vous avez du talent. J'ai pour vous une très grande estime. Vos photos m'ont fait très grand plaisir.

Croyez à ma fidèle amitié.

LE CORBUSIER

ill. 4.12 - photograph of Le Corbusier in the atelier, with his co-workers in the background (left to right: Aristomenis Provelenghios, Fernand Gardien, Jean Preveral, Roger Aujame, and Jerzy Sołtan)
ill. 4.13 - example of Jerzy Sołtan's visual work inspired by the vibrant artistic life in Paris and in particular by Fernand Léger under whom Sołtan studied painting in Paris, and who remained a continued artistic reference in Sołtan's work (Jerzy Sołtan, *D'après Monsieur Léger I*, 1962, crayon, Museum of the Fine Arts Academy, Warsaw)
ill. 4.14 - letter sent by Le Corbusier to Jerzy Sołtan in response to the photographs of the latter's painted sculptures, showing Le Corbusier's appreciation of Sołtan's work
ill. 4.15 - photograph from Le Corbusier's funeral showing different co-workers, including Jerzy Sołtan (in a white suit in the background), standing between his former colleagues (in the same line, from left to right: Maurice Jardot, Shadrach Woods, Jerzy Sołtan, Georges Candilis, and André Wogenscky)
ill. 4.16 - example of Sołtan's painted sculptures appreciated by Le Corbusier (Jerzy Sołtan, *The Kiss*, 1955, raw painted clay, Museum of the Fine Arts Academy, Warsaw)

I have heard and learnt next to you. Surrounded by that life (so different from the one I was living in Paris), I feel reassured by knowing that somewhere, you exist". Probably it was as an answer to such a pessimistic letter, when Le Corbusier sent him back a print and a short poem:

> "In the bag of your skin
> do your own affairs
> and give thanks to the Creator".[70]

Such letters underline their close relationship, but they also show that although it was friendly, it never went beyond the one between a mentor and a mentee: Le Corbusier remained in Sołtan's mind always a reference, someone to look up to, and the latter did not tend to equal himself or to renounce what he learnt from the French architect. He eventually identifies Le Corbusier's work with what was in his reading the true spirit of modernism, referring to the "grassroots" of cultures and of what was potentially capable of inspiring contemporary architects to renew their work (Chapter 7). *Vice versa*, Le Corbusier had a very good opinion of Sołtan too. Whereas he could be very cruel in criticising someone else's work, in his commentary on Sołtan's sculptures (ill. 4.16), he wrote, "my dear Soltan [*sic*], thank you so much for your painted sculptures. You are the best. You are an artist; you have talent. I have a great esteem for yourself. Your photographs brought me great pleasure. Believe in my loyal friendship" (ill. 4.14).[71] Similarly, he was supportive when he backed Sołtan as a candidate for the position of chairman of the Department of Architecture at the Graduate School of Design (Chapter 5). He described him to Sert, who at that time was the dean of the school: "it is a man of great moral and professional value through his conscience and through his heart: contact with others. Very acute spirit = a man of quality. Very architect = contact with problems of construction and of visual arts [*sic*]".[72] Eventually, as a token of gratitude – which was not granted for anyone – Le Corbusier gave Sołtan's family his own car, a SIMCA Fiat.[73] Through all these gestures, it is clear that Le Corbusier held Sołtan and his work in high esteem, and whereas it surely opened some doors for him, it also showed recognition for his architectural and intellectual loyalty towards the French architect.

It is underlined by the title of Sołtan's longest written text on architecture, a series of memories entitled *On Architecture and Le Corbusier* that he worked on towards the end of his life.[74] Another vivid example of such loyalty may be Sołtan's involvement in many organisations bearing the name of Le Corbusier. Throughout the years, he corresponded with several of them and he was a member of the Association Internationale Le Corbusier.[75] Later, he was involved also in the Friends of Le Corbusier organisation, founded in New York in 1983.[76] His involvement as a consultant with a Swiss organisation called the Le Corbusier Center Foundation is, contrarily to the others, more critical.[77] He was afraid of an improper use of Le Corbusier's name and of the involvement of incompetent people that would distort the understanding of his work: it was important for him that such an organisation had to follow Le Corbusier's spirit – which is connected to his long-lasting goal to cleanse the aura of Le Corbusier and modern architecture. Indeed, Sołtan's aim in general was to use such an organisation in order to promote Le Corbusier's work and ideas. When the Association Internationale Le Corbusier was dissolved, in a letter to André Wogenscky, Le Corbusier's fellow co-worker and director of the Fondation Le Corbusier in Paris, Sołtan suggested that a new organisation might be useful, and that it should make an appeal to the younger generations of architects.[78] Through such actions, one may see his willingness

70 Sołtan refers to it in the draft of the book *On Architecture and Le Corbusier* from November 1995, p. 127, see: MASP-JS.
71 Le Corbusier to Sołtan from October 20th, 1958, see: FLC-DN, R3-4-558-001. Translation from French (SR).
72 Le Corbusier to Sert from March 15th, 1961, see: MASP-JS. Translation from French (SR).
73 According to Joanna Sołtan, the car was to be given to Sołtan's son, Karol Edward, named after Le Corbusier, and who was to be his godson. Sołtan asked Le Corbusier to be his son's godfather in a letter from December 4th, 1950, see: FLC-DN, R3-4-243-001. However, Le Corbusier claimed it was not possible in his answer from December 15th, 1950, see: FLC-DN, R3-4-539-001. The car was officially donated to Sołtan according to Le Corbusier's letter from December 21st, 1960, see: FLC-DN, R3-4-564-001. After Sołtan's departure to the United States, the fate of the car remains unknown. In the Museum of the Fine Arts Academy, there are some letters from the Museum of Architecture in Wrocław concerning the whereabouts of the car, as it was to be given to them, see: MASP-JS.
74 Draft of the book *On Architecture and Le Corbusier* was translated into Polish and published only in 2020 by Centrum Architektury in Warsaw: Jerzy Sołtan, *On i ja: o architekturze i Le Corbusierze* (Warsaw: Centrum Architektury, 2020).
75 Based on the archival records, he was its member at least in 1971-1975, and he was actively participating in the events in America (organising and chairing conferences, such as on October 12th, 1972). Due to the association's activities, he was in contact with fellow co-workers, such as Wogenscky, Aujame, and Georges Candilis. Correspondence concerning Association Internationale Le Corbusier, see: MASP-JS.
76 Sołtan was a member of the board of Directors in 1985-1986, and member of the Executive Committee in 1984. Those roles could have lasted longer, but no correspondence from the following years is present. Correspondence concerning Friends of Le Corbusier, see: MASP-JS.
77 Sołtan was asked by them to be a consultant, but from the notes he left on the organisation's programme, one may see that he was quite critical of the idea: he was sceptical because it seemed to him that the use of Le Corbusier's name was accidental, and there were blanks that needed to be filled in order to understand the actual connection of the organisation to Le Corbusier's practice, theory, and architecture. Sołtan's notes on Le Corbusier Center Foundation's status and correspondence concerning the organisation including letters from David Shaff and Heidi Weber, see: HGSD-JS, AB020.
78 Sołtan to Wogenscky from March 10th, 1977, see: MASP-JS.

to expand modern ideas and to defend them somehow in the era dominated by postmodernist criticism – following the same integrity and consequence of a vision of architecture that led Sołtan before, since his education at the Polytechnic of Warsaw and later throughout his life. These memories of Le Corbusier were to be a life-saving memory during the difficult years of socialist realism after Sołtan's return to Poland.

difficult return to Poland – between hope and oppression

After four years of collaboration with Le Corbusier, Sołtan decided to move forwards and to go back to Poland as the country seemed to offer good opportunities, as it still needed reconstruction after the war. Hoping to implement some Corbusian ideas there, he had high expectations of this time. However, due to the socialist realism propaganda and the influence of the USSR, the task was difficult and his activity was limited. Nonetheless, thanks to his activity at the Fine Arts Academy and in the Workshops, he claimed in retrospective, "it seems to me that in that period we succeeded in bringing into Warsaw or even Polish architectural world some of the 'modernism with a human face' or some of 'new contemporaneity'".[79]

cultural oppression via socialist realism

On Sołtan's return to Poland, the country was already in cultural and political turmoil. In the 1947 general elections, the communist parties – thanks to propaganda, oppression, and results manipulation – reported a decisive victory, gaining over 80% of the official votes.[80] Along with cementing the position of the communist government, it was clear that the country was to be more dependent from the USSR, and within architecture, the Soviet influence meant a turn towards socialist realism. This return to classical forms with socialist-based contents was considered ideologically necessary in cementing communism and the Stalinist doctrine.[81] In the USSR, this tendency was affirmed architecturally through the difficult history of the competition for the Palace of the Soviets and the winning entry by Boris Iofan. In spite of precedents of modern architecture in the USSR, Iofan's design completely rejected modern ideals. His monumental palace crowned by a giant statue of Lenin was a prime example of socialist realism orbiting towards propaganda and aimed at underlining the greatness and the glory of the USSR and of socialism.[82] In Poland, the tendency came later, but it was officially introduced in June 1949.[83] With the heavily politicised and indoctrinating rationale, it was a tool of cultural oppression against those who remained faithful to modern architecture. Officially authorised publications mentioned that socialist realism in architecture was "to struggle against cosmopolitanism, constructivism, formalism, to struggle for alluding creatively to the great legacy of Polish and global architecture".[84] Such an attitude was not something Sołtan was expecting upon his return to Poland. In 1945-1949 he came back several times and he was able to see that Polish architecture – yet not electrifying as it often followed the pre-war direction of functionalism – was still following in the steps of modern ideals laid down by Praesens or CIAM.[85] In addition, the understanding of what was happening in Central and Eastern Europe was different in the West. Sołtan recalls that in France it was believed to be "some sort of a benevolent communism".[86] The decision to come back to Poland – influenced by the talks on the upcoming position at the Fine Arts Academy in Warsaw and by advice of some friends[87] – was therefore far from naïve. Eventually, after long hesitations on whether to go back to Poland or to settle elsewhere in Western Europe, Sołtan left Paris on July 31st, 1949. However, instead of finding in Poland the predicted idealised version of socialism, he encountered a propaganda-fuelled vision of art. His refusal to this attitude was blunt, qualifying the First National Conference on Research on Art

79 Bulanda, p. 66. Translation from Polish (SR). The expression "modernism with a human face" refers to the expression "socialism with a human face", one of the slogans of the opposition protests against the communist regime in 1968 in Prague.
80 When concerning the communist period in Poland, the word "Party" always refers to PUWP, Polish United Workers' Party, and the governing party in 1948-1989.
81 Anna Cymer, *Architektura w Polsce 1945-1989* (Warsaw: Fundacja Centrum Architektury, 2019), pp. 67-68.
82 Competition for the Palace of the Soviets (1931) gathered over two hundred and fifty design proposals, including important international proposals from Le Corbusier, Gropius and Erich Mendelsohn.
83 The importance of the indoctrinating discourse can be seen in the architect Goldzamt's words at the meeting when socialist realism was introduced: "a new historical period, building of the very foundations of socialism, and further strengthening of the class struggle puts in front of us new tasks, including the field of architectural work. Political and economic strengthening of the people's country, expanding of the basis and range of planned economy, constant increase of wealth of the working masses, and therefore, further increase of their living, material, and especially spiritual needs, and finally the great ideological offensive of our Party, developing continuously struggle for the socialist reconstruction of people's consciousness – all of it requires a new position and a change of direction of our architecture", see: Edmund Goldzamt, 'Zagadnienia realizmu socjalistycznego w architekturze', in *O polską architekturę socjalistyczną. Materiały z krajowej partyjnej narady architektów odbytej w dniu 20-21 VI 1949 roku w Warszawie* ed. by Jan Minorski (Warsaw: Państwowe Wydawnictwo Techniczne, 1950), p. 16. Translation from Polish (SR).
84 Piotr Garliński, *Architektura polska 1950-1951* (Warsaw: Państwowe Wydawnictwo Techniczne, 1953), p. 3. Translation from Polish (SR).
85 Cymer, p. 63.
86 Draft of the book *On Architecture and Le Corbusier* from November 1995, p. 126, see: MASP-JS.
87 One of them was for example Oskar Hansen, former co-worker at Pierre Jeanneret's office in Paris, and later Sołtan's colleague from the Academy and the Workshops, and a fellow member of CIAM and Team 10. Oskar Hansen, 'O moim mistrzu – Jerzym Sołtanie', 1993, see: MASP-JS.

organised in December 1950 (which concluded that "comrade Stalin" was the ultimate arbiter in all questions concerning form and content in the arts) as "bullshit" and "falsifying the facts".[88]

However, in spite of some architects having interest in modern ideas, architectural practices were centrally controlled and gradually losing autonomy – initially practices had to be accepted by the state authorities, but the system gradually evolved to a centralised control of single designs at regional level. *De facto*, this meant that most architectural practices were banned and architects became the employees of official planning and design bureaus.[89] Through such political control, through a series of exhibitions, symposia, and conferences, the communist authorities aimed at imposing the new canon and visual standards amongst architects. Such an attitude, devoid of reflection and imposing ideological language through a unilateral top-down process, was contrary to Sołtan's views on art and architecture: he claimed it deprived architecture of all artistic values.[90] Remembering 1949 for its "innumerable courses, symposia, seminars and congresses" Sołtan connected them with "brainwashing and indoctrination, teaching the socialist realism".[91] Similar brainwashing was present also in architectural publications: they were to underline the progress and the greatness of socialist realist architecture following the Party's directives, which remained the main reference.[92] Arguably, every publication was controlled and censored, and the architectural examples always came from the USSR or other countries from the Soviet area of influence: they thus had to be aligned with the socialist realist canon. In addition, they were most often deprived of any critical insight, used simply as tools to illustrate the quantitative production of new dwellings promised by the authorities. Visually referring often to classicism and to Renaissance architecture, socialist realism designs used the ideal of eternal beauty and order to copy blindly.[93] Sołtan criticised such an attitude heavily as it was both formal and reductive, which was demeaning for Renaissance creativity itself, and he ridiculed the idea of building contemporary monuments as historicist copies of old styles.[94] Many buildings following the imposed canon were in Sołtan's opinion manifestation of "the heavy hand of communist intellectual terror" influencing culture in the entire area of Soviet influence.[95]

At the beginning Sołtan seemed to have tried to rationalise the requirements of socialist realism and adapt them to his own ideas (as for example, the "grassroots" architecture, Chapter 7), but he realised quickly that it was impossible and there was no place for developing one's own original artistic interpretation. According to the official discourse, abstractionism was abruptly criticised to give way to historicism and monumentality. Architectural publications from that time had no reference to modern architecture origins in Europe. CIAM, Bauhaus, Le Corbusier – all of these were denied, ridiculed, or neglected – and many architects who had formerly collaborated with CIAM, became followers of the regime's architecture and started to diminish the role and value of modernism. Modern architecture – as it was considered Western – was depicted as backward, wrong, and simply ugly.[96] As a result, Polish architecture from 1949-1955 was completely separated from Western Europe and the architectural discussion in Poland lost track of the developments of new ideas, including first criticisms of CIAM urbanism, and discussions amongst Team 10 members in Aix-en-Provence. This situation highly impaired the quality of Polish architecture and it influenced the perception of Polish architects' modern architecture at the international level in Dubrovnik and in Otterlo.

88 Beata Gontarz, 'Krytyka kultury w PRL-u. Na podstawie Dziennika Jana Józefa Szczepańskiego', in *Interdyscyplinarna Konferencja Naukowa "PRL-owskie re-sentymenty", 22-23 listopada 2016 r.*, ed. by Alicja Kisielewska, Monika Kosztaszuk-Romanowska and Andrzej Kisielewski (Gdańsk: Wydawnictwo Naukowe Katedra, 2017), p. 158. Sołtan refers to this meeting in: Bulanda, p. 48.
89 Aman, p. 174. Control at regional level was facilitated by coordinating committees who organised meetings, evaluated designs, and more generally, it promoted the development of socialist realism, see: Garliński, pp. 3- 4.
90 Already in the 1950s, he criticised the very logic of imposing socialist realism in architecture, underlining that if someone did not share socialist realist ideas, they were forced to do things that were – according to them – wrong: and in such a situation, it was impossible to think about art. Lecture 'Architektura, malarstwo, rzeźba' in January 1951, see: AASP-JS.
91 Lecture on Polish art in Washington DC (marked "Tapes Washington DC"), see: MASP-JS.
92 Official documents and Party regulations were quoted as the only reason to give value to architectural proposals, such as for example in Ossowiecki's publication, accompanied by conclusions from the USSR Builders' Commissions, see: Michał Ossowiecki, *Budownictwo wielkobudynkowe* (Warsaw: Budownictwo i Architektura, 1956). In addition, the publications were using specific jargon, which could identified with propaganda materials and the Party's discourse, as for example in Goldzamt.
93 For example, the Soviet critic Mihajlovskij in an overview of classical forms in architecture connected such forms to the values of Marxism and Leninism, see: Iosif Boleslavovič Mihajlovskij, *Formy klasyczne w architekturze* (Warsaw: Państwowe Wydawnictwo Techniczne, 1952). To use classical architecture details and motifs was meant to give more value to socialist realist architecture. Many constructions, such as the MDM residential complex in Warsaw or the building of the Ministry of Agriculture, were adorned with classical elements with no connection to their function. MDM residential complex (Marszałkowska Dzielnica Mieszkaniowa) was designed by Józef Sigalin and Stanisław Jankowski and opened in 1952 (ill. 4.18). It was a model for an ideal socialist city, see: David Crowley, 'Paris or Moscow? Warsaw Architects and the Image of the Modern City in the 1950s', *Kritika: Explorations in Russian and Eurasian History*, 9 (2008), 769-798 (p. 778). The Ministry of Agriculture was designed by Jerzy Grabowski, Stanisław Jankowski and Jan Knothe and opened in 1955.
94 Lecture 'Architektura, malarstwo, rzeźba' in January 1951, see: AASP-JS.
95 Lecture on Polish art in Washington DC (marked "Tapes Washington DC"), see: MASP-JS.
96 Crowley, p. 783.

ill. 4.17 and 4.18 - examples of Polish architecture built in the era of socialist realism, showing clear references to classicism and eclecticism through the use of classical elements and details (ill. 4.17 - building of the Polish Parliament redesigned by Bohdan Pniewski in 1949-1952 and called by Sołtan "a half-arsed ogre of a building" due to forms and decorations following the imposed canon; ill. 4.18 - residential complex Marszałkowska Dzielnica Mieszkaniowa (MDM) in Warsaw designed by Józef Sigalin and Stanisław Jankowski and opened in 1952 as a model for an ideal socialist city)

The regime's absolute approach to architecture made it almost impossible for Sołtan – and other architects unwilling to bend their design methods and visual schemes – to influence the profession. Propaganda, along with the criticism of the West, oppressed modern architecture already at the local scale. Modern designs often had to be changed in order not to be rejected and architects needed to adapt to the requirements in order to avoid consequences.[97] Referring to such oppression, Sołtan called it "a wishing contest", claiming it was much destructive for architecture in general, and it brought it to a critical state of art – or rather "non-art".[98] Considering Sołtan's previous experience in France, socialist realism appeared as a mindless return to the Beaux-Arts tendencies and refusal of the positive characteristics of modern architecture, such as the connection of form to technology, functions, and materials. His emotional attitude towards this problem became evident when he criticised socialist realism buildings in private with those who had similar ideas – as in the case of a commentary on the Polish Parliament's building (ill. 4.17) describing it as a work of "some stupid moron making an extension following his master's style, with the result looking like a half-arsed ogre of a building".[99] His fierce opposition was long-lasting and much later, he referred to socialist realism when criticising similar formally-based approaches in postmodernism.[100] Moreover, in such a hostile situation, it was difficult for Sołtan even to keep in contact with his colleagues in France: "I felt less free to correspond with Le Corbusier now than when I was in the German military camps", he stated.[101] At the same time, it prevented him from participating in the international congresses and meetings with Western architects, such as CIAM or ASCORAL, its French section. Moreover, his work possibilities were reduced, which would also have meant financial issues. In a letter to Le Corbusier, he complained about being limited to design interior equipment, whereas others were working on monumental and historical architecture.[102] Between 1949 and 1954, Sołtan was not able to build any constructions, his activity limited to architectural competitions, theoretical studies, and a handful of exhibition and interior designs.[103]

from socialist realism towards normative-based "hodgepodge"

Fortunately for Sołtan, socialist realism was officially abandoned in 1956, after its condemnation by USSR president Nikita Khrushchev,[104] and architecture in Poland started to return to its previous modern course. Khrushchev's intervention gave more liberties to USSR citizens and loosened the official control apparatus starting the period referred to as the "thaw". Connected to these political changes, all architects who were working with classicist and eclectic schemes found themselves in an environment suddenly promoting modernity, technology and functionalism.[105] Previously imposed ideas were criticised, although it was not always recognised that they were imposed on architects: some of Polish critics qualify them as, "unfortunate tendencies, [...] which directed the work of many urbanists and architects towards the false path of historical eclecticism and of the use of long-aged spatial concepts and decorative forms",[106] suggesting architect's personal decisions rather than a centrally enforced and compulsory style. Contrary to the official discourse, Sołtan's criticism of socialist realism was much harsher, accusing architects who followed the imposed style of ugliness and pointing to ethical issues.[107] He underlined that there was an ethical difference between working with socialist realism on the one hand, and radically changing one's beliefs and championing the fierce fight against modern architecture on the other one, as happened for some of the pre-war most-renowned Polish architects.[108] Whenever it was possible to speak freely without possibility of political repercussions, Sołtan denounced those who turned their backs on Le Corbusier, Gropius, and other modern architects. According to his reading, most of socialist realist architects were insincere with themselves, and they were actively promoting the propaganda dogmas in search of success and career – such an attitude for Sołtan was simply morally wrong. Such emotional criticism of socialist realism reveals how much it affected Sołtan and it leaves no doubts that it influenced his ideas on modern architecture for his entire life (for example, his criticism of postmodernism).

Whereas the abandonment of socialist realism meant a return to normative-based "matchbox architecture", which formed a very limiting architectural context to most of Sołtan's design work in Poland (Chapter 9), it also meant an opening towards the West and more contacts with the international discussion on architecture. After years of isolation, it became possible to know and to teach Western architecture.[109] As a result, even if Polish architecture remained mostly outside the international discussion on modern architecture criticism (Chapter 3), "it did not exist in the void – achievements of architects worldwide were known there too and they influenced new designs" thanks to easily accessible publications and information on buildings from behind the iron curtain.[110] Buildings such as Le Corbusier's Unité d'Habitation or his Ronchamp chapel started to be an inspiration for various designs.[111] However, Corbusian ideas and his vision of architecture directed towards the future remained abstract to many Polish architects.[112] Even though he was quoted – along with Mies – as one of the most important architects of the time, his work was regarded more critically, because "in his designs the existing society is not respected, as it is opposed to the gigantic concepts directed towards the future".[113] Following a more down-to-earth and functionalist tendency, Polish architecture could be illustrated by its normative-based character (Chapter 9). For example, Gropius was praised as a representative of "radical functionalism", of fulfilling the needs of the society, and of his making modern architecture more accessible for people.[114] He was often shown as the guide of modern architecture and the one who introduced most humanism to it, referring to the architect's task "to serve the society and to solve its problems".[115] It is not astonishing that in such an atmosphere, the *Athens Charter* was revered as the ultimate achievement in architecture and the planning of cities, while in Western Europe its ideas were already discussed as too prescriptive and schematic by Team 10.[116] Where Aldo van Eyck or Alison Smithson had been discussing ideas such as clusters since the mid-1950s, Polish urbanism was still based on the prescriptive thesis of the *Athens Charter*, which created a much limiting context to Sołtan's work (Chapter 9).

Fine Arts Academy – circle of artists

Sołtan's pedagogical and professional activity within the Fine Arts Academy in Warsaw could be considered as a relatively safe harbour during these difficult years of socialist realism and normative-based frenzy. There, he was freer to teach this "modernism with a human face" he brought with him from Paris, and these memories

97 For example, when Oskar Hansen received a commission for a renewal of an office building in the centre of Warsaw and designed modern elements with no connection to socialist realism, he was called to a disciplinary commission, who wanted to withdraw his accreditation to work as an architect, see: Filip Springer, *Źle urodzone. Reportaże o architekturze PRL-u* (Krakow: Karakter, 2011), p. 89. As a result, when he was designing, along with Sołtan, interiors of a horse race track building in 1951-1952, he was officially banned from working as an architect by a court sentence for "lack of subordination to the new order". Oskar Hansen, 'O moim mistrzu – Jerzym Sołtanie', 1993, see: MASP-JS.

98 Notes 'Wszelka architektura ma prawo do sztuki plastycznej' from 1952-1953, see: AASP-JS.

99 Bohdan Pniewski (1897-1965) was a Polish architect and teacher at the Polytechnic of Warsaw since 1946. His design for the expansion of the Sejm (Polish Parliament) was opened in 1952. Sołtan's commentary recalled in Krzysztof Meisner to Sołtan from 1990s, see: MASP-JS. Translation from Polish (SR). Sołtan commented in a similar graphic manner on the winning design of the Palace of the Soviets by Iofan calling it not only a tasteless temple to Stalin, but also "the longest dick of the world superbly crowned by the figure of a gesticulating gentleman in a faultless suit", see: draft for a review for Peter Lizon, *The Palace of Soviets – the Paradigm of Architecture in the USSR*, see: MASP-JS.

100 For example, he was comparing the work of Pniewski, the ogre-builder, to designs by Charles Moore, pointing to the same irony, absurdness, and the mocking of history, see: Bulanda, p. 51.

101 Draft of the book *On Architecture and Le Corbusier* from November 1995, p. 127, see: MASP-JS.

102 Sołtan to Le Corbusier from October 26th, 1952, see: FLC-DN, R3-4-543-001. Translation from French (SR).

103 Exhibition designs: touring exhibition 'Children in Poland' in 1949-1950, exhibition 'How do Polish workers live?' in 1951, exhibition design for National Folk Art Exhibition in 1952, and stand design for the World Fair in Paris in 1953. Furniture designs: furniture for nurseries in 1951. Unbuilt and theoretical designs: 'Monument' theoretical design in 1950, interiors of the State Race Course at Służewiec in 1951, competition design for terraced houses in 1951, competition for a skyscraper in 1952, theoretical design of a railway engines depot in 1952, theoretical design of a commercial centre in 1953, and competition interior design for houses in 1954, see: *Jerzy Sołtan*, ed. by Jola Gola, pp. 113-145.

104 Khrushchev during his speech in February 1956 condemned Stalinism in general, referring to "abuse of power", "violence and terror", and "intolerance". Socialist realism, as a part of the Stalinist doctrine, was equally criticised, see: Aman, p. 213.

105 The turn of architectural tendencies was also underlined in the foreign relations. For instance, Polish Embassy in the United States issued a press release on April 16th, 1956 on the new direction in Polish architecture, "stressing utility and economy in contrast to monumentalism", see: GTA-JT, 42-JT-18-114/115.

106 Jan Zachwatowicz, *Architektura polska* (Warsaw: Arkady, 1966), p. 463. Translation from Polish (SR).

107 Already in 1955, Sołtan mentioned in a letter to Le Corbusier, "the old [architects] for six years (1949-1955) have been deliberately preaching the ugliest cause and start now to make a painful transition". Sołtan was able to be harsh on Polish architecture, as he sent the letter from Zurich. Sołtan to Le Corbusier from November 4th, 1955, see: FLC-DN, R3-4-553-001. Translation from French (SR).

108 He wrote in 1993, "it is one thing to succumb to politics, and another thing to "adapt" emotional experiences to the situation". Sołtan to Władysław Strumiłło from April 18th, 1993, see: MASP-JS. Translation from Polish (SR). As an example of such an attitude, architectural critic Aman quotes for example Szymon Syrkus who "pleaded the cause of socialist realism so vigorously that his closest friends and acquaintances at least took it for irony", see: Aman, p. 173.

109 Polish architect Wierzbicki describes for example a bus tour to Western European countries, an experience that was for him and for his colleagues a liberation and freedom, see: Jerzy Wierzbicki, 'Autokarem przez Austrię, Szwajcarię, Francję i Włochy Północne', *Architektura*, 1 (1957), 38. See also comments on the article, in Crowley, pp. 784-785.

110 Cymer, p. 124. Translation from Polish (SR). Wybieralski, member of the Academy's faculty recalls also easy access to publications, see: interview with Wojciech Wybieralski.

111 For example, Le Corbusier's housing ideas were the inspiration for the Superjednostka housing estate in Katowice, designed by Mieczysław Król and opened in 1972. Ronchamp chapel inspired the design of the new church in Nowa Huta in Krakow designed by Wojciech Pietrzyk and opened in 1977.

112 For example, Ronchamp chapel was criticised for the inadequacy of its form and the content, see: Edward Charytonow, *Historia architektury i formy architektoniczne* (Warsaw: Państwowe Wydawnictwo Szkolnictwa Zawodowego, 1963), p. 134.

113 Przemysław Trzeciniak, *Przygody architektury XX wieku* (Warsaw: Nasza Księgarnia, 1974), p. 181. Translation from Polish (SR).

114 Stanisław Latour and Adam Szymski, *Powstanie i rozwój architektury współczesnej – narodziny nowej tradycji, cz. III* (Szczecin: Wydawnictwo Politechniki Szczecińskiej, 1976), p. 83.

115 Trzeciniak, pp. 178-179. Translation from Polish (SR).

116 As late as in 1972, some claimed, "the proclamation of the *Athens Charter* was a breakthrough event in the development of modern architectural theory. [...] To undertake new problematics at the Congress in Athens meant to broaden horizons of [the] architect's creative and social work, giving him the basis to form environment, which would satisfy material and spiritual human needs", see: Piotr Biegański, *U źródeł architektury współczesnej* (Warsaw: Państwowe Wydawnictwo Naukowe, 1972), p. 463. Translation from Polish (SR).

stuck with many of his students and co-workers.[117] His teaching there along with the design activities within the Artistic and Research Workshops (Chapter 9) are the most important aspect of his work in Poland. In addition, the Academy is one of the few institutions that have organised exhibitions on their former teacher's work, and the school's connections with Sołtan have been also documented by a small number of publications.

Existing until today, Warsaw's Academy is the oldest fine arts higher education institution in Poland, dating back to 1816,[118] although traditionally it was not connected to architecture. Before the Second World War, architectural education concentrated within the main technical university and Sołtan's *alma mater*, the Polytechnic of Warsaw.[119] Both schools were however severely damaged during the war, and the city had no valid infrastructures to offer for teaching, and the years immediately following the war were necessary to rebuild the structures of the school almost from scratch. The Academy's present-day building was partially demolished and unsuitable for use, and its renovation started only in 1947, with the opening of its spaces for the school progressing gradually until 1952.[120] Moreover, only a few of the faculty staff from before the war remained, and the school was in need of new teachers and artists. The uncertainty of rebuilding after the war was increased by the ongoing discussion on remodelling of architectural and artistic education in Poland, which would continue to promote architectural education in technical schools only.[121] Within this context, Sołtan came to Poland briefly in March 1948 and presented two lectures, mainly on Le Corbusier, attracting attention of those interested in forming the new design faculty at the Academy.[122] Several months later, in September, the Senate voted in favour of appointing Sołtan as professor: a decision claimed to be "the most important event in the history of the school in its sixty years".[123] In June the following year Sołtan was also officially given the "professor" title by Bolesław Bierut, the president of People's Republic of Poland.[124] Nonetheless, the discussion on the curriculum was still ongoing and there was still no Faculty of Architecture at the school, only a separate architectural studio. Finally, on June 8th, 1950 the Ministry of Culture and Arts decreed the new structure of the school, including the faculties of painting, sculpture, graphics, interior design, textile, set design, and conservation.[125] Quite soon afterwards, on August 14th, 1950 Sołtan was appointed as the head of the Faculty of Interior Design at the Academy.[126] The choice of directing the Academy towards interior design and not towards architecture saved it from the toughest influences of socialist realism. The lack of a clear programme paradoxically was helpful: "not only it was not understood how the Interior Design Faculty should look like, but above all, how socialist realism should influence such a faculty" – even the authorities and the Party were not sure how to guarantee this.[127] As there were no precedents in interior design concerning how propaganda art could be conceived, the ideology's influence on its forms was less apparent. As a result, the Party interfered less in the programme, but instead, specific staff members were imposed. Eventually, thanks to such an ideologically undefined position and to the presence of Sołtan, the Faculty of Interior Design became by the 1960s one of the most important faculties within the school.[128]

117 Director of the Academy's museum Gola, talks about Sołtan's "myth" in the school, see: *Jerzy Soltan*, ed. by Jola Gola, p. 17. Some recognise his most important role for the school even though he was not a dean, see: interview with Wojciech Wybieralski.
118 Along with the schools from Krakow (1818) and Poznań (1919), they were the longest established in the country.
119 The Polytechnic of Warsaw was the only architecture school existing before in Poland prior to the Second World War (founded in 1918). The architecture school in Wrocław, even though it had existed since the nineteenth century, had to be re-created and the teaching staff had to be assembled, due to the shifting of the country's borders after the Second World War, with none of the former staff remaining. At the same time, new schools were opening in the 1940s – in Gdańsk and Szczecin.
120 Wojciech Włodarczyk, *Akademia Sztuk Pięknych w Warszawie w latach 1944-2004* (Warsaw: Wydawnictwa Szkolne i Pedagogiczne, 2005), p. 39.
121 Since after the war, there was an ongoing discussion on the structure of the school between the Academy itself and the Ministry of Culture and Art, which preferred the school to concentrate only on 'pure art' – painting, sculpture, and graphics – and issued a series of laws since 1946 influencing teaching programmes at art schools, see: Włodarczyk, p. 44. This discussion continued in the years 1947-1951: the Academy was fighting for its independence and for the possibility of its own authorities to draw the programme. There were no precise programme directives back then, thus quite often the officials from the Ministry of Culture and Arts took the initiative to influence teaching programmes and the choice of faculty members, see: Ksawery Piwocki, *Historia Akademii Sztuk Pięknych w Warszawie w latach 1944-1964* Warsaw: Wydawnictwa Szkolne i Pedagogiczne, 2004), p. 201.
122 Włodarczyk, p. 56. However, due to the uncertain situation within the school, Sołtan corresponded with Urbanowicz – a fellow prisoner from Murnau and at that time director of the Visual Department at the Ministry – to explain scepticism and uncertainty concerning return to Poland and concerning the acceptance of the unofficial position offer from the Academy. Recalling others' issues with positions offered in Poland and foreseeing a conflict concerning the position of the head of the faculty, Sołtan did not want to leave France until he was certain to get the job at the Academy. Sołtan to Urbanowicz from June 4th, 1948, see: ISPAN-BU.
123 Włodarczyk, p. 264. Translation from Polish (SR).
124 Certificate from June 25th, 1949, see: AASP-JS.
125 Włodarczyk, pp. 58, 95.
126 Ministry of Culture and Arts to Sołtan from August 14th, 1950, see: AASP-JS.
127 Włodarczyk, p. 62. Translation from Polish (SR).
128 Włodarczyk, pp. 128, 184.

ill. 4.19 - group of Polish architects from the Artistic and Research Workshops working on the construction of 'Tropik' typical pavilion in Damascus with Jerzy Sołtan (first to the right) supervising the construction, as an example of collaborative and interdisciplinary design team
ill. 4.20 - Jerzy Sołtan in front of the main elevation of the main building of the Fine Arts Academy in Warsaw in 1995, with the poster of the monographic exhibition of his work organised at the Academy

However, even with less influence by socialist realism than the Polytechnic of Warsaw (architecture taught there was clearly considered as a propaganda tool), ideological questions were still present in the school in a form of pressure on faculty, ideological modules imposed in the curriculum, and Party's infiltration amongst students and staff.[129] In addition, library sections on modern art and architecture, including works by Picasso, the futurists, and CIAM became restricted and required authorisation.[130] The official status of the school was linked to the socialist realism ideology,[131] and every personal and staff decision had to be accepted by the Ministry and – in practice – by the Party and its Central Committee.[132] In consequence, Party members started to be more visible in the school: on the one hand, through youth groups, such as the Party-dependent Association of Polish Youth, and on the other hand through appointing new members of the faculty and forcing to leave others.[133] In such an atmosphere, in October 1951, Sołtan was relieved from his position of the head of the Faculty of Interior Design, and soon afterwards, his teaching duties were limited to a module on construction materials.[134] His fascination with Le Corbusier's architecture and refusal of socialist realism canon were dangerous at that time: it meant to oppose the ideology, and therefore to oppose the Party, leading to repression by various government organisations.[135] Such a context is also very important to realise the weight of Sołtan's teaching and design in contrast with the propaganda as an attempt to bring modern architecture and art into the socialist realist Poland – against all the odds. He was able to continue to work, somehow hidden, thanks to the managerial capacities of the school's deans – Franciszek Strynkiewicz, Marian Wnuk, and Kazimierz Nita – to parley with the authorities, which significantly reduced the impact of socialist realism and of the Party in general on the Academy.[136] In his own memories, Sołtan recalls Wnuk and Nita as having enormous contribution in defending the school from the propaganda, claiming that thanks to them, "indoctrination and conversion in the area of Fine Arts was proceeding with lesser tension than in other fields".[137] More freedom was possible only after the abandonment of the socialist realism propaganda from the mid-1950s onwards – since then the Party limited its interference to staff management without overseeing the teaching programmes.[138] With this "thaw", Sołtan started to design within the Academy in the specially created Artistic and Research Workshops – a truly modernist atelier, where he gathered a vibrant group and developed a series of designs, which fully illustrate his vision of architecture (Chapter 9, ill. 4.18).

129 Włodarczyk, pp. 82-83, 89. Many underline the conflict between the Fine Arts Academy and the Polytechnic, as a rivalry between artists, designers versus more technically prepared architects. At the same time, an architect's job was viewed as more influential by the Party and it was more susceptible to indoctrination, see: interview with Bogusław Smyrski. However, even at the Academy teaching programmes included ideological modules, such as Marxism, Leninism, Marxist aesthetics, and political economy. The timetable in 1949 included already three hours per week of Marxism and Leninism and two hours of Russian throughout the entire first and second years. During the entire third and fourth years, the students had political economy classes, and at fifth year, the students had one semester of Marxist aesthetics, according to the plan of timetable for the Faculty of Interior Design at the Academy for the year 1949/1950, see: ISPAN-BU.

130 Andrzej Jan Wróblewski, 'Professor', in *Jerzy Sołtan*, ed. by Jola Gola, p. 40.

131 The programme from 1950 includes as its aim "to form candidates for artistic professions, preparing them for autonomous research in visual arts based on the theory of Marxism and Leninism, to form and prepare for artistic and scientific work in the field of visual arts based on the socialist realism method, to make research in the field of visual arts, to form and instruct youth studying at the Academy to be citizens conscious of their duties to the People's Republic of Poland, and to participate in broadening the knowledge of arts in the society", see: Włodarczyk, p. 95. Translation from Polish (SR).

132 The documents kept at the Archives of the Academy of Fine Arts in Warsaw show correspondence between the school and the ministry concerning authorisations to employ, to give extra hours or to grant leave to staff, see: AASP-JS. For the importance of the Party in the decision-making process, see: Włodarczyk, p. 111. Similarly, programmes of single modules had to be sent to the ministry until the 1980s, see: Włodarczyk, p. 122.

133 The atmosphere of control and indoctrination can be seen for example in a note prepared by the Party in 1951 on one of the teachers: "during his work, he showed to be a reactionary propagator of formalist-constructivist direction in the arts. He was often convincing students to read Western architectural magazines and to assimilate their forms. Consciously, he was not mentioning USSR's role in the field of mechanisation of building and USSR's help, which granted us the building development we may see now here", see: report on Koziński, quoted in Włodarczyk, p. 113. Translation from Polish (SR).

134 Ministry of Culture and Arts to Sołtan from October 9th, 1951, see: AASP-JS.

135 Sołtan's opposition to socialist realism in the school can be illustrated by his comment to a speech by one of the teachers imposed by the Party. Sołtan recalls, "the whole audience froze. At the Academy, the social realism [*sic*] was accepted as a *malum necessarium*. Even politically engaged faculty members and students tended to deal with this ordeal of the butchering of art with some decency. And there was a public open case of political servility, brainwashing". Lecture on Polish art in Washington DC (marked "Tapes Washington DC"), see: MASP-JS.

136 Strynkiewicz tried to face the first months of socialist realism at the Academy, but he resigned from the position in 1951. Wnuk, the second one, was a pre-war socialist and member of the Party, however with no devotion to the socialist realism ideology, and retrospectively one of the faculty claims, "Wnuk proved to be the master of personal relationships. He had good contacts with the employees in the ministry, and friendly relationships with the artists who shared his ideas on the school and atelier. Finally, tolerance and intuition for important matters (protection of Sołtan's atelier, creation of the Artistic and Research Workshops, bringing Hansen to the Faculty of Sculpture), for which he was not afraid to stand up for, even if he did not always agree with them, made of him a providential person. During his mandate, the most militant followers of socialist realism disappeared from the Academy", see: Włodarczyk, pp. 141, 190. Translation from Polish (SR). Moreover, during the visits, Wnuk was not showing the Artistic and Research Workshops and Sołtan's work to the visitors in order to protect them from repressions linked to socialist realism ideology.

137 Lecture on Polish art in Washington DC (marked "Tapes Washington DC"), see: MASP-JS.

138 Włodarczyk, pp. 116-117.

However, after 1959, Sołtan started to travel often to the United States to teach at Harvard, spending half of the year in Poland and half of it in the United States, until he eventually settled down in the United States in early 1966.[139] With the government's hostility towards the capitalist United States, along with some Party-influenced faculty members' hostility towards Sołtan, his influence started to decrease.[140] His friends criticised vividly the situation at the school and within the Workshops after his departure, underlining political conflicts' negative influence on personal decisions.[141] By the late 1960s, the activity of the Workshops decreased and they lost most of their initial impetus. Sołtan's co-worker, Adolf Szczepiński wrote in a letter to him, "after your departure, a total failure began [...]. All the avant-garde you gathered so skilfully (Fangor, Mroszczak, Piórko...) became scattered. Then, the wrong people at high positions in the Academy and in the Workshops meant that any collective of mentally disabled has better design results".[142] Finally, the Workshops in their initial form were closed in 1979 at the time of separation of the Faculty of Industrial Design from the Faculty of Interior Design.[143] Whether the contact between the Academy and Sołtan afterwards was a courteous relationship or a closer one, it is still a matter of discussion.[144] However, from the mid-1980s, the Academy took more interest in former members of the faculty, such as Sołtan and Lech Tomaszewski, and it resulted eventually in organising the first exhibition on Sołtan's work in 1995 (ill. 4.20), accompanied with the catalogue edited by Jola Gola.[145] Regardless, it seems that although from that time, most of Sołtan's influence within the Fine Arts Academy remains related to the school's museum, arguably Sołtan remained rather a "myth within hearts" – but not much more.[146] New exhibitions were organised – such as the 'Ineffable Space – Jerzy Sołtan, Lech Tomaszewski, Andrzej Jan Wróblewski' from 2018, but they tend most of all to point to the importance of Sołtan in the past of the Academy, whereas his involvement in architecture was much broader.

Poland and beyond

Sołtan's formation shows consistency and a consequent following of the very same direction he established while reading the first pages of Le Corbusier's *Quand les cathédrales étaient blanches*. His interest in those ideas and the willingness to follow them at all costs are important to understand his later conflicts in Poland with the socialist realism cultural dictatorship or with the technocratic and economy-based centrally-planned vision of architecture afterwards. Sołtan's activity in Murnau – including first attempts in painting and designs for theatre sets – acknowledged the importance of teamwork and collaboration with artists in later designs. His stay in Paris introduced him fully to the world of Corbusian theory and designs. Methods of work, ideas, forms, connections, some more of general spirit – all of these present in Sołtan's life and work – somehow originate from these two moments of his life. They influenced his ideas – thanks to the contacts with many artists (Chapter 6). They also influenced his designs – concerning both forms and methods (Chapter 9). They influenced finally his teaching – since Sołtan was referring to those experiences when lecturing, and since he wanted to awaken sensitivity in his students for Le Corbusier's ideals (Chapter 8). The years following the return to Poland undoubtedly correspond to his prolific artistic and architectural creation, to his involvement in pedagogy and to his devotion to expand the reach of the modernist architecture of Le Corbusier or the modern ideas of CIAM in Poland. They also correspond to his fruitful collaboration with other architects and artists, mainly within the Artistic and Research Workshops at the Fine Arts Academy in Warsaw. Results of this collaboration are counted amongst his most successful buildings (Chapter 9), and his former students

139 As it is recalled by Joanna Sołtan, the decision was not initially to leave forever, but after a few years, the Polish authorities refused to renew the family's passports, making it difficult to go back to Poland.

140 For example, his friend Szymon Bojko recalls hostility towards Sołtan during a faculty meeting at the Academy. Bojko to Sołtan from January 17th, 1967, see: MASP-JS.

141 For instance, Smyrski underlines political games at the Academy and within the workshops, see: interview with Bogusław Smyrski.

142 Undated letter from Szczepiński to Sołtan from the early 1990s, see: MASP-JS. Translation from Polish (SR).

143 Such a move took the Academy further from Sołtan's ideas, both based on his involvement with the Workshops and on his idea of industrial design teaching. While he was personally involved in introducing design at the Academy in the 1950s, he had a much broader vision of synthesis of arts and collaboration with artists, and he wanted to enlarge the interests both of industrial design itself and of the Faculty of Interior Design, building a connection and approaching a more generic Faculty of Architecture. Earlier, his idea of broadening the interests of industrial design was unanimously accepted by the Academy's Senate and as a result, the discipline within the school was collaborating closely with the Sculpture Faculty, see: Włodarczyk, pp. 194-195.

144 There was definitely interest in Sołtan's work – for example in 1971 he was asked by the Academy to contribute an article to the annual publication (not excluding it happened other times). Fine Arts Academy to Sołtan from June 22nd, 1971, see: MASP-JS. Similarly, Sołtan himself seems to have kept contact with the school even years after his departure – for instance in 1985, he donated some exhibition catalogues to the Academy so that they could be made available for the students. Elżbieta Szańkowska to Sołtan from October 4th, 1985, see: MASP-JS.

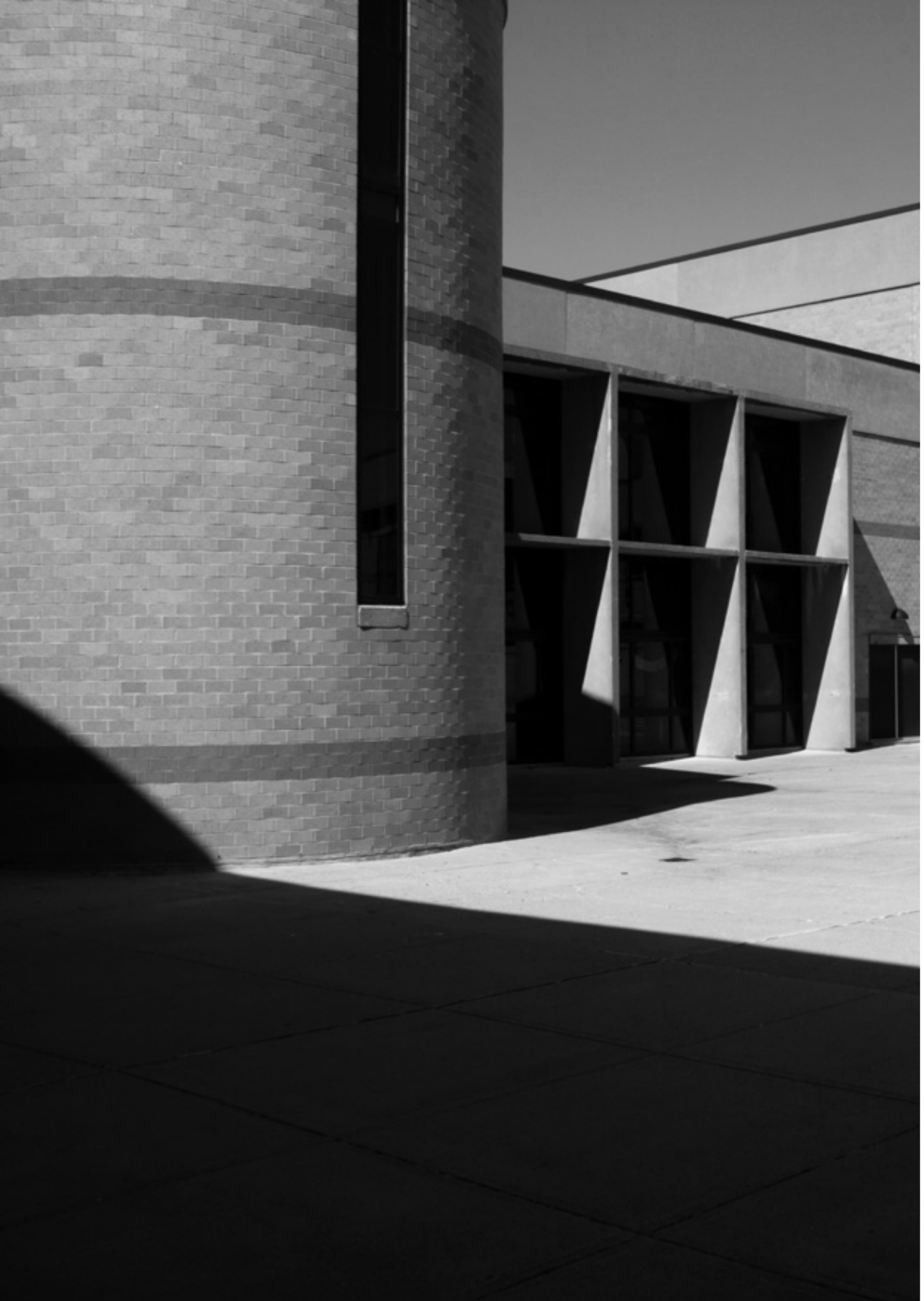
145 It was the first publication on his art and architecture, and it was a loosely organised collection of memories, biography fragments, information on various designs, and a short selection of his articles. Since the catalogue was prepared along with Sołtan (curated by Jola Gola in collaboration with Sołtan), it is plausible to assume that designs, which were the most important to him, were well represented.

146 Writing to the first director of the museum Włodarczyk about the idea of the exhibition, Sołtan mentioned in 1987, "sometimes it is better to be a myth within hearts rather than an idiot on the exhibition walls". Sołtan to Włodarczyk from April 14th, 1987, see: MASP-JS. Translation from Polish (SR).

refer to contacts with him with much devotion. In spite of the political hostility and the lack of coherence in the regime's position on architecture – first socialist realism and then normative-based low-cost matchbox architecture – he was able to contribute even slightly to Polish architecture, by leaving his legacy both through designs and teaching.

Therefore, when he claimed in 2001 that he was mostly a Western architect, he was not renouncing his origins and his connections to Poland. On the contrary, when he decided to come back to Poland in 1949, this was dictated partially by some romantic and patriotic sentiment.[147] Instead, he recognised the weight of the influence that his experiences in Western Europe had had on his life and work, while at the same time his possibilities in Poland were limited. Urbanism, for example, was a much-politicised discipline, and it was highly connected to the Party's ideology. His design possibilities were also limited, as he added in 1962, "an important life goal for me is an architect's creative work. A non-creative architect is not a full pedagogue. I work creatively as an architect – in order not to disperse my efforts – in one institution only, i.e. in the Artistic and Research Workshops at the Academy. Unfortunately, right now I follow there only one design. As a professor at Harvard University, I would have the possibility to make designs abroad too".[148] As a result, Sołtan's Polish work constitutes only one part of his contribution to architecture, at a much more local and reduced scale. His involvement with international organisations, such as CIAM or with his colleagues from Team 10, was not less interesting. Finally, his teaching at Harvard Graduate School of Design gave him much more possibility to influence future architecture professionals and to teach in a much more modern-architecture-friendly environment. Through his experiences in Poland, he continued the path laid down by his formative experiences – both in Murnau and in Paris – and it allowed him to develop the many ideas he was to share at an international level.

147 Draft of the book *On Architecture and Le Corbusier* from November 1995, pp. 125-126, see: MASP-JS.
148 Sołtan to the Fine Arts Academy from October 13th, 1962, see: MASP-JS. Translation from Polish (SR).



Sołtan's mature years: international development

it is funny how the CIAM and the beginning of Team 10 seem to still be close to us and at the same time already far away

– Jerzy Sołtan to Jaap Bakema[1]

With the letter sent to Bakema, Sołtan makes the connection between his most important international activities involving CIAM and Team 10. Referring to CIAM and to the beginnings of Team 10, and to their presence at the Graduate School of Design, he underlines the continuity and the syncretic evolution of his ideas throughout the twentieth century. Even though he was not involved in CIAM for long, as he entered the organisation only months before the last congress in Dubrovnik, and he did not attend all the meetings of Team 10, these two groups had a permanent effect on Sołtan's views on architecture, on his teaching, and on his designs too. The importance placed by CIAM on social values and the weight they gave to the question of habitat can be seen in many of Sołtan's writings. Team 10's thick cultural dimension and broadening of CIAM's discourse with new elements, questions, and influences points to his sensitivity for a multi-layered vision of modern architecture. Those experiences seem to converge towards Sołtan's involvement in teaching at Harvard, a school with a special role in modern architecture education in the United States thanks to its direct connections with Bauhaus, CIAM, and Team 10. This continuity of thought, originating with CIAM, then developed with Team 10, and later expressed at Harvard, illustrates, according to Eric Mumford, that "understanding the urbanistic discourse of CIAM remains important today, as many subsequent approaches to shaping the built environment by architects and planners still seem connected to CIAM ideas".[2] Sołtan's teaching at Harvard presents itself thus almost as a summary of his previous experiences, underlining the continuous validity of CIAM and Team 10's ideas. The context of Sołtan's teaching for over twenty years at Harvard reveals itself to be most important in understanding his role for the school, and for teaching the principles of modern architecture (Chapter 8).

This chapter analyses the international contexts of Sołtan's work, his role within them, and his influence, following the previous chapter on his formation in Europe and on his work in Poland. Throughout the analysis of the context of his activity within CIAM, Team 10, and Harvard, it aims to illustrate how these experiences form a logical continuity with his previous work and with his education, and it answers the question on the role of Sołtan's international experiences in understanding his legacy. First, this chapter deals with Sołtan's involvement with CIAM as arguably his first relevant contact with the wider international community of modern architects. Then, the analysis concentrates on his contacts and involvement in Team 10 meetings and discussions, underlining the importance of his own views in the light of the group as a whole. Finally, it analyses his presence at the Graduate School of Design at Harvard, where his teaching and influence on the profile of the school can be considered as an important contribution to modern architectural education.

breakthrough of CIAM

In the early years of modern architecture, CIAM as an international organisation for modern architecture was a unifying force gathering architects from different countries, representing different tendencies, but all of them close to modern ideals. Created in 1928 in La Sarraz in Switzerland, when modern architecture was still a struggling alternative to academicism, its aim was to promote modernist ideas and design methods, and it proved to be a very important tool in expanding modern influence throughout Europe and beyond. Whereas the initial declaration was signed by individual architects, the organisation quickly adopted a hierarchical model, where national groups were formed in different countries, almost exclusively European ones, and delegates represented national groups' work during congresses.

CIAM and Polish influences

From the very beginning at La Sarraz, Polish architects were present in CIAM. With the early influence of Szymon Syrkus, and his membership in CIRPAC (the executive organ of CIAM), he could naturally communicate with other members of the Polish CIAM branch called Praesens (Chapter 4) and spread the ideas that were talked about at the international level in Poland and, *vice versa*, he could bring at the international level their proposals from Poland. Throughout CIAM 2 and CIAM 5 congresses, Polish architects centred around

1 Sołtan to Bakema from July 25th, 1974 sent after Bakema's lecture at Harvard, see: HNI-JB, BAKE g8.
2 Eric Mumford, *The CIAM Discourse on Urbanism 1928-1960* (Cambridge: MIT Press, 2000), p. 7.

the Syrkus couple were a relevant and numerous group, which was able to raise to the international attention their ideas, such as their plan for Warsaw.[3] After CIAM 5, the presence of Polish architects within CIAM was still visible, even in spite of the increasing tensions at the international level, because the organisation was important for them to keep cross-boundary links between different countries and national sections.[4] However, due to the still rising tensions in the late 1930s, there were arguably no signs of the activity of Polish architects within CIAM from 1938 until after 1945. Due to the war, there was not only no possibility for the Polish architects to contact fellow CIAM members, but it was simply impossible to work and to function normally.[5] It was not until the war ended when it was possible for the Polish delegation to take part anew in the architectural discussion at international level, with new important roles within CIRPAC, and with Helena Syrkus nominated as one of CIAM's vice-presidents.[6] Her position was to guarantee a better dialogue between Western and Central or Eastern European architects, with an opening towards leftist ideas.[7] It was arguably one of the most remarkable positions of Polish architects in CIAM's history. However, shortly after in 1948, came the change of Polish CIAM architects' attitude, who turned towards historicism in Warsaw's reconstruction plans and started to preach socialist realism (Chapter 4).[8] Such an attitude was a clear sign of the upcoming change, and a clearly stated collision course with many CIAM architects. The CIAM 7 congress in Bergamo in 1949 was a turning point as the first to be organised after Polish architecture was officially influenced by the socialist realism doctrine. In Bergamo (ill. 5.2), Helena Syrkus actively criticised CIAM, functionalism, and modern art, and at the same time, she preached socialist realism and propaganda art.[9] Roughly two weeks before the congress, she wrote to Mart Stam, "we can no longer afford to sit in CIAM and see it bring ruin in such a biased way as is done by Le Corbusier, Giedion, Roth, etc. We have no choice but to either leave CIAM or to inaugurate a discussion that is long overdue".[10] As she was still CIAM's vice-president, her shift towards this much different position and criticism of the organisation was unsettling, but it also influenced the position of Polish architects within CIAM: Eastern Europe was distanced from positions of power at CIAM, and some

3 Proceedings from CIAM 2 included Szymon and Helena Syrkus, and Józef Szanajca as national delegates, and the Polish group was one of the biggest, together with the German, French, Dutch, Swiss, Spanish, and Soviet delegations, see: Mumford, pp. 34, 42. In the following years, Praesens exhibited their work at the CIAM congresses in Frankfurt and in Brussels, and they participated actively in CIAM 4 on board of Patris II (the congress actually took place on a cruise ship going from Marseille to Athens). They discussed then issues of Warsaw, which became the basis for 'Warszawa Funkcjonalna', a regional plan by Syrkus and Jan Chmielewski. At CIAM 5, thanks to the presentation of their work, the importance of the Syrkus couple and of other Polish architects became much more apparent. Their response to the studies on functional cities became a model study for other architects, as even Le Corbusier was reported to have recognised its value, see: Wojciech Leśnikowski, 'Functionalism in Polish architecture', in *East European Modernism*, ed. by Wojciech Leśnikowski (New York: Rizzoli, 1996), pp. 209-211. The plan for Warsaw was interesting, as it "involved regional planning of both rural and urban areas, with the two sharply distinguished, paralleling Le Corbusier's interests in the rationalisation of rural life at this time", see: Mumford, p. 112. Simultaneously, other Polish CIAM members presented their designs and ideas (such as Stanisław Tolwiński's presentation on the organisation of leisure in workers' settlements, and Syrkus' report on workers' housing in Poland).

4 One example of such an attitude was the creation of CIAM-East including members from the Central and Eastern European countries, such as Yugoslavia, Greece, Romania, Poland, Czechoslovakia, Austria, and Hungary. This sub-group aimed to meet independently, "to deal with their own special problems", with meetings held in 1937 in Budapest, Žilina, and Brno, see: Mumford, pp. 117-119.

5 For example, Szymon Syrkus was imprisoned in the Auschwitz concentration camp during the war, see: Mumford, p. 171.

6 Szymon and Helena Syrkus were both present at the CIRPAC meeting in Zurich in May 1947, where they reported on the situation in Poland. They were not present in Bridgewater at CIAM 6, because they were busy with the reconstruction of Warsaw after the war. Their commitment to rebuilding the Polish capital was one of the earliest examples of CIAM members working in post-war reconstruction, and Mumford comments that during CIAM 6, the rest of Europe was "sluggish" in terms of reconstruction. Helena Syrkus replaced Victor Bourgeois as CIAM's vice-president, and she held this position along with Walter Gropius and Le Corbusier, see: Mumford, p. 173.

7 One of the CIAM members Pierre Emery wrote to Helena Syrkus, "we have elected you to the Council to create a connecting link between East and West". Emery to Syrkus from March 10th, 1948, see: GTA-SG, 42-SG-20-60. Moreover, it has been argued that Giedion wanted to open the organisation towards the leftist and Marxist positions, and Syrkus, as a long-time socialist from before the war seemed to be the right person, see: Stanislaus von Moos, 'CIAM's ghosts – Le Corbusier, Art and World War II', in *Le Corbusier, History and Tradition*, ed. by Armando Rabaça (Coimbra: Coimbra University Press, 2017), p. 232.

8 For example, the Syrkus couple presented an updated version of their plan 'Warszawa Funkcjonalna' by introducing the theme of historic reconstruction in the capital after the war. The plan assumed rebuilding of around eight hundred buildings in the historical centre of Warsaw, "including the exact replication of all of its palaces, castles and churches", see: Mumford, p. 183. Helena Syrkus also tried to convince Giedion to read Stalin's essay *Historical and Dialectical Materialism* in order for him to know what the work in Eastern Europe was about. Syrkus to Giedion from February 24th, 1948, see: *CIAM Archipelago. The Letters of Helena Syrkus*, ed. by Aleksandra Kędziorek, Katarzyna Uchowicz and Maja Wirkus (Warsaw: Narodowy Instytut Architektury i Urbanistyki, 2019), pp. 238-243. She also criticised *Space, Time and Architecture* for the lack of a "purely Marxist point of view", see: Stanislaus von Moos, p. 234.

9 During the discussions in Bergamo, Helena Syrkus started to criticise choices and directions taken by the organisation, and argued that although the early CIAM postulates were positive, they turned towards "regrettable capitalist notions" of the *Existenzminimum*. She commented that the Eastern European countries rejected such an attitude and decided to regain respect of the past, leaving behind theories of the *Athens Charter* and moving into reality, see: Mumford, p. 194. Such a declaration was not the only example of the growing difference between Eastern and Western architects though. Giedion recalled his discussions with Helena Syrkus during the congress, as she wanted to give a speech on socialist realism. Syrkus to Giedion from July 5th, 1949, see: GTA-SG, 42-SG-29-12. She argued also, "art belongs to the people and must be understood by the people" – making a stand in favour of propaganda art (ideologically aimed at being close to people), and criticising modern art at the same time, see: 'VII CIAM. Il Settimo Congresso Internationale di Architettura Moderna – Bergamo 22-31 luglio 1949', 33-34, *Metron* (1949), 48-72 (p. 59).

10 Syrkus to Stam from July 10th, 1949, quoted after Ursula Suter, *Hans Schmidt 1893-1972. Architekt in Basel, Moskau, Berlin-Ost* (Zurich: GTA, 1993), p. 50.

even called it a diaspora.[11] In such a manner, Polish-imported socialist realism succeeded in severing Eastern European countries from the influence of CIAM for several years: Polish architects were absent at CIAM 8 and CIAM 9, leaving them out of the international debate, and Syrkus' position was criticised by others.[12] There was no Polish CIAM group, and Helena Syrkus was listed only as an individual member.[13]

Independently from Praesens, Sołtan was in contact with CIAM through different channels: during his stay in France, he was a member of ASCORAL, the French CIAM branch founded by Le Corbusier during the war. Afterwards, whereas he remained engaged with modern ideals after his return to Poland, the possibility of connection to CIAM was much more difficult due to the socialist realism propaganda. Only with the abandonment of socialist realism ideas, the opportunity to open towards modern architecture and Western countries reappeared, and Sołtan started to consider the possibility of founding a CIAM cell in Poland, given that the members of previously CIAM-aligned Praesens had gone rogue following their socialist realism propaganda agenda. In November 1955, Sołtan wrote to Le Corbusier, "I believe also that a moment will perhaps come to create a CIAM cell here. It is necessary that people really can inscribe".[14] He had already expressed the same willingness in a letter to his friend and colleague from Le Corbusier's atelier Roger Aujame from October of the same year, where he not only showed interest in bringing CIAM to Poland, but also expressed his criticism of the Syrkus couple's attitude under socialist realism.[15] Arguably, their activity and position during socialist realism was unknown for architects abroad and Sołtan's letters informing about their preaching socialist realism and criticising CIAM was a significant revelation. Sołtan's willingness to open to CIAM and his accusations towards the Syrkuses resulted already in 1955 in adding his name as a referee for a Polish CIAM group in reorganisation, and the following year, he was listed as an observer and participant of CIAM 10 in Dubrovnik, which marked also a generation shift in modern architecture in Poland: Sołtan was some twenty years younger than Helena Syrkus.[16] Arguably, thanks to Sołtan's contacts from Paris and through letters he was able to send from 1955, he started to be noticed amongst the leaders of CIAM. For example, in February 1956, Edith Aujame wrote a letter to Jaqueline Tyrwhitt, the secretary of the CIAM council, mentioning both Sołtan's work on exposition pavilions abroad and his revelations on the Syrkus as enemies of modern architecture in Poland.[17] Such news surely attracted attention amongst the CIAM leadership. In such an atmosphere, his letter to Alfred Roth, in which he informs him he was creating a CIAM group in Poland along with Oskar Hansen and Zbigniew Ihnatowicz did not go unseen: less than two weeks later they were officially invited to participate in the congress in Dubrovnik.[18] Nonetheless, Sołtan's involvement did not mean that Helena Syrkus was not recognised by the organisation anymore, nor that Sołtan became the key figure for the re-organising Polish CIAM. In some documents from 1956, Syrkus still appears as the contact for the Polish group instead of him, and she was mentioned by Josep Lluís Sert in his opening speech in Dubrovnik as one of the 'big names' who were absent, along with Le Corbusier, Walter Gropius, and Cornelis van Esteren.[19] Regardless, CIAM 10 in Dubrovnik (ill. 5.4) was a breakthrough for Sołtan and his position within CIAM thanks to his recognition of the modern cause. His deep interest and determination to take part actively in the organisation's work may be seen even in the early letters to the organisers. He mentions to Roth, "I hope that from now on my work connected with the CIAM will be a continuous one – you know yourself

11 Stanislaus von Moos, p. 237. In addition, Giedion recalled CIAM 7 in Bergamo for "the hottest discussion between East and West", adding that the question of aesthetics and visual aspects of modern art and architecture "are not just personal matters... but they are a part of our attitude towards the world, and that they merge – sometimes tragically – into politics", see: Sigfried Giedion, 'Architect, Painter and Sculptor', in *A Decade of New Architecture* ed. by Sigfried Giedion (Zurich: Girsberger, 1951), pp. 30-40.

12 When in Hoddesdon at CIAM 8 Aldo van Eyck and Jaap Bakema referred to Van Doesburg and his avant-garde work, it was very well received by the participants, and it could be seen as a clear disapproval of Syrkus' interest in propaganda art, see: Jos Bosman, 'CIAM After the War: a Balance of the Modern Movement', *Rassegna*, 52 (1992), 6-21 (p. 13).

13 Lists of CIAM groups and members from June 1952 and from July 1953 do not include any Polish group, and Helena Syrkus is listed as an individual member, see: GTA-AR, 42-AR-22-81 and 42-AR-22-82.

14 Sołtan to Le Corbusier from November 4th, 1955, see: FLC-DN, R3-4-553-001. Translation from French (SR).

15 Sołtan wrote, "the moment comes perhaps to create a CIAM cell in Poland. News that Edith gave me in her last letter is very important, especially concerning Syrkus preparing to participate in the next CIAM congress. Why important? It is because during last 6 (six) years, 1949-1955, the Syrkuses sustained vigorously that CIAM ideas are the worst one can imagine (from political, social and architectural point of view). They change now! But in Poland they are too known (especially amongst the youth) as enemies of CIAM". Sołtan to Aujame from October 10th, 1955, see: MASP-JS. Translation from French (SR).

16 Sołtan's name was added in pen at the end of a typed list of CIAM national cells in a list in 1955 as the referee: the person with whom to correspond concerning the CIAM cell in reorganisation, see: GTA-AR, 42-AR-22-24. The document was an update of another list where Sołtan was not included, see: GTA-AR, 42-AR-22-72. Sołtan is listed as an observer in a list of CIAM members and CIAM 10 participants from August 1956, see: GTA-AR, 42-AR-22-71.

17 Aujame to Tyrwhitt from February 9th, 1956, see: GTA-JLS, 42-JLS-28-30.

18 Sołtan informed Alfred Roth about the creation of the Polish CIAM in a letter from February 26th, 1956, see: GTA-SG, 42-SG-44-131. He is invited to participate in the congress in a letter from Sert from March 6th, 1956, see: GTA-JLS, 42-JLS-28-32.

19 Sert's opening speech from August 6th, 1956, see: GTA-JLS, 42-JLS-28-109 to 113.

how much I desired it".[20] He wanted also to take part in work of the Commission A.1, which was composed mainly of the CIAM leadership, including Sigfried Giedion, Sert, and Tyrwhitt – it was a perfect occasion to make himself recognised, to show his willingness to contribute, and to work following CIAM's ideals. Not only was the Commission A.1 relevant due to its members, but also due to its agenda: it was to prepare the *Habitat Charter*, a document on the future development of human dwellings, which was to be one of the most important results of the Dubrovnik congress according to the organisation's leadership.[21] During several days of work in the commission, Sołtan was able to enter into contact with CIAM's most important figures, who were also to become his colleagues in the following years at Harvard. From then, he was officially recognised as the referee for the Polish group, and in the post-congress documents, the Polish group in formation is mentioned as the "Fine Arts Academy".[22] As a result, CIAM 10 in Dubrovnik was a milestone in Sołtan's involvement in architecture at the international level, and in his contribution to relations between Polish architecture and the outside world.

Sołtan's role in re-organisation of CIAM

However, Sołtan entered in contact with CIAM at a difficult time: regardless of the criticism of the Polish members during the socialist realism era, the organisation had been criticised from within since CIAM 8. It lost its initial impetus, and as Tyrwhitt remembers, due to the commitment of the founders in the post-war reconstruction and many commissions, the initial members had less time to give to CIAM, whereas the younger generation wanted to change the organisation.[23] Such differences between the 'middle' generation and the youngest members led to the decision after CIAM 9 that the following congress was to be handed over to the younger members, who started to question some ideas and disagreed with earlier practice of editing congress proceedings to give a more uniformed vision of discussions.[24] As a result of the criticisms, some groups refused to participate and the congress was less-attended than the previous one,[25] leaving the organisation's unity visibly wounded. Such a deepening split made it necessary to change CIAM's leadership and organisation, so attempts to re-organise CIAM followed after the congress in Dubrovnik. A questionnaire was sent to all members by Pierre Emery in November 1956 concerning the future of the organisation.[26] Consequently, one of the ideas that was agreed for the new CIAM was to abandon the mechanism of national groups, and instead to include individual members, who would develop modern architecture according to the principles stated in La Sarraz at the time of the foundation of CIAM. During the process, a group of most renowned CIAM architects was asked then to prepare a list of around thirty individuals – 'the group of thirty' – who could be members of the new CIAM, and Sołtan's name was included in the lists prepared by Sert and Emery (in particular, Sert included him as one of ten architects from Europe).[27]

20 Sołtan to Alfred Roth from June 5th, 1956, see: GTA-AR, 42-AR-14-277.
21 It was to be based on the ideas from the previous congress and on the proposals from sessions' participants, addressing "the future structure of the human habitat from the smallest to the largest agglomerations". Giedion to CIAM members from May 30th, 1956, see: GTA-AR, 42-AR-14-137 to 138. During a working meeting in Padova in Italy just a few days before the beginning of the congress, it was underlined, "everybody expects from CIAM that the 10th Congress should produce a document on the Habitat similar in quality to the *Charte d'Athènes*", making thus the Commission A.1 very important for the organisation's leadership. Document 'Aspects of Program for CIAM 10 at Dubrovnik to be given final form at Padova, Aug. 2/3. 1956', see: GTA-AR, 42-AR-14-130 to 131. The question of habitat reappeared in Sołtan's later teaching activities at Harvard and in his texts (Chapters 7 and 8).
22 Since after the congress, Sołtan was presented as Polish CIAM's referee instead of Helena Syrkus. In a printed list of national sections from August 1956, he is listed as a referee, see: GTA-JT, 42-JT-22-7 to 11.
23 Jaqueline Tyrwhitt, 'CIAM and Delos', *Ekistics*, 52 (1985), 470-472. According to Frampton, "the decisive split came with CIAM 9 held at Aix-en-Provence in 1953, when Alison and Peter Smithson and Aldo van Eyck undermined the functionalist categories of work, dwelling, recreation, and transport by proffering a radical cellular approach toward the aggregation of urban form for different generic densities", see: Kenneth Frampton, 'Foreword', in Mumford, p. xiv.
24 Mumford, pp. 206, 226. Le Corbusier followed this thread in his message to the participants of the CIAM 10 congress in Dubrovnik, backing the new generation, ending his letter by exclaiming, "*vivent les CIAM-Seconds*" (as he referred to the youngest members). Le Corbusier to CIAM 10 participants from July 23rd, 1956, see: GTA-AR, 42-AR-15-138 to 144. Other CIAM leaders tried however to calm down the discussions, and for example Sert's in his congress opening speech aimed at rationalising these differences by claiming it was a sign of the organisation's vivacity and activity, which was underlined also by some written messages from absent members. Sert's opening speech from August 6th, 1956, see: GTA-JLS, 42-JLS-28-109 to 113.
25 Such as for example the French delegation, which announced absence and criticised the latest incarnation of CIAM as being paralysed by "Byzantine discussions". Jean Badovici to Roth from April 24th, 1956, see: GTA-AR, 42-AR-14-186.
26 The questionnaire asked about members' interest in CIAM's work, about the relevance of the ideas and aims acclaimed in La Sarraz in 1928 and in Bridgewater in 1947, about the most important works of CIAM, such as the *Athens Charter* or the functional city studies, and about the future of the organisation. It was sent to all CIAM members by Emery on November 1st, 1956, see: HGSD-JS, AA009.
27 Bakema to Emery from December 5th, 1956, see: Paris, Fondation Le Corbusier, Congrès-ASCORAL, D3-19-81. The CIAM Council stated, "the intention of this list is to provide a balanced representation of names from different parts of the world [...]. This list, we hope, reflects the growing importance of the eastern nations, which we believe will have increasing influence in the future", but due to the internal conflicts, the list was rejected by younger British architects connected to Team 10: Alison and Peter Smithson and John Voelcker. The importance of the list was underlined in CIAM Council to Le Corbusier from February 26th, 1957, see: Paris, Fondation Le Corbusier, Congrès-ASCORAL, D3-19-86. The same letter

ill. 5.1 (chapter cover) - detail of the Salem High School designed by Jerzy Sołtan for Haldeman and Goransson
ill. 5.2 - photograph from the meeting during the CIAM 7 congress in Bergamo in 1953 with most of the CIAM Council at the table (right to left: Sigfried Giedion, Cornelius van Eesteren, Helena Syrkus, Ernesto Nathan Rogers, Le Corbusier, and Josep Lluís Sert), where Helena Syrkus was to promote and agitate in favour of socialist realism
ill. 5.3 - Alison Smithson editing texts and ideas discussed during the CIAM 10 congress in Dubrovnik in 1956; due to her editing work, all the original Team 10 publications were subject to the Smithsons' bias, preferring their ideas and designs above the work of the other members
ill. 5.4 - photograph from the meeting during the CIAM 10 congress in Dubrovnik in 1956, with Jerzy Sołtan (second row, second to the left), Ernst May, Willem van Tijen, Benjamin Merkelbach, Margarete Schütte-Lihotzky, and others

However, in order to understand the reasons behind this recognition, one has to understand Sołtan's position on the process of the re-organisation of CIAM. Whereas for the younger generation of European architects CIAM's ideas stated in the *Athens Charter* were put into question, for Sołtan it was important to recognise the organisation's strength and integrity in order to expand the reach of modern architecture – for example in a Poland dominated until then by socialist realism – and it was important for him to include, more intensely, countries in Eastern Europe and the Far East in discussions on modern architecture.[28] As a result, he was not criticising the *Athens Charter* or the organisation's developments after the Second World War, but he was underlining the need for them to persist. In an article published in Poland in 1956,[29] he gave a very positive opinion on CIAM underlining its international character, its practical aspects, discussion, and confrontation of ideas. He underlined then that CIAM was not formulating any formal declarations, leaving only ideas and theory as the common ground. Although he mentioned in the article changes within the organisation and the passage from "national cells" towards "natural selection groups", he did not dwell on the criticisms of CIAM's ideas by the youngest members that might have been heard at the international level, in an attempt to depict the organisation as the advocate of modern architecture worldwide.[30] He underlined that many architects wanted to develop in the modern spirit, but they had fewer possibilities (he quoted for example India, Egypt, and Arab countries), highlighting CIAM's role in further education and research into modern architecture for such countries.[31] Such ideas were not however considered a priority by the Western European architects from the younger generation, like Team 10, who continued to criticise CIAM.[32] Nonetheless, Sołtan's interest in strengthening CIAM was surely one of the reasons why his interventions in Dubrovnik had already been noticed by others. Not only was his involvement in CIAM 10 important, but also relevant were his post-congress reflection on the future of the organisation and his interest in the continuity and in building on the legacy of CIAM. Bakema mentioned that Sołtan's ideas had influenced his own reflection on the future of the congresses, making his name known to all the members.[33] As his name was included in 'the list of thirty', it was always present in the correspondence related to the re-organisation of CIAM. His further interest and involvement are shown for example in a note 'The Future of the C.I.A.M.' sent in July 1957 to several members of the council. He stated there clearly the need to continue with CIAM's tradition (ill. 5.5).

As a result of his position, Sołtan was involved in 1958-1959 in the re-organisation of CIAM and in the committee, which was charged with the preparation of a programme for the Otterlo meeting in September 1959. He was also named one of the co-opted members of the Coordination Group.[34] Even though his involvement in its meetings was difficult due to his duties abroad,[35] the final report of the Coordination Group included some ideas that Sołtan had already outlined earlier in the note from 1957 (abandonment of national groups and the organisation of discussions based on designs, not on theoretical issues). A design-based model presumed that at the Otterlo meeting presentations were aimed to understand the common ground between various architects based on their architectural responses, rather than their written or verbal declarations.[36] Such elements would be amongst those that Sołtan would recognise as most important for the success of later Team 10 discussions. Moreover, he underlined other important issues concerning the future of CIAM. In a letter to CIAM's leadership, he stated that one of the most pressing issues that the organisation had to deal with was the interior enemy of "bad modernists" – modern formalists who, according to him, constituted the biggest threat to modernism (Chapter 3).[37] In his view, a strong and clear statement and position was necessary to denounce

was sent to Tyrwhitt, Roth, Sert, and Emery. A group of British architects rejected this proposal in a letter to Bakema from March 22nd, 1957, see: Paris, Fondation Le Corbusier, Congrès-ASCORAL, D3-19-117-002. Sołtan's name was included in Sert to Emery from December 17th, 1956, see: GTA-AR, 42-AR-17-94 to 95.

28 He referred to that during CIAM 10 in Dubrovnik, as it is reported by the proceedings of the Commission A.1 from August 8th, see: GTA-JT, 42-JT-18-281 to 287.

29 Jerzy Sołtan, 'Po X Kongresie Architektury Nowoczesnej', *Przegląd Kulturalny*, November 1956, pp. 5-8.

30 In a letter to Le Corbusier, he claimed that this article had been the first one published in Poland on CIAM in seven years and therefore, it was normal that he tended to give a positive picture. Sołtan to Le Corbusier from November 17th, 1956, see: FLC-DN, R3-4-246-001.

31 Sołtan, 'Po X Kongresie Architektury Nowoczesnej'.

32 This is clearly seen in the discussions in Otterlo, especially in Sołtan's comment to his Hungarian colleague Charles Polónyi's intervention. Polónyi underlined then the need for architects from the communist countries to be more connected to modern architecture, and he suggested making CIAM's presence there more visible, or creating another modern architecture organisation in Eastern Europe. When Sołtan defended his colleague's ideas, he denounced the lack of sensitivity for the matter amongst others: "I am a little bit sad, you know, because I understand that this state of things is for you people of another importance – I would not say smaller or greater – but another importance than it is for us". Sołtan's speech in Otterlo, see: HNI-JB, AV60, audio 6.

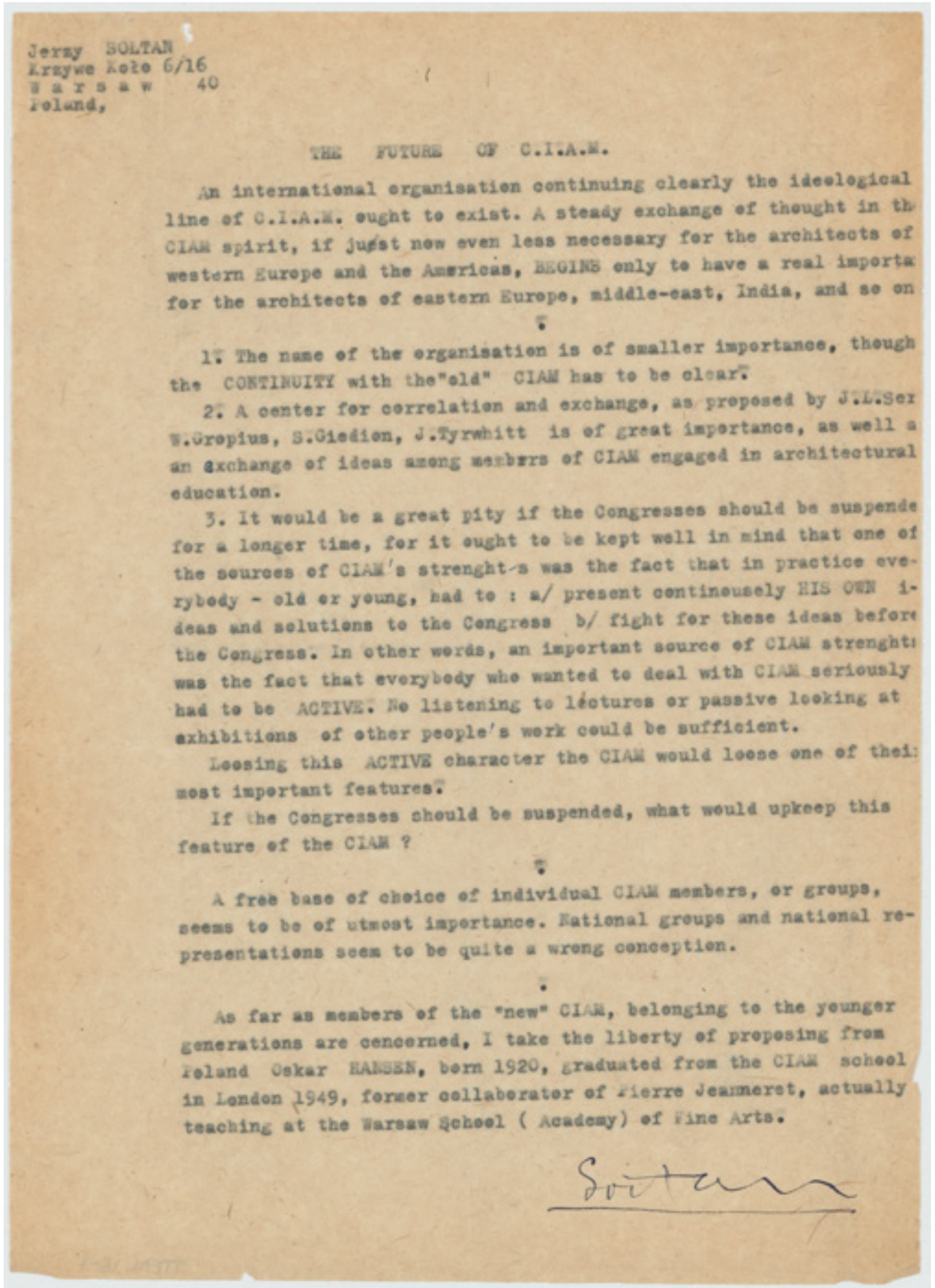
33 Bakema to CIAM members on the re-organisation of CIAM from December 5th, 1956, see: GTA-JLS, 42-JLS-28-3 to 5.

34 Bakema to CIAM members from July 8th, 1958, see: GTA-AR, 42-AR-22-57.

35 For example, supervising the construction of the 'Tropik' pavilion in Damascus (Chapter 9).

36 Directives for the Otterlo reunion in 1959 from October-November 1958, see: GTA-AR, 42-AR-22-2.

37 Sołtan to CIAM from June 23rd, 1959, see: HGSD-JS, AD001. A similar position was taken by him during the Otterlo meeting several times, as he wanted to show that the spirit of CIAM was still necessary, claiming that one of the conclusions of the meeting should be a statement



Jerzy SOLTAN
Krzywe Koło 6/16
W a r s a w 40
Poland,

THE FUTURE OF C.I.A.M.

An international organisation continuing clearly the ideological line of C.I.A.M. ought to exist. A steady exchange of thought in th CIAM spirit, if just now even less necessary for the architects of western Europe and the Americas, BEGINS only to have a real importa for the architects of eastern Europe, middle-east, India, and so on

1. The name of the organisation is of smaller importance, though the CONTINUITY with the"old" CIAM has to be clear.

2. A center for correlation and exchange, as proposed by J.L.Ser W.Grepius, S.Giedion, J.Tyrwhitt is of great importance, as well a an exchange of ideas among members of CIAM engaged in architectural education.

3. It would be a great pity if the Congresses should be suspende for a longer time, for it ought to be kept well in mind that one of the sources of CIAM's strenght-s was the fact that in practice eve-rybody - old or young, had to : a/ present continuously HIS OWN i-deas and solutions to the Congress b/ fight for these ideas before the Congress. In other words, an important source of CIAM strenght: was the fact that everybody who wanted to deal with CIAM seriously had to be ACTIVE. No listening to lectures or passive looking at exhibitions of other people's work could be sufficient.

Loosing this ACTIVE character the CIAM would loose one of thei: most important features.

If the Congresses should be suspended, what would upkeep this feature of the CIAM ?

A free base of choice of individual CIAM members, or groups, seems to be of utmost importance. National groups and national re-presentations seem to be quite a wrong conception.

As far as members of the "new" CIAM, belonging to the younger generations are concerned, I take the liberty of proposing from Poland Oskar HANSEN, born 1920, graduated from the CIAM school in London 1949, former collaborater of Pierre Jeanneret, actually teaching at the Warsaw School (Academy) of Fine Arts.

Sołtan

ill. 5.5 - Jerzy Sołtan's text 'The Future of the C.I.A.M.' he sent to a number of CIAM dignitaries (for example, Josep Lluís Sert, Sigfried Giedion, and Alfred Roth), but also other members (for example, Jaap Bakema and Alison and Peter Smithson), in order to share his ideas, where he underlined the necessity of the continuing CIAM meetings, the need of the members to be more active and present their own work, and where he sided with the abandonment of the mechanism of national cells and moving towards individual or group memberships

and to point to the flaws of the "bad modernists" and to avoid modern architecture becoming criticised as a whole because of their errors. In Sołtan's vision, CIAM was then a tool to make publicly known, promote, and defend modern architecture. His commitment to CIAM came not only from his interest in modern ideals, but also from his will to defend the 'good name' of the entire "modern family".[38]

CIAM – faults and merits

The idea of cleansing the name of modern architecture was connected to the connection between Le Corbusier and CIAM. As Sołtan's first contact with the organisation was through ASCORAL founded by Le Corbusier, he naturally connected the French architect's ideas with those of CIAM and considered the organisation as "extension of Le Corbusier's impact on the world".[39] In 1948, when lecturing in Poland, he defined modern architecture and CIAM by using Le Corbusier's expression of "a play of volumes brought together in light" and referred to it not as a new discovery, but as something forgotten, which needed to be re-discovered.[40] He adopted a similar approach even in later texts, where he used once again Le Corbusier's ideas as CIAM's.[41] Years after, he still recognised the importance and the legacy of CIAM referring with much nostalgia to his first experiences with ASCORAL: "even to-day when I re-read the *Extrait du Statut* in my ASCORAL-CIAM card I get a whiff of fresh air. But in the old times it was indeed a most stimulating experience to take part in these events – really to start thinking about architecture".[42]

However, referring to the first years of CIAM, Sołtan recognised that modern ideals, mostly social and technological-economic, had to be simplified and clearly presented so that they could be understood more easily: CIAM's efforts were to make them more accessible. While in a letter to his colleague Hansen, he mentions that the ability to simplify was actually the biggest strength of CIAM,[43] at the same time, Sołtan recognised that such an attitude connected early CIAM's ideas and activity with "buildings [that] did not lend themselves to subtle, individual subjective interpretations and subtle discussions". Such a vision of architecture created "formidable weapons", he argued, for those who were devoted to the cause, but less talented, linking it to the spread of "matchbox architecture" and modern formalists (Chapter 3), which was one of the reasons for the organisation's final undoing.[44] With its expansion modern architects were accounted not only amongst "the modern family", but also amongst those who simply followed fashion: therefore, with the international success, according to Sołtan, "modern" lost its meaning.[45] However, even though after Otterlo, no other meetings were organised, the spirit of CIAM and some of its ideals seemed to survive within Team 10. Sołtan discussed the connection between the two groups underlining the continuity of themes, but differences of approach: Team 10 was trying to be more comprehensive, and to work more in totality.[46] In his view, the new group built on the legacy of the previous one, and the experiences of CIAM let Team 10's work and ideas become richer and make "the old definition [of CIAM's aims] more complete".[47]

Team 10 – together for modern architecture... and CIAM

Much less numerous than CIAM, Team 10 was a heterogeneous group composed mainly of Europeans, who originated in the younger generation of architects involved in the last CIAM congresses. Their continued research on a broader vision of modern architecture endured for thirty years, from CIAM 9 in Aix-en-Provence in 1953 until the 1980s. Without an official organisation or a membership, differently from its predecessor, the group was repeatedly referred to as "a family" sharing common denominators,[48] and Sołtan himself described it as "collaboration of specialists united by a common cultural background and by friendships".[49] Thanks to such a convergence, the group's meetings and contacts promoted discussion and further development of their ideas through re-elaborating, re-proposing, and working on the principles of modern architecture.

Sołtan's activity within Team 10

Sołtan took an early opportunity to become actively part of the group, even though he was not one of its founding members: he was absent from the first meetings due to the ban to travel abroad in the years of ravaging socialist realism in Poland. Similarly to CIAM, the turning point was his participation in the 1956 congress in Dubrovnik, from when he remained in close contact with the group. However, between 1953 and 1956, the group's identity and direction had already been defined during a series of discussions and meetings, which resulted in Sołtan 'taking a train already in motion' and having less impact on shaping the group's initial identity.[50] However, other Team 10 members remember him from Dubrovnik – not only from discussions, but also from their unofficial meetings. In comparison, whereas Sołtan's first direct contacts with CIAM leaders were marked by the commission discussions, his contacts with Team 10 members were mostly social, which was also remembered by other members of the group, suggesting that he became recognisable amongst over two hundred participants.[51] In particular, Sołtan's contact with fellow Team 10 member Bakema was important. They had corresponded before the congress and afterwards, Sołtan's reflections on the congresses were forwarded by Bakema to all CIAM members, making him a recognisable figure at the time of re-organisation. To underline his involvement and appreciation of his ideas within Team 10, a good example is Bakema's letter to Sołtan: "it is necessary that you come to Otterlo. Important decisions have to be taken".[52] *Vice versa*, Sołtan recognised the importance of the meeting too, assuring that in spite of many organisational issues, he would "certainly do [everything necessary] with utmost energy" adding, "I look very much forward to the congress, as I am very much concerned with the state we are in now in architecture".[53] During the discussions in Otterlo, his passionate interventions on "bad modernists" and "the inner enemy" were captivating, as he was applauded by the public during his speech.[54] Similarly, his account of modern formalism in architecture was astonishing for many.[55] Apart from the passionate interventions, Sołtan was also able to present two of his designs: 'Warszawianka' sporting centre and the typical exhibition pavilion 'Tropik' (ill. 5.8). There were forty participants who presented sixty designs – Sołtan presented two giving him the possibility to show more work than many others did.[56] Moreover, he was actively taking part in discussions with other participants on designs and theoretical issues.[57] In addition to these comments, he also translated from French to English and from English to French others' interventions, as the discussions were held in those two languages.[58] Finally,

released by CIAM or a CIAM-based new organisation. In such a declaration, the organisation should explain its position and its ideals, because, as he explained in one speech in Otterlo, "if an organisation that was bound to disappear reappears, it has to explain its position", see: HNI-JB, AV49, audio 7. Translation from French (SR).

38 Lecture 'Where do we go from here...?' at the Virginia Polytechnic Institute and State University in December 1978, see: MASP-JS.

39 Interview with Urs Gauchat.

40 Draft for a lecture 'BOS' in February 1948, see: MASP-JS. Ideas in the lecture could be traced back to Le Corbusier's *Vers une architecture* and *Quand les cathédales étaient blanches*.

41 For example, in an article from 1956, he mentioned the need for sun, space, and greenery, the communication at two speeds, the need for development in height, and he referred to the principles of the *Athens Charter*, see: Sołtan, 'Po X Kongresie Architektury Nowoczesnej'.

42 Sołtan's statement on CIAM in documents collected by Jaqueline Tyrwhitt from April 8th, 1964, see: GTA-JT, 42-JT-23-45 to 50.

43 Sołtan to Hansen from June 17th, 1975, see: MASP-JS.

44 Article 'An Answer to *L'Architecture d'Aujourd'hui*: A Friendly Meditation' from January 1975, see: MASP-JS. Similarly, Jaqueline Tyrwhitt agreed with this reading of CIAM: she mentioned that the *Athens Charter* had had a negative effect on architecture and urbanism – it led many to the most literal interpretations and applications, which caused errors and thus led to examples of failure, see: Tyrwhitt, pp. 470-472.

45 Lecture 'Where do we go from here...?' at the Virginia Polytechnic Institute and State University in December 1978, see: MASP-JS. For example, Sołtan saw such a fashion-based attitude in CIAM 10, referring to the disproportion between the number of participants (two hundred and fifty) and the number of projects (only thirty-nine), and calling the congress more of a "social event" concentrated less on the actual work. Notes on CIAM chronology and comments, see: MASP-JS.

46 Sołtan to *L'Architecture d'Aujourd'hui* from October 1974, see: HNI-TT, TTEN1.

47 Article 'An Answer to *L'Architecture d'Aujourd'hui*: A Friendly Meditation' from January 1975, see: MASP-JS.

48 Bosman, p. 20.

49 Article 'Quelques aspects du travail de l'architecte' for the review *Architecture, Formes + Fonctions* from 1964, see: MASP-JS. Translation from French (SR).

50 Team 10 was self-appointed during CIAM 9 in 1953 and met again in Doorn in January 1954, when growing dissatisfaction with the limiting possibilities of the 'Functional City' approach led them to prepare the 'Statement on Habitat', later called by Alison Smithson the 'Doorn Manifesto'. During the council meeting in June 1954 in Paris, the group was officially recognised as the CIAM 10 Committee, charged with preparation of the next congress. As a result, the group identity was defined by a series of five meetings before Dubrovnik aimed to prepare the upcoming event (Paris, June 1954; London, August 1954; Paris, September 1954; Paris, April 1955; Paris, July 1955; La Sarraz, September 1955), see: *Team 10 1953-1981: in search of a utopia of the present*, ed. by Max Risselada and Dirk van den Heuvel (Rotterdam: NAI, 2005), pp. 43-45.

51 He was at the same hotel with the Smithsons, Shadrach Woods, Georges Candilis, and Voelcker: all of them were staying at the Hotel Lapad in Dubrovnik, whereas the most prominent CIAM members were staying at the Hotel Sumratin, according to the accommodation organisation provided by Centroturist agency, see: GTA-AR, 42-AR-14-11. In a retrospective recollection of the congress, Alison Smithson mentions Sołtan in social situations, and not in architectural discussions. She recalls, "the Howells were in the campsite on the promontory's end: every morning they would pick us up early and we would watch Jerzy Sołtan, the amazingly cheerful Pole, wearing a black skull cap, dive, horizontal with the water surface, over the mud of the lagoon", see: *Team 10 Meetings: 1953-1984*, ed. by Alison Smithson (London: Rizzoli, 1991), p. 24. The same memory of Sołtan in Dubrovnik was given by Alison Smithson during a seminar on Team 10 at the Architectural Association in 1982, see: HGSD-JS, AA028. Sołtan had also more official contacts with Bakema before meeting the group in Dubrovnik, as the latter was managing the congress materials.

52 Bakema to Sołtan from June 8th, 1959, see: HNI-JB, BAKE g6.

53 Sołtan to Bakema from April 18th, 1959, see: HNI-JB, BAKE g6.

54 HNI-JB, AV36, audio 11.

55 He mentioned for example such a thoughtless formalist approach in an account of his visit to Lebanon: "I have seen in Beirut houses designed very much under the influence of Le Corbusier, very much influenced by Marseille. [They were] put six or seven in a row, within a distance of six feet one from another. I know because I measured it". Such a revelation met with many laughs from the public, and with some voices of disbelief how it might be possible, see: HNI-JB, AV36, audio 12.

56 Sołtan mentions the meetings in Otterlo as a "working congress" in comparison to CIAM 10 Dubrovnik. He refers to sixty designs presented and forty architects in his CIAM chronology and comments, see: MASP-JS.

57 In particular, he discussed the question of the picturesque referring to 'Warszawianka' with Louis Miquel; with Ernesto Rogers he argued on the matter of historicism concerning Torre Velasca in Milan; he commented on Hoffmann's "village of tomorrow"; he discussed the issue of rational and emotional elements in design with Fernando Távora; and he praised the quality of Kenzo Tange's Tokyo Bay design. For the discussions, see: HNI-JB, AV36, audio 13 ('Warszawianka'), AV41, audio 1 and 6, AV42, audio 2 (Torre Velasca), AV33, audio 1 and 2 (village of tomorrow), AV31, audio 2 and 4 (emotional issues in design), AV38, audio 1 (Tokyo Bay).

58 For instance, he was translating Peter Smithson's presentation of London Roads Study and André Wogenscky's comments on Le Corbusier. See: HNI-JB, AV47, audio 7 and 8, AV38, audio 8, AV39, audio 1.

he took an active part in the discussions on the future of CIAM.[59] In general, his interventions were well received and regarded important issues he brought into the group (emotional needs, visual aspects), and he was never attacked by others, as were for example architects Rogers or Lovett – and therefore the meeting was an important event for him to be 'confirmed' by Team 10.

However, in spite of his successful participation in the Otterlo meeting and in spite of his active involvement in the future of CIAM or Team 10, he did not attend several of the following meetings.[60] His absence would be revealed to be important, especially in the case of meetings in Paris and London in 1961, as during these meetings the *Team 10 Primer* was drafted: in January 1961, Team 10 announced the publication, which came into existence a year later as an issue of *Architectural Design*. Even if Sołtan's contribution to the *Primer* was limited, a few texts and images of his designs were still included (mainly relating to his speeches and presentations in Otterlo), and he was listed as one of Team 10 architects (amongst the total of ten members of the group).[61] In fact, in a letter to Bakema in 1964, Sołtan mentioned that he was sorry to have missed all the meetings since Otterlo, but that he was in contact with individual members: Aldo van Eyck, Shadrach Woods, Ralph Erskine, Georges Candilis, John Voelcker, and the Smithsons.[62] He did attend the following meeting in Berlin in 1965 (ill. 5.11, 5.12), to which new participants were also invited, as the group was still defining its size.[63] In the following years, he did not attend any more meetings, as he moved permanently to the United States and Team 10 remained focused on Europe.[64] Among those he missed, the Urbino meeting was particularly interesting, as it involved a larger number of participants, and some of the core members of the group were displeased with the discussions, which according to them were less productive. As a result, the faith in the group started to fade amongst some members.[65] Sołtan was however convinced of the importance of the group. In 1967, in a letter to fellow members, he admits that he did not attend the meetings as often as he wished to, again due to the problems connected to the 'communist' Polish passport.[66] At the same time, he underlined the importance of the group's work: "the few stimulating, authentic exchanges of ideas connected with the world of architecture and urban design took place mostly during our meetings".[67] Understanding of his situation, the following exchange with the Smithsons showed that they actually counted on his presence. They suggested Sołtan should keep Woods posted on his movements so that they would be able to organise new meetings that fitted around his visa requirements: the meetings were to be planned in order to fit Sołtan's availability.[68] Such a gesture surely stood as another token of appreciation of his devotion to Team 10 discussions and meetings. Indeed, as a result, he was able to attend the following meetings in London in 1969, in Toulouse in 1971 (ill. 5.13), and in Berlin in 1973. The main themes of these can be found also in Sołtan's own thinking. For example, the meeting in Toulouse was centred on the theme of repetition (which may be found many times in Sołtan's writings in his reference to "unity in variety" and to serial production, Chapter 6). These were also the last years when the entire initial group was able to meet: in 1972 Voelcker died, and in 1973 so did Woods. Afterwards, Sołtan did not attend the last Team 10 meetings in Rotterdam in 1974, in London in 1975, in Spoleto in 1976, and in Bonnieux in 1977, even though he was invited.[69]

In spite of the lack of continued presence, other members of the group held Sołtan in high esteem. In a 1982 publication by Alison Smithson, even though he was not included as one of the "first family", he was amongst

59 HNI-JB, AV49, audio 7, AV50, audio 7, AV59, audio 1, AV60, audio 6.
60 Arguably, it was not possible for him due to his schedule. In the years following Otterlo, he was teaching one semester at the Fine Arts Academy in Warsaw, and the other one at Harvard. As a result, he missed the meetings in Bagnols-sur-Cèze in 1960, in Paris in 1961, in London in 1961, in Drottningholm in 1962, in Royaumont in 1962, in Paris in 1963, and in Delft in 1964.
61 During the meeting in London, the group organisation was drafted: Candilis and Peter Smithson were named "responsible", Bakema was "coordinator", whereas Alison Smithson, van Eyck, Ralph Erskine, Voelcker, Geir Grung, Woods, and Sołtan were included as "participants", see: *Team 10 1953-1981: in search of a utopia of the present*, p. 92.
62 Sołtan to Bakema from December 3rd, 1964, see: HNI-JB, BAKE g7.
63 Different to the previous meetings, Berlin did not concentrate on a specific theme, but on a free exchange of experiences and ideas between the participants, see: *Team 10 1953-1981: in search of a utopia of the present*, pp. 121-123.
64 For example, he missed meetings in Urbino in 1966, and in Paris in 1967. Sołtan received invitations for both meetings, but was unable to attend, see: HGSD-JS, AD001.
65 For example, Woods mentioned, "Urbino was extremely discouraging, but I am sure we should continue" in a letter to Sołtan from January 17th, 1967, see: HGSD-JS, AD001. As a result, a discussion started within Team 10 on the nature of the group: whether to expand the invitations to other or not. Whereas the Smithsons, Giancarlo de Carlo, and Woods preferred to limit the invitations, fearing that Team 10 would share the fate of CIAM as "a sort of club", Aldo van Eyck was more interested in broadening the number of invitees, see: *Team 10 1953-1981: in search of a utopia of the present*, p. 142. Sołtan agreed with limiting the number of invited architects, in order to avoid confusion as during the last CIAM congresses, so in an answer to Woods' letter, he suggested to "stick more to the initial members". Sołtan to Woods from January 25th, 1967, see: HGSD-JS, AD001.
66 It might be connected to the same issue Joanna Sołtan related to: after Polish communist authorities refused to release Sołtan a new passport, he would have issues in travelling back to Europe (Chapter 4).
67 Sołtan to Team 10 members from January 25th, 1967, see: HGSD-JS, AD001.
68 Smithsons to Sołtan from March 1967, see: HGSD-JS, AD021.
69 Sołtan received invitations for a meeting in Spoleto. In addition, he received letters concerning the hypothetical meetings in Lisbon in 1981 and in Morocco, see: MASP-JS.

ill. 5.6 - photograph from the discussions during the Team 10 meeting in Otterlo in 1959 (sitting from left to right: Eduard Sekler, Jerzy Sołtan, Oskar Hansen, Peter Smithson, Ralph Erskine, and John Voelcker)
ill. 5.7 - casual photograph during the Team 10 Otterlo meeting in 1959 (Jerzy Sołtan with his Polish colleagues Oskar and Zofia Hansen)
ill. 5.8 - photograph from the discussion during the Team 10 meeting in Otterlo in 1959, with Jerzy Sołtan presenting his design of the typical exhibition pavilion 'Tropik' and talking to Ernesto Nathan Rogers and Josep Antoni Coderch
ill. 5.9 and 5.10 - photographs from the Team 10 meeting in Otterlo in 1959, where Alison and Peter Smithson, Aldo van Eyck, and Jaap Bakema were announcing the death of CIAM in spite of other colleagues' willingness (for example Sołtan and Karoly Polónyi) to continue to organise similar meetings

the "evolving Team 10 family alive and active in 1982".[70] Alison Smithson mentions him also as one of the elder members of Team 10, closely related to the "hard core" of the group.[71] Similarly, his colleague Giancarlo de Carlo considered him along with Bakema the most interesting members, closest to his own ideas. He mentioned, "both were really outstanding figures. Sołtan was particularly acute, and Bakema highly competent, full of passion and exceptionally generous. With their entry into the critical circuit [...] the exchanges between all of us became more frequent and much richer".[72] In fact Sołtan, when talking about himself, labels his role as that of "thinker", "theoretician", and "pedagogue", rather than "doer", referring to his extensive teaching activities.[73] Commenting on Sołtan's role within the meetings, his friend Urs Gauchat claims, "his special role was that of being commentator, evaluating what they had said [...]. They all had slight trepidation of presenting something, because Sołtan liked to 'puncture balloons'".[74]

between the official and the unofficial: bias vs. friendships

If Sołtan's role was indeed relevant, such an image does not come out from the scholarship on Team 10. There are no traces of the contents of the discussions apart from the Otterlo meeting, the archival sources appear to be incomplete, and they do not give enough information on the relationships within the group. In addition, most of the initial publications were edited and curated by Alison Smithson, making their account unavoidably biased by the British architects' ideas.[75] As a result, the Smithsons' ideas constituted around forty-five per cent of the content of the *Team 10 Primer*, and their work was also the main focus in later publications, such as *The Emergence of Team 10 out of C.I.A.M.* (1982). Sołtan's contribution was then, as already mentioned, minimal. Whereas in the latter, there are none of his texts nor designs included, in the *Team 10 Primer* he had only five contributions including presentation of one design only, 'Warszawianka' sporting centre. This limited presence was later only repeated by the following scholarship, which simply used those first publications by Alison Smithson as sources, making the actual discourse on Team 10 dependent on this partial image. With the missing records of the meetings, it is thus difficult to retrace the development and politics of the group faithfully.[76] It is therefore possible to suppose that Sołtan's involvement and contribution were more relevant than shown in Alison Smithson's publications. Given his actual activity during the meeting in Otterlo, compared to the relatively small amount of his ideas included in the *Team 10 Primer*, it suggests that his role in Team 10 – and not only his – was somehow diminished by the partial discourse.

The partiality of Alison Smithson's narration of Team 10 however does not suggest conflicts within the group: Sołtan stated that Team 10 had given him many friends, and his correspondence with them testifies to this. He was in close relationship with Woods, van Eyck, Candilis, and Hansen.[77] Even though due to distance, political issues, and managing his teaching activities, he was not able to see them often, numerous letters demonstrate friendship between himself and Alison and Peter Smithson.[78] Peter Smithson supported Sołtan in his criticism of Peter Eisenman's limited reading of Le Corbusier when he was at Harvard,[79] and both Smithson and Sołtan supported each other's criticisms of Torre Velasca in Otterlo while arguing with Ernesto Rogers.[80] Another particular relationship was the one with Woods, which may be easily understood from Sołtan's long obituary

70 Alison Smithson includes the Smithsons, the Howells, Voelcker, Candilis, Bakema, van Eyck, Daniel van Ginkel, Hans Hovens Greve, and Rolf Gutman as the "first family", and the Smithsons, Candilis, van Eyck, Sołtan, José Coderch, de Carlo, Erskine, Manfred Schiedhelm, Pancho Guedes, and Guillermo Jullian de la Fuente as the "evolving family". *The Emergence of Team 10 out of C.I.A.M.*, ed. by Alison Smithson (London: Architectural Association, 1982), p. 4.
71 Alison Smithson mentions him as an "elder member" during a seminar on Team 10 at the Architectural Association in 1982, see: HGSD-JS, AA028. She claims he was close to the "hard core" in notes from 1983, see: HNI-TT, TTEN35.
72 Cleia Tuscano, 'How can you do without history? – interview with Giancarlo de Carlo, Milan, via Pier Capponi 13, 23 May 1990, 20 February 1995, 24 November 1999', in *Team 10 1953-1981: in search of a utopia of the present*, p. 341.
73 Sołtan to *Architecture d'Aujourd'hui* from October 1974, see: HNI-TT, TTEN1.
74 Interview with Urs Gauchat.
75 Anne Pedret, *Team 10: An Archival History* (London: Routledge, 2013), pp. 2-7. Pedret adds that when editing Team 10 publications, Smithson "used the same editorial techniques of omission, appropriation and categorisation that had been used by Giedion, Gropius, and Le Corbusier to portray CIAM before the war", see: Pedret, p. 214. She refused to use some of van Eyck and Bakema's ideas, such as threshold, relations, and identifying devices, and she manipulated the chronology.
76 For example, the recent study by Pedret switches attention from focus on Alison and Peter Smithson towards a more bi-polarised discussion between the British and the Dutch groups, giving more space to van Eyck and Bakema. However, this still fails to value the importance of other members, especially those coming from Central Europe.
77 Interview with Joanna Sołtan.
78 In private correspondence, they refer to informal meetings, and sometimes alter their names: Sołtan is called by Alison Smithson "Sołtanski", whereas they are called "Alisonka and Petraska" by him. Sołtan to Smithsons from October 28th, 1976, and Smithsons to Sołtan from November 17th, 1970, see: MASP-JS. Similar close relationship is confirmed by Simon Smithson, see: interview with Simon Smithson.
79 Interview with Urs Gauchat.
80 HNI-JB, AV41, audio 1 and 6, AV42, audio 2.

ill. 5.11 - photograph from the discussions during the Team 10 meeting in Berlin in 1965, with Jerzy Sołtan standing and listening to the presentations
ill. 5.12 - photograph from the discussions during the Team 10 meeting in Berlin in 1965 (left to right: Shadrach Woods, Georges Candilis, Aldo van Eyck, Peter Smithson, Alison Smithson, Jerzy Sołtan, and Jaap Bakema)
ill. 5.13 (next page) - casual photograph during the Team 10 meeting in Toulouse in 1971, with the entire "family" posing (Jerzy Sołtan leaning on the ground)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note from 1973, where he describes their first meeting, discussions, work at Harvard, and friendship.[81] Based on the number of letters and the insistence of Sołtan in inviting de Carlo to teach at Harvard, one may also consider their relationship as close, even if they had much less direct contact than Sołtan and Woods.[82] Another proof of his close connections to Team 10 members are the invitations for them to give lectures in the schools where he was teaching.

In fact, the very characteristics of the group lay in their close personal relationships, which appeased possible 'ideological' conflicts, as different members had divergent ideas. It is difficult to define 'Team 10 theory' or 'Team 10 ideas', and the very members of the group would argue they never existed. Peter Smithson refers to "many differences" within Team 10, whereas Candilis claims, "each of us followed our own path of development, and all we did was share our thoughts with the others. Team 10 was the occasion for us to critique each other, and not with kid gloves".[83] The discussion between the English and the Dutch members, especially between the Smithsons and van Eyck was sometimes very critical, and thus it can be easily assumed that there was some antagonism between them.[84] As a result of such differences, the group issued only one common statement – the Doorn Manifest in 1954 – and there were no later press releases or charters, which were sent to the public. However, even though each member had a different hierarchy of architectural issues, different ideas and their own point of view, they were united by "mutual trust and respect".[85] Members of the group referred to such differences as something natural and not as conflicts where they had to fight for their ideas. Candilis claimed, "that was what made our movement dynamic", whereas van Eyck underlined there was "a sufficient overlap, there were sufficient ideas, within all the divergences, that were common and comparable at the time".[86] Similarly, Sołtan commented positively on the confrontations within Team 10 meetings, underlining that they were unavoidable when "accepting that values related to imagination, to poetics, to visual richness are meaningful in making and discussing architecture". In his reading, it was necessary for the development of Team 10's ideas. In fact, through such a continuous reflection, ideas were elaborated over time: after the meeting in Toulouse for instance, the title 'Building for People' was changed into 'Building with People', focussing on participation of the community in design.[87]

Certainly, such an informal character of discussions and the possibility to speak one's mind freely, with respect, but also with irreverence, was much aligned with Sołtan's idea of a stimulating atmosphere.[88] He was not an outsider as a member of the group: he was willingly participating in the meetings, whenever his schedule allowed him to do so. Sołtan's reduced presence in published materials may be explained thus differently. Pedret suggests that the Smithsons simply needed advertising through Team 10 publications, since their professional position was more delicate than the one of Woods, Bakema, and van Eyck.[89] It was confirmed later by Alison Smithson herself, as in a lecture in 1982 she stated, "we, Alison and Peter Smithson, needed Team 10 most. We were trying to change our minds; trying to reach out towards what freedoms people were going to want and by so reaching, extend the inherited language... develop, then extend our own language".[90] The lesser importance of Sołtan's ideas and works in the official publications would then be partially a by-product of such a situation.

Team 10: continuity and equilibrium

In Sołtan's reading of modern architecture, whereas early CIAM architects' ideas could have been often referred to as functionalism, with Team 10's broader interest in many aspects of the design, the group represents a more complete 'rationalist' or 'modernist' point of view (Chapter 3). In contradiction to other groups, he praised Team 10 for not concentrating on one single aspect of architecture, whether it was formal, technological, cultural, or even pseudo-cultural. Instead, he argued, Team 10 "reinstalled the problem of architecture in its totality", including intuition, imagination, visual sensitivity, social relevance, economy, and technical validity.[91]

81 Obituary note on Woods from November 1973, see: HNI-TT, TTEN28.
82 Letters to and from Giancarlo de Carlo are in the archives in Warsaw and Cambridge: MASP-JS, and HGSD-JS.
83 Cleia Tuscano, 'Coming from different traditions – interview with Peter Smithson, Catania, Convento dei Benedettini, 29 March 1992', in *Team 10 1953-1981: in search of a utopia of the present*, p. 334. Cleia Tuscano, 'The difference between good and bad – interview with Georges Candilis, Paris, rue Campagne Première 17/5, 4 January 1991', in *Team 10 1953-1981: in search of a utopia of the present*, p. 320.
84 Dirk van den Heuvel, 'The Diagrams of Team 10', *Daidalos*, 74 (1999), 40-51 (p. 42).
85 *Team 10 1953-1981: in search of a utopia of the present*, p. 12.
86 Cleia Tuscano, 'The difference between good and bad – interview with Georges Candilis, Paris, rue Campagne Première 17/5, 4 January 1991', p. 320. Cleia Tuscano, 'Everybody has his own story – interview with Aldo van Eyck, Amsterdam, van Eyck office, Entrepotdok 23-24, 26 September 1991', in *Team 10 1953-1981: in search of a utopia of the present*, p. 329.
87 Sołtan to *Architecture d'Aujourd'hui* from October 1974, see: HNI-TT, TTEN1.
88 Gauchat refers to Sołtan's irreverence, and to his refusal to put anyone on the pedestal, see: interview with Urs Gauchat. Such an attitude may be easily found in the discussion between Team 10 members.
89 Pedret, p. 215.
90 Seminar on Team 10 at the Architectural Association in 1982, see: HGSD-JS, AA028.
91 Article 'An Answer to *L'Architecture d'Aujourd'hui*: A Friendly Meditation' from January 1975, see: MASP-JS.

Such an openness of the architectural discourse to various elements is, according to him, vital in positioning Team 10 within modern architecture history. Coming back to the image of architectural tendencies moving as an "eternal seesaw" (Chapter 3),[92] he claimed that with a broadening of the research, and by liquidating oversimplifications, Team 10 brought that historical pendulum to a harmonious position, and he saw it as "an attempt to keep the content and form in equilibrium".[93] Therefore, through broadening CIAM's discourse and completing it, Team 10 would stop in Sołtan's mind the eternal pendulum movement oscillating between form and function (ill. 3.16).[94] It is a truly revolutionary way of seeing Team 10's legacy and such an idea shows the utmost importance of the group for architecture globally, at least in his opinion, and the capacity of integrating new elements.

In fact, in his own reading of Team 10, the group did not cut off from CIAM as definitely as it may have been suggested by Alison and Peter Smithson. He claimed that it had a positive relationship with CIAM, as it integrated new elements building on its legacy, continuing the very same modern lineage.[95] The general idea of continuity of modern architecture was shared by all Team 10 members – one can for example refer to Alison Smithson's words on the aim of Team 10: "to celebrate our individual and collective confidence in the continuity of the modern movement in architecture".[96] Sołtan however underlined not only the continuity with modern architecture, but with CIAM too, and more precisely with "the less popular, more demanding, more creative and visually gifted part of the early modern movement"[97] – with what has been defined as modernism (Chapter 3). Instead, the Smithsons' "aggressive rhetoric of destroying CIAM as an institution, [...] overshadowed their ability to seek other continuities with CIAM".[98] What Sołtan underlined was the ideological continuity, whereas the Smithsons wanted to mark the rupture by criticism of the organisation itself as manifested by the enactment of CIAM's death in Otterlo (ill. 5.9, 5.10). Such an attitude was based moreover on an incomplete vision of CIAM – for example in the publications edited by Alison Smithson, or in the interventions by the couple, they never acknowledge Le Corbusier's interest in the historical heritage of cities, nor are they interested in the Italian contribution to CIAM, which was a far less anti-historical: leading to a bias in the Smithson's narration.[99] Meanwhile, in Sołtan's vision, it was actually this historically sensitive part of CIAM – including for example Le Corbusier and Giuseppe Terragni – that constituted the very core from where Team 10 originated. Sołtan was far from considering modern architecture or CIAM as anti-historical: he repeatedly underlined the importance of the "grassroots" of modernism in history (Chapter 7). The absence of such reflections concerning links to history in Smithson's portrayal, left this particular aspect of modern architecture critique vulnerable to be reused by postmodernism architecture. If this was included, modernism would have been understood as less anti-historical and postmodernism rhetoric would perhaps have been much less potent.[100]

Sołtan's less radical vision of Team 10 did not succeed however in penetrating official publications, and the criticism of the structures of the old CIAM nourished criticism of modern architecture as a whole. He was nonetheless insistent on these issues while teaching in Poland, and even more importantly, in the United States at Harvard. His mediated vision of Team 10 did not endure in the publications, but it was passed on to his students, who recall contact with Team 10 architecture – whether it consisted simply of getting to know the buildings or in direct contacts with members of the group. As a result, it does not seem striking that whereas Team 10 meetings stopped at the beginning of the 1980s with the death of Bakema, the theoretical heritage and ideas of the group are still considered by Sołtan's students as up-to-date, and "probably more valid now than they were then".[101]

the American Dream of modernism – Harvard

With no limitations on teaching at Harvard in comparison to the communist Poland, Sołtan was able to expand his thinking and ideas freely, and at the same time he was able to promote them amongst students. Concentrating on the context and on Sołtan's role in the school, and not on his actual teaching activities

92 Lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.
93 Lecture 'Where do we go from here...?' at the Virginia Polytechnic Institute and State University in December 1978, see: MASP-JS.
94 Article 'An Answer to *L'Architecture d'Aujourd'hui*: A Friendly Meditation' from January 1975, and draft of article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, see: MASP-JS.
95 Lecture at ICSID in Mexico in October 1979, see: MASP-JS.
96 Meeting record by Alison Smithson from Team 10 meeting in London from October 25th – 26th, 1980, see: MASP-JS.
97 Lecture in Saint Louis in September 1987, see: MASP-JS.
98 Pedret, p. 195.
99 Pedret, pp. 223-225.
100 Pedret refers to the faults in Alison Smithson's narration and suggests that completing it with ideas of Italian CIAM, postmodernism ideology would have been crippled. However, she does not refer to Sołtan's ideas, see: Pedret, p. 225.
101 Interview with Edward Baum.

analysed later (Chapter 8), this part depicts the image of Harvard as one of the core universities of modernist architecture education in America. Throughout the twentieth century, the school moved away from Beaux-Arts tendencies to become a Bauhaus-influenced institution and then the unofficial headquarters of the CIAM leadership in the organisation's last days, until finally becoming one of the schools that taught following Team 10's lead. However, before modernist ideas were widely accepted at Harvard, America was much influenced by classicism and eclecticism of Beaux-Arts, with very little echo of the early CIAM congresses. CIAM's ideas were much distant from the eclecticism and formalism that dominated American architecture in this period. Manhattan skyscrapers were still built in the typical art-déco style until the beginning of the Second World War, examples being the Chrysler Building and the Rockefeller Center, the latter completed only in 1939. Architectural historian Eric Mumford mentioned, "no reverberation of these Congresses was to be felt either in the faculty or the student body of my school", nor did they receive "any important place in any American architectural journal of the period".[102] In such a traditional and eclectic context, with no American architects having attended the meeting in La Sarraz, modern architecture in the United States began much later than it did in Europe.[103] It was linked to the arrival of European architects, many of whom were fleeing from Nazi Germany. Thanks to their experience, and their previous teaching, their contribution to promoting modern ideas amongst young American architects was invaluable. Such an important role of European architects was praised by Sołtan who underlined they made it possible for architectural education to be based both on art and on logic and reason.[104]

Harvard – from CIAM to Le Corbusier

Harvard Graduate School of Design created in 1936 was amongst the schools that participated in the shift from an eclectic model towards modern architecture. Under the leadership of Joseph Hudnut, the school's dean from the beginning until 1953, it became one of the most important cores of modern architecture education in the United States. Its importance was due to the presence of Gropius as chairman of the Department of Architecture from 1937, and to his remodelling of the curriculum along with the gathering of new teaching staff. According to Sołtan, Gropius brought to Harvard his Bauhaus vision of architecture, closer to early functionalism, and based on the principle of "form follows function", but nonetheless remarkable in the American context for its novelty of rationalisation of use, of simplicity, and of the readability of visual forms.[105] Thanks to the new presence of European educators and architects, to the prestige of the school, and to their influence on architectural education, Sołtan argued, "Gropius and that group collectively contributed to the victory of modern architecture, especially their version of modern architecture, in America and beyond, perhaps even all around the world".[106] At the same time, the school started to attract CIAM representatives and to publish CIAM-based texts,[107] and it embraced the social-political dimension of architecture, becoming thus much closer to the mainstream CIAM discourse.[108] However, Harvard was relatively isolated in the drift towards modern architecture in the first years: many schools were "highly technical and their design was very banal", and some of the well-known universities, such as Columbia, remained influenced much longer by eclectic models.[109] It was only after the war, with the appointment of Sert as the new dean of the Graduate

102 Mumford, p. 140.
103 Mumford argues that until after the war "the main centres of CIAM activity remained outside of the United States" when drawing the image of modern architecture teaching in the United States, see: Mumford, p. 149.
104 Inauguration lecture at the Fine Arts Academy in Warsaw in October 1958, and lecture 'Pojęcie szkoły w architekturze współczesnej', see: AASP-JS. The exodus of Gropius, Marcel Breuer, László Moholy-Nagy, and Mies van der Rohe had a crucial influence on the development of modern architecture in the United States. For example, the Illinois Institute of Technology, due to the educational activity of Moholy-Nagy and Mies, was called by many, "Chicago Bauhaus". In addition, Sołtan referred to a growing tendency to follow the Neue Sachlichkeit in the country. Inauguration lecture at the Fine Arts Academy in Warsaw in October 1958, see: AASP-JS.
105 Lecture on the Graduate School of Design from September 16th, 1997, see: MASP-JS. However, as Hudnut was critical towards the rigid "matchbox" version of modern architecture, functionalist ideas in the school seemed to have been less radical than in Ernst May's or Hannes Meyer's versions, see: Pedret, p. 16. In particular, Gropius brought to the school therefore not only his colleagues from Bauhaus, but also the 'more romantic' Serge Chermayeff and Giedion. The latter was offered the position of Charles Eliot Norton Chair of Poetry, and in 1938-1939 he delivered a series of twelves lectures, which were the basis for his *Space, Time and Architecture*, published by the Harvard University Press in 1941, see: Mumford, p. 123.
106 Andrzej Bulanda, *Rozmowy o architekturze* (Warsaw: Muzeum Akademii Sztuk Pięknych, 1996), p. 66. Translation from Polish (SR).
107 Starting with Gropius and Giedion (respectively, one of the vice-presidents and the first secretary general of CIAM), the school was to become a solid connection between the international organisation and the United States. For example, another member of CIAM and its future president, Sert, published with Harvard University Press a study on architecture and urbanism. The contract for *Can Our Cities Survive?* – the first American publication based on CIAM congresses and CIAM-influenced designs – was signed by the dean Hudnut in 1941, using once again the university's publishing house for promoting modern architecture ideals, see: Mumford, p. 134.
108 It is shown in a note on the Department of Architecture written by Sołtan's friend and school's teacher Eduard Sekler: "Architecture of all the arts is linked most inseparably to our day-to-day existence. From this follows the nature of an architect's commitment [...]. His work may never be detached from the concrete reality of human and social endeavour. Changes in form, which do not relate to this reality, are spurious or meaningless [...]. Accordingly, architectural education should begin by familiarising the student with the function of architecture in society as the most basic prerequisite for later evaluation and selection". Note by Sekler on the Department of Architecture from April 20th, 1961, see: RIBA-JT, TyJ/18/6.
109 Interview with Edward Baum.

ill. 5.14 - photograph of the Carpenter Center for Visual Arts, Harvard institution and the only building designed by Le Corbusier in the United States. which stands as a solid proof of Corbusian influence within the school
ill. 5.15 - photograph from a school reception at the Graduate School of Design illustrating modern lineage of the school, with its associations to three stages in the school's history since its creation until the 1970s: Bauhaus, CIAM, and Team 10; in the photograph, Jerzy Sołtan is talking to the former CIAM president Josep Lluís Sert and Ise Gropius, Walter Gropius' widow and Bauhaus editor

School of Design in 1953 and the gathering of a considerable number of the CIAM leadership and Corbusian architects in one school, that not only the curriculum, but also architectural practice beyond the university was effectively influenced. Sołtan comments on this passage, "in the late forties after a period of Sachlichkeit and Bauhausian harshness, Harvard started Corbusierising".[110] In his account, it meant for Harvard to turn towards modernism – connected to a much thicker dimension of cultural, social, poetic, and artistic issues – and given the *Zeitgeist* and the criticism of the *Athens Charter*, such a decision seemed to him "natural" and "logical".[111] With Hudnut's retirement in 1953, the school started to look for his successor, with such modern candidates as Le Corbusier, Oscar Niemeyer, and Ernesto Nathan Rogers.[112] After they refused or were not allowed to take the position, Sert became the next candidate. By that time, he had worked with Le Corbusier in 1929-1930, and he was praised for the design of the Spanish Pavilion in Paris in 1937, where *Guernica* was exhibited. According to Sołtan, "he recognised Gropius' excellence, but he felt also differences, weaknesses, and missing elements characterising Gropius' school of architecture. He started to strengthen at Harvard such another line of modernism, which he was representing".[113] It was however a 'peaceful revolution', as Sert was not against the Bauhaus, nor against Gropius. Sołtan comments, "Sert realised that among his main tasks was the de-bauhausation of the *milieu*, NOT BEING AT ALL AGAINST it [*sic*] – he wanted to go – as he felt – higher – into the more artistic regions".[114] One of the effects of his views on architecture was strengthening CIAM's presence within the school. Under Sert, Harvard faculty staff included already CIAM's president, vice-president, and general secretary. In the mid-1950s, he managed to bring to the school also Jaqueline Tyrwhitt, secretary to the Council. Throughout the second half of the 1950s, many statements released by members of CIAM's Council were in fact issued from Harvard,[115] giving the school a much-privileged position in the United States as one of the main battlefields for "good" modern architecture, along with CIAM.[116] Such a modernist allegiance affected not only the curriculum, but also the new staff, as Sert was looking for other architects who had similar ideas – hence Sołtan's appearance at the university.

Sołtan's appearance and role at the Graduate School

In addition to cementing Sołtan's contacts with CIAM and Team 10, his participation in CIAM 10 in Dubrovnik, and especially his work in the Commission A.1 could have facilitated his entry amongst Harvard faculty. Sert was able to see some of the Polish designs during the congress, and he knew that Sołtan was supported by Le Corbusier,[117] so he contacted him quite soon after and by 1958 Sołtan received an invitation to be a visiting critic at the Department of Architecture.[118] The first year of his involvement seems to have been successful and met a positive reaction from the dean, as afterwards Sołtan started to teach quite regularly at Harvard, spending autumn semesters in Poland and spring semesters in the United States.[119] In the process, Sołtan was offered not only the full professorship, but also the chairmanship of the Department of Architecture. Nonetheless, in spite of the school's interest in Sołtan, and in spite of his own interest in such an appointment, he was not able to come due to the Polish communist authorities, which refused his request to work more permanently in

110 Article 'Joseph Rykwert – a bridge to my personal Europe' from 1996, see: MASP-JS.
111 The decision to name Sert the dean of the school was contemporary with the unofficial gathering of Team 10 architects during CIAM 9 in Aix-en-Provence and their criticism of the *Athens Charter* and of the most rigid functionalism. As a result, Harvard turned towards the other version of modern architecture in the midst of the discussion on its limits. Lecture on the Graduate School Design from September 16th, 1997, see: MASP-JS.
112 None of them accepted or were eventually given the offer. Le Corbusier had stated several times that his vision of modernism might be taught only in the atelier, and therefore he did not accept the proposal. Niemeyer by that time had built a series of designs in Pampulha, the headquarters of the United Nations in New York, and some high-rise residential buildings in Brazil, showing not only interest in social issues, close to Bauhaus, but also in visual aspects and in sculptural possibilities of designs, which were to be reaffirmed in his following works. His profile was definitely interesting for Harvard, but Niemeyer's membership in the communist party in Brazil was a drawback at one of the most delicate moments in the cold war: with the threat of the nuclear conflict during the Korean War on one hand, and with vivid McCarthyism in the United States, the relation between the United States and the USSR were very fragile. It increased the fear of communist infiltrators, and therefore Niemeyer was refused a visa. Mumford refers to Sołtan's account of Niemeyer's problems, "he was not permitted even to enter the United States, much less direct an academic department". Rogers had already been the editor of *Domus*, and he had been working along with his colleagues within BBPR practice in Milan, although he is said to have turned down the offer, see: Mumford, p. 238.
113 Bulanda, p. 66. Translation from Polish (SR).
114 Lecture on the Graduate School of Design from September 16th, 1997, see: MASP-JS.
115 At this point, several of CIAM's leadership concentrated within one school only. In 1956, the CIAM Council was formed by Sert (president), Giedion (secretary general), Bakema, Candilis, Emery, Howell, Rogers, Rudolf Steiger, and Tyrwhitt, see: GTA-AR, 42-AR-22-25.
116 Lecture at SARP from January 14th, 1960, see: AASP-JS. In a press interview with Sołtan from 1959, he mentioned that he was particularly glad to work at Harvard, as the school was opposing the tendencies in architecture of "bad" modernists and "false" modernism, see: 'Życie w pracowni prof. J. Sołtana. Doświadczenia z Harvard', *Życie Warszawy*, 7 July 1959.
117 Le Corbusier to Sert from March 15th, 1961, see: MASP-JS.
118 Bulanda, pp. 66-67. Sołtan requested the Fine Arts Academy in Warsaw to authorise his absence for the spring semester in 1959 already in August 1958. Sołtan to the Fine Arts Academy from August 2nd, 1958, see: AASP-JS.
119 In January 1961, in a letter to Sołtan, Sert expressed his appreciation towards his work and added that he would like him to continue what he had started before, as a part of a longer commitment, involving Sołtan's staying two or three years, which would have been extendable. Sert to Sołtan from January 31st, 1961, and from February 9th, 1961, see: MASP-JS.

ill. 5.16, 5.17, and 5.18 - photographs of the Gund Hall, the new building of Harvard Graduate School of Design designed by John Andrews and inaugurated in 1972 during Sołtan's chairmanship; the building united all the school's activities, which up to this point were scattered around the campus and offered a new design studio area: open-space stepped balconies called "the trays" (ill. 5.17)
ill. 5.19 - historical photograph of "the trays" in the Gund Hall, showing design studio spaces and students' personal desks

America.[120] This illustrates again the continuously hostile atmosphere in Poland concerning countries on the other side of the iron curtain. As a result of such a policy, Sołtan continued to work one semester at the Fine Arts Academy, and one semester at Harvard until finally settling permanently in the United States in early 1966. The uncertainty of the situation was raised by one of Sołtan's friends, Paul Krueger, who remembers Sołtan fearing invigilation and being tapped.[121] In spite of such a situation, he was supported by his colleagues, and Sert for example wrote to him in 1965, "we count you as a regular member of the faculty".[122] The direction of the school's vision of architecture seemed thus clear and even though some of the faculty remained from the previous Bauhaus period, Sołtan reflected, "old professors started to evolve themselves, to change, and to look critically at the rigid beginnings of modern architecture", such as his future friend and practice partner Albert Szabo (Chapter 10).[123] It did not prevent frictions and discussion amongst the faculty, which could be observed by some of the students,[124] but Harvard was continuously moving away from a more rigid version of functionalism towards rationalism or modernism. More similar-thinking modern architects came along: Sołtan names as closest to him Eduard Sekler, Woods, and Joseph Zalewski, and their vision of architecture was reinforced by the selection of visiting critics.[125] Their presence marked the school for a long time, as some of Sołtan's students recall Le Corbusier's influence even in the late 1970s, also thanks to Sołtan's teaching (Chapter 8).[126]

Finally, Harvard became also a magnet for Team 10 architects who either taught or visited the school.[127] When asked about their influence at Harvard, Edward Baum recalls, "the spirit of Team 10 was there. Sert was a kind of a natural bridge between the Corbusians and Team 10, because he was a strong advocate of a human reinterpretation of canonical modernism. [...] Sert was actually a very comfortable host to a number of different points of view, including Team 10".[128] With both CIAM and Team 10 influences, the common agenda points – such as the question of housing – were highly important in the school. Sołtan's students recall that there were no assignments for private houses, whereas they included collective housing: "we actually never did a single house at the school. It was thought to be beneath architecture as a social instrument".[129] As a result, Team 10's and Sołtan's own interest manifested in his lectures and texts on the issue of habitat (Chapter 7) overlapped with the school's focus including Sołtan's teaching giving "extremely important role of the housing projects or types of housing".[130] Such a situation points to the latter's influence on the direction of architectural education at Harvard.

Gradually, with his involvement and relevance within the school growing, Sołtan was able to have an impact on architectural education at Harvard. He based his teaching on previous experiences, with a particular reference to a broader vision of modern architecture, which he compared to the Artistic and Research Workshops back in Warsaw, and which could be reflected by the new initiatives undertaken at the university.[131] He was interested in teaching a closer collaboration between an architect and an artist, referring to his experience at the Fine Arts Academy and to the Corbusian *mode d'emploi*.[132] The connection with his previous experiences did not rely only on free inspirations, but also on trying to maintain contacts with the fellow staff members of the Fine Arts Academy.[133] However, as he commented later, such contacts with Poland started to fade with time due to the distance and communism in Poland.[134] Consolidating Corbusian ideas within the school was another important aspect of Sołtan's teaching, which appeared vividly in the modules he taught until the late 1970s and even after his retirement (Chapter 8). He dwelt on Le Corbusier's architectural theory, and he offered a very personal reading of his former employer's work. However, Sołtan's most relevant importance and his appointment as chairman of the Department of Architecture (1967-1973) coincides with the growing importance of Team 10 ideas in the school. Already before the appointment, Sołtan was in charge of organising "the intellectual part of the education" by preparing reading lists and inviting Team 10-related architects for weekly lectures.[135] With chairmanship, he had more influence on the school's direction, and he was interested in bringing more of Team 10-like thought to Harvard through new appointments and choosing visiting critics.[136] The relationship with the group continued even after Sołtan's mandate, and for example in 1974 Bakema came to give a lecture.[137] Sołtan himself recalls that he "started inviting to the GSD these new-spirit-modernists... among them the Team 10 people. As soon as they became available, I tried to lure into Harvard as instructors-teachers our own NEW – what was very important – brand new modern architecture".[138] Following this tendency, Harvard became one of the schools, which expanded Team 10's ideas over America.[139] Nonetheless, Harvard's position seems to be special, with compact or even "monolithic" faculty, while Sołtan "immediately became one of the fulcrum points of the Graduate School of Design".[140] With professors coming from different backgrounds (American architects, Bauhaus-influenced architects brought by Gropius, CIAM-based architects brought by Sert, and finally those affiliated with Team 10), Sołtan's role was to communicate between them.[141] Another manifestation of such a cohesion and common values shared by the faculty at the Graduate School of Design was the decision on commissioning the design of the new school building to a young Australian-born Harvard graduate John Andrews, which provided a vast stepped open space shared by all the design studios called "the trays" (ill. 5.17, 5.19).[142] In consequence, the general atmosphere at the school was coherent and solidly backed by the profile of the staff, by the programme, and also by the very building the school was to move to. Therefore, when commenting on the general atmosphere in the school under Sołtan's chairmanship, former student Urs Gauchat underlines the united voice the school was speaking:

> "It was terrific. Sołtan was the leader of that; and the faculty had an intellectual position, which it has not had since that time. It was politically left, but it was linked to the idea that it is a real privilege to be an architect, that architects design structures for people who cannot design themselves, and that architects have an obligation to do the very best for them. Sołtan dismissed the idea of building private houses for wealthy clients, as he thought that was frivolous and ridiculous. He thought those as masturbatory exercises, with the architect pleasing himself with no effect on the world around himself. He thought that we all had a social responsibility following the idea of a social contract between professional architecture and the society. It was something he believed in very deeply, and for a twenty years span, that was what Harvard was about. You designed schools, and you designed housing. Never

120 Actually, in Sert to Giedion from November 14th, 1961, Sert mentions that Sołtan was the best for the position of the chairman, but that he would not be able to stay permanently at the Graduate School of Design, see: HGSD-JLS, E008. In a letter to the Fine Arts Academy, he mentioned that when he asked the Polish ambassador in the United States whether he was able to accept the offer, he was refused and told to continue to work as a visiting professor. Sołtan to the Fine Arts Academy from October 13th, 1962, see: AASP-JS.

121 Paul Krueger recalls that it required a lot of organisation to gather his entire family in one place and to bring them to the United States. He remembers that Sołtan "schemed to get all his family at one moment in time, one summer, so that they could all be able to live in Cambridge together". In addition, "during the first months, years, when he came to Cambridge, he was concerned that his phone was being tapped, so he only talked politics when we went for long walks", see: interview with Paul Krueger.

122 Sert to Sołtan from November 8th, 1965, see: HGSD-JLS, E010.

123 Bulanda, p. 67.

124 Voorsanger, one of Sołtan's former students graduated from Harvard in the early 1960s, recalls there was a conflict between the European and American architects: "the school was in real tension between those professors coming from Europe [...] versus the American professors graduated from Yale, or likewise", see: statement by Bartholomew Voorsanger from May 13th, 2019.

125 Bulanda, p. 67.

126 Interview with Thomas Holtz.

127 For example, van Eyck was a visiting critic in the school in 1962. The list of Harvard staff and invited lecturers, critics and professors made compiled in 1986 by Christopher Hail and is available at the Frances Loeb Library at Harvard.

128 Interview with Edward Baum.

129 Ibid.

130 Sołtan mentions this in a video interview from 1997, see: HGSD-JSM.

131 In 1967, he mentioned that "we are concluding here (I work a lot on it) something like the Artistic and Research Workshops next to Harvard. The main study would be new urbanism with realistic application included (construction of experimental fragments)". Sołtan to Szymon Bojko from January 23rd, 1967, see: MASP-JS. Translation from Polish (SR).

132 'Życie w pracowni prof. J. Sołtana. Doświadczenia z Harvard'. For example, Sołtan was involved in the process of establishing the Carpenter Center for Visual Arts (ill. 5.14), which were aligned with the method of work from the Workshops.

133 For example, in 1966, he suggested Wojciech Fangor as a visual arts teacher to the chairman of the Department of Architecture, Benjamin Thompson, and in 1965 he formed a design group to work on a competition for an art museum in Berlin, bringing together staff members from both Harvard and the Fine Arts Academy. The group included on one side François Vigier and Wilhelm von Moltke, and on the other one Ihnatowicz (Chapter 10).

134 Bulanda, p. 67.

135 Interview with Urs Gauchat.

136 In a letter to de Carlo from 1967, Sołtan mentions that with more administrative power in the school, he might act on strengthening the links between Team 10 and Harvard. Sołtan to de Carlo from June 28th, 1967, see: MASP-JS. The following correspondence from 1968-1969 with the Italian architect shows Sołtan's interest in inviting him to teach at the school, in spite of de Carlo's numerous commitments in Italy, see: MASP-JS. Former chairman of the Department of Urban Planning, Vigier, mentions that as a chairman, Sołtan had the particular opportunity to choose the visiting critics in the school, see: interview with François Vigier. In the years of his chairmanship, several architects connected to Team 10 were invited: group's members Oswald Mathias Ungers and Manfred Schiedheim, and Team 10's occasional guests such as Tange, Rykwert, and Gino Valle. The list of Harvard staff and invited lecturers, critics and professors made compiled in 1986 by Christopher Hail and is available at the Frances Loeb Library at Harvard.

137 Sołtan to Bakema from July 25th, 1974, see: HNI-JB, BAKE g8.

138 Lecture on the Graduate School Design from September 16th, 1997, see: MASP-JS.

139 Several members of the group immigrated permanently or semi-permanently to the United States: Bakema, Candilis, van Eyck, and Erskine were visiting teaching there, whereas Sołtan and Woods were living in the United States, see: Cleia Tuscano, 'How can you do without history? – interview with Giancarlo de Carlo, Milan, via Pier Capponi 13, 23 May 1990, 20 February 1995, 24 November 1999', p. 343. As a result, Alison Smithson mentioned several universities in America, where Team 10 members were teaching: not only at Harvard, but also at MIT, Columbia, IIT, and Yale. Seminar on Team 10 at the Architectural Association in 1982, see: HGSD-JS, AA028.

140 Urs Gauchat, 'Pedagogue', in *Jerzy Sołtan*, ed. by Jola Gola (Warsaw: Wydawnictwo Akademii Sztuk Pięknych, 1995), p. 32.

141 A fellow member of the faculty Vigier, himself chairman of the Department of Urban Planning, claims that Sołtan proved to be a good politician, managing the internal politics of the department and possible divergences, see: interview with François Vigier. Along with Sert, Sołtan helped to appease the differences between Corbusian and Bauhausian members of staff, see: Albert Szabo, 'A Man of Poetic Syntheses', in *Jerzy Sołtan*, ed. by Jola Gola, p. 80.

142 The decision to hand the design of the Gund Hall to John Andrews illustrated well the character of the school evolving from its initial Gropius' influence, see: Bulanda, p. 67.

would anybody do a private house. It was about designing places of work, it was the idea that you are the expression of the society, the embodiment of the intellectual and political movements at the time. You cannot say at this point – today – what Harvard is about – you could not ever since then. There was the idea of a social mission, and it had some kind of intellectual cohesion amongst the teachers. Sołtan's attitude was that architecture devoid of that social mission, without this social contract, was not worthwhile. It is a folly, it is superficial, it is the antithesis of what an architect should be doing. He was really the person who represented that and talked about that and made that be the central theme of his time at Harvard. It had a big influence. Even though he did not work directly, he ensured the collective would act together. Everybody was united back then: he was the glue holding it all together".[143]

Such unity and cohesion were of course very much needed at the time of Sołtan's chairmanship. His mandate lasted from 1967 until 1973, and therefore it included the student protests in 1969. At Harvard too, it proved to be a difficult time,[144] although it seems that it was less critical for the GSD: already before the protests, the faculty started to renew the curriculum (Chapter 8).[145] Therefore, with a mild change, the school succeeded in installing the new programme, which guaranteed the continuity of architectural education. Nonetheless, the political situation in the school was continuously evolving and according to Gauchat, it was possible to see differences quickly after Sołtan ended his chairman's mandate.[146] Sołtan's student and later a member of the faculty Christopher Benninger recalls that there were even attempts to oust Sołtan from his chairman position as too much design-driven instead of practice-driven by the younger members of the teaching body, with less connection to the older "Corbusian guard".[147] In addition, in the mid-1970s, the postmodern criticism of modern architecture was already well defined. Jencks' *Modern movements in architecture* was published in 1973, and Venturi's *Learning from Las Vegas* in 1972. Moreover, the new dean from 1969 onwards was Maurice Kilbridge, whose economics and business background was to repair the "administrative turmoil" and "fiscal disaster" inherited from Sert. Looking from an architectural perspective however, his deanship was judged by the faculty and by the students as unable to guarantee a cohesive intellectual and theoretical agenda, which was present under Sert.[148] At the same time, *Learning from Las Vegas* took its position as a part of the Department of Urban Design curriculum, and more postmodern ideas were visible amongst the teachers.[149] According to some students, voices of discontent started to appear within the faculty, as for example Gerhard Kallmann commented on "Corbu mafia" within the school, with possible reference to Sołtan himself.[150] As the architectural climate was changing, Sołtan with his strictly modernist approach and the will to 'cleanse the aura' of Le Corbusier and true modernist architecture through his teaching (Chapter 8) would have appeared out of date. As a result, he retired from his position in 1979, at the age of sixty-six, only shortly after reaching the minimum age to retire at that time in the United States – even if he continued to teach punctually at the school through the 1980s. However, especially in this last turbulent period at the GSD, Sołtan was able to spend more time on design work, and since the 1970s, he was involved in various design groups producing a handful of buildings and participating in different competitions (Chapter 10).

the last modernist architect

Sołtan's life – from the very disappointment with functionalist architecture in Poland in the 1930s, through his interest in art starting in the camp in Murnau, and his fascination with Le Corbusier from the very beginning, and later during work in Poland, whether firstly struggling under socialist realism or later teaching and designing at the Academy and Workshops (Chapter 4) – shows a continuous line and integrity of thought. Similarly, his involvement with CIAM and Team 10, as well as his immigration to the United States testifies consequence and continuity in his work. His commentary on modern architecture, univocal through the years, based on the criticism of too basic functionalism (whether it was in the local Polish context or at the international level of CIAM's discussions) and the need of research of much more complex modernist ideals is significant and easily identifiable, as in many cases it may be described as 'against all the odds'. The context he was working within – either in Poland with rigid functionalism or socialist realism, or in the United States with the appearance of postmodernism – could have been hostile to modern ideas, without altering Sołtan's allegiance however.

Since the last years of his teaching at Harvard, and much more after his retirement, he was lecturing in many universities and cities across the United States and abroad, giving further testimony to his reading of modern architecture.[151] In particular, since the late 1970s, he was involved first in planning and later in the curriculum programming of the architecture teaching at the King Abdulaziz University in Jeddah in Saudi Arabia, where he was able to implement his vision of culturally and socially sensitive, yet global modern architecture.[152] Along with that, he dedicated much time to lecturing and to writing a commentary on modern architecture, based on his experiences with Le Corbusier, finally published in 2020.[153] He called himself the "last modernist architect",[154] but arguably, he was more than that. His reading of modernism and the continuous belief in the importance of modern architecture ideals for building a new culture (Chapter 3), along with the reading of Team 10's lineage as 'the way of the middle' stopping the pendulum momentum of the eternal seesaw between functionalism and formalism, gives crucial context to teaching and design work. His lectures and texts testify to a continuous and active involvement in architectural education, of the will to 'right the wrongs' of modern architecture, and of his loyalty to modern ideas, making him rather a missionary of modernist architecture, willing to share his ideas and theory and to pass them on to new generations of architects. This is why the understanding and the analysis of his theories is crucial to defining his legacy (Chapter 6).

143 Interview with Urs Gauchat.
144 Interview with François Vigier. The main protests at Harvard concerned the University Hall and the Faculty of Arts and Sciences, not the Graduate School of Design, see: Craig Lambet, 'Echoes of 1969', *Harvard Magazine* (2019) <https://www.harvardmagazine.com/2019/03/1969-student-protests-vietnam> [accessed on February 20th, 2020].
145 Sołtan commented on this in a letter to de Carlo, "we start this academic year with a new curriculum. It was worked out, fortunately, before the Harvard revolution. The revolution only settled it". Sołtan to de Carlo from September 8th, 1969, see: HGSD-JS, AD013. Baum recalls that by the time of the protests, the new programme was finished ready to be applied, hence political troubles were avoided, see: interview with Edward Baum.
146 Interview with Urs Gauchat.
147 Interview with Christopher Benninger.
148 First only an acting dean while the university was looking for a more suitable candidate. 'A New Dean For the GSD', *The Harvard Crimson*, 17 March 1976. Benninger claims Kilbridge to have been "actually a good guy, but totally unaware of what was the GSD, art, design" and adds that some faculty "wanted more students with more fees, more teaching of practical skills and knowledge", see: interview with Christopher Benninger.
149 Interviews with Shamay Assif, and with Simon Smithson.
150 Interview with Thomas Holtz.
151 He lectured at MIT, University of Pennsylvania, University of Virginia, University of Arlington, University of Saint Louis, University of Indiana, University of Arizona, and University Lexington. In addition, he lectured in many countries abroad, including multiple times in Canada, but also in Mexico, Morocco, Poland, France, Spain, Germany, and Iran. For the list of lectures, see: *Jerzy Sołtan*, ed. by Jola Gola.
152 Davis remembers working with Sołtan as an assistant when he was working on the curriculum for that university, see: interview with Marleen Kay Davis. Drawings of the plans of the university campus in Jeddah are present in slides used by Sołtan to show his own work, see: HGSD-JS, CB series, 5B. Additional written documents on Sołtan's involvement as a consultant in Jeddah from 1976-1990 are kept in the collections at Harvard, but are restricted until 2040, see: HGSD-JS, BB series.
153 Jerzy Sołtan, *On i ja: o architekturze i Le Corbusierze* (Warsaw: Centrum Architektury, 2020).
154 *Jerzy Sołtan*, ed. by Jola Gola, p. 18.

theory: on beauty and art in architecture

he is one of those artists who never bring their ideas to such perfection that they can be put aside: it seems that he deliberately does not give a precise form to the motifs that interest him most, and wants to return to them throughout his life

– Jola Gola on Jerzy Sołtan[1]

This statement by Jola Gola, director of the Museum of the Fine Arts Academy in Warsaw and curator of the Jerzy Sołtan exhibition organised there in 1995, identifies a substantial challenge when analysing Sołtan's work. Not only does his active period cover a timespan of over half a century – his articles, lectures, letters, and other writings date from the early 1940s until the early 2000s – but it also shows continuous evolution. Even if the main stream of his thought seems to remain close to modern architecture ideals – and he is called as late as in 1995, "the last of the modernists"[2] – it is impossible to consider his theory immutable for over half a century. His ideas evolved along with his designs and architectural teaching, developing in parallel to his artistic activity – drawing, painting, and sculpting – which although constitute an important part of his work, are not analysed here, as the volume of Sołtan's artistic production would shift attention away from this thesis' focus on his architectural work. Nonetheless, it is necessary to recognise and acknowledge the utmost importance of artistic activity in Sołtan's architectural work. To understand their connection, this chapter focuses on the analysis of his theoretical writings throughout the years. It comments on the issues they raised, on their evolution, relation to the context, and on the similarities between his theory and those architects closest to him, such as Le Corbusier, other Team 10 members, and his colleagues from the Fine Arts Academy and Harvard. Throughout the analysis, it tends to answer the question: how did Sołtan's interest in art influence his architectural activity, and what were the consequences for his work? In order to answer these questions, the chapter analyses for the first time the connection between art and architecture in his writings. Then it dwells on visual issues and their affinity to the arts – on the search for beauty, on harmonic diagrams, proportions, and on the question of scale. Finally, it addresses the synthesis of various arts in design, as well as the synthesis of diverse disciplines within architecture as a crucial part of Sołtan's design method.

between art and architecture

Interestingly, the definition of architecture given by Sołtan throughout the years seems not to have changed much, and it is based on the difference between simpler down-to-earth "building" and more complex and complete "architecture". In the 1940s, he claims, "building somehow starts from a scratch and serves – and sometimes (very very rarely) turns into architecture", with the latter defined as "an art that serves".[3] This vision of architecture uniting functional and artistic or poetic aspects remains vivid also in his later texts relating to his vision of rationalism in architecture (Chapter 3). Ten years later, in 1958, he writes that architecture comprises "building and ordering of the surroundings through intellectual (technology) and emotional means", and that "building becomes architecture when, while creating, emotion appears next to technology".[4] He uses the same words over forty years later, writing in 1990 that "architecture is building elevated to the level of art".[5] He stresses this claiming that with no poetics (as he refers to artistic values), a building "has no right to be considered as a work of art. Therefore... it ceases to be architecture".[6] These constant comparisons between architecture and building make a clear reference to Sołtan's own education at the Polytechnic of Warsaw, where – according to him – art was missing (Chapter 4). This tendency overlaps actually with Le Corbusier's views, as seen in the aims defined at the CIAM congress in Bridgewater in 1947: "to work for the creation of a physical environment that will satisfy man's emotional and material needs and stimulate his spiritual growth", which corresponds to some passages from *Vers une architecture*.[7] Sołtan's work for him in those very years might suggest that the prior interest in visual arts was reinforced during the stay in Paris through Le Corbusier's insistence on poetics and artistic values in architecture.

1 *Jerzy Sołtan*, ed. by Jola Gola (Warsaw: Wydawnictwo Akademii Sztuk Pięknych, 1995), p. 22.
2 *Jerzy Sołtan*, ed. by Jola Gola, p. 18.
3 Lecture 'O syntezie architektury, malarstwa i rzeźby' in Warsaw in February 1948, see: MASP-JS. Translation from Polish (SR).
4 Inauguration lecture at the Fine Arts Academy in Warsaw in October 1958, see: AASP-JS. Translation from Polish (SR).
5 Notes on religious architecture in Poland from June 1990, see: MASP-JS. Translation from Polish (SR).
6 Andrzej Bulanda, *Rozmowy o architekturze* (Warsaw: Muzeum Akademii Sztuk Pięknych, 1996), pp. 20-21. Translation from Polish (SR).
7 Typed document with Le Corbusier's text based on *Vers une architecture* with Sołtan's commentary on the aims of CIAM and related to CIAM 6 in Bridgewater from 1946, see: MASP-JS.

interest in arts

In addition to Sołtan's definition of architecture as an art, he was also vividly interested in visual arts in general, with some artists constantly referred to in his texts. He mentions often Giotto and Piero della Francesca, adding that in the past, architects were at the same time artists, as for example Michelangelo and Leonardo.[8] In particular, Sołtan was interested in work and art of Piero della Francesca, in his connection to and synthesis between intellect and emotion – an interest, which was fuelled also by Le Corbusier's own interest in the artist. Sołtan recalls, "in our talks, della Francesca's name continuously came up, particularly in relation to the different systems of regulating lines and, hence, the Modulor".[9] At the same time, Sołtan was interested in modern artists too. Amongst those closest to him visually, he names Henri Matisse, Paul Klee, Jean Gris, Pablo Picasso, Constantin Brancusi, Fernand Léger, and Georges Braque. In particular, his diary entries from the 1950s contain an extensive number of art-based reflections and thoughts on art, an interest he never abandoned, continuing to look at architecture with this artistic perspective throughout his life. For some artists, it is particularly visible: he mentions Picasso in his writings at least from 1946 continuously until 1998, while he refers to Braque at least from 1948 until 1995. In fact, his collaboration and close contacts with artists, starting with his imprisonment in Murnau, had a clear influence on his ideas concerning architecture and on his design methods. For example, amidst ravaging socialist realism in Poland, he claimed, "all architecture has the right for visual arts", underlining the need for artistic interest amongst architects.[10] He was also working on his own art from the war onwards (and the first artworks kept by the Museum of the Fine Arts Academy date from 1940-1943 – the period of his imprisonment in Murnau).[11] At the same time, he was studying other artists through copying and analysing their works, such as for example, Klee, Léger, and several unnamed Japanese artists.[12] The importance of artistic activity for an architect was undoubtedly fuelled by Le Corbusier's influence. Sołtan was in fact very precise in his account of Le Corbusier's daily routine and in the importance of the time the latter spent working on art.[13] In Sołtan's reading, the former's artistic production was crucial for the creative process of design, and even if their influence was indirect, architectural and artistic activities were fuelling each other, which helped in the development of the poetics of many Le Corbusier's designs.[14] Following that example, Sołtan was continuously working on art.[15]

Moreover, he passed on this interest to his students, as while teaching he pleaded in favour of the importance of visual studies and practical involvement in the arts.[16] Some claim that their interest in art and artistic work were nourished by Sołtan's influence at the school.[17] In a lecture from 1965, Sołtan argued that students should be more interested in art, that they should look for art and artworks that pleased them, and not limit themselves to occasional visits to museums. He was much interested in his students' artistic production – as is shown in his letter to his former student at Harvard, Michael Graves (before he turned towards postmodernism), where he states, "I personally want to compliment you particularly warmly in relation to your paintings".[18] His contact and correspondence with Jacek Damięcki and Lydia Rubio on their work equally points to the importance of visual research and to the development of the architect's mind according to him.[19] As a result, some students remember him for his profound understanding of the arts.[20] These contacts suggest the existence of a thread of continuity of artistic method, coming from Le Corbusier, channelled through Sołtan and his teaching, and then passed on to the latter's students.

It is interesting however to observe how the role of art gradually grew in Sołtan's vision of architecture. In 1948, he wrote, "basic errors in the program, in the functioning, construction – they rule out beauty".[21] In another lecture from 1948, he mentions that in order to achieve beauty, one has to recognise different elements linked to psychology, physiology, and emotions. Visual aspects of architecture – here described as beauty – would be then dependent on function, construction, and satisfaction of human needs. However later, referring to Herbert Read's and Lewis Mumford's ideas, he gave more importance to the visual aspects. Already in the 1950s, shortly after his departure from Le Corbusier's atelier and his return to Warsaw, he was making notes from Read's *Art and Society* (1936) in his diary showing the superiority of arts and poetics over intellect: "what we call the scientific attitude is inadequate [...]. Whilst nothing has proved so impermanent and provisional as that which we are pleased to call scientific fact and the philosophy built on it, art, on the contrary, is everywhere in its manifestations, universal and eternal".[22] Following Read's ideas, Sołtan claimed that art gives to science what it lacks – understanding of right and wrong,[23] and it seems that discovering these texts was important, as he mentions them in a letter to Le Corbusier.[24] On the one hand Read would be relevant in giving more weight to the artistic side of architecture in Sołtan's vision, but on the other hand the environment and context of the 1950s when Sołtan started to give more importance to artistic expression was important too. He was teaching then at the Fine Arts Academy, which was in the first place an art (and not an architecture) school. His contacts with artists who taught there, conversations with them, and his increased artistic activity to replace design work under socialist realism, were important to cement the importance of art in architecture for him – and remained strong afterwards. One may refer for example to his lecture given at the Academy in 1995, when he continued to underline the importance of poetics and beauty, both in arts and in architecture.[25]

the quest for beauty

The idea of beauty was very important in Sołtan's perception of architecture. Again, it may be traced to Le Corbusier and Sołtan's first days in the Parisian atelier. He recalls that he was struck by his boss' statement on a design he was working on: "my dear Sołtan, it needs to be beautiful".[26] Such a bold expression of interest in a building's aesthetics, sounded strange to Sołtan who was educated in the midst of functionalist "matchbox architecture" following the motto "do not grieve for roses while forests are burning" (Chapter 3). When commenting in 1979 on his education in Warsaw, Sołtan recalls, "visual, poetic, emotional aspects were tacitly banned [...], it was bad taste to speak art or to speak beauty".[27] In a retrospective analysis of such functionalist education, he argues in favour of the opposite. Referring to the metaphor of roses as identified with beauty and poetics, Sołtan makes a very strong claim: if one does not look for a rose – does not look for poetics and beauty – then one is not a human being. Furthermore, he puts the very reason for architecture with no poetics into question: "is a building conceived without concern with 'roses' worth being thought about and... built? What does the notion of 'roses' mean in the lingo of a builder and possibly eventually of an architect?", he asks. Such doubts may be connected to French philosopher Jacques Maritain's ideas, which Sołtan quoted in a lecture in 1995: "the term poetics is not connected [...] with any individual art, but it is something more basic... It is an agreement between the inner essence of all things and the inner essence of human creation itself".[28] Such a gradually developed discussion on the issue of beauty in architecture is a good example to show how Sołtan's ideas were actually growing and building on his first experiences and how they were developed throughout his life. In addition, his growing interest in philosophy, and in particular in the new French philosophers, made his arguments on the issues of beauty, delight, and its meaning for architecture even more elaborate.[29]

Such a reflection does, however, lead to an important dilemma, and Sołtan recognises this when referring to architecture according to Vitruvius' three pillars – *firmitas*, *utilitas*, and *venustas* (firmness, commodity, and delight as he translates them into English). He claims that the last of them – "delight", which he connects with the more common "beauty" – is the most difficult to talk about. Referring to the previous difference between building and architecture, it is beauty, which makes architecture possible, and at the same time, one is uncertain about its meaning.[30] It is linked to the utmost subjective aspect of art, and it is revealed by one of the most repeated quotations in Sołtan's writings on art throughout the years: Benedetto Croce's claim that "art is perfectly defined when simply defined as intuition", appears in Sołtan's notes in the early 1950s and persists

8 Article 'New Churches in Poland: How many of them can be called architecture?' from October 1990, see: MASP-JS.
9 Lecture at the Carpenter Center at Harvard in March 1987, see: MASP-JS.
10 Notes 'Wszelka architektura ma prawo do sztuki plastycznej' from 1952-1953, see: AASP-JS. Translation from Polish (SR).
11 *Jerzy Sołtan*, ed. by Jola Gola, pp. 99-100.
12 He mentions copying Japanese artists' works and Klee's art in diary notes from November 11th, 1951, see: MASP-JS. In the collection of the Museum of the Fine Arts Academy in Warsaw, there is a series of Sołtan's paintings registered as *D'après Monsieur Léger* from 1960s and 1990s.
13 Draft of the book *On Architecture and Le Corbusier* from November 1995, pp. 11-12, see: MASP-JS.
14 He underlines it very clearly in a review of Geoffrey Baker's publication on Le Corbusier. Sołtan criticises Baker for not giving any space to Le Corbusier's art in order to understand his architecture, see: Sołtan's review of Geoffrey Baker's *Le Corbusier: An Analysis of Form* from 1984, see: HGSD-JS, AC006. He analyses the importance of Le Corbusier's art in the lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.
15 According to Joanna Sołtan, her father's painting developed in Murnau during his captivity, see: interview with Joanna Sołtan.
16 He was particularly appreciative of the Italian sculptor Costantino Nivola's atelier at Harvard and his practical education applied in arts, see: lecture on the Graduate School Design from September 16th, 1997, see: MASP-JS.
17 For example, see: interview with Thomas Holtz.
18 Sołtan to Graves from December 6th, 1974, see: MASP-JS.
19 Interview with Jacek Damięcki. Statement by Lydia Rubio from February 12th, 2021.
20 Statement by Lydia Rubio from February 12th, 2021.
21 Lecture 'O syntezie architektury, malarstwa i rzeźby' in Warsaw in February 1948, see: MASP-JS. Translation from Polish (SR).
22 Quote from Herbert Read's *Art and Society* in Sołtan's diary notes from October 26th, 1952, see: MASP-JS.
23 Untitled article by Sołtan on industrial design, see: AASP-JS.
24 Sołtan to Le Corbusier from April 27th, 1950, see: FLC-DN, R3-4-242-001 to 002.
25 Lecture at the Fine Arts Academy in Warsaw in 1995, see: MASP-JS.
26 Sołtan recalls this statement by Le Corbusier multiple times, as for example in the article 'Working with Le Corbusier', in *Le Corbusier: the Garland essays*, ed. by H. Allen Brooks (New York: Garland, 1987).
27 Lecture at ICSID in Mexico in October 1979, see: MASP-JS.
28 Lecture at the Fine Arts Academy in Warsaw in 1995, see: MASP-JS. Translation from Polish (SR).
29 Interview with Urs Gauchat.
30 Lecture on the Graduate School Design from September 16th, 1997, see: MASP-JS.

until the late 1990s.[31] Sołtan also refers to Braque's idea that "what counts in art is what cannot be explained".[32] Through these two examples, it may seem that art in Sołtan's vision is something impossible to define and to grasp, something completely free and dependent on subjectivity only, but he never was in favour of art looking for novelty for its own sake. In 1958, he claimed that modesty and discipline are better than "highly artistic bullshit",[33] and in later years, he was very critical of those who use art as a social ladder or as a tool for profit and fame. In particular, he was critical of Yves Klein, Marcel Duchamp, and Christo, and questioned the value of their work.[34]

Such criticism of their work may seem contradictory to Sołtan's vision of art as intuition and as an undefined area, but it leads to ideas that lie underneath such theoretical considerations and that show themselves in the field of architecture. Even though he rarely spoke about the concept of a canon of beauty, he mentions it in 1948 referring to some "constant elements of visual arts".[35] This idea becomes stronger in later texts coming from the 1980s and 1990s. He claims that there are "constant, eternal, and universal" elements, which may be considered as "canons, as basis for objective beauty".[36] This is of course different from utterly proclaiming something as beautiful or right, as happened with the classicist architecture built throughout the era of socialist realism in Poland. In fact, in his commentary from 1952, where he claims that it is impossible for art to be proclaimed as "beautiful",[37] he refuses the rigid and mindless imposing of a scheme, proposing instead the continuous search and reflection on what the canon of beauty might be.

beauty in modules

Sołtan's interest in canons of beauty was more far-reaching than the plain assumption of the validity of classical forms under the socialist realism propaganda. In 1945-1947, he was actively working with Le Corbusier on the Modulor measurement system. A year later, in 1948, he was asked to write an article on it for the Italian architectural magazine *Domus*, as Le Corbusier himself was much occupied with the work on the Unité d'Habitation in Marseille.[38] From then, reference to the Modulor was constantly present in Sołtan's writings, articles and lectures. He referred to it in his diary entries from the 1950s, in lectures in Poland and in the United States throughout the 1950s, 1960s, and 1970s, and then in the 1990s. Whereas in these writings Sołtan was aiming to explain Le Corbusier's theory, he was also using his own experiences and observations to illustrate it. As a result, it is unclear to grasp where lies the limit between his own ideas, Le Corbusier's ideas merely explained, and Le Corbusier's ideas as Sołtan adopted them. It is particularly visible in Sołtan's lectures in the 1970s and 1990s, and in his unpublished book on architecture and his relationship with Le Corbusier.[39] The explanation of the Modulor and of the human scale is illustrated there with Sołtan's examples, showing that they have been important elements of his own research. The very structure of Sołtan's texts and lectures makes it furthermore difficult to draw the limit between his own and Le Corbusier's ideas, as the difference fades in Sołtan's alternation of ideas coming from both.

in the search of the human scale

Nonetheless, it is certain that Le Corbusier's ideas were important for Sołtan, and most of the latter's texts on the Modulor are aimed to explain and to clarify the origin of the measurement system, as he claimed it was often misunderstood.[40] When referring to it, he underlined the two main elements, which were at its basis – combinatorial possibilities of a chain of proportions based on mathematically and geometrically grounded series on the one hand, and a reflection closely linked to human scale and to dimensions in architecture on the other one. He mentions these elements in the article in *Domus*, and they remained important references and a solid basis in his theory. Amongst those however, he is especially interested in the issue of human scale, which

31 Sołtan writes down this quote from Benedetto Croce in diary notes from August 20th, 1953, see: MASP-JS. He refers to it later for example in notes on religious architecture in Poland from June 1990, see: MASP-JS; and in a published interview with Sołtan: Bulanda, p. 17.
32 He mentions that quote in notes on religious architecture in Poland from June 1990, and in a lecture at Harvard in July 1990, see: MASP-JS. He mentions it also in a published interview with Sołtan: Bulanda, p. 17.
33 Inauguration lecture at the Fine Arts Academy in Warsaw in October 1958, see: AASP-JS. Translation from Polish (SR).
34 He comments "everyone can do that" on Marcel Duchamp's adding of a moustache to *Gioconda* and he accuses Klein of opportunism and Christo of making no contribution to art. He mentions Klein and Duchamp in a lecture at the Fine Arts Academy in Warsaw in 1995, and Christo in a lecture at Harvard in July 1990, see: MASP-JS.
35 Lecture at Klub Młodych Artystów i Naukowców in Warsaw in March 1948, see: MASP-JS. Translation from Polish (SR).
36 Bulanda, p. 17. Translation from Polish (SR).
37 Sołtan's diary notes from May 21st, 1952, see: MASP-JS.
38 Jerzy Sołtan, 'Modulor: Sistema di misura di Le Corbusier', *Domus*, 3, (1948), 2-5. Sołtan mentions Le Corbusier asking him to write it in the lecture 'The Modulor revisited' from the late 1970s, see: MASP-JS.
39 Draft of the book *On Architecture and Le Corbusier* from November 1995, lecture 'The Modulor revisited' from the late 1970s, lecture 'Re-evaluation of the modular system the Modulor' from 1972, see: MASP-JS; untitled notes by Sołtan from March 1995, see: HGSD-JS, AC007.
40 Lecture 'Re-evaluation of the modular system the Modulor' from 1972, see: MASP-JS.

he engages with recalling his personal experiences and memories. One of these examples is a trip to Ardennes in France in the late 1940s, which he constantly refers to from the 1950s until the early 2000s. He describes:

> "A second 'revelation' of the notion of scale in architecture was for me seeing the Bouillon castle in Ardennes [...]. We were driving in a closed car. Through the windows, we could only see the steep walls [...]. We stopped. We get out. In front of us, the castle of Bouillon. No elements to mark researched proportions, no architectural or sculptural details, and the materials – looking against the sun – unrecognisable. And yet the impression of perfection – lyrics, poetics – something that touches directly our hearts. Looking for that "something", I asked myself whether it was not the question of the architectural scale. Powerful and enormous volume [...] and some openings in it. Openings scattered here and there, along the grey mass of the castle. Openings and defence (?) remnants, always connected to human silhouette – inscribing them perfectly [in the text, there is a small sketch of a human silhouette inscribed in a rectangle of a window opening]. These openings, positioned adequately, make the grey mass come alive. Observer's thoughts, or perhaps their subconsciousness, senses that behind the grey and inanimate surface there are staircases, passages, corridors, which pop outside here and there in a manner that one wonders on what happens behind the walls. All this, in an atmosphere full of joy of discovery and of familiar elements (human dimensions) in what is unknown (passive grandeur of stone wall)".[41]

This was one of the first times Sołtan mentioned this trip and from then, when talking about the question of scale and of human dimensions, he refers to this experience, as if it was some kind of personal *catharsis*. In 2001, in one of his last texts referring to his experience of over fifty years before, he comments on it in much a similar way, adding more rationale to it and connecting the impression of the castle's scale with the concepts of beauty and delight.[42] A similar experience he refers to quite often is a visit in an old watermill in the Yvelines department close to Paris, where he noticed the low height of the door openings did not impede his positive sensation of its human scale. In addition to the previous examples, Sołtan quotes others to illustrate the question of the scale, all of them based on his own experiences, and not on Le Corbusier's texts – such as the vernacular architecture of German cottages and architecture of pueblos in Mexico.[43]

In his opinion, low door height is a sign of design respectful to human scale, as opposed to the prescriptive normative height of 260-340 cm, which "kills the scale",[44] and which he was also critical about when teaching.[45] He claims also that such a normative height makes the perspective lines of the floor and of the ceiling almost identical (as the eye level would be at the midpoint of the height of a room), causing the sensation of uneasiness and unrest. He adds, "inhuman building regulations, normative limits, and rules established unilaterally by architectural morons may even immobilise a conscious artist and architect. Norms concerning the height of spaces – around 300 cm – and standard windows make it impossible to reach a good and simple solution to the basic problem of architecture – the scale. Polish suburban areas and Polish buildings in general are its best illustration".[46] Here, his definition of a "good scale" is strictly connected to the human factor: he identifies it with a situation "when in a piece of architecture there are enough elements that are clearly related to man".[47] The attention to human scale may be seen also in Sołtan's attempt to re-define the word "symmetry", as he refers it to the original Greek meaning, "*sym metros*", i.e. "with measure".[48] For Sołtan, symmetry, as it is commonly understood, is something to deride, it is "the geometry of idiots" he mocked.[49] Instead, the 'true' symmetry is much broader than a mere axis-based concept, it is meant to respect human scale and to design according to human dimensions. Such an interest in human dimensions and the search for the optimum height of space has of course its direct connections to Le Corbusier's work, including one of the designs Sołtan was working on – the Unité d'Habitation. Le Corbusier's designs often operate with non-standardised heights. His design in Marseille has no interiors with a height of three metres – the private rooms are lower, whereas the living

41 Diary notes from November 13th, 1951, see: MASP-JS. Translation from Polish (SR).
42 Article on Claude Laurens from May 2001, see: MASP-JS.
43 For the vernacular architecture in Germany, see: diary notes from November 13th, 1951. For the pueblos, see: draft of the book *On Architecture and Le Corbusier* from November 1995, pp. 99-102. For Yvelines, see: lecture 'The Modulor revisited' from the late 1970s, lecture 'Who are you?' from Raleigh, Pittsburgh, and Houston from 1959-1962, see: MASP-JS.
44 Diary notes from November 13th, 1951, see: MASP-JS.
45 The very same references and the very same sketches as in his diary notes from the early 1950s can be found in student notes from the late 1970s from the seminar module 'Grassroots of the Contemporary Movement' taught at Harvard, see: P-MKD.
46 Diary notes from November 13th, 1951, see: MASP-JS. Translation from Polish (SR).
47 Lecture 'Who are you?' from Raleigh, Pittsburgh, and Houston from 1959-1962, see: MASP-JS.
48 He mentions that in untitled notes by Sołtan from March 1995, see: HGSD-JS, AC007; and in his comments for a research project 'Programy i metody doszkalania technicznego plastyków dla potrzeb produkcji przemysłowej', see: AASP-JS.
49 Wiktor Gessler, 'Myśliwiecka', 1995, see: MASP-JS. Translation from Polish (SR).

areas are much higher – such that the interest in the question of scale and the refusal or generally acclaimed normative mean height of spaces make a direct connection between Sołtan and Le Corbusier.

through geometry to the Modulor

The interest and the importance of the human scale was only one of the components of the Modulor where "anthropometric ergonomic data are fed into mathematical equations".[50] Sołtan is keen on explaining the geometrical and mathematical reasons standing behind Le Corbusier's theory, giving a thorough explanation of such concepts first in the article in *Domus*, and coming back to explain them again many times over the years. His geometrical and mathematical explanation follows Le Corbusier's line of thought including similarities between rectangles, the concept of the golden ratio, and the Fibonacci series. However, he links all of these considerations with another concept – the one of regulating lines (referred to by Le Corbusier as "*tracés régulateurs*") and harmonic diagrams. Following Sołtan's account, the geometrical and mathematical construction of the Modulor begins in fact with the idea of beauty and aesthetics in composition granted by regulating lines, which form harmonic diagrams within a planar or spatial composition.[51] Only once one accepts the validity of such an idea, such concepts as similar rectangles, the golden ratio, and the Fibonacci series appear.

The importance of regulating lines was crucial for Le Corbusier: Sołtan claims that they were his employer's solution to obtaining harmony in architectural or artistic compositions.[52] At the same, as he underlines, they were also present in other artists' work, such as Piero della Francesca and Picasso.[53] The regulating lines appear in Sołtan's narration as a visually strong claim and research of some universal canons of aesthetics that may be shared in all the arts, including two- and three-dimensional representations. As such, they seem to be applicable both in art and architecture, and they guarantee some superior order to the composition, making them crucial in both domains:

> "Every element in the space, and in particular all architecture, follows a rule according to which different elements are aligned. The more consciously an object is composed, the more precisely its elements fit together following that rule. Such a visual 'rule', such a treble clef or bass clef can be sensed through a canonical diagram, which would show how much and in what manner different elements of the composition follow the general rule".[54]

According to Sołtan, such a general rule is given by the regulating lines, which are traced following geometric constructions of similar rectangles and of the golden ratio. Through the regulating lines, harmonic diagrams are traced and they seem to be, according to Sołtan, the ultimate tool in research of aesthetics. As an example of their application, he mentions often Le Corbusier's Maison La Roche, Villa Stein, and also the church of Saint-Louis-des-Invalides in Paris.[55] The example of the church here seems to be the most interesting, as it is not Le Corbusier's design nor it is referred to in his writings. The correspondence between Saint-Louis-des-Invalides and harmonic diagrams is connected to Sołtan's personal and direct experience. He referred to it in his memories of the church's relation with aesthetics thanks to the visual and spatial force of harmonic diagrams.[56] As well as in the case of human scale, Sołtan uses a truly personal experience to illustrate Le Corbusier's ideas. Through updating them by his own observations and impressions, Sołtan is in a natural way showing that they are still valid for others, and that they could still apply to architecture. Not only in the case of the harmonic diagrams, but also in the case of the Modulor itself; Sołtan wants to show the system's flexibility and validity even years after it was created. The basic Modulor measurement system has been developed as a series of dimensions, which took the form of a measuring tape that Sołtan always kept with him.[57] The tape was graduated with a series of measurements that came from the interest in the human scale, as they were ordered following the golden ratio and the Fibonacci series' growth, and they were organised in two sets – the red and the blue series, which were geometrically connected between them. What is however more interesting is the fact that the entire series was changed: originally in 1945, it was based on the medium human dimension of a 175 cm tall person. Instead, it was changed into a series based on a 183 cm tall one in 1946, when Le Corbusier was working on the United Nations' headquarters in New York City. Sołtan recalls Le Corbusier's frustration when he came back from the United States and said, "Sołtan, those bloody Americans are so tall. We have to change our point of departure if we want our system to be somewhat universal".[58] His frustration shows also the importance of the universal aspect of the Modulor he was much interested in during the work on the system. A similar belief persists somehow in Sołtan's own lectures, as he uses rhetorical questions on whether the Modulor might be still necessary for architects.[59] At the same time, Sołtan was still using it and he refers to it as something useful, as an "attempt to modularise without dehumanising".[60] As a result, he claims in the late 1970s, the "aura of discussions that led to its [the Modulor's] birth remains – I believe – always of interest", as he sees in the Modulor a tool that is still available for the architects to use and to work with while designing.[61]

However, Sołtan's opinion on the use of the Modulor was far from dogmatic or radical. He was not perplexed by the different heights of the Americans, as Le Corbusier was. On the contrary, he claims, "Corbu's words should always be treated as a spark that can put some engine in motion as an initiation... a beginning of something – not as a scholarly, impeccable dissertation".[62] He does not obstinately apply in a revered and literal way the Modulor series in all the designs. He is much more flexible, and uses it as a basic scheme that could be adapted to various situations and realities. Already in the article in *Domus*, he suggests, "it would be possible to create another Modulor: its starting point would be for example a five feet tall person, a Modulor for the giants or for the Pygmy people".[63] He is not concerned with the universal and absolute value of the same scale applicable everywhere, but he sees the Modulor as a much more flexible and adaptable method that could be changed according to need. He mentions indeed, "if one accepts that the Modulor has some merits, but in general is not 'holy'... one doesn't need much intelligence and effort to adjust it and to compute a new series of numbers".[64] It becomes a basis, a starting point, and as he assumes even earlier, in the 1950s, "when you have some dimension that holds... [that] is logical for some definite reason – then – start from it [and] make yourself a 'New Modulor' for each individual purpose".[65] At the same time, Le Corbusier seems to have been contrary to such manipulations with the scale, as Sołtan recalls his employer's doubts concerning the possibility of introducing another Modulor scale based on the average height for the Japanese population. Le Corbusier commented that it would have destroyed the system's universality, "if we do that, the universality of the Modulor goes to pieces" – which seems not to have been an issue for Sołtan.[66]

Sołtan admits also that he uses the Modulor in a flexible manner: "in my own practice I tailored to my needs quite a 'few Modulors', starting with measurements related to some concrete requirement of the project", showing that while he was accepting Le Corbusier's idea, he was adapting it to his own requirements. He claims that he was using the system "freely" – with no universal or holistic mystical aura that was read by some in Le Corbusier's own text on the Modulor.[67] This is perhaps one of the most indicative examples showing that Sołtan was not merely copying and applying his Le Corbusier's ideas, but was working with and on them, looking for new possibilities. His disapproval of the Modulor's criticisms is based on the fact that it is "treated too literally and therefore... misunderstood".[68] It was for him a starting point, a spark that was to light other people's ideas and thoughts. However, not all were equally enthusiastic concerning the Modulor. Whereas some shared Sołtan's enthusiasm, and Einstein commented on the system, "it is a scale that makes the good likely and the bad unlikely", others were much more critical.[69] Sołtan relates that Le Corbusier's "play with the golden section and Fibonacci series is criticised as schoolboy mathematics wrapped in a cloak of mystification" by some critics, including Rudolf Wittkower. At the same time, Sołtan wants to underline naivety and the lack of understanding of such criticism, which "lies here in the simple fact that the mathematics of the Modulor were not supposed really to be anything more than a starting platform, a spark".[70]

50 Lecture 'Re-evaluation of the modular system the Modulor' from 1972, see: MASP-JS.
51 Draft of the book *On Architecture and Le Corbusier* from November 1995, lecture 'The Modulor revisited' from the late 1970s, lecture 'Re-evaluation of the modular system the Modulor' from 1972, see: MASP-JS.
52 Lecture 'The Modulor revisited' from the late 1970s, see: MASP-JS.
53 Lecture 'Who are you?' from Raleigh, Pittsburgh, and Houston from 1959-1962, see: MASP-JS.
54 Diary notes from January 14th, 1952, see: MASP-JS. Translation from Polish (SR).
55 Draft of the book *On Architecture and Le Corbusier* from November 1995, pp. 104-107, see: MASP-JS.
56 Ibid.
57 Sołtan's friend Gauchat recalls that the former had a Modulor measuring tape, and it is kept in the family archive (ill. 4.10), see: interview with Urs Gauchat.
58 Lecture 'The Modulor revisited' from the late 1970s, see: MASP-JS. Untitled notes by Sołtan from March 1995, see: HGSD-JS, AC007. Le Corbusier modified subsequently the basic dimension and 183 cm basis was present in the Modulor system explained by Sołtan in *Domus*.
59 He asks that in the lecture 'Who are you?' from Raleigh, Pittsburgh, and Houston from 1959-1962, see: MASP-JS.
60 Lecture 'Re-evaluation of the modular system the Modulor' from 1972, see: MASP-JS.
61 Lecture 'The Modulor revisited' from the late 1970s, see: MASP-JS.
62 Ibid.
63 Sołtan, 'Modulor: Sistema di misura di Le Corbusier', p. 5. Translation from Italian (SR).
64 Lecture 'The Modulor revisited' from the late 1970s, see: MASP-JS.
65 Lecture 'Who are you?' from Raleigh, Pittsburgh, and Houston from 1959-1962, see: MASP-JS.
66 Lecture 'The Modulor revisited' from the late 1970s, see: MASP-JS.
67 Ibid.
68 Ibid.
69 Sołtan recalls Einstein's words in draft of article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, see: MASP-JS.
70 Sołtan relates German architecture critic Rudolph Wittkower's criticism of Le Corbusier's Modulor in the lecture 'The Modulor revisited' from the late 1970s, see: MASP-JS.

through modules and towards synthesis

What emerges from Sołtan's account of and around the Modulor series is the general interest in modules and "flexible standardisation" – a typically Aalto-esque term, which however has never been referred to in Sołtan's reading of and commentary on the Modulor.[71] Similar research on modules was also promoted by CIAM at the time of the Modulor's creation, and Sołtan connects it to the interest in combinatorial and modular systems during CIAM 6 in Bridgewater.[72] As a result, the 1940s intellectual climate was favourable for modular elements and combinatorial systems applied to architecture. However, even afterwards the question on what is a good or a bad module was present in Sołtan's writings, as he continues to explain the reasons and the process behind the definition of the Modulor. He appreciates the development and ongoing interest in modular elements, as in his text from 1972, when he comments, "the variety of the results [...] is fantastic".[73] Some of the studies concerned with modularity are also linked to the interests of groups he was working with, such as Team 10 or GEAM (Chapter 5).

However, he claims the research on modules was to be treated very carefully, not to develop into a prescriptive and limiting obligation. He lectures, "I'm seizing all opportunities when addressing people who work or will work in the domain of building to express a warning. So here I am today warning you that with inhuman mechanistic modules, one can pollute the built environment just as other mechanistic debris is polluting the earth". He adds, "it is often virtually impossible to conceive of a really satisfactory building, visual elements included, when using industrially produced and generally accepted components based on modular systems, as they are being normally developed now without any concern for visual issues".[74] With these two passages from the same lecture in 1972, he underlines the utmost importance of considering flexibility and visual aspects of the modular and serial production. Such a claim, connected to Team 10's interest in adding more layers to modern architecture and in broadening the reductive vision of functionalism, leads to the need for cooperation between different factors when working on modules. On the one hand, Sołtan underlines the need to carry on with the research and with using technology in defining new models, and on the other one, he urges for the connection to visual elements and to beauty. His interest in modular systems and in the Modulor in particular, is connected to the trans-boundary position of such research, uniting both visual, artistic, technological, and scientific elements. For this reason, he claims that harmonic diagrams serve for "opening eyes for poetics of contemporary sciences and technology",[75] using this system to illustrate architecture as a synthesis of different fields and influences.

architecture as synthesis

While commenting on modules and their meaning in architecture, Sołtan calls them "borderline between facts and imagination, science and poetry, between measurable facts and their subjective appraisal".[76] His interest in the Modulor, harmonic diagrams, modules, and scale stands as a strong connection between visual arts on one side and scientific disciplines on the other. In addition, he often praises the ideas of the 'synthesis of arts' or the 'synthesis of disciplines' within architecture, as he claims the subject should include a range of diverse influences. His position places architecture as a whole (and not only his studies on modules) on the borderline between several domains, and it leads architecture to be considered as "a nonentity [...] considered by scientists as a piece of art and by artists as the result of scientific attitude".[77]

architecture and the visual arts

Even before considering architecture as synthesis between art and science, Sołtan referred to it as 'synthesis or arts'. Such an idea, with its roots probably within the *Gesamtkunstwerk* from the beginning of the century and within the expansion of *art nouveau* across Europe, was already visible in work of such architects as Victor Horta and Hector Guimard. In their designs in Brussels and in Paris, they included almost every detail as a part of the logic of "total work of art".[78]

71 Alvar Aalto called for "flexible standardisation" earlier, as for example in his lecture 'The Flexible Stair' delivered in Stockholm in November 1942, see: Alvar Aalto, 'The Flexible Stair', in *Alvar Aalto in his own words*, ed. by Göran Schildt (Helsinki: Otava, 1998), pp. 164-167.
72 Lecture 'The Modulor revisited' from the late 1970s, see: MASP-JS.
73 Lecture 'Re-evaluation of the modular system the Modulor' from 1972, see: MASP-JS.
74 Ibid.
75 Sołtan's comments for a research project 'Programy i metody doszkalania technicznego plastyków dla potrzeb produkcji przemysłowej', see: AASP-JS. Translation from Polish (SR).
76 Lecture 'Re-evaluation of the modular system the Modulor' from 1972, see: MASP-JS.
77 Lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.
78 Françoise Aubry and Jon Vandenbreeden, *Horta: art nouveau to modernism* (Ghent: Ludion Press, 1996), p. 22.

Similarly, in Sołtan's view, all visual disciplines should coexist. Already in 1948, he lectures, "in each building some percent [of work] must go for visual arts".[79] He means that within architectural design, visual art should have its own space – an idea deeply connected to Le Corbusier's work. Their contact made Sołtan very familiar with the idea of including art within architecture, and his ideas from the lecture in 1948 fully illustrate this. However, it seems that while he was constantly interested in the presence of visual arts in architecture, he had been seeing them gradually as something that was merging, and not merely co-existing with the building itself. Already in the 1950s, he states that there should be no border between architecture, painting, and sculpture, as they should create one united organism and express the same spirit:

> "In all great visual work the borders between works of architecture, painting, and sculpture are unnoticeable. [...] Architecture, painting, and sculpture are one organism, which plays a great game between the real themes and realism of painting and sculpture, and abstraction of architecture. To put it differently, within the abstraction of architectural plasticity, painting and sculpture lead to crystallisation of themes to talk about, to tell, to teach through a language much more direct than speech and than teaching through architectural plasticity language. The unity of architecture, painting, and sculpture within architecture does not rely on hanging between columns (for a painting) or on standing between columns (for a sculpture). The unity of architecture, painting, and sculpture is guaranteed by the common content... but also the common form".[80]

This is connected to his vision of architecture as the result and sum of other disciplines. According to his reading (following Sigfried Giedion's ideas from *Space, Time and Architecture*, 1941), in the course of history, visual arts mature before, whereas architecture comes afterwards, when the cultural spirit of the era is more cemented.[81] Such a claim influenced his idea that painting and sculpture would determine architecture in the course of time and, as a result, that they are closely related to one another. It seems however that this idea kept on evolving, becoming more inclusive with time, and while initially he includes in such unity of arts only architecture and the visual arts, in 1964 he argues that architecture had recently encompassed more disciplines, including music.[82] This interest in merging visual arts and music or sounds can be seen in his designs throughout the years, such as in, for example, the Polish Pavilion for the 1958 EXPO in Brussels and in the entry for the 'Diomede' competition in 1989 (Chapters 9 and 10).

Sołtan's focus on the synthesis of arts does of course capture the spirit of the era. Le Corbusier was collaborating with the Greek experimental composer Iannis Xenakis on the Philips Pavilion for the 1958 EXPO in Brussels – which Sołtan knew and claimed to be one of the most interesting designs of the period.[83] Simultaneously, in the early 1950s, in the age of the socialist realism cultural dictatorship in Poland, the idea of uniting the work of painters and sculptors with buildings was common practice. This was aimed at giving a more readable and direct propaganda image for the population, but Sołtan was very critical of the results, pointing also to the absence of actual collaboration between architects and visual artists resulting in lack of dialogue between artworks and buildings.[84] He argued that architecture should show "continuity in the efforts, continuity in contemporary thought", and this would materialise in continuity of various artists' work.[85] It was not achieved at all in the works of the socialist realism propaganda, which lacked artistic research and a proper collaboration, such that – according to Sołtan – there was no 'synthesis of arts'. However, even if due to Sołtan's own practice of art and contacts with visual artists he was sensitive to the idea of connecting various art disciplines, his vision of architecture was broader and went beyond this relation. In spite of his deep interest in art and visual values being part of design, he recognised that "it is not the visual training only that can help the architect in his 'quest for emotions'. In fact, I think we overstress the visual [aspects]", suggesting that other elements may lead to architecture's poetics too, and that architecture itself is a much more complex discipline.[86]

"the dope" of the ineffable space

The connection between architecture, art, and other disciplines is evident in the concept defined by Le Corbusier as "the ineffable space" or "*l'espace indicible*". It is directly connected to the poetic qualities of the space, to the questions of beauty and delight, and to Le Corbusier's and Sołtan's interest in harmonic diagrams

79 Lecture 'O syntezie architektury, malarstwa i rzeźby' in Warsaw in February 1948, see: MASP-JS. Translation from Polish (SR).
80 Lecture at SARP from 1950s, see: AASP-JS. Translation from Polish (SR).
81 Inauguration lecture at the Fine Arts Academy in Warsaw in October 1958, see: AASP-JS.
82 Jerzy Sołtan, 'Dźwięk i architektura dzisiejsza', *Ruch muzyczny*, 20 (1964), 3.
83 Draft of the book *On Architecture and Le Corbusier* from November 1995, p. 17, see: MASP-JS.
84 Lecture 'Architektura, malarstwo, rzeźba' in January 1951, see: AASP-JS.
85 Sołtan's undated text on modernism 'Charakterystyczne pytanie', see: MASP-JS.
86 Lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.

and regulating lines. As noted earlier, in Sołtan's commentary to Corbusian ideas, he links beauty to studies on the Modulor and to research on the intangible and immaterial qualities of space.[87] Following Le Corbusier's interest in these principles, Sołtan admits that the former "passed onto him the obsession" of the ineffable space as a global explanation of spatiality and poetics of architecture, worthy of modern space.[88] He calls it a "sort of a visual dope without which it was difficult to live", underlining his utmost interest and allegiance to the concept even years after it was formulated by Le Corbusier, which is also recalled by some of his former students.[89] Its revolutionising character lay according to Sołtan in the fact that through the Modulor's dialogue between scientific and technological discoveries, and poetics, the concept of the ineffable opened traditionally physically bound and perspective-based space to other influences and elements. Such a new concept, at least in Sołtan's reading, was exclusive to Le Corbusier's research within architecture. Sołtan mentions that hardly any other architect was interested in similar questions, and he draws Le Corbusier's portrait as that of a lone avant-garde warrior fighting for the sake of poetics and of the ineffable space.[90] In Sołtan's book manuscript from the 1990s, he uses Le Corbusier's definition to explain it:

> "It is a reality I discovered on the journey. When a work is at its maximum of intensity, of proportion, of quality of execution, of perfection – the ineffable space appears: places begin to radiate, physically they radiate. They determine what I call the 'ineffable space': it means a shock which does not depend on the dimensions, but on the quality of perfection. It is in the domain of the ineffable".[91]

For Sołtan, this concept is a *conditio sine qua non* to fully understand Le Corbusier's work, and he claims that thanks to the ineffable space concept, all the pieces of Le Corbusier's theory fall into their places, and they all become much clearer.[92] Given his architectural allegiance to Corbusian ideas, he was very keen on making this concept in particular clearer and more understandable, as for example through re-visiting it in the mid-1980s in a series of notes and through explaining it to the students.[93] He claims that an additional explanation was necessary, because when the idea was coined by Le Corbusier, it was undefined and vague, as at that time, around the 1950s, it was still unclear what it should refer to.

Sołtan connects the ineffable to the idea of spatial continuum, obtained through new materials and techniques, as well as to the new 'building freedoms', such as those commonly referred to as the "five points of architecture" formulated by Le Corbusier. Used with consciousness and not limited to the formal attitude treating them as a mindless repertory of modern elements, they enabled architecture to reach the poetics and immaterial character of ineffable space. In Sołtan's reading, this concept bridges a gap between poetics and art on one hand, and technology and science on the other one.[94] The Corbusian ineffable space is then strictly linked to Sołtan's own vision of architecture as synthesis of different influences and disciplines, whether they belong to the fine arts or to the rational world of science and technology.

architecture, technology, and more

In fact, Sołtan's functional education did leave some imprint on his vision of architecture, as he did not see it as pure art: he recognised the need to join both art and science within architecture. He continued to work with such a belief, as he claims as late as in 1990, "it seems that as well as reasoning is always influenced by subconscious elements of intuition and emotion, emotional experiences are entangled here and there with reason, logic... and science".[95] Similar ideas were present in his lectures already in the early 1940s, when he presented architecture as synthesis of poetics and rationality, especially when applied to Le Corbusier's architecture (Chapter 3). In a lecture for the Young Artists and Scientists Club in Warsaw from 1948, he reads Le Corbusier's work as an example of such a synthesis, which interestingly coincides with what Sołtan himself was praising in architecture – another direct link between his employer's views and his own ideas.[96] As a result, he criticises the idea that the "architect has to be either an artist or a technician" – he claims that one could and should be both.[97]

87 Draft of the book *On Architecture and Le Corbusier* from November 1995, p. 109, see: MASP-JS. Interview with Marleen Kay Davis.
88 Bulanda, pp. 45-46. Translation from Polish (SR).
89 Lecture at the Miami University in Oxford, OH in March 1984, see: MASP-JS.
90 Notebook 'The 'ineffable space' re-visited' from the 1980s, see: MASP-JS.
91 Sołtan's translation of Le Corbusier's words, quoted in draft of the book *On Architecture and Le Corbusier* from November 1995, p. 109, see: MASP-JS.
92 Notebook 'The 'ineffable space' re-visited' from the 1980s, see: MASP-JS.
93 Ibid.
94 Ibid.
95 Notes on religious architecture in Poland from June 1990, see: MASP-JS. Translation from Polish (SR).
96 Lecture at Klub Młodych Artystów i Naukowców in Warsaw in March 1948, see: MASP-JS.
97 Lecture at SARP from 1950s, see: AASP-JS. Translation from Polish (SR).

Architecture, he argues, needs both intuition and science.[98] Even further, he suggests in 1963, "both sides [artists and technicians] must understand their insufficiency and their mutual need to complete each other".[99]

Such a balanced vision of architecture between arts and science had its roots in Sołtan's dual formation – the official one at the Warsaw Polytechnic and the unofficial one linked to his contacts with artists and art practices. His experiences at Murnau camp, his work in Paris and Brussels in the late 1940s, and his relationships with colleagues at the Fine Arts Academy in Warsaw were crucial to both complement and complete the functionalist education he received. As he moved swiftly between these two disciplines, he claimed, "the limit [between art and technology] fades always more", while development of science enables development of arts.[100] Such a view pushed him towards calling for a more complete educational model for artists collaborating with industry, linked to his experiences in industrial design. He draws attention to the broader dimension of formation for industry – both for artists and technicians, as their education should include social, political, artistic, and technical issues. In his view, such a model would guarantee for an artist to have not only a high level of artistic quality, but also broad interests including technical thinking and the capacity of working with different branches of industry. He suggests that such education should concentrate on a transitive approach, which through a sample introduction to one branch of industry would be applicable likewise to others.[101] Such a model was thought to ease their future collaboration, for example while working in teams on industrial design assignments. These ideas are fully visible in his own idea of teamwork.

Nonetheless, Sołtan remained sceptical concerning elevating technology to the most important place in architecture, and he repeats architectural historian Stanford Anderson's statement that architecture and design are "problem worrying" rather than "problem solving".[102] As the tendency to build more high-tech architecture rose around the world in the 1980s (Centre Pompidou in Paris or the Lloyd's of London Building in the late 1970s and early 1980s), Sołtan showed scepticism concerning "monuments of technology" and technology-based architecture, which he finds neither dazzling, nor brilliant.[103] Instead, he continued to praise collaboration and synthesis within architecture, and he suggests that the surge of interest in technology decreased the artistic value of architecture as a whole.[104] Even though he saw in technology a useful asset to manage the composite nature of architecture suggesting that computers should be helpful in managing a more complex and holistic reality), he considers this only as a tool. Facing such a compound reality would lead, according to Sołtan, to two possibilities. One solution would be to make the design more objective using computer and analytical processes, but he is critical towards such a use of the computer calling it "not civilised". He claims, "designers will begin to rely on emerging techniques in systems analysis, computer science and the like, but they need not to be dominated by such tendencies. On the contrary, specific problems should determine the relevant techniques necessary and the extent of their use as aids".[105] He considers instead the second possibility of use of those techniques: to use them as tools and not as design in itself. At the same time, he is also clear about the mutual need of technology and art in architecture:

> "No single procedure can describe, step by step, the nature of design. While aspects of it need to systematised, others must remain free from the constraints of a 'method'. Parts of the process are rational and quantifiable, while other parts should remain intuitive. It is, at times, a matter for trial and error, always iterative, and never a linear process. It cannot be isolated from invention and invention necessitates a creative mind. And it is in the act of creation; or an idea, a concept, a probable solution, that design links science and art. At this point all forms of design from embroidery to architecture to engineering become similar, if not indistinguishable. Like all forms of exploratory process design can be viewed as a dialogue between fact and fancy, actual and possible, and what could be and what is".[106]

However, apart from the visual arts and science, Sołtan sees architecture as a much more inclusive discipline. He is critical towards very selective specialising in narrow disciplines, as he claims that it means to sacrifice poetic,

98 Untitled article by Sołtan on industrial design, see: AASP-JS.
99 Interview with Sołtan by J. Piaskowska, 'Wiedza + emocje = wzornictwo przemysłowe', *Słowo ludu*, 21 May 1961. Translation from Polish (SR).
100 Ibid.
101 Sołtan's comments for a research project 'Programy i metody doszkalania technicznego plastyków dla potrzeb produkcji przemysłowej', see: AASP-JS.
102 Lecture 'Architecture Today' at Harvard in October 1976, see: MASP-JS.
103 Article for *San Francisco Bay Architects' Review* from November 1982, see: MASP-JS.
104 Lecture 'Architecture Today' at Harvard in October 1976, see: MASP-JS.
105 Ibid.
106 Sołtan refers here to the ideas expressed by the British biologist Peter Medawar in his *Induction and Intuition in Scientific Thought* from 1969 in the lecture 'Architecture Today' at Harvard in October 1976, see: MASP-JS.

spiritual, and psychological elements.[107] He adds, "how can analytical methods ever be subtle and appropriate as intuition and sympathy", claiming that specialists' cannot attempt "to objectify human individual existence". For example, he refers to the limits of behaviourism and he indicates it as a mechanistic and not a human process.[108]

Instead, he is in favour of much broader thinking, and he defines good designing as "complex thinking unifying into one organic entity many different functions of an object" and as broadening functionalist ideas with more functions including biological, psychological, aesthetic, and productive.[109] He was interested in an cross-disciplinary approach already in the 1940s, when in a lecture he discussed physiological and psychological hygiene, as well as contact between natural and artificial elements.[110] Similar ideas are evident throughout several encounters – within the Workshops in Warsaw and earlier in Murnau. Arguably, contact with fellow Team 10 members nourished his broader vision of architecture as he met similarly thinking minds within the group. This thick cultural dimension can be seen in Team 10 over the more limited interests of CIAM. Given Sołtan's personal interest in broadening the horizons of architecture, he praised Team 10 for "constant inventiveness" and for "diversity of satisfying various needs, mobility, mutability and exchangeability of elements, structural growth of the construction".[111] Even though such a thick dimension of several influences was a common denominator in his previous experiences, it seems that with different members of Team 10 and their different focuses, it was brought to another level – and this was extremely important for Sołtan. Towards the late 1950s and the early 1960s, the topic of a broader understanding of architecture as a more inclusive and cross-disciplinary field seems to be more visible in Sołtan's texts. For example, when Sołtan comments on architecture as seen by Team 10 in 1964, he lists among the main characteristics, "integration of vital elements of the program, until now considered separately; discovery of new elements [referring to new disciplines architecture should be addressing]; creation of poetic values thanks to juxtapositions and contrasts of those elements".[112] Arguably, more visibility given to such issues may be a result of discussions with other members of the group, such as Alison and Peter Smithson and Aldo van Eyck. Whereas it would be difficult if not impossible to determine the relationships and influences within the group – and to determine if and how much Sołtan was influenced by their ideas – one may surely conclude that Sołtan's interest in the cross-disciplinary nature of architecture met fertile ground amid fellow Team 10 members.[113] The major visibility of such ideas in his lectures and texts from that time may be due to discussions within the group and to the growing criticism of CIAM-based architecture in general as too simplifying and restrictive. Such an evolution in his understanding of the cross-disciplinary aspect of architecture may be seen for example in a different reading of Le Corbusier's work. Whereas in 1948 he refers to it mainly as a synthesis of rational and poetic elements, in 1965 during a lecture at the Fine Arts Academy, he commented on how the *oeuvre* connected various domains: functionality, construction, biology, sociology, economy, structure, materials, world history, and politics. He claims that they all merge and become "digested" through Le Corbusier's unique creativity and poetics.[114] Such an evolution in his reading of Le Corbusier's work may suggest here two aspects: on the one hand, Sołtan has become more aware of the complexity of the problem thanks to relationships with other Team 10 members. On the other hand, his reading of Le Corbusier was at least partially projecting Sołtan's own vision of architecture onto his former employer, as it evolved following Sołtan's broadened understanding. Not only did he add personal experiences to make Le Corbusier's ideas clearer, but he also seems to have been projecting his own views. This implies that his work should not be seen as a mere consequence of Le Corbusier's work, but rather as a result of complex and mature architectural thinking, based on his own values and personal experiences.

Regardless of his reading of Le Corbusier though, the importance of synthesis in architecture is a true *Leitmotiv* in Sołtan's work. It may be seen throughout his designs, and it influenced his teaching. Some of his designs and design teams are vivid examples of such a cross-disciplinary approach to architecture. He refers to them with due humility, claiming in 1995, "I do not know what my realisations, designs, drawings, graphics, and sculptures are worth, but the very presence of those disciplines and their coexistence in life (brain – reflection – guts – emotion) of one and the same human being... it is something important for me".[115] Such a genuine interest underlines syncretism within Sołtan's own work, but a similar attitude may be found too in the formation of design teams.

syncretic teamwork

Sołtan's interest in synthesis of the arts and in the cross-disciplinary aspects of architecture had of course a direct impact on his designs, which in most cases were results of teamwork. As he preached for education that prepares for collaboration between different artists and technicians, he applied the same reasoning in his designs. From 1948, he lectured on the French Union of Modern Artists, where artists, architects, interior designers, and engineers were collaborating on design. He praises particularly the fact that they were working together from inception, which in his reading is to guarantee more efficient ideas and programming, and led to better results in general. He claims also that such a practice stands as the best collaboration between an architect and a painter, where it is impossible to tell where architecture ends and painting begins. He opposes such an attitude to the tendency in Poland at the same time, which was to expand architects' expertise even if they might be visually undereducated (Sołtan uses though a much stronger expression, calling them "so much stupid that they won't know that they are like this").[116] According to him, visually undereducated architects may have inferiority complexes related to other artists – and therefore they would distance themselves from them and aim at creating art themselves.[117]

Instead, in Sołtan's opinion, an architect should be the leader of a group of specialists, a group composed based on one's talent, temperament, and on the specific needs of the design. He suggests the architect's role as a leader, in consideration of their easier and broader understanding of different issues.[118] Such a managerial role would be very important, as the tasks undertaken by such a group would be complex. An architect would be a supervisor who guarantees the unity of the design. Sołtan bases the success of collaboration and of teamwork on the capacity of agreement and on the similar views. His personal notes from the 1950s show care in building up design teams, which – most importantly – could be different for each design, based on different people's expertise.[119] He claimed that even if the members are different, they should look towards the same general direction: he calls for "similar views, similar emotional involvement, similar loves and disgusts".[120] In 1964, he listed also among the characteristics of architects' work, "collaboration of specialists united by a common cultural background and by friendships".[121] While slight differences of opinion would be beneficial for the constructiveness of discussions and the development of the design, major divergences, claims Sołtan, would be highly disruptive. He illustrates such an idea of contrasts and similarities in a commentary on teamwork in exhibition design, which he defined as "new art connected closely to cooperation and fight between different elements, which would complete and oppose each other".[122] His interest in constructive decision-making processes within design contrasts with assigning specific tasks and framing team members' work. It would be limiting their influence on the overall layout of the design:

> "Another recommendation, of a totally different character but useful and also, it would seem, quite realistic – may be harder to implement as it relates to the very process of conceptualisation of a building [...]. I am thinking of a more substantial participation of pure visualists (painters, sculptors, graphic designers) from the very beginning in the birth of a design project. Today a standard custom is for the architects to assign to artists definite tasks while maintaining for themselves a full autonomy of the conception. This process merits, I feel, some rethinking. It seems to me that in the view of the newness of our times, this has to be constantly repeated, in view of the brutality and speed of changes in the fields related to construction, only extraordinary talents can encompass and handle the entirety of the process. The architect agrees to invite a whole swarm of advisors from all kinds of fields related to science and technology, but he or she is seldom sufficiently logical and rational, or simply modest enough, to include a visual artist among the principal consultants. Consciously or not, he or she identifies the 'artistic element' in the task with himself".[123]

107 Draft of article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, see: MASP-JS.
108 Lecture 'Architecture Today' at Harvard in October 1976, see: MASP-JS.
109 Interview with Jerzy Sołtan 'Plastyka w życiu współczesnym' from April 1961, see: AASP-JS. Translation from Polish (SR).
110 Lecture 'O syntezie architektury, malarstwa i rzeźby' in Warsaw in February 1948, see: MASP-JS.
111 Lecture at SARP from January 14th, 1960, see: AASP-JS. Translation from Polish (SR).
112 Article 'Quelques aspects du travail de l'architecte' for the review *Architecture, Formes + Fonctions* from 1964, see: MASP-JS. Translation from French (SR).
113 There are no recordings of the informal meetings of Team 10, apart from those from Otterlo from 1959.
114 Lecture at Zachęta National Gallery of Art in Warsaw after Le Corbusier's death, see: MASP-JS.
115 Sołtan to the Fine Arts Academy from May 23rd, 1995, see: MASP-JS. Translation from Polish (SR).
116 Lecture 'O syntezie architektury, malarstwa i rzeźby' in Warsaw in February 1948, see: MASP-JS. Translation from Polish (SR).
117 Ibid.
118 Lecture in Damascus in 1956, see: MASP-JS.
119 Diary notes from August 19th, 1953, see: MASP-JS.
120 Notes on religious architecture in Poland from June 1990, see: MASP-JS. Translation from Polish (SR).
121 Article 'Quelques aspects du travail de l'architecte' for the review *Architecture, Formes + Fonctions* from 1964, see: MASP-JS. Translation from French (SR).
122 Article 'U podstaw wystawiennictwa' from 1952, see: AASP-JS. Translation from Polish (SR).
123 Article 'New Churches in Poland: How many of them can be called architecture?' from October 1990, see: MASP-JS.

Whereas Sołtan was himself also an artist and could rely on his own artistic capacities, he still involved artists in his own work, such as for example the painter Jerzy Nowosielski in the designs for churches in Sochaczew and in Nowa Huta, and Wojciech Fangor in Warsaw Midtown railway station, 'Warszawianka' sporting centre, and typical school walls studies in Massachusetts. At the same time, his former co-workers recall in general a very constructive atmosphere while working on design projects. Krzysztof Meisner for example recalls that, in the Workshops, ideas were valued according to their quality and not according to who had had them, and that Sołtan was humble and looked for the team's approval.[124] Damięcki in particular appreciates the results of teamwork in the Workshops, calling them examples of "team syncretism".[125] Bogusław Smyrski underlines that even though different people were involved in the Workshops and they had different tasks, thanks to Sołtan's and Zbigniew Ihnatowicz's supervision, the final result was harmoniously composed, while the different parts of design were well integrated with each other.[126] Interestingly, such an attitude was entirely different from the one Sołtan observed as a co-worker of Le Corbusier. In Paris, he worked following a clear hierarchy.[127] He recalls in addition, "some of my colleagues who worked with Le Corbusier after me [...] reproached our boss for not recognising sufficiently the role of the collaborators".[128] Amongst many of Sołtan's co-workers contacted, none have similar criticism. While organising work in his own practice, Sołtan does not tend to impose such a system and the model for the organisation of his design work must lie then somewhere else: probably, in Murnau and in the collective work on set designs for the camp theatre. This collaborative model was then installed in the Workshops in Warsaw.

As a result of Sołtan's interest in arts, of his research of beauty, and of a cross-disciplinary conception of architecture, whether based on aesthetics or on the programmatic synthesis of different disciplines and influences, such teamwork was crucial for many projects he led, especially in Poland. Moreover, Sołtan saw in these group works the future of architectural design stating, "only a group of people would be able to lead successfully a piece of work from scratch towards architecture".[129] Whereas his views on arts and beauty may seem outdated today, like for example his references to the regulating lines and harmonic diagrams, there is undoubtedly freshness in the cross-disciplinary vision of architecture, which may be seen even today as avant-garde. The cross-disciplinary approach, extracted and strengthened through Team 10's experience, is a constant element in Sołtan's texts and ideas, and it is directly linked to his involvement in the social dimension of architecture, linked to the issue of dwellings, which may be easily seen in his lectures, articles, and writings. It points to a very broad range of interests, which together form the basis of Sołtan's architecture. Along with artistic or aesthetic attention, and social interest in the problem of human dwellings, more general references to anthropological and cultural issues are yet another element that forms the basis of Sołtan's architecture.

124 Krzysztof Meisner, untitled text on Sołtan, see: MASP-JS.
125 Interview with Jacek Damięcki.
126 Interview with Bogusław Smyrski.
127 Sołtan mentions that in his article 'Working with Le Corbusier', in *Le Corbusier: the Garland essays*.
128 Draft of the book *On Architecture and Le Corbusier* from November 1995, p. 17, see: MASP-JS.
129 Bulanda, p. 70. Translation from Polish (SR).

theory: from today's problems towards the future

it became clear to the architects that in a world where millions die not only because of the lack of food, but also because of the lack of shelter and the lack of a "roof over their heads", their primary role is to guarantee a home to those millions of people in need

– Jerzy Sołtan on the early modern architecture[1]

When explaining and referring to the origins of modern architecture, Sołtan underlines the social, cultural, and human background to it. With the words above, he somehow gives absolution to the first years of modern architecture and to their tendency to concentrate on the function, on the quantity and not on the quality of the dwelling. According to his account, as a result of rapid world population growth, the pressing question of habitat became the main problem that modern architecture had to initially respond to, which Walter Gropius referred to as "the most urgent and also the most complicated building problem".[2] Hence, although Sołtan dismissed the functional and simplifying approach to architecture, he supported the reasons behind it. His historical account of early modern architecture often refers to a dramatic vision of the need for shelter that architects responded to, but arguably, he rarely refers to this before the 1970s, but it later became a constant theme, very often referred to in conferences around the world, whether at Harvard, at the Fine Arts Academy in Warsaw, or further afield in Montreal, Miami, and Mexico.[3] Sołtan refers to the problem of habitat and "millions dying because of the lack of the shelter", at least in the late 1960s.[4] Previously he had referred to modern architecture as entering into a new age, and he quoted French philosopher Claude Lévi-Strauss to evoke an image of a new revolutionising culture, and an image of technology, capacity, and evolution. From the 1970s on, he tends to underline in a much stronger way more dramatic social aspects to the birth of modern architecture.[5] Such a shift of vision towards early modern architecture might also be related to the dynamics of the world's population. Even if it was continuously growing in the 1920s and 1930s, it seemed that there was no major change compared to previous decades. On the contrary, with the post-war surge in population, especially in Asia, Sołtan's attentiveness relates more specifically to a general climate of consciousness towards the problems of population growth. Throughout the 1960s and 1970s, growth was much faster around the world, and attention to demography in the 1960s was much more visible than in previous years. For example, a cover of *Time Magazine* in 1960 announced "The Population Explosion" linked to the growth of population in less developed countries in Africa and Asia.[6] Similar problems were raised by the United Nations, brought in by writers and economists such as Barbara Ward, who advised Robert McNamara from the World Bank and Lyndon B. Johnson on the issues of 'developing countries'. Habitat became an issue also in European countries: for example, in Poland, the demographic boom drove the construction of new schools throughout the entire country.[7] In addition, fears connected to the increasing world's population were fed by publications such as Paul Ehrlich's book *The Population Bomb* (1968). Sołtan's attentiveness to such issues was thus connected to the world of the 1960s rather than to the situation from before the Second World War. He refers to this problem as a continuously pressing issue that architecture has to answer to, even in the 1980s:

> "Shelters, whether they please us or not, they will be built: the undeniable reality of human needs requires it. The quantity of millions of people needing them grows equally dramatically. The danger of such a situation, the amount of those millions makes the most subtle and sensitive debates strangely unimportant. The slogan "do not grieve for roses when forests are burning" becomes again painfully up-to-date. It actually has never outdated, and it was cast into shadow by artistic failures of building... and architecture".[8]

1 Article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, see: MASP-JS. Translation from Polish (SR).
2 Walter Gropius, *Scope of Total Architecture* (New York: Collier Books, 1955), p. 136.
3 Lecture at the Fine Arts Academy in Warsaw in 1995, lecture at ICSID in Mexico in October 1979, lecture at the Miami University in Oxford, OH in March 1984, lecture at the Université Laval in Montreal in June 1996, lecture at Harvard in July 1990, lecture in Montreal in September 1990, see: MASP-JS.
4 The issue of habitat was at the core of the design studio of the Master Class in 1966 taught by Sert, Sołtan, Joseph Zalewski, and Albert Szabo (Chapter 8). Brief on the Master Class from October 10th, 1966, see: HGSD-JS, AA003.
5 Sołtan quotes Lévi-Strauss in many texts, as for example in article 'Tao Ho à la Chaux de Fond' from 1998, lecture in Montreal in September 1990, lecture at ICSID in Mexico in October 1979, article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, article 'Antoni Kenar i nowe czasy – stare ślady na nowych ścieżkach' from 1995, notes on religious architecture in Poland from June 1990, and lecture at Harvard in July 1990, see: MASP-JS. They refer to an excerpt from Claude Lévi-Strauss, *Race and History* (Paris: UNESCO, 1958), p. 35.
6 David Lam, 'How the World Survived the Population Bomb: Lessons From 50 Years of Extraordinary Demographic History', *Demography*, 48 (2011), 1231-1262.
7 Anna Cymer, 'Tysiąclatki – szkoły na rocznicę', *culture.pl* (2020) <https://culture.pl/pl/dzielo/tysiaclatki-szkoly-na-rocznice> [accessed on April 8th, 2020].
8 Article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, see: MASP-JS. Translation from Polish (SR).

This passage shows that Sołtan connects this historical reading of early modern architecture to the needs of his present-day world, as he also underlines several times later. Furthermore, he reproaches governments and architects for not dealing enough with the question of shelter. His accusation is that "infinitely little is being done about it [population explosion] by the various governmental organisations of the world", which means that "architects, frustrated or even angered by their own impotence amidst the verbiage of those governmental organisations in relation to the habitat, particularly that of the needy masses, have turned to other endeavours".[9] As he stated in 1984, the issue of habitat was then even more pressing than in the 1920s when the principles of modern architecture ideals were discussed.[10] He supported these ideas when developed by the students at Harvard, and when one of them, Christopher Benninger, introduced to his studio design in 1966 the issue of self-help amongst the poorest inhabitants of Latin America countries, Sołtan stood firmly to support this idea, even if it was less favourably looked at by other faculty members, who were looking for higher architecture. The same studio design became later the basis for Benninger's pilot project for self-help led by the World Bank.[11]

However, the question of habitat had already been present in international discussions on modern architecture – as for example in CIAM 10 *Charte de l'Habitat* that was issued after the congress in Dubrovnik in 1956. The attention Sołtan gives to the problem of shelter and to the needs of the global population, nevertheless points to the utmost importance of social issues in his vision of architecture, where "social" means rigorously "responding to the needs of the society". Such understanding refers, of course, to the basis of his functionalism-based education in Warsaw, and to his constant faith in the ideals of modern architecture – whether it was CIAM or Team 10. Following this sense of duty of an architect to respond to those needs, the social issues and anthropological references to broader cultural questions are a constant element in his texts. This chapter aims to analyse and to explain the importance of those issues in his work, referred and analysed against the complex context of the second half of the twentieth century. It aims to answer the question: how was Sołtan addressing social and anthropological questions in his architectural theory? In order to answer this, the chapter focusses firstly on the issues of mass production, flexibility, and the possibility of individual users' self-expression amid the need of guaranteeing shelters to the population. Secondly, it establishes a link between those issues and the previously discussed artistic questions through the Vitruvian concept of *unitas in varietate*,[12] referring to the questions of order and simplicity. It continues by analysing how these different elements – both artistic and social – might be united by the means of a programme. Finally, it discusses how the anthropological questions of the new culture permeates Sołtan's vision of architecture in relation to the never-ending project of modernity.

'masses versus individuals'

The growing population and the parallel increasing need for habitat in the second half of the twentieth century was echoed clearly in Team 10's discussions and in Sołtan's own texts. Concerns with the increase in the world's population needed to address the necessary uniformity of mass-produced residential units, but at the same time, everyone's right to self-expression linked to the cultural evolution of the welfare state. Sołtan's notes point to such a dilemma, as he was well aware of the need to guarantee both of them: he underlines the necessity to build and produce more architecture, and the requirement for it to be more individual.[13] The CIAM congresses discussed it only partially – the organisation, according to Sołtan, was generalising more complex issues in order to be able to formulate a more generally and quickly applicable solution. As a result, CIAM halted before considering the second problem, and it stopped at the stage of giving uniformity and addressing general issues.

Team 10 and mass production

Sołtan's more balanced vision, taking into account the user's individual needs, is more aligned with the research led by his Team 10 colleagues. As they continued on CIAM's research and the design of new residential architecture, several members of the group, such as Shadrach Woods, Alison and Peter Smithson, Jaap Bakema, and Ralph Erskine, were involved directly with mass residential units, many of which were linked to Le Corbusier's Unité d'Habitation in Marseille. Through high-density residential designs such as Robin Hood Gardens in London (1972), Byker Wall in Newcastle (1982), and the Carrières Centrales in Casablanca (1951-1952), discussions on the role of collective housing continued within Team 10, building on the foundations of the old CIAM. In one of the texts, Sołtan refers to building higher residential buildings – "how high?" he asks in order to answer the population's needs.[14] Even though his own built work and ideas are scarce in Team 10's publications (Chapter 5), they are much aligned with the group's ideas and they were definitely relevant for Team 10, as well as for the matters discussed during the meetings or with individual members separately. There is common ground between the two and his reading of Team 10 principles improves our understanding of his theoretical stance for architecture in general, and it points to understanding what his own legacy is within Team 10. While listing the themes important for the group, he mentions issues such as "mobility", "growth", "aesthetics of an open form", "problem of the great number", "networks", "clusters", "design of systems", "role of the user", and "contact between the general and the particular".[15] All of these relate to the dilemma of choice between mass production and freedom of individual users.

High demand for residential architecture moved the discussion towards issues such as standardisation and mass production, also reflected in Sołtan's own texts and in his interest in how to humanise them. His critical attitude towards absolutes – such as his doubts on the Modulor as universal, and his preference to operate with a more flexible system – contributed to Team 10's discussions on the matter. Even before his association with the group, he was already deeply involved with the problem of mass production, as he was amongst the first educators at the Fine Arts Academy in Warsaw to teach industrial design from 1949. His familiarity with the issues enabled him to identify in a very clear way the problem of mass housing. He points to the already mentioned contrast and paradox between the need to mass-produce residential units and to guarantee freedom of self-expression to the individual users: "the urge to keep individualism of a single human being within architectural order of the community is a constant conflict between the individual and their surroundings".[16] A similar issue was defined by Sołtan's colleague from Bakema, who in notes from the Team 10 meeting in Berlin in 1965 refers to the needs of an anonymous man in a world dominated by mass production, and by the problem of "housing for a great number".[17] Sołtan himself was well aware of Bakema's ideas, as he names his Dutch colleague and refers to his ideas directly in some writings, when using the same expression "anonymous user", an ideal entity one should be addressing when designing.[18] The main issue lay in the fact that according to Sołtan, such an anonymous user does not cherish the result of objectifying and generalising mass production. A contemporary architect, Sołtan argues, became very proud and sure of themselves and they made the claim, meaning it sincerely and not only through *reductio ad absurdum*, that "I work for masses, for the great numbers. Even if they are individual human beings, there is no time for details. Me – architect – I know their true needs, and I know what the priorities are. I know not only what to do, but also how to do it".[19] Such a sardonic account of architects' attitudes in the 1960s and 1970s points to the need to dilute somehow the designers' supreme power and to make it more subtle, to enable the users to live in an environment they have also influence on, and that they can modify too.

In order to answer to the users' actual needs, Sołtan suggested then that an architect should have two main roles: the first one would be "to create big-scale systems – at the urban scale – with the optimal, flexible, and ordering 'superstructures' as ordering framework". The second would be "to create small elements – at an object's or apartment's scale – with which the user would be filling in the superstructure framework".[20] They have to be mutually important to be able to satisfy the needs both of mass production and of the individual users.

from the particular to the general and from the general to the particular

Such a double task for the architect has its main role in guaranteeing reasonable flexibility of the system, and it can be illustrated by one of the most repeated mottos of Sołtan – "from the particular to the general and from the general to the particular". He claims that these words were used by Le Corbusier while Sołtan was working for him in Paris in the 1940s,[21] but at the same time, they became a much-repeated maxim for Sołtan's own students and co-workers. Independently one from another, they recall such a phrase as one of the mottos that was always present in Sołtan's work and teaching.[22] Such an attitude is praised by Sołtan in Team 10's

9 Sołtan refers to the pressing issue of habitat as a contemporary problem (and not only referred to historical analysis of the early modern architecture) in a lecture on the Graduate School Design from September 16th, 1997. He further criticises governmental organisations and architects for not being attentive enough to the questions of shelter in an article for *San Francisco Bay Architects' Review* from November 1982, see: MASP-JS.
10 Lecture at the Académie d'Architecture in June 1984, see: MASP-JS.
11 Interview with Christopher Benninger.
12 Latin phrase often uses by Sołtan and used by Vitruvius, meaning "unity in variety".
13 Sołtan refers to this complexity of the problem for example in an untitled draft for a lecture on modern architecture, see: AASP-JS.
14 Undated notes 'How high?', see: MASP-JS.
15 Notes on CIAM chronology and comments, and article 'Quelques aspects du travail de l'architecte' for the review *Architecture, Formes + Fonctions* from 1964, see: MASP-JS.
16 Untitled draft for a lecture on modern architecture, see: AASP-JS. Translation from Polish (SR).
17 Note from Jaap Bakema on Team 10 meeting in Berlin in 1965, see: HNI-JB, BAKEg135. Sołtan refers to the problems of habitat and mass production in many texts.
18 Sołtan names Bakema and he uses the term "anonymous user" in the lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.
19 Article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, see: MASP-JS. Translation from Polish (SR).
20 Untitled draft for a lecture on modern architecture, see: AASP-JS. Translation from Polish (SR).
21 Draft of the book *On Architecture and Le Corbusier* from November 1995, p. 39, see: MASP-JS.
22 Interviews with Urs Gauchat, with Edward Lyons, and with Thomas Holtz.

vision of architecture, referring to the group's attention to the individual user. He compares CIAM's and Team 10's approach to architecture problems by aligning the former with an attitude of "from the particular to the general", and the latter with "from the particular to the general and from the general to the particular".[23] Such an iterative manner of dealing with issues of mass production and individual users reflects the attention given to the flexibility of models proposed by the members of the group. A note from the meeting in Bagnols-sur-Cèze (unattended by Sołtan) presents the issues of flexibility as crucial for the development of architecture: "it would certainly bring a new spirit to the urban environment, to the buildings, to the objects of everyday life".[24] The focus on this issue concentrated the group's efforts on the problem of "optimum" instead of referring to the problem of "minimum" as CIAM did.[25]

The conflict between the particular needs of individual users and the requirements of mass production is connected, both in Team 10's work and in Sołtan's own writings, to the concept of users' participation. The changed name of the group's meeting in Toulouse into 'Building with People' was a prime example of such an attitude: it puts forward the need of working alongside users to define better their needs and expectations.[26] One has to mention particularly Giancarlo de Carlo as an important reference concerning the issue of users' participation in architectural design, for example through his essay *Architettura della partecipazione* from 1973.[27] It was also one of the core themes for Bakema, and he applied it in the design for 't Hool neighbourhood in Eindhoven in the Netherlands in 1971, where the inhabitants were involved in the decision-making process.[28] A similar strategy was taken by Erskine in his design for the Byker Wall in Newcastle upon Tyne, where he opened a temporary office in order to be in closer contact with future residents and to understand their expectations.[29] The need and the importance of such a phenomenon was thus a common ground for the members of the group, and Sołtan himself refers to it very positively:

> "Residents' participation [...] in the design process is of course something extremely positive [...]. The participation of the public, of clients, of a user in building design is today of course a well-known process. In the West, it was called 'participatory design', i.e. designing with participation. That name has a positive character: the relationship and the role of the users in the design process was well balanced. When the role of the user increases, when the design process becomes effectively a list of clients' demands from the architect – the name of such a process changes too: in the USA, it is called 'populist design' [...], and it starts to smell of demagogy".[30]

With such an opinion, he points to the limits of participatory architecture and he recognises that it should not dominate the design process. The populist approach to participatory design he criticises, is according to him very dangerous, as he argues that in such a situation, the decisive force to determine a design's layout would not be architect's knowledge and experience, but the demagogic skills of the most active and participative users. Such a situation could mean that "chaos would be elevated to the altars", as for example in the case of Lucien Kroll's student housing near Brussels.[31] It is worth underling that Sołtan is cautious from the very beginning of the excesses of participatory design, and as early as in 1965, he warns about giving too much freedom to the users.[32] His idea is clear: participation means the opportunity of the user to express their needs, but it does not suggest giving the pencil to clients' hands.[33] Such an attitude, in his opinion, could be a sign of a less talented architect, who would wish to compensate for their failures, lack of talent, and disappointments through a complete subjugation to their clients.[34] In Sołtan's vision, the architect – on the contrary – should be well equipped and educated for design: "the role of an enlightened, socially-oriented architect is to contribute by his generally positive social attitude". As a result, he claims that he would like architects to be treated

23 Notes on Team 10 chronology and comments, see: MASP-JS.
24 Unsigned note from Team 10 meeting in Bagnols-sur-Cèze, see: MASP-JS.
25 Article 'An Answer to *L'Architecture d'Aujourd'hui*: A Friendly Meditation' from January 1975, see: MASP-JS.
26 Sołtan refers to the change of name of the meeting from 'Building for People' to 'Building with People' in Sołtan to *Architecture d'Aujourd'hui* from October 1974, see: HNI-TT, TTEN1.
27 Giancarlo de Carlo, 'Architettura della partecipazione', in Peter Blake, Giancarlo de Carlo and James Maude Richards, *L'architettura degli anni settanta* (Milan: Il Saggiatore, 1973).
28 "t Hool Eindhoven', *Jaap Bakema Study Centre* (2020) <http://open.jaapbakemastudycentre.nl/content/t-hool-eindhoven> [accessed on April 8th, 2020].
29 Peter Blundell Jones, 'Ralph Erskine: an organic architect?', *Architectural Research Quarterly*, 18 (2014), 210-217 (p. 213).
30 Andrzej Bulanda, *Rozmowy o architekturze* (Warsaw: Muzeum Akademii Sztuk Pięknych, 1996), pp. 24-25. Translation from Polish (SR).
31 Sołtan criticises the participatory design as well as Lucien Kroll's design in draft of article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, see: MASP-JS.
32 Lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.
33 Lecture 'Where do we go from here...?' at the Virginia Polytechnic Institute and State University in December 1978, see: MASP-JS.
34 Bulanda, p. 25.

"not [as] robots, but [as] valuable partners".[35] In Sołtan's world, where an architect is also an artist, meaning they are also talented visual creators, it is unthinkable to be subjugated to the users' demands. He sees the users' participation in a different way, as the possibility of using and working with the elements that are left for them by the architect. The customisation, in Sołtan's view, is then the second stage happening after the architect's defining of the ground rules or sets of principles. He explains that already in 1968, claiming that in future, the "designer would not be forced to create different solutions, determined by the undefined or superficially described physical and emotional needs of the users. Thanks to the development of new methods, the user would be able to compose themselves, to change objects according to their own preferences, and to organise their dwelling. The designer would become then a true creator of space, a steersman, and a guide".[36] The validity of such an idea may be seen in the fact that around fifty years later, some architects follow this very scheme, although with a slightly different interpretation. Created in 2000, the architectural practice Elemental, founded by the Chilean architect Alejandro Aravena, follows a very similar scheme in many of their designs. Their housing designs as Lo Espejo in Santiago de Chile or Quinta Monroy in Iquique deal with the issue of affordable housing through giving the inhabitants the choice to finish the construction of half the apartment according to their needs.[37] The layout of the entire housing development as well as the structure of the dwellings is defined by the architect, whereas the single dwellings become customised by the inhabitants: they adapt their own dwellings within the general system.

Such an attitude refers directly to the importance of the constant correspondence and dialogue between the general and the particular, as was preached first by Le Corbusier and afterwards by Sołtan. In such a manner, mass production might be discussed and related to a smaller scale, based on an individual user. This leads to the concept of standards and it is based on the Vitruvian concept of "unity in variety" advocated by Sołtan.

order, unity, and programme: architecture between reason and beauty

The Vitruvian concept of "unity in variety" is another constant element in Sołtan's texts. It refers to the ancient Roman architecture treatise by Vitruvius, *De architectura*, where architecture is praised for reflecting unity between various elements, something that occurs normally in nature. The concept of "unity in variety" relied on a formal basis, and Vitruvius refers to symmetry and proportions as the main means to reach this. It is reflected in Sołtan's texts too, where he connects the concept to the use of regulating lines and harmonic diagrams, which at their very basis are born out of comprehension of proportions. He connects this to considerations on rectangles, on similarity in geometrical terms, and on the proportions between similar forms: in Sołtan's texts, this concept seems to be strongly based on aesthetics.[38] He calls it "the basic element of beauty" and relates it closely to the arts, comparing it also to French philosopher Charles Lalo's theory on aesthetics and science.[39] Throughout the years, he continues thus to refer to it as a principle or axiom that architecture and art are based on (Chapter 6).

However, his vision is broader than aesthetics only and the very example of "unity in variety" illustrates it well: it shows a concrete connection between aesthetic and artistic ideas on the one side, and human and social issues on the other. In his unpublished text on Le Corbusier, he criticises Palladio's Villa Rotonda for its excessive focus on formal composition and aesthetics. He claims that whereas the building was surely conceived following the logic of the formal principle of unity in variety, with different façades being treated in the same manner and with a clear reference to regulating lines, it leads to wrong assumptions and a formal dictate of aesthetics and axial symmetry. The decision not to differentiate the façades, each of them with different orientation, sunlight conditions, and functions, would be both wrong and simplifying for the architectural problem.[40] He refers to the "unity in variety" as something broader, more inclusive: the very discussion on the conflict between mass production and the needs of individual users within Team 10 is for him simply another manner of application of the Vitruvian rule.[41] He underlines both the universality and the adaptability of this rule and its clear connection to the problem of human dwellings:

35 Lecture 'Where do we go from here...?' at the Virginia Polytechnic Institute and State University in December 1978, see: MASP-JS.
36 Lecture 'Odpowiedź Ben Shanowi' from conference in Aspen, CO from 1968, see: MASP-JS. Translation from Polish (SR).
37 Alejandro Aravena, 'Elemental: a do tank', *Architectural Design*, 83 (2011), 32-37 (pp. 32-33).
38 For example, he refers to unity in variety as a concept based on aesthetics in Bulanda, p. 51; in a lecture at the Fine Arts Academy in Warsaw in 1995 and in draft of the book *On Architecture and Le Corbusier* from November 1995, see: MASP-JS; and in untitled notes by Sołtan from March 1995, see: HGSD-JS, AC007.
39 Diary notes from October 12th, 1952, see: MASP-JS.
40 Draft of the book *On Architecture and Le Corbusier* from November 1995, p. 35, see: MASP-JS.
41 Article 'Quelques aspects du travail de l'architecte' for the review *Architecture, Formes + Fonctions* from 1964, see: MASP-JS.

> "This principle has of course a universal character and it applies, as it has always applied, everywhere: at the scale of big cities and small villages and neighbourhoods, in groupings of huts, dwellings, big residences, and... palaces. Different cultures and different epochs were able to deal excellently with this principle. Unity in variety flourished through time and space. It was possible to find the discipline of the whole, without decreasing users' individuality. Coexistence of those opposites was perfected through ages. People dealt with no bigger difficulties with the changes of quantity and therefore of density of the world's population".[42]

With these words, Sołtan underlines that the Vitruvian principle is valid throughout history naturally, with no obligation put on architects, mainly thanks to the existing technical limitations, local materials, and to the clearly defined needs and customs that shape them.[43] However, with fast-growing architectural production along with the increasing role of industry, he argues that this homeostasis was disturbed. He qualifies modern architecture as a "jungle", stating that it has become much more difficult to find unity in variety in such a complex context.[44] Therefore, he sees interest in this research as the architect's obligation, whereas his ideas concerning teamwork and the cross-disciplinary aspect of architecture are built up on this same basis. He claims that it is impossible to achieve "unity in variety" without collaboration between artists and without considering scientific or technological aspects.[45] Instead, he urges architects to work towards the ideal of "unity of variety", basing their research on architectural standards, which would also enable individual users' expression.[46] An example of such a standardised design, aimed to enable adaptability to different requirements and conditions, and at the same time to guarantee "unity in variety", are Sołtan's designs for the international fair pavilions, especially the typical exhibition pavilion 'Tropik' built under his direct supervision in 1955 in Damascus, and then in New Delhi and Zagreb by other teams (Chapter 9). According to the initial typical design, the pavilions could be modified by adapting them to particular needs, but still following the same design principles. Typical elements, such as modular walls or ceilings, were able to be adapted to the needs of a particular fair, but they all followed the same logic and schemes. As it is underlined by Sołtan, typical design was studied in order not to be too vague (making prefabrication impossible) or too strict (leading to inhuman solutions), but it is meant to give common aesthetics to different fairs – as if it was today's concept design for a brand store.[47]

systems and the splendour of the order

In 1955, Sołtan writes, "XYZ is otherwise unity in variety", comparing the Vitruvian principle to a reference system, a grid that organises the space and its single elements.[48] It guarantees the needed order and simplicity, which are directly connected to the question of beauty. He adds that the Polish word "order" – "*ład*" – has the same root as "pretty" – "*ładny*", claiming that the essence of the order is part of beauty in architecture or in the arts.[49] The very question of order is important to him, as he comes back to it in several texts throughout the 1950s and 1960s, and before Venturi's infamous statement that "less is a bore", Sołtan commented that "order is not a bore".[50] Instead of seeing it as a limiting element, he identifies it with something splendid: he refers to "*splendor ordinis*", the splendour of the order, one big melody, which unites harmoniously various details. In architecture, he sees it for example in superstructures and super-beehives, which enable the coexistence of various elements following the same rules defined and depending on the technological and scientific developments.[51]

Such attention to the problem of order finds its direct application in art and architecture. Referring to a quote by Constantin Brancusi he repeatedly mentions over the years,[52] "simplicity is not an aim in itself, but eventually you reach simplicity", he claims that a successful artist or architect would eventually distill from a more complex context and reach order and simplicity. He underlines that order does not mean simplicity *tout court*, because "an artwork simple from the beginning is simply stupid".[53] For Sołtan, the concrete method of finding such a rule resides in the use of systems. He mentions that an architect "must conceive systems, which would assure order and harmony. He must 'think systems' and stop thinking about individual masterpieces".[54]

This discourse puts Sołtan close to discussions and ideas shared by other modern architects of the period. Whereas the concept of a grid can be traced back to ASCORAL and to CIAM's texts,[55] the question of systems has a much closer connotation to Team 10 and his friend and colleague Woods. Along with Alexis Josić and Georges Candilis, Woods founded a practice in Paris in 1955 and the issue of systems was amongst their main concerns, as they worked "to find a minimum structuring system, thereby leaving the maximum possibility of adaptation. They tried to develop a system of organisation which could be realised gradually and was valid for every stage of growth".[56] Sołtan was well aware of the interest of his colleague, as he mentions Woods and his interest in broader systems or grids with the example of his design for the University of Frankfurt or the building of the Free University of Berlin. Both of them are designed by Woods and his colleagues, and they are examples of a larger system, following a rule within which single units and elements are placed. Jacek Damięcki, Sołtan's student who worked at the trio's practice at that time, recalls that it was Woods who drew the main system, "the ground rules" that were to be obeyed by all the building of the campuses, and then different members of the studio designed single elements.[57] A similar design approach was taken by Sołtan in the design competition for the museum of modern art in Berlin in 1965: he claimed that with the systematic design for the building's elevations, even an undergraduate student would be able to compose them (Chapter 10).[58] The importance of the systems so typical of Woods' designs may be also seen in Sołtan's own teaching at the Graduate School of Design at Harvard in the assignments he gave to the students (Chapter 8). It is a safe assumption, given their close relationship, both as colleagues within Team 10 and as fellow teachers at Harvard, that they exchanged those ideas and they influenced each other.[59] They both worked and taught with a consciousness of the importance of systems in architectural design.

A similar approach was taken by Sołtan's old friend Oskar Hansen. He defined the problem of an "open form", presented by him at the Team 10 meeting in Otterlo in 1959. The theory assumes that architecture is to be co-created by its users, as an absorbent background, which would emphasise their actual needs and daily life.[60] This idea and the theory of an "open form" is often quoted by Sołtan amongst ideas Team 10 were working on.[61] He was also enthusiastic concerning Hansen's ideas, as was well illustrated by Sołtan's lecture from 1965, where he mentions, "this highly social approach to architecture, that is, designing systems for others to move in, leads obviously to a particular visual expression. Some call it the aesthetic of the 'open form' – an aesthetic that is in perpetual formation, perpetual birth".[62] As well as in Woods' case, Sołtan was able to confront Hansen's ideas directly and he was very interested in the "open form" theory, which relates to issues of participatory design and systems.

combinatorial possibilities and computers

The interest in systems, in some larger frameworks and grids, which would enable single users to create their own dwellings within them, is also connected to combinatorial studies (referred to as a possibility of multiple solutions coming from a limited number of elements) and – as technology developed – to the possibilities given by computers' calculating capacities. A similar idea was already present in Sołtan's work, through his work and studies of the Modulor with Le Corbusier. He argued that the measurement system's role was to "allow the building industries to produce components conceived so as to be put together in a coherent way responding with greater flexibility to the human needs".[63] Later, the very idea of systems assumed that the users are to

42 Article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, see: MASP-JS. Translation from Polish (SR).
43 Sołtan mentions all those elements as basis for the continuous presence of "unity in variety" throughout history in lecture 'Odpowiedź Ben Shanowi' from a conference in Aspen, CO from 1968, see: MASP-JS.
44 Untitled draft for a lecture on modern architecture, see: AASP-JS.
45 He underlines the connection between "unity in variety" and the collaboration with artists in notes 'Wszelka architektura ma prawo do sztuki plastycznej' from 1952-1953, see: AASP-JS. He refers to the connection between "unity in variety" and the use of science and technology in diary notes from July 15th, 1955, see: MASP-JS.
46 Interview with Sołtan 'Plastyka w życiu współczesnym' from April 1961, see: AASP-JS.
47 Sołtan describes the possibilities or adaptation of the system in a lecture in Damascus in 1956, see: MASP-JS.
48 Diary notes from July 15th, 1955, see: MASP-JS.
49 Diary notes from October 12th, 1952, see: MASP-JS.
50 Lecture at SARP from 1950s, see: AASP-JS. Translation from Polish (SR).
51 Sołtan mentions superstructures already in diary notes from October 12th, 1952, see: MASP-JS. He mentions the idea of a beehive as a system in an untitled draft for a lecture on modern architecture, see: AASP-JS.
52 He mentioned it many times, while probably one of the first traces of it comes from diary notes from October 12th, 1952, see: MASP-JS.
53 Diary notes from October 12th, 1952, see: MASP-JS. Translation from Polish (SR).
54 Article 'Quelques aspects du travail de l'architecte' for the review *Architecture, Formes + Fonctions* from 1964, see: MASP-JS. Translation from French (SR).
55 According to Eric Mumford, the concept of the grids was developed by Le Corbusier within ASCORAL, see: Eric Mumford, 'CIAM urbanism after the Athens Charter', *Planning Perspectives*, 7 (1992), 391-417 (p. 417).
56 Jürgen Joedicke, 'Notes on the Origins and Planning Methods of the Partnership', in Georges Candilis, Alexis Josić and Shadrach Woods, *Building for people* (New York: Frederick A. Praeger Publishers, 1968), p. 9.
57 Interview with Jacek Damięcki.
58 Edward Baum, member of the team who worked on the design for the Berlin museum, recalls Sołtan claiming that if his 'system' was right, then even an undergraduate student would be able to work with it, see: interview with Edward Baum.
59 Sołtan prepared a very personal and detailed memory after Shadrach Woods' death in November 1973, see: HNI-TT, TTEN28.
60 *Dom jako forma otwarta – Szumin Hansenów*, ed. by Jan Smaga, Aleksandra Kędziorek and Filip Springer (Krakow: Karakter, 2014).
61 For example, he lists a series of elements and issues that Team 10 was working on and he includes there the theory of the open form in notes on Team 10 chronology and comments, see: MASP-JS.
62 Lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.
63 Lecture 'The Modulor revisited' from the late 1970s, see: MASP-JS.

choose from within an already established range of possibilities in order to adapt to their own surroundings, whether it is a place of work or a dwelling, and it required the capacity to consider different combinations and results coming from such a model. In such a context, the main role of combinatorial tools is, according to Sołtan, to humanise the solutions and to facilitate work on standards. It meant for him to reach the highest possible number of standardised elements: as many as possible to give the users the possibility to adapt them better to their needs, and as few enough to make standardisation possible.[64]

This interest in combinatorial elements may be connected to Sołtan's contact with his friend and colleague from the Fine Arts Academy in Warsaw, Lech Tomaszewski, an engineer who was also interested in research into combinatorial possibilities in architecture.[65] They collaborated on a number of designs, such as 'Warszawianka' sporting centre and the Polish Pavilion for the 1958 EXPO in Brussels, and they co-taught the same studio at the Academy (Chapter 9). Through their contacts, Sołtan was familiar with Tomaszewski's systematic approach to analysing different possibilities and combinations or solutions to a problem. In addition, Sołtan was aware of Christopher Alexander's research and his interest in computers, studying how they could help in decision making process.[66] Using them as a tool was becoming an innovative approach in design, which Sołtan included as one of the interests of Team 10.[67]

In fact, Sołtan considered computers as a tool and a help to deal with complex systems and standard questions. He underlines their usefulness to manage composite situations over the years, between the 1970s and 1995.[68] This approach aligns itself with the Modulor and its combinatorial possibilities. Similarly as in the case of the Modulor, one needs to know how to use them. Sołtan calls computers "extremely useful tools when well applied", as he always considers that the architect cannot be guided by the computer, but that they should use the computer for their own needs.[69] This interest in the combinatorial possibilities led to another very important aspect of Sołtan's theory, which combines and ties together many different aspects of architecture – the programme.

the programme and the genius

The question of the programme[70] appears very often in Sołtan's texts, and it is usually accompanied by his recollection of Le Corbusier's quote: "to design well, you need talent, to program well, you need genius". He refers to this quote many times, and through that, he claims that the very question of programme was important for Le Corbusier.[71] Nonetheless, he admits that even if his own reading of the theme comes from Le Corbusier, it is based only on bits and pieces of random ideas, as his boss never produced any comprehensive writing on this matter.[72] However, in order to understand the importance of the question of the programme for Sołtan, it is necessary to step out of its common sense as a dry list of requirements an architect has to respond to. As an example, he gives the Unité d'Habitation in Marseille where the programme for the building included the number of the families, the size of apartments, the type of services for the community, and the dimensions of the common spaces: they were not given by the Ministry who was the commissioner, but they were entirely proposed by Le Corbusier. The programme was something broader, something that showed the genius of the designer in planning and programming functions and organisation of the building in a much broader and curatorial way. However, one of the most significant explanations of the meaning of the programme for Sołtan and of its importance is connected to his memory from Rockefeller Center in New York quoted in his lecture from 1965 and later mentioned in his manuscript on Le Corbusier:

> "The architectural merits of the Rockefeller Center were analysed, discussed and praised extensively, by many – Siegfried Giedion, for instance. The new scale, new structural qualities expressed in the slab-like volumes, the novelty of the space-time perception of these volumes. However, I believe that we owe perhaps an even stronger emotional shock to the minute white square of the skating-rink, dug in under the feet of the grey tower, and to the tiny puppet-like figures hovering and zig-zagging on it. This was a great decision – a surrealistic decision – a fairytale decision. The Hansel and Gretel skaters dancing in the skyscraper forest. A masterpiece of programming and juxtaposing functions: a skating rink as a signal spot of the heart of a world capital. After this decision, the architecture – so very grey – and the sculpture – so very gold – became unimportant. Who notices them? Who cares? One can really conclude that with this streak of genius in programming, the architect can allow himself the luxury of being a bad designer, or at least to abstain from design. 'The drabber the better', would he say. 'Let my decision work for me'".[73]

Similarly, Sołtan would argue that Le Corbusier's decision to involve the local community and to make them interact with the Carpenter Center for Visual Arts at Harvard, the latter's only building in North America, was equally stimulating.[74] Arguably, the visit to New York was a trigger for Sołtan's considerations on programme, as it was in the case of his visit to the castle in Ardennes in France for the issue of the human scale. Most of the times he mentions the importance of the programme from the 1960s and onwards, he refers to this memory of New York, even if he illustrates the idea also with Le Corbusier's quote (using it for example as a motto for a summer school in 1981).[75] Therefore, while the initial idea of the programme was likely influenced by his Corbusian experience, Sołtan developed the idea himself. In both cases – at Harvard and in New York – he is not interested in architectural features, but in the very decisions that come beforehand, in the planning and programming of the design, in the "problem worrying instead of problem solving".[76] For Sołtan, the importance of such decisions is paramount and "cannot be overemphasised", and the programme is not to be accepted passively even if "the relation between programming and designing constitutes often the most painful part of the process in the birth of a building".[77] The result however, argues Sołtan, is worth the effort, because design would be working together with programme in favour of the building's success. In the case of the Rockefeller Center the idea of placing an ice-rink amidst the skyscrapers became a magnet attracting people: the programmatic decisions are to make it easier for the design to work – "let my decision work for me", he mentions. This approach of course does not identify programme with the mere idea of juxtaposing functions: in his vision of architectural programming, this is a very poetic decision. He urges that programme should enable "the richness of life"[78] to be shown, as in case of the ice-rink: down-to-earth activities in their simplicity (again, referring to Brancusi's quote), are to give a much deeper quality to the project. Sołtan underlines that such decisions and programming are tightly connected to the artistic vision. Referring to the Rockefeller Center, he adds, "the main decision was taken on the level of the program. Whoever comes later is of minor importance, really. The main decision is not only social, but poetic".[79]

This broader meaning of programme, encompassing both a social and artistic vision, connects to the ideals of Team 10. In a commentary from 1964, Sołtan lists the main ideas of the group as "integration of vital elements of the program, until today treated separately; discovery of new elements, creation of poetic values thanks to the juxtaposition of contrasts between those elements", and "open aesthetics, sober and based on the richness of the program; rigorous use of healthy materials, sober but made beautiful thanks to the richness of contrasts; visual research going beyond the dimension of a building".[80] These elements connected the idea of programme to the previously mentioned themes – to participatory design, to systems, and to the thick cultural dimension of architecture. As a result, programming – the preliminary considerations on the design – has paramount importance on Sołtan's theoretical positions. It is equally interesting to notice that such an approach, applied more scarcely in the past, now seems to be taken into account more willingly by present-day designers. Certain architectural practices, for example Bjarke Ingels Group from Denmark, follow this idea of programmatic creativity and poetics. Just as Sołtan praised the ice-rink in the middle of a financial and business centre, the Danish practice designed a skiing slope atop of a waste-to-energy power plant.[81]

64 Interview with Sołtan 'Plastyka w życiu współczesnym' from April 1961, see: AASP-JS.
65 Interviews with Wojciech Wybieralski and with Jacek Damięcki.
66 Interview with François Vigier.
67 Notes on Team 10 chronology and comments, see: MASP-JS.
68 He referred to the usefulness of computers in lecture 'Architecture Today' at Harvard in October 1976, see: MASP-JS.
69 Lecture 'Where do we go from here...?' at the Virginia Polytechnic Institute and State University in December 1978, see: MASP-JS. Similarly, Sołtan's student Tabet claims that Sołtan would hate architecture defined as a product of Grasshopper, see: interview with Atef Tabet.
70 The meaning of "program" (he used the American spelling) in Sołtan's texts refers to a much broader understanding of a "brief". It does not mean a list of functions, but a much more elaborate opportunity of redefining architectural schemes and settled canons.
71 The issue of the programme is underlined in draft of the book *On Architecture and Le Corbusier* from November 1995, p. 26, in a lecture on the Graduate School Design from September 16th, 1997, see: MASP-JS; in Sołtan's review of Geoffrey Baker's *Le Corbusier: An Analysis of Form* from 1984, see: HGSD-JS, AC006; in Bulanda, p. 53.
72 Draft of the book *On Architecture and Le Corbusier* from November 1995, p. 38, see: MASP-JS.
73 Lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.
74 Sołtan refers to that in draft of the book *On Architecture and Le Corbusier* from November 1995, p. 34, see: MASP-JS; and in the lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.
75 Brief for "a place of spiritual retreat in San Miguel de Allende" from summer school in Mexico in 1981, see: P-JS.
76 Referred to American architectural historian Stanford Anderson's ideas, lecture 'Architecture Today' at Harvard in October 1976, see: MASP-JS.
77 Lecture on the Graduate School Design from September 16th, 1997, see: MASP-JS.
78 Bulanda, p. 65.
79 Lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.
80 Article 'Quelques aspects du travail de l'architecte' for the review *Architecture, Formes + Fonctions* from 1964, see: MASP-JS. Translation from French (SR).
81 The building of Copenhill in Copenhagen was designed by Bjarke Ingels Group and it was opened in 2019. It is a waste-to-energy power plant, with an artificial skiing slope on its roof.

However, even though the question of the programme seems to encompass many of Sołtan's other ideas, there is more to his architectural theory than aesthetic and social considerations. Throughout his entire life, he underlines the utmost importance of cultural changes linked to modern architecture, and to the development of science and technology. These anthropological considerations seem to complete the missing elements in Sołtan's vision of architecture, and they contribute to our understanding of the importance of his theory to the legacy of his work.

towards the "grassroots" of modern architecture

Social and anthropological issues related to architecture are very much connected in Sołtan's theory. Concepts such as the importance of systems, "unity in variety", and the iterative passage between the general and the particular can be readily connected to his interest in history and to vernacular architecture in particular. When Sołtan refers to the existence of the concept of "unity in variety" within history, he underlines that in the past, with fewer building materials and fewer technologies available for construction in general, it was easier to obtain a uniformed image of a city.[82] Similar ideas are found in de Carlo's commentary and analysis of the city of Siena, where he commented then that through the ages, constructions in the city followed Gothic forms, and as a result, "the Gothic of the 15th century is so intimately melded with all the Gothics of the centuries following that the mixture is imperceptible".[83] In de Carlo's reading, the historical architecture of Siena is then an example of what Sołtan calls "unity in variety". Interest in historical and vernacular architecture is actually a common trait for many Team 10 architects. Peter Smithson applauded Bakema's design for 't Hool neighbourhood in Eindhoven, commenting on it that "architectural language becomes more acceptable as it retreats into vernacular".[84] However, the focus on vernacular dwellings is perhaps most visible in van Eyck's writings on the American pueblos and on the Dogon people in Africa, and in his journeys there to better understand their cultures.[85] For Sołtan in particular, the concept of "vernacular" is important due to its connection to the ideas of "unity in variety" and systems: he argued that it illustrates very well both the openness of a system within vernacular architecture, and the order of its complex image.[86]

It is important to underline that in Sołtan's and Team 10's meaning this interest in vernacular architecture differs from its common definition relating it to folk art. In Sołtan's account, such a typical attitude results in historicism, and he relates it to the postmodernist criticism of modern architecture for the complete repugnance of history and the past in general.[87] On the contrary, he refers the idea of vernacular to something more basic, to the principles that are followed by different cultures at their early stages. He states that, "being early means comprising an authentic vernacular, not in a superficial sense, but in a basic sense".[88] An example of such an attitude may be his reference to the German cottages as illustration of his considerations of the human scale. He disparages them for superficial and literal decorations, but he also appreciates their raw connection to the human form through the height of rooms and doors,[89] a common trait Sołtan had been looking for also in other places, such as in the watermill in Yvelines in France or the pueblos in New Mexico (Chapter 6). The focus on these basic principles is in fact a constant element in his writings from the very beginning until his last years. What is referred to here as "grassroots" of architecture,[90] accompanied Sołtan throughout his entire life.

"grassroots architecture"

The idea of the "grassroots" refers to the origins of architecture and of culture in general. In his texts, Sołtan names similar concepts – the interest in principles, foundations, and beginnings – throughout his entire life since the 1940s until the late 1990s.[91] Sometimes he identifies them with more specific examples, such as for example early Greek, early Romanesque, early Chinese, and early Egyptian cultures.[92] At other times, he mentions also the early Christian architecture, cultures of India, Mesopotamia, pre-Incan America, as well as cultures of the indigenous peoples in Africa and in Australia.[93] Such interest in the indigenous cultures can be also seen in reading of Herbert Read (one of those art critics Sołtan often referred to): "for in the primitive art we see so clearly, what is so difficult to perceive in the complex products of highly cultured civilisations – the directly expressive quality of the artist's vision, its objectification in solid shapes".[94] On the contrary, "in its later stages art is overlaid by modes of life and manners that are not of its essence".[95] The concept of "grassroots" unifies vernacular aspects of architecture with historical interest in specific "burgeoning" periods in architectural history. All have in common something electrifying, something that is able to move the observer. Sołtan illustrates this well with some of his own memories – a visit to Wawel Castle in Krakow in Poland. Even narrating events that took place in his childhood from a perspective of over seventy years, he shows these had a strong influence on his ideas on architecture, and they have helped him to understand and to define the idea of a "grassroots of architecture":

> "At the age of seven – I remember it quite vividly – I was taken to Kraków – the ancient medieval capital of Poland. And there, to the imposing – it hovers above the whole town – royal castle of Wawel. Needless to say, I was instructed well in advance that what I'll see is important and also... beautiful. Thus after a considerable climbing up the castle hill, I [...] reached the main entrance to the building complex. And the main entrance – main access occurs at the newest part of the castle. The process of its erection started [...] at the very top of the hill and then logically 'cascaded' with the centuries down the slope of the hill. Thus – today the visitor enters a handsome, colonnaded Renaissance-Baroque courtyard and then – the Renaissance-Baroque interiors. Duly impressed, I was led through these classicist rooms and halls. I was however – I remember it well – not moved by what I saw. Yes, yes, all this is fine... but – I felt – it is not 'mine'. Orderly rigorous and not 'helpful' to me. And then something strange happened. I just became elated... almost gay. Something was changing around me – I felt that I 'belong to here' – that this could be mine. Quite a few years later it was given to me to realise that this change of mood occurred when entering the medieval part of the castle – [with] the white-washed row stone walls, the a-symmetric volumes, the window-apertures cut out here and there, seemingly haphazardly but somehow providing light and view right where it was needed. Since this memorable 'getting acquainted' I had a chance of entering the Kraków Wawel castle several times [...], and each time I waited suspiciously for the... experience. Shall it or shall it not re-occur? And... it never failed me. It was always there".[96]

With this memory, Sołtan illustrates the freshness and the awe that the "grassroots" could stimulate. In a retrospective analysis of this visit, he claims that his enchantment with the medieval interiors of Wawel Castle was caused by his interest in "basic pasts, in various beginnings".[97] Even if this reading is, quite probably, biased by his later experiences and contacts, it does not diminish his utmost interest in the basic principles of architecture and culture. Fascination with such early epochs however was not of interest to Sołtan alone. On the contrary, an interest in beginnings and origins was not uncommon in the twentieth century, especially amongst the artists whom he knew through Le Corbusier and amongst his fellow Team 10 members. Sołtan refers to his contacts with Le Corbusier, Fernand Léger, Constantin Brancusi, and to his knowledge of Pablo Picasso's work.[98] The latter, in particular, was inspired by the ancient Cycladic art, resulting in many similarities between cubism and the Antiquity.[99] Similarly Brancusi, was looking for the origins in the primitive exoticism of indigenous peoples and in the art of the ancient Greeks.[100] Their modern art is inspired by these historical moments and by those indigenous cultures, showing the very same interest in the "moments of burgeoning" as Sołtan showed in his fascination with the early medieval interiors of the Polish castle.

82 Sołtan mentions these elements as a basis for the continuous presence of "unity in variety" throughout history in lecture 'Odpowiedź Ben Shanowi' from a conference in Aspen, CO from 1968, see: MASP-JS.
83 Commentary was a part of his contribution to the ILAUD (International Laboratory of Architecture and Urban Design), a research group founded by him in 1974 that continued the path started by Team 10, see: Giancarlo de Carlo, 'About Santa Maria della Scala', *ILAUD Bulletin*, 2 (1986), 40-50.
84 Peter Smithson's comment 'From Team X Holland, April 4th-10th 1974 two thoughts for Terni' from April 1974 on Jaap Bakema's design of the neighbourhood of 't Hool in Eindhoven, see: MASP-JS.
85 Aldo van Eyck, 'The Pueblos' and 'The Miracle of Moderation', in *Aldo van Eyck: Collected Articles and Other Writings 1947-1998*, ed. by Vincent Ligtelijn and Francis Strauven (Amsterdam: SUN Publishers, 2008).
86 Lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.
87 Lecture at ICSID in Mexico in October 1979, see: MASP-JS.
88 Interview with Sołtan conducted by Jay Henry from 1990, see: MASP-JS.
89 Diary notes from November 13th, 1951, see: MASP-JS.
90 Sołtan does not use always the term "grassroots", but it becomes the *Leitmotiv* of some of his teaching activities at Harvard, such as the seminar 'Grassroots of the Contemporary Movement' from the 1970s. For the commodity of the text, the concept referring to the principles and origins of cultures is referred to as "grassroots" movement, whereas architecture based on such ideas is called "grassroots architecture".
91 For example, one of the first documented texts where Sołtan refers to the interest in the principles is lecture at Klub Młodych Artystów i Naukowców in Warsaw dating back to March 1948, whereas he continued to talk about the issue still in article 'Tao Ho à la Chaux de Fond' from 1998, see: MASP-JS.
92 Lecture at ICSID in Mexico in October 1979, see: MASP-JS.
93 Untitled handwritten notes on the "grassroots" architecture 'Może użytecznym okazać się', see: MASP-JS.
94 Herbert Read, *Art Now*, 3rd edn (London: Faber and Faber Limited, 1948), pp. 45-46.
95 Ibid.
96 Untitled notes by Sołtan from March 1995, see: HGSD-JS, AC007.
97 Bulanda, p. 47. Translation from Polish (SR).
98 Ibid.
99 An exhibition was organised at the Museum of Cycladic Art in Athens in 2019, see the catalogue: *Picasso and Antiquity*, ed. by Nicholas Chr. Stampolidis and Olivier Beruggruen (Athens: Museum of Cycladic Art, 2019).
100 Sanda Miller, *Constantin Brancusi* (London: Reaktion Books, 2010), p. 92.

In addition to the cubist art, there is also architecture, Sołtan argues, which follows the fascination with the origins of other cultures in a similar manner.[101] He identifies such designs with truly modernist architecture, which have not cut off from history like most modern architecture and the International Style did (Chapter 3). He argues that such a tendency within modern architecture is crucial for keeping in vivid contact with history. The most evident example of such an attitude in Sołtan's account was again Le Corbusier. The former refers many times to the Swiss-born French architect's interest in early cultures and in beginnings, such as early Christian architecture, villages in Southern Europe or in the Middle East, and in Romanesque architecture.[102] Sołtan underlines the connection between Ronchamp Chapel and the Roman catacombs and caves where the first Christians had to meet in order to avoid religious persecution. Referring to Ivan Leonidov, Sołtan underlines the timelessness and the connection between his Ministry of Heavy Industry and the ancient Mesopotamian architecture of Assyria, Babylon, and Sumer.[103] He comments also on a similar interest in essential forms in Louis Kahn's design for the Bangladesh Parliament in Dhaka.[104] Yet not mentioned by Sołtan in the context of the "grassroots", the previously mentioned examples of Team 10's interest in the vernacular and in other cultures follow the same path.

This interest in principles and in the foundations of architectural epochs and of cultures in general is, in Sołtan's opinion, not always literal. In the first texts, he does not refer, always, to specific examples in architectural history, but he mentions more general principles and origins. A more generic definition of "grassroots" in the first texts may reflect the same interest into essential truths in Le Corbusier's research on harmonic diagrams and regulating lines. Similarly, Giuseppe Terragni's unbuilt design for the Danteum, his monument to Dante, the author of the *Divine Comedy*, was to include a forest of primitive columns organised according to a composition based on the golden ratio.[105] Both through the formal references and through more theoretical research, these examples showed, according to Sołtan that "the very process of searching for the essentials was a clear continuation of a historic tradition".[106] Thus, thanks to this interest in the "grassroots", modernist architecture was kept close to history and it had connections with the past (Chapter 3). As a result, following Sołtan's reading of modernist architectural history, they "never discontinued their roots with the past, proceeded along these lines continuously, threading on the verge of the known, dear, traditional, new, resorting to the basics, to the beginning, never to the blossoming and withering".[107] It is in fact an important aspect in Sołtan's vision of the "grassroots": he does not refer to developed epochs and to developed forms, as in his opinion the latter are already influenced by the spirit of the time they were created in. Instead, he is interested in the malleable essence of primal, basic elements and times. They mean for him simply "rebirth of architecture".[108] He expresses this feeling already in 1948:

> "They call us to use the sources of 'our' people's art. Yes, but in the sense that we have to look at the sources of art in general [...]. All research of new paths brings those who make culture to the foundation of human art, to people's art – to primitive art [...]. Only through looking at whole-human ideals, we will reach national art 'on the way' [...]. Thanks to its help, we will be expressing something even higher and international".[109]

Whereas in this excerpt, taken from a lecture given in Poland in 1948, Sołtan names "people's art", which was to be praised under the socialist realism doctrine (Chapter 4), he is more tuned to "peoples' art". The latter means for him something related to the raw idea of the "grassroots", already present in his thinking at that time, showing that this concept had not changed along with the imposed doctrine in Poland. On the contrary, he has been against referring to popular or folk art, and it seems as if he was trying to 'smuggle' the concept of "grassroots" to the imagery of socialist realism.

101 Interview with Sołtan conducted by Jay Henry from 1990, see: MASP-JS.
102 He refers to these elements for example in a lecture at the Miami University in Oxford, OH in March 1984, notes 'Can tradition, history and modernism be... friends?' from 1988, interview with Sołtan conducted by Jay Henry from 1990, and lecture 'The Modulor revisited' from the late 1970s, see: MASP-JS.
103 Sołtan mentions the affinity between Leonidov's Ministry of Heavy Industry and ancient architecture for example in the article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, notes 'Can tradition, history and modernism be... friends?" from 1988, lecture at Harvard in July 1990, and notes on religious architecture in Poland from June 1990, see: MASP-JS; in Bulanda, p. 47.
104 He refers to the Parliament in Dhaka for example in draft of the book *On Architecture and Le Corbusier* from November 1995, pp. 82-83, and notes on religious architecture in Poland from June 1990, see: MASP-JS.
105 He mentions Terragni's use of the golden ratio for example in notes on religious architecture in Poland from June 1990, see: MASP-JS.
106 Lecture at the Miami University in Oxford, OH in March 1984, see: MASP-JS.
107 Lecture at Harvard in July 1990, see: MASP-JS.
108 Lecture 'Impresje Paryskie' at the National Museum in Warsaw in March 1948, see: MASP-JS.
109 Handwritten notes 'W Polsce i ZSSR nie docenia się rewolucyjności chwili w dziedzinie sztuki' from the late 1940s, see: MASP-JS. Translation from Polish (SR).

This interest in the "grassroots" and references to the origins of other cultures is seen also in Sołtan's designs and teaching. Some of his works refer to Polish Romanesque architecture – such as the Salem High School – and others, like Jaqueline Tyrwhitt's house refer to ancient Greek architecture (Chapter 10). While commenting on the issues of "grassroots" connected to the design of religious buildings, he mentions as possible references early Christian architecture, ancient churches in Syria, country churches in Burgundy, Roman caves and catacombs, and even churches in New Mexico – some of them as ideas 'borrowed' from Le Corbusier.[110] He had been keen, also, on passing this interest onto others: one of his students and his co-worker at the Workshops wrote to Sołtan after a trip to Greek ancient sites, "all of these marvels, I owe then to you, Professor".[111] Sołtan could have been pointing his students in such a direction, arguably because he wanted to show them the universal value of the beginnings and origins of cultures.[112] Similarly, referring to Antoni Gaudí's idea that "originality is return to the origin" during his teaching at Harvard, Sołtan was pointing to the importance of these concepts in the contemporary practice of architecture.[113]

from the "grassroots" to modernity

Such an interest is strictly connected to research into new ways of expression that Sołtan had been looking for within modernist architecture, common to many architects and artists: "fascination by the beginnings of other cultures in other epochs, through history and geography can be seen amongst present-day artists. A need occurs to look for [a] common basis, common foundations, always important, important also today".[114] By stating this in 1995, he shows that the concept of "grassroots" is still relevant and that architects should still be interested in the origins of other cultures. The reason for interest is a parallelism between different origins and modern times, both crucial and evident in the modernists' works. Those architects had concentrated on the same references Sołtan points at: early moments, burgeoning cultures, and building foundations of architectural movements. Those moments correspond to "the beginnings of the previous epochs to those moments when random cultures were born, and when new forms started to crystallise", which supposedly related to moments in history that had been continuously repeating over the centuries.[115]

Such a concept of recurrent basic elements in cultures and architectural epochs throughout history underlined not only correspondence between those different historical moments, but also between themselves and the present-day. "New things repeat themselves", Sołtan claims.[116] These ideal similarities and correspondences between our times and the beginnings of other cultures stand as the very reason for Sołtan's interest in the "grassroots" of architecture. Following Le Corbusier and others, Sołtan argues that the same freshness of ideas, the same virginity of forms and simplicity of concepts is found in both modernity and the "grassroots". This idea is explained in the very first pages of *Quand les cathédrales étaient blanches* (1937) – in the same book Sołtan that fell in love with (Chapter 4) – where Le Corbusier underlines the closeness of modernity and historical times. One of the most quoted excerpts from the book refers to this very concept:

> "Yes, the cathedrals were white, sparkling white, building in their whiteness and also young, and not dark, dirty, old. The whole epoch was fresh and young... And today – the present day is also young and fresh. Today also the whole word recommences".[117]

Even if Le Corbusier's words were almost sixty-years-old when Sołtan continued to refer to them, they had not lost anything of their meaning to him: "our times are young", he concludes.[118] The same youthfulness, in Sołtan's reading, directed cubist artists such as Picasso to study indigenous art from Africa, Australia, and Oceania.[119] Sołtan comments on the affinity between modernism and the "grassroots", "when seeking periods parallel to one's own [...], one is led to turn oneself towards those epochs when [...] humanity was starting

110 Notes on religious architecture in Poland from June 1990, see: MASP-JS.
111 Adolf Szczepiński to Sołtan from September 23rd, 1966, see: MASP-JS. Translation from Polish (SR).
112 For example, Włodzimierz Wittek – his co-worker at the Workshops – refers to Sołtan's affinity to the "grassroots" in his covering letter for nomination of Sołtan for *honoris causa* PhD at the Polytechnic of Warsaw from November 2000, see: MASP-JS.
113 Sołtan refers to this in notes from a seminar on students' reading of Eudardo Torroja's book *Philosophy of Structures*, organised in the fall of 1966 at Harvard, see: HGSD-JS, AA003.
114 Article 'Antoni Kenar i nowe czasy – stare ślady na nowych ścieżkach' from 1995, see: MASP-JS. Translation from Polish (SR).
115 Notes on religious architecture in Poland from June 1990, see: MASP-JS. Translation from Polish (SR).
116 Article 'Tao Ho à la Chaux de Fond' from 1998, see: MASP-JS.
117 The quote from *Quand les cathédrales étaient blanches* is mentioned in a number of texts by Sołtan including for example: notes on religious architecture in Poland from June 1990, lecture at ICSID in Mexico in October 1979, lecture 'The Modulor revisited' from the late 1970s, lecture in Montreal in September 1990, draft of the book *On Architecture and Le Corbusier* from November 1995, p. 71, see: MASP-JS; untitled notes by Sołtan from March 1995, see: HGSD-JS, AC007; and Sołtan's review of Geoffrey Baker's *Le Corbusier: An Analysis of Form* from 1984, see: HGSD-JS, AC006.
118 Untitled notes by Sołtan from March 1995, see: HGSD-JS, AC007.
119 Notes on religious architecture in Poland from June 1990, see: MASP-JS.

anew".[120] For this very reason, Sołtan tends to use and modify a communist slogan and when commenting on the right direction of contemporary art and architecture to follow he calls for the "beginnings of all cultures, unite".[121] In spite of their apparent distance, it would be possible to unite those beginnings by searching and looking for the essence common to them. The research led by cubist artists and modernist architects was thus aimed to "unite what cannot be united".[122] Sołtan explains the reasons behind that interest in the indigenous art in an undated commentary, claiming that "connection between those two opposite poles – full modernity and tradition, history, and past – is possible. [...] It is possible even without resigning from the dreams of that ineffable space".[123] By referring to the Corbusian concept, Sołtan argues that those different origins may coexist peacefully and harmonically. Since they follow the very same basis and essence, there should be no contrast between them. As an example of such peaceful coexistence, some kind of visual harmony that he refers to several times, he mentions an exhibition of modern art paintings at the Avignon castle. The exhibition, which included works by Georges Braque, Jean Gris, Paul Klee, Léger, Joan Miró, and Picasso, was organised within the old medieval walls of the popes' castle, and according to Sołtan, its apparent disorder in the layout of the paintings resulted in establishing fruitful visual correspondence between both artworks and architecture. He recalls a feeling "that this was a happy 'cohabitation', that they somehow belonged to the same world".[124] He refers to a similar sensation at a visit to a Picasso exhibition, inside the medieval Grimaldi castle in Antibes in southern France. However, whereas he praised the raw and unpolished "grassroots" aesthetics of medieval buildings and their affinity to modern art, he was much more sceptical concerning the correspondence between the same modern artworks and a more developed architecture, like that of Versailles castle or of the Elysée Palace. Both buildings, examples of French neoclassicism, did not refer to the simple and essential forms of architectural "grassroots", and according to Sołtan, such a difficult context to organise an exhibition of modern art would mean that the result would be "only thrilling as a surrealistic, perfidious cultural joke – a visual *salto mortale*".[125] Between modern art and classicism there is, he claims, inadequacy and impossibility to find dialogue, because classicism itself is too developed, too well defined by its cultural background and its canons of aesthetics. Instead, contexts consisting of a more malleable "grassroots" interior would interact well with modern art.

Such a comparison within the world of art is of course due to Sołtan's affinity to the problems of visual arts. However, a similar possibility of a happy cohabitation may be referred also to architecture and its different layers. Already in 1948, he called for a "composition based on the equal rights of different epochs and material contrasts", which would result in "amazing and moving tension of cultures, expressions, and materials".[126] This idea of the juxtaposition of different epochs in architecture was later discussed with his colleagues from Team 10, some of whom had very similar ideas. Peter Smithson formulated the term "conglomerate building", referring to the number of historical layers within one complex, which resulted in its apparent complexity fading in front of recognition of its unfolding orders. This idea, based initially on two examples of medieval buildings around Siena, with equally applicable to some examples of modern architecture. Their common characteristics lay in the capacity to develop from inside out, to adapt to the changeability of the functions of the building.[127] Aligned with Smithson's ideas, Sołtan's comment to such a turbulent process of architecture, in which buildings are often modified, was however mostly based on the poetics and emotional perception of their formal values:

> "In architecture cohabitation of different levels of stylistic development seems to be quite positive. Even more: juxtaposition of buildings that represent different levels of formal development seems often a source of intellectual and visual pleasure – or even 'thrilling delight' – authentic old and its authentic new neighbour".[128]

Given the importance of the concept for Sołtan, it seems therefore entirely natural that he had been urging and calling for others to follow this direction. Quite interestingly, throughout his life, his calls to arms for the sake of modernism did not change, which gives a basis for further consideration on the present-day actuality of

120 Lecture at ICSID in Mexico in October 1979, see: MASP-JS.
121 He repeats this call in untitled notes by Sołtan from March 1995, see: HGSD-JS, AC007; in notes on religious architecture in Poland from June 1990, and in draft of the book *On Architecture and Le Corbusier* from November 1995, p. 72, see: MASP-JS. The quote refers to the slogan "workers of all world, unite", a rallying cry from Karl Marx's *The Communist Manifesto* from 1848.
122 Article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, see: MASP-JS. Translation from Polish (SR).
123 Ibid.
124 Draft of the book *On Architecture and Le Corbusier* from November 1995, p. 75, see: MASP-JS. Similar ideas are mentioned in notes 'Can tradition, history and modernism be... friends?" from 1988, and notes on religious architecture in Poland from June 1990, see: MASP-JS.
125 Draft of the book *On Architecture and Le Corbusier* from November 1995, p. 76, see: MASP-JS.
126 Lecture at Klub Młodych Artystów i Naukowców in Warsaw in March 1948, see: MASP-JS. Translation from Polish (SR).
127 Peter Smithson, 'Conglomerate ordering', *ILAUD Yearbook*, 1 (1987), 54-59.
128 Untitled notes by Sołtan from March 1995, see: HGSD-JS, AC007.

the concept of "grassroots" and its supposed timelessness. Already in 1948, his expressed interests are "building on the visual and basic pre-primitive values", "expression of simple and essential emotions", and "purification of form and return to simple forms".[129] In addition, he claims that only on an essential visual basis would one be able to formulate an answer to the pressing architectural needs of modernity.[130] He links the idea of the "grassroots" (probably connecting them, in the 1940s, with Le Corbusier's interest in regulating lines and harmonic diagrams) with the necessary condition for a "building" to become "architecture".[131] Within those first recommendations, it is easy to find the trail Sołtan would follow in the following years. During many conferences and in many articles, he calls architects and architecture students to follow this very same line: reminding of architecture's "right" to history,[132] he urges to "go to beginnings", to look at burgeoning cultures,[133] and he emphasises the need to "re-begin" and to "run for the essentials", which was also manifested by his design teaching (Chapter 8).[134] Research on these "primary and basic values", according to Sołtan, is necessary for "improvement of the 'sense of place' and 'spiritual purpose' in human shelters and settlements of today", giving to the idea of the "grassroots" a tangible aim and reason to refer to.[135]

When in 1990, Sołtan called during a lecture in Montreal for "exploring the parallelism of births of cultures and thus of births of forms", "exploring the beginnings of styles, the common and universal origins", "researching of common foundations, universal throughout the epochs", and "researching of the eternal beginning and re-beginning", his interests had not changed much from what he was calling for forty years earlier in Warsaw.[136] His idea was still to attract attention to this affinity between modernity and the "grassroots", as well as to the utmost need of research focused on these issues. As late as the 1990s, he still claims that the interest in the "grassroots" is crucial for the future development of architecture. In an interview from 1997, he says, "[now] you have got all those impossible things by Frank Gehry. And that is petty [...]. I think that we will come through it and the mankind will come back to some essentials. But the Bilbao... [sighs]".[137]

Through the idea of the "grassroots", Sołtan tries then to relate modernist architecture to the beginnings of other cultures, based on the parallelisms between these essential moments in history. The urge to research them, to understand them, to relate to them, and to work with them is persistent throughout his life for a reason. He sees in these origins as *conditio sine qua non* for transgressing cultures, for building something new, for creating a new culture.[138] "The present day is also young" wrote Le Corbusier, and in Sołtan's vision, it means that we should refer to the "grassroots" and aim to build origins of our own culture.

a new beginning

The idea of a new beginning, yet seemingly so romantic and poetic, is based on the technological and scientific developments happening from the second half of the nineteenth century. In a world where new production methods, new scientific breakthroughs, and new theories revolutionise the reality of human life, it would be impossible for architecture to follow a historicist attitude. The revolutionary aspect of the twentieth century was analysed and described by the French philosopher Lévi-Strauss, whom Sołtan referred to continuously in his later texts. According to the former, the world had been facing an unprecedented change, something unseen since the Neolithic Revolution – a moment truly worthy of a new beginning. In such a context, it seems then natural that Sołtan aimed to use the essentials and the origins of other cultures to build and to better define the culture of our own times.

In his reading of the contemporary world, it has no defined culture, and therefore the "grassroots" stands as a magnificent means to build it.[139] Even if Lévi-Strauss' text dates back to the 1950s and it refers to the ideas already expressed in the heroic period of modern architecture, according to Sołtan the changes brought to the world by new technologies and discoveries had been so profound, that at least in the 1990s the text still stands as a valid commentary to the present-day. Just as he claimed in the late 1940s that such new times needed new

129 Lecture 'Impresje Paryskie' at the National Museum in Warsaw in March 1948, see: MASP-JS. Translation from Polish (SR).
130 Handwritten notes 'W Polsce i ZSSR nie docenia się rewolucyjności chwili w dziedzinie sztuki' from the late 1940s, see: MASP-JS.
131 Lecture at Klub Młodych Artystów i Naukowców in Warsaw in March 1948, see: MASP-JS.
132 Lecture at ICSID in Mexico in October 1979, see: MASP-JS.
133 Lecture at the New Jersey Institute of Technology from April 1992, and untitled handwritten notes on the "grassroots" architecture 'Może użytecznym okazać się', see: MASP-JS.
134 Lecture at the Miami University in Oxford, OH in March 1984, see: MASP-JS.
135 Article for *San Francisco Bay Architects' Review* from November 1982, see: MASP-JS.
136 Lecture in Montreal in September 1990, see: MASP-JS.
137 Video interview from 1997, see: HGSD-JSM.
138 Lecture at the ACSA conference in 1984, see: MASP-JS.
139 Lecture at Harvard in July 1990, see: MASP-JS.

ways of expression,[140] he reaffirms this over forty years later: "new times are worthy of new environment".[141] Following his vision of architecture as a social duty and a commitment to society, he sees, then, the architect's task – his own task – as unearthing those connections with the "grassroots", helping contemporary society to define its new culture.[142] Former student Benninger remembers Sołtan as unique thanks to his looking forward for the means to build a new civilisation.[143] In his vision of architecture as the ultimate "litmus paper" or "blood test" for society, he claims that it is necessary for the former to be defined in order for the latter to develop.[144]

> "New sensibilities have to be developed, new sources of imagination uncovered, new forces of association mobilised. [...] A new culture has to be built up. This does not occur overnight. [...] Frankly, how much time do we architects, the majority of us, dedicate to the activities I am speaking about? How much do we even know of even the most simple, basic, merely visual language and grammar? And supposing that we do know, is this kind of very basic grammar sufficient to move to the new world? Was it sufficient for the moderns of the early twenties? A total attitude, a culture – that is what is necessary".[145]

The importance of architecture for a society to reach new culture and to define its new identity is therefore crucial. It projects Sołtan's theory directly into the future, even without considering the relevance of his social and human-based observations. Not only does he consider some aspects that seem to be socially important and applied in architectural design still today, he also underlines the utmost anthropological role and value of architecture in building a new culture. This almost revered vision of the discipline, linked initially to the mechanistic revolution proper to the early years of modern architecture, arguably seems to fit the rapidly changing reality of today's world. As a result, the idea of "grassroots" can be considered as a part of his legacy and a signpost for creating new culture even today.

140 Handwritten notes 'W Polsce i ZSSR nie docenia się rewolucyjności chwili w dziedzinie sztuki' from the late 1940s, see: MASP-JS.
141 Lecture in Montreal in September 1990, see: MASP-JS.
142 Lecture at the ACSA conference in 1984, see: MASP-JS.
143 Interview with Christopher Benninger.
144 He mentions the concept of architecture as "litmus paper" in a lecture at the Miami University in Oxford, OH in March 1984, lecture at Harvard in July 1990, and notes on religious architecture in Poland from June 1990, see: MASP-JS.
145 Lecture 'The Eternal Seesaw' at Harvard in April 1965, see: HGSD-JLS, SA503.

teaching of Jerzy Sołtan

he deserves this recognition because he never relaxed or abbreviated his commitment to architecture and education; he remains a standard to which all of us aspire, as well as the conscience that reminds us when in doubt: believe, commit, risk, and truth will prevail

– Charles Gwathmey on Jerzy Sołtan[1]

With these words, one of New York Five Architects alluded to the experience of being taught by and to the influence of Jerzy Sołtan, in support of his former teacher's candidature for the Topaz Medallion award. Since 1976, the award has been given each year as the highest recognition the American Institute of Architects and the Association Collegiate of Architecture Schools can give to an architecture educator, recognising "service to the profession, academy, and society", and based on architectural projects, research, and teaching.[2] While the award includes both modern and postmodern architects – Serge Chermayeff and Marcel Breuer on one hand, and Charles Moore and Vincent Sully on the other – it is worth noting that most of the award's recipients have been AIA members. Until 2020, only ten awards were given to non-members, including Colin Rowe, Kenneth Frampton, and Denise Scott-Brown. For Sołtan, who never held AIA membership, to be nominated for and to receive this award was recognition indeed.[3] Arriving twenty-three years after his retirement from the professorship at Harvard, the award in 2002 was a strong affirmation of his continuous contribution to architectural education, in both America and elsewhere. Although it came later (the first supporting letters held at AIA Archives are from 1989), the backing was impressive, including support letters from Gwathmey and Michael Graves, from Frampton, and from architecture professors and deans from Harvard, MIT, and Berkeley.[4] They all pointed to his contribution to architectural education by teaching on modernism: "Jerzy Sołtan has brought to Harvard, and to other schools and forums, a sense that Le Corbusier, his own mentor and friend, has been alive for an extra generation".[5]

The chapter concentrates on Sołtan's teaching: on the ideas he taught, but also on his pedagogical approach. It focusses on Sołtan's time at Harvard, between 1960 and 1979, as it represented the period when he was able to teach most freely what and how he wanted to, with no interference from the authorities, as had happened in communist Poland.[6] It depicts the most mature and intense period in his teaching, compared to his teaching at the Fine Arts Academy, where he shared time between teaching and design at the Workshops.[7] Therefore, based on the teaching experience at Harvard, and with opportune references to Sołtan's other teaching duties, this chapter reflects on the question: what are the values of Sołtan's teaching? In order to answer that, it concentrates first on defining the pedagogic framework of what he was teaching referred to Harvard's teaching programme. It concentrates then on the connection between teaching and his theory, and on methods in design teaching. Finally, it addresses the relation between rational and poetic elements in his teaching and to the transitive values of his pedagogic approach.

teaching at Harvard

At the time of Sołtan's teaching at Harvard, the Graduate School of Design – and its Department of Architecture – underwent radical changes. Not only did the initial modernist-based ideals start to weaken from the mid-1970s onwards, but the teaching programme in the department also changed, corresponding with widespread students' protests in 1969. In architecture, the curriculum transformation started before these protests and, in spite of Sołtan's chairmanship at the time, did not involve enforcing his ideas. It was mostly enacted by younger members of staff. One of them, Edward Baum, recalls, "we made some radical changes under his leadership. He did not impose them, but he basically told the young faculty, "*you make the changes*". [...] As a committee – that I was part of – we changed the curriculum, and Sołtan backed it".[8] Before 1969, the school provided a hierarchically structured graduate curriculum: the school's registers from the 1960s indicate "the sequence and combination in which [the courses] are normally taken, in three and one-half successive years".[9] After 1969,

1 Gwathmey to AIA Awards Department from November 16th, 1995, see: AIA-JS.
2 ACSA, 'AIA/ACSA Topaz Medallion' (2020) <https://www.acsa-arch.org/awards/topaz-medallion/> [accessed on June 27th, 2020].
3 One of the backers of the nomination, Sołtan's former student Gauchat, mentioned that the process and the application were "political" and that it was difficult to have Sołtan's candidature accepted, see: interview with Urs Gauchat.
4 See: AIA-JS.
5 Chermayeff to AIA Awards Department from January 4th, 1989, see: AIA-JS.
6 Interview with Joanna Sołtan.
7 In addition, it has been much more challenging to trace details of Sołtan's teaching in Warsaw between 1949 and 1965, as the archival documentation is much less complete, and it is more difficult to access direct testimonies from former students.
8 Interview with Edward Baum.
9 *Official Register of Harvard University* for the Graduate School of Design for 1968-1969, p. 30, see: HGSD.

the programme's duration remained the same, but its inherent structure altered. The remodelling rejected the previous hierarchy between first, second, and third years of the programme, and the system of core and elective modules was introduced.[10] The core corresponded to three semesters of more structured teaching, with the remaining four semesters filled with optional modules and teaching tailored to suit students' varying interests, enabling contact between students from the semesters four to seven within the same optional modules. This was well accepted both by faculty and the students, as it introduced the new liberty of the latter to decide at the beginning of each semester which optional modules to take. As a result, the restructuring was a rather painless passage through troubled times at American universities, and this 'core and optional modules' system is still in place at the school today.[11] Contacts between the students were also enhanced by the GSD buildings: whereas the old Robinson Hall, a historical Beaux-Arts building designed by Charles McKim, consisted of classically conceived classroom spaces, the new Gund Hall opened in 1972 offered four floors of decks as an open space – "the trays" – where the contact between studio students was much more direct. This layout proved to be an important aspect of teaching at the GSD (ill. 5.19).

Sołtan's teaching at Harvard fitted into two major themes in the curriculum: design and architectural theory, while he was less involved with technological studies.[12] These fields formed parts of the curriculum both before and after 1969. In the register from 1968, its main elements are listed as "design studio course", "visual studies", "technological studies", and "human studies".[13] The same disciplines are indicated in the 1972 register, showing that the curriculum change did less to the content of the programme than to its organisation.[14] Within this context, the design courses were prioritised, while other disciplines functioned as auxiliary, supporting the main studios.[15] Throughout this chapter, the analysis illustrates the connections between the theoretical modules and studio modules taught by Sołtan, and shows the broad spectrum of his pedagogic activity across the school and its impact.

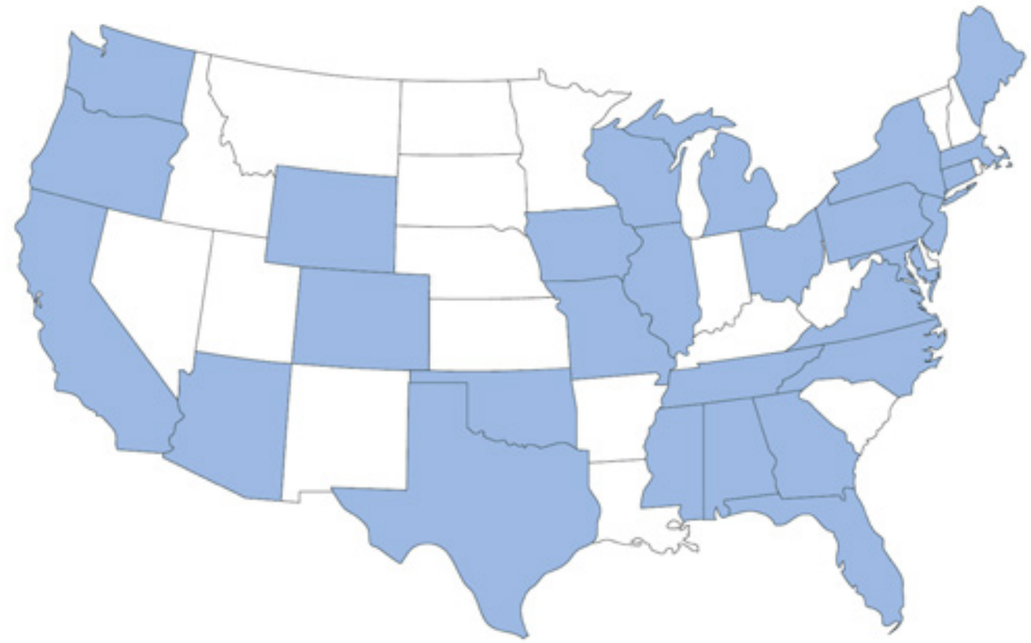
the impact of Sołtan's teaching

Throughout his lifelong teaching, starting with a short term assistantship under modern architect Marcel Lods at the Beaux-Arts in Paris in the 1940s, and continuing with his uninterrupted teaching in Poland and in the United States from 1949 until the retirement in 1979, in addition to his later commitments, Sołtan's impact on architecture teaching was impressive. It can be seen in the number of students he taught, in some of these students' own teaching afterwards, and in the recognition of their teaching too. Based on the collected data,[16] around 175 students who attended Sołtan's modules at Harvard were identified, 86% of whom were successfully traced. Whereas students from these lists remained mainly in America (67% of them continued to work or to teach in the USA across the entire country), the span over other countries was significant. A number of students established themselves in all the continents, going as far as South Africa, Japan, and Australia (ill. 8.2). More importantly, a number of Sołtan's former students were involved in teaching, lecturing at universities across the United States, Canada, Israel, Taiwan, Argentina, India, United Kingdom, and Australia. Amongst the identified former students of Sołtan, 34% of them were involved in regular teaching. Although the nature of some data overemphasises their ranks,[17] the number of educators among Sołtan's former students is significant, as well as the number of the universities they taught at, as shown in the map (ill. 8.4). Moreover, several of them were awarded the Topaz Medallion, such as Adele Naude Santos, Marvin Malecha, and Graves.

These numbers alone are however insufficient to testify of the impact of Sołtan's teaching methods and approach. It remains an open question as to how much his teaching influenced those who themselves contributed to teaching new generations of architects: that is how transferrable his approach was. An important aspect here

10 The core of the system was subsequently expanded at the behest of the students, see: interview with Edward Baum.
11 Interview with Edward Baum.
12 The study of Sołtan's involvement in teaching at the Graduate School of Design is based on the official registers of the university and the description of the single modules (if the tutor for the module is mentioned), and on the records of the Jerzy Sołtan Collection from the Harvard Special Collections, including a selection of teaching documents as notes, briefs, student assignments, student lists, and reading lists. For archival documents, see: HGSD-JS, AA and AB series.
13 *Official Register of Harvard University* for the Graduate School of Design for 1968-1969, pp. 23-25, see: HGSD.
14 *Official Register of Harvard University* for the Graduate School of Design for 1972-1973, pp. 35-39, see: HGSD.
15 Ibid.
16 The main source were here student lists for Sołtan's modules: student list from July 19th, 1966 for Master Class in architecture, student list from 1975-19766 for 'Grassroots of Contemporary Architecture 13-1b', student list from 1976-1977 for M. Arch. II, two undated student lists for M. Arch. II design studios, undated student list for 'Le Corbusier Workshop', see: HGSD-JS, AA001, AA003, AA010, AA013, AA019, AA021. In addition, information was gathered from student papers and works making part of Jerzy Sołtan Collection, and from interviewing Sołtan's students. A list of selected Sołtan's students was attached to the application for the Topaz Medallion, see: AIA-JS.
17 For example the students lists from the AIA Archives concentrated on those involved in the academia, and the student lists from Harvard relate mostly to the graduate course M. Arch. II for already accredited architects, while much less lists relate to the M. Arch. I graduate course, the normal accredited professional degree.

countries Jerzy Sołtan's students were working and teaching in



states Jerzy Sołtan's students were working and teaching in

ill. 8.1 (chapter cover) - Carpenter Center for Visual Arts at Harvard designed by Le Corbusier
ill. 8.2 - world map highlighting those countries the identified students in Jerzy Sołtan's modules have worked after having finished the course (based only on 86% traced students identified during the research)
ill. 8.3 - United States map highlighting those states the identified students in Jerzy Sołtan's modules have worked after having finished the course (based only on 86% traced students identified during the research)

is the initial affinity between the teacher and the students: some were sensible to modern architecture ideals prior to attending his modules, as they underlined during the interviews.[18] In such cases, due to the general architectural climate at Harvard, the distinction between being influenced by Sołtan himself or by the school in general becomes much fluid. His influence points mostly to Le Corbusier, who was the reference figure not only at Harvard, but also at Cornell University. The same period shows overlapping interests shared by Sołtan and the New York Five, two of whom (Gwathmey and Graves) were his students, while Richard Meier also was teaching at the GSD.[19] Some of Sołtan's students, such as for example Stan Szaflarski and Anthony Ames, in their later work show influence by Le Corbusier's forms, design approach, by the use of the Modulor.[20] As a result, whereas Sołtan's teaching definitely contributed to these interests amongst his students, it was aligned with broader tendencies afoot at the time. However, in order to fully understand the impact of Sołtan's pedagogical work, it is necessary to analyse the content and the approach to teaching: only afterwards it would be possible to discuss the meaning and the legacy of his architectural education.

continuous studio teaching

In order to create such an impact, Sołtan's pedagogic activities built continuously on his experiences from Poland, where he was teaching at the Fine Arts Academy, with modules ranging from interior design and industrial design to architecture, often concentrated on temporary or exhibition buildings.[21] At Harvard, his studio teaching was more intense, as he was less involved in professional practice, and it included modules varying from the first to the last semester of the graduate programme. One of these was for example 'Environmental Design 2-1a', an inter-departmental module for the first semester of the graduate programme described as "a course to make students see man as measure of the human habitat, whether individual or community, and to introduce students to architecture, landscape architecture, and city planning as integral and interdependent tools for forming man's physical environment", which Sołtan co-taught with Albert Szabo and Ronald Robert Gourley.[22] The module was attended by students from all departments of the GSD as an introduction to the school and acknowledgment of the overlapping and cooperation between the disciplines. He was also mentioned as one of the tutors (again, with Szabo and Gourley) for the fourth semester module, 'Architectural Design Studio 2-2ab', described as a course dealing with "simple prototype buildings" and carrying "the studies of the human habitat begun in first year".[23] After the reorganisation of the curriculum, he also delivered the 'Upper Level Design Studio Option' as a design module for the sixth or the seventh semester of the graduate programme,[24] and an 'Energy Conscious Design Studio', another optional module to be taken from the fourth semester onwards and co-taught with Michael Kim.[25] After his retirement, Sołtan continued to engage with design teaching, as for example through another 'Design Studio Option' in 1981, where he was one of the critics, with Kim and Daniel Schodek as consultants.[26] When Jaqueline Tyrwhitt, with whom he was well acquainted, was teaching at Harvard, he was involved in the Urban Design programme and he co-taught an 'Urban Design Studio' in the 1960s with her and Wilhelm von Moltke.[27]

In addition, Sołtan was involved in Harvard's M. Arch. II programme design studios, which for example he taught since 1976.[28] The curriculum was designed for students who already had a professional title, quite often

18 For example, Assif points to the interest in modern architecture he had before attending Harvard, see: interview with Shamay Assif. Davis remembers that her previous education at the Cornell University "primed" her to be more attuned to Sołtan's vision of modern architecture and his reading of Le Corbusier, see: interview with Marleen Kay Davis.

19 Graves and Gwathmey are listed among the students in the nomination for the Topaz Medallion, and they wrote support letters, see: AIA-JS. For Richard Meier, see interview with Anne Wattenberg. At the same time, Sołtan had contacts and knew Peter Eisenman, see: interview with Urs Gauchat. He also referred to John Hejduk's work when teaching, as in a brief for a lecture by Sołtan for the seminar 'Architecture Today' from December 9th, 1976, see: HGSD-JS, AA013.

20 For example, Garden Pavilion and Hulse Pavilion in Atlanta designed by Anthony Ames have many features coming from Le Corbusier's work, see: 'Architecture', *Anthony Ames Architect* (2020) <http://www.anthonyamesarchitect.com/> [accessed on September 15th, 2020]. Stan Szaflarski mentioned that in several designs he wanted to use the Modulor system, in spite of the client's doubts, see: interview with Stan Szaflarski.

21 Limited information on modules Sołtan was teaching in Poland can be found in notes on organisation and methods of the Faculty of Interior Design from 1951, see: ISPAN-BU.

22 The course is mentioned in the registers from 1967-1968, 1968-1969, and 1969-1970. Sołtan is mentioned in *Official Register of Harvard University* for the Graduate School of Design for 1967-1968, p. 15, see: HGSD.

23 *Official Register of Harvard University* for the Graduate School of Design for 1967-1968, p. 17, see: HGSD. In 1973, he was teaching this module along with Urs Gauchat, Gilbert Cass, and Joan Goody, according to the assignment (beach house) for Architectural Design studio from September 24th, 1973, see: HGSD-JS, AA010.

24 Bulletin for architecture students from 1976-1977, see: HGSD-JS, AA008.

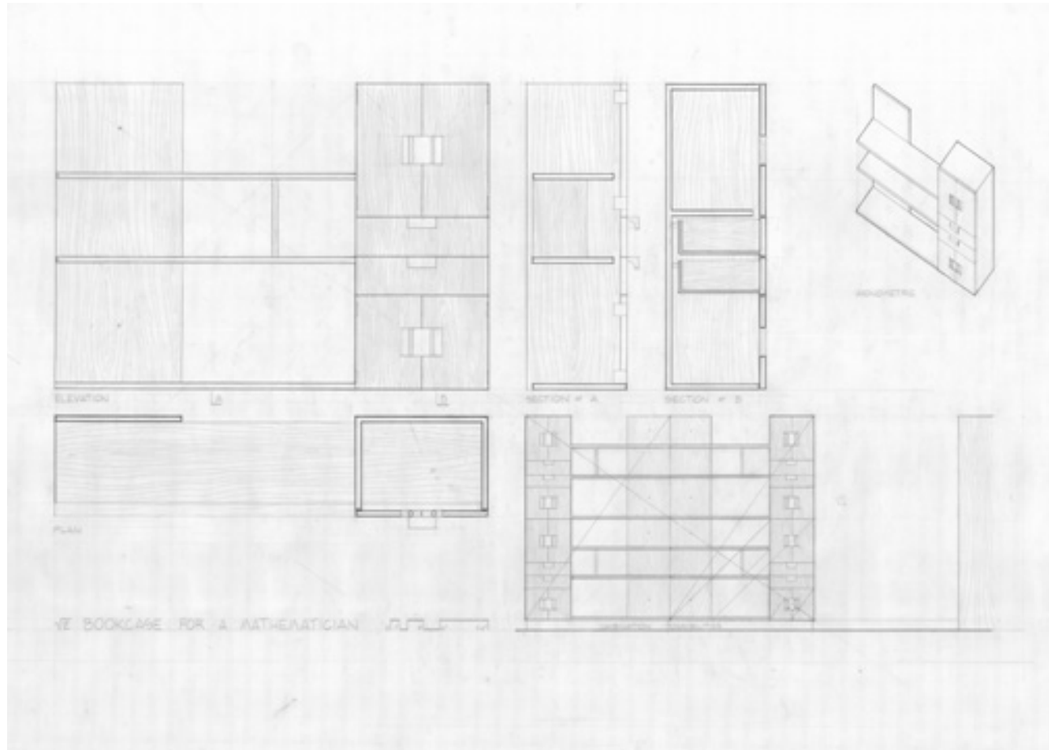
25 Brief for 'Energy Conscious Design Studio' from 1979, see: HGSD-JS, AA023.

26 Brief for 'Design Studio Option' from 1981, see: HGSD-JS, AA025.

27 For example, he is listed as one of the instructors for the Urban Design studio along with Jaqueline Tyrwhitt and Wilhelm von Moltke in 1967, according to the brief for the Urban Design Studio from February 6th, 1967, see: HGSD-JS, AA004.

28 Actually, for some of those years, like 1978, Sołtan was co-teaching with Gerald McCue. However, the latter was less involved in the studio due to administration work, see: interviews with Umberto Guarracino and with Makoto Shin Watanabe.

universities Jerzy Sołtan's students were teaching at



ill. 8.4 - world map showing the universities Jerzy Sołtan's students have been teaching at (based only on 86% traced students identified during the research)
ill. 8.5 - elevation, sections, plan, and axonometric drawing from Marleen Kay Davis design of a "bookcase for a mathematician" for the 'Grassroots of Contemporary Architecture' seminar, using golden ratio and harmonic diagrams in the elevation's composition

from another university, and wanted to pursue further studies. The programme – still in place at Harvard although nowadays longer in duration than the original – was a continuation of Harvard's former Master Class (co-taught by Sołtan together with Josep Lluís Sert, Joseph Zalewski, and Szabo),[29] which in the 1960s was "a special, limited program open only to students who already hold a first professional degree in architecture and who are well qualified for additional architectural studies".[30] Following its steps, the M. Arch. II programme was Harvard's adjustable post-professional degree proposal for individual students, where they are "as free as possible" to adapt its content to their own needs.[31] Similarly, the 'Independent Studio Course' Sołtan tutored was aimed "to provide an opportunity for advanced students to pursue a special studio interest outside the structured course offerings of the Department".[32] Throughout this programme, Sołtan was in contact with more advanced students, many of whom came from different universities from abroad. For example, the student list from one of the M. Arch. II studios included candidates who had graduated from universities in Australia, Japan, Italy, and Israel, in addition to several institutions across the United States.[33] More vivid contacts with a varied cohort of students was also guaranteed by the exchange programme between Massachusetts Institute of Technology and Harvard: students from each university had the possibility to enrol in a module at the partner university, an exchange mentioned already in 1970 and largely appreciated by the students.[34] Sołtan's involvement with the Master Class before, and with M. Arch. II programme later, is of interest because he was dealing with more advanced and more demanding students, which required his teaching to be adapted to their level. His studio teaching is illustrated through the example of these two courses.

between theory and design

In addition to design, an important element of Sołtan's contribution to teaching was theory, which also continued on his teaching experience in Poland.[35] At Harvard, many of his theory modules were connected similarly to art-based and poetic-based issues, as for example the seminar-workshop[36] from the spring semester of 1974 concentrated more in-detail on the work of Le Corbusier and his ideas on the Modulor and ineffable space. Its brief states clearly that it was aimed at students "already familiar with the work of Le Corbusier".[37] This experience led arguably to define another theoretical module, which was present in the curriculum for several years, from 1975 until Sołtan's retirement in 1979: 'Grassroots of Contemporary Architecture 13-1b', available as an optional module.[38] The example of this module seminar is used to illustrate Sołtan's approach to theory-based teaching. It was concerned mainly with a theoretical and historical overview of modernist architecture, with the particular case of Le Corbusier's work. Likewise in 1985, seminar 'The Many Faces of Contemporary Architecture and... Le Corbusier 22-3b' followed the same path.[39] These seminar modules made part of the architectural theory training offered by the GSD and they provided the students with a critical overview of humanistic themes. At the same time, Sołtan was involved in core theory teaching, as for example 'Approaches to Architecture 1-1ab', a core module after the curriculum change, co-taught with Michael Mostoller, and referred to as "a survey course dealing with many of the governing methodologies and issues that are characteristic to the study and practice of architecture. The course is organised for beginning students in design and is oriented toward a greater understanding of the scope of responsibility present in approaching architectural problems".[40] In addition to the design studios, these activities stand as a very good illustration of the transition of Sołtan's ideas and as a link to his architectural theory. The vast range of pedagogic activities in both design and theory makes, in fact, an interesting argument of how his teaching was connected to, and how it reflected, his own architectural ideas.

29 Interview with Urs Gauchat.
30 *Official Register of Harvard University* for the Graduate School of Design for 1968-1969, p. 30 see: HGSD.
31 Brief for M. Arch. II design studio from July 12th, 1977, see: HGSD-JS, AA001.
32 Brief for the 'Independent Study Course' from 1974, see: HGSD-JS, AA012.
33 Student list for M. Arch. II design studio from 1978, see: HGSD-JS, AA021.
34 *Official Register of Harvard University* for the Graduate School of Design for 1970-1971, p. 38, see: HGSD. Interview with Shamay Assif.
35 For example, back at the Academy, in 1962-1963, he taught a visual analysis module on proportion, scale, and colour – a clear reference to his visual arts interests, see: *Ineffable Space – Jerzy Sołtan, Lech Tomaszewski, Andrzej Jan Wróblewski*, ed. by Jola Gola and Agnieszka Szewczyk (Warsaw: Akademia Sztuk Pięknych, 2018), p. 202.
36 Some courses Sołtan taught were classified as "seminars", which at Harvard meant stand-alone non-core credit-giving modules including various – both practical and theoretical – activities, varying from a couple of sessions up to regular meetings throughout the entire semester.
37 Brief from 'Le Corbusier Workshop' from February 12th, 1974, see: HGSD-JS, AA007.
38 Numerous documents concerning the module are kept as part of Jerzy Sołtan Collection, see: HGSD-JS, AA001, AA007, AA008, AA009, AA010, AA020, AB016, AB017, and AB018.
39 Brief for The Many Faces of Contemporary Architecture and... Le Corbusier from 1985, see: HGSD-JS, AA031.
40 *Official Register of Harvard University* for the Graduate School of Design for 1970-1971, p. 82, see: HGSD.

teaching and theory

When talking to one of his students in Warsaw, Sołtan once said, "dear Bogusław, the fact that you are here at the Academy and not at the Polytechnic, it has been like winning a lottery ticket. Here, you can think. And there, they just draw".[41] Whereas this statement was surely influenced by a different political situation and a different relation with the Party's propaganda in both schools (Chapter 4), the pedagogic approach played a key role. The Academy not only offered a range of design and artistic studios, but also theoretical courses, and the above statement illustrates well Sołtan's appreciation of such importance of theory, which could find correspondence in his well-read character.[42] Close relation to theory accompanied him during the years of teaching at Harvard, even if in the 1960s, the school was criticised for the lack of connection between theoretical modules and design studios. While one of the GSD students at that time heavily criticised the teaching staff for not being able to deal with problem solving, creative thinking, and the theoretical foundations of design, his colleague's commentary was, "the one exception to your zip, zip, zip assessment was the design wisdom of Jerzy Sołtan. I was fortunate enough to have him for my thesis. The effect has been everlasting".[43] In order to explain how he faced the task of teaching theory, this part concentrates on the module he taught from 1975 until 1979, 'Grassroots of Contemporary Architecture'.[44]

through the "grassroots" to Le Corbusier

The very special connection with Le Corbusier in Sołtan's teaching was much visible throughout the theoretical modules and design studios the latter was teaching both at the Academy and at Harvard: to the point that some of the fellow members of the faculty in the late 1970s referred with hostility to "a Corbu mafia" at the GSD.[45] This attachment is illustrated very well by the 'Grassroots of Contemporary Architecture' module. The optional seminar included a series of weekly two-hour meetings across one semester.[46] It included formal lectures and presentations by Sołtan, but also "project analyses, short design exercises treated as attempts to implement the result of analysis, short papers (reports) presented by seminar members".[47] The students' role was to participate actively in discussions, as seminars concentrated on a free exchange of ideas and conversations, which points directly to more advanced learners.[48] As a result, it corresponded to a range of advanced learning levels, reaching the highest one: the seminar did not bother with "remembering", but included the more advanced activities as "understanding", "analysing", "evaluating", and – finally, through the design exercises – "creating".[49] Through brief practical and analytical assignments, Sołtan set out to show that the ideas and theoretical values taken from Le Corbusier's writings could still be applied in practice, underlining the connection between theory and practice – an issue often flagged as missing by the GSD students from the 1960s.[50]

In a brief introduction to the module, Sołtan described it as aimed "for the students ALREADY FAMILIAR with the work of Le Corbusier". The content was more advanced than a generic overview of the work of the architect, and according to the brief, the main learning outcome was "to get acquainted in depth with some chosen, important aspects of his life, his philosophy, and the approach to design as developed and applied by himself and his close collaborators".[51] The themes of the meetings organised throughout the semester explain why he preferred to teach students who were already familiar with Le Corbusier's work: Sołtan was not analysing Le Corbusier's architecture, but looked in depth at his theory, which would have seemed otherwise too abstract to the students.[52] Of course, it relates to his own experience with Le Corbusier and to his own design practice,

41 Interview with Bogusław Smyrski. Translation from Polish (SR).
42 Interview with Urs Gauchat.
43 *Architecture Education at Harvard Then (1965) and Now (2015)*, ed. by David Parsons (Create Space, 2016), p. 46.
44 In March 1975, Sołtan was outlining the seminar-workshop plan for the upcoming academic year 1975-1976, see: HGSD-JS, AA010.
45 Interview with Thomas Holtz.
46 Brief for 'Grassroots of Contemporary Architecture' from 1978, see: HGSD-JS, AA022.
47 Ibid.
48 The seminar was aimed mainly at students attending M. Arch. II programme, but it was also available for Master students from other departments of the GSD and from the Urban Design Program. The importance of discussions is shown in undated notes for 'Grassroots of Contemporary Architecture', see: HGSD-JS, AA008. In addition, Maragna, one of the students recalls in an interview Sołtan's interest in free discussions, see: interview with Rocco Maragna.
49 The terms relate to Bloom's Taxonomy, teaching theory formulated starting from the 1950s by a committee chaired by Benjamin Bloom (1913-1999), an American psychologist. The updated hierarchy of the taxonomy levels, from the simplest to the most demanding one is: Remembering – Understanding – Applying – Analysing – Evaluating – Creating.
50 *Architecture Education at Harvard Then (1965) and Now (2015)*, p. 15.
51 Brief for 'Grassroots of Contemporary Architecture' from 1978, see: HGSD-JS, AA022.
52 Notes from 'Grassroots of Contemporary Architecture' from 1979 by Marleen Kay Davis indicate in the schedule of the seminar's meetings: general commentary to twentieth century architecture, cultural and artistic background to Le Corbusier's work including French avant-garde, Sołtan's personal history and contacts with Le Corbusier, Le Corbusier's working methods, extensive explanation of the Modulor, and criticism of postmodernism, see: P-MKD.

making this course very personal. Sołtan used his direct contact with Le Corbusier to make students more interested in the subject and to illustrate his ideas. Thanks to a series of anecdotes and memories from the atelier, he referred to the recurring themes such as beauty and simplicity in architecture, to the use of "soft drawing methods" (for example, charcoal) while designing, to the concern for the poetic content in architecture, and to the connection between Le Corbusier and other architects and artists, for example Picasso and Kahn.[53] Using these direct experiences was surely an important aspect of his teaching, as many students from design studios and other modules recalled this even in retrospective memories. One of them recollected, "we were of course totally impressed with the fact that Professor Sołtan was 'Mr American Modulor', that was huge. I just thought it was so great, not to mention slightly goofy".[54] However, the anecdotal interest in Le Corbusier and the cleansing of his aura as an 'inhuman' modern architect was not the only outcome of the module. In addition to the close connection to Sołtan's own experiences, the seminars referred to ideas he mentioned in lectures and articles. He described it as:

> "An analysis and personal interpretation by each student of Le Corbusier's approach to design in its totality, formal problems and methods included; ex. impact of the poetic of program on form ("to design well you need talent, to program well you need genius"), evolution of the approach to technology and materials, problems of 'scale', proportion, 'regulating lines' and their evaluation, the Modulor system, its evaluation, its application, the definition of search for the 'ineffable space', etc., etc.".[55]

Within this short description of the subject, Sołtan mentioned a number of issues he often referred to in his texts and lectures on architecture. Themes such as programme, scale, the Modulor (including the mathematical and geometrical origin of the scale, and its different series), and proportions – in very close connection to Le Corbusier's ideas, but looked at through the lens of Sołtan himself – through the years became a constant element of his own artistic vision of architecture (Chapter 6), and they were illustrated in detail to the students, referring to the personal experiences he mentioned repeatedly in many texts: the genius of the programmatic choice to include a skating ice rink at the Rockefeller Center; the sensation of scale during the trip to Ardennes; and perception of the proportions of the façade of the church Saint-Louis-des-Invalides in Paris.[56] As lectured by Sołtan, issues such as regulating lines and proportions were connected to the concept of beauty: a concept that was foreign to the GSD earlier in the 1960s. The school's former students from that time recall, "GSD in general [...] really did not have the concepts of beauty or decoration worked out at all",[57] an assumption that seems far from Sołtan, from his artistic background, and from the reminiscence of the Corbusian comment "it needs to be beautiful" from his first day at the atelier.[58] This criticism does not seem to apply to Sołtan indeed, as he did include the issue of beauty in his teaching, as in the 1967 lecture entitled 'Proportion and Scale', where he talked about human scale, regulating lines, proportions, and the relation between functionality and beauty.[59] In fact, David Parsons, whose thesis was supervised by Sołtan in 1967, recognised that the question of beauty was not neglected, but rather suspended between the lines: "at the GSD, I think this word [beauty] was never spoken but often thought".[60] Indeed, after Sołtan had retired, while presenting a theory seminar at Harvard in 1988 he referred once more to Le Corbusier's "it needs to be beautiful": "*il faut que ça soit beau*", as he liked to quote it in French.[61] For the 'Grassroots of Contemporary Architecture' module, these theoretical issues were well represented by the extended reading lists required from the students, which, even if they varied throughout the years, saw the main references remain the same.[62]

As the focus of the seminar was Le Corbusier, two out of four compulsory readings in 1978 included his writings: *Vers une architecture* (1923) and *Quand les cathédrales étaient blanches* (1937), in addition to Edward Hall's *The Hidden Dimension* (1966) and Gaston Bachelard's *The Poetics of Space* (1957) – all of which the students were expected to purchase and read in order to be able to participate in the seminar's activities and

53 Sołtan referred to many episodes from his work and contacts with Le Corbusier according to the excerpts from M. Arch. II Conversatorium and from 'Grassroots of Contemporary Architecture' from 1976-1977 typed by David Strombom, see: HGSD-JS, AA020.
54 Reference to Sołtan's involvement in the definition of the Modulor system during his work at Le Corbusier's atelier and to his height, see: interview with Anne Wattenberg.
55 Brief for 'Grassroots of Contemporary Architecture' from 1978, see: HGSD-JS, AA022.
56 All of these examples are present in notes from 'Grassroots of Contemporary Architecture' from 1979 by Marleen Kay Davis, in addition to a series of sketches depicting the view of the castle in Ardennes and illustrating the right dimension of the height of a room in relation to human perception (very similar to those Sołtan drew himself in his diary in the 1950s), see: P-MKD.
57 *Architecture Education at Harvard Then (1965) and Now (2015)*, p. 85.
58 Sołtan mentions the quote "*il faut que ça soit beau*" by Le Corbusier many times, as for example in Andrzej Bulanda, *Rozmowy o architekturze* (Warsaw: Muzeum Akademii Sztuk Pięknych, 1996), p. 29.
59 Sołtan's lecture 'Man and his Visual Environment' from July 26th, 1967, see: HGSD-JS, AA005.
60 *Architecture Education at Harvard Then (1965) and Now (2015)*, p. 85.
61 Note for a seminar from 1988, see: HGSD-JS, AA034.
62 Brief and undated reading list for 'Grassroots of Contemporary Architecture' from 1978, see: HGSD-JS, AA007 and AA022.

assignments. Whereas Le Corbusier's texts were clearly connected to the module, the other two were giving an interesting philosophical and intellectual background. Bachelard's text is a cosmological cross-cultural discussion on the house and dwelling, going back to their origins and analysing their basic and primitive aspects. Interestingly, throughout the discussion, the author formulates ideas similar to the "grassroots" concept explored by Sołtan. Bachelard claims, "we must therefore experience the primitiveness of refuge and [...] return to the field of the primitive images".[63] If these ideas could have supported Le Corbusier's and Sołtan's interest in the "grassroots", Hall's text offered a true opportunity for critical reflection. His comments on differences between different cultures seem to contradict Le Corbusier's search for the universal measure and system through the Modulor: it disassembles the search for the universal *tout court*, because of the discrepancies applied to people through the bias of their own culture. *The Hidden Dimension* also includes discussion on the matter of scale, proportions, and perception. These issues were further illustrated by additional readings from another year including Jay Hambidge's texts on aesthetics and geometry: *Dynamic Symmetry: the Greek Vase* (1920), *Dynamic Symmetry in Composition as used by the Artists* (1923), and *Practical Application of Dynamic Symmetry* (1920) and by H. E. Huntley's *The Divine Proportion* (1970), where the connection to beauty is evident. Together with D'Arcy Wentworth Thompson's science treatise *On Growth and Form* (1917), these texts were useful to illustrate mathematical and geometrical principles that were connected to the theory behind the Modulor. Similarly to Hall, Wentworth Thompson and Huntley point to the existence of some physical laws determining the existence of living organisms, where mathematics could provide a formula deciphering reality, and together, they provide an interesting background vision of Le Corbusier's ideas. On the one hand, they show he was not isolated in his search for determining a universal law, but on the other one, the search of the universal is put into questioning due to the cultural differences, reflecting Sołtan's own more flexible vision of the Modulor (Chapter 6). Other suggested texts included Paul Klee's *The Thinking Eye* (1956) and *The Nature of Nature* (1964), Herbert Read's *Art Now* (1933), Francis Steegmuller's biography *Guillaume Apollinaire – a Poet among Painters* (1963), and Russell Walden's collected essays *The Open Hand* (1977). Through Klee's notes and through the interest in Apollinaire, Sołtan pointed to the importance of the artistic aspect of architecture, whereas thanks to Herbert Read's analysis, he offered another possibility of familiarising with the idea of the "grassroots" and with the interest in primitive art. In addition, Sołtan provided students with an extensive six-page bibliography of various texts written by Le Corbusier as an illustration of "major writings of a man who understood town planning, architecture, and painting as intimately-related activities".[64]

The importance given to art was connected to the importance of the connection between Le Corbusier's design and painting, underlined many times by Sołtan. He explained his master's daily schedule, with painting as an important activity influencing design,[65] referring to Le Corbusier's own words, "if generations to come attach any importance to my architecture, it is to this unknown labour that one has to attach its deeper meaning".[66] As a result, Le Corbusier was presented by Sołtan as "poet, philosopher, painter, sculptor, urbanist, architect: a tremendous worker".[67] Such a broad vision and a detailed documentation of Le Corbusier's creative work reflects the initial description of the module, aimed to understand in depth his work and ideas. At the same time, the focus on both design and art relates directly to the artistic vision of architecture shared by Sołtan, and to the latter's collaboration with artists throughout his life: in this sense, the module directly reflected Sołtan's biography and ideas.[68] In addition, the reading list's relation to poetry, science, and visual arts illustrated Sołtan's alignment with a much thicker cultural dimension, making the 'Grassroots of Contemporary Architecture' module tightly linked not only to Le Corbusier's vision of architecture, but more generally, to modernist and rationalist ideals, and trying to pass them on to the students. In handwritten notes for the module, Sołtan wrote that, "I want them really to know, to be able (if they wish) to apply [Le Corbusier's design method]".[69] His aim was to keep modernist architectural thought alive; therefore he mentioned as the objective "to get [students] acquainted with way of life as base of creation", referring directly to Le Corbusier's routine and daily schedule, and hoping that it could find interest amongst future architects.[70] An example of the approach is the central focus of the seminar on the explanation of the Modulor, which lasted for three weeks and concluded with a

63 Gaston Bachelard, *The Poetics of Space*, 2nd edn (Boston: Beacon Press, 1994), pp. 29-30.
64 Brief for 'Grassroots of Contemporary Architecture' from 1978, see: HGSD-JS, AA022.
65 Notes from 'Grassroots of Contemporary Architecture' from 1979 by Marleen Kay Davis includes a detailed schedule illustrating Le Corbusier's routine, see: P-MKD.
66 Excerpts from M. Arch. II Conversatorium and from 'Grassroots of Contemporary Architecture' from 1976-1977 typed by David Strombom, see: HGSD-JS, AA020.
67 Undated notes for 'Grassroots of Contemporary Architecture', see: HGSD-JS, AA008.
68 Notes from 'Grassroots of Contemporary Architecture' from 1979 by Marleen Kay Davis include biographical information on Sołtan's life, including his education in Poland, imprisonment in Murnau, first meeting with Le Corbusier, and his work and contacts in Paris, see: P-MKD.
69 Undated notes for 'Grassroots of Contemporary Architecture', see: HGSD-JS, AA008.
70 Undated notes from a seminar, see: HGSD-JS, AA010.

design exercise during the following meeting.[71] Shamay Assif, one of the students, recalls that in spite of his initial doubts concerning the validity of these concepts, he appreciated the poetic and romantic approach taken by Sołtan in the module, which clarified how such compositional rules could be discovered and implemented.[72] In his recollection, he points to one of the most important aspects of Sołtan's theory teaching: to make students fully understand and appreciate the foundations of modern architecture, which would lead to building its heritage. Assif recalls that the seminar aimed to re-define modern architecture, as an attempt to right its wrongs and its misunderstandings: "there was an attempt to teach us modernism, to teach us what modernism was all about", he recalls.[73] Even in the 1970s, in spite of the surging postmodern ideas, Sołtan's university teaching remained therefore close to modernist ideals, and he was able to share with the students his own reading of modern architecture development, defining and illustrating different tendencies ranging from the initial "matchbox architecture" to the "grassroots" and criticising postmodern "eclectic smorgasbord" (Chapter 3).[74]

Student papers fully prove this thesis.[75] All that are kept in the archives at Harvard and that relate to the module refer directly to Le Corbusier's designs or ideas. Papers produced follow the outline of some works from the previous seminars on Le Corbusier taught by Sołtan and dealing with, for example, regulating lines and ineffable space.[76] While some concentrated on single designs by Le Corbusier, such as the Ronchamp chapel or the Carpenter Center, others referred in a more general manner to his work. In particular, A. V. Khalili's paper on Ronchamp illustrates Sołtan's own views on Le Corbusier, as for example the duality of Corbusian work and a 'both/and' attempt to unite rational and poetic elements.[77] This underlines the direct connection between Sołtan's ideas and students' papers. Some papers aimed to analyse broader aspects of Le Corbusier's work, such as 'Ornament in the Early Work of Le Corbusier', and other essays referred clearly to his ideals, such as the one entitled 'The Free Plan'. Others followed the path leading to the coexistence of art and architecture in Le Corbusier's work, as in the paper 'Le Corbusier: His Art and Architecture'. Otherwise, a number of essays concentrated on geometry and the search for some underlying rules in design, as for example papers on mathematical influences and on the Modulor itself: 'The Modulor: Struggle for an Equilibrium' and 'Pythagorean Influences in the Development of Le Corbusier'. Other papers built on the heritage of modern ideals, such as Shamay Assif's paper from 1976 entitled 'Thoughts on Permanence and Change' referring to the connection between the past, the present, heritage, and conservation of modern architecture. Within all these examples of student papers, a common thread lies in the alignment with modernist ideals and in correspondence between students' work and Sołtan's own views.

Sołtan's ideas and teaching

While 'Grassroots of Contemporary Architecture' was only one module taught by Sołtan, it illustrates clearly the direction of his teaching throughout the years, relating closely to his personal experience with Le Corbusier, to the importance of his architecture, and to giving back the value to modern architecture ideals. In fact, apart from this module, Le Corbusier's influence in Sołtan's teaching was paramount. Through the design studios, seminars, workshops, and other occasional lectures, Sołtan is remembered by a number of his former students for the importance of his former master.[78] He underlined this when introducing himself to the students as the only person who had worked with Le Corbusier, who had been a member of CIAM and participated in Team 10, in addition to having read all Le Corbusier's texts.[79] Even if such a statement was quite bold, the value of this aspect of his teaching was recognised by a group of students who asked him to develop the contents of

71 Notes from 'Grassroots of Contemporary Architecture' from 1979 by Marleen Kay Davis indicate in the schedule of the seminar's meetings, see: P-MKD.
72 Interview with Shamay Assif.
73 Ibid.
74 Notes from 'Grassroots of Contemporary Architecture' from 1979 by Marleen Kay Davis include schemes and classification of modern architecture tendencies as an attempt to order and to explain the situation of contemporary architecture and its connection to modern ideas, see: P-MKD.
75 Some student papers produced for the module 'Grassroots of Contemporary Architecture' are part of Jerzy Sołtan Collection at Harvard, see: A. V. Khalili, 'Le Corbusier and the Notre Dame du Haut at Ronchamp'; James Adams, 'The Modulor: Struggle for an Equilibrium'; Bruce Owensby, 'Pythagorean Influences in the Development of Le Corbusier'; Anne Wattenberg, 'Ornament in the Early Work of Le Corbusier'; Alan Kawasaki, 'Expression vs. Construction: the Carpenter Center for the Visual Arts'; J. Fung, 'The Free Plan'; Konrad Kwok, 'His Art and Architecture'; Shamay Assif, 'Thoughts on Permanence and Change', see: HGSD-JS, AA009, AB016, AB017, AB018, and AD017.
76 Steve Fisher, 'Regulating lines: an investigation'; Richard Wesley 'The Fourth Dimension and the Ineffable Space', see: HGSD-JS, AA009 and AA011.
77 Notes from the 'Grassroots of Contemporary Architecture' refer to the dualism of Le Corbusier's work including both rational and poetic elements, according to undated student notes from 'Le Corbusier Workshop', see: HGSD-JS, AA009.
78 Most of former students name Le Corbusier when talking about their education: see interviews with Paul Krueger, with Urs Gauchat, with Bogusław Smyrski, with Thomas Holtz, with Anthony Ames, and with Christopher Benninger; and statement Bartholomew Voorsanger from May 13th, 2019.
79 Notes for M. Arch. II design studio from September 18th, 1978, see: HGSD-JS, AA021.

one of his architectural seminars and to concentrate on Le Corbusier.[80] Sołtan was illustrating a number of different designs by Le Corbusier not only through theoretical modules such as 'Grassroots of Contemporary Architecture', but also within design studios.[81] In addition, he was bringing students often to the Carpenter Center. One of the students recalls these site visits: "he took us over and he explained many of its design principles, and then [...] I would just go there repeatedly to look at and to try to understand what it was about".[82] As in the case of the 'Grassroots of Contemporary Architecture' module, students were engaging with Corbusian theory and ideas, such as regulating lines, the Modulor, and their application.[83] Similarly, references to the trip to Ardennes and an extensive analysis of 'good' and 'bad' examples of human scale connected to this geometrical and artistic side of Corbusian architecture (Chapter 6). Some design assignments advised to use the Modulor or regulating lines. For example, between 1974 and 1976 Sołtan gave as an assignment a design of a "bookshelf for a mathematician" (ill. 8.5) where "the geometric organisation of the main elevation of the shelf: frame, open part, close able part, drawers, etc. should be subject to a 'regulating line' system".[84] Similarly, in some assignments, as in a design of students' own house, they were expected to use the Modulor system.[85] Alike exercises had been also proposed to students at the Fine Arts Academy in Warsaw, for example related to visual composition and volumes.[86] Arguably, the weight of these ideas became more apparent in Sołtan's teaching with time, as earlier, in the 1960s, his students remember that although he was interested in the problems of proportions and harmony, he did not articulate these when teaching.[87]

Sołtan's alignment with Le Corbusier pointed to the firm belief in modern architecture ideals and it underlined the connection between theory and teaching. Sołtan's pedagogic engagement continuously aimed to defend modern architecture history, as he did for example during the 'Grassroots of Contemporary Architecture' module. After his retirement, in 1985 while presenting an optional seminar at Harvard he claimed, "the purpose of this seminar is to discuss the trends in contemporary architecture, to elucidate some misunderstandings, and eventually to dispose of a few myths related to it (e.g., its anti-historicism, anti-traditionalism, cosmopolitanism, etc.)".[88] As a result, he gave a closer look to the work of several of the most important modern architects. While he presented Le Corbusier as "exclusionary, not reductionist", he claimed that Mies' architecture following the over-repeated slogan "less is more" ended up being reductionist and negatively simplifying.[89] Aalto was illustrated as too irrational and episodic: way too personal to be applied by others.[90] Similarly, Wright never appeared in Sołtan's teaching. Instead, he mentioned architects such as Kahn, Gropius, and Meier, and artists such as Picasso and Matisse,[91] aligning pedagogy with his reading of modern architecture concentrated on rationalist thicker ideas and on a modernist vision of "grassroots architecture" (Chapter 3). As a result, his own reading of modern architecture and of its off-shots was of utmost importance for understanding his teaching. Interestingly, whereas it may point to a well-defined and rigid position of Sołtan's on modern architecture, it seems that while his views and options were clearly stated during the theoretical subjects, he was much less prescriptive while teaching design modules. One of the students underlines, "in the studio, he reacted to what you had on paper. In the theory class, he taught theory".[92]

During the 'Approaches to Architecture 1-1a' module from 1970,[93] Sołtan lectured about a number of issues linked to modern architecture, related to his own experience and illustrating his own theoretical alignment. The course was structured as Sołtan's reading of modern architecture history, with a particular focus on the issues he was familiar with: the *Athens Charter*, CIAM, and Team 10. The module consisted of three weekly meetings:

80 Note from Sołtan to McCue from August 17th, 1976, see: HGSD-JS, AA015.
81 For example, a collection of slides with photographs of a vast number of Le Corbusier's designs, for example: Villa Stein, Maison Cook, Immeuble Clarté, Pessac housing complex, Villa Savoye, Villa de Mandrot, Centrosoyuz, Palace of Soviets, Swiss Pavilion, Salvation Army Building, Plan Obus, Maison Curruchet, plans for Saint-Dié and La Rochelle, Ronchamp chapel, Maisons Jaoul, Venice hospital, Chandigarh buildings, La Tourette, Unité d'Habitation, see: HGSD-JS, CB series, 1A, 1B, 2A, and 2B.
82 Interview with Anne Wattenberg.
83 For regulating lines, see interviews with Anne Wattenberg, with Shamay Assif, and chapter 'Wyjazd na zawsze' from *Bliskie z Daleka* draft by Stan Szaflarski. The Modulor as a part of design strategy was named by a number of former students, see interviews with Anne Wattenberg, with Umberto Guarracino, with Bogusław Smyrski, and with Paul Krueger.
84 Assignment (bookshelf) from October 30th, 1974 and from March 9th, 1976, see: HGSD-JS, AA010 and AA015.
85 Undated assignment (own house), see: HGSD-JS, AA010.
86 Curriculum programme of the Faculty of Interior Design from 1960, see: ISPAN-BU.
87 Interview with Christopher Benninger.
88 Brief for 'The Many Faces of Contemporary Architecture and... Le Corbusier' from 1985, see: HGSD-JS, AA031.
89 Undated notes from a seminar, see: HGSD-JS, AA010.
90 Ibid.
91 Matisse, see: interview with Thomas Holtz. Meier, see: interview with Anne Wattenberg. Gropius, Kahn, and Picasso are mentioned in the excerpts from M. Arch. II Conversatorium and from 'Grassroots of Contemporary Architecture' from 1976-1977 typed by David Strombom, see: HGSD-JS, AA020.
92 Interview with Atef Tabet.
93 Calendar, lectures, and readings list for 'Approaches to Architecture' from 1970-1971, see: HGSD-JS, AA006.

a lecture on Mondays, a case study presentation on Wednesdays, and a discussion on Fridays. Lectures were connected to illustration of the theoretical concepts with case studies and students were expected to improve their understanding of the matter through readings, such as Le Corbusier's *Vers une architecture*, Sert's *Can Our Cities Survive* (1942), *Team 10 Primer* (1962), and the *Athens Charter* itself. The lectures themselves were grouped in clusters named "architect – process", "architect – technology", "architect – great number", and "architect – social change", and single meetings dealt with issues like 'Architect's Context: Programming', 'Mass Production', and 'Industrialisation'. Both lecture clusters and single lecture titles can be easily related to his ideas (Chapter 7). In the notes for the module, he includes for example themes such as flexibility, combinatorial capacities of computers, connection between technology and human aspects, and the importance of the programme – all of which were aligned with his theoretical position.[94] Especially the focus on the problem of the "great number" seems to be particularly fitting the discussions that at that time were at the very core of the Team 10 meetings. The concept of the programme was referred for example to the new building of the GSD, the Gund Hall (where Sołtan is said to have proposed the position of the library directly seen from the street and close to the entrance in order to encourage students to enter and study there),[95] to the cafes in Piazza San Marco in Venice, and to the flowers traditionally covering Grand Place in Brussels. According to Sołtan, these public spaces illustrated the potential of the void space, an idea that can be referred to his reading of the Rockefeller Center and its skating rink (Chapter 7).[96] These concepts were illustrated by a number of case studies, which interestingly were not taken from famous architects, but mostly from American and more local contexts (like Tufts Medical Center and Copley Square in Boston, the cooperative housing development Co-op City in Bronx, and the BART – Bay Area Rapid Transit, rail public transport system in the San Francisco Bay region), making it easier for the students to visualise and understand the concept. The structure of the course and the contents of the lectures and readings are therefore another clear example of the connection between Sołtan's theory and teaching, close to the modernist and rationalist version of modern architecture aimed to build common ground and language with the students. Similarly, in notes from a seminar from the 1970s, Sołtan included as one of the texts to read his own article 'An Answer to *L'Architecture d'Aujourd'hui*: A Friendly Meditation' from January 1975, in which he explains the connection between CIAM and Team 10.[97]

The importance of Sołtan's faith in modern architecture can be seen also in a reading list for the seminar 'The Many Faces of Contemporary Architecture and... Le Corbusier' from 1985. The list, aimed to illustrate the current state of architecture, was ordered according to importance, with publications by Le Corbusier and *Team 10 Primer* coming first, along with texts by Gropius, Klee, and Apollinaire's biography, while *The International Style* (1932) and *Complexity and Contradiction* (1966) were listed as the last positions, as Sołtan was vividly contrary to modern formalism of the International Style and to postmodernism.[98] Amongst these, it is interesting to point to *Scope of Total Architecture* by Gropius (1956). He writes there about a series of problems, most familiar to Sołtan: standardisation, housing (referring to architecture as a "social art"), but also about the importance of the interdisciplinary aspect of the architecture design process and the artistic side of architectural education. In addition, he expresses directly his criticism towards the International Style: "there is no such thing as International Style", he claims, adding that to aspire to define a style means to freeze architecture and to stop its development.[99] Through giving such readings to the students, Sołtan used Gropius to strengthen his own vision of modern architecture and his own theoretical credo: and using one of the most prominent predecessors at Harvard was surely a strong point in his criticism of postmodernism, which he opposed vividly many times. For example, in a seminar in 1988, he aimed to explain the misunderstandings of modern architecture and to point to the flaws of postmodernism described as a "joke", "caricature", and "thumbing nose".[100] Such a clear alignment with modern architecture ideals makes the discussion on his design teaching even more interesting.

design studio teaching

Similar to his theoretical teaching, design studios were well inscribed into Sołtan's theory and experiences. As he taught studios at all stages of higher education, starting from the first year and ending at Master level, different modules corresponded to varied approaches, but in order to illustrate his design teaching, this chapter concentrates on the design studio delivered for the Masters students in the 1960s and 1970s, and through the analysis of its programme, reading lists, discussions, assignments, and timetable, it is possible to draw a complete picture of it.

Master Class studio: theory and habitat

The general programme for the 1966 Master Class shows connections between theory and teaching, and between theory and practice. The programme was to follow three directions including Humanities, Sciences (Technology), and Visual Research, according to the recommendations by the teaching team composed of Sołtan, Mitchell, and Szabo already in 1962.[101] The same focus on humanities, structures, and visual research refers however to earlier programmes at the GSD.[102] The same elements are listed as the main aspects of architectural teaching at the Academy in Warsaw for Sołtan's course from 1960.[103] While this correspondence is far too limited to assume that the attention to these three areas at Harvard is linked to Sołtan's presence and his former experiences, it is safe to claim that such a focus was close to the modernist and rationalist vision of architecture, going far beyond the reductive functionalism of the 1920s and 1930s. The presence of both technology and humanities remained indeed a constant element in Sołtan's studio teaching, with students remembering their importance also in the late 1970s.[104]

Connection between these disciplines could be seen for example in the series of readings the students were required to complete prior to the beginning of the Master Class programme. At the beginning of July, they were provided with a reading list including: Sigfried Giedion's *Space, Time and Architecture* (1941), Le Corbusier's *Quand les cathédrales étaient blanches*, Lewis Mumford's *Technics and Civilization* (1934), and Eduardo Torroja's *Philosophy of Structures* (1958).[105] Le Corbusier's publication was a clear reference to Sołtan's reading of his former employer's work, close to the modernist vision of modern architecture, based on the parallel to the beginnings of other epochs and young movements. Similarly, Giedion's history of modern architecture followed the path closer to history and looked for its origins in the previous centuries, alluding to the concept of universality (Chapter 3). Mumford's text is an erudite discussion with links to history, art, literature, philosophy, geography, politics, and science, which surely is similar to Sołtan's interest in critical and well-educated argument.[106] The author discusses the machine revolution as praised by Le Corbusier and he points to the processes within Western cultures, which led throughout the ages to define the importance of the machines. For Sołtan, such a text could thus be both a philosophical grounding for modern ideas (also through references to cubism) and an illustration of an eloquent discussion. Torroja's text seems to be chosen similarly in order to stimulate the students for critical thinking: it focusses on the need to reflect on the reasons and the logic behind structural choices, based on the initial requirements for the structure. Thanks to the knowledge of these texts, the students were more prepared for long discussions with Sołtan during critiques and conversations on designs: they introduced the students to the intellectual context at Harvard, and were considered, according to some students, considered by the faculty as "family Bibles".[107]

In addition to the readings, the importance of history in the Master Class, recognised by Sert, Sołtan, and Zalewski, was underlined by one of the 1967 students.[108] Therefore, through these texts, the students were introduced to the theoretical position of both the school and their teachers. They were aimed to build common ground for understanding and a reference to the architectural worldview the students were expected to refer to during the course.[109] They were asked to prepare a double submission for each of the publications: "a formal report, carefully stating what you feel most important about the book" and "an informal group of notes, quotations, ideas, excerpts, etc." – both of them to be handed in at the first autumn meeting, giving the teachers the opportunity to be acquainted with their ideas. Such a method may relate to Sołtan's own manner of taking notes on readings: in his diary entries from between 1951 and 1956, he was similarly annotating quotations

94 Notes for 'Approaches to Architecture' from 1970-1971, see: HGSD-JS, AA006.
95 Bulanda, p. 67.
96 Notes for 'Approaches to Architecture' from 1970-1971, see: HGSD-JS, AA006.
97 For the article 'An Answer to *L'Architecture d'Aujourd'hui*: A Friendly Meditation' from January 1975, see: MASP-JS.
98 Reading list for 'The Many Faces of Contemporary Architecture and... Le Corbusier' from 1985, see: HGSD-JS, AA031. For criticism of postmodernism, see interviews with Urs Gauchat, with Shamay Assif, with Paul Krueger, and with Simon Smithson.
99 Walter Gropius, *Scope of Total Architecture* (New York: Collier Books, 1955), pp. 14-15.
100 Note for a seminar from 1988, see: HGSD-JS, AA034.
101 Brief for the Master Class in Architecture from October 10th, 1966, see: HGSD-JS, AA003.
102 For example in a note on the curricula from April 20th, 1961, see: RIBA-JT, TyJ/18/6.
103 Notes on the curriculum programme of the Faculty of Interior Design from 1960, see: ISPAN-BU.
104 For example, Thomas Holtz remembers initial research into history of architecture in a design studio in 1977, see: interview with Thomas Holtz. Davis remembers Sołtan's involvement and sensitivity to energetical efficiency design in a design studio from 1979, see: interview with Marleen Kay Davis.
105 Reading list for the Master Class in Architecture from July 1st, 1966, see: HGSD-JS, AA003.
106 Mumford's text also can be traced back to Sołtan's interest in another publication, *Culture of Cities*, which he ordered for the POW camp's library when in captivity. Sołtan mentions this in a video interview from 1997, see: HGSD-JSM.
107 Interview with Christopher Benninger.
108 *Architecture Education at Harvard Then (1965) and Now (2015)*, p. 90.
109 Actually some of the students from the 1967 Master Class refer to the fact that the school was following a "dogma": the school's architectural worldview was very clearly defined at that time, see: *Architecture Education at Harvard Then (1965) and Now (2015)*, p. 21.

along with his own ideas.[110] Arguably, he proposed the same procedure for the students in order to understand their critical and analytical potential. The module was to start officially in late September, and during the first meeting, the students were expected to submit the reading reports and notes. It was then the first assignment they were handling in the studio, making it adamant that practice was not limited to design exercises only, but it required and was based on a theory beneath them. This connection was further developed as the programme included compulsory and elective courses to enter into the detail of the three core disciplines, with all of them to be synthesised within design. According to the brief, the studio was to include both theoretical and practical elements:

> "Major attention in the Design Studio will be focussed upon one of the most urgent universal problems in the world today, 'Habitat'. After a short period devoted to a sketch problem of a character somewhat removed from 'Habitat', the class will start its investigation into the world requirements regarding 'Habitat' today. This two-week period of research will be summed up by a graphic and verbal presentation on the part of each team to the rest of the class during a two-day review and discussion. A special sketch problem related to the research of three days duration will follow and after a two-day review and discussion, the main project will be developed. Seminars on 'Habitat' will be held during this main design period (together with seminars discussing the books). During the housing problem, sketch problems of one to three day duration, of a deliberately different character, will be issued to develop and exercise those aspects of design that would not ordinarily be stressed in problem of low cost housing. Some of these sketches may be issued to and discussed concurrently with students in the First Year Studio [...]. An attempt will be made to sum up both of the housing research and the subsequent designs in some form that would lend itself to possible publication".[111]

From this studio brief, it is evident that the focus was aligned with Sołtan's attention to the issue of the growing world population and to the need for "habitat", as he referred to the need of human dwellings: an issue he continuously underlined since the 1960s (Chapter 7). At the same time, this focus was at the very core of the housing discussions between Team 10 members and it defined architecture teaching at the GSD, concentrated on mass housing and rejecting the idea of private residences.[112] As a result, the design studio assignment was aligned with not only Sołtan's ideas, but also with the school's direction, and with the general architectural discussion of the time. The main problem 'Habitat: Today's Dilemma' was presented to the students in early October, after which they were divided into groups, each one of which was to study low cost housing in different areas: Western Europe, Eastern Europe, USA, Latin America, Asia, India, and Africa, as a clear recognition of the worldwide importance of the issue. In addition, another group was to form a 'Standards Committee', which was to formulate the guidelines to be followed by all the students afterwards: a very important aspect of the design studio policy applied by Sołtan.[113] These recommendations resulted in a research base making the designs closer to real-life circumstances, including details on geography (topography, climate, natural resources, and land use), demography, technology (available materials, infrastructures, transport, and building methods), culture (values, living habits, health, education, and family structure), economic and political structure (cost of the buildings, national economy, political system, local government, and control), and government standards.[114]

Following the group research, the problem of habitat was studied through a rapid design assignment (the so-called "sketch problem") due within four days. The brief read: "now that you have searched and sifted information pertaining to the needs in the field of habitat of different countries and the official recommendations for fulfilling them, you are asked to design individual cells, methods of clustering them and basic systems of their extension. The essential purpose of this project is to present the most appropriate designs consistent with official requirements and recommendations of the area you investigated".[115] After the reviews of this problem, the main assignment of the housing area design was to be worked on from November until January. In the meantime, two other "sketch problems" were presented to the students. Both the final housing assignment in general and the sketch problem illustrated above were again close to the work of Team 10, especially, the Smithsons and their studies of "clusters", along with Jaap Bakema's interest in flexibility and extensions, illustrating Sołtan's close relation with the group's theoretical agenda. In addition, this short assignment stresses even more Sołtan's confidence in the urgency of the issue of habitat, which could be seen also in Christopher Benninger's final design proposal, who following Sołtan's support, developed the idea of self-help housing in Latin America with the help of the planners from the Joint Center for Urban Studies. With the further development of Benninger's student design into a pilot programme for the World Bank in India, one may argue that the outreach of Sołtan's teaching went beyond theory and ideas.[116]

110 In Sołtan's diary notes from 1951-1956 he includes for example quotations from texts by Lewis Mumford and Herbert Read, see: MASP-JS.
111 Brief for the Master Class in Architecture from October 10th, 1966, see: HGSD-JS, AA003.
112 Interview with Urs Gauchat.
113 For the team division (low cost housing research) for the Master Class in Architecture from 1966, see: HGSD-JS, AA003. In addition, the assignment (housing cell) for the Master Class in Architecture from October 25th, 1966 includes a note "uniform presentation standards must be established by the Standards Committee", see: HGSD-JS, AA003.
114 Recommendation of the Standards Committee regarding the sections of the research project for the Master Class in Architecture from 1966, see: HGSD-JS, AA003.
115 Assignment (housing cell) for the Master Class in Architecture from October 25th, 1966, see: HGSD-JS, AA003.

Master Class: between the particular and the general

While housing and habitat were the core issues of the design studio, it is worth mentioning also the first design assignment, the one referred to in the brief as unrelated to the problem of habitat. It comprised the design of a national stand as an architectural representation of one of the countries that were participating in the 1968 Olympic Games in Mexico City. With an undefined position, a standardised plot, and generic requirements, this assignment pointed interestingly to Sołtan's own professional experience of design of exposition fair pavilions in Poland, including the Polish pavilion for the 1958 EXPO in Brussels and the typical exhibition pavilion 'Tropik'. As a result, alluding to the need of adaptability and to the experience of a 'typical' pavilion, the brief asked the students to "take into consideration a variety of contexts into which their clusters [of stands] may be sited".[117] The assignment included both teamwork and individual designs: the group activity consisted again of establishing "general regulations for the respective clusters of pavilions, governing the principles of clustering and individual stand design", while single students were to design a stand for a selected country. Similar to the assignments on habitat, "governing principles" or "standards" were to be defined in advance, through the collaboration of all the group members, in order to establish the rules to be obeyed by everyone. The intelligence of the definition of such rules and the balance between the order of the whole complex and the creativity and expression of single stands reflected perfectly the problem of "system" that Sołtan often referred to in his writings (Chapter 7). Applied to this assignment, the balance between the rules governing the system and the single elements, contributed to the constant dialogue between the particular and the general. Such an iterative model of work, re-assessing previous decisions, and a back-and-forth movement between the governing principles and the single design, were of crucial importance for Sołtan. The relevance of this process was underlined by one of the students of the course:

> "We had a project where each person was supposed to design a pavilion for an international fair, the equivalent of the world exposition. You could pick a country. There was a grid and you had to fit into it, and it had to be something that reflected that country. There was also a question of us coming up with rules as a collective: we had to decide what the rules for doing this were [...]. That was a Sołtan kind of project, he brought this to the course [...]. What he was interested in was how you teach the fact that you have common denominators that you decide upon, and that they provide the rules for what you do, and the relationship between the constraints and the interpretation [...]. When we did the large housing project, it was huge. Again, we had to make the rules explicit, work with them and think that we will design a project based on them. This was a constant theme with him; he used to repeat over and over again, "*go from the general to the particular*" [...]. And it was just interesting to see how it worked".[118]

To start a studio with the national stand design meant thus to test the student against a series of ideas: the system, the programme, and flexibility. It meant Sołtan was keen on constant reflection and questioning. One of his students mentions, "he was [...] into the programme. However, a programme very broadly conceived: 'what the purposes of this building in human terms are' – not the purposes in terms of square metres. He liked questioning those things, as Le Corbusier did in his work. He did not do standard programmes".[119] All of these elements were at that time at the very core of the Team 10 discussions, whose influence in the 1960s was well visible in the school through the affinity of ideas and through the presence of some members of the group – especially Sołtan and Woods (Chapter 5). At the same time, the coexistence of both individual and group work was a clear signal for the students, pointing to the collective aspect of architectural practice and its connection to the individuals: it definitely developed collegial feelings within the group. Therefore, in a discussion on their education at Harvard, some students from the 1967 Master Class claimed, "any assessment of our experience

116 Christopher Benninger claims that the initial studio design was used by him when developing a public housing project in India funded by the government-owned institution Urban Development Corporation, for the Economically Weaker Sections – as the poorest families in India are referred to, see: interview with Christopher Benninger.
117 Assignment (national stand) for the Master Class in Architecture from September 26th, 1966, see: HGSD-JS, AA003.
118 Interview with Urs Gauchat.
119 Interview with Edward Baum.

needs to recognise that we WERE the school" – referring to the fact that they learnt from each other.[120] Perhaps that was one of the reasons why they claimed, "we weren't taught much, but we learnt a lot".[121] In this sense, Sołtan tried to join different age groups and to make the students work together in order to facilitate mentoring between more advanced students and the younger ones. One of his former students and later a member of the faculty, Edward Baum, recalls that when he was doing undergraduate level studies at Harvard College, he was involved in a design studio for the Master Class. He had to give a hand to the Master students in producing architectural models – a collaboration, which was introduced by Sołtan, thinking about better preparation of the undergraduate students for future architecture studies.[122]

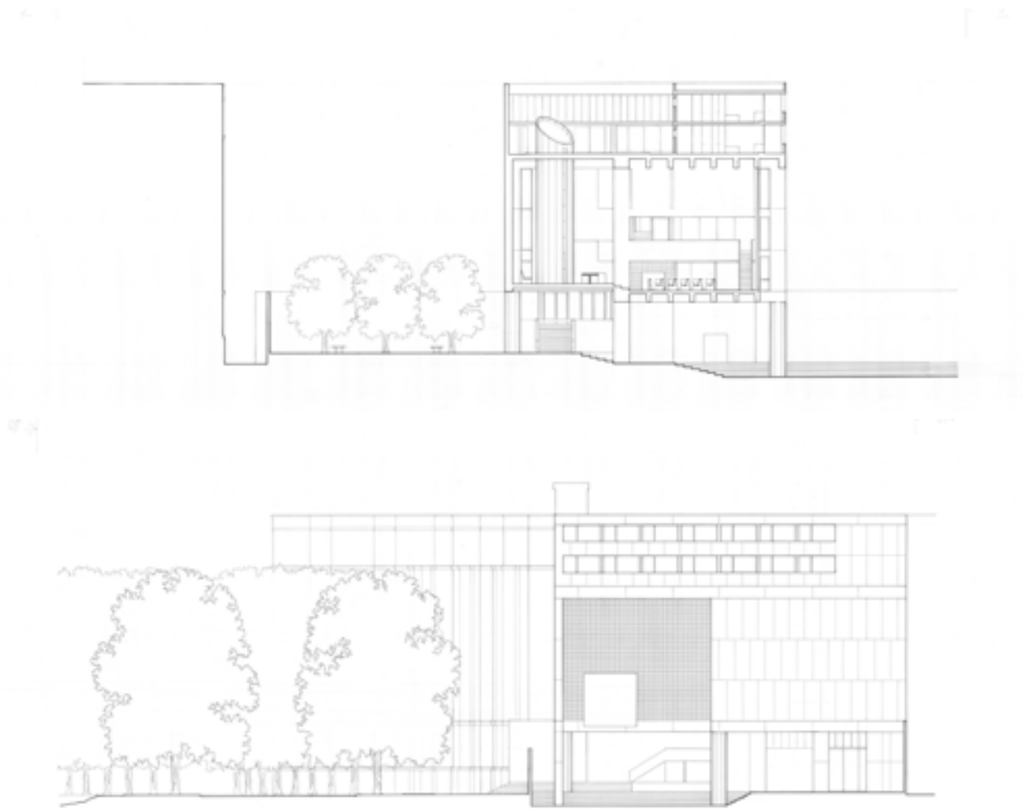
M. Arch. II: "grassroots architecture"

While the Master Class design studio in the 1960s focussed on the issues of the habitat, a similar course in the 1970s underlined another aspect of Sołtan's teaching. The studio was the first semester design module in the M. Arch. II programme for already professionally accredited architects, delivered between 1977 and 1979, in the last years before Sołtan's retirement from Harvard, and it was taught with Gerald McCue.[123] It comprised a design project for a 'place of spiritual retreat', where the students had to design:

> "A complex of buildings connected with the religious tradition of the student's own choice. Thus, the project may comprise a Buddhist or Christian chapel of any denomination, a mosque, a synagogue, etc. A few cells or cabins and a communal sitting and eating [...] facility and a small office will also be a part of the program. The main element will be the religious space for some 50 persons (seated and standing). It will serve the local community and visitors attending the services on holy days. It is assumed that this element will give the character to the whole complex of buildings. Eight to ten cells (or cabins) will provide shelter for people interested in spending some time (3-10 days) in seclusion. The cell will be about 70 sq. ft. [around 6.5 m^2] with an absolute minimum of equipment".[124]

Although the brief also includes practical aspects such as parking, heating, access by those delivering religious services and administration, this design task concentrates much more on the poetics. The site of the design at the Walden Pond relates clearly to Sołtan's sensitivity to landscape as an important place for the American transcendentalist Henry David Thoreau, according to which "a lake is the landscape's most beautiful and expressive feature".[125] In addition, focus on religious architecture was definitely connected to Sołtan's lifelong interest in religion and desire to build a church, as well as to the church designs and to religious architecture critical texts he worked on throughout the years (Chapter 9). A similar exercise was also proposed to students during a 1981 summer school in Mexico, where they had to design a "place of spiritual retreat in San Miguel de Allende".[126] These student exercises were once again connected to Sołtan's own design experience and his ideas, making also a clear reference to modernist architecture, as the brief quoted as possible references for work by Le Corbusier, and painters Fernand Léger and Jean Lurçat. With the academic objectives of the studio listed by the brief as: "to give an opportunity for thought about the relevance of historic continuity of a particular, and somewhat neglected, range of human concerns", "to research the heritage related to the subject", "to relate the past and present in a small and rather physically uncomplicated design case", and "to deal with relatively simple environmental problems physically", the studio built on the ideals of modernist architecture. Moreover, the brief pointed directly to the simple forms, as "the founder-donor wishes the architect to create a very humble facility truly conducive to its purposes: withdrawal from the turmoil of everyday life; thinking, reading, and meditating" through "contemporary, sound, and not expensive technical means". These directories point to a design closer to the poetic and modernist vision of architecture than the rationalist vision present in the habitat assignment. The interest in history and the awareness of its importance for design influenced the initial weeks of the studio: historic research was to last the first week of the semester, while the second one included research presentations.[127] Sołtan also provided the students with a list of readings referencing each of

120 *Architecture Education at Harvard Then (1965) and Now (2015)*, p. 14.
121 *Architecture Education at Harvard Then (1965) and Now (2015)*, p. 46.
122 Interview with Edward Baum. The collaboration between the students from the Master Class and the first year is also mentioned in the brief for the Master Class in Architecture from October 10th, 1966, see: HGSD-JS, AA003.
123 Both Master Class and M. Arch. II programme were aimed at professionally accredited architects, with M. Arch II taking place of the former after the reorganisation of the curriculum in the late 1960s. McCue's involvement is remembered by some former students, see: interviews with Anne Wattenberg, and with Simon Smithson. However, due to his administrative duties, he was less present than Sołtan, the latter remaining the main reference design tutor in the studio.
124 Brief for M. Arch. II design studio from 1978, see: HGSD-JS, AA021.
125 Quoted in Bachelard, p. 210.
126 Brief for "a place of spiritual retreat in San Miguel de Allende" from summer school in Mexico in 1981, see: P-JS.
127 Undated assignment (place of spiritual retreat) for M. Arch. II design studio, see: HGSD-JS, AA019.



ill. 8.6, 8.7, and 8.8 - section, elevation, and ground and first floor plans from Marleen Kay Davis' design of the "place of spiritual retreat" assignment from 1978, showing references to Corbusian architecture; sections and elevations were drawn using the Modulor and the building's proportions were influenced by the regulating lines and the golfen section, and the space was organised as an architectural promenade culminating in the garden roof with long horizontal openings, which served as a cloister space restricted for the monks inhabiting the urban monastery (showing also influences by Le Corbusier's interest in monasteries like the Certosa in Galluzzo near Florence in Italy)

the religions they could select in order to familiarise them with the requirements, the underlying philosophy, cultural and religious traditions, poetry, imagery, and symbolism connected to the chosen religion.[128] Such an approach while teaching a design studio was particular within the school, as one of the students observed:

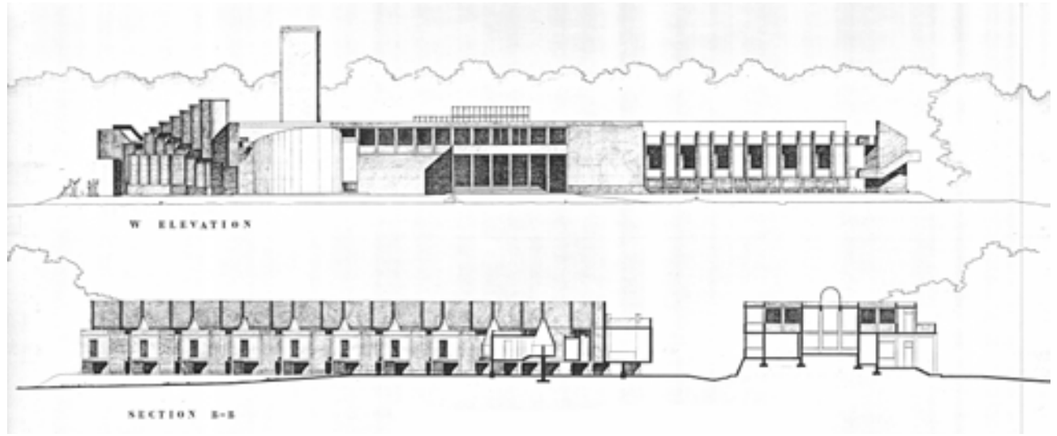
> "Sołtan was definitely different [from other teachers]. The one thing that was very good in his studio, it was at the beginning. He got us away from the drawing boards just to do research on art and architecture. I do not mean history of art, but he was looking for forms: he meant going back to the simple ones. He emphasised that, the simplicity of design... and going back to archaic forms".[129]

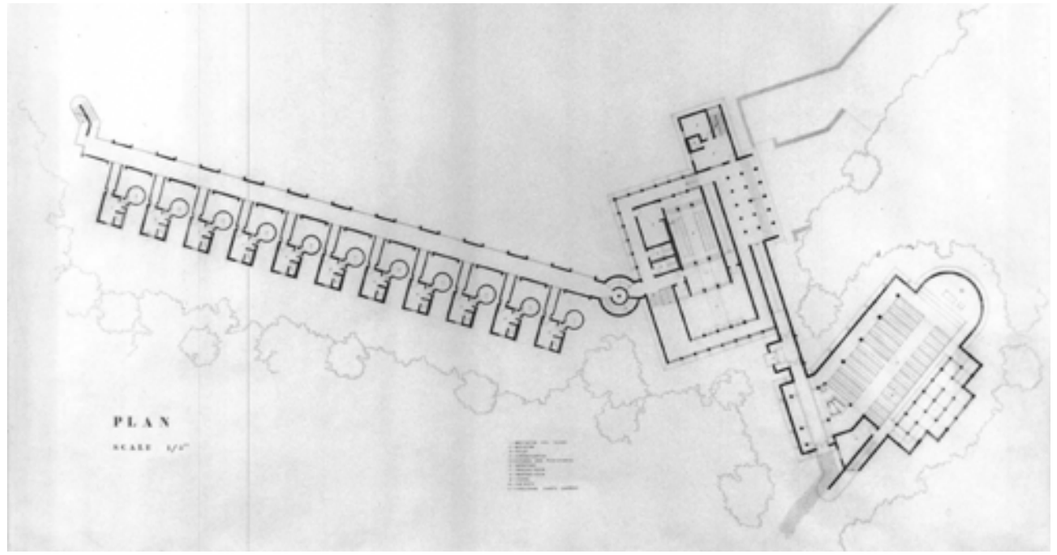
The interest in the archaic forms, in the connection between the past and the present, in the continuity and broader culture point to this "grassroots" vision of modernism, related according to Sołtan to Le Corbusier. In some notes for the students, he writes about all the early periods in culture being close to our modern times.[130] In fact, he taught this design studio at the same time he taught the 'Grassroots of Contemporary Architecture' module, with the same ideas at the basis of both of them, and with the faith in the value of Le Corbusier's work impacting the studio. Some of the designs from the studio, like these by Marleen Kay Davis and by Umberto Guarracino, refer to Corbusian architecture. Volumes and some details like *brise-soleil* and skylights, and the spatial arrangement of different functions, point to his works, as it can be seen in the drawings (ill. 8.9, 8.10).[131] Especially in Davis's design, the reference was to the urban monasteries based on the model of Florence Certosa and Le Corbusier's La Tourette (ill. 8.6 to 8.8).[132] Even the lettering follows the traditional font used in the designs prepared by the atelier in rue de Sèvres, which was also applied by Sołtan in many architectural drawings. These influences are the manifestation of Sołtan's interest and enthusiasm towards this architecture and his statement when introducing the studio: "I am an authentic Le Corbusier disciple".[133]

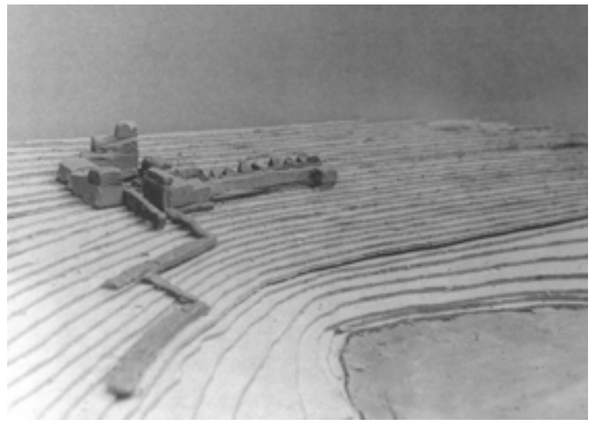
However, even though the vision of architecture Sołtan tended to transfer through the studio was clearly Corbusian, he did not look to impose his ideas, being far from "shaping" students' work to fit his vision of architecture.[134] In the notes for the first meeting of the studio, he underlines "openness to ideas",[135] while one of his students recalls him saying "if any of you do not want to be in this studio, that is fine with me – I have no lust for power", alluding to the lack of interest in forcing his own ideas. He is in fact remembered as a mentor rather than as a professor interested in controlling the students.[136] Students Guarracino and Atef Tabet recall Sołtan repeating: "be yourself" in an attempt to promote students' own reflection.[137] Through such ideas, Sołtan was aligned with the teaching position praised by Gropius in one of the texts the former advised the students to read: "the initial task of a design teacher should be to free the student from his intellectual frustration by encouraging him to trust his own subconscious reactions".[138] Similarly, in the 1981 summer school in Mexico, Sołtan advised the students to take a "constructive/aggressive position" towards the programme and questioning its elements.[139] Such an attitude could be assimilated to coaching, where students were encouraged to identify the programme and schemes they would be developing and as such, Sołtan's teaching can be described as developed theory with students recognised as "contributing partners".[140]

Regardless of the more poetic or more rational approach to design, the methods and the structure of the module were similar in the Master Class and in M. Arch. II studios. Initial research, shorter sketch problems during the semester interwoven with the main design task were still present in the calendar. The main design was to follow three phases, "work on design concepts", "development of design concepts", and "final development", with some intermediate reviews, as it was scheduled in the 1960s: a model that was widely applied across the school. Finally, presentations were assessed by a number of teachers including both faculty members and external reviewers.[141] Whereas through this analysis of design studio modules, it is possible to understand the role and

128 Undated reading list for M. Arch. II design studio, see: HGSD-JS, AA021.
129 Interview with Thomas Holtz.
130 Undated notes for M. Arch. II design studio, see: HGSD-JS, AA019.
131 Portfolio by Umberto Guarracino from April 17th, 2020; Thomas Holtz, *Architecture and Design 1970-2010* (2010), pp. 93-109.
132 Interview with Marleen Kay Davis.
133 Notes for M. Arch. II design studio from September 18th, 1978, see: HGSD-JS, AA021.
134 Fox refers to "shaping" as a simple teaching theory, where the teacher treats students "as raw material to be shaped, or moulded, or turned to a predetermined and often detailed specification", see: Dennis Fox, 'Personal theories of teaching', *Studies in Higher Education*, 8 (1983), 151-163 (p. 153).
135 Notes for M. Arch. II design studio from September 18th, 1978, see: HGSD-JS, AA021.
136 Interview with Thomas Holtz.
137 Interviews with Umberto Guarracino and with Atef Tabet.
138 Gropius, p. 33.
139 Brief for "a place of spiritual retreat in San Miguel de Allende" from summer school in Mexico in 1981, see: P-JS.
140 Fox, p. 156.
141 For example, in 1979, the reviews included for example the former chairman of the department George Anselevicius, several GSD professors (including Michael McKinnell, Jorge Silvetti, and Moshe Safdie), and external critics like Richard Meier.







ill. 8.9 and 8.10 - elevation, section, and plan from Umberto Guarracino's design of the "place of spiritual retreat" assignment from 1978, showing references to Corbusian architecture with the use of the pilotis, *brise-soleil*, and study of the light coming into the conical roofs of the retreat's cells
ill. 8.11 and 8.12 - clay model and charcoal sketch from Thomas Holtz's design of the "place of spiritual retreat" assignment from 1977, showing references to Corbusian architecture and influence by La Tourette; illustration of Sołtan's interest in the "soft media" in the first conceptual part of the design

the position of assignments, readings, and discussions in Sołtan's teaching, it is important to understand how his teaching philosophy and approach influenced his students' work.

the man and the teacher

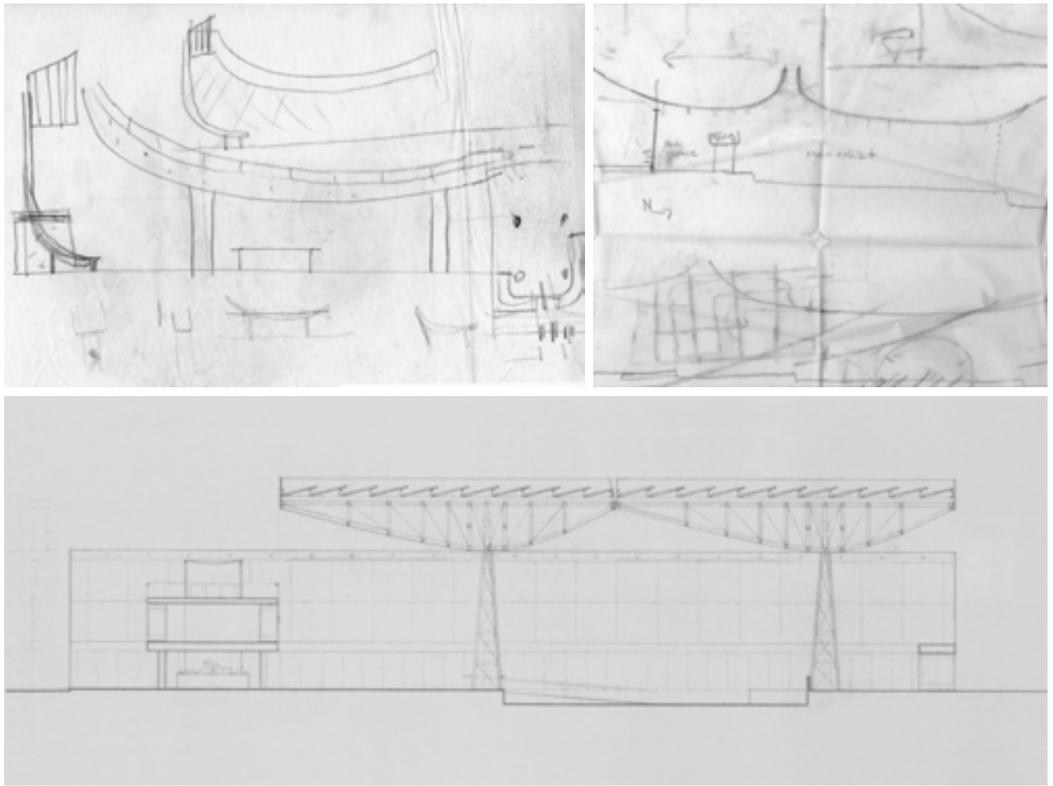
In addition to the content approach to architecture teaching, an important aspect of Sołtan's pedagogic work was his attitude. Throughout the letters and comments from former students, one may often encounter adjectives like "enthusiastic", "warm", "inspiring", and "kind", but also "energetic", "devoted", and "intense".[142] "Critical but inherently fair" – that is how he is remembered by his student Benninger.[143] In the series of interviews with his former students, many have precise memories of events involving Sołtan as an educator who is both dedicated to the cause of modern architecture, but also to his students. Anne Wattenberg recalls that one such conversation with him reassured her to continue studying architecture, and eventually made her go from a student near to failing to the one who passed the studio with honours.[144] Guarracino claims that the corrections with Sołtan were not felt as such, thanks to his kindness – which however did not undermine the critical value of them.[145] It was fuelled by openness towards the students and not hiding his own history from them: he was not hiding from them the experience of the POW camp during the war, a confession that was not granted in a teacher-student relationship.[146] It was perceived as a very important aspect of his teaching, as recalled also by Edward Baum, who was himself dean at the University of Texas Arlington: "he was my most powerful teaching model. I tend to approach students similarly, in a friendly and supportive way".[147]

This very open and kind approach was in contrast to the high standard of work he required from the students. "He was incredibly demanding and yet we loved him", one of them stated.[148] Through such a close and friendly relationship with the students, Sołtan was using a rhetorical device: he disarmed the young students on their own terms, and his personality was of utmost importance. Anecdotes of his wit could make an entire chapter. Students often recall his unorthodox attitude, including making corrections riding across the hall sitting inside a janitor trash can, impersonating other people, simulating lying dead his own catafalque, dressing as a monk, and making fun elegantly yet intelligently out of other members of the faculty: puncturing the balloon.[149] He was allergic to pride and solemnity, as when he was doodling simple erotic drawings, "noodles" as he called them, during the faculty meetings.[150] A similar attitude was present in design teaching, when he aimed to de-construct the myth of an architectural genius and to present work of the "masters of modern architecture" as work of students' peers, favouring critical reflection.[151] Thanks to such an attitude, through speaking students' language, and through being honest and kind with them, he was able to get their attention, making them more susceptible to receiving his message. Benninger comments on that adding that because of his specific sense of humour, "he kept us on our toes".[152] Thanks to that, Sołtan was able to keep a balanced relationship with the students: close enough but capable of giving critical advice.[153] Both aspects were graphically illustrated when Sołtan advised his former student Richard Wesley at the beginning of the latter's pedagogic career, saying, "teaching is an anatomical trick. You must hug a student and simultaneously kick them in the ass".[154]

between the rational and the poetic

In addition to the simultaneous kicking and hugging, Sołtan's teaching illustrates other dualisms. Following the reading of Le Corbusier's work as both rational and poetic, Sołtan's teaching did include a similar dichotomy. It united the poetic idea of a concept with a solid connection to real life. The latter was already an important element for architecture education within the GSD tradition, praised by Gropius, who underlined the need to put students in real-life situations, referring to economy and time.[155] The conscious and the subconscious were both recognised as valid elements of architectural creation and teaching by Sołtan and Gropius: the latter underlines the utmost importance of the role of the architect in combining the sensitivity of beauty and the

142 Supporting letters for the Topaz Medallion nomination, see: AIA-JS.
143 Interview with Christopher Benninger.
144 Interview with Anne Wattenberg.
145 Interview with Umberto Guarracino.
146 Interview with Thomas Holtz.
147 Interview with Edward Baum.
148 Richard Wesley's lecture 'All Men Are Born Fools: a Tribute to Jerzy Sołtan, 1913-2005' at Harvard from March 3rd, 2006.
149 Interview with Urs Gauchat.
150 Interview with François Vigier.
151 Interview with Paul Krueger.
152 Interview with Christopher Benninger.
153 The need of balance between rigid and friendly approaches is for example explained in Gina Wisker et al, *Working one-to-one with students* (New York: Routledge, 2008), p. 54.
154 Richard Wesley's lecture 'All Men Are Born Fools: a Tribute to Jerzy Sołtan, 1913-2005'.
155 Gropius, p. 26.



ill. 8.13 and 8.14 - Jerzy Sołtan's section sketches for Anne Wattenberg's pavilion design assignment from 1978, showing the importance to design in section in addition to plans
ill. 8.15 and 8.16 - plan and section from Marleen Kay Davis' design of an exhibition pavilion in Egypt for the 'Energy Conscious Design Studio' module from 1979 with a movable roof, which was to generate power as an example of challenging schemes in design solution and going beyond simple 'solar' design; through dealing with issues like heat storage, guaranteeing fresh breeze and ventilation, the design was dealing with similar topics to those Sołtan faced when designing the typical exhibition pavilion 'Tropik'; the design shows attention to the contrast between the 'low-tech' traditionally looking and heavy battered perimeter walls referring to ancient Egyptian architecture and the 'high-tech' of the 'energy conscious' solution including two cantilever roof structures

awareness of the needs of the society: both elements clearly present in Sołtan's texts.[156] One of his students, Davis, remembers directly the question of poetics, linked to the Corbusian ineffable space, along with the social-political agenda of housing as two core elements in Sołtan's design studio,[157] which would effectively illustrate a lineage between Sołtan's and Gropius' teaching.

In addition, Sołtan's pedagogy corresponded to his practice experience. For example, when design teaching, he tended to underline the importance of cross-disciplinarity in architectural design: some students remember that he would take the role of a landscape architect during discussions and reviews, and he would comment on the design taking such a position. He would also point to the fact that in a real-life professional experience, a design would have involved a number of other professionals, and that it would have been necessary to be able to collaborate with them.[158] This approach has been developed further at present-day Harvard: design critiques now include landscape architects, real estate professionals, and lawyers, broadening the concept used by Sołtan in the 1970s.[159] The collaboration with other professionals transcends also from Sołtan's teaching activities at the Academy, where he was collaborating with other professional figures, whereas the brief of the Interior Design Faculty quoted as the basis of the programme "integration of all artistic and technical disciplines, which take part in contemporary design" alluding to a close collaboration between different artists.[160] A similar approach was applied at Harvard, where the 'Environmental Design' module from the first year was taken together by the students from all the school's departments creating an opportunity for exchange.[161] Through his teaching, Sołtan manifested also the need for architects to collaborate with engineers and scientists, as for example through his involvement in the 'Energy Conscious Design Studio' in the late 1970s, where he acted as a design tutor while showing avant-garde awareness of the climate-based questions relating to sunscreens, ventilation, and design configuration, which was based on his previous experience of the typical exhibition pavilion 'Tropik', and which could be today considered as rudimentary elements to passive design.[162] Through his involvement in the module, he showed to the students that designer's choices could help to resolve these issues, without considering the environmental design technologies as a final add-on to an already well-defined design, but as a core element of the design concept based on the contrast and dialogue between the poetic and the technological. For example, Davis' studio design of a fair pavilion in Egypt from 1979 (ill. 8.15, 8.16) was uniting both historical inspirations of ancient Egypt and innovative technological ideas.[163]

Another evident sign of such down-to-earth attitude and realism was the range of design assignments given to the students. The national stand and the housing design for the Master Class were surely aligned with such an idea, but other tasks were also well grounded in plausible situations. One of the two-week assignments from 1973 was a small beach house: "a friend has agreed to lease you on a long basis a piece of property on his private estate and will allow you to erect a minimal inexpensive seasonal dwelling for your personal use". The building was to be wooden, slightly over fifty square metres, and equipped with a pre-manufactured sewage and bathroom module.[164] Some other design tasks included bookshelves, bookshops, schools, farmer market, and housing development in the Shady Hill area in Cambridge.[165] As in the case of the M. Arch. II studio with the place of spiritual retreat, in the late 1970s, some tasks seem to be less social-political, including for example the student's own house.[166] This was issued as the first assignment in the design studio in 1976, and the purpose of the exercise stated, "to re-evaluate the values related to the program, the functioning, the technology, and the image of a contemporary individual shelter located in a rural environment. The exercise will give an occasion to

156 Gropius, p. 74.
157 Interview with Marleen Kay Davis.
158 Interview with Umberto Guarracino.
159 The presence of other professionals at the critiques at Harvard is mentioned by Parsons, see: *Architecture Education at Harvard Then (1965) and Now (2015)*, p. 31.
160 Translation from Polish. Wojciech Włodarczyk, *Akademia Sztuk Pięknych w Warszawie w latach 1944–2004* (Warsaw: Wydawnictwa Szkolne i Pedagogiczne, 2005), p. 201. Collaboration with other specialists is mentioned in the curriculum programme of the Faculty of Interior Design from 1960, see: ISPAN-BU.
161 The first two semesters before the change of the curriculum were shared by all the departments of the GSD. For example, *Official Register of Harvard University* for the Graduate School of Design for 1969-1970, p. 26, see: HGSD.
162 Interview with Marleen Kay Davis, and notes from 'Energy Conscious Design Studio' from 1979 by Marleen Kay Davis, see: P-MKD.
163 In the 'Energy Conscious Design Studio' in 1979 he gave as one of the assignments to the students an exhibition pavilion in Egypt, which was to use natural ventilation for heating and cooling thanks to the design of the roof and spatial organisation of the courtyard. Marleen Kay Davis' design for the studio included not only technological elements (as a moving roof), but also historically-inspired stone walls referring to Egyptian temples. In notes from 'Energy Conscious Design Studio' from 1979 by Marleen Kay Davis, there are some sketches, which show details of technological solutions from the typical exhibition pavilion 'Tropik', see: P-MKD.
164 Assignment (beach house) for Architectural Design studio from September 24th, 1973, see: HGSD-JS, AA010.
165 Assignment (bookshelf) from October 30th, 1974 and from March 9th, 1976, see: HGSD-JS, AA010 and AA015. R. M. Brandon's design for a bookstore from 1974, see: HGSD-JS, AA010. Paul Krueger mentions the design of a farmer market, see: interview with Paul Krueger. Richard Wesley's design for the Shady Hill area housing from 1975, see: HGSD-JS, AA012.
166 Feedback notes on students' designs of a cultural building, probably a museum, see: HGSD-JS, AA012.

define (or re-define) one's own attitude towards our culture and possibly to take a position towards the present architectural language: its prose and poetics".[167] Through these words, it is clear that Sołtan wanted the students to review generally accepted assumptions and to question the schemes in house design – the task was clearly aimed to promote critical reflection amongst students.

the parti *and the Socratic method*

While the previous assignments were linked to land leasing and building a small unit for personal use with limited resources, the "own house" assignment took also a much more poetic position – former student Tabet calls it "a house for a dreamer", referring to Le Corbusier's Cabanon.[168] In addition, it invited the students to question the scheme, to re-evaluate the established norms attached to housing, and to relate this to larger cultural questions concerning the idea of shelter (Tabet recalls that it pushed the students to look for the "essentials", which can be understood as Sołtan's "grassroots"),[169] requiring both critical reflection and poetic sensitivity. As a result, some of the students failed to see the aims of the assignment, remained puzzled, and did not develop their ideas fully.[170] The strength of the idea uniting both rational problems and poetics can be illustrated by the *parti*.[171] This short idea, a small sketch, was the main concept of the design and throughout the years, it was very much present in Sołtan's design studio.[172] The idea of such a strong poetic concept was however defined by a series of rational and critically built considerations. The design strategy applied by many students consisted of dealing with different problems separately and then – through synthesis and an artistic gesture – defining the *parti* and following on with the work: "once you arrived at the design strategy that you came to during the process of overlay of different elements, you were left with a *parti*. Once you had it, you just kept going, and that *parti* led you throughout the design".[173] It enabled students to go beyond more standardised solutions. Some remember the idea as exploring "parts of a problem independently to discover the possibilities".[174] Wattenberg, a student from 1978, explains this mechanism: "you separated each of the elements, the circulation, the programme, the entrance, and the enclosure, then you solved them independently and rationally, and then you overlaid them on top of each other. Then you would allow this thing called "the hand of God": one little shake, and then – that was it".[175]

This method favoured resolving single elements separately: as different layers that could be then overlaid on semi-transparent pieces of paper. At that stage, when all of these elements were already thought about and the layers could be overlaid, it was possible to look for artistic expression in a series of rationally solved problems.[176] At the same time, through such an approach, the design tended to review critically broadly accepted assumptions, and ideally to promote new interpretations. In general, it illustrates how much Sołtan's approach was drawing-driven and how much the design process relied on drawings and graphical exploration. While some remember working with plans, the sections seem to be the most important drawings in the design process according to a number of students (ill. 8.13 to 8.15).[177] The importance of the concept was connected to Sołtan's interest in art: defining the *parti* and the main concept sketch idea coming from these different layers of single problems, was easier to be reached through visual research. Referring to Le Corbusier's daily routine and the importance of painting, in Sołtan's mind, the definition of a design concept was easier when working with "soft media": soft pencils, charcoal, gypsum, as in some examples of student work (ill. 8.11, 8.12). One of his students recalls:

> "The idea was that the initial creation moment of the project lies in our soul and in our mind as a fluid thought, an element that cannot be boxed at the beginning with sharper and rigid lines. He invited us to express through soft media. He believed that in that soft gesture, in the stroke, there is truth, there is a sum of who I am as a person, but also of who I am as a culture".[178]

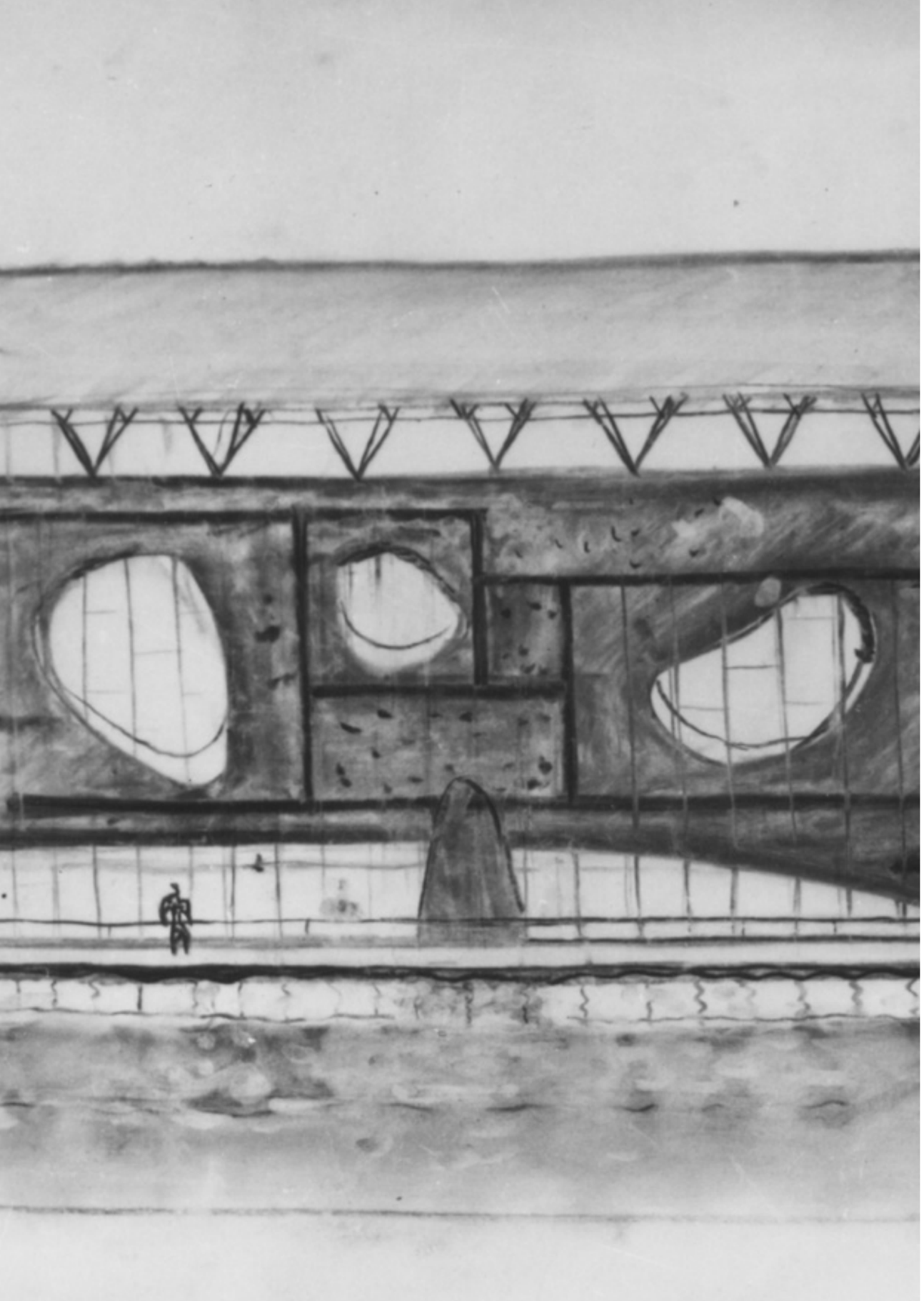
167 Assignment (own house) for Architectural Design studio from September 27th, 1976, see: HGSD-JS, AA015.
168 Interview with Atef Tabet.
169 Ibid.
170 Statement from Kiyohide Sawaoka from September 15th, 2020.
171 The term comes from the French expression "*parti pris*", indicating the process of decision-making and respecting the previously made decisions. It was widely applied at Harvard in Sołtan's time. It is referred to by Parsons in the 1960s, see: *Architecture Education at Harvard Then (1965) and Now (2015)*, p. 46, and by Anne Wattenberg in the 1970s, see: interview with Anne Wattenberg.
172 Interviews with Edward Baum, with Anne Wattenberg, and with Umberto Guarracino. See also Richard Wesley's lecture 'All Men Are Born Fools: a Tribute to Jerzy Sołtan, 1913-2005'.
173 Interview with Anne Wattenberg.
174 *Architecture Education at Harvard Then (1965) and Now (2015)*, p. 56.
175 Interview with Anne Wattenberg.
176 Ibid.
177 For example, Marleen Kay Davis and Joanna Lombard remember working with sections, and Anne Wattenberg remembers working with plans. Interviews with Marleen Kay Davis, with Anne Wattenberg, and with Joanna Lombard.
178 Interview with Umberto Guarracino.

Through getting hands dirty, through exploring these undefined lines, there was more space left for exploring the essentials, the basics of architecture. In some assignments, he suggested the students for example to submit freehand drawings, and some students recall that their tendency to draw in a less precise manner, using charcoal or very soft crayons, was due to Sołtan's influence.[179] Imprecise drawing during the first phase of design was then a tool to find the ideas and to understand the poetics underlying the design.[180] It was to detach the students from drawing beautifully something that was not enough cross-examined,[181] making a direct connection between the design work, the concept (the *parti*), and critical thinking by asking puzzles and the question "so what?" – referred by some as a constant element of Sołtan's reviews and discussions with him.[182] Benninger explains this adding, "his technique was to ask the student a question that needed analysis to answer, and often it would be that there was no possible answer. That silence was the conclusion".[183] Similarly, this is how Urs Gauchat remembers when Sołtan mentioned self-questioning for the first time:

> "He said to me one day, "*I want you to do something, take a piece of paper, now write on it "so what?" and pin that up above your desk*". Then, for the whole time I was there, there was that constant question "*so what?*", and that was such a good *Leitmotiv*, because that was the question that he always asked everybody and on everything. A very useful question: it meant that I had to look at what I was doing. I thought it was terrific: if you would make some kind of rationale, that question does away with all the rationale that comes after you do something. It presupposes that you have decided that issue beforehand, not as a rationalisation. He hated rationalisations".[184]

Through this simple question and thanks to promoting discussions in the classroom, the design process was to reach another level, based on students' self-questioning and self-assessment. Through reflection on their design, on reasons behind their decisions, the students were expected to relate them to the *parti*, to the aim they had defined beforehand, and to avoid clichés or "cut and paste" attitude.[185] Arguably, such an education of critical thinking, a Socratic method aimed to make the students think and reflect themselves, was one of the most valuable ideas taught by Sołtan. In the dedication at the beginning of his booklet on architectural education at Harvard, Parsons included a longer thank-you note to Sołtan, where he mentions, "Sołtan taught me that design should be fuelled by curiosity and persistent exploration. I hope that this report reflects that teaching".[186] This exploration, questioning, and broad cultural vision were amongst the most valuable aspects of his teaching, whether it was design or theory. They reach beyond design and make Sołtan's teaching closer to student-based "growing theory", aimed at personal growth.[187] According to Benninger, all these qualities meant that Sołtan was not only educating new architects – but also he was educating future leaders.[188] His teaching remained close to modern architecture ideals, to his own experiences, and to his work with Le Corbusier. He also addressed the most pressing issues such as the need for shelter. He was keen on passing on the same ideas he was explaining in his writings: programme, system, flexibility, "grassroots" architecture. However, the ability to think, to question, and to be aware of one's own actions went beyond architecture. Sołtan's legacy in teaching would not relate only to his ideas, but also to his approach to design. Through the logical construction of the design process around the core idea, the design project was also a critical analysis exercise. These issues are at the core of the discussion on the nature of Jerzy Sołtan's legacy to follow in the next chapters.

179 Assignment (housing cell) for the Master Class in Architecture from October 25th, 1966, see: HGSD-JS, AA003. Sometimes, at the beginning of a design studio, Sołtan asked the students to buy charcoal, clay, and butcher's paper, see: interview with Karl Fender. Thomas Holtz claims that his use of freehand drawings was influenced by Sołtan, see: interview with Thomas Holtz.
180 Interview with Rocco Maragna.
181 Interview with Karl Fender.
182 Interview with Urs Gauchat, and Richard Wesley's lecture 'All Men Are Born Fools: a Tribute to Jerzy Sołtan, 1913-2005'.
183 Interview with Christopher Benninger.
184 Interview with Urs Gauchat.
185 Interview with Christopher Benninger.
186 *Architecture Education at Harvard Then (1965) and Now (2015)*.
187 Fox, p. 157.
188 Interview with Christopher Benninger.



Jerzy Sołtan's architecture: Poland

it is a path full of ruins and disasters – Sołtan has been actually erased from the Polish space – there are still some relics, but we do not have anything that would be a tangible and real proof of his talent

– Aleksandra Kędziorek on Jerzy Sołtan's architecture in Poland[1]

These words illustrate well the present-day situation of Sołtan's design work in Poland. Whereas one would hope that his architecture would be kept in good shape, the reality is much different. To look for Jerzy Sołtan's designs today means to face buildings, some poorly maintained, and others altered without considering their original concept or their architectural value. It also means to understand the value and the reasons for the abandonment of other designs that remained unbuilt. In addition, it means to face the challenges of conservation of modern architecture in Poland. As in other countries of the former communist bloc, due to the centrally planned economy model, Polish architects were dealing with the lack of funds and poor material availability, leading to the lower quality of materials used in construction. In modern architecture, as it often experimented with new materials and with the new possibilities of the existing ones, such an issue was even more visible. Moreover, the lack of acceptance of buildings from the communist era, unwanted and "badly born" leads today to the lower interest in it.[2] As a result, Filip Springer compares visiting sites of Sołtan's buildings to archaeology, as beneath the shrubberies and underneath new advertisement banners, it is difficult to picture the original aspect of the built space.[3] Therefore, when talking about Sołtan's designs and their almost forgotten value, one may often encounter bitterness, deception with the uninterest, and resignation,[4] almost as if the words "*nemo propheta in patria*" – "no prophet in one's own country"[5] – were a curse upon his architecture.

This chapter faces these challenges and it discusses the value and the legacy of Sołtan's built and unbuilt design work in Poland as part of his contribution to architecture discourse. It is followed by analysis of his work from the Harvard years (Chapter 10), and together they enable us to comment on the importance and on the continuity of Sołtan's design work as a whole. First, this chapter analyses the position of his design work in a broader context of Polish architecture. Secondly, in order to illustrate the wide range of his work and to enable an in-depth analysis, it concentrates on a selection of four designs,[6] based mainly on a preliminary analysis of them, on Sołtan's writings.[7] The chapter does not only position his architectural design within the body of his work, but it aims to contextualise it within the broader discourse on modern architecture, with the analysis looking at the main concept, at functions, and at materials enabling to understand their meaning in relation to Sołtan's theory and ideas, aiming to show the unity across his work in the next chapter. Relating on the core ideas present in Sołtan's teaching and theory, the chapter illustrates how these are connected to the design work developed by the Artistic and Research Workshops co-founded and co-led by Sołtan, through a discussion on 'Warszawianka' sporting centre, on the interiors of Warsaw Midtown railway station, and on the unbuilt designs for the 1958 Polish EXPO pavilion in Brussels and for a parish church in Sochaczew. Through these designs, it aims to explain the value of Sołtan's design work and its place within his legacy as a part of Polish – and not only – modern architecture.

1 Filip Springer, *Źle urodzone*, 2nd edn (Krakow: Karakter, 2017), pp. 317-318. Translation from Polish (SR).

2 One of the many examples of such an attitude is illustrated by the press discussion on the possible demolition and remodelling of 'Dukat' department store in Olsztyn designed by the Artistic and Research Workshops led by Sołtan (Chapter 4). One publication included a series of street interviews with the locals, none of whom cared about preserving the original form: the article included short street surveys from a very restricted range of walkers-by (all retired lower or lower middle class women) who claimed that "it is not a specially interesting building" and "it is far from being worth preserving", see: Adam Pietrzak, 'Chcą wpisać Dukat na listę zabytków', *Gazeta Olsztyńska*, 20 February 2008. Another article is titled 'It is neither pretty, nor worth preserving' concerning the plans of renovation of the building, see: Rafał Radzymiński, 'Ani on ładny, ani zabytkowy', *Dziennik Elbląski*, 5 September 2003.

3 Springer, 2nd, p. 297.

4 Interviews with Jacek Damięcki, with Stan Szaflarski, and with Bogusław Smyrski.

5 "*Nemo propheta in patria*" is the name of Alvar Aalto's boat. Oskar Hansen, Sołtan's colleague referred to that quote when commenting on Sołtan's work in Poland. Oskar Hansen, 'O moim mistrzu – Jerzym Sołtanie', 1993, see: MASP-JS.

6 The entirety of Sołtan's design production has been listed in the catalogue of his works, *Jerzy Sołtan*, ed. by Jola Gola (Warsaw: Wydawnictwo Akademii Sztuk Pięknych, 1995).

7 The selection of the designs for this chapter is based on the relevance of the single works in Poland, based mainly on the importance given to them in Sołtan's texts and given to their state of conservation. For example, in a letter to Polish architecture critic Tadeusz Barucki, Sołtan names 'Warszawianka' sporting centre, the Polish EXPO pavilion, the typical exhibition pavilion 'Tropik', and the church in Sochaczew as the most interesting buildings in Poland – all of which will be discussed within the chapter. Sołtan to Barucki from April 14th, 1987, see: MASP-JS. The preliminary analysis aimed to understand which buildings might be most important today for understanding his legacy. For example, the existing buildings of 'Wenecja' bar and 'Dukat' department store are not extensively analysed here due to the heavy alterations to the original designs they suffered in the last decade. At the same time, the selection was helped by the interviews with Sołtan's friends and colleagues who worked with him with the Workshops.

nemo propheta in patria

Most of Sołtan's design work in Poland fits into the years 1955-1965, after the fall of socialist realism, and before his final and permanent departure to Harvard. This period was characterised by a specific approach to architecture and to its criticism, strictly linked to a normative-limited approach, which diverged from Sołtan's own vision of modern architecture, and which influenced architectural critique. Almost all publications on architecture in Poland at that time were ordered according to a building's functions, and not following the architect's body of work or geographical regions, as it was common in most written work on architecture worldwide.[8] Such a structure implies a clearly functional and programmatic approach to architectural practice, where lists of buildings and architects from all around the country tended to show that economy and construction were flourishing and well developed everywhere, taking a stance aligned with the Party's propaganda.[9] In addition, it had little to offer on comparisons between single buildings – they were presented and described mostly as stand-alone examples, outside of the body of work of their authors. The role of an architect was diminished: one's personality and singular style was dissolved, and there was no complex vision nor analytical commentary of a single architect's works.[10] With less focus on individuality and through showing a variety of possible solutions to a single functional problem, the unwritten aim of such publications was clear: they gave a unified yet rich image of Polish modern architecture. Given the pressing supply of new housing, the main role and most space was given to residential architecture in Poland,[11] so Sołtan's works – which never included a collective residential building – were never considered in the first place.

limiting functionalism

This functionalist approach to architectural criticism was reflected in the very practice of architecture. Creativity and expressionism were limited – both by the lack of materials and economic resources,[12] and by the simplistic approach to architecture. The challenge launched by the Soviet Union was to build "cheaply and quickly", with no focus on the quality, so architects "produced not designs for buildings – specific forms of architecture – but building types".[13] With the growing role of standardisation, the architect's role was diminishing until it was limited to the final shape of the building.[14] One of the most vivid examples of such architecture was the programme for schools, which consisted of studying universal rules for design.[15] The programme influenced educational buildings all around the country and all the "one-thousand-anniversary schools" follow the same scheme in plan and the same organisation.[16] It was approached as a task, as a managerial problem, and it was not considered as an opportunity for architectural expression, concentrating instead on the effectiveness of the educational system, funds for rebuilding the schools, and the success of the slogan "one thousand schools for one thousand years". At the same time, publications on the matter were hardly concerned with the theory of the architecture of schools, and there were little considerations on how schools should be designed.[17] A similar approach was present in most domains of architecture, as well as in urbanism. Architecture critics of the time often gave an idyllic image of proposals based on such a normative-based design: "based on research and analysis, in cooperation with specialists from many domains, new norms and indices were defined for programmatic and spatial urban concepts. It guarantees a general and economically convenient fulfilling of the needs of the inhabitants of cities and neighbourhoods".[18] Such a description puts the ideals of residential

8 Examples of such an organisation: Tadeusz Barucki, *Architektura Polski* (Warsaw: Arkady, 1985); Adam Kotarbiński, *Rozwój urbanistyki i architektury polskiej w latach 1944-1964* (Warsaw: Państwowe Wydawnictwo Naukowe, 1967); Przemysław Szafer, *Polska architektura współczesna* (Warsaw: Wydawnictwo Interpress, 1977); Jan Zachwatowicz, *Architektura polska* (Warsaw: Arkady, 1966).

9 When concerning the communist period in Poland, the word "Party" refers always to PUWP, Polish United Workers' Party, the governing party in 1948-1989.

10 In some publications, all the illustrations are gathered at the end of the text, making them look more like an overview list of everything that was built in Poland, with no architects mentioned in the captions, as in Kotarbiński.

11 Szafer, p. 7.

12 For example, one may refer to the issues connected with the construction of Warsaw Midtown railway station in Warsaw by Sołtan, see: interview with Bogusław Smyrski.

13 David Crowley, 'Paris or Moscow? Warsaw Architects and the Image of the Modern City in the 1950s', *Kritika: Explorations in Russian and Eurasian History*, 9 (2008), 769-798 (p. 790). All building activities were tightly connected to the national economic and social policies as a part of the centrally planned economy. Architecture was therefore closely linked to the 'realisation of the plan objectives' (as in socialist realism – Chapter 4). Given the technocratic approach to architecture, it was often assumed that citizens' needs would be fully satisfied simply through the realisation of the national plan.

14 Anna Cymer, *Architektura w Polsce 1945-1989* (Warsaw: Fundacja Centrum Architektury, 2019), p. 266.

15 Szafer, p. 13.

16 The common expression 'one-thousand-anniversary schools' refers to the programme of building new establishments for the one-thousand-years anniversary of Poland's creation dating back to 966. The programme was linked to the population boom, and the connected growing need of educational institutions, see: Anna Cymer, 'Tysiąclatki – szkoły na rocznicę', *culture.pl* (2020) <https://culture.pl/pl/dzielo/tysiaclatki-szkoly-na-rocznice> [accessed on April 8th, 2020].

17 *Architektura i budownictwo szkolne PRL*, ed. by Jerzy Dobek (Warsaw: Wydawnictwa Szkolne i Pedagogiczne, 1976).

18 Zachwatowicz, p. 468. Translation from Polish (SR).

ill. 9.1 (chapter cover) - interior sketch of the unbuilt design for the swimming pool at 'Warszawianka' sporting centre
ill. 9.2 and 9.3 - competition model of the unbuilt design for the 1958 EXPO pavilion (top) and the present-day state of 'Warszawianka' sporting centre (bottom), two examples of abandoned projects and mis-maintained buildings illustrating the main issues regarding Jerzy Sołtan's designs in Poland

building from that time as the very opposite to Sołtan's ideas, who was against the excessive standardisation of human needs and against the prescriptive way of normalising architecture.[19]

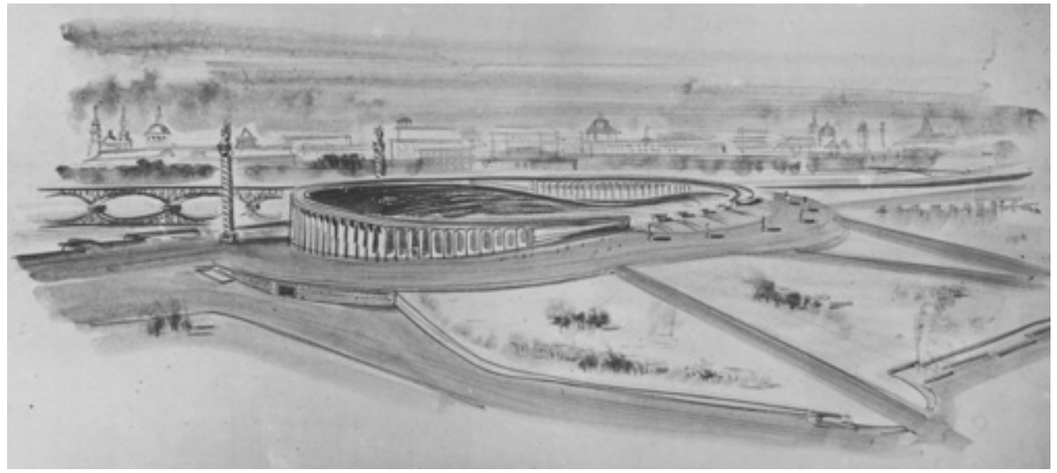
Such a standardised and mechanical approach to architecture was fiercely opposed by Sołtan and others who looked for something more in architecture – whether it was poetics, aesthetics or simply a more human scale. Jacek Damięcki, one of Sołtan's students and co-workers at the Artistic and Research Workshops claims that the normative approach was simply more accessible for a larger number of architects, even those with no creative talent. He adds, "when it became standardised, opportunistic people applied such a model and they navigated with the current".[20] According to Sołtan, the prescriptive idea "to objectify human individual existence" was mistaken at the very beginning in its simplifying claim to answer to human needs. In order to comment on that attitude, he praises flexibility and refers to Lewis Mumford, "the very qualities that make these methods so efficient in designing rockets, space satellites and similar instruments or weapons, cripples them for more human uses. Systems' analysis cannot handle organic or human complexities without eliminating precisely those very qualities that make them organic or human".[21] According to Sołtan, such an attitude is simply mistakenly placed, since "analytical techniques and rational methods are not antagonistic to human values – they are indifferent to them".[22] He claims that such standardisation "became the symbol of brutal-and-insensitive-for-human-needs construction in the communist countries".[23] Instead, his own works were not following a standardised and typology-inclined attitude, but such preaching seems almost to have been cast into the void, save for his influence in the Fine Arts Academy in Warsaw. Friendships, belief in teamwork, and the possibility of work following one's ideals even in a very rigid environment[24] – all of these values were present and refer to that school and to the atelier that was created within it in 1954: the Artistic and Research Workshops.

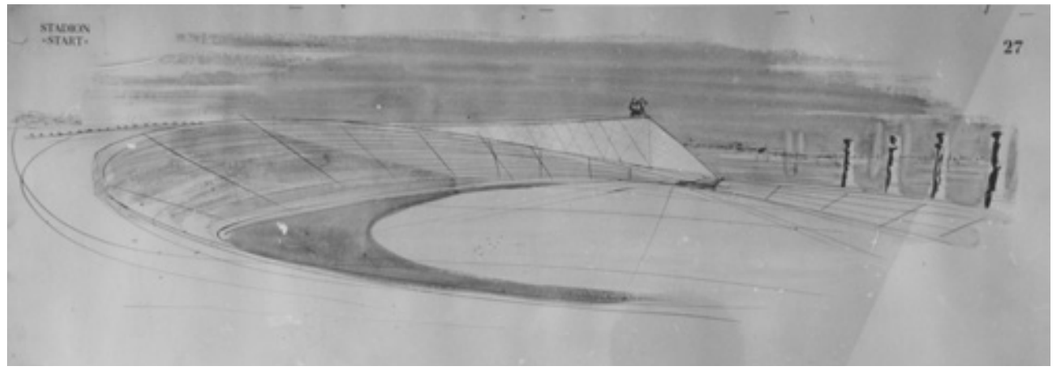
Artistic and Research Workshops

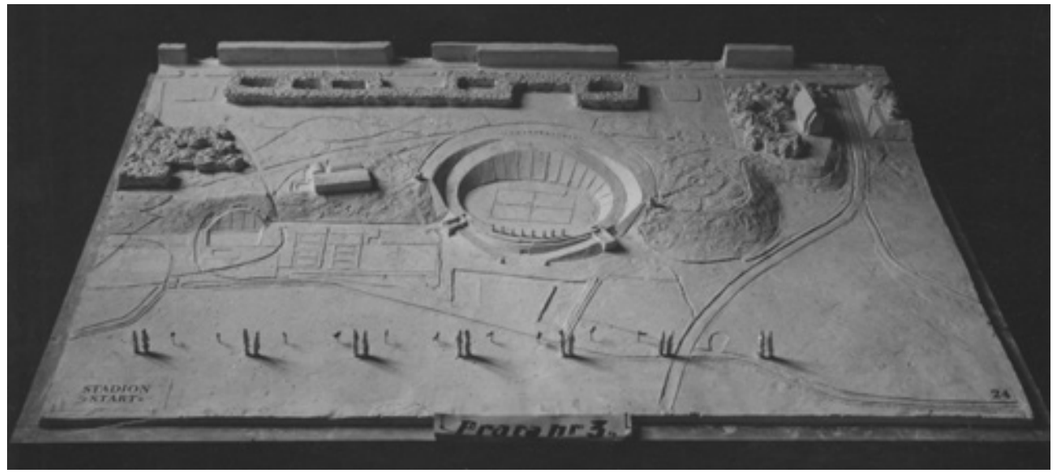
Thanks to the initiative of the authorities of the Fine Arts Academy, the Artistic and Research Workshops were created, as a support and patronage for its professors involved in architectural design, and as a recognition of Sołtan's potential for the school. The need for such an institution showed after the turmoil around the competition for the Decennial Stadium in Warsaw and after winning another one for 'Warszawianka' sporting centre by a group of professors including Sołtan and Zbigniew Ihnatowicz.[25] A relatively compact group forming the Workshops was selected initially amongst students and graduates of the Academy, but it was often increased by others. Each design – both competitions and commissions – was developed by a carefully gathered team of specialists selected on purpose for the project.[26] It enabled Sołtan to put into practice his ideas based on previous experiences of teamwork and collaboration with artists (Chapter 4),[27] and this attitude is crucial in order to understand any of the designs produced there. In addition, the very possibility of contact between art and architecture, of work in such a place, and of collaboration with specialists was a magnet for students. One of them, Viola Damięcka, recalls, "such an atmosphere was mobilising the school [...]. The entire building was vibrating with problems in every atelier".[28]

Such an approach to architecture was clearly in contrast with the normative, low-cost, and fast-paced practice outside. The Workshops could have been criticised for working too long on their designs, and with the rich variety of themes, they were unsuitable for developing standardised designs. The practice was not working on residential designs, which were the most important and the most standardised in this period.[29] The contrast

19 Interview with Urs Gauchat.
20 Interview with Jacek Damięcki. Translation from Polish (SR).
21 Quoted in the lecture 'Architecture Today' at Harvard from October 1976, see: MASP-JS.
22 Lecture 'Architecture Today' at Harvard from October 1976, see: MASP-JS.
23 Draft of an article 'Wycieczka w dżunglę architektury współczesnej' from 1984-1985, see: MASP-JS. Translation from Polish (SR).
24 Andrzej Bulanda, *Rozmowy o architekturze* (Warsaw: Muzeum Akademii Sztuk Pięknych, 1996), p. 65.
25 The competition for the Decennial Stadium showed that architects from the Academy lacked solid support from their institution, and as a result, the winning entry by a group led by Jerzy Hryniewiecki and including Sołtan and Ihnatowicz was not realised. Instead, three groups were requested to make amendments to their proposals, but Sołtan and Ihnatowicz refused to do so. Eventually, the realised building was designed by Hryniewiecki, Marek Leykam, and Czesław Rajewski, see: Cymer, *Architektura w Polsce 1945-1989*, pp. 102-103. The competition for 'Start' sporting centre (later called 'Warszawianka' sporting centre) was won by Sołtan, Ihnatowicz, Franciszek Strykniewicz, and Wojciech Fangor – all of whom were professors at the Fine Arts Academy, who at the time had no permanent office. As their design raised discussion and polemics in the press, the dean of the Fine Arts Academy Marian Wnuk offered to give them a possibility to work from within the Academy creating the Artistic and Research Workshops, see: Bulanda, p. 55, and *Jerzy Sołtan*, ed. by Jola Gola, p. 144.
26 Diary notes from August 19th, 1953, see: MASP-JS.
27 Many designs of the Workshops included participation of artists from the very beginning of the design, which was not a common practice in Poland. For instance, Sołtan and Ihnatowicz were working with painters: Fangor and Jerzy Nowosielski, sculptors: Strynkiewicz, and musicians: Stanisław Skrowaczewski. In addition, design teams included also more technical specialists and construction practitioners.
28 Interview with Viola Damięcka. Translation from Polish (SR).
29 Wiktor Gessler, 'Myśliwiecka', 1995, see: MASP-JS.







ill. 9.4, 9.5, and 9.6 - competition design for the Decennial Stadium in Warsaw (top) and the initial proposal for 'Start' (later 'Warszawianka') sporting centre (middle and bottom); both designs show elements pointing to socialist realism canons, including monumentality, grand arcades, and overscaled columns, but they also included the idea of the main stadium leaning against the ground, pointing to sensibility to the natural landscape and the view of the Vistula River valley

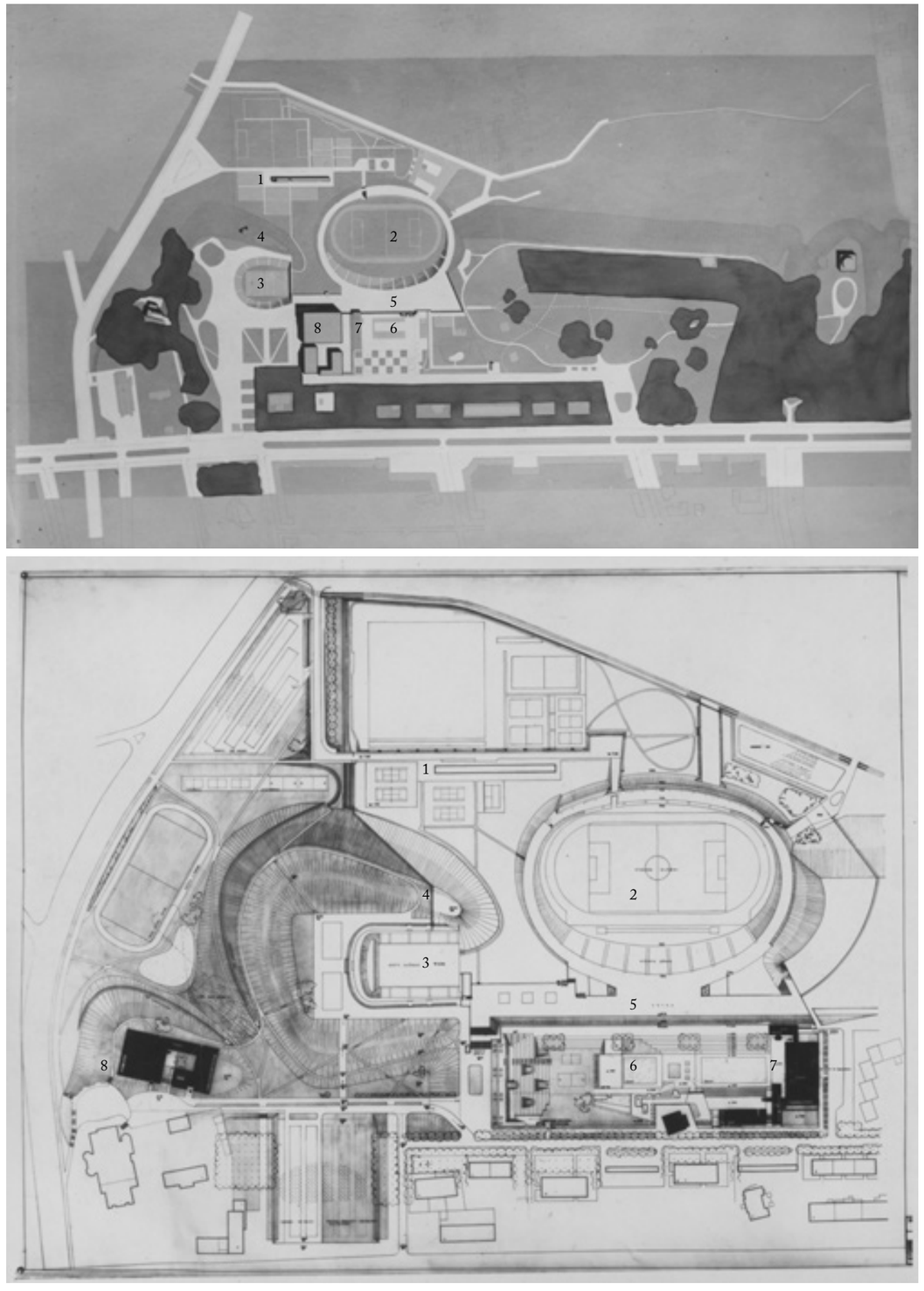
was however much appreciated by those who worked there: Andrzej Pinno called the Workshops "a true oasis of art in a sea of stiff socialist architecture".[30] Similarly, Damięcki comments on the Workshops claiming they were "a creative organisation, where there was no bureaucracy, only selection of people and working groups, some strategy and real achievements. It distinguished designs from the Workshops, compared to such normative residential hodgepodge".[31] The appreciation comes also from the friendly atmosphere within the Workshops: when working into the small hours, the entire practice was staying late together, including Sołtan's and Ihnatowicz's relatives coming to help. Another example of a friendly atmosphere were casual visits to the nearby swimming pool during the summer.[32] Sołtan's own attachment to the staff and students occasionally working in the Workshops is also shown by the massive amounts of postcards sent by him to the office.[33]

modern architecture in Poland with(out) Sołtan

However, since Sołtan was not actively involved in residential designs, nor actively preaching the Party's cause (and neither was the Fine Arts Academy), his position as an architect was not always favoured by the system, especially after his permanent departure for the United States. One can point to a mutual rejection: Sołtan's refusal of first socialist realism and then of normative-based design, and certain hostility towards Sołtan that could have been sensed in Poland. His designs for churches in Nowa Huta and Sochaczew were rejected by the religious authorities, and the communist government eventually abandoned his design for the 1958 EXPO pavilion. As a result, in a retrospective commentary to his work in Poland, he mentions, "Poland is tied too much to the memories of a really great past, and of somewhat recent one-of-a-kind noble fights; it is also too ambitious to recognise its own weaknesses, and it believes in its own intellectual autonomy. On the other hand, it is too small to be able actually to create such autonomy [...]. People like myself, who decided to acknowledge the greatness of something foreign, not really known in Poland or falsely known, they are in danger of unpopularity or of almost ill interest, as in case of some kind of exotic animal".[34] He adds that even if it was possible to think differently, the new ideas were squashed by different groups. In a bitter commentary to the Polish reality, he once stated, "Polish architecture was submerged in total parochialism".[35] Even though such a commentary may be exaggerated due to his personal experience, one has to recognise that indeed modern Polish architecture – both before and after the Second World War – is almost absent from the canonical history of architecture (Chapter 3).

Although his works were occasionally mentioned in architectural publications, there was no particular emphasis on the author, and no commentary on his body of work. In general, most publications by Polish critics treated his work in a dismissive manner. Jan Zachwatowicz includes in the functionalist overview of buildings in Poland only two designs that Sołtan was working on – 'Warszawianka' sporting centre and 'Wenecja' bar, both of them as items only within a longer list of designs.[36] Moreover, when commenting on Polish architects' commitments abroad, he does not mention Sołtan even though at that time he was already regularly teaching at Harvard. Similarly, little space is given to his work by Adam Kotarbiński. He does not mention Sołtan's name, but he includes illustrations of two designs: 'Warszawianka' and Warsaw Midtown railway station.[37] Aligned with them is the publication by Przemysław Trzeciniak, where he does not give Sołtan much space: his name is mentioned in the caption of a photograph of the typical exhibition pavilion 'Tropik', whereas it is absent in the main text. Surprisingly, the design for the 1958 EXPO pavilion in Brussels is named, although only in order to give an example of an advanced roof construction, and therefore Sołtan's name is not mentioned.[38] Much more attention to Sołtan's work is shown in Przemysław Szafer's publication who was a fellow teacher at the Fine Art Academy. His publication is in fact one of the few to grant more attention to Sołtan's work, and to go beyond merely mentioning his designs: he describes 'Dukat' department store, 'Wenecja', 'Warszawianka', and Warsaw Midtown station, and he mentions also the exhibition designs for international fairs.[39] Each of these designs is briefly described and all of them are praised for their architectural values: arguably, it is the most complete analysis of Sołtan's work written in communist Poland. Otherwise, occasionally there were newspaper or magazine articles on single designs, such as on 'Warszawianka', especially in case of inaugurations.[40] However,

30 Collection of articles by Andrzej Pinno, 'Wędrówki architekta' from 2004, see: LASP, PM 656. Translation from Polish (SR).
31 Interview with Jacek Damięcki. Translation from Polish (SR).
32 Interview with Viola Damięcka.
33 Many postcards are kept in the Museum of the Fine Arts Academy, see: MASP-JS.
34 Bulanda, p. 66. Translation from Polish (SR).
35 Lecture on Polish art in Washington DC (marked 'Tapes Washington DC'), see: MASP-JS.
36 Zachwatowicz, pp. 471, 474.
37 Kotarbiński, illustrations n. 138 and 229.
38 Przemysław Trzeciniak, *Przygody architektury XX wieku* (Warsaw: Nasza Księgarnia, 1974), pp. 304, 306.
39 Szafer, pp. 28-29, 36, 39-40.
40 For example, Zbigniew Ihnatowicz, 'Ośrodek sportowy Warszawianka w Warszawie', *Architektura*, 5-6 (1967), 217-225.



ill. 9.7 and 9.8 - intermediary versions of the plan of 'Warszawianka' sporting centre complex from 1956 (top) and 1962 (bottom), showing different parts of the sporting grounds situated at different levels and consistency of the general layout: 1 - training grounds at the bottom terrace; 2 - main stadium; 3 - tennis/hockey stadium with office building; 4 - artificial hill; 5 - corso: the main communication axis; 6 - open swimming pools area; 7 - cafeteria and swimming pools services building; 8 - covered swimming pool and gym halls

the general tendency is that Sołtan's work was somewhat neglected in the main architectural discourse in Poland. Only as late as in 1985, his work seems to be more appreciated by Tadeusz Barucki (who knew Sołtan, collaborated with him on a minor design in 1961, and exchanged with him some letters in the 1980s), who includes in his text a wider range of designs: 'Dukat', 'Warszawianka', Warsaw Midtown railway station, and the 1958 EXPO pavilion.[41] He recognises also the effort of Sołtan and the *milieu* of the Fine Arts Academy in Warsaw in "cultivating in Poland Le Corbusier's ideas – especially in pedagogy – even in the difficult for Polish architecture period of 1949-1956".[42]

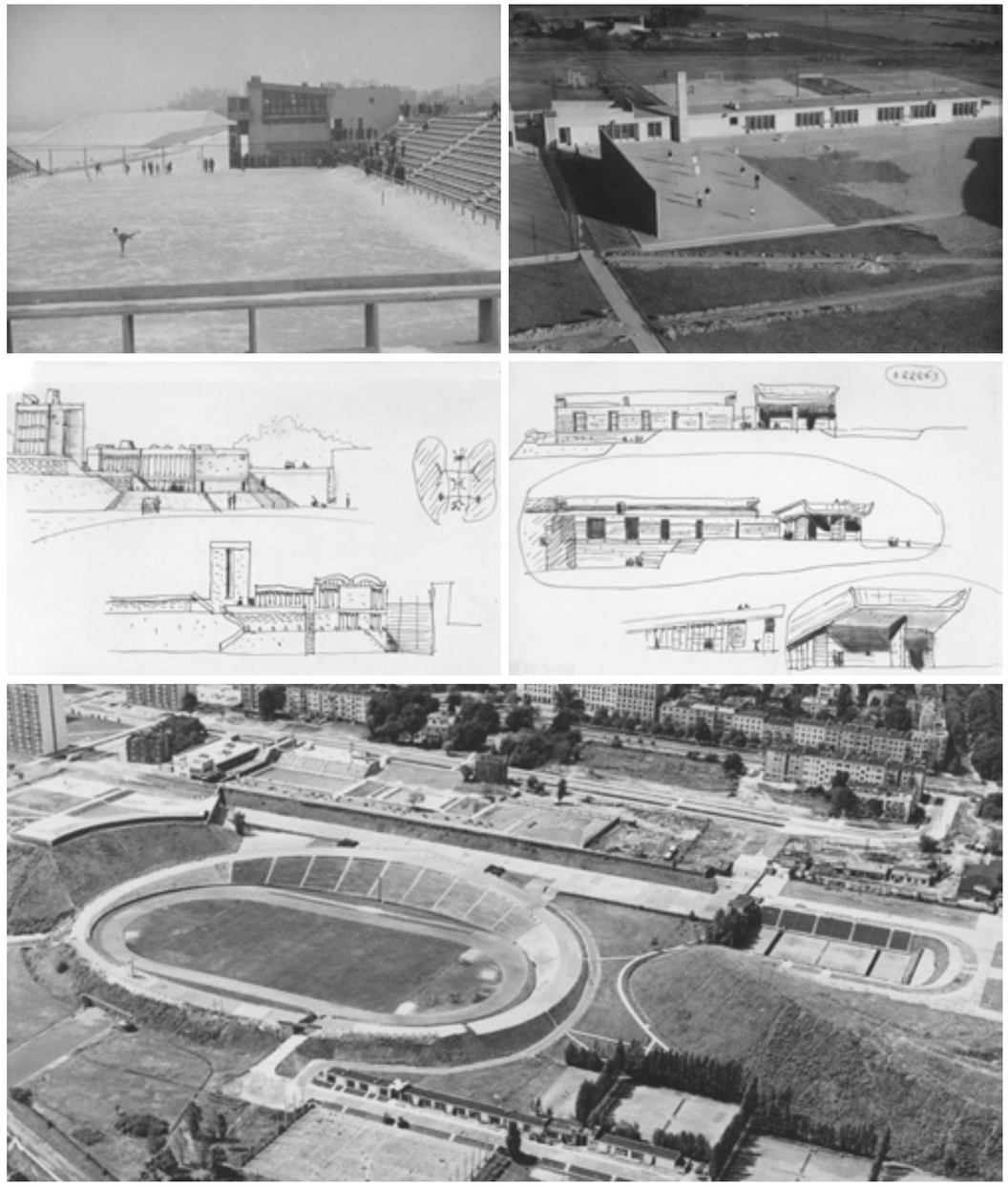
Overlapping in these publications points however to some of the more interesting designs in Sołtan's body of work. Designs such as 'Warszawianka' sporting centre, Warsaw Midtown railway station, and the 1958 EXPO pavilion were those most named – even if laconically. To have attracted attention even in the hostile environment of the communist Poland may suggest in fact a broader value of such designs. The discussion on these designs, along with Sołtan's designs of churches, aims to illustrate the importance of his work for Polish modern architecture.

'Warszawianka' sporting centre – architectural archaeology

The initial design of 'Warszawianka' sporting centre was closely related to the delicate matter of the earlier winning competition entry for the Decennial Stadium in Warsaw from 1953, designed by a group led by Jerzy Hryniewiecki along with Sołtan and Ihnatowicz, and to the domination of socialist realism doctrine in architecture. That earlier stadium building, initially idealised as an Olympic stadium for the capital and later used to celebrate the tenth anniversary of the Polish People's Republic, was to become one of the main venues for official festivities. Then, due to its representative character, it was required from the design to refer to the official course of architecture. As a result, in spite of Sołtan's vivid criticism of socialist realism in architecture, their proposal clearly pointed to the imposed style – a couple of monumental columns on the river bank (along with a series of smaller statues at the opposite site of the building) and a gigantic arcade circling the stadium almost around its entire circumference were the most flagrant elements (ill. 9.4). Recently, Springer commented on the design as "soaking with socialist realism",[43] and a press commentary from 1953 claimed, "uniting monumentality of classical architecture and socialist realist content, it is a bold attempt for a socialist realist sport architecture".[44] Nonetheless, it is interesting to observe sculptural attitude: the design included landscaping leading to an asymmetrical section of the building, with the surrounding terrain decreasing towards the Vistula River. A similar attitude would be seen afterwards in 'Warszawianka', a complex designed for one of the pre-war Warsaw local sport clubs, founded already in 1921.[45]

Inspired by some elements of the Decennial Stadium, 'Warszawianka' became one of the flagship designs of the Workshops, which however took over a decade to be completed, due to the changing programmatic requirements, political hesitations, and to the lack of construction materials.[46] The new complex was part of a plan of rebuilding sport structures in Warsaw after the war, during which the club's buildings were completely destroyed. That competition was organised under the supervision of the national authorities, as in 1949-1955, all the sporting clubs in Poland were unified in state-dependent groupings as part of control and reorganisation following the Soviet model.[47] Only in 1957, 'Warszawianka' was officially reinstated as a stand-alone organisation, which probably led to the redesign of the initial competition proposal. In 1956-1957 a modified team[48] re-elaborated the previous proposal erasing any existing connection to socialist realism present in the competition entry.[49] It included redesigning the stadium, covered swimming pool, and the surrounding

41 Barucki, pp. 206, 213, 217, 222, 225.
42 Barucki, pp. 153-155. Translation from Polish (SR).
43 Springer, 1st edn, p. 51. Translation from Polish (SR).
44 'Najlepsze miejsce oddała Stolica', *Sportowiec*, 8 July 1953. Translation from Polish (SR).
45 Before the Second World War, 'Warszawianka' developed from being initially a football club, into a multi-sporting organisation, including basketball, volleyball, handball, hockey, cycling, swimming, tennis, boxing, ice-skating, and fencing. The initial sporting grounds belonging to 'Warszawianka' were situated in Warsaw in Wawelska Street.
46 Stefan Tworkowski, Andrzej Rostowski, and Zygmunt Hofman, *Projektowanie zespołów sportowych* (Warsaw: Wydawnictwa Politechniki Warszawskiej, 1969), p. 73.
47 The competition drawings are entitled in fact as "Stadium Start", 'Start' being the name of one of the groupings of sporting clubs in Warsaw controlled by the authorities.
48 The competition entry for 'Start' sporting centre (later 'Warszawianka') was prepared by architects Sołtan and Ihnatowicz along with Fangor and Strynkiewicz. The main design team since 1956 included Sołtan, Ihnatowicz, Lech Tomaszewski, Włodzimierz Wittek, Wiktor Gessler, and Fangor.
49 For example, the competition entry included a series of statues completing the lower part of the main stadium, and the initial form of the covered swimming pool did not have a modern volume. Instead, the latter stood atop of the escarpment with a two-level monumental arcade facing the river valley. Both statues and arcades are present in the Decennial Stadium winning entry, making the first proposal for 'Start' include socialist realism content (ill. 9.5, 9.6). It is uncertain how much these elements were connected to Sołtan's input in the designs, but his fierce criticism of



ill. 9.9 (previous page) - 'Warszawianka' sporting centre, view of the artificial hill and the retaining wall system as example of extensive landscaping present from the very beginning of the design
ill. 9.10, 9.11, 9.12, and 9.13 - different elements of the sporting complex: recessed tennis/hockey stadium with the office building (top left), one-floor pavilion for the training grounds at the bottom terrace (top right), unbuilt design for a hotel and offices at the top terrace (middle left), and another version of the unbuilt office building at the top terrace (middle right) with architectural details pointing to Le Corbusier's architecture (for example curved roof shape, brise soleil)
ill. 9.14 - aerial view of the entire complex, succession of descending terraces from the escarpment towards the Vistula River valley

grounds, although only the main football stadium, tennis stadium with offices, and a series of training grounds with their own pavilion were completed until 1962. Following that, in 1964-1966, the Workshops worked on the design of leisure grounds and open swimming pools to complete the complex (ill 8.7, 8.8). The whole area, starting from the modified design from 1956-1957, illustrates the importance of landscape, as well as the importance of collaboration with different artists, alluding closely to Sołtan's writings.

escarpment and landscape

The site and its natural aspect was perceived by the design team from their very first proposal. It sits atop of a natural escarpment, with around twenty metres of height difference, facing the old riverbed of the Vistula River, occupied mainly by flood meadows. Ihnatowicz called it "the most beautiful natural landscape element in Warsaw", and its importance as such was also underlined by Sołtan.[50] Already in the competition entry, the main stadium was leaning against the slope, and an artificial hill was used to modify the landform. Later, in a note concerning the design, Sołtan suggested to position buildings at different levels and to limit their height in order to increase visually the perception of space.[51] In fact, different parts of the complex were built on four terraces gradually descending towards the valley.

The lowest one, around one metre higher than the land below, included training grounds for different sports along with a low one-floor linear services pavilion (ill. 9.11). The second terrace included the main stadium field for football and athletics, with a seven-thousand-people audience. The third one, at the top level of the main stadium's sitting area, functioned as a communication axis connecting different functions. At its northern end, there was a smaller stadium for tennis (in summer) and hockey (in winter) with a four-thousand-people audience and a pavilion for changing rooms and sporting club offices (ill. 9.10). At the other side, there was a leisure and swimming area with smaller basins for children. Finally, the topmost terrace, almost at the street level, included swimming grounds with two open-air swimming pools with grass-covered steps for audience, leisure "beach" area, and cafeteria.[52] In addition, the design was to include there an unbuilt gym hall complex with four halls for athletics and other games or a covered swimming pool, and a hotel. The latter was to be the only dominant vertical element in the entire complex (ill. 9.12).[53] This upmost area was to be the most intensely used, hence the decision to keep it close to the street, in order to avoid increasing the number of paths connecting different levels.[54] Below the terraces, the designers suggested limiting the tree height, and to leave most land as flood meadows in order not to obstruct the view towards the river valley. The importance of the natural fluvial landscape and re-creation of water elements of the old river valley was believed to create a positive microclimate in the area.[55] The attention towards the climatic conditions can be also seen in positioning the swimming pools in a slightly recessed area and using the earth coming from digging to create artificial hills, both of which were to protect the area from wind.

In addition to functional division, such a succession of terraces enabled the buildings to descend along with the slope and not to create visual obstacles hiding the view of the river valley, contributing to the landscape perception at two scales: from one terrace to another, and from the site towards the valley. Many sketches point to the vastness of the panorama that was to be seen from the escarpment, and the attention given to the limited height of the training grounds pavilion and trees in the lower part can easily prove that. Some remember Sołtan taking photographs of different views from and within the complex and trimming the unwanted plants – it was a core concept for the design.[56] At the smaller scale, the connection between two terraces was enhanced by the use of roofs as 'the fifth elevation'. Following the Corbusian idea of a garden roof, many roofs – especially in the swimming pools area – were used as terraces for sunbathing.

The importance of perception and of the view could be connected to Sołtan's intimacy and knowledge of the site, which could have influenced the design.[57] Oskar Hansen, Sołtan's colleague from the Workshops, recalls also that the latter loved natural grass-covered terraces facing the Mienia River in Warsaw countryside, which

socialist realism – both during propaganda and afterwards – may point to the official requirements in the competition tender, to the change of the nature of the client (in 1953, it was a state-controlled sport grouping, whereas in 1957, it was a more independent sporting club), and to the fear of repressions towards architects who followed modern architecture ideals in 1953 (Chapter 4).

50 Hanna Szmalenberg, 'O fundamentach i kamieniu pobierczym', *Gazeta Wyborcza*, 6 October 1995. Translation from Polish (SR).

51 See: MASP-JS.

52 Ihnatowicz.

53 Tworkowski, Rostowski, and Hofman, p. 81.

54 Tworkowski, Rostowski, and Hofman, pp. 83-84.

55 Wiktor Gessler, 'Myśliwiecka', 1995, see: MASP-JS.

56 Interview with Joanna Sołtan. Barbara Lipkowa, 'Myśliwiecka', 1978, see: MASP-JS.

57 Sołtan had been living in the area and he claimed that he thought about walks with his father along the escarpment when designing the complex in a letter to Damięcki from February 26th, 1984, see: MASP-JS.

ill. 9.15, 9.16, and 9.17 - open-air swimming pool complex at the top terrace as an example of microclimate attention: the recessed position was to protect the users from wind, and the extensive grass steps were to guarantee place for spending time without sitting on warm concrete; the complex was recognised as the best building in Warsaw in 1972, although it was demolished in the 1990s to make place for a covered swimming pool building

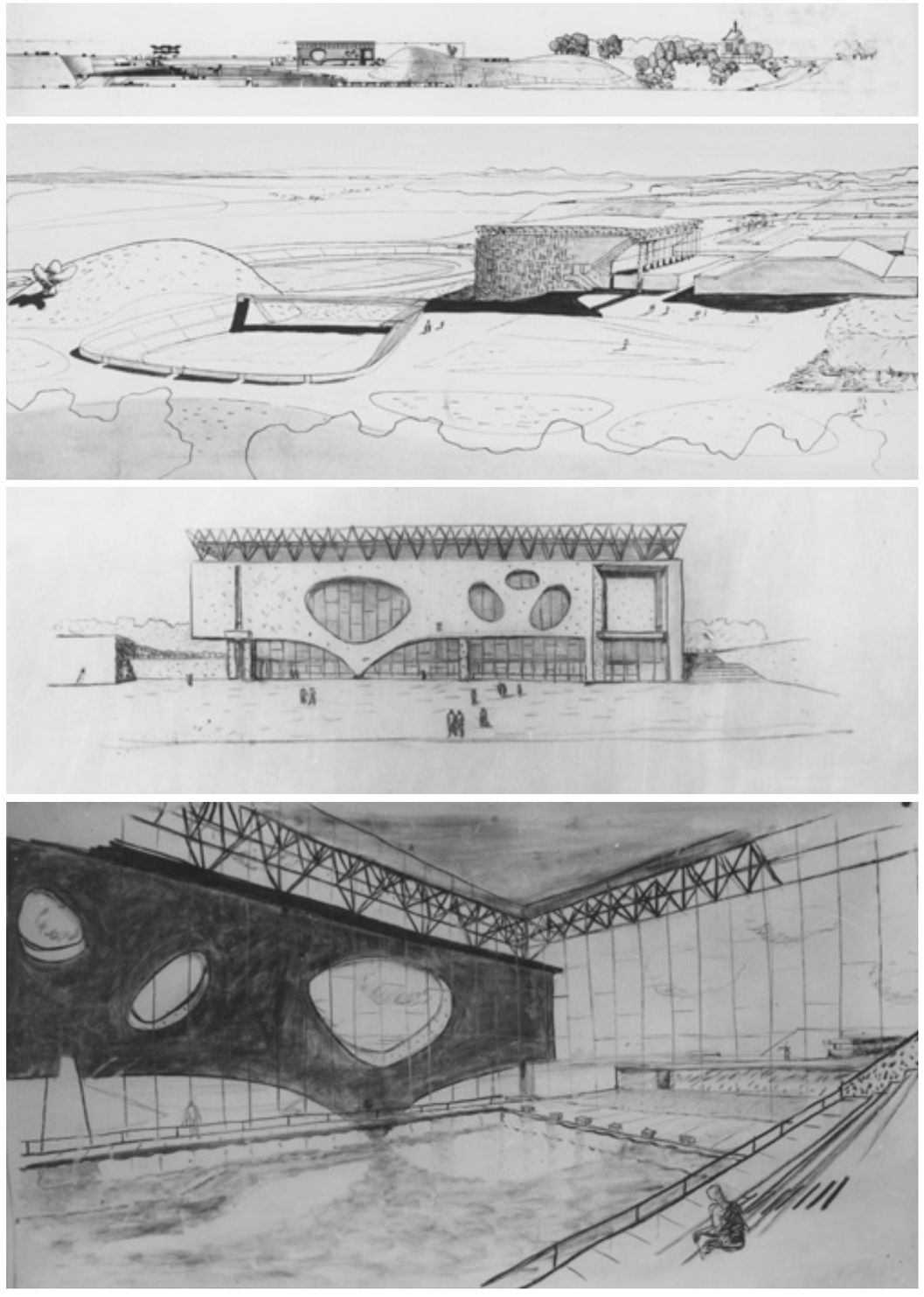
could have been another inspiration.[58] Finally, one could look for precedents to such an attitude in ancient Greek architecture, which Sołtan knew very well.[59] The very idea of an asymmetrical form of the main stadium, leaning against the slope of the escarpment and opening itself towards the river valley, makes it look like an ancient amphitheatre, or like the ruins of the stadium in Delphi in Greece. Whether these particular ruins were familiar to Sołtan and whether they may be a connection between the two is uncertain, but there is a striking similarity in the relation between earth, construction, and landscape in both cases. It definitely contributes to the idea of "grassroots" architecture, which was very close to Sołtan throughout his life (Chapter 7). The paradigm of landscape and earth is further explained by Hansen, who in a commentary to his colleague's design calls the complex "a poetic and spatial lecture on Earth" based on three entities – the stadium following the landform, the hill covered with grass creating a background and granting balance to the composition, and the retaining walls as a "spatial lecture on gravity".[60]

Indeed, the retaining walls (ill. 9.28) were an important element of the design, which was often presented by Sołtan as one of the novelties.[61] The design developed by Lech Tomaszewski was not a typical wall, as it included a series of elements, which organically reinforced earth and made it strong enough to sustain the weight of the terraces and other constructions.[62] The drawer-like elements were filled with earth, and therefore, they used considerably less concrete for the construction,[63] with no need of steel or deep foundations. As a result, the construction was easy to assemble, cheap, and it had low maintenance needs. It was particularly important given the dire economic circumstances in Poland and the lack of construction materials. Aware of the problems in the Polish construction industry, the design team tended to use materials easy in maintenance, referring also to the already poor management of many sporting facilities.[64] Using a difficult situation to their advantage, they succeeded however in obtaining an interesting visual effect, a returning composition element repeating itself in the entire complex: "as architectural detail, the wall creates an interesting and highly desired visual effect, as it repeats in different compositions and sizes accentuating the spatial unity of the complex".[65] They add to the meaning of earth in the complex: used as foundation, as construction element, as wind shelter, and as sculptural and visual element, earth becomes the ultimate protagonist of the design of 'Warszawianka'. Following Sołtan's commentary, "land itself acquires a primordial importance and it answers to the different structural and functional needs".[66]

towards syncretism

In addition to the careful design with attention to the landscape, 'Warszawianka' is also a prime example of collaboration between artists. The initial competition design was conceived by two architects, a sculptor, and a painter. Wojciech Fangor, the painter, remained involved in all the subsequent phases of the design. Thanks to such a close collaboration, it was possible for the design to unite all the visual arts together in a coherent proposal. For example, as seen in the elevation (ill. 9.18), the modelling of land reminds of a work of a sculptor, and the design of white pebble paths crossing the hill covered by grass is very pictorial. The presence of some sculptures in the complex was closely related to architecture: a lighter sculpture atop of the hill was counterbalanced by the mass of the land beneath it, while a much more massive sculpture was opposed to the light structure of the cafeteria. Through such a close collaboration between disciplines, some point to the post-cubist and Corbusian dimension of the space, to the idea of a continuum, "felt only simultaneously from all directions and not gradually step by step",[67] referring to the idea of the ineffable space (Chapter 6). Much later, in the 1990s, a Warsaw city commission recognised the value of the complex as an example of Corbusian "learned game, correct and magnificent, of forms assembled in the light", as he describes it in *Vers une architecture*.[68] The complex is in fact one of the few complete designs by Sołtan, which stands as a manifesto

58 Oskar Hansen, 'O moim mistrzu – Jerzym Sołtanie', 1993, see: MASP-JS.
59 Adolf Szczepiński mentions Argos, Mycenae, Corinthus, and Acropolis as "miracles he owes to Sołtan" in a letter from September 23rd, 1966, see: MASP-JS.
60 Oskar Hansen, 'O moim mistrzu – Jerzym Sołtanie', 1993, see: MASP-JS. Translation from Polish (SR).
61 For example, when presenting the design for 'Warszawianka' in 1959 in Otterlo, he pointed to the existence of terraces due to the height difference, and to the new technology of the retaining walls construction. Original recording: HNI-JB, AV36, audio 12.
62 Ihnatowicz, p. 220.
63 Depending on the source, it is reported that the system used between forty and seventy percent of materials less than a typical retaining wall. Tworkowski, Rostowski, and Hofman, p. 85. Sołtan's presentation text for Team 10 Otterlo meeting in September 1959, and article 'Quelques aspects du travail de l'architecte' for the review *Architecture, Formes + Fonctions* from 1964, see: MASP-JS.
64 Ihnatowicz, p. 220.
65 Tworkowski, Rostowski, and Hofman, pp. 85-86. Translation from Polish (SR).
66 Sołtan's presentation text for Team 10 Otterlo meeting in September 1959, see: MASP-JS. Translation from French (SR).
67 Włodzimierz Wittek, 'Opinia' (2000), see: MASP-JS. Translation from Polish (SR).
68 Official report by Miejska Komisja Urbanistyczno-Architektoniczna, 'Wnioski n/t opracowania programowo-przestrzennego terenów klubu sportowego Warszawianka' from March 1994, see: MASP-JS.



ill. 9.18, 9.19, 9.20, and 9.21 - unbuilt design for the covered swimming pool building at the top terrace, as an example of close collaboration between artists: the pictural wall with irregular apertures was to be an opening towards the landscape, which was to be seen from the inside of the building; sitting atop of the complex, the covered swimming pool would have been its culminating point in a much more creative manner than the initial hotel building, which was to dominate the surroundings thanks to its height

of his ideas and of the collaborative method used in the practice. Referring to the idea of the ineffable space, it offers a Corbusian approach to a building type, which was not realised by Le Corbusier himself, extending the influence of modernist architecture in Poland.

Even though the design team included various designers and artists, syncretism and the coherence of the design are remarkable. Damięcki underlines that it speaks one voice, and that it shows not only the integrity of Sołtan himself, but of the entire design team without any disturbing compromises.[69] This collaboration with artists from the very beginning of the design is appreciated by a critical commentary from 1956: "the builder bent the form of a concrete wall to suit the painter's vision. The painter was building his concept conscious of the technical possibilities of materials. The sculptor had before his eyes the image of the whole complex, without prioritising the details".[70] The most significant example of this attitude is the unbuilt design for the covered swimming pool (ill. 9.18 to 9.21). According to Damięcki, it illustrates the best "polyphonic and total concept" of 'Warszawianka'. With its glass elevation facing the valley and sculptural openings in the concrete wall in front of it, it was to guarantee for the audience inside to look towards landscape, sky, and clouds outside.[71] Its "concrete painting" wall, along with the relation to the landscape, and at the same time clear structural system pointed to a realistic yet fully poetic vision of architecture: "an architect's dream coming true".[72]

between criticism, recognition, and abandoned potential

Nonetheless, the swimming pool design caused the most criticism of 'Warszawianka'. Already after the publication of the results of the competition, the winning entry was opposed, as Sołtan reported in a letter to Le Corbusier.[73] Later in 1957, the modified version of the design was criticised for overstressing visual aspects through "introducing elements in contrast with the landscape and with the context, and sometimes not respecting the human scale".[74] It was claimed to be "too representative" and too concerned with visual values, as opposed to the much desired simplicity. Elaborate elements were believed unnecessary in a local sporting structure: everyday life would be mistakenly treated as exhibition. Such an idea would be fiercely opposed by Sołtan, according to whom there should be no reason for denying someone access to beauty, which – in his opinion – was unavoidably connected to architecture (Chapter 6). The fiercest criticism concerned the swimming pool building, which was claimed to be in visual contrast with other elements, to cause dangerous light contrast inside, and to "look for originality, unsupported by logics of function and construction". Its structure was claimed illogical, with no spatial sense, and the reasons for the irregular openings were contested.[75] In spite of these voices however (mostly connected with the more functionalist Polytechnic of Warsaw, opposed to the Fine Arts Academy, Chapter 4), the complex was well received by the community and it became a popular leisure spot for the citizens of Warsaw, and historical photographs show crowds of people spending their time around the swimming pools (ill. 9.15).

In fact, whereas voices of discontent were present, the complex received a number of different recognitions, including awards from the Polish Olympic Committee and from the Ministry of Land Economy and Environment Protection.[76] In 1972, the complex was declared 'Mister of Warsaw' and "an example to follow for so much needed leisure structures" in the capital.[77] It was appreciated by another architect from Le Corbusier's atelier, Iannis Xenakis,[78] and it was presented by Sołtan in Otterlo at the Team 10 meeting. When in 1965 Sert was asked to supervise the design of a stadium in Baghdad according to Le Corbusier's will, but rejected the request not being able to work on the design at a distance, he proposed Sołtan claiming, "he would carry out Corbu's ideas with greatest care" and referring to Sołtan's experience going back to the very design of 'Warszawianka'.[79]

69 Interview with Jacek Damięcki.
70 Aleksander Wojciechowski, 'Aby architektura znów stała się sztuką', *Przegląd Artystyczny*, 1 (1956), 2-10 (p. 10). Translation from Polish (SR).
71 Interview with Jacek Damięcki.
72 Ibid. Translation from Polish (SR). Given the similarities of the structural pattern, the roof was most probably inspired by the design for the 1958 EXPO pavilion roof by Tomaszewski.
73 Sołtan to Le Corbusier from February-March 1955, see: FLC-DN, R3-4-546-001, R3-4-547-001.
74 Romuald Wirszyłło, 'Ośrodek sportowy ZS Start w Warszawie', *Architektura*, 4 (1957), 141-145 (p. 143). Translation from Polish (SR).
75 Ryszard Michalak, 'Na marginesie projektu ośrodka sportowego Start', undated article in the press collection of the Museum of the Fine Arts Academy, see: MASP-JS. Translation from Polish (SR).
76 *Jerzy Sołtan*, ed. by Jola Gola, p. 235.
77 'Mister stolicy – zespół rekreacyjny Warszawianki', *Trybuna Ludu*, 17 January 1973. Translation from Polish (SR).
78 Szmalenberg.
79 Maurice Besset (Le Corbusier's atelier) to Sert from October 14th, 1965, he informs Sert about the design of the stadium. Sert writes in an answer on October 29th, 1965 that he cannot work on the design and he proposes Sołtan or, if he would not be able, Emery. Finally, in a letter from November 10th, 1965, Besset informs that Emery's experience in the Middle East should be helpful for the design process, see: HGSD-JLS, E037.

ill. 9.22, 9.23, 9.24, 9.25, 9.26, 9.27, 9.28, and 9.29 - comparison of 'Warszawianka' sporting centre when it was fully operative (1970s) and its present-day state in different parts of the complex, pointing to the severe issues linked to the lack of maintenance since its opening; the main stadium and the connection to the lowest terrace (top line) show particular signs of negligence, whereas the circular path around the main stadium (second line) has become unrecognisable underneath shrubberies; the office pavilion next to the tennis/hockey stadium (third line) and the retaining walls (bottom line) are best preserved thanks to the maintenance works from the early 1990s

Despite the recognition received, for years following the construction, 'Warszawianka' was mismanaged and lacked proper maintenance – as its authors predicted. In the early 1990s, the sporting club authorities were struggling with financial problems and they were looking to turn some of their grounds into profit, considering new constructions in the free areas, losing the importance of landscape the authors wanted to emphasise with the design. The sport club was also considering improving the profitability of the open-air swimming area through enclosing them. Already at that time, parts of the complex were in bad shape: the tribunes of the main stadium were out of use, as the wooden benches disappeared, leaving concrete supports only.[80] Such a state led to the ambitious initiative of renovation in 1993-1995, when Sołtan was assured the complex "was treated as a monument".[81] However, repair concentrated mainly on the tennis field and on the retaining walls, while the rest of the complex was left aside, making a visit to the site close to an archaeological excursion.[82]

Today, the complex "has become completely derelict".[83] The lower terrace pavilion does not exist anymore, replaced by new training grounds, as the club's expansion was most intense in that area. The main stadium is almost completely lost, overgrown by thick shrubberies and with temporary pavilions standing in the middle of the former field (ill. 9.22 to 9.25). Moreover, trees grow today atop of the artificially built hills, making them completely unrecognisable although offering a new habitat for the city's wildlife. At the upper terraces, the area where there were water pools for children is now occupied by residential buildings, whereas the entire open-air swimming pools grounds is now occupied by a contemporary swimming pool building, much different from Sołtan's initial design. As a result of these changes, the main axis of the complex at the second highest terrace no longer has a communication role, and it remains abandoned, only with the tennis field and the service building attached remaining relatively close to the original design (ill. 9.27). Such an extent of decay regarding the entire complex is mostly connected to the lack of acknowledgement of the value by the private owner and difficulties of applying protection rules. Some of the solutions, as the modular covered sporting fields positioned within the main stadium, seem to follow a very entrepreneurial attitude looking to cut down costs and time (ill. 9.30). In spite of a city commission declaring the complex European cultural heritage in the 1990s,[84] in 1999 the open-air swimming pools were demolished to make place for the new building (ill. 9.31). Another example of such lack of recognition was the use of the main stadium as a movie set for the Polish production *Quo Vadis?* in 2001, when it acted as an amphitheatre during Nero's times.[85] Due to the production, the extensive construction of the film setting damaged the complex further.[86] In spite of the seemingly disinterested owners of the club, the complex became object of interest for local bottom-up initiatives focussed on modern architecture and on local history,[87] and consequently, the design was given new attention in 2016 competition for the regeneration of the area, stressing its heritage values.[88] Following that, in 2018 it was part of the Polish exhibition at the Venice Biennale as an example of architecture using the forces of nature,[89] becoming Sołtan's most discussed design in the recent years, along with Warsaw Midtown railway station, showing that the core design ideas can still be invigorating, even in today's practice.

Warsaw Midtown – between ideas and their memories

The underground interiors of Warsaw Midtown railway station were a much more high-profile design. It was part of a major investment programme in Warsaw aimed to modernise the rail transport crossing the city from East to West, launched in the 1960s.[90] At the beginning of the decade, a duo of architects Arseniusz

80 Ryszard Opiatowski, 'Warszawianka – klub nie tylko Mokotowa', *Gazeta Wyborcza*, 15 July 1993.
81 Tomasz Jastrun to Sołtan from August 21st, 1995, see: MASP-JS. Translation from Polish (SR). A special commission was created by the city of Warsaw to work on the renovation project of the complex, and former designers were asked to supervise their works, as Sołtan relates to this in a letter to Jerzy Brejowski, Gessler, and Pinno from April 24th, 1994, see: MASP-JS. Gessler mentions that possibility in the article 'Myśliwiecka', 1995, see: MASP-JS.
82 Szmalenberg.
83 Interview with Jacek Damięcki. Translation from Polish (SR).
84 Official report by Miejska Komisja Urbanistyczno-Architektoniczna, 'Wnioski n/t opracowania programowo-przestrzennego terenów klubu sportowego Warszawianka' from March 1994, see: MASP-JS.
85 Sylwia Machlar, 'Warszawianka dla Nerona', *Tygodnik Przegląd* (2000) <https://www.tygodnikprzeglad.pl/warszawianka-dla-nerona/> [accessed on November 10th, 2020].
86 Interview with Jacek Damięcki.
87 The design is mentioned for example by the association 'tu było tu stało' on their website as a remarkable modern design in Warsaw, see: 'SKS Warszawianka', *Association 'tu było tu stało'* (2020) <https://www.tubylotustalo.pl/mapa-tbts/95-sks-warszawianka> [accessed on November 13th, 2020].
88 The competition was won by the architectural practice Centrala from Warsaw, see: 'Who We Are', *Centrala* (2020) <https://www.centrala.net.pl/who-we-are> [accessed on October 21st, 2020].
89 '16. Międzynarodowa Wystawa Architektury – La Biennale di Venezia: Amplifikacja Natury', *Zachęta – Narodowa Galeria Sztuki* (2018) <https://zacheta.art.pl/pl/wystawy/16-miedzynarodowa-wystawa-architektury-la-biennale-di-venezi> [accessed on October 21st, 2020].
90 'Budowlana ofensywa na kolejowej trasie W-Z', *Express Wieczorny*, 13-14 May 1961.

ill. 9.30 - closed pavilions at the centre of the main stadium as an example of incompatible modifications within the site
ill. 9.31 - the present-day swimming pool built at the position of the demolished open-air swimming pools: example of the complete lack of architectural harmony between the existing parts of the original design and new buildings and additions within the site of 'Warszawianka' sporting centre

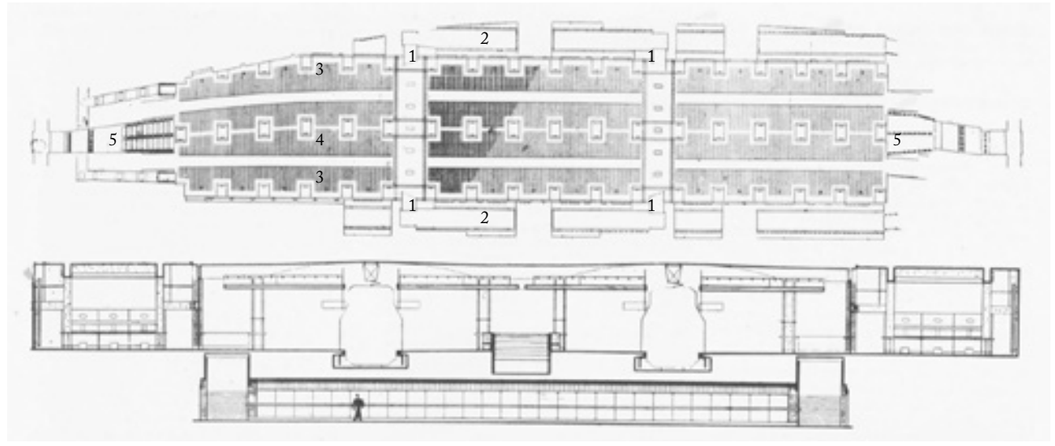
Romanowicz and Piotr Szymaniak started a series of modern railway station designs for local and national trains in Warsaw: Warsaw Ochota in 1962, Warsaw Powiśle in 1963, and Warsaw East in 1969. Finally, Romanowicz was commissioned to build the main station in the city, the brutalist building of Warsaw Central, opened in 1975. The realisation of Warsaw Midtown in the early 1960s was closely related to these: the duo designed the main layout, including the exterior pavilions, but they invited Sołtan and his group from the Fine Arts Academy to design the interiors,[91] a fact that illustrates well that architecture teaching at the Academy was considered more linked to interiors rather than to 'actual architecture', identified with the Polytechnic of Warsaw. The building, close to the future Warsaw Central, was aimed for regional travellers arriving directly to the city centre: hence the importance of the station as a high-profile infrastructure and the interest of the authorities.

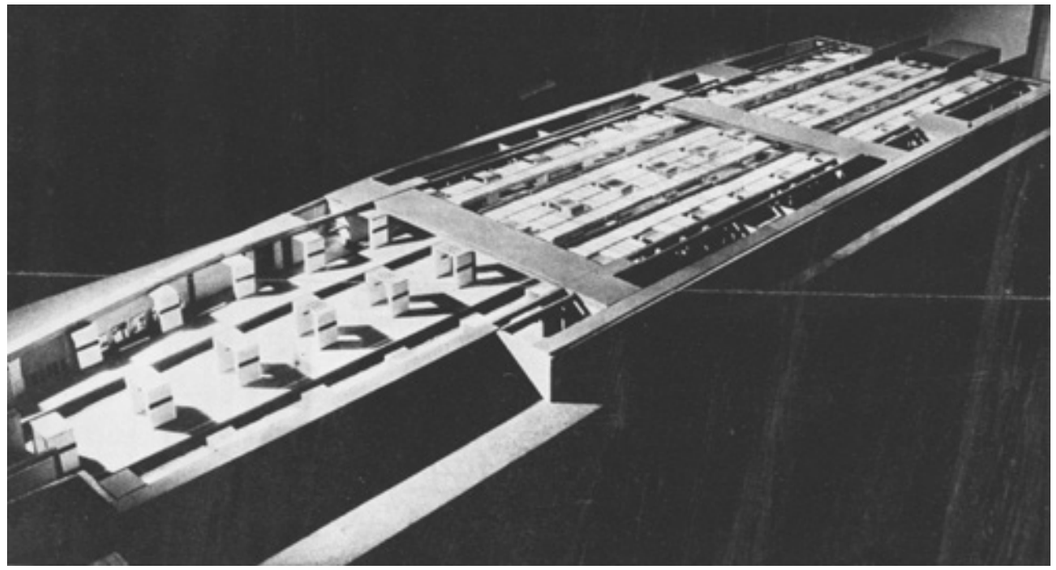
However, the interior design by the architects Sołtan and Ihnatowicz along with the painter Fangor, all professors at the Academy, showed that it was far from concentrating on aesthetics only. When listed by Sołtan, along with 'Warszawianka' and several other designs in an article from 1964, it was presented as an example of "collaboration of specialists united by a common cultural background" and as "integration of vital elements of the programme, until today treated separately; discovery of new elements, creation of poetic values thanks to the juxtaposition of contrasts between those elements",[92] making the philosophy of the design clearly connected to Sołtan's interest in the concept of programme (Chapter 7). Sołtan's role was to channel these different tasks into a cohesive response to the design problem following the main design ideas. In fact, through a close collaboration of the main authors along with a series of other figures,[93] assigned with different tasks such as audio information, visual information, and acoustics, the design of the railway station illustrates that different questions could be well resolved together in a limited number of design decisions.

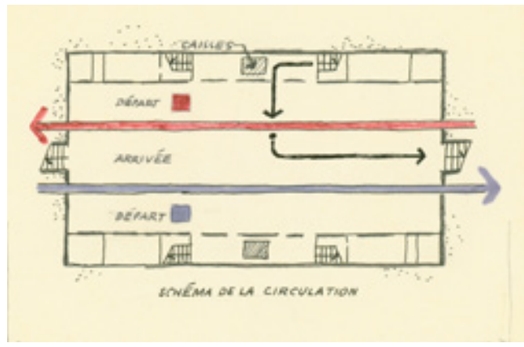
an open space underground

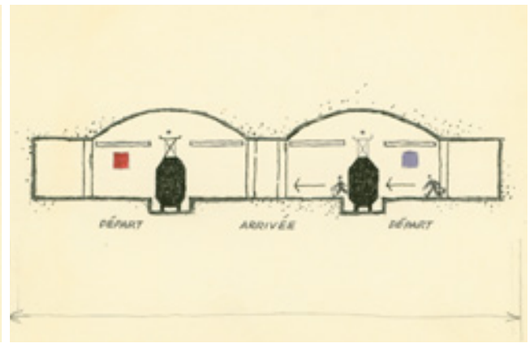
The design's aims could be condensed in two main ideas: to optimise the functioning of the station, and to create a pleasant space for the passengers, instead of "a house of infernal noise as it happens often with railway stations".[94] The design was symmetrical and it included an underground hall, around two-hundred-metres-long, with three platforms and auxiliary spaces: waiting and ticket desk rooms, connected to two overground pavilions and two other surface exits. The layout followed the idea that departing and arriving passengers should not mix: the three platforms are clearly organised in a manner to let them either enter or leave the station. The two lateral platforms are accessed from the entrance pavilions designed by Romanowicz and Szymaniak. Following down the stairs, one arrives in an underground hall with ticket desks, and further on with lateral platforms for departing passengers: one eastbound and one westbound, while the central platform was reserved for arrivals. A train entering the station was accessible from one of the lateral platforms and from the central one, making it possible for the passengers first to get off at the central one, and then letting others to get on board from the side. Such a system was underlined by a carefully designed visual information scheme,[95] which associated with each direction one colour (East – red and warm colours, West – blue and cold colours), guiding the passengers from outside the entrance pavilions on the surface right to the departing platforms (ill. 9.34, 9.35, 9.39).[96] The arriving passengers were to get off at the central platform and leave the station by one of the surface exits. Such a scheme was at the time practical and functional, but it is not used any more today, as most of the passengers use the central platform, best connected to the underground lines.[97] Consequently, the visual information elements are no longer needed and they have long since disappeared, with coloured mosaics in wall niches as the only remnants. In addition, the lettering used throughout the station was custom-designed with a light-box system, following a careful study of the size and position of writings along the path of a passenger so that there would be always a visible indication,[98] and later becoming widely used across other railway stations in Poland, along with the designs of sitting benches, ashtrays, and bins.[99]

91 Filip Springer, 1st edn, p. 108.
92 Article 'Quelques aspects du travail de l'architecte' for the review *Architecture, Formes + Fonctions* from 1964, see: MASP-JS. Translation from French (SR).
93 Main design group: Sołtan (main designer), Fangor, Gessler, Ihnatowicz, Tomaszewski, Szczepiński, Bogusław Smyrski; acoustics: Jerzy Sadowski; lighting: Kazimierz Danielewicz; visual information: Smyrski, Józef Mroszczak; visual design of the mosaics: Jolanta Bieguszewska, Stanisław Kucharski; rack construction: Zbigniew Lebecki. Collaboration: Brejowski, Damięcka, Witold Czajkowski, Krzysztof Łukasiewicz, Jerzy Stajuda, Bogusław Winiarski, Julian Hulnicki, Roman Terlikowski.
94 Jerzy Sołtan, 'Dźwięk i architektura dzisiejsza', *Ruch muzyczny*, 20 (1964), 3. Translation from Polish (SR).
95 Szafer claims that the visual and audio information was adequate to the growing metropolitan aspect of Warsaw, see: Szafer, p. 36.
96 Notes 'Une station souterraine de chemin de fer', see: MASP-JS.
97 The connection to the underground lines (opened only in 1995) was foreseen by the design, see: interview with Bogusław Smyrski.
98 Interview with Bogusław Smyrski.
99 Grzegorz Piątek, 'Kilkadziesiąt lat w podziemiu', *Architektura & Biznes*, 6 (2006), 35-37 (p. 36).









ill. 9.32 and 9.33 - plan, section, and model of the interiors of Warsaw Midtown railway station showing regularity and linear development of the design; the section shows also an additional passage, which was thought for circulation between the platforms in case passengers misunderstood visual information code; 1 - stairs from the pavilions above and ticket offices halls; 2 - waiting halls; 3 - departure platforms; 4 - arrival platform; 5 - exits
ill. 9.34 and 9.35 - scheme of circulation at Warsaw Midtown railway station showing the three platforms (central one for arrivals and lateral ones for departures) and the two directions of the tracks (red - eastbound, blue - westbound) guaranteeing optimum use of the station; the two colours were determining visual information schemes throughout the station
ill. 9.36 (next page) - central arrivals platform at Warsaw Midtown, regular and open space in an underground railway station that was designed aiming to create a visually larger and less enclosed space

The main design problem however relied on creating a pleasant space – not a cave nor a dungeon – even if it was underground, which required a series of considerations including acoustics, lighting, and visual perception. As the station was an enclosed space, the idea was to avoid sound resonating when a train was entering one of the platforms. A series of sound insulating elements was therefore included in the design: along the track ditches, there was a series of perforated panels, coloured according to the visual information scheme, which were to absorb the noise at the level of the wheels of a train, helped by a sound-absorbing mat at the bottom of the ditch. Columns and pillars were clad with other perforated aluminium panels and filled with sound-absorbing materials, as was the hanging rack consisting of linear perforated elements along the entire length of the station. Thanks to these devices, in a situation when people were talking at a normal tone, an entering train was almost inaudible.[100] For safety reasons, the audio information system included a series of four hundred and sixty small "whispering speakers", which were to announce train arrival to the passengers. They were positioned all across the station, some hanging on the rack, and others in the auxiliary spaces like the waiting rooms. Furthermore, Sołtan's idea was to create a full sound experience, and he approached composers to create music, custom-composed for the station, which was to be far from the annoying and impersonal background tunes at the airports.[101] However, this idea was abandoned due to the cost and time.

The problem of an underground space was also tightly connected to the lighting issues. As Sołtan underlines, there was a sharp difference between the open space outside, immersed in sunlight, and an underground hall – and the idea was to diminish this contrast. The entrance and the exit halls were most illuminated in order to smooth the visual perception of coming from a dark place to a light place and vice-versa. Along the platforms, artificial lighting was coming from the top: it was held by the hanging rack, and it was designed to illuminate most places where passengers were to assemble. The position of the lighting above the main rack structure made it easier to expand visually the space, making it seem larger and dematerialising the ceiling (ill. 9.43). Similarly, the lighting system was also to dematerialise the perimeter walls of the waiting rooms. As the latter were visually connected with the platforms through large-dimension glass panels, the interior of the station was perceived as an open space: there was no visual boundary between the platforms and other rooms, and lateral walls of the waiting rooms were clearly visible from the platforms. As the ceiling lighting in the waiting rooms was not strong, the wall illumination was clearly attracting attention and through the lightness of the walls, they tended to 'dematerialise' visually making the space seem larger and less enclosed.[102] In addition, the track ditch was illuminated too – a design decision that was taken with hesitation by the authorities – but it revealed to be a successful attitude towards keeping the station clean, as passengers were less likely to throw rubbish in well-illuminated spaces: an approach proposed later by Romanowicz at Warsaw Central.[103]

As Bogusław Smyrski recalls, the study of visual perception was probably the most important part of the design for Sołtan.[104] It was based on the assumption that there are two types of perception at the station: static by the passengers waiting for the trains and dynamic by the passengers on board of the trains in motion. Following studies of perception in motion, the idea was to avoid details, which could cause nuisance for the passengers. Therefore, wall surfaces were plain, simple, and no posters or banners could be perceived from the trains (posters and advertisements were allowed only on walls perpendicular to the rail tracks). Instead, passengers were to be exposed to the simple surfaces (either in travertine slabs or metal panels) with no detailed decoration. Only at a larger distance, along the perimeter walls, a series of coloured ceramic mosaics in intensively illuminated niches (the lightest elements in the entire space of the station)[105] carefully studied by Fangor was planned (ill. 9.38, 9.40). They were a result of a study of how these coloured surfaces could be perceived by a moving observer, as a number of visual schemes and studies show (ill. 9.37). Such a careful approach to dynamic perception was innovative and unique at the time. However, the attention was also given to a static passenger waiting for the train to arrive. The same architectural elements were characterised by a series of details, which could be perceived only at a small distance by "an eye looking for small discoveries".[106] For example, the very texture of the travertine slabs is irregular, and the division between them reflected a relation to human scale, with a

100 Notes 'Une station souterraine de chemin de fer', see: MASP-JS.
101 Ibid.
102 Ibid. See also: Jerzy Sołtan, 'Projekt i realizacja wnętrz dworca kolejowego Warszawa-Śródmieście', *Biuletyn Rady Wzornictwa i Estetyki Produkcji Przemysłowej*, 1 (1964), 10-19.
103 Secretary from the Workshops recalls that several days after the inauguration, she got a call from the Ministry asking what kind of "miracle" the designers did, as the passengers were not throwing rubbish at the station, in Barbara Lipkowa, 'Myśliwiecka', 1978, see: MASP-JS. The same attitude was recalled by Bogusław Smyrski when he exchanged with the station staff, who was impressed by the cleanness of the space days after the opening, see: interview with Bogusław Smyrski.
104 Interview with Bogusław Smyrski.
105 Sołtan, 'Projekt i realizacja wnętrz dworca kolejowego Warszawa-Śródmieście', p. 18.
106 Notes 'Une station souterraine de chemin de fer', see: MASP-JS. Translation from French (SR).

ill. 9.37 and 9.38 - visual studies for perception of coloured mosaics by passengers in moving trains for Warsaw Midtown railway station, an innovative approach centred on the human well-being
ill. 9.39 - example of visual study for the interior elevation of the eastbound platform at Warsaw Midtown railway station: including hanging informative panels, track ditch cladding with coloured panels, and ceramic mosaics; most elements of the visual information system are no longer existing, save from the mosaics
ill. 9.40 and 9.41 - example of one of the mosaic niches at Warsaw Midtown railway station showing the difference between their initial illumination and lightness (1960s) and their present-day state with missing elements, accumulation of dirt, lack of illumination, and missed coherence with added architectural elements (as the handrail)

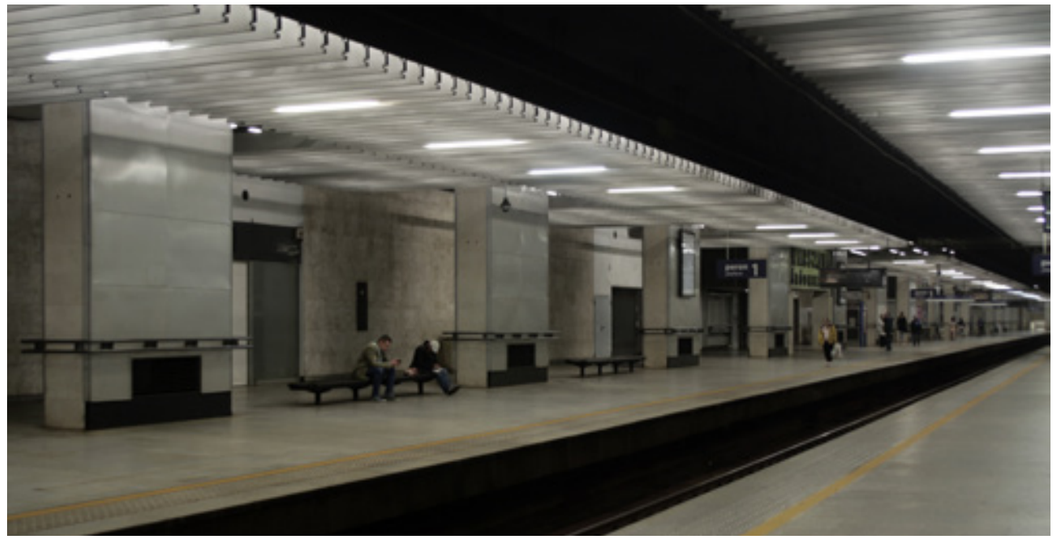
narrower strip of stone at the eye-level height. Similarly, metal panels were perforated, and the ceramic mosaics consisted of a series of small elements in different tonalities of the same colour. Thanks to this parallel attention, the same elements were used to enhance both dynamic and static visual perception.

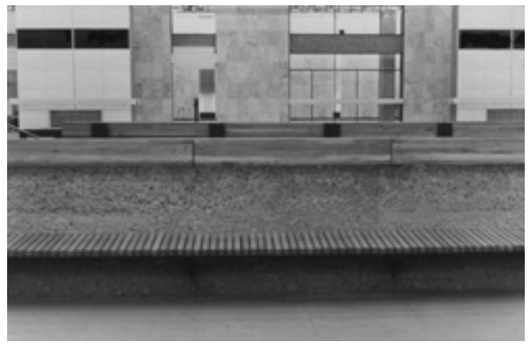
from mismanagement to the present-day

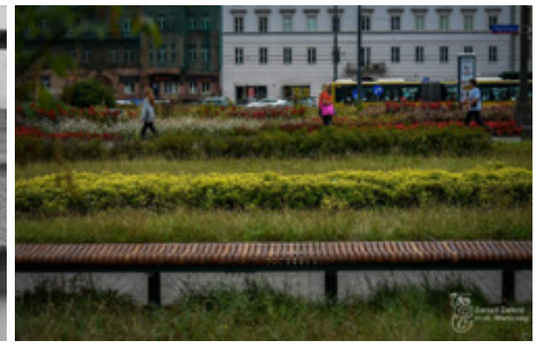
However, as the programme was ambitious and it included different elements, the design team was to face a number of obstacles during the construction process. The most visible problems were caused by the limitations and the availability of the materials. During one of the initial meetings, Sołtan was presented by the Ministry with a rather restrictive list of no more than sixteen materials that could be used, which he commented saying, "dear Minister, I am really sorry, but can we also design a station out of dried shite?" – which actually ended the discussion and gave the group more freedom in design choices.[107] Nonetheless, in the centrally planned economy, availability remained a problem. The glass panels between the waiting areas and the platform hall were impossible to be found in Poland, if one did not want the glass to deform grotesquely the reflections, so they had to be brought from Czechoslovakia. The coloured tiles for the mosaics were initially to be commissioned abroad, then they were to be produced by a factory in Poland – but eventually the pigment cost of around ninety dollars[108] proved to be too high and they were produced by yet another Polish manufacturer, who did not respect all of the colour tones. As a result, Sołtan had to obtain a series of coloured lamps in order to bring the mosaic colours out, as they should have appeared.[109] The lighting equipment available was also insufficient, hence the need to distribute lighting where it was most needed.[110] All of these elements led to time delays, and the last touches to the interiors were given on the eve of the opening,[111] and there was a call for the students of the Academy to fill in the coloured ceramic tiles in order to finish them in time.[112]

The main problem of the railway station was, though, a thorough lack of maintenance, as has been pointed out by many others, and the lack of attention to its details by the Polish National Railways company, which owns the building. After the initial success (the design was awarded a Ministry award in 1964), after having hosted a New Year's Eve gala,[113] and after having been a movie set a few times,[114] the design was left to mismanagement. Arbitrarily changed elements, the lack of attention to such everyday aspects as changing light bulbs, and the wild appearance of posters made the station "sadder and sadder" for the designers.[115] Today, after years of poor maintenance, the main concept of the design is hardly visible. The increased number of kiosks at the central platform, and opaque divisions between the old waiting rooms and the platform area, along with the removal of lighting of the train tracks almost entirely erased the idea of an underground open and light space (ill. 9.42). The importance given to the passengers' perception has been nullified by the lack of attention given to the mosaics: they are no longer illuminated, many are dirty, and they lack many pieces (ill. 9.41). In addition, many perforated metal panels were removed from the columns, and there is little sign of the original furniture. The carefully designed visual information based on colour is no longer present, whereas lettering in many cases was replaced with the new company lettering style, which has no connection to the interior design, while the "whispering speakers" system was replaced by a much smaller number of devices speaking at a louder volume. Amongst the remnants of the past, there are only the original travertine wall cladding, the hanging rack system with new lighting appliances, along with the mistreated mosaics. Because of all of these faults, the general impression, the experience of the whole project that was most important for Sołtan,[116] cannot be seen: there is no open-space, there is no attention to the perception of the passengers, and there is no attention to the details of visual and audio information. In the present-day discussion, the future of the station balances between the plans of expansion (as the small number of platforms slows down the rail traffic in the centre of Warsaw), which

107 Interview with Bogusław Smyrski. Translation from Polish (SR).
108 The value of ninety dollars in 1961 was equivalent to around 7,300 Polish złoty according to 'Historical Currency Converter', *Historical Statistics* (2021) <https://www.historicalstatistics.org/Currencyconverter.html> [accessed on March 25th, 2021]. The average one-year wage in Poland in 1961 was 19,500 Polish złoty, see: 'Przeciętne wynagrodzenie od 1950 r.', *ZUS* (2021) <https://www.zus.pl/baza-wiedzy/skladki-wskazniki-odsetki/wskazniki/przecietne-wynagrodzenie-w-latach> [accessed on March 25th, 2021].
109 Bogusław Smyrski describes different problems linked to the lack of construction materials and bad execution, see: interview with Bogusław Smyrski.
110 Notes 'Une station souterraine de chemin de fer', see: MASP-JS.
111 Barbara Lipkowa, 'Myśliwiecka', 1978, see: MASP-JS.
112 Interview with Wojciech Wybieralski.
113 The New Year's Eve on December 31st, 1963 was organised at the platforms of the station, see: *AR/PS. Architektura Arseniusza Romanowicza i Piotra Szymaniaka*, ed. by Grzegorz Piątek (Warsaw: Centrum Architektury, 2012), p. 87. It was also mentioned by Smyrski, see: interview with Bogusław Smyrski.
114 For example, the railway station was featured immediately after its opening in *Beata*, dir. by Anna Sokołowska (Zespół Filmowy Start, 1964) and in *Spotkanie ze szpiegiem*, dir. by Jan Batory (Zespół Filmowy Syrena, 1964).
115 Barbara Lipkowa, 'Myśliwiecka', 1978, see: MASP-JS.
116 Interview with Bogusław Smyrski.







ill. 9.42 and 9.43 - interior of Warsaw Midtown railway station in the 1960s and today, showing remaining elements from the initial concept (travertine wall cladding, concrete floor cladding and hanging sound insulating rack; throughout the years although the cladding of the columns was changed, and the illumination was replaced with one hanging below and not above the rack (making it impossible to illuminate the ceiling and to expand the space visually as it was intended initially); in addition, the track ditch has now become a black line cutting through the interior, something that was avoided in the design
ill. 9.44 and 9.45 - example of benches at Warsaw Midtown railway station (bottom left) and recently added urban furniture in Warsaw city centre (bottom right), example of recognition and reuse of Jerzy Sołtan's designs today

would potentially require demolition of the existing interior,[117] and attempts to attract attention to the value of the space. Recently, a series of benches originating from Sołtan's design for the station were introduced within the public space above as a part of a citizen proposal for the city's planning (ill. 9.45).[118]

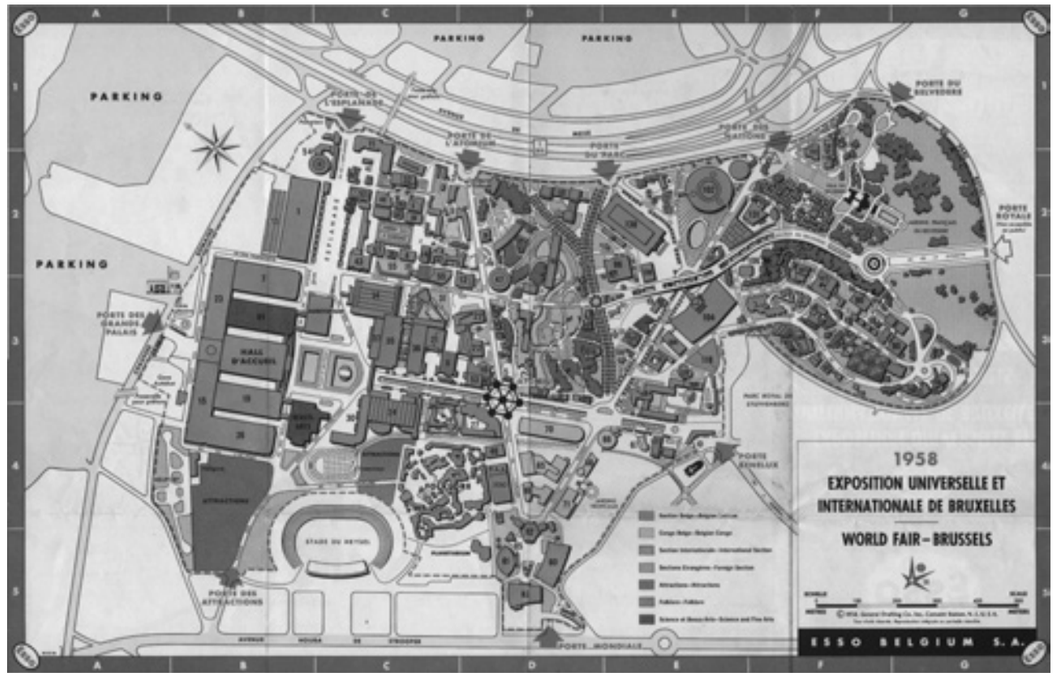
In general, as in many cases of Sołtan's designs, the interior of the station presents a sad remnant of what it was earlier, although many can still see his hand in the interiors.[119] Through the work of his team and through synthesis of different problems, the design of the station illustrates care for details, which was characteristic of Sołtan's designs. A similar attention to the details can be seen in the design of 'Wenecja' bar in Warsaw, where a huge number of design drawings includes all custom furniture, use of the same materials inside and outside, as well as the care of illumination.[120] The care of details can be also clearly illustrated by a much later design of the Mellon Bank interiors in Boston: a truly exquisite interior for around one million dollars, clad with expensive materials, such as marble, mahogany, bronze, and ceiling mirrors. It included also sophisticated lighting and recessed niches for artworks, the latter of which became a reason for Sołtan's criticism of the management of the space by his client.[121] When he realised that the artworks purchased independently by the client did not coincide with his artistic vision, he offered free consultancy to change them and to avoid having "smorgasbord" hung on the walls[122] – which was not accepted by the clients. Whether it was an interior of a railway station, a neighbourhood bar or a luxurious interior of bank offices, the very relation between single elements, connected to the main design ideas, coincides with the concept of going "from general to the particular and from the particular to general", as it was many times called for by Sołtan (Chapter 7). Many aspects of the problem, seemingly resolved one by one, all contributed to the larger idea – a design attitude that some of his later students remember from Sołtan's teaching and refer to as "the hand of God" gesture.[123] In addition, in spite of a number of figures who worked on different tasks, the design was unified by the main idea that kept all the elements together as parts of the system: an attitude that was difficult to find in Polish modern architecture of the time.

Brussels EXPO – from breakthrough to breakdown

The connection between Sołtan's theory and designs is also evident in the unbuilt design for the 1958 Polish EXPO pavilion in Brussels. The pavilion follows the trend in Polish exposition design, which clearly linked it to modern architecture ideas and forms, even in the age of socialist realism propaganda. As one of his colleagues claimed, exhibition design in general was "probably the only isolated islet in the pond of socialist realism".[124] This apparent freedom of exhibition design from politics was however tactical, because contrary to other fields, exhibitions had to be brought abroad and it was necessary to adapt their visual aspects to the canons beyond the sphere of influence of the USSR. As fair and exposition pavilions had to engage with a public who were not acquainted with socialist realism ideas, it was impossible for them to blindly follow that path. Instead, it was accepted by the authorities that such architecture should include the much resented 'foreign' modern aesthetics.[125]

Such an attitude enabled architects to follow modern ideas in exhibition design, and thanks to Sołtan's contacts with fellow former prisoners from the Murnau camp in the Polish Foreign Trade Chamber responsible for international fairs and expositions,[126] he was commissioned to design several. He worked for example on exhibitions 'Children in Poland' (1949-1950) and 'How do Polish workers live' (1951), as well as on pavilions for fairs, including the Polish pavilion for the World Fair in Paris (1953). The design of a typical exhibition pavilion 'Tropik' for warm countries (developed with a team from the Workshops) was a successful proposal, which was implemented several times: in Damascus (1955-1958), New Delhi (1955), and Zagreb (1956-

117 Jarosław Osowski, 'Dworzec Śródmieście rozrośnie się do czterech torów. Podziemny łącznik do stacji metra Centrum', *Gazeta Wyborcza*, 22 January 2019 <https://warszawa.wyborcza.pl/warszawa/7,54420,24386118,dworzec-srodmiescie-do-zmiany-powstana-dodatkowe-tory-i-lacznik.htmlZ> [accessed on October 14th, 2020].
118 Tomasz Urzykowski, 'Faliste ławki według wzoru z lat 60. stanęły przy Pałacu Kultury. Warszawiacy je uwielbiali', *Gazeta Wyborcza*, 6 September 2020 <https://warszawa.wyborcza.pl/warszawa/7,54420,26272391,faliste-lawki-przy-palacu-kultury-odtworzono-znakomity-projekt.html> [accessed on October 10th, 2020].
119 Both Gauchat and Vigier, Sołtan colleagues from Harvard, commented on the present-day state of the station that it looked "quite the same" as they remembered it, see: interviews with François Vigier and with Urs Gauchat. Sołtan's student from the Academy in Warsaw Damięcki commented also that Sołtan's poetics can still be felt "in the remains of the station", see: interview with Jacek Damięcki.
120 Notes 'Une station souterraine de chemin de fer', see: MASP-JS.
121 Interview with Edward Lyons.
122 Sołtan to George Farrell (Mellon Bank) from November 1st, 1982, see: MASP-JS.
123 Interview with Anne Wattenberg.
124 Oskar Hansen, 'O moim mistrzu – Jerzym Sołtanie', 1993, see: MASP-JS. Translation from Polish (SR).
125 Barucki, p. 153.
126 Leon Jerzy Gadziemski was a prisoner at POW camp in Murnau and worked later at the Polish Foreign Trade Chamber. He helped Sołtan get commissions from the Chamber, see: Bulanda, p. 55.



ill. 9.46 - plan of 1958 EXPO area in Brussels with no Polish pavilion; its original site just next to the newly built Avenue du Belvédère was at the centre of the area; after Poland's resignation from participation, its place occupied by two other pavilions, n. 123 and 97 (Malta and Chile)
ill. 9.47 - one-to-one scale model of the roof of the Polish 1958 EXPO pavilion, the only part of the design that was realised in 1956-1957, mainly to prove that the structure designed by Lech Tomaszewski was feasible; the model was to be exhibited as part of the exposition next to the pavilion in the last reduced design
ill. 9.48 (next page) - competition view of the Polish 1958 EXPO pavilion in Brussels showing the exterior side of the curved wall, which was to be covered by pictorial interpretation of complex mathematical functions, as an example of syncretism between art and science, which was one of the cornerstones of the design prepared at the Workshops

BX58 ★

Rozpoczęcie pawilonu z belgijskim ostrzeżeniem
/widoczny od południa/

1957).[127] These designs were also well received in Poland – at least they were appreciated in the retrospective analysis after the decline of socialist realism: "at the international level Polish architects create works entirely free of eclecticism. They are exhibition pavilions for international fairs and events showing bold and modern ideas of spatial organisation, construction, form, and colours".[128] Easy to transport and to assemble, simple, adaptable, and visually attractive, 'Tropik' was a prelude to the work on the competition entry for the Polish EXPO pavilion, where the building itself was not only functional, but also it was treated as an exhibit – a piece of architecture that was a true breakthrough in the communist Poland.

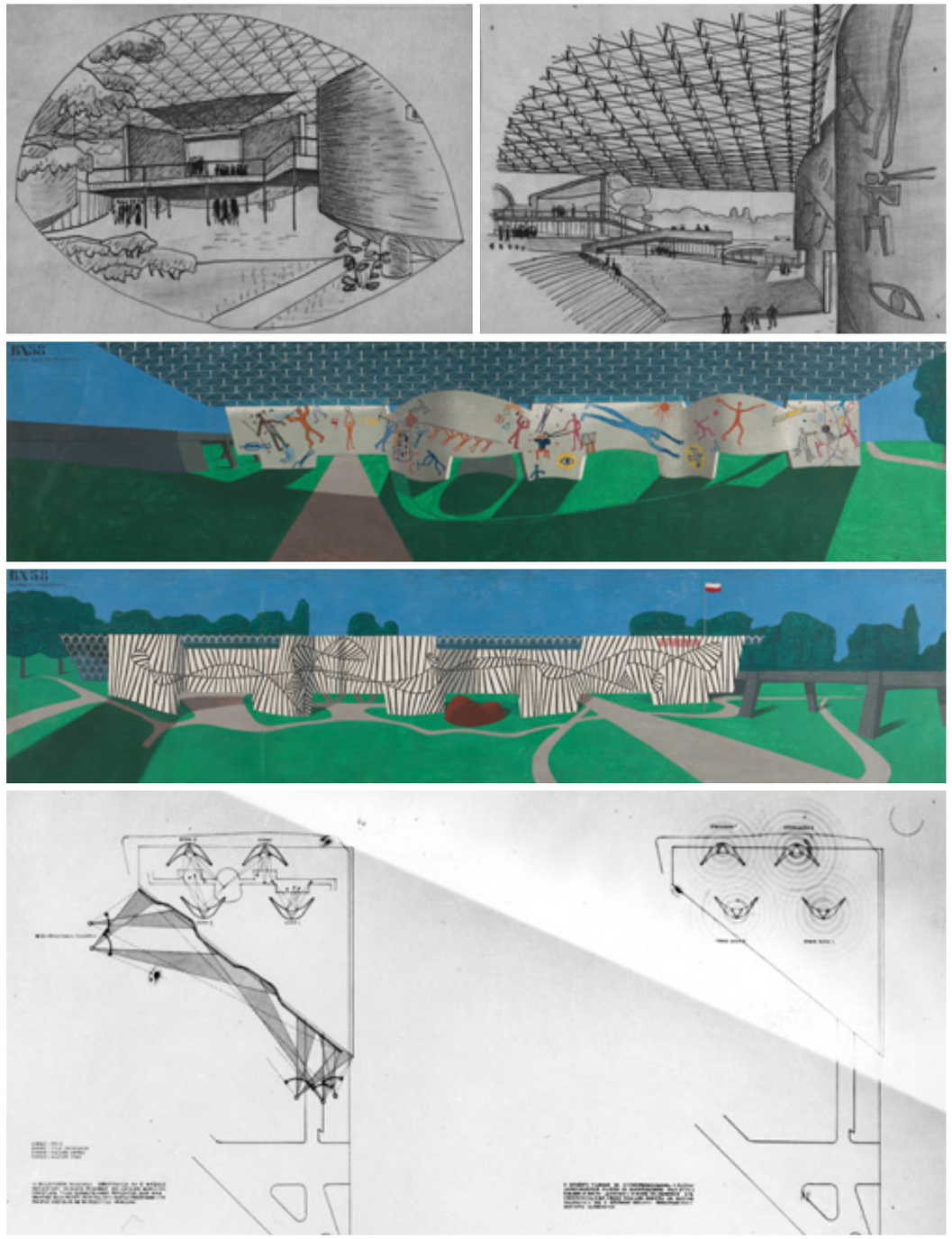
competition for the EXPO pavilion

The 1958 EXPO was the first major international fair organised after the Second World War, and the event attracted attention all around the world with around two hundred participating countries. The exhibition, gathering both Western countries and the communist bloc, was an opportunity for a 'peaceful coexistence', a course in international relations from the mid-1950s. It attracted well-known architects, and it was an opportunity to express new ideas: such as the Atomium and Le Corbusier's and Xenakis' design for the Philips Pavilion, "the Electronic Poem" with Edgard Varèse's music composed specially for the fair. At the same time, the Soviet Union abandoned the socialist realism attitude, and aimed to propose a modern and technologically advanced pavilion.[129] Following their lead, the initial attitude of the Polish authorities was grand: they petitioned the organisers to change the land plot for the pavilion. Instead of the original 3,000 square metres, they asked for 15,000 and eventually they were granted 10,000 square metres – with an interesting position next to the main axis of the EXPO area, next to Finnish and Norwegian pavilions (ill. 9.46).[130] In 1956, a competition was organised by the Polish Society of Architects to select the design, gathering one hundred and two proposals, and Sołtan's team from the Workshops was awarded a special mention, along with indication for realisation.[131]

The design of the pavilion followed three main ideas: respect of the natural landscape of the site, a complete experience thanks to audio-visual elements, and structural simplicity. The main layout enabled the vast area to remain mostly untouched by the pavilion construction: it refused a traditional concept of a box, following on the experience of 'Tropik' with a limited number of vertical divisions. There were almost no walls, and the pavilion itself proposed itself as a fragment of the park. Polish newspapers approached this idea as an absolute revelation: "I have seen something that has not yet existed. At least here, in our reality [...]. The best feature of the design of the Polish pavilion for the Brussels exposition is the fact that it will not be following our well-established schemes. It will be simply... a garden, a garden with exhibits".[132] Sołtan underlined that the existing park would be almost untouched: grass and shrubberies would be kept at the ground level, and the roof would have openings for bigger trees. It would create therefore a free exhibition space with display boxes positioned between the trees, along the lawns, and standing on the grass (ill. 9.49, 9.50). The idea of a pavilion as a volume was rejected, and the difference between the interior and the exterior was dissolved.

In addition, the proposal foresaw a very important role of artists in the work on the pavilion, which was to guarantee an integral audio-visual experience for the visitors. The main idea consisted again of including artists from the very beginning of the design process, due to the "basic correspondence of creative processes in different artistic and scientific disciplines".[133] Similarly to other designs, their close collaboration was to guarantee integrity and unity of the design. When presenting it in Otterlo, Sołtan called the design in fact a "plastic achievement", referring to the visual values of the pavilion.[134] The main wall of the pavilion, a division from the plots occupied by the Finnish and Norwegian ones, was to be a gigantic, one-hundred-metre-long graphic element. The exterior side was to include Fangor's artworks as a visual and abstract interpretation of complex mathematical functions (ill. 9.52), while the interior side was to illustrate a narrative of the last twenty years of Polish history through a composition of selected and enlarged children's drawings (ill. 9.51),

127 *Jerzy Sołtan*, ed. by Jola Gola, pp. 116, 130, 140, 152.
128 Zachwatowicz, p. 465. Translation from Polish (SR).
129 Susan E. Reid, 'The Soviet Pavilion at Expo '58 and the search for a modern socialist style', in *Measuring up Against the West: A History of Russian Exposition and Festival Architecture* ed. by Alla Aronova and Alexander Ortenberg (London: Routledge, 2018).
130 Adam Wysocki, 'A jednak Bruksela', *Życie Warszawy*, undated article in the press collection of the Museum of the Fine Arts Academy, see: MASP-JS.
131 Main design group: Sołtan, Ihnatowicz, Tomaszewski, Fangor, and Skrowaczewski. Collaboration: Tadeusz Babicz, Jan Hempel, Henryk Marconi, and Małgorzata Marconi. Their proposal was awarded with a special mention, although the first three prizes were awarded to other works, see: 'Przed wystawą światową w Brukseli', *Projekt*, 2 (1956), 65-68. The design group was later enlarged to around twenty people who were working on the advanced design in 1956-1957. Sołtan includes a very long list of those who contributed to the design in his notes on the 1958 Polish EXPO pavilion, see: ISPAN-JS.
132 Adam Wysocki, 'BX 58 rusza na podbój Brukseli', *Życie Warszawy*, 22-23 July 1956. Translation from Polish (SR).
133 Włodzimierz Wittek, 'Opinia' (2000), see: MASP-JS. Translation from Polish (SR).
134 Sołtan's presentation text for Team 10 Otterlo meeting in September 1959, see: MASP-JS.



ill. 9.49 and 9.50 - internal views of the Polish 1958 EXPO pavilion showing the roof structure, which enabled to maintain almost unscratched the existing park vegetation, including trees; the series of uplifted decks formed the main itinerary, which moved fluidly from one area to another
ill. 9.51 and 9.52 - competition coloured views of the curved wall of the Polish 1958 EXPO pavilion, main elevation of the pavilion illustrating the union of arts thanks to the collaboration between architects and painters, and syncretism between science and art thanks to the motifs of the exterior side of the wall (bottom) with pictorial interpretation of complex mathematical functions; the interior side of the wall (top) was to be a composition of enlarged childish drawings forming a narrative of the most recent Polish history, referring to the interest in rough "grassroots" architecture
ill. 9.53 - schemes of lighting, visual projection screens, and music reach in the Polish 1958 EXPO pavilion pointing to the value of the design as an example of union of all arts - not only visual

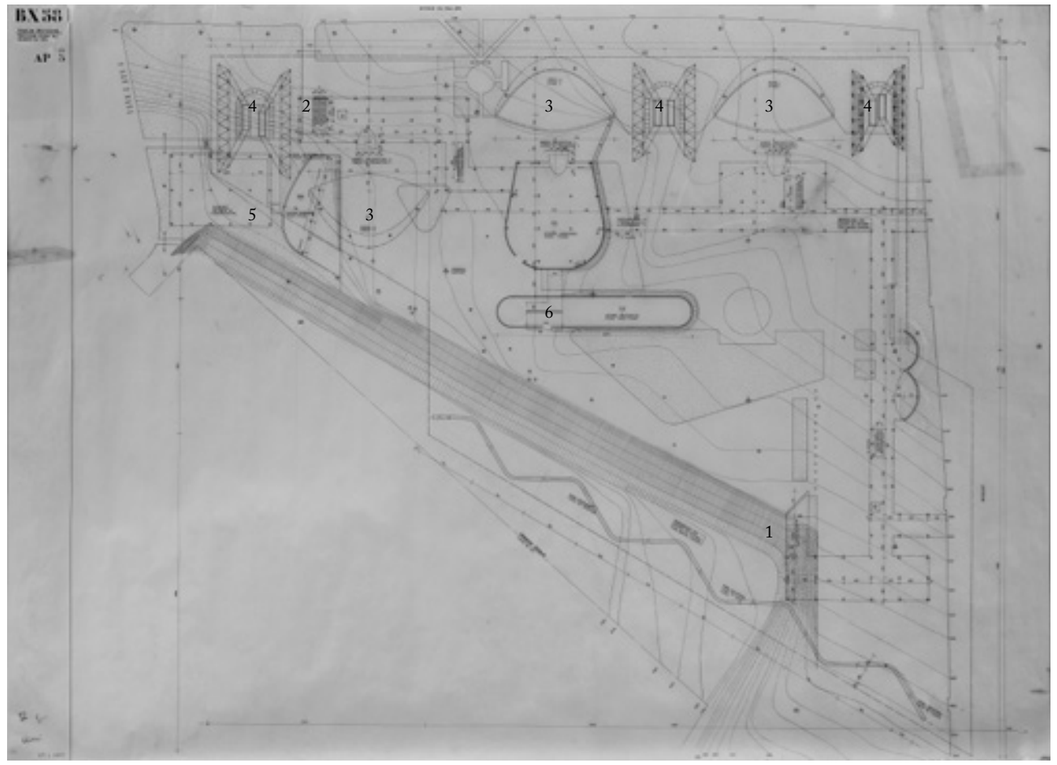
originals of which were to be also exhibited in one of the displays.[135] The importance of the pictorial wall was to be underlined by illumination: static inside and moving outside. In addition to these pictorial elements, the pavilion would include an entirely innovative and complex audio-visual experience. Following the concept of the exposition, a series of projections was to complete the exhibits: they were to illustrate the history behind the exhibits, referring for example to the authors. Four hanging screens were showcasing these projections and music composed specially for this occasion by Stanisław Skrowaczewski, which were to be seen and heard from each spot in the entire pavilion (ill. 9.53). Following a very close collaboration with the composer, the music was to be "a sum of impressions of the surrounding space", and it was to be inspired by the most elementary, the simplest Polish folk music (looking for the origins and the "grassroots" of Polish culture).[136] Music was then considered as an integral part of the whole exhibition, and not as an "added value",[137] making Sołtan's team proposal close conceptually to the Philips Pavilion, and making it a precedent to the later Warsaw Midtown railway station.

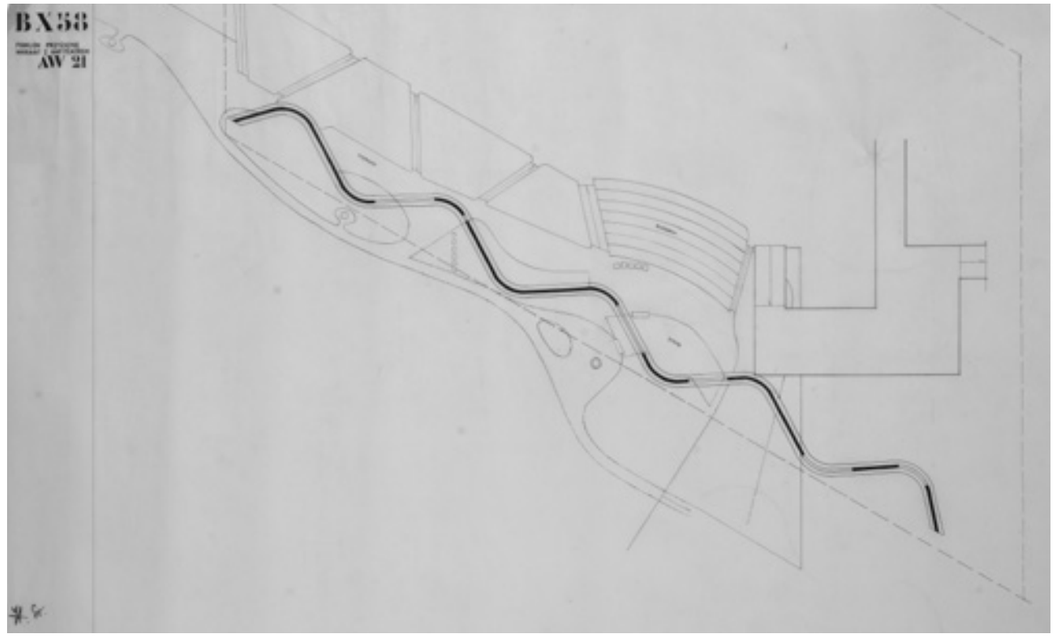
In spite of such an ambitious programme, the design of the pavilion was simple. When Sołtan presented it in Otterlo, he underlined its structural clarity, functionality, and flexibility. The construction was thought to use only iron and concrete core, steel braces, and spherical joints.[138] The most advanced part of it was the roof across the entire pavilion, which followed the tradition of truss constructions erected and idealised by Buckminster Fuller, Le Ricolais, and Pierluigi Nervi. Designed by Tomaszewski, its advantage was to improve the static response to existing charges.[139] It was supported by the pictorial wall on one side, and by three punctual truss pillars on the other side. The rest of the pavilion construction was simple, and it included a series of uplifted decks and terraces, which were completing park lawns and a stage at the ground level as the exhibition itinerary, with different exhibition sections cohabiting within the same space. Visitors were to move freely between the exhibits and the trees, under the great truss roof structure, facing the interior side of the pictorial wall. This organisation was maintained in the following and more detailed version of the design completed between December 1956 and January 1957. Whereas there were some minor changes, as the length of the pictorial wall, the V-shaped form of the supports of the roof structure, the number of projection screens reduced to three, the position of the stage, and the removal of an additional exterior terrace for a cafeteria, the concept of the pavilion remained unchanged. The roof plan included the detailed position of openings for the trees, the hanging screens were much more detailed, and Sołtan mentioned a very complex work on the music together with Skrowaczewski.[140]

between politics and economy

Nonetheless, only a couple of months later, in February of 1957, the official position on the Polish participation in the 1958 EXPO changed. Press reported that the budget for the building of the pavilion was cut to one third of the initial amount, as the authorities realised that Poland could not afford the initial expense.[141] The decision was motivated ideologically, claiming, "we cannot go out to the world with gigantomaniac construction of pavilions".[142] As a result, the design team had to reorganise entirely the proposal, coming up with a much reduced, rectangular, and linear version of the pavilion (ill. 9.58). It kept some of the initial elements, as the roof structure model and uplifted decks, but there were no openings for the trees, no long pictorial wall, and the presence of audio-visual materials was much reduced. The pavilion also lost most of its open character, and it was much closer to a 'box scheme'. It became a reduced version of an innovative idea, losing therefore most of its original clarity and strength. Finally, because of intense discussion in Poland on the feasibility of the design and due to the lack of support for the project by the authorities, it was decided that Poland was not to participate in the exposition.[143] A vibrant press discussion on the design was fuelled by claims by the authors of one of the first-prize-awarded designs that the Workshops' design lacked "structural realism", and that it

135 In the case of the interior wall, the artist's role would be to select and to assemble children's drawings. The very idea of using childish artwork is connected to the concept of "rough" ideas and concepts in burgeoning cultures, as Sołtan associated it with the concept of "grassroots" (Chapter 7).
136 Notes on the 1958 Polish EXPO pavilion, see: ISPAN-JS.
137 Sołtan, 'Dźwięk i architektura dzisiejsza'.
138 Presentation text for Team 10 Otterlo meeting in September 1959, see: MASP-JS.
139 Jola Gola, 'Aura Sołtana i Tomaszewskiego', in *Wzornictwo na Myśliwieckiej* ed. by Jan Łoziński and Maja Łozińska (Warsaw: Wydawnictwo Akademii Sztuk Pięknych, 2018), p. 134.
140 Sołtan, 'Dźwięk i architektura dzisiejsza'.
141 The budget for the participation in the 1958 EXPO went down from fifty-seven million zloty and one million dollars to fifteen million zloty and three hundred and thirty thousand dollars, see: 'Trzy razy mniejsze koszty udziału Polski w brukselskiej Wystawie Światowej', undated article in the press collection of the Museum of the Fine Arts Academy, see: MASP-JS.
142 'Bruksela 1958', *Projekt*, 2 (1957), 37. Translation from Polish (SR).
143 Jola Gola, 'Aura Sołtana i Tomaszewskiego', in *Wzornictwo na Myśliwieckiej*, p. 134.





ill. 9.54 and 9.55 - plans of the developed design of the Polish 1958 EXPO pavilion (ground level - top, detail of the curved wall - bottom) with more accurate indications of the structure supporting the roof, a more detailed drawing of the curved wall, and a clear organisation of the exposition itinerary, including the audiovisual projection screens; at this stage, all the details were provided for the most crucial elements - roof structure, screens, stairs, and other details; 1 - stairs to the exhibition deck (beginning of the exhibition); 2 - stairs to the exhibition deck (end of the exhibition); 3 - projection screens; 4 - roof structure support; 5 - office building on pilotis; 6 - shop area on pilotis

was too elaborate and poetic in its expression, criticising especially the pictorial wall.[144] The latter idea, that exhibition design should not relate to emotions, was considered by Sołtan as absurd and contrary with his very definition of architecture based on beauty (Chapter 6). As a response to the structural criticism, the design team built a model of a fragment of the roof in Warsaw in order to show that it was founded on existing structural models. Whereas it ended the discussion on structural feasibility, the question of the cost remained and it led to the abandonment of the project. Contrary to Polish scepticism, the design raised interest in some Western countries (for example the design was published in France, Germany, and in the United States), pointing to its value, originality, and innovation.[145]

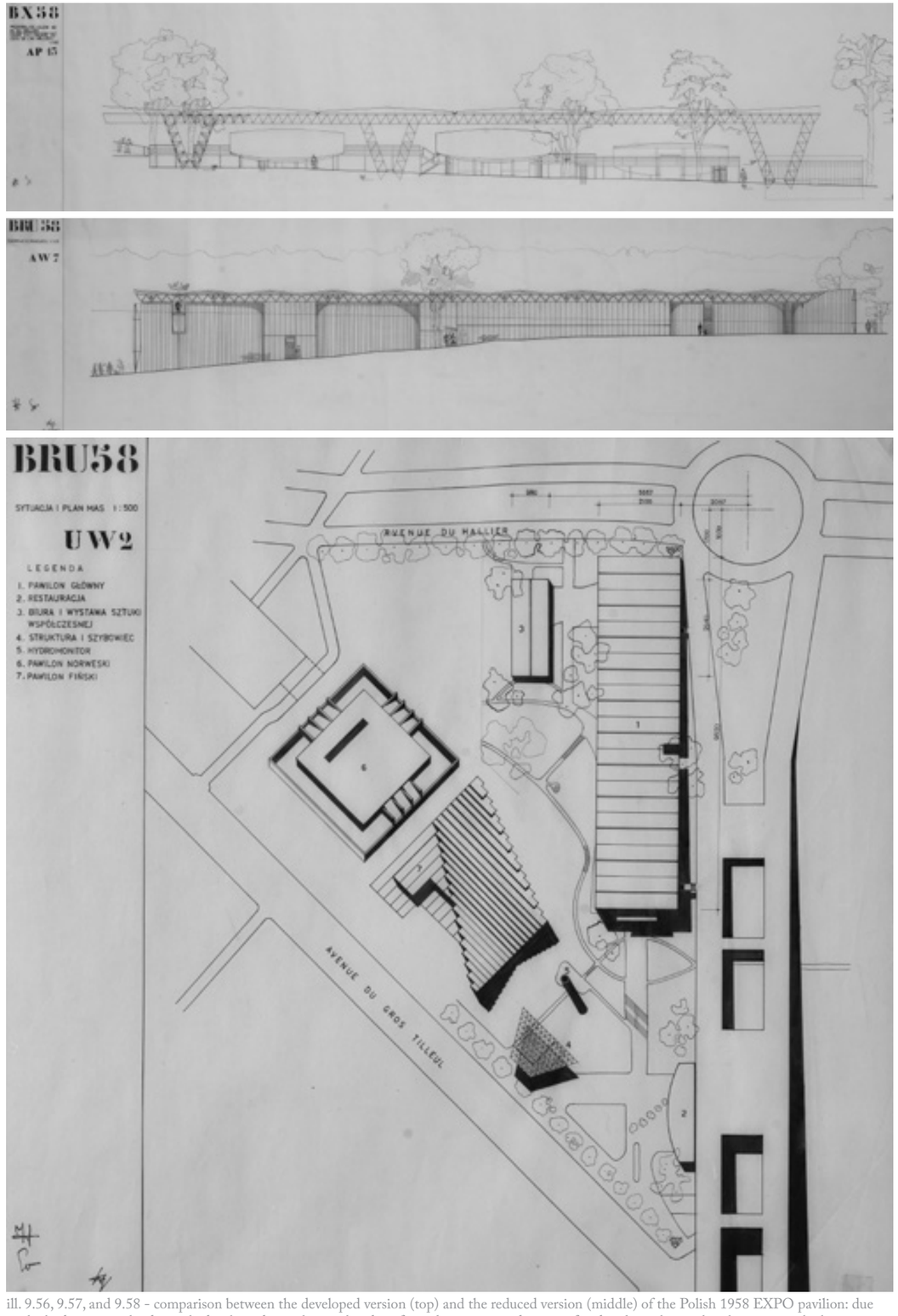
Similarly, those who worked on the design agreed in unison that it was extraordinary. Krzysztof Meisner claimed, "it was promising a worldwide revelation".[146] Wiktor Gessler added, "if the Polish Pavilion for the EXPO was to be built in its original version, it would have won the golden medal".[147] Sołtan himself admitted that they wanted it to be "a pavilion of the second half of the twentieth century".[148] It is definitely true that even more than in the case of 'Tropik' typical pavilion, the 1958 Polish EXPO pavilion was considered as an exhibit itself. It focussed on presenting an idea and not on presenting a product, as it was common at that time. It was an idea, which was not limited to Poland's culture and history, but it was a commentary to a much larger reality of human civilisation and its changes during the last century – the design itself was a true theoretical statement, relating closely to Sołtan's vision of modernity.

Sochaczew – a crusade to build a church

In addition to the previous designs, Sołtan was also passionately involved in religious architecture – a branch which strangely could develop in communist Poland. The fragile relationship between the communist authorities and the Catholic Church could be exemplified by the plan of the new district of Krakow – Nowa Huta – designed under the socialist realism propaganda in 1949, and planned for the "perfect and new" society of communist Poland, renouncing to include a church as part of the master plan. Regardless, the local population was trying to undermine the initial plan and to organise religious offices in the district. The impasse resulted in riots, organisation of open-air holy masses, and eventually, opening of a church in 1977.[149] Indeed, with the end of the most rigid period of the Stalinist propaganda around 1955-1956, it was possible for the church in Poland to develop, even if the authorities were still hostile towards it.[150] Consequently, Sołtan and his team from the Workshops participated in 1957 in two competitions, the first one for the very church of the district of Nowa Huta, and the second one for a church in Sochaczew, a town near Warsaw.[151] These were not the only architectural competitions for churches organised in the communist Poland, as actually a number of modern churches were built throughout the country and church architecture was quite prolific.[152]

In a commentary to architecture of Polish modern religious buildings,[153] Sołtan points, however, to the questionable value of many of these designs. According to him, given their quantitative relevance in Polish architecture, they should also stand for good quality, whereas many designs are, according to him, "beyond visual capabilities and sensibilities of their authors and clients".[154] Instead, he criticises the superficiality of building churches higher and higher, and he condemns excessive decoration and wealth of religious architecture as repugnant and shameful, pointing to the contrast with the humbleness of the first churches. Instead of

144 Reply to the criticism concerning design was published in *Stolica*, 52 (1956), 2-3, and re-published in *Jerzy Sołtan*, ed. by Jola Gola, p. 175.
145 *Architecture d'Aujourd'hui* wanted to publish the design in one of the issues and looked for a manner to contact Sołtan, *Architecture d'Aujourd'hui* to Aujame from December 20th, 1956, see: MASP-JS. It was also published in Germany, see: Jerzy Sołtan, 'Der polnische Ausstellungspavillon für die Weltausstellung Brüssel 1958', *Bauwelt*, 52 (1957), 1367-1369, and in the United States, see: John Borrego, *Space Grid Structures* (Cambridge: MIT Press, 1968), pp. 102-103.
146 Krzysztof Meisner, untitled text on Sołtan, see: MASP-JS. Translation from Polish (SR).
147 Wiktor Gessler, 'Myśliwiecka', 1995, see: MASP-JS. Translation from Polish (SR).
148 Notes on the 1958 Polish EXPO pavilion, see: ISPAN-JS. Translation from Polish (SR).
149 The antagonism and the refusal of the authorities to build a church in Nowa Huta was based on the ideological argument that the district was to diminish Krakow's long-established atmosphere of an intellectual and cultural city. The construction of a new district centred on heavy industry buildings, including the biggest steel factory in Poland, was to bring to the city a number of workers, a pillar of the communist ideology. Differently from the authorities' wishes, the local population wanted a church to be built in the district.
150 With the period of the 'thaw' in 1955-1956, the Stalinist regime was dropped by the authorities in Poland and regime's repressions were loosened, including those for the church. For example, the head of the Polish Catholic Church, the Primate of Poland Stefan Wyszyński known for his support for the democratic opposition, was under home arrest since 1953, but he was finally released in 1956.
151 Both competitions were officially organised by the Polish Society of Architects (SARP).
152 Actually, Sołtan mentions that some say ironically, "in Poland there are no new constructions other than churches", in the notes on religious architecture in Poland from June 1990, see: MASP-JS.
153 Sołtan wrote a longer commentary to the general situation in architecture and in particular, to the specific situation of religious architecture in Poland in 1990: undated notes on religious architecture in Poland from June 1990 and article 'New Churches in Poland: How many of them can be called architecture?' from October 1990, see: MASP-JS.
154 Article 'New Churches in Poland: How many of them can be called architecture?' from October 1990, see: MASP-JS.



ill. 9.56, 9.57, and 9.58 - comparison between the developed version (top) and the reduced version (middle) of the Polish 1958 EXPO pavilion: due to the budget costs, the design had to be redrawn, losing the idea of a park entering under to roof and making the pavilion become much closer to a closed regular box (bottom) with additional functions separated from it: 1 - main pavilion; 2 - cafeteria; 3 - offices; 4 - roof structure model

the grandeur of the highest possible church, he praises the "warm smallness" of a religious space. These very ideas, expressed as late as in the 1990s, explain perfectly the designs by Sołtan and his teams of the two churches from thirty years earlier. They are deeply inscribed in Sołtan's vision of modernity, in his interest in the beginnings of cultures, and in the concept of "grassroots architecture". Applied to religious architecture, these ideas point mostly to early Christian architecture and on how the first Christians were meeting.[155] These simple and humble spaces, in Sołtan's opinion, can give intimacy and the feeling of *sacrum*, which lies at the foundations of a religious building. Similarly, they correspond to Sołtan's teaching in the late 1970s at Harvard when in his design studios, he gave as one design assignment a "space of spiritual retreat", and when in the seminar 'Grassroots of Contemporary Architecture' he referred to the common ground and overlapping of the beginnings of cultures (Chapter 8), pointing to the correspondence between his design, teaching, and theory.

the church for Sochaczew

The design for a parish church in Sochaczew[156] illustrates perfectly these ideas, and is one of Sołtan's preferred designs.[157] It is the most detailed church design by Sołtan and his teams,[158] winning first prize in a competition in 1957, modified in early 1958,[159] and then abandoned later the same year. It was blocked by the head of the Catholic Church, the Primate of Poland Stefan Wyszyński, and the following events became a true thorn in Sołtan's side. The design was taken away from the authors in spite of being accepted beforehand by the religious authorities and by the government,[160] and the actual commission was given to Mieczysław Gliszczyński, another architect who developed a proposal, which was strikingly similar to the one by Sołtan's team (ill. 9.68 to 9.70). Throughout the years, Sołtan came back to these events with bitterness admitting, "I am not supporting taking away a design [...] from the authors so that others could do the same. It is a rather ethical and not an architectural problem. I cannot understand here the client and a colleague – the new author – accepting to take the task in these circumstances and continuing in this spirit".[161] The high hopes he had for this design, along with his deeply religious and ethical character, explain his feelings of deceit and frustration with the development of this design, sentiments underlined also by his friends and relatives.[162] His later exchange with the Vatican and attempts to participate in a design in the Holy Land point likewise to how much the matter was important to him.[163]

Sochaczew church shows Sołtan's interest in landscaping and perception, but it also illustrates his views on architecture of a sacred space, connected to the influences of Le Corbusier and to the importance of visual art.[164] The site of the building lies over the slope of the Bzura River valley, next to an important road axis – at the time the main connection between the cities of Warsaw and Łódź. The relation to the site and the perception of the building were amongst constantly present design elements in both versions, from 1957 and 1958. Similarly to Warsaw Midtown, the design was sensitive towards different aspects of perception: both by the cars travellers moving along the nearby road axis, and by the participants of the religious ceremonies that could take place around the church. The South elevation facing the road was free of detailing and it created a vast surface as a visual background to the bell tower standing between the road and the main building. The design included also an artificially recessed area between the main building and the road, which was to diminish the visual and acoustic impact of the traffic on the area surrounding the church, to guarantee safety to those walking around

155 For example, Sołtan refers to the religious architecture of early Christian churches in Palestine, to caves in Syria, to Roman catacombs, to Romanesque churches in Burgundy and in Poland, and to first churches in New Mexico in the notes on religious architecture in Poland from June 1990, see: MASP-JS.

156 The design included a parish church and a series of auxiliary spaces. The final version of the design from 1958 included one main nave and one lateral nave, atop of which a matronaeum was positioned. Along the North elevation of the building and underground, all the auxiliary functions were positioned: sacristy, baptistery, meeting room, and service rooms.

157 The design for the church in Sochaczew is mentioned in Sołtan to Barucki from April 14th, 1987, see: MASP-JS.

158 Main design group: Sołtan (main designer), Ihnatowicz, Szczepiński; painting: Nowosielski.

159 The main changes of the design layout between 1957 and 1958 included inverting the main direction of the church and adding an underground level. In the second version, the altar was moved from the traditional East extremity of the church to the West wall (ill. 9.65, 9.66). While it inverted the interior layout and the South elevation of the building, the main elements remained the same. Through reverting the direction of the church, it was possible to enter directly from the square in front of the church, with the entrance in front of and not behind the main altar. The added underground level hosted a funerary chapel, a meeting room, and a series of service rooms, which possibly were included after the consultation with the client (for example, the meeting room was initially planned to be in another building).

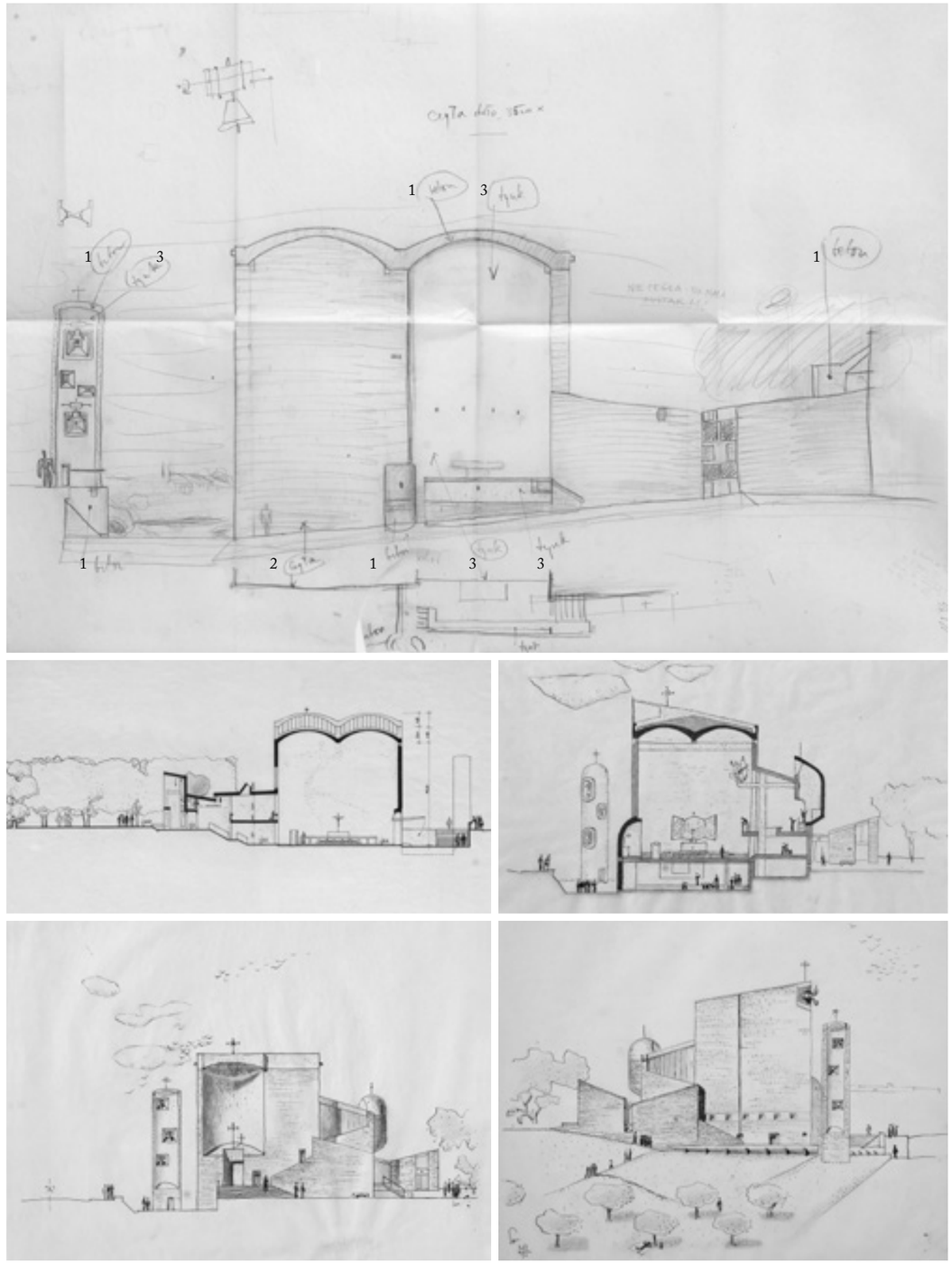
160 Sołtan mentions that the team modified the design after having received observations from the client, which was later accepted by the political and religious authorities, but due to an 'unfortunate evolution' of events, the design was rejected and the commission given to Mieczysław Gliszczyński, who eventually built the existing church: in Sołtan to *Poland* magazine from December 7th, 1966, see: MASP-JS.

161 Bulanda, p. 65. Translation from Polish (SR).

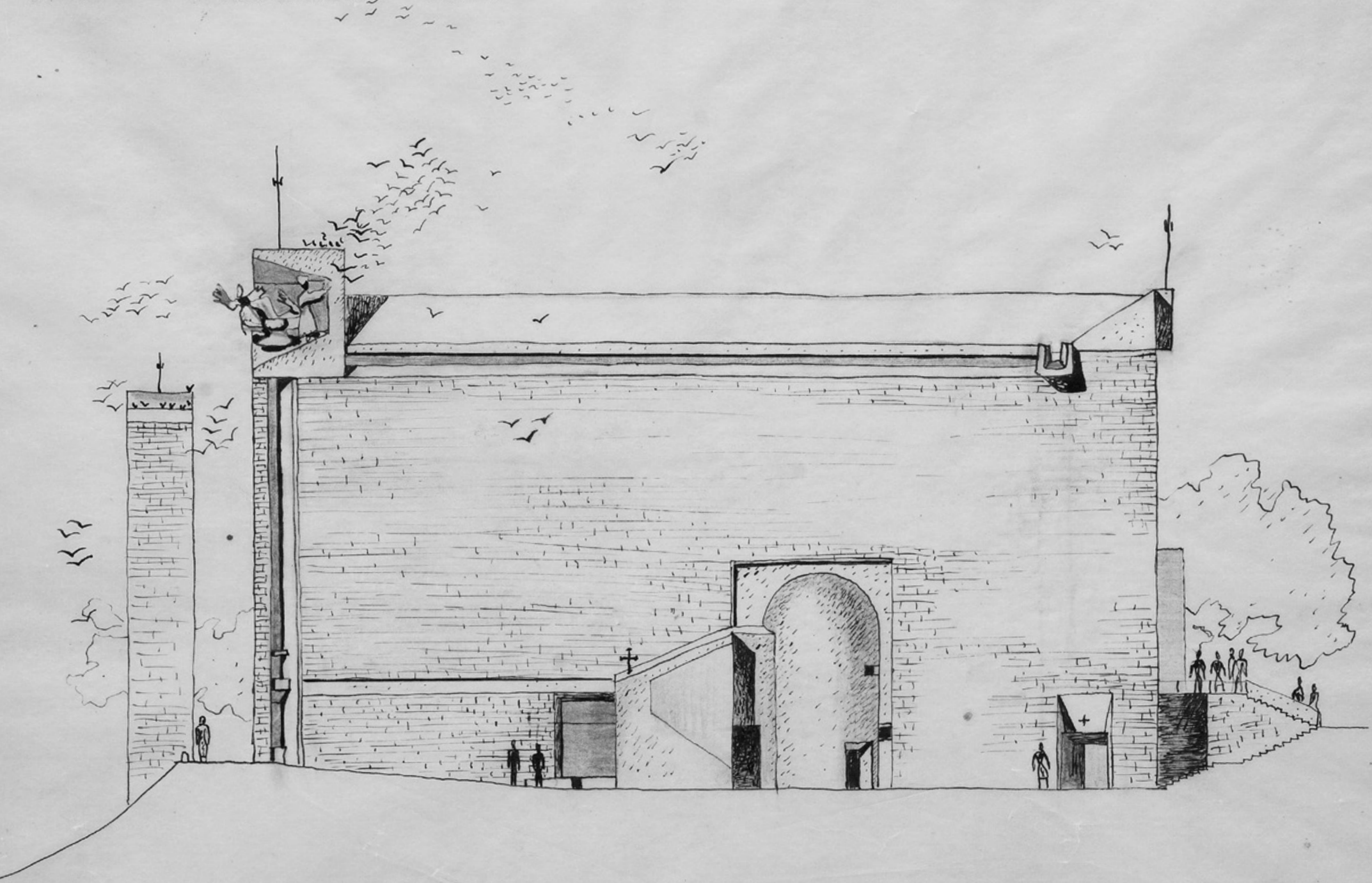
162 Interviews with Joanna Sołtan and with Urs Gauchat.

163 Sołtan exchanged in 1993-1994 with pope's secretary Stanisław Dziwisz on the renewal of the Old Jerusalem, Sołtan to Dziwisz from December 19th, 1993 and Dziwisz to Sołtan from January 8th, 1994, see: MASP-JS.

164 Sołtan drafted a description of the design, possibly for a conference or a publication in undated notes 'Design of a parish church in Sochaczew', see: MASP-JS.



ill. 9.59 - early sketch of material use for Sochaczew church, pointing to the use of concrete (1 - "beton"), raw brick (2 - "cegła"), and plaster (3 - "tynk"), referring to simple materials, which were to grant the building the character of a raw space and to interact visually with polychromic paintings
ill. 9.60 and 9.61 - comparison of the early version of Sochaczew church (middle left) and the final version (middle right), the latter with an added underground level, changed roof form, and more details; both versions show elements that can be traced back to Le Corbusier's architecture and they foresee division of the faithful between the main nave, the lateral nave, and the matronaeum
ill. 9.62 and 9.63 - elevations of the final version of Sochaczew church: East elevation facing the square (bottom left) and West elevation facing the valley (bottom right); drawings show the texture of materials suggested in the earlier sketches



the church, and to clear the view of the church from the road. At the same time, the recessed area gave more monumentality to the building, creating a basement on which the church would stand. A landscaping approach similar to 'Warszawianka' is visible in the West elevation of the building facing the river valley, underneath which there was a series of ramps along the natural slopes culminating with an open-air altar for massive celebrations.

When describing the design, Sołtan points to simplicity, humbleness, and essentiality of the church, relating to early Christian architecture as a source of inspiration for a place of reflection, which was visible since the first version of the design. Thanks to the form of the ceiling – two symmetrical vaults – and thanks to the use of lapidary materials – mainly limestone bricks and concrete for walls and vaults (ill. 9.59), and terrazzo for floor cladding – raw simplicity of the space was evident. It helped to create a feeling of a cave or catacombs inside the church, relating closely to the "grassroots" aspect of religious architecture. In addition, the interior was to be shaped by the light, illuminating mostly the altar area and with no direct light on the benches where the faithful were to be gathered. With the focus on the altar, and with the light coming from the crack under the roof – as happens in the Ronchamp chapel by Le Corbusier – the space would have been charged with spirituality. The rough materials and a limited number of decorations attracted attention to what is immaterial: the light and the Corbusian "ineffable space" praised by Sołtan. For the same reason, the latter insisted on the division of the space for the faithful into the main nave, lateral nave, and matronaeum. Through such a division, he wanted to avoid crowds, which would make gestures and liturgy lose their meaning: an opinion he professed also much later in 1990. The strength of his concept of a sacred space lies in integrity and in consequence, with which he approaches these themes: the very same elements (rough materials, vaults, lighting, and space division) were proposed in the design for a church in Nowa Huta by Sołtan, in addition to be present in his writings from the 1990s.[165] Moreover, the church of Sochaczew included a number of details present in Le Corbusier's designs for the Ronchamp chapel and of the La Tourette convent, two designs which remained for Sołtan a reference point when speaking about religious architecture even years later.[166] Some elements, as the light crack under the roof along the perimeter of the walls and different skylights at the matronaeum level make clear reference to these two designs.[167] Similarly, rain gutters and the very idea of an exterior altar can be associated with Ronchamp (ill. 9.63, 9.64).

In spite of these similarities, the church in Sochaczew cannot be considered as a simple inspiration by Le Corbusier's architecture. Sołtan wholeheartedly shared Le Corbusier's interest in early Christian architecture: they followed the same cultural schemes and they shared the same ideas, and therefore the church in Sochaczew was not a blind attempt to design following master's footsteps formally. On the contrary, it shows a profound reflection on Corbusian architecture and adds to it. A very important element in the design for Sochaczew was the presence of carefully studied visual art content. Following Sołtan's idea of juxtaposition of similar beginnings of "grassroots architecture" and modern art, the design aspires to create a unified vision including both disciplines. Visual artists were part of the team, they participated in discussions on the design, so the decisions on colours, materials, and the polychrome paintings were an integral part of the design aimed to strengthen the feeling of the "ineffable space".

a project lost

Eventually however, the project was rejected by the religious authorities. In a letter to Sołtan from the bishop's office, he was informed that he was refused the consent to proceed with the construction because of "the lack of sacred character" and "a certain anxiety of the West elevation due to the strong division".[168] The niche in the South elevation, the vertical accent in front of the church, the chapel at the upper level, and details of the roof design and rainwater drainage were all criticised – even if the design was accepted beforehand. In addition, according to the Primate Wyszyński, the building would be "unsuitable for construction", as it would be too costly for conservation, it would not respect the context, and it would have "too many signs of construction-o-cracy".[169] When the design task was handed over to Gliszczyński, he most probably worked with these

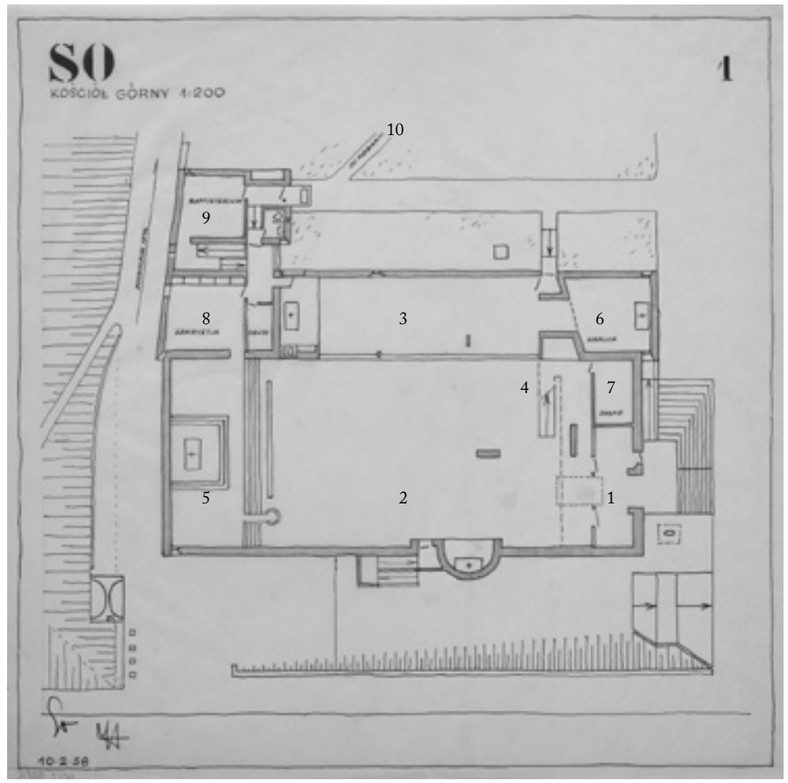
165 Similarly to the design for Sochaczew, the design for Nowa Huta included a space division between the main nave and two lateral ones, the use of rough materials, such as concrete and limestone bricks, a similar light crack under the roofs, and a double vault structure of the ceiling of the main nave.

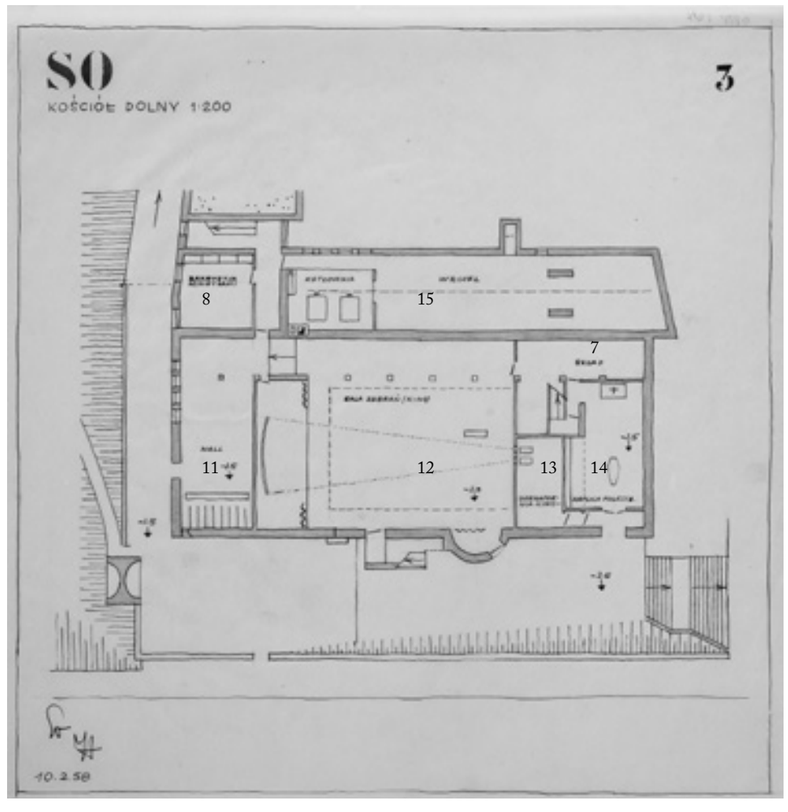
166 Notes on religious architecture in Poland from June 1990, see: MASP-JS.

167 For example, in the competition entry from 1957 the skylight over the side nave was similar to those used by Le Corbusier in La Tourette (ill. 9.60), and in the modified version from 1958, the light was coming through a niche similar to the side chapel in Ronchamp (ill. 9.61).

168 Bishop's office to Sołtan from August 2nd, 1958, see: MASP-JS. Translation from Polish (SR).

169 Wyszyński probably means by "construction-o-cracy" the will to build more than necessary, a note in his personal journal entry from June 26th, 1958, see: Stefan Wyszyński, *Pro memoria, Tom 5: 1958* (Warsaw: IPN, 2018), p. 186. Translation from Polish (SR). In a letter to his friend Fangor from March 26th, 1991, Sołtan was still commenting on the position of Wyszyński, hypothesising that the latter would not risk a modern





ill. 9.64 (previous page) - South elevation of the final version of Sochaczew church, a plain surface of the walls of the church was to be a background to the bell tower standing at the top of the slope descending towards the Bzura River; few glass elements (glass crack under the roof and vertical glass stripe next to the altar) would create focus in specific places of the interior; some architectural details point to Le Corbusier's architecture
ill. 9.65 and 9.66 - plans of the upper (top) and lower (bottom) levels of the final version of Sochaczew church; 1 - main entrance; 2 - main nave; 3 - side nave; 4 - stairs to the matronaeum; 5 - main altar; 6 - chapel; 7 - storage; 8 - sacristy; 9 - baptistery; 10 - path to the parish building; 11 - hall; 12 - meeting room; 13 - projection room; 14 - funerary chapel; 15 - technical rooms

comments simply modifying Sołtan's design. In fact, the present-day church responds well to the criticism sent to Sołtan in 1958: there are no rough materials and the façade is coloured, the roof is pitched and symmetrical, differently from the original design, and there is no matronaeum at the upper level inside. In addition, another tower was added to the church: as if it was an ironic gesture to contrast Sołtan's criticism of building a church the highest possible. Nonetheless, the main plan layout of the building and of the main liturgical space, the idea of a recessed area between the church and the street, the position of windows (including the presence of a long window under the roof and of a larger window illuminating the altar), and the presence of visual elements outside – they all point to elements present in Sołtan's design.

Today, the church in Sochaczew stands as a faraway remnant of Sołtan's idea of sacred space. Transfigured by the work of another architect and by the lack of the original author's firm belief in the concept, there is almost nothing left from the initial design in the existing building. There is no atmosphere of an early Christian meeting place, let alone of the "ineffable space". Nonetheless, the unbuilt design from 1958 illustrates well how much Sołtan's beliefs remained clearly defined over the years. It shows how much Sołtan's work was close to Le Corbusier's designs: without copying them, but re-interpreting them following Sołtan's own vision of sacred space. The continuity of this thought may be seen in a continued design exercise – unfinished at the time of Sołtan's death – a theoretical design of a church.[170] He was working on it from the early 1950s until the early 2000s, and even if it was a conceptual work, it meant a great deal to him, and he put much effort into these studies since the 1990s.[171] Its final version was a small, simple, and intimate meditation space, which – again – would use concrete and rough materials, carefully planned natural lighting, and visual arts elements to contribute to the sacred dimension of the space.[172] The result was a sculptural design of simple prisms cut out from the base rectangle, which formed a proportioned volume re-interpreting Sołtan's continuous beliefs in the true meaning of a sacred space. Thanks to the use of green roofs and planting, the design made a church much closer to a sanctuary cut out from rock, as a reminiscence of the early Christian churches (ill. 9.76). Thus, together with the church designs from the late 1950s – it emphasized the bridge between Sołtan's ideas and work.

oasis of modernism

Through the analysis of these works, it seems clear that Sołtan tried to bring as much as possible of modernist architecture to Poland, adding to it his own values linked to the importance of art, landscape, and poetics. Through his designs, he brought Polish architecture closer to the West. Of course, it meant that he paid a price. After he left for the United States, he was criticised for having betrayed the socialist country, for having left for the American capitalist pandemonium. Such an attitude is remembered by one of his colleagues from the Fine Arts Academy in Warsaw: "he was considered an ideological error, and the members of the party were speaking that he betrayed [the country]".[173] Jacek Damięcki, his former student, claims moreover that there was jealousy of his success abroad, and therefore his work may have somehow been misjudged back home.[174] The neglect of Sołtan's work, therefore, and the lack of attention to his successes and creations, came thus from political and ideological reasons. As he left Poland, his work was misjudged, and only with time, did it regain attention.

Nonetheless, in a recent interesting commentary on Polish architecture, one reads that his work was a "remarkable statement that indicated both East and West" with his architecture and teaching claimed to be "an attempt to rediscover the moral roots of socialism under the debris of Stalinism, its vulgar materialism and empty propaganda",[175] referring to his social ideas in architecture and his belief that the figure of an architect has a duty to society, following the idea of *noblesse oblige*. His beliefs in the social values of architecture on the one hand, and the complete refusal of Stalinist propaganda, dogmas and empty rhetoric on the other seem to put him in a position that – arguably – could have been understood only by those who were living different realities "between East and West".[176]

church building due to the political engagement of the Catholic Church in Poland.

170 The design was described by Sołtan's friends and relatives as a "chapel for the pope". Actually, Sołtan met with Karol Wojtyła when he was in the United States even before he became pope, and he was driving him in the surroundings of Boston with his own car, see: interview with Joanna Sołtan.

171 He remembers Sołtan often showing him some very minor modifications to the design of the church, see: interview with Urs Gauchat.

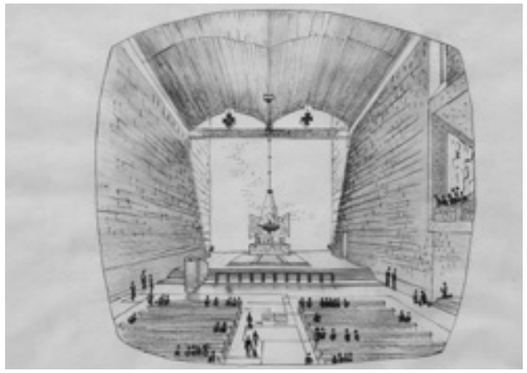
172 A number of sketches of the design include paintings and visual elements both inside and outside the church. The drawings show also that the outdoor cladding would include concrete slabs, similar to those used by Tadao Ando. In fact, some of the later drawings show a presence of regular punctual elements on the slab surface, and Sołtan himself expressed appreciation to Ando's Church of the Light in 1990, in the notes on religious architecture in Poland from June 1990, see: MASP-JS.

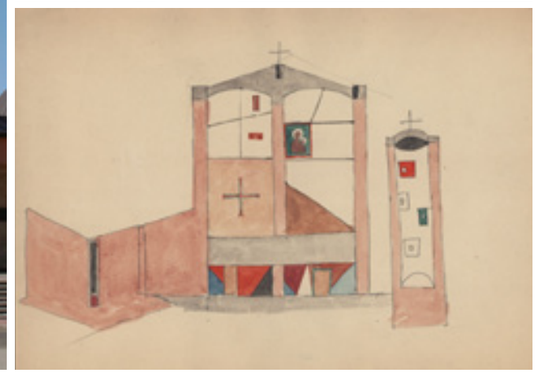
173 Krzysztof Meisner, untitled text on Sołtan, see: MASP-JS. Translation from Polish (SR).

174 Interview with Jacek Damięcki. Similarly, Jola Gola calls Sołtan "*persona non grata*", see: *Jerzy Sołtan*, ed. by Jola Gola, p. 20.

175 Crowley, p. 794. For the reference to the ideal of noblesse oblige, see: interview with Urs Gauchat.

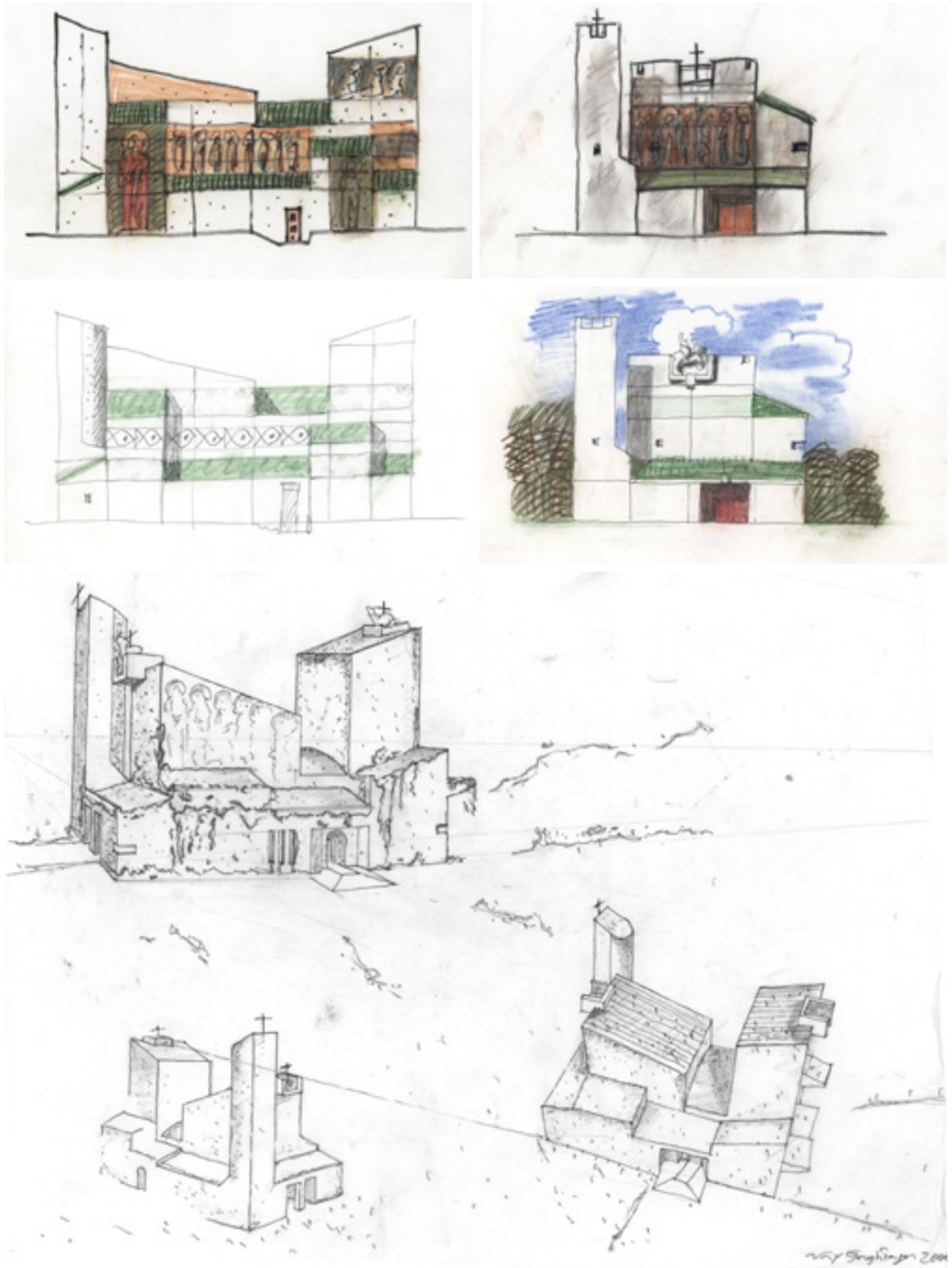
176 Crowley, p. 798.



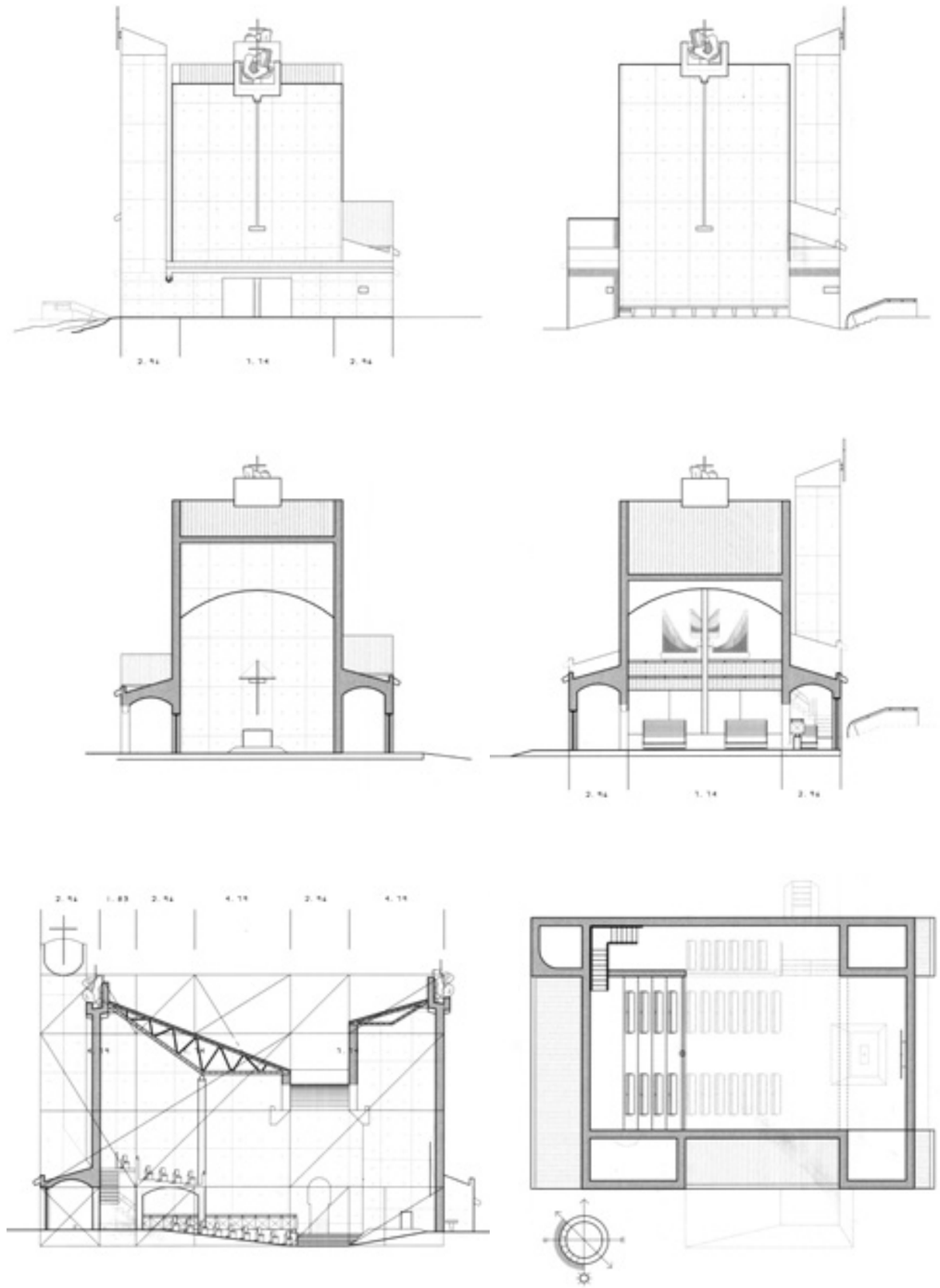


ill. 9.67 and 9.68 - comparison between the interiors of Sołtan's design for Sochaczew church and the building designed by Mieczysław Gliszczyński; even though the church has the same layout, the built design has completely lost the sensation of a cave through the use of different materials, of additional decoration, and through eliminating the vaulted ceiling; because of introducing an extensive glass surface in the main elevation, the interior is also more uniformly illuminated and the poetics focussed on light is lost

ill. 9.69, 9.70, and 9.71 - comparison between the exteriors of Sołtan's design for Sochaczew church and the building designed by Mieczysław Gliszczyński; the built church has continued on some ideas started by Sołtan, although the final result is a deranged version of Sołtan's design; whereas the colour of the built church may find correspondence in Sołtan's drawings of the brick walls, there are no abstract elements while many more exterior figurative artworks have been introduced; position of the glass crack under the roof and of the glass strip next to the altar continue with Sołtan's design, but the main elevation glass has been introduced; the bell tower has been incorporated to the main building and a second higher tower has been introduced



ill. 9.72, 9.73, 9.74, and 9.75 - examples of sketches for the design of a theoretical church showing continuity of Sołtan's interest in rough surfaces and in the use of artwork in religious designs; green elements point to roofs covered by grass or other plants; various elevation drawings point to the importance Sołtan gave to this design
ill. 9.76 - sketch of the design of a theoretical church, a concrete volume with green roofs with grass and climbing plants making the church look like a piece of an overgrown rock, alluding to the character of a sanctuary as a cave or catacombs (relating to the "grassroots" of religious architecture)



ill. 9.77, 9.78, 9.79, 9.80, 9.81, and 9.82 - elevations, sections, and first floor plan of a theoretical church showing continuity in the earlier freehand drawings; drawings dated from 2001 make this arguably one of the final designs Jerzy Sołtan was working on

Undeniably, the most important role was the one of the Workshops: a place that marked its position in Polish modern architecture, not only by its quality production, but also as an opening towards the West. Gessler, the chief of the Workshops summarises it recalling, "there was a door to a different world, there was a place for so many unknown issues, and there was the *Athens Charter*, Team 10, modernism. Symmetry could be called there the 'geometry of idiots', and the Palace of Culture and Science, 'a horrid nightmare of a confectioner who dreams that he became an architect'".[177] Many amongst Sołtan's collaborators recall that they met there for the first time the ideas of CIAM and Team 10, and they had a better understanding of Le Corbusier.[178] Thanks to Sołtan, both the Academy and the Artistic and Research Workshops had vivid contacts with Western Europe. The Workshops' secretary recalls that staff and students were going abroad for longer or shorter stays to gain new perspective and that afterwards they were exchanging experiences.[179] In addition, the contacts with foreign countries were not only based on the possibility of networking and the possibility of passing an internship in a renowned practice elsewhere, but also on the will to bring as much as possible of modern architecture to the Academy – or to Poland. Sołtan was keen on inviting guests from abroad, and he was very much interested in gathering new publications for the library. In a letter to Le Corbusier from 1955, he asks for publications of his works, claiming, "by sending me your books and publications, you make a favour not only to me, but also to many young people, who lack contact with your works and who are almost deprived of it".[180] His efforts preaching Le Corbusier's work influenced for example the student initiative to translate and to publish *Modulor* and the *Athens Charter* at the Academy as early as in 1956 – just shortly after socialist realism declined.[181] With such rich contacts with foreign designs and ideas, it seems logical that at least in some aspects, the Academy improved the general understanding of architectural education as connected to these international tendencies. When Anna Cymer states, "in spite of the iron curtain, and thus of the difficulties with the contact with the West, and of the delay linked to the need for rebuilding of organisations, schools, and teaching staff, Polish architecture from that time cannot be called retarded, backwards, or deprived of originality"[182] – it was in huge measure thanks to the Fine Arts Academy in Warsaw and to designs by Sołtan. His design work in Poland was able to give identity and diversity, which was missing in many examples of modern architecture there.[183] What he brought to Poland – his own reading of modernism influenced by Le Corbusier, but also the importance of such aspects like art and landscape – would be also present in his later works, pointing to the continuity within his body of design work, which the thesis evaluates in the next chapter.

177 Wiktor Gessler, 'Myśliwiecka', 1995, see: MASP-JS. Translation from Polish (SR).
178 Andrzej Pinno refers to the importance of CIAM and Team 10 ideas in the atelier, and to their importance in his decision to leave Poland, see: collection of articles by Andrzej Pinno, 'Wędrówki architekta' from 2004, see: LASP, PM 656. Smyrski and Damięcki recall the importance of Le Corbusier, see: interviews with Bogusław Smyrski and with Jacek Damięcki.
179 Barbara Lipkowa, 'Myśliwiecka', 1978, see: MASP-JS. For example, Damięcki spent around a year at Candilis-Woods-Josić practice in Paris, Pinno was sent first to Paris and then to study architecture at Harvard, and Viola Damięcka was sent to Paris. She summarises it recalling, "every time when we were able to go abroad, we had a personal support letter. Every time, it was someone of the highest level", see: interview with Viola Damięcka. Translation from Polish (SR). Collection of articles by Andrzej Pinno, 'Wędrówki architekta' from 2004, see: LASP, PM 656.
180 Sołtan to Le Corbusier from February-March 1955, see: FLC-DN, R3-4-546-001 and R3-4-547-001. Translation from French (SR).
181 Jola Gola, 'Aura Sołtana i Tomaszewskiego', in *Wzornictwo na Myśliwieckiej*, p. 126.
182 Anna Cymer, *Architektura w Polsce 1945-1989*, p. 266. Translation from Polish (SR).
183 Interview with Stan Szaflarski.

Jerzy Sołtan's architecture: Harvard years

my God, that's a Le Corbusier building

– François Vigier on the Salem High School[1]

This is how Vigier, Jerzy Sołtan's Harvard colleague and former chairman of the Department of Urban Planning, recalls seeing the Salem High School for the first time. Unaware at the time that his fellow faculty member was its architect, he recognised the hand and ideas close to Le Corbusier. In fact, Sołtan's designs drawn after his arrival to Harvard in the United States and abroad, build on his former experiences and, similarly to those developed in the Workshops, they illustrate well his theory, even though there is no continuity in the design teams he worked with. His initial American-based works as the design of Jaqueline Tyrwhitt's house and the participation in the competition for Berlin Museum of Art, were isolated experiences, and later he was involved in several design situations. This chapter analyses his design work through this variety of circumstances and design groups Sołtan participated in, it discusses its position related to his theory and teaching in relation to the previous chapter, and it aims to answer the question on where the legacy of Sołtan's architectural work lies. It concentrates on four themes developed in different design groups: Jaqueline Tyrwhitt's private house in Greece, a competition entry for Berlin Museum of Art, a series of schools built in Massachusetts, and a competition entry for a monument in the Bering Sea. This analysis explains different collaboration strategies, and it positions these designs in Sołtan's body of work, while commenting on their relevance and correspondence to tendencies in architecture contemporary to them. Throughout his designs, similar ideas emerge as recurring elements, and the analysis identifies for example references to landscape, the care for the use of different materials, and the close relation to Corbusian architecture.

Architectural designs were developed along with Sołtan's continued teaching activity with the Graduate School of Design at Harvard, with which he was involved since 1959, and which absorbed most of his time, especially between 1967 and 1973 when he was chairman of the Department of Architecture. However, due to these teaching and administrative duties, his design work was less intense and discontinued. Until 1965, he was still actively involved in the designs from the Workshops and only afterwards, he started to work continuously in the profession in the United States. In 1967-1969, most of his practice work referred to the collaboration with his faculty colleague Albert Szabo, but their work resulted in only one building completed – a private house in Laconia, New Hampshire – and the rest of their work remains as unbuilt designs, mainly in Massachusetts.[2] Later in 1970, Sołtan was approached by and became the chief designer of Haldeman and Goransson, a large design practice in Boston opened in 1969 and concentrated mainly on educational architecture.[3] He designed with them a series of eight schools in the Boston area, which present the most complex part of his architectural design work in the United States (and in most cases, with still unaltered function), although the collaboration was most prolific after the end of his chairman mandate in 1973.[4] It was however halted at the end of the 1970s and in the early 1980s, when there was less funding for school architecture. The practice needed to rebrand and it became part of the SWECO corporation as its American section (SWECO USA) and in the process, Sołtan was to become the central figure in another branch of the former practice, which was to be centred on more sophisticated designs (as some interiors already designed under Sołtan within the firm), but due to the lack of financial backing, the project was discontinued.[5] After that, Sołtan's involvement in architectural design was again mostly sporadic, as he was often involved in conferences and invited as a speaker across the United States and abroad, and he chose carefully which projects to take part in. In the 1980s Sołtan participated in some competitions with one of his former students, Thomas Fodor,[6] and between the 1980s and 1990s,

1 Interview with François Vigier.
2 Along with Szabo, Sołtan prepared several designs, Bell House in Sparoza, Greece (1967), Narva House in Laconia, New Hampshire (1968), Gwen House in Manchester, Massachusetts (1968), Zeiss-Ikon cinemas (1969), and Charity Fund office interiors in Boston (1970s).
3 Lyons, who was the office manager in the practice, recalls the office employing around sixty to seventy people, and he claims the practice to have been one of the largest architectural practices designing schools in Massachusetts, see: interview with Edward Lyons.
4 With Haldeman and Goransson, Sołtan designed a series of nine schools around Massachusetts: Salem – Salem High School (1970-1976, design team: Sołtan, Lyons, William Whitney), Brockton – Raymond Elementary School and Davis Elementary School (1972-1976, design team: Sołtan, Lyons, Wojciech Fangor, Alan Baer, Robert Carlson, Edward Vitigliano, Whitney), New Bedford – Carney Elementary School and Hayden-McFadden Elementary School (1975-1976, design team: Sołtan, Lyons, Baer), Newton – expansions to Davis School and Lincoln-Eliot Elementary School, and unbuilt design of expansion to Underwood Elementary School (1975, design team: Sołtan, Lyons), and Lynn – Breed Middle School (1977, design team: Sołtan, Lyons, Fangor, Baer), along with a design of a skating rink (1972-1973, design team: Sołtan, Lyons, Fangor). Later, with the practice rebranded as SWECO USA, he designed the interiors of the World Class Restaurant in Boston (1980, design team: Sołtan, Lyons, Vitigliano) and of the Mellon Bank in Boston (1982, design team: Sołtan, Lyons, Vitigliano).
5 Lyons holds a series of Sołtan's headshots, which were taken when assembling materials for a brochure presenting the new branch of the firm, see: interview with Edward Lyons.
6 Competitions for a ballet and theatre centre 'Jacob's Pillow' in Beckett, Massachusetts (1984) and for the School of Fine Arts in Birmingham, Alabama (1985).

he worked on a series of monument competitions with freely composed teams, which included some of his former collaborators and other specialists.[7] These commitments were decided spontaneously, and they were not structured within an established architectural office.

Greece and the "grassroots"

Between 1959 and 1965, Sołtan was continuously travelling between Poland and the United States, teaching the fall semesters at the Academy and the spring semesters at Harvard. At the same time, he was working on the designs prepared in the Workshops, such as Warsaw Midtown railway station, 'Wenecja' bar in Warsaw, 'Dukat' department store in Olsztyn, and the last stages of 'Warszawianka'. During this transition period, it would have been difficult for him to find stable design commissions in America: he was mostly occupied with teaching and as an immigrant, he lacked connections outside the Harvard *milieu*, thus creating fewer possibilities for professional work. Indeed, his first design independent from the Workshops was a private commission from his friend, fellow GSD faculty member, and former CIAM secretary Tyrwhitt whom he had known since the 1956 CIAM congress in Dubrovnik (Chapter 5). As a planner and not an architect, Tyrwhitt asked Sołtan to design a house on a piece of land she had bought in Sparoza near Athens. This design, developed mostly by Sołtan himself,[8] offers an interesting insight into the application of his ideas into practice outside of the collaborative teamwork from the Workshops. The house designed in 1963 illustrates Sołtan's reading of the "grassroots" of architecture, with references to ancient Greece, and it builds at the same time on the previous experiences of the importance of landscape.

In order to understand the design, one has to visualise the setting as it was in 1963. Today, even though far from the uncontrolled urbanisation of Athens and its surroundings, Sparoza has become a small suburb with stand-alone villas sitting on mild slopes of hills covered with olive groves, close to a highway connecting the capital to the new airport. In 1963, there was nothing of that: in the historical photographs (ill. 10.6), one can actually see that the house was immersed in its natural setting, with no other constructions around. This aspect was one of the main reasons why Tyrwhitt decided to settle there, as her aim was to create a Mediterranean garden.[9] Only afterwards, the surrounding area grew to a small community, which was a witness to many meetings of the group centred around the Greek architect Constantinos Doxiadis and the review *Ekistics*.[10] As a result, the design was an entirely isolated house on a hillslope, with the surrounding grounds that were to become the future garden.

Sparoza – a dialogue with landscape and stone

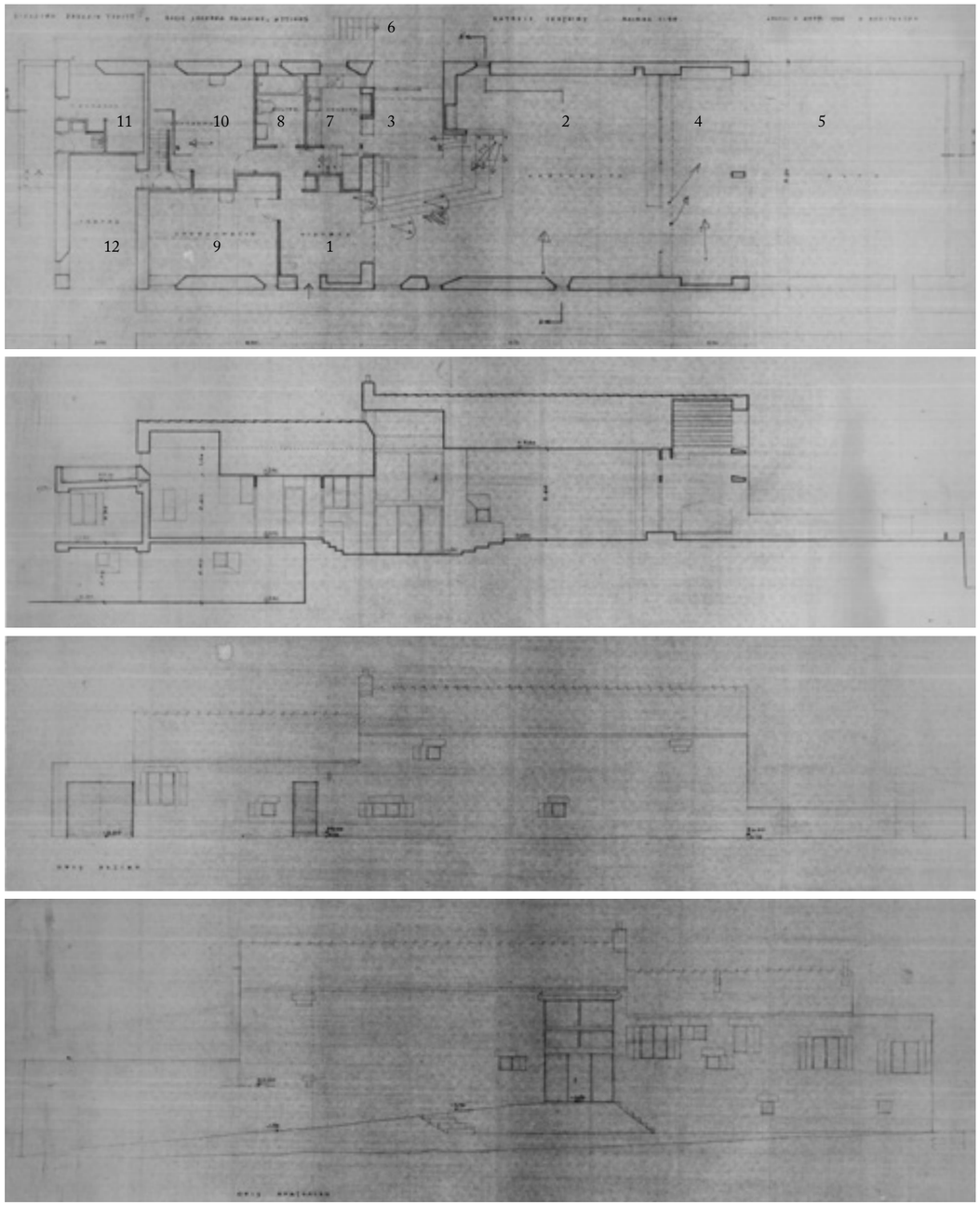
To work on a slope, with a design much dependent on the actual form of the land, was a difficult task for Sołtan, especially since he never visited the site, neither before nor during the construction. The plans and sections of the building (ill. 10.2 to 10.5), show the graded layout of the house, with different floor levels, terraces, and with an underground cellar level, which helped to adapt to the site. Built perpendicular to the slope direction, the house follows the landform without the need to create imposing retaining walls or to use pilotis. Its main level includes in the southern part a spacious and well-lit daytime area with a living room and a recessed kitchen; whereas in the northern part there are two rooms for the owner and her family, along with garage and gardener's room. The other two levels – the attic and the lower ground level – include service rooms used only as cellars and stores, limiting the use of the house to its main level, especially to the daytime area with its full-width window and porch, opening towards a vast courtyard, from which it once was possible to admire the surrounding landscape, as can be seen in historical photographs (ill. 10.10 to 10.12). Whereas the characteristic southern elevation with the porch and a Lorraine cross element was executed following Sołtan's drawings, the courtyard – as it can be seen in the section drawing of the house (ill. 10.9) – was not built. The courtyard, at the same level of the porch, would have been an outdoor extension of the indoor living area, the true main room of the house. Probably undecided between admiration of the panorama and the privacy of this area, Sołtan changed his design several times, as can be seen in different versions of the section. The walls on two sides of

7 For example, competition 'Diomede' for a monument in the Bering Sea (1989), competition 'Atlas' for the reuse of a former site of long-range missiles (1990), and competition for the Holocaust Memorial in Boston (1991).

8 To design the Sparoza house, Sołtan collaborated only with Polish architect Henryk Jerzy Marconi (which was their only collaboration). While it is unclear what the nature of their collaboration was, it is safe to assume that Marconi's role was close to that of a draughtsman. As Marconi was involved in a professional practice in Warsaw at that time, and he was specialised mostly in industrial architecture, he was probably less involved in the conceptual design phase.

9 Tyrwhitt describes thoroughly the site and the beginnings of the garden in Sparoza in her book, Jaqueline Tyrwhitt, *Making a Garden on a Greek Hillside* (Limni: Denise Harvey Publisher, 1998).

10 Tyrwhitt is said to have created a vibrant cultural and intellectual life, inviting many students, architects, and dignitaries involved with Konstantinos Doxiadis, see: Ellen Shoshkes, *Jaqueline Tyrwhitt: a Transnational Life in Urban Planning and Design* (Surrey: Ashgate, 2013), p. 228.



ill. 10.1 (chapter cover) - eastern terrace in Jaqueline Tyrwhitt's house in Sparoza, Greece, with the view over the Mesogeia plain
ill. 10.2 - plan of Jaqueline Tyrwhitt's house ('Greek unbuilt version' differing from the built house by the size of the windows and the outdoor terraces layout), with the existing organisation of the main floor of the house with the living area in the southern part and private rooms in the northern part: 1 - entrance; 2 - main living area; 3 - recessed area with a fireplace; 4 - exterior porch; 5 - southern courtyard; 6 - eastern terrace; 7 - kitchen; 8 - bathroom; 9 - main bedroom; 10 - guest bedroom; 11 - service room; 12 - garage
ill. 10.3 - section of Jaqueline Tyrwhitt's house ('Greek unbuilt version'), showing the different levels of the house, with the underground cellar level and interior steps following the slope of the hill, with the continuity between the interior and the exterior (the same level of the living area inside, the outdoor covered porch, and the exterior courtyard), and with a wide opening of the southern courtyard towards the surrounding landscape
ill. 10.4 and 10.5 - elevations of Jaqueline Tyrwhitt's house ('Greek unbuilt version'), showing different types of openings, from the large glazed surface in the centre of the eastern elevation to the small windows in oblique niches, which underline the mass of the walls (the normal-sized windows corresponding to the two bedrooms, kitchen, and service room were not realised)
ill. 10.6 (next page) - view of Jaqueline Tyrwhitt's house after completion, immersed in the landscape and with no other constructions around

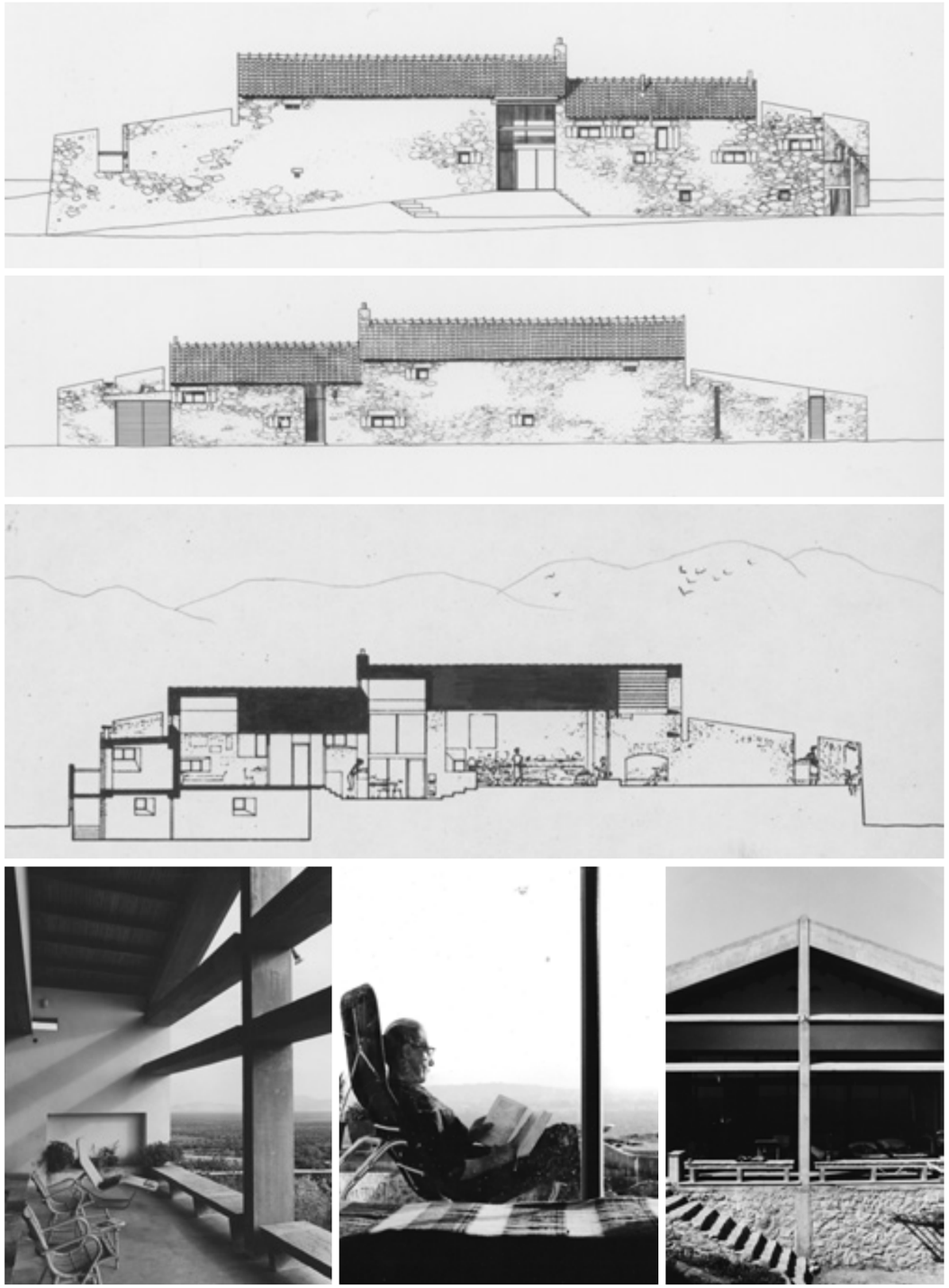
the courtyard were initially higher, but were to be lower and to open towards the landscape at the southern end, giving it more the aspect of a 'room with a view' guiding one's perception to the very end of the terrace and beyond. Another later version however (ill. 10.3),[11] had the lateral walls lowered to one metre, making no visual obstacles and leaving the surrounding panorama to be open, but creating less shade. In both of these versions, the difference between the interior and the exterior fades, adapting to the Mediterranean climate and to the common use of outdoor space. The courtyard however was not built and instead a recessed garden was included, a space where the owner and her guests were able to spend time in privacy, with no disturbance from the outside, but with no visual contact with the surroundings either. As a result, the porch remained the main exterior area of the house, with its direct connection to the surrounding landscape.

The relation with the landscape is not limited to the southern porch though: the house has two main window openings: the full-width glazing facing south, and a full-height opening next to the kitchen at the centre of the eastern elevation, which breaks the monotony of the continuous wall. The latter leads to a smaller and entirely open-to-landscape outdoor area, from where it is possible to look at the garden terraces descending along the hill (ill. 10.6). Less representative than the main porch, it gives the possibility to spend time shaded from the afternoon sun by the house itself.[12] These two openings guarantee the main living area is fully illuminated, making it – according to the present-day inhabitant Sally Razelou – "a wonderful space", thanks to its height, to the form of the space, and to the light. Similarly, Tyrwhitt called the house "a sun-trap with several sunny corners" with sunlight for several hours a day.[13]

Thanks to this close connection to the landscape and the use of natural materials, the house today sits immersed within its garden, and far from the pristine form of "matchbox" functionalist architecture disliked by Sołtan. He stressed the importance of these materials: in a written note on the design, he points to "visually active" materials, such as stone (walls and floor), wood (ceiling and floor), plaster (walls), and iron (windows), many of them used in a rough form – a similar attitude that can also be seen in the church designs in Poland. Looking at the elevation drawings and interior and exterior photographs of the walls, it is clear that stone masonry was an important aspect of the design (ill. 10.7, 10.8, 10.13). Indeed, the house was not built in concrete, contrary to the mainstream construction tendency in Greece in the 1960s, and its masonry construction caused the issue of finding experienced stonemasons (who eventually came from Crete).[14] Sołtan's and Tyrwhitt's decision to rely on stone was closely related to the former's interest in local traditions and in vernacular forms – an attitude that would reappear in the later private residence designs Sołtan developed with Szabo. To look for traditional construction methods meant for Sołtan to look towards more malleable and fresh *materia* of basic and essential "grassroots" of architecture (Chapter 7).

As a result, the building appears to grow as another of the terraces on the slope and fits uniquely to the surrounding landscape. The thickness of the walls and the size of the small openings in most of the sketches and in the built design can be traced back to Sołtan's fascination with historical architecture. The small windows in the inclined niches contrasted from the two main openings, and they were to give the impression of a solid stone wall (ill. 10.7, 10.15), perhaps a reminiscence of his visit to the castle in Ardennes, which he used many times to illustrate the problem of scale in architecture (Chapter 6). Although they give less light to the rooms and they may be more difficult to access than normal windows due to their positions, they follow the logic of a Romanesque building with small openings and solid walls – a style Sołtan often referred to and preferred to the much-too-elaborate-and-definite Gothic – and they can be also traced back to Le Corbusier's Ronchamp chapel. Their seemingly random positions along the eastern elevation (ill. 10.7) nevertheless follows functional prerogatives, and were aimed at creating interesting views, as for example the small kitchen window looking towards the small stone-clad terrace. The stone walls were also directly connected to Tyrwhitt's collection of modern paintings: hanging on an irregular stone masonry wall, modern artworks were likely alluding to Sołtan's reminiscence of the exhibition of modern art at the Avignon palace – an event he used many times to underline the correspondence between modernity and other raw and early stages in the development of civilisations (Chapter 7). In drawing paintings hanging on a stone wall in the section of the building (ill. 10.13), the reference to Avignon is evident.

11 Whereas the drawings are not dated, some of them are schematic sketches by Sołtan (referred to as 'schematic unbuilt version') and others have annotations in Greek (referred to as 'Greek unbuilt version'), meaning they should have been more advanced in time and development of the design.
12 Benninger underlined this aspect of the design as particularly pleasant, see: interview with Christopher Benninger.
13 Jaqueline Tyrwhitt, 'Sparoza – First impressions', *Ekistics*, 314-315 (1985), 512.
14 'The house at Sparoza', *Mediterranean Garden Society* (2020) <https://www.mediterraneangardensociety.org/building.html> [accessed on November 17th, 2020].



ill. 10.7 and 10.8 - elevations of Jaqueline Tyrwhitt's house ('schematic unbuilt version' differing from the built house by the outdoor terraces layout), showing the reduced dimension of the windows in the bedrooms and in the kitchen, due probably to the idea of massiveness of the stone walls of the building as in Romanesque architecture
ill. 10.9 - section of Jaqueline Tyrwhitt's house ('schematic unbuilt version'), showing the continuity between the interior and the exterior (the same level of the living area inside, the outdoor covered porch, and the exterior courtyard), and with an axial opening of the southern courtyard towards the surrounding landscape creating a 'room with a view'
ill. 10.10, 10.11, and 10.12 - photographs of the southern porch with the view of the surrounding landscape as the main outdoor space of the house

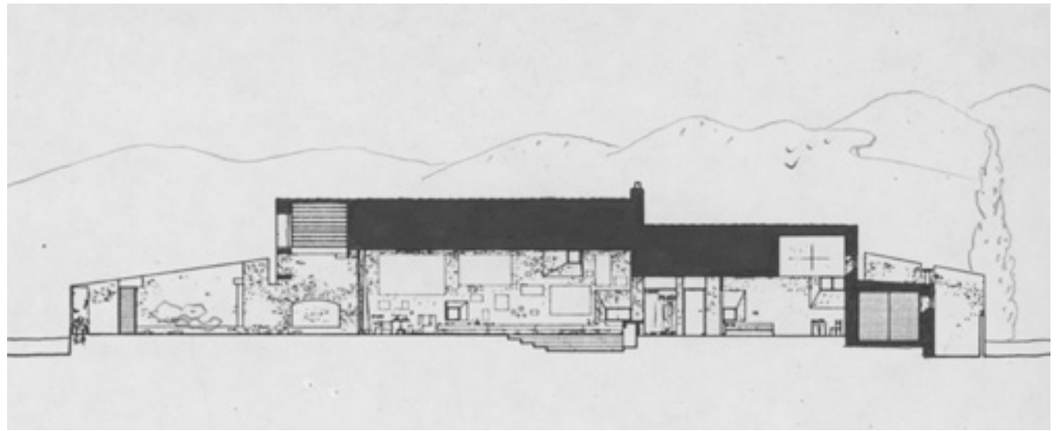
Finally, Sołtan's interest in the "grassroots" of architecture influenced the layout of the building. The composition of the main southern elevation, divided into three horizontal parts by its concrete shades, can be easily compared to the composition of the main elevation of a Greek temple. As is shown by the graphical schemes (ill. 10.16, 10.17), similar proportions apply both to a temple and to the Sparoza house. The porch niche in Sołtan's design can be compared to the main colonnade, while the horizontal *brise-soleil* creates a line comparable to a typical frieze with metopes and triglyphs. The topmost triangular part of the building has the same form of a Greek temple tympanum. In particular, the house can be compared to the archaic Greek model of *anta* temple (ill. 10.16), such as for example the Athenian Treasury building in Delphi, characterised by two columns limiting the front of a pronaos and two lateral projections of naos wall extensions. The southern porch follows this very same model, and it was also to propose chromatically similar ideas.[15] Thanks to these clues based on sketch and design layout analysis, the possible reference to an early type of a Greek temple building, as opposed to more developed layouts, follows once again Sołtan's interest in early and burgeoning "grassroots" of architecture, and along with the church designs in Poland, the Sparoza house can be considered as an application of this interest.

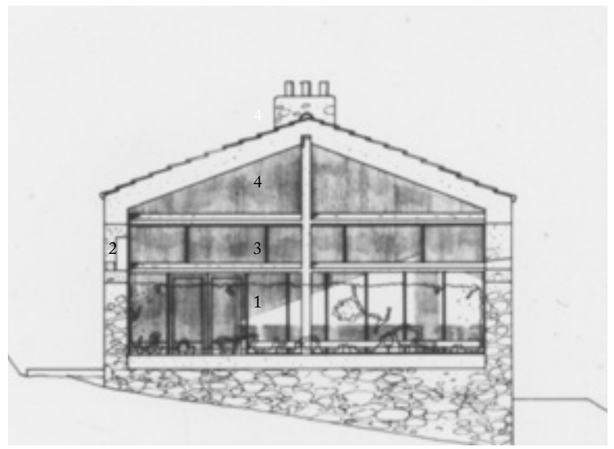
Sparoza – faults and merits

Regardless of the undeniable interest in this building due to the close connection with Sołtan's theory, one also has to consider some technical flaws in the design. One of the most visible ones relates to heating and the architect's overenthusiasm concerning Mediterranean heat. Upon its completion, the building had no heating system apart from the fireplace, and Tyrwhitt had to add a stove afterwards. In addition, the large glazed openings with iron frames were not enough to guarantee warmth in winter – hence around 2010, all the large window frames were changed into a new double-glazed frame in white PVC,[16] much more impactful visually, and with no correspondence to the frame division drawn by Sołtan. As much as such a change was needed, arguably it would have been possible to include a more subtle window system (the difference is consistent when comparing historical and present-day photographs, ill. 10.22, 10.23). Other issues raised are the access to the topmost windows, especially in the living area, to the view from the bedrooms (from the main bedroom, there is no window at the eye level) and their small size (one of the former inhabitants of the house, Tyrwhitt's gardener Fleur Pavlidis, calls them "miserable" due to their size and illumination).[17]

Sołtan's absence during the construction (being both busy teaching between Poland and the United States and travelling on a Polish 'communist' passport, which was surely not helpful), and the choice of stone not concrete may have caused other problems linked to the execution and of the building that otherwise could have been avoided. However, the main difference between the building upon its completion and today, is the flourishing vegetation. Resident permanently in Sparoza for over twenty years, Tyrwhitt brought many plants from different regions,[18] and the present-day manager of the building, the Mediterranean Garden Society, continues her legacy and established an experimental garden around the house's grounds. Due to the vegetation, there is no longer any visual contact between the house and the Mesogeia plain below (ill. 10.18 to 10.21), neither from the porch, nor from other terraces, but the evolution of the building's surroundings shows the ability of this design – through the use of natural materials and its strong connection to the land – to adapt and to stand as a landscape element. Its success can be also proved by alluding to the design of nearby constructions,[19] and by the following commission of another house in Sparoza for Tyrwhitt's former student and neighbour Gwen Bell in 1967.[20] One of Sołtan's students and Tyrwhitt's friend, Christopher Benninger, claimed also that in one of his designs, he was inspired by the layout of the house, referring in particular to the main living area and the outdoor spaces.[21] The house in Sparoza, with its references to the vernacular architecture, would also find continuity of thought in designs developed together with Szabo, as for example a house in Laconia in New Hampshire, which references the vernacular architecture of New England. Regardless, the importance of this design stands as confirmation of the continuity of Sołtan's ideas even when not designing as part of the team of the Polish Workshops.

15 In one small sketch, Sołtan marked the triangular shape at the top of the southern elevation to be painted in blue, as it probably was in the Athenian Treasury building in Delphi, according to the reconstructions (ill. 10.16, 10.17), see: MASP-JS.
16 Interview with Sally Razelou.
17 Fleur Pavlidis to Szymon Ruszczewski from July 5th, 2019.
18 'The MGS Garden at Sparoza', *Mediterranean Garden Society* (2020) <https://www.mediterraneangardensociety.org/sparoza.html> [accessed on November 17th, 2020].
19 Interview with Sally Razelou.
20 The unbuilt design of Gwen Bell's house in Sparoza was developed by Sołtan and Szabo in 1967, and it followed a courtyard house scheme. Gwen Bell was one of the earliest neighbours in Sparoza to whom Tyrwhitt sold a portion of land, see: Shoshkes, p. 226.
21 Interview with Christopher Benninger.





ill. 10.13 and 10.14 - section of Jaqueline Tyrwhitt's house ('schematic unbuilt version') and photograph of the western wall of the living area, both showing the design intent of placing Tyrwhitt's modern paintings on the stone wall, alluding to Sołtan's interest in juxtaposing historical and modern elements
ill. 10.15 - photograph of the inclined niches in the bathroom, showing the thickness of the walls and referring probably to Romanesque architecture
ill. 10.16 and 10.17 - schemes comparing the reconstruction of the main elevation of the building of the Athenian Treasury in Delphi (following the layout of an ancient *anta* temple) and the southern elevation of Jaqueline Tyrwhitt's house, showing in both cases: 1 - a covered niche, the temple pronaos or the porch in the house building; 2 - projection of the longitudinal walls of the building; 3 - a horizontal element, which corresponds to the ancient frieze, and in Sołtan's design was to marked by a series of vertical elements probably simulating triglyphs; 4 - the triangular tympanum, which according to some Sołtan's design ideas was indicated to be painted in blue, same as in the reconstruction of the ancient building

Berlin Museum of Art – in-between Poland, Harvard, and Team 10

Designed in 1965, shortly after Sołtan's permanent arrival to the United States, the competition entry for a museum in Berlin, can be considered as a transitional design, which builds a bridge between the activity within the Workshops and the more limited design work by Sołtan during his Harvard period. The competition was part of a larger scheme for a new centre in West Berlin, where a series of cultural venues were built after the city was divided by the Berlin Wall in 1961, and which is still in development today. After the division, a series of important cultural institutions remained inaccessible in the Soviet-controlled sector of the city, hence the idea to develop a new cultural centre, around the already existing Berliner Philharmoniker (1956-1963) by architect Hans Scharoun, including for example Mies van der Rohe's Neue Nationalgalerie (1962-1968) and Scharoun's Staatsbibliothek (1967-1973). The new art museum site was to complete the area, standing adjacent to the gallery and to the concert hall, at the place of the present-day Kulturforum building, and it had to respond to a compelling context. When the competition was organised in 1965, Scharoun's concert hall had already opened for two years, and Mies' gallery was under construction, hence the museum building would be seen as another piece to complete the set, as seen in the area context model (ill. 10.24). The difficulty of the task to relate to this particular context proved popular nevertheless: the competition included a total of one hundred and thirteen proposals by German groups, and three others from international groups, one of them being Sołtan's team.[22]

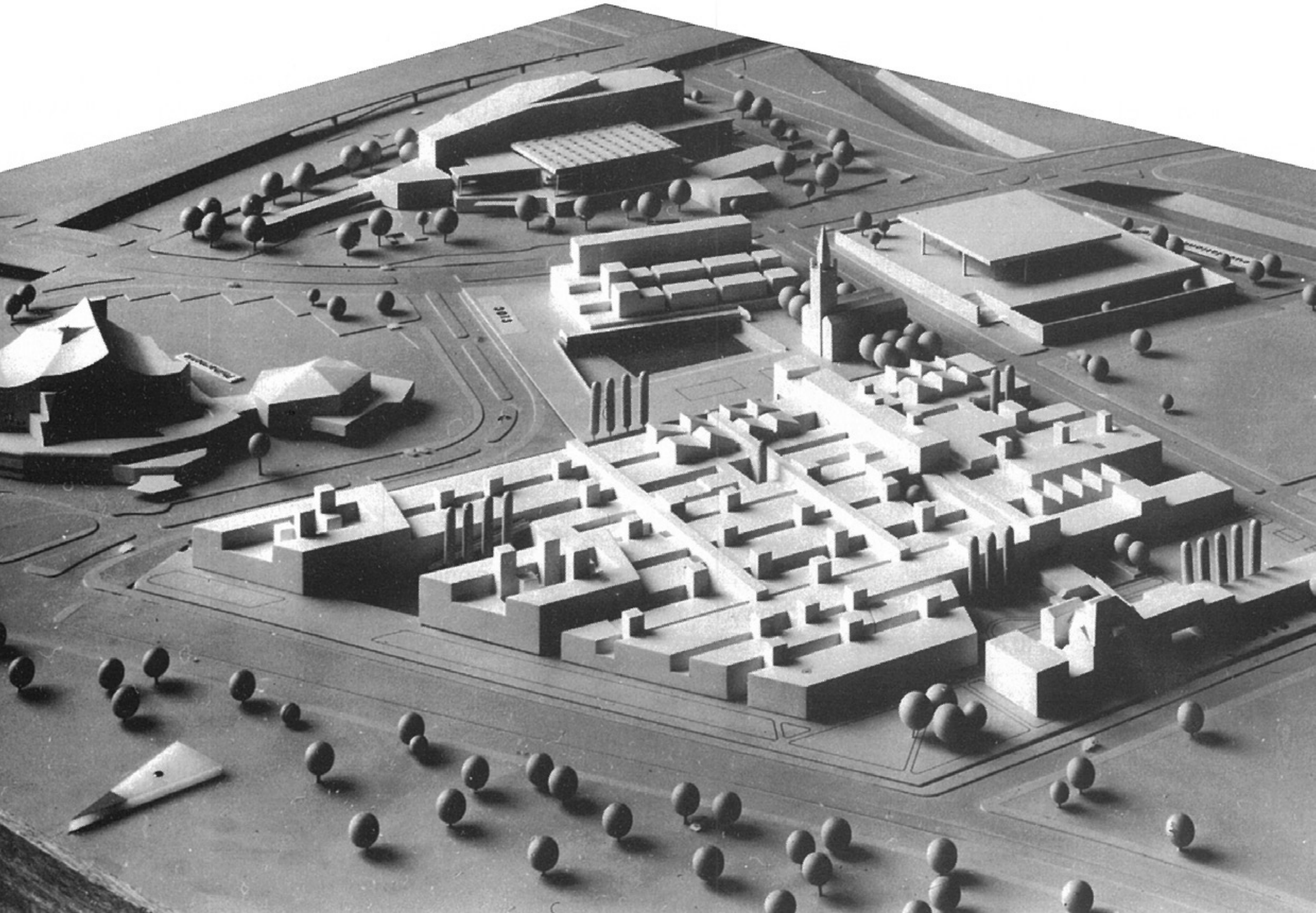
His group consisted of people involved both in the Workshops and in the GSD at Harvard, pointing to a transition between the two worlds: Poland and the United States. Again, as in the case of his previous competitions, Sołtan gathered a specific task group. Amongst the group members, there were for example Vigier and Wilhelm Viggo von Moltke, both fellow members of the faculty at Harvard.[23] The former, as a planner, was to contribute to the mobility and communication scheme of the museum (according to Sołtan, "the key to the museum is circulation").[24] Von Moltke, also a planner, was to contribute to the "German spirit" of the design, and his help was undeniable since the elaborate tender and its requirements had to be translated from German.[25] As an absent member of the team, Sołtan listed also his long-time friend from the Workshops, Zbigniew Ihnatowicz, who was however still working in Poland, and not able to contribute to the competition: it shows however Sołtan's willingness not to cut completely all links with Poland. Their work followed the scheme laid down by the workshops, centred on discussion and the sharing of ideas. Vigier recalls Sołtan as "good collaborator", looking for suggestions and interested in discussing design issues, and another team member, Paul Krueger, recalls that there were no issues in sharing his own ideas.[26] Although the team's proposal was not awarded, it is interesting to look with attention at the design, which shows the continuity of ideas visible in the designs developed in the Workshops, as well as the conflux of ideas between various Team 10 members and Sołtan's shared interest in the group's ongoing architectural research.

a museum as a city

Amongst the competition entries, there were two major design attitudes: the new museum was either creating 'a third pole', in addition to Scharoun's and Mies' buildings, or it created a neutral setting and a background for the other two structures.[27] Sołtan's group developed their proposal following the second approach, proving to be coherent in the architectural panorama of the time. As Krueger recalls, "something was in the air" in the 1960s and their proposal aligned itself with the then developing tendency of "mat buildings", alluding to Le Corbusier's hospital design in Venice (1964–1965) and to the Free University of Berlin by Team 10 member Shadrach Woods following a competition won in 1963.[28] Pursuing a scheme where "city is like a building, building is like a city", which was not only of interest for Sołtan, but also stemmed from Team 10's philosophy, the museum proposal indeed takes the form of what Sołtan called an "exhibition city".[29]

22 'Konkurs na projekt muzeum w Berlinie nie dał rezultatu', *Architektura*, 3 (1967), 96, 99-100 (p. 96).
23 The design group included Sołtan, Ihnatowicz, von Moltke, Vigier, Krueger, and Edward Baum. Most of the members pointed to the fact that the competition was developed as a loose collaboration outside the normal working hours, as all of them had normal full-time jobs, either teaching or working in a practice. Sołtan, Vigier, and von Moltke were teaching, Krueger was working full-time at Sert's office in Cambridge and he recalls working on the Berlin competition early in the morning, from 4 a.m. until 9 a.m., before starting the actual work at Sert's office, see: interview with Paul Krueger. Baum was not involved since the beginning, and he was a student at the time, his role being mainly draughtsman and modelmaker, with no role in the design process, see: interview with Edward Baum.
24 Interview with François Vigier.
25 Interview with Paul Krueger.
26 Interviews with François Vigier and with Paul Krueger.
27 Krueger adds bitterly that the competition was not ended, and no winner was selected, see: interview with Paul Krueger.
28 Interview with Paul Krueger.
29 Baum recalls Sołtan's interest in the matter, see: interview with Edward Baum. These words reflect Aldo van Eyck's scheme with a leaf and a tree: "tree is leaf and leaf is tree – house is city and city is house – a tree is a tree but is also a huge leaf – a leaf is a leaf but it also a tiny tree – a city is not a city unless it is also a huge house – a house is a house only if it is also a tiny city". Sołtan refers to the building as an "exhibition city" in notes on

ill. 10.18, 10.19, 10.20, and 10.21 - present-day and historical photographs (ill. 10.19 in 1980 and ill. 10.21 in 1963) of the southern elevation, showing the gradual growth of the plants in the garden and surrounding the building
ill. 10.22 and 10.23 - present-day and historical photographs of the main living area facing the southern porch, which initially opened to the landscape, and later had the visibility covered by the garden plants; the photographs show also the difference between the original dark iron window frames and the present-day PVC white frame, which does not correspond to the initial layout



Following the scheme of "a building as a small city", clearly read through the main plan of the building (ill. 10.25), the concept was centred on the flexible character of the museum. Far from the idea of 'a monumental box' and of a pristine volume, such as the Neue Nationalgalerie by Mies, it would have been perfectly possible for the structure to grow with time, to gain new sections, or to simply use the scheme as it was initially laid down: as shown in the plan scheme, the design already included possible extension directions indicating its adaptive principles (ill. 10.25, 10.31). Such a tendency was close to Shadrach Woods' vision of a system, within which one could add new sections to the museum, following the initial pattern and fabric, without compromising the composition of the whole. It was visible also in the modularity of the elevations (ill. 10.26, 10.27), which used repeated thinner or larger inclined *brise-soleil* elements, which on the one hand point to Le Corbusier's Carpenter Center, but on the other one to Sołtan's later design of the Salem High School, creating at the same time the background for the surrounding buildings. Such flexibility has been underlined by all of those who worked on the design, and it also influenced the communication within the museum. The design was organised orthogonally thanks to the main 'spine', clearly identified in the plan (ill. 10.31, 10.32): this axis worked as the main street, "the Museumstrasse", and the distribution system to the complex, and such a layout was close conceptually to the "corso" in 'Warszawianka' and to the organisation of the Salem High School designed a decade later in the United States. The main street was one of the few elements that rose above the one-level structure of the museum exposition area, as can be seen in the model and three-dimensional schemes (ill. 10.31). The volume of the museum's backbone included entrances and the main passage at the elevated level, exposition area and workshops at the ground floor slightly below, and service areas, storage and technical areas below them and underground. Above the main entrance, there was another level with a restaurant, a conference room, and a library, and main offices at the very top level. From the main axis, one was able to see and enter the exhibition space freely and without following a given itinerary. Compared to a very complicated programme, reflected in various sections of the museum itself, its layout is characterised by clarity and simplicity of organisation. Krueger and Edward Baum, when referring to the competition programme, recall a very complicated and elaborate list of requirements, which in the proposal simply became parts of the city. As a city, the building thus has more representative and important spaces, and there are also secondary illuminated streets described as "light ditches", which enter the exhibition areas. The whole pattern is based on exhibition areas and workshops interwoven with the "light ditches" passages, creating an "organically linked complex".[30] Hierarchy, clear organisation, and simplicity are therefore very important for the design, as well as in the recognition of the service spaces. Baum, referring to Louis Kahn's attention towards the division between served and servant spaces, points to the dedicated space for the supporting functions at the underground level including storage, technical, and service rooms,[31] all of which were serving the main exhibition level, replicating in section the pattern of the principal and secondary streets (ill. 10.28, 10.29), almost as the plan of Parisian sewers replicates the plan of the boulevards.

In addition to the main street and perpendicular exhibition rooms, the complex also included a series of patios. For Sołtan, these were to create an element of surprise, inviting one to look differently at the changing perspective and the changing scale of the complex.[32] Well-illuminated, with landscaping and vegetation, they were places for the visitor to stop and to rest between visiting one exhibition room and another. They were part of a rather elaborate system of natural lighting, which was developed by Sołtan throughout the museum, answering the needs expressed by the tender. The small typical section drawings (ill. 10.30) were in fact amongst those that were personally drafted by Sołtan, and not by one of the younger members of the team. They could have been connected to a system similar to Josep Lluís Sert's Maeght Foundation in southern France,[33] with the Berlin museum's interiors illuminated using strip windows with half-transparent glass across the entire complex, and lighting towers that illuminated larger and more important exhibits. As in the situation of the interior of Warsaw Midtown railway station, lighting played a very important role determining atmosphere and perception of the interiors of the museum, even if developed only at the competition stage. Different schemes and details of different illumination patterns enabled the design to respond adequately to the needs of a particular exhibition and particular exhibits.

Although the museum was an unbuilt design, it stands as an interesting example of a transition from the collaboration-based practice at the Workshops, to Sołtan's more irregular professional commitments in the United States. It is also a practical demonstration of how Team 10 scheme of a mat building was permeable

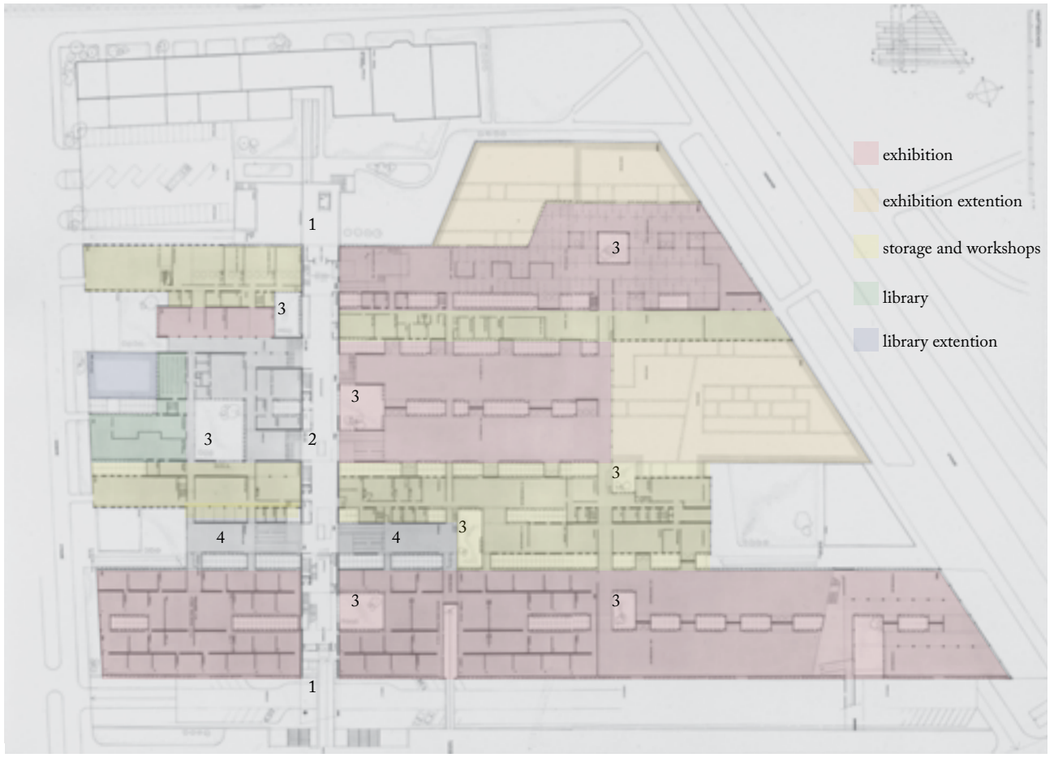
the design, see: P-JS.

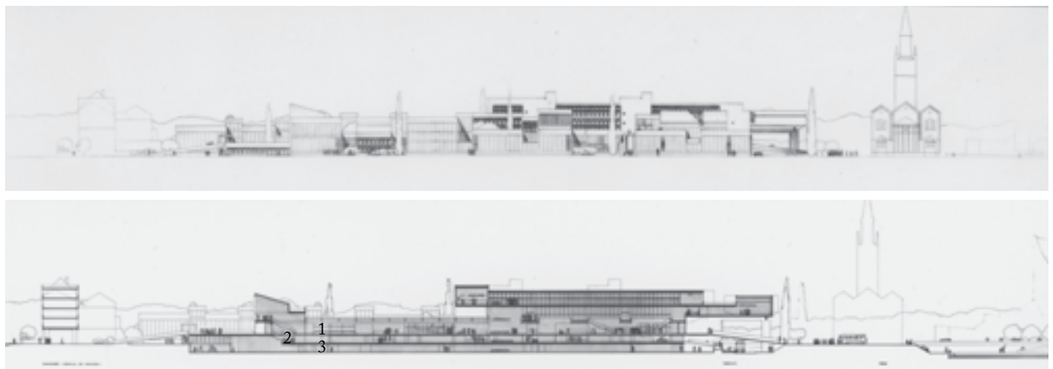
30 Sołtan's notes on the design, see: P-JS. Translation from French (SR).

31 Interview with Edward Baum.

32 *Jerzy Sołtan*, ed. by Jola Gola (Warsaw: Wydawnictwo Akademii Sztuk Pięknych, 1995), p. 253.

33 Interview with François Vigier.





ill. 10.24 (previous page) - model of Berlin Museum of Art, showing the context of the building, including Mies' Neue Nationalgalerie, Scharoun's Philharmonics, Neo-Gothic Sankt Matthäuskirche, and Scharoun's State Library, which was built later in the 1970s, forming together a collection of important landmarks in the very surroundings of the museum

ill. 10.25 - plan of the main floor of Berlin Museum of Art, showing the organisation of the building as a city with a regular and hierarchical scheme with the main stem - the Museumstrasse - and other functions that develop orthogonally from it, 1 - entrances; 2 - Museumstrasse; 3 - patios; 4 - main vertical communication; the exposition and its auxiliary functions were organised orthogonally to the Museumstrasse and included exhibition spaces, possible exhibition spaces extension, storages and workshop rooms, library, and possible library extension (see legend)

ill. 10.26 and 10.27 - elevations of Berlin Museum of Art, with the continuous eastern elevation (ill. 10.26) showing seriality and repetition, as a background to the nearby constructions, and with the southern elevation (ill. 10.27) granting the direct connection between the museum's interior spaces and the street thanks to large glazed surfaces

ill. 10.28 - section of the Museumstrasse of Berlin Museum of Art, showing the organisation of the main communication axis of the complex, combining all the different functions: 1 - Museumstrasse, 2 - mezzanine floor, 3 - underground service area and storage

between the group's different members, building on the idea of a system and of an open form: "it is not a museum as a vault for art, but a living space, which belongs to the passer-by".[34] With extensive glass surfaces and brise-soleil elements, the elevations used texture more than form to allow views inside the building from the exterior. Following these ideas, the design for the museum in Berlin is perhaps one that brings Sołtan's design work closest to the ideas of his fellow Team 10 members.

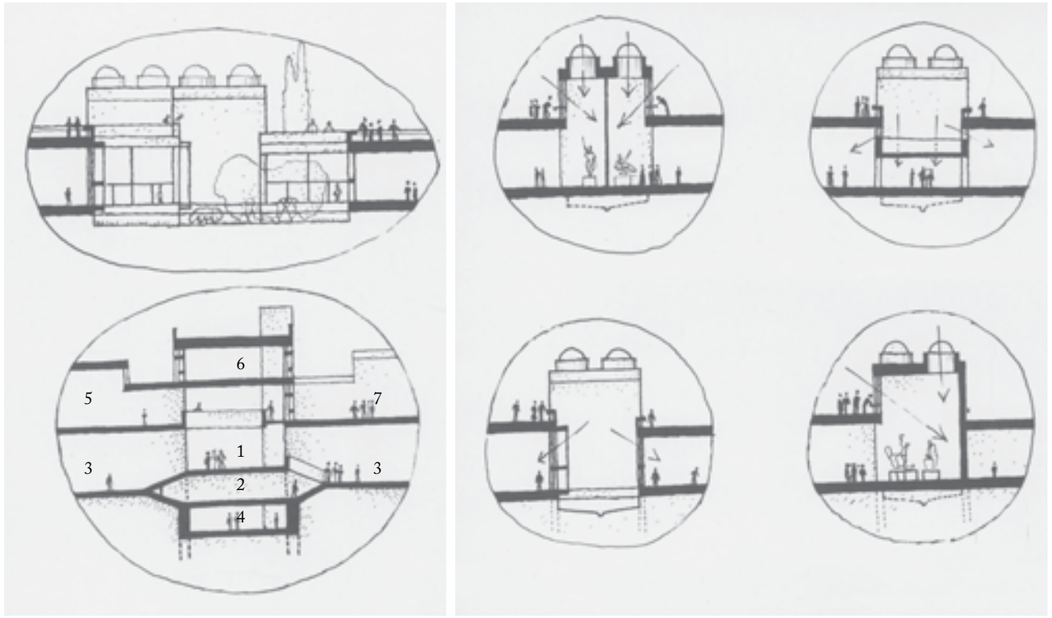
Salem High School and educational designs – the programme, graphics, and the walled city

After the unsuccessful competition entry for the museum and the series of designs prepared with his fellow faculty member Szabo, Sołtan turned to Haldeman and Goransson, a large and well-established Boston office, which could have offered him much more concrete opportunities for design realisation as one of the biggest practices designing schools in Massachusetts. Actually, the benefit was mutual: on the one hand, as one of his friends reminds, the practice was interested in having his expertise and gaining prestige for having a Harvard professor as a chief designer.[35] Sołtan, on the other hand, "was interested in being able to build some designs as opposed to being a theoretician".[36] Even though the reality with Haldeman and Goransson was completely different from the collaboration that would take place in the Workshops, Sołtan tried to bring along similarly minded designers. Edward Lyons, the office manager at the time, recalls that his condition was to bring some of "his people" from the Graduate School of Design – Alan Baer and William Whitney, both of whom had been his students at Harvard.[37] Wojciech Fangor, Sołtan's old friend from the Academy, whom he introduced also as a visiting member of the faculty of the GSD, was a consultant to some of the designs, having contributed again the large graphic elements, even if his input was limited compared to the number of designs produced.[38] Along with his former students, Sołtan was able to work on the designs for the practice, and thanks to a small office opened on purpose in Harvard Square, it was possible for him to keep up and to meet his co-workers in spare time between teaching duties, and to leave them assignments. However, as they were his former students, the dynamics of the team was surely different from the Workshops, where Sołtan was able to exchange with his peers, such as Ihnatowicz, Lech Tomaszewski, and Fangor. Collaborating with his own students, there was less possibility of an equal exchange and profound discussion, the fault of human psychology and the natural attitude one has towards former teachers. Sołtan's friend Urs Gauchat commented on these designs claiming, "he never took a great pride in those particular schools. He would say he worked on those [but] they were not *his* schools".[39] Described by Lyons as "his hands", Sołtan's former students were thus mainly executing what his ideas were, rather than discussing together on the development of the designs. Lyons recalls Sołtan sometimes coming "with a little sketch",[40] which then had to be developed by the team. Interestingly, the same attitude is described by Sołtan himself when remembering his work at Le Corbusier's atelier: his master would come in the early afternoon with a small sketch the draughtsmen were to decipher and to develop into a proposal (Chapter 4). As a result, the very initial relationship with the team members made the syncretism praised by Jacek Damięcki in 'Warszawianka' and in the EXPO pavilion much more difficult to achieve: even if Sołtan's ideas are clearly visible, he had less opportunities to confront them with fellow designers.[41] Lyons recalls discussions based on financial and construction aspects of the design, but the truly artistic part of the team was missing. The collaborative design attitude present in the Workshops was absent, and arguably, that was the reason why Sołtan subsequently invited Fangor to contribute to the artistic aspects of the design.

from the programme to a walled city

As the chief designer, Sołtan was therefore involved mainly in developing the concept and in working on the early architectural design, and less in construction or in relationships with clients.[42] He was not responsible for the programme either, as the office had a special programming department, which prepared very detailed and innovative briefs for the practice's designs. The Salem High School as the first educational building designed by the practice together with Sołtan in 1970–1976 shows perhaps best the programmatic solutions that were to be proposed over and again in later works. Compared to the schools traditionally built in New England, the building is more articulated due to the presence of atriums, large corridors, and socialising spaces (ill. 10.41 to

34 'Konkurs na projekt muzeum w Berlinie nie dał rezultatu', p. 100. Translation from Polish (SR).
35 Interview with Paul Krueger.
36 Interview with Edward Lyons.
37 Ibid.
38 Fangor collaborated with Sołtan on the designs of two schools in Brockton (1972-1976), of Breed Middle School in Lynn (1977), and on an unbuilt design of a skating rink (1972-1973).
39 Interview with Urs Gauchat.
40 Interview with Edward Lyons.
41 Interview with Jacek Damięcki.
42 Lyons recalls that Sołtan himself was not much interested in meeting the clients, see: interview with Edward Lyons.



ill.10.29 - two sketches of typical sections of one of the patios (above) and of the Museumstrasse (below). showing the visual contact between the roof used as a public space for diverse manifestations and the interior of the museum; the section of the Museumstrasse shows different communication connections between the floors: 1 - Museumstrasse; 2 - mezzanine floor; 3 - ground floor: exhibition; 4 - underground passage: service area; 5 - library; 6 - offices; 7 - public space at the roof
ill. 10.30 - four sketches of typical sections of the exhibition areas, showing different solutions for the illumination of the museum interiors, based on the size of the exhibits and the type of exhibition as a solution that could be easily adapted to the specific needs of the given exhibition room
ill. 10.31 - organisation schemes of the museum with the layout of the different floors (above) and organisation of the ground floor (below), illustrating the central role of the main axis of the Museumstrasse and illustrating the idea of expandable museum, with possible extensions of the exhibition areas and of the library
ill. 10.32 - organisation of the first floor (above) and service circulation scheme (below), illustrating the central role of the main axis of the Museumstrasse and the attention put to the servant spaces in addition to the served spaces

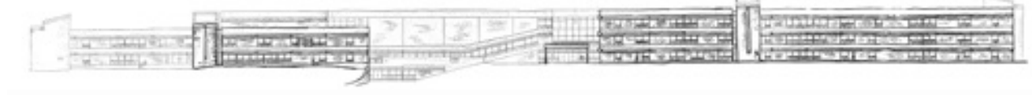
10.46), which descend from the programmes prepared by the office. To think critically and innovatively about the programme was an approach clearly aligned with Sołtan's attention to the matter resumed in words "to design well, you need talent, to program well, you need genius" (Chapter 7), a saying which was remembered by his co-workers.[43] As a result, even though the initial programme was not from Sołtan himself, he embraced it quite naturally, as it was close to the approach common amongst his fellow Team 10 friends and some of their designs, like the Huntington School by Alison and Peter Smithson with its large courtyards or the Amsterdam Orphanage by Aldo van Eyck with its ample socialising spaces.

In comparison to other schools designed by Sołtan, the Salem High School was planned for a larger number of students – 1500 in total – which caused the design to reach significant dimensions, over two hundred metres in length and the total surface of around forty thousand square metres, as the building tended to remain low, following the lead of the earlier museum competition entry. The plan shows the building is centred around the main courtyard in the western part with different teaching sections: business, languages, and sciences, whereas more practical artistic ones are localised in the eastern part of the complex next to the gym hall (ill. 10.41 to 10.44). This circulation scheme and the presence of the main core around the courtyard and of some local cores within single sections (for example in the business and language sections) was Sołtan's addition and expansion of the programmatic ideas.[44] An important aspect is the layout of the area adjacent to the main entrance to the school, including a multi-purpose auditorium and the central library. A position close to the entrance and a clear visibility to the students was in Sołtan's opinion a gentle invitation to study and to use the library's premises – a reflection coming probably from his own experience of teaching at the Academy in Warsaw and from the position there of the Academy's library.[45] The importance of this idea can be underlined by the persistence of the layout in the buildings of two elementary schools in Brockton, where the entrance is close to the central media centre area and common facilities. A similar approach is present also in two elementary school buildings in New Bedford, where the central hall and the adjacent media space are also next to the main entrance.

With the central position of the courtyard, with glazed corridors facing towards the space (ill. 10.47, 10.48), the school gained an enclosed common area for socialising. Designed as a place to rest during a break, it offered a range of places to sit and to spend spare time thanks to a recessed area with steps. Such an approach relates to some Team 10 works and ideas, visible especially in Herman Hertzberger's school designs and in his texts.[46] Following the assumption that a school is not only a place to instruct, but also to learn to be a part of the society, this aspect of the courtyard was therefore relevant, and it can find correspondence in architectural practices of the time. Even though it is the only building with such a large open-air space – partially due to the school's dimensions – other buildings in New Bedford and Brockton have either smaller outdoor areas or covered halls (ill. 10.56, 10.61) as the central part of the school, the latter almost as in some of Alvar Aalto's designs, where a public square is covered by a roof and becomes an indoor space.[47]

With this importance given to the common socialising areas, and to the communication axis with their hierarchy – the main six metre wide corridor and the secondary three-metre-wide corridors stemming from the main one – the Salem High School building reminds of a city, following once again schemes laid down in the previous decade by the designs such as Woods' Free University of Berlin and the hospital in Venice by Le Corbusier, and building on Sołtan's own experience of the design of Berlin Museum of Art. However, in the case of the building in Salem, the idea of "house is city and city is house" gains a new meaning when looking at it through the lens of Sołtan's interest in early Medieval architecture, in particular in Polish Romanesque buildings, like the Collegiate in Tum.[48] Alluding to the idea of "grassroots" architecture and to the correspondence between the early stages of different periods (Chapter 7), the building becomes therefore not only a city, but a Medieval walled city, with its red brick walls and with the emergency staircases volumes appearing as defence towers

43 Interview with Edward Lyons.
44 Ibid.
45 Whereas it was not clearly stated in relation to the Salem High School, the connection to the Academy's library influenced Sołtan's consulting the design of the new building for the Graduate School of Design, the Gund Hall, which has its main library clearly visible from the street, with its entrance just next to the entrance to the building. A similar layout in Salem makes logical an assumption that the same idea influenced the design of the high school. For the reference to the Academy at the Gund Hall, see: Andrzej Bulanda, *Rozmowy o architekturze* (Warsaw: Muzeum Akademii Sztuk Pięknych, 1996), p. 67.
46 For example, in Herman Hertzberger, *Lessons for students in architecture* (Rotterdam: 010 Publishers, 1991).
47 For example, in the case of the Rautatalo building in Helsinki, see: Szymon Ruszczewski, 'Mediterranean piazza – public space in Aalto's designs', *Alvar Aalto Researchers' Network Seminar – Why Aalto (2017)* <https://www.alvaraalto.fi/content/uploads/2017/12/SzymonRuszczewski.pdf> [accessed on November 7th, 2020].
48 *Jerzy Sołtan*, ed. by Jola Gola, p. 16.



ill. 10.33 - pictural rendering of the Salem High School, showing the old quarry rocks and the natural landscape surrounding the building; view from South-East with the gym building
ill. 10.34 and 10.35 - historical photographs of the northern elevation of the Salem High School, showing the regularity of the brick-and-concrete walls with the spiking staircase volumes, referring to European Romanesque architecture and giving the entire complex the aspect of a walled city
ill. 10.36 and 10.37 - charcoal-drawn elevations (northern - above, southern - below) of the Salem High School, showing some elements that can be traced back to Corbusian architecture, as the staircase volumes with vertical openings similar to detail in Ronchamp and the inclined *brise-soleil* structure in the school library (at the centre of the southern elevation), which can be compared to the inclined *brise-soleil* elements at the Carpenter Center
ill. 10.38 and 10.39 - photographs of the Salem High School in the 1990s, showing the unchanged elevations of the building and Sołtan taking pictures of the school building
ill. 10.40 (next page) - present-day photograph of the Salem High School, showing the relationship between the quarry rocks and the school building; the brick cladding is not original, the brighter tone corresponding to the recent renovation works

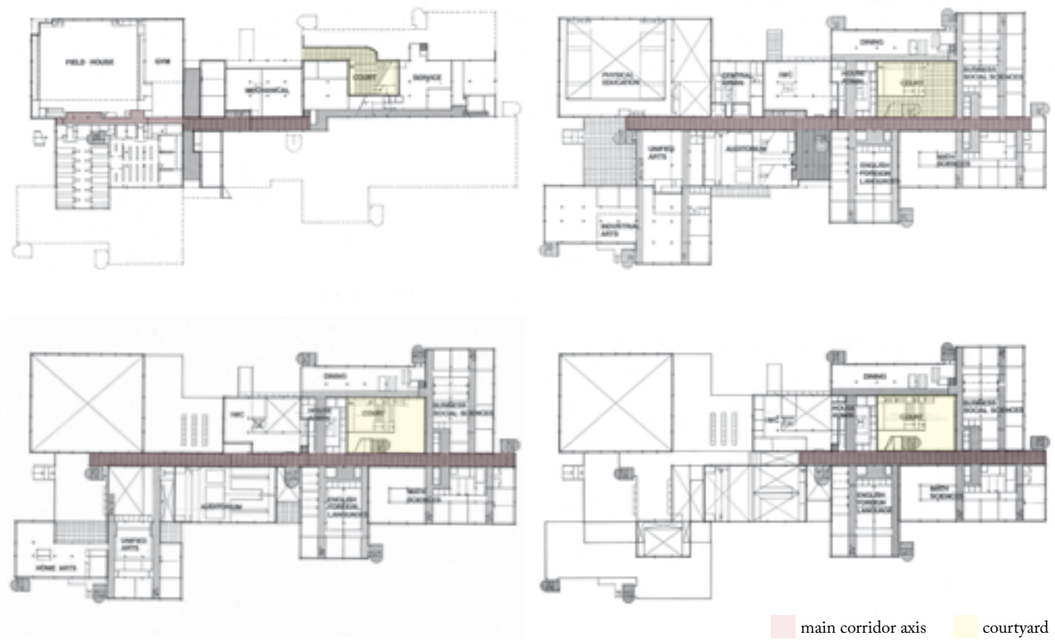
(ill. 10.34 to 10.37).[49] Building on the memory of walled cities and castles, like the Château de Bouillon in Ardennes he mentioned so many times when speaking about the issue of scale in architecture (Chapter 6), the Salem High School building is then closely linked to Sołtan's belief in the "grassroots" architecture and to the idea of a building as a larger system. The use of red brick along with horizontal concrete elements show also a recurring theme, which was already present in 'Wenecja' in Warsaw in the late 1950s, and which can be related to Le Corbusier's Maisons Jaoul.

school designs – between landscape and art

In addition to the courtyard, the school in Salem has other outdoor spaces, more open towards the surroundings, and other designs similarly included smaller open spaces: the Brockton schools had a decreasing recessed outdoor area with steps creating a small open-air classroom (now demolished in both sites), whereas the Breed Middle School in Lynn still has outdoor spaces functioning as an extension of regular classrooms at the ground floor. Such an approach points to the importance of landscaping, which takes over in Salem due to the site specificity. The school building sits within an old quarry, and the connection to the site was well studied by Sołtan and the design team.[50] For example, when approaching the building on foot, the school volume unveils gradually: one has to cross an artificial hill (ill. 10.40) from where it is possible to appreciate the entire building from a raised level, from between the rocks, making the perception of it entirely different from, for example, the nearby eclectic Collins Middle School, accessed climbing a long central staircase. As a result, Sołtan's design, in spite of its considerable dimensions, rejects monumentality and it uses horizontal expansion and landscaping in order to appear at a more human scale along the front northern elevation. To prove that, one may compare it to the opposite southern elevation facing the quarry walls – remaining mostly hidden to a first-time visitor – which is much higher and would have appeared much more monumental. In a similar manner, the attention to the perception of the outdoor natural space can be seen in the plan of the building. The corridors are not blind and all of them end with full-width glazed openings facing the rocky walls of the quarry, and the vast openings in the classrooms and in the cafeteria visible in the elevations establish a direct relation between the interiors of the school and its natural setting (ill. 10.36, 10.37). Interestingly, in the case of schools in Brockton, Lynn, and New Bedford, within a more built urban context, the openings were studied in order to limit the interactions with the outdoor setting, limiting at the same time any possible distractions for the students and gaining more chalkboard space. As a result, in each classroom in these schools, there is a limited number of full-height windows, compensated by a long strip window at ceiling level, which offers uniformed lighting with no visual contact to the exterior (ill. 10.60), guaranteeing at the same time more wall surface to be used for teaching activities.[51] These elements point to the continuity of the importance of landscaping and carefully studied perception in Salem – stemming from the initial version of 'Warszawianka' and visible in his critiques and comments to students at Harvard.[52]

The terminating windows of the corridors in Salem also show another important aspect of the design: the use of the Modulor system by Sołtan. He often referred to the school stating it was designed using the Modulor scale.[53] Edward Lyons commented that saying, "it was critical to everything".[54] Present in windows, elevations, and other measurements, the use of that system and the connection to Le Corbusier are however most evident in the study for a typical gym hall wall graphics, which Sołtan worked on extensively together with Fangor, and which was then implemented in the schools in Brockton and in New Bedford. The use of colour and of large-scale graphics were in fact recurring elements in the practice,[55] and for example in the Brockton schools, Sołtan used physical models in order to decide the alternance and the succession of coloured panels cladding the roof structure (ill. 10.53, 10.54). In the Salem High School, the lighting was also custom-designed by Sołtan, with its linear elements referencing earlier works.[56] Similar to Warsaw Midtown railway station, the buildings in Salem and in Lynn use a code of colours along the corridors and common spaces, which improves

49 Lyons recalls that Sołtan approached staircase design as something that can be dealt with freedom, see: interview with Edward Lyons. Such an approach can be associated with Louis Kahn's attention in his designs to the entrance halls and staircases, where architecture can truly unveil.
50 Lyons recalls Sołtan studying carefully the approach to the school and the views from the school towards the walls of the quarry and he mentioned that Sołtan was equally involved in the design of the parking lots and paying fields on the school grounds, see: interview with Edward Lyons.
51 The stripe windows have been covered in Lynn and in Brockton schools, reducing significantly the amount of light in the classrooms, but they remain open in New Bedford, as in the original design.
52 For example, Guarracino recalls Sołtan assuming the role of a landscape architect when commenting on students' design proposals. Equally, Holtz recalls Sołtan's sensitivity to landscape, see: interviews with Umberto Guarracino and with Thomas Holtz.
53 For example, Szaflarski and Vigier recall Sołtan commenting on the use of the Modulor in Salem, see: interviews with Stan Szaflarski and with François Vigier.
54 Interview with Edward Lyons.
55 Ibid.
56 Ibid.



ill. 10.41, 10.42, 10.43, and 10.44 - plans of the Salem High School floors (ground, first, second, and third), showing the organisation of the complex, centred around the main courtyard, with the different section clusters around the open space; with the main corridor axis, connecting main functions of the building; and with the common facilities (auditorium and library) positioned next to the main entrance area
ill. 10.45 and 10.46 - photographs of the interior of the Salem High School, showing the wide main axis courtyard (left) and one of the secondary corridors connecting different classrooms within a cluster (right); glazed opening at the end of the corridors frame the quarry rocks, increasing the importance of the landscape in the design
ill. 10.47 and 10.48 - photographs of the main courtyard of the Salem High School, pointing to the important visual connection between the surrounding corridors and classrooms and the outdoor courtyard space, due to recent modifications - as filling in of the recessed area of the courtyard with the new HVAC installations - the socialising role of the courtyard diminished

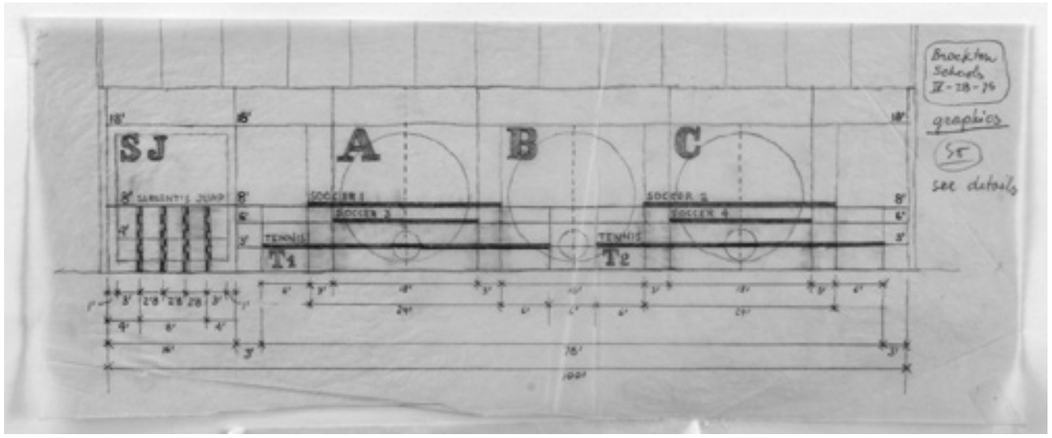
the orientation throughout the complex: an aspect which remains present today in spite of renovations. The large graphics were however one of the most important visual elements for Sołtan in these designs as he studied them in a series of sketches (ill. 10.49, 10.50),[57] which refer clearly to the idea of the union of arts he inherited from Le Corbusier. Using a series of geometrical divisions and lines, they are an interpretation of the Modulor series, related to the actual dimensions of playing fields and alluding to the artistic interpretation of complex mathematical functions in the Polish EXPO pavilion (Chapter 9). In addition, the lettering on these walls uses the font from the drawings in Le Corbusier's atelier. The connection to Le Corbusier can be also seen in some architectural details: the strip windows in most of the school buildings (Lynn, Brockton, and New Bedford), the skylights, and the *brise-soleil* structure in the school library in Salem (ill. 10.37), which in the early sketches is inclined as the same architectural element in the Carpenter Center at Harvard. The emergency staircase volumes in Salem and New Bedford (ill. 10.36, 10.37, 10.55, 10.57) can also be connected to the Ronchamp chapel and the openings above the side altars. Consequently, the school designs by Sołtan in the Boston area point clearly to his ideas and they show continuity of his design work.

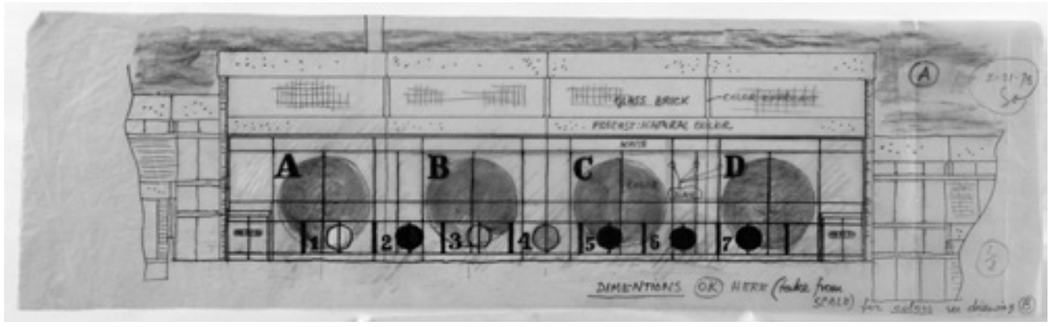
maintenance and misunderstanding

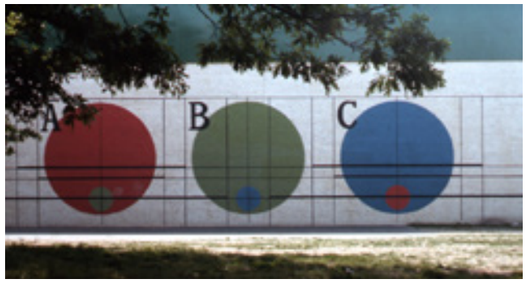
With the example of these buildings, it is also possible to observe the effects of different approaches to conservation and their effects on the state of the buildings: schools in New Bedford are constantly repaired when need occurs, the Salem High School was neglected for years and recently it underwent extensive renovation works, whereas the schools in Brockton continue to show signs of bad maintenance (ill. 10.52). These diverse approaches highlight different issues, although in general these buildings do conserve most of the original design ideas. Even in the massive renovation works in Salem, comprehensive of "roof replacement, resolution of ADA accessibility, exterior envelope improvements, new interior finishes, HVAC, plumbing, and data/electrical upgrades", including remodelling of some interior spaces and intervention in the exterior cladding, both the main concept of the building as a place to socialise and the layout of the building as a walled city remain clearly appreciated even today.[58] The renovation project was awarded and recognised by the New England section of the Construction Management Association of America, a non-governmental construction industry association, in 2009 and 2010. However, even in a successful intervention as the one in Salem was claimed to be, the lack of the understanding of the initial design idea together with evolving requirements led to the abandonment of some crucial elements, such as the main courtyard: the recessed area was used to make space for the new installations of the HVAC system (ill. 10.48), decreasing therefore the appeal of the courtyard as a socialising space and making it become rather a service area. Similar problems can be seen in New Bedford, where the Modulor wall has been repainted covering the bottom part of the graphic with white paint (ill. 10.59).[59] In the Davis Elementary School in Brockton, a barracks extension was added, with no connection whatsoever to the original building.

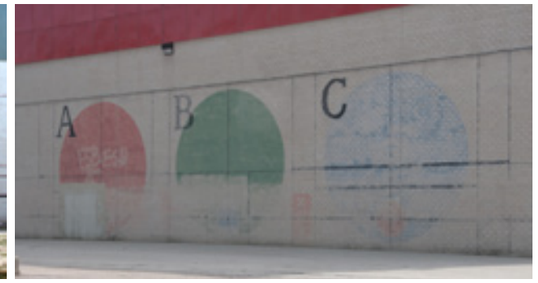
In spite of these transformations, designs of the schools are generally intact. Renovations, new introductions, and repairs could of course impact their integrity and alter the buildings' aspect, but the lack of maintenance would have led to final deterioration, as in the case of 'Warszawianka' (Chapter 10). Probably in response to the threat of bad maintenance, the schools were built using resistant materials: the main construction in steel frame and precast concrete elements, with cladding in either bricks with concrete elements (Salem, Lynn, and New Bedford) or bricks and coloured porcelain enamel on steel panels (Brockton). However, the dire need of renovations in Salem at the end of the 2000s shows that regular maintenance is still needed, as in the case of the schools in New Bedford.[60]

57 Lyons recalls the recurring use of the large-scale graphics, see: interview with Edward Lyons. Krueger adds that even if Sołtan was not excessively enthusiastic concerning the school designs, he was very much attached to these graphic schemes, see: interview with Paul Krueger.
58 The description of the renovation can be found at: 'Salem High School', *Flansburgh* (2020) <http://www.flansburgh.com/portfolio/salem-high-school/> [accessed on November 7th, 2020].
59 The Modulor wall has been painted white in Hayden-McFadden Elementary School (initially called Knowlton School), whereas it is well preserved in Carney Elementary School. However, in the latter, the playground in front of the wall has been transformed into a parking lot for the staff, so there is much less interaction between the graphics and the students, who according to the initial design idea were to use the wall for their activities.
60 In New Bedford, schools are continuously repaired as part of a long-time programme, according to which the oldest ones (over one hundred years) are demolished and new ones are built. As the schools designed by Sołtan are less than fifty years old, they undergo smaller renovations when needed. At the Carney Elementary School, different elements are being changed constantly (as the ceiling panels, windows and their framework): the original windows were in plexiglass and started to become opaque, and new opening mechanisms were installed between 2015 and 2017. Similarly, repairs took place in 2012 when a fire destroyed some classrooms, see: interview with the staff of New Bedford Schools from April 5th, 2019.









ill. 10.49 and 10.50 - Sołtan's drawings of the graphic design for the gym wall in Brockton schools, pointing to the research on proportions, modules, scale, based on the actual dimensions of different sport disciplines fields (for example tennis or football), building on Sołtan's role in the definition and his interest in the Modulor
ill. 10.51 and 10.52 - photographs of the realised gym wall in Brockton schools, showing the state after the completion (left) and present-day conservation (right), pointing to the disinterest in one of the important elements of the design
ill. 10.53 and 10.54 - example of research in colours for Davis Elementary School in Brockton, based on a model using coloured pieces (left), which helped to arrange the metal cladding panels in the building (right)

conceptual designs – poetics, purity, and concord

A different approach to design was showed by Sołtan in conceptual projects for a series of competitions he worked on after he ended collaboration with SWECO in the 1980s, including the competition 'Diomede' for a monument in the Bering Sea (1989), competition 'Atlas' for the reuse of a former site of long-range missiles (1990), and the competition for the Holocaust Memorial in Boston (1991). During those years, Sołtan spent much less time on building designs and on teaching, concentrating on these theoretical proposals, which give an interesting insight concerning the connection with his own biography, the construction of the teams, and the connection with the ideas present already in his earlier works. These three were independent competitions, less connected with the established process of architectural tenders followed in professional practice, alluding to the "new professional design organisations [...] and cultural exchanges of contemporary art and architecture", which were emerging at that time.[61] The Holocaust Memorial competition was organised by an independent committee, which wanted to recognise the martyrdom of the Jews during the Second World War through a much less structured process: amongst the submitted designs, a jury would have chosen seven proposals, which were to be submitted to the local community to express their opinion about which design to choose.[62] The 'Atlas' competition was organised together by a collective of different private and public foundations, including the New York State Council of the Arts, New York City Department of Cultural Affairs, and the National Endowment for the Arts. With the less profession-led character of the competitions, each was more susceptible to remain as paper-drawn concepts rather than actual buildings.

Indeed, Sołtan was well aware that these buildings were not to be built,[63] although he was determined to participate. His interest in both competitions 'Diomede' and 'Atlas' can be explained by his personal history, as a bridge between the East and the West, working on both sides of the iron curtain, in different political and economic contexts. With the end of the cold war, the Soviet *perestroika*, the definite division of the Soviet Union, and the fall of the Berlin Wall, in 1989-1991, the political climate was enthusiastic and hopeful for a new era in geopolitical relations. Upon the signature of the START treaties on the limitations of the massive destruction arms in 1991, and following a wave of enthusiasm, the organisers of the 'Atlas' competition looked for a proposal for the reuse of one of the missile sites in the United States. Similarly, the 1989 'Diomede' competition was an attempt to refer to the end of conflict between the United States and the Soviet Union. Sołtan's participation in the competition for the Boston Holocaust Memorial (ill. 10.62) remains probably more personal, related to his own tragic experiences of the war, and as a homage to his wife, who died in 1984, but was involved in rescuing Jews from ghettos in Poland, and recognised as one of the Righteous Among the Nations later in 1999.[64] Through such a strong personal connection to these designs, and through his great commitment to them,[65] one can argue that they illustrate well Sołtan's most important ideas.

'Diomede' – a tale of sound and light

Ideated by a P.S.1 Contemporary Art Center curator Glenn Weiss and organised by both the Institute for Contemporary Art and the Union of Russian Architects,[66] the 'Diomede' competition reflected on the changing political situation worldwide, which with almost one thousand three hundred design proposals coming from twenty-eight countries was an important milestone in acknowledgement of the end of the Cold War.[67] The selection of the site of the competition also referred to the changing geopolitical framework: the participants were asked to design a monument on the Diomede Islands in the middle of the Bering Sea, in-between Alaska and the Soviet Union, at the very junction between America and Asia, one island on each side of the International Dateline, and until the end of the Cold War – on each side of the Iron Curtain (ill. 10.64, 10.65). The call for proposals explicitly pointed to this changing situation and reflected the enthusiastic spirit

61 Andrew Wasserman, 'Between Today and Tomorrow: Bridging the Diomedes', *SAH 2018 Annual International Conference* (2018) <https://app.oxfordabstracts.com/events/84/program-app/submission/3275> [accessed on November 15th, 2020].
62 Lisa Mahlum, 'The Similarities of Difference: a Comparative Analysis of the New England Holocaust Memorial in Boston and the Memorial of the Murdered Jews of Europe in Britain', *intersections*, 10 (2009), 279-308 (p. 287).
63 Interview with Urs Gauchat.
64 Hanna Sołtan (Borucińska), along with her parents, sheltered a Jewish boy from the ghetto in Otwock near Warsaw in 1942, and helped him to forge false identity papers until the liberation of Poland, see: 'The Righteous Among the Nations Database, *Yad Vashem* (2020) <https://righteous.yadvashem.org/?search=soltan&searchType=righteous_only&language=en&itemId=4034433&ind=0> [accessed on November 15th, 2020].
65 For example, when asked about the 'Diomede' competition, Gauchat recognises immediately the importance of the design for Sołtan, see: interview with Urs Gauchat.
66 P.S.1 Contemporary Art Center was an important art museum in New York City, which since 2000 has become MoMA PS1. Archives of the 'Diomede' competition are held by the Canadian Centre for Architecture, see: Montreal, Canadian Centre for Architecture, Gift of the Institute for Contemporary Art/PS1 Museum, Diomede Islands competition entries and other documents, DR1994:0039:001-141.
67 Andrew Wasserman, 'Between Today and Tomorrow: Bridging the Diomedes', *SAH 2018 Annual International Conference* (2018) <https://app.oxfordabstracts.com/events/84/program-app/submission/3275> [accessed on November 15th, 2020].

ill. 10.55 and 10.56 - present-day photographs of the Carney Elementary School in New Bedford, showing a similar material scheme to the Salem High School, with characteristic staircase volumes and horizontally developed bricks-and-prefabricated-concrete elevations (left), and showing the interior main common space, 'an indoor courtyard', around which the main common facilities (library, cafeteria) are positioned (right)
ill. 10.57, 10.58, 10.59, and 10.60 - present-day photographs of the Hayden-McFadden Elementary School in New Bedford, showing a very similar development to the Carney Elementary School, with the difference of the brick tone, and an additional floor level (top left); photographs show superficial renovation of the graphic design for the gym wall with the bottom part painted white (bottom left), and some interior spaces and a typical classrooms with one full-height window and a stripe window, limiting visual distractions from outside and adding more chalkboard surface
ill. 10.61 - section of the Hayden-McFadden Elementary School in New Bedford, showing different elements of the design: 1 - central recessed area as the "indoor courtyard" of the school; 2 - gym; 3 - exterior gym wall with graphic design used for different sport games; 4 - greenhouse; 5 - teaching rooms at different levels; 6 - typical classroom with stripe windows to give light without disturbing the students used along with fewer full-height windows

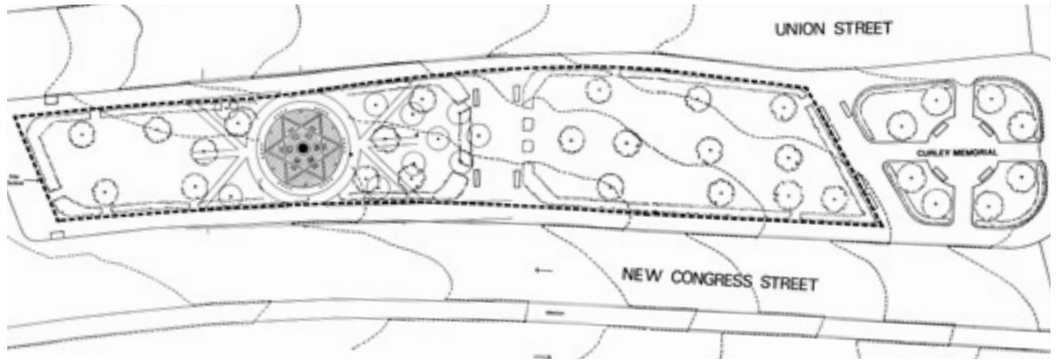
of the late 1980s and early 1990s. The proposals were to "mark the end of infinite territorial frontiers and the true acceptance of our human existence on a fragile and finite globe", and the goal of the competition was "to establish an independent and ongoing dialogue on art and architecture", "to examine rising aesthetic theories and visions", and "to reinforce the role of artists and architects as catalysts of cultural change".[68]

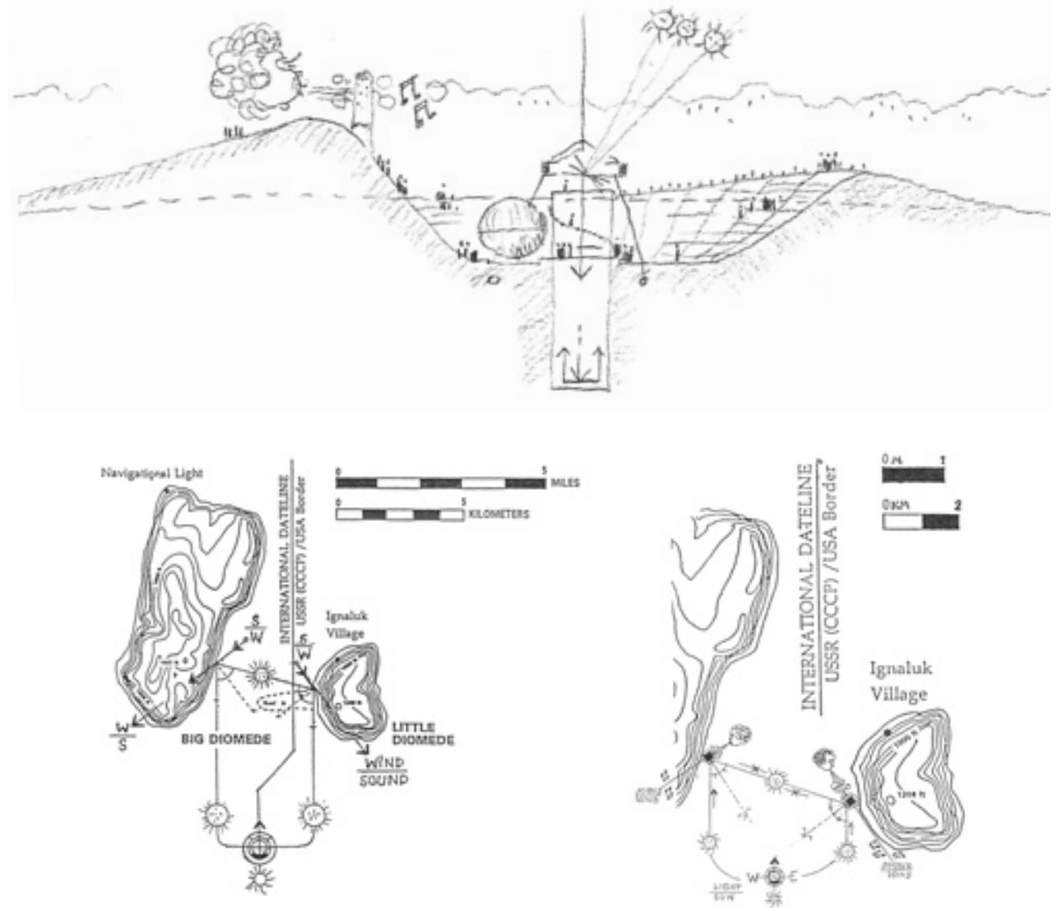
These ideas were undoubtedly attractive for Sołtan, who had for years yearned for a closer collaboration between artists and architects, and who underlined the utmost importance of architecture as the "litmus paper" and keystone of culture (Chapter 6).[69] In his recognition of architecture as a catalyst and in his ongoing reflection on the new culture, on the new beginning, one can definitely see correspondence with the competition tender. Sołtan's design proposal aimed to answer these questions through a poetic interpretation of the relation between architecture and science idealised as two separate structures, each one standing on one of the islands. The connection between the two buildings was to be immaterial, intangible, more poetic – approaching the Corbusian idea of the "ineffable space" – as opposed to a physical and tangible connection. In the proposal description, Sołtan wrote in fact, "the authors feel strongly that the bridge between the continents and the two time zones should be provided by NATURAL and TIMELESS means organized with the help of CONTEMPORARY KNOWLEDGE".[70] As a result, he gathered a group of specialists and scientists who were to help him develop the concept centred on the role of light and sound: he invited to collaborate a Polish engineer teaching at the MIT Wacław Zalewski, two acoustic specialists from a Cambridge-based office, and his Polish relative Andrzej Sołtan, an astronomer.[71] Carl Rosenberg and Larry Philbrick, the acousticians involved in the proposal, recall meeting Sołtan a few times to talk about the project, remembering their own astonishment to be asked to participate in a monument design,[72] Sołtan's receptiveness of their suggestions, and a friendly and collaborative atmosphere when discussing the designs.

Following the ongoing research on lighting, going back to the workshops, through the designs of the museum in Berlin and the school buildings in Massachusetts, the proposal was partially based on the minute research and the use of natural light. Similarly as in other competitions from those years, especially 'Atlas' (where one can see the study of sun rays angle in the section drawing – ill. 10.63),[73] in 'Diomede' the role of light was vital. The plan drawings (ill. 10.64, 10.65) include schemes of sun rays and illustrate the idea of creating a "light bridge" between the two islands. According to Sołtan, they were to "converse one with the other by the means of LIGHT and SOUND": sunbeams are sent from one structure to the other thanks to the large and polished surfaces of stainless steel slab mirrors (ill. 10.68, 10.69) at three exact moments of the year: at noon during the equinoxes and during the summer solstice (hence the collaboration with the astronomer Andrzej Sołtan). Such a light bridge was in Sołtan's words "the TIMELESSNESS of the dialogue between the two sides", addressing directly the political context of the competition.

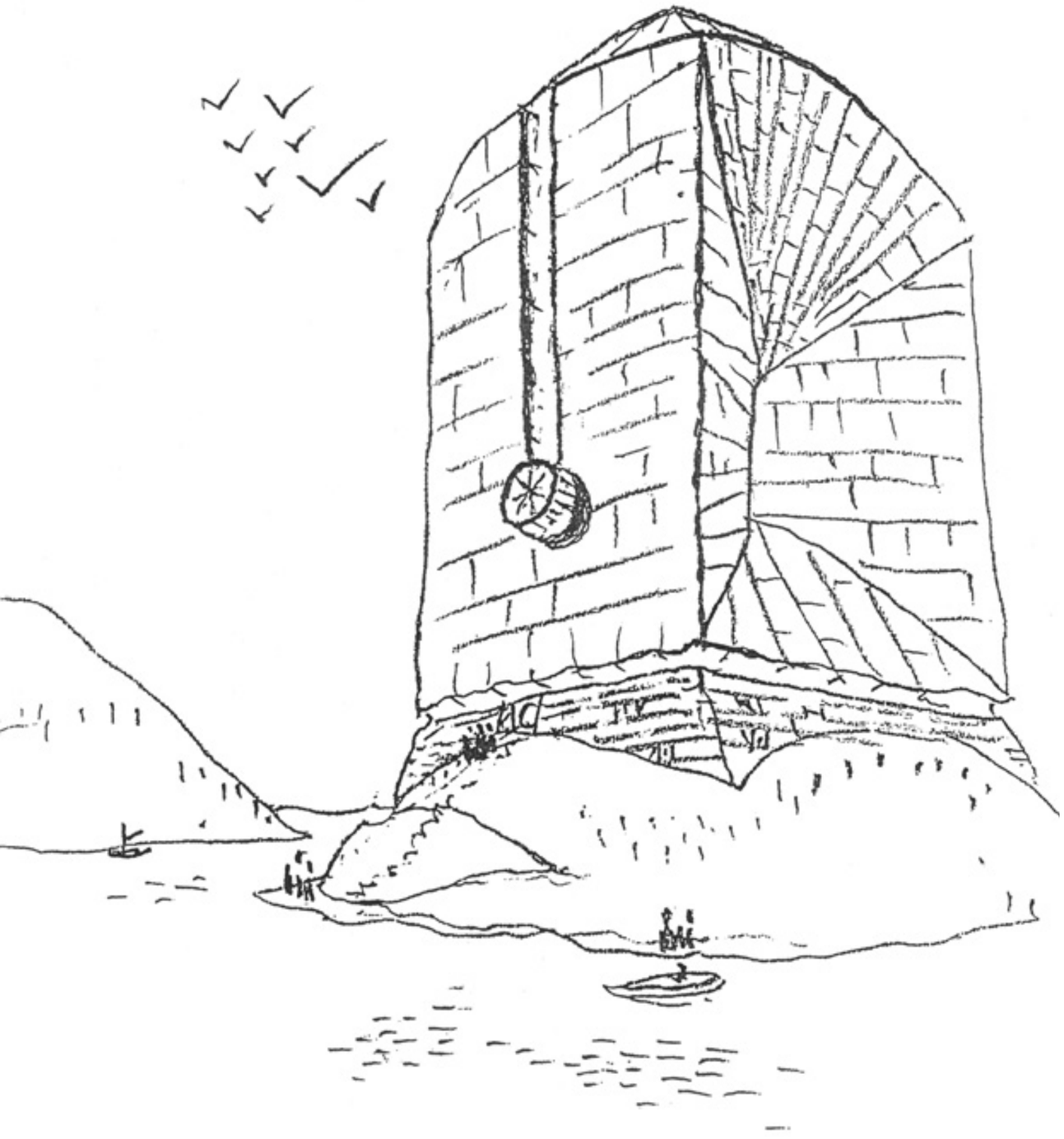
A similar intangible bridge was to be created by sound or – according to Sołtan's initial idea – a tune that would connect the two buildings. The idea came from ancient Egypt and the legend of the Memnon Colossi, giving the concept a much more ethereal and mythical aspect. Alluding to the ancient accounts of tones whistling through the cracks of one of the giant monuments of a pharaoh damaged by an earthquake,[74] Sołtan wanted to use the wind, which blows constantly in that area, in order to create tones and tunes, which would create a dialogue between the two structures. Rosenberg and Philbrick recall Sołtan's initial idea and their insight, which resulted in a more technical development of the idea following the principle of a void glass bottle: "the actual structure would generate sound due to the movement of air. There was the question of the wind

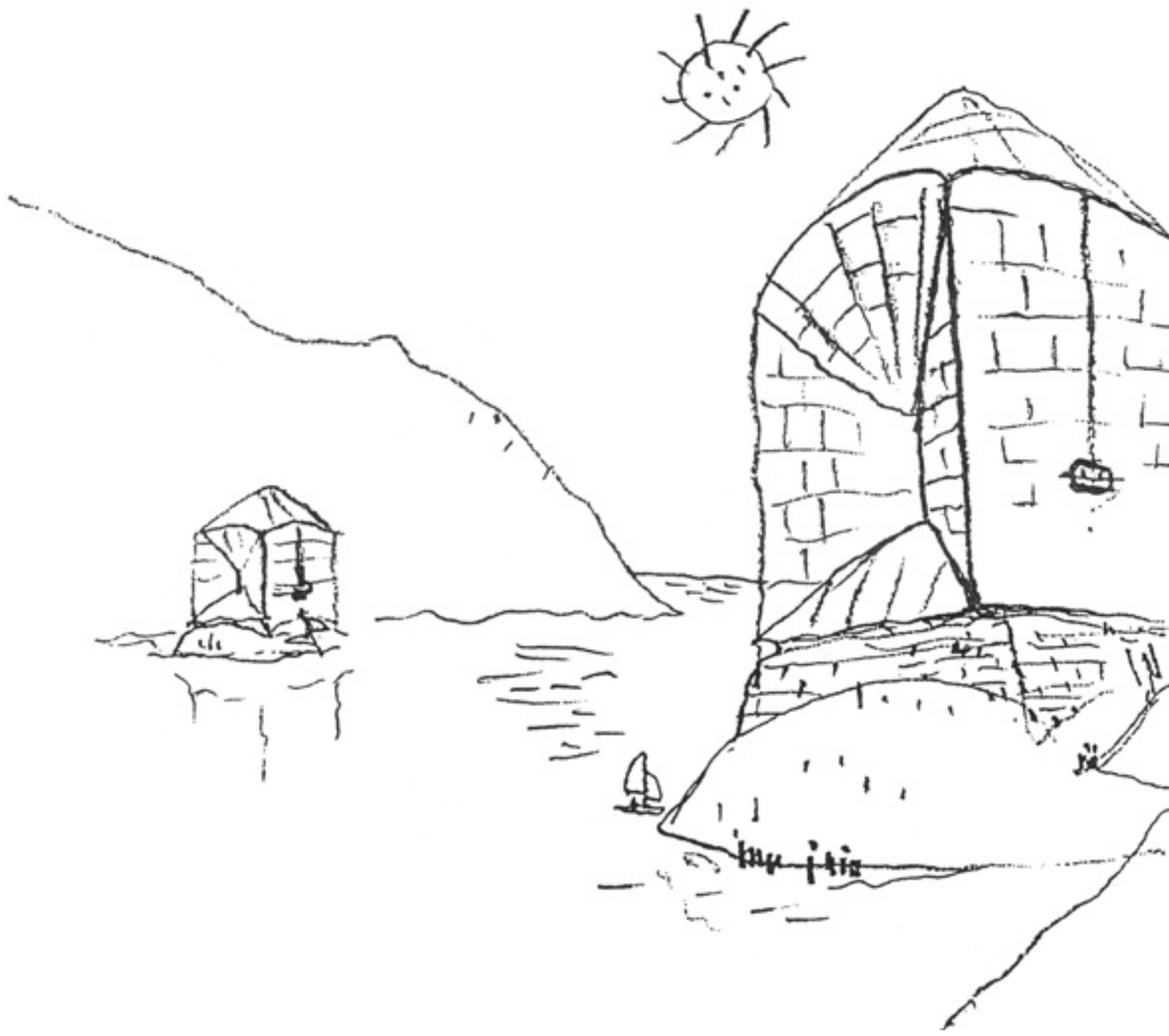
68 Competition tender held along with the submitted design proposal, see: P-JS.
69 Sołtan mentions the concept of architecture as "litmus paper" in a lecture at the Miami University in Oxford, OH in March 1984, a lecture at Harvard in July 1990, and notes on religious architecture in Poland from June 1990, see: MASP-JS.
70 Submitted design proposal, see: P-JS.
71 The design team included Jerzy Sołtan, Zalewski, Rosenberg, Philbrick, and Andrzej Sołtan.
72 Even if they were only briefly consulting, they recall the project and its main concept, even though they were initially surprised by the invitation to collaborate. Rosenberg remembers, "my first thought was, *why do you even contact us, it is a monument* [...]. You can tell this was an interesting project because Larry and I, we both remember it over thirty years. Perhaps not too much in depth, but it surely made an impression on us. There are plenty of designs where we just need to add the acoustics – and we do not remember those", see: interview with Carl Rosenberg and Larry Philbrick.
73 For the 'Atlas' competition, Sołtan collaborated with the MIT physicist Walter Lewin to work on the idea to bring the light to the very bottom and to illuminate the entire former missile shaft. This idea can be seen in a section sketch, where in spite of different sun rays incidence angles throughout the year, the bottom of the shaft remains illuminated.
74 Gola refers to the connection with the Memnon Colossi in *Jerzy Sołtan*, ed. by Jola Gola, p. 295. The legend of the 'singing' statue dates back to the account of ancient Greek geographer referring to an earthquake that took place in 27 BC, which damaged severely the northern statue, and after which a whistling sound could be heard every morning until restoration works undertaken by the Roman emperor Septimius Severus in the second century, see: Ahmed Osman, 'Memnon's Musical Statues: the Long-Standing Guardians of Amenhotep III's Temple That Found a Voice', *Ancient Origins* (2017) <https://www.ancient-origins.net/ancient-places-africa/memnon-s-musical-statues-long-standing-guardians-amenhotep-iii-s-temple-found-021525> [accessed on November 15th, 2020].





ill. 10.62 - sketch for the competition for the Holocaust Memorial in Boston, charged with metaphysical and spiritual elements relating to Hebraic religion and to death
ill. 10.63 - sketches for 'Atlas' competition for reuse of a dismissed missile site, with references to the relationship with landscape (creating or reusing of a dune-shaped artificial hill), and to the interaction with sunlight (sunrays marked in the main section drawing with different angles according to the date) and with wind (scheme of blowing wind producing tunes in the main section drawing)
ill. 10.64 and 10.65 - sketches for 'Diomede' competition for two twin monuments standing on two Diomede Islands, showing the international dateline and the border between the United States and the Soviet Union running between the islands, as well as indications of interaction with sunlight (sunrays illuminating the monuments and creating a light bridge between the islands) and wind (schemes of wind blowing through the monuments creating sounds to be heard on both islands)
ill. 10.66 and 10.67 (next page) - sketches for 'Diomede' competition with the twin monuments in relationship to the surrounding scale, standing as simple and essential geometric volumes: cubes with a cone-shaped pointed roof, with the vertical fissure including a stainless steel slab reflecting sunlight and a full-height niche through which wind should blow producing different sounds





coming through the structure, and of how to design this to create different sounds".[75] That principle was based on a narrow passage, "a wind tunnel", through which wind would have passed and created different tones thanks to one hundred interconnected resonating air chambers of different dimensions, which can be seen in the drawings (ill. 10.70, 10.71). Even though the full concept would have been difficult to achieve (as some sketches include musical notes), it would have been possible to produce different tones when the wind was blowing.[76] Interestingly, the idea was not new for Sołtan, as in this 1989 design, he came back to an idea he had much earlier, in the 1950s, when he was working on a theoretical monument design in Warsaw, which included "cubes of different sizes put one on top of another and placed in the waters of the Vistula, which, depending on the wind force, produced various sounds, or, in another version, huge blocks with crevices".[77] When compared to 'Diomede' and 'Atlas', these earlier designs show the persistence of the idea to use wind and light in Sołtan's work (ill. 10.74).[78]

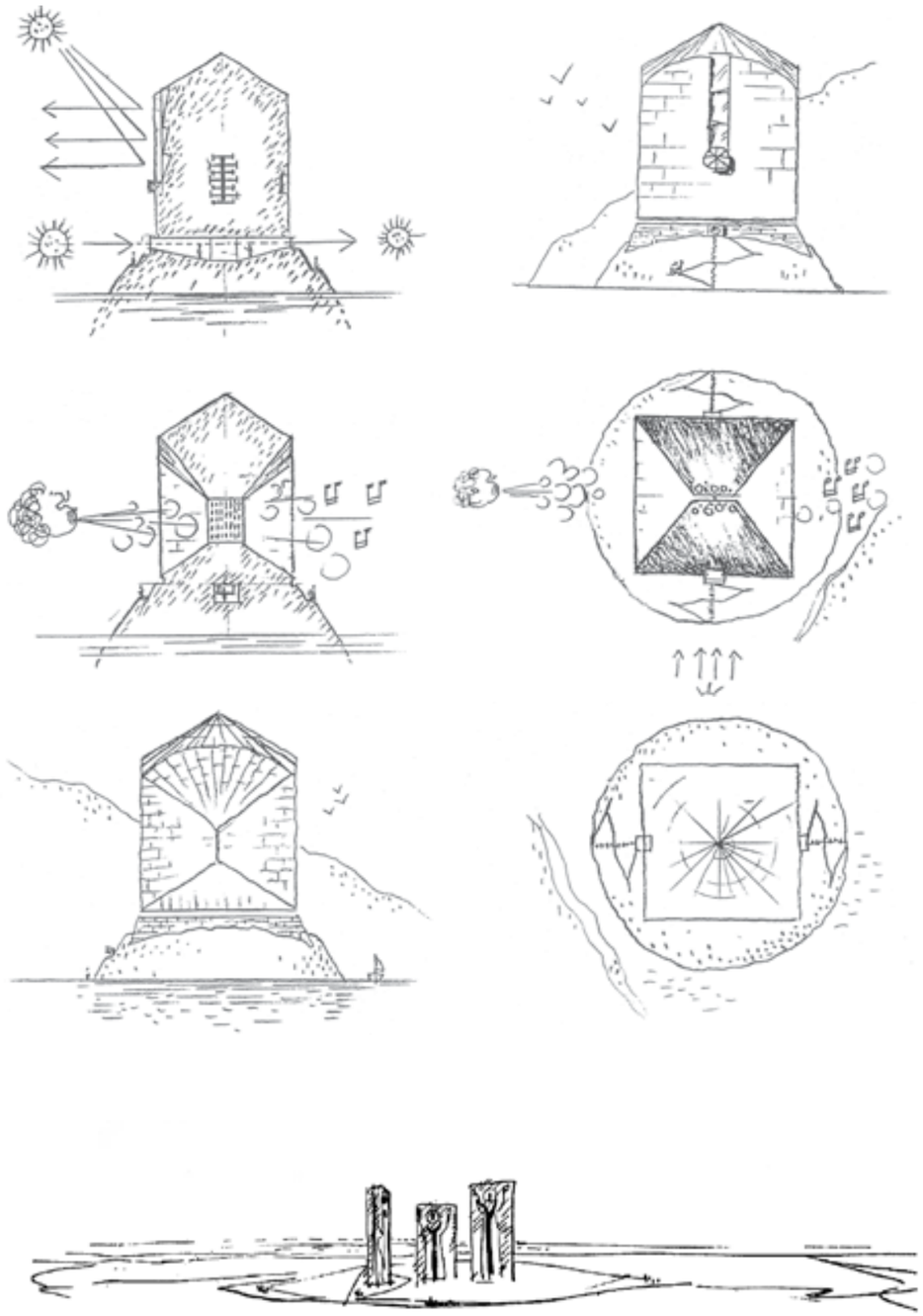
Finally, the design points to Sołtan's ongoing research on form and on the plastic and visual values of architecture. His friend Gauchat argues, "that was an important project because it took architecture towards a pure and symbolic gesture, very abstract and devoid of function. He thought it had purity to it, and that was important to him. [...] It was an abstract exercise, but it filled him with pride".[79] An exercise to work following his long-praised principles of geometry, it was also an opportunity for a poetic composition and aesthetic reflection on that pristine form. Whereas the dimensions of the two twin structures were significant: thirty-metre-high cubes with a cone-shaped roof, concrete structure, clad with local granite, and infilled with local materials were definitely striking, compared to the distance of almost four kilometres between the two islands, the scale was much less striking, as seen in a perspective drawing (ill. 10.67). Only when standing at the bottom of the buildings, from where one would enter inside the tower's basement used for exhibitions, would it have been possible to perceive the dimension of the structures.[80]

Relating closely to the landscape and to the rocky surface of the barren islands, this design continues the dialogue between architecture and nature in Sołtan's work and it stands as a poetic reflection, building on his interest in the "grassroots" of architecture and in the search for a new culture: a quest he was very clear to underline since the appearance of postmodernism in art and architecture (Chapter 3). It is a perfect demonstration of the continuity of themes in design work and theory along the years.

continuity of ideas

Arguably, a model known from the Workshops in Poland, fitted into a centrally planned economy, would not have been applicable in the United States. Whereas the work pace in the Workshops enabled careful design of details, Sołtan himself underlined the importance of time and the lack of possibility to concentrate on the details in America: such a model was difficult to apply in a capitalist context.[81] A different economic setting however did not change his approach to architecture, and his designs developed in the United States and elsewhere, without collaborating with his colleagues from the Fine Arts Academy and the Workshops, do show continuity of ideas and values. One of the most visible examples of this is his reference to the "grassroots" of architecture as a correspondence between modernist architecture and the early stages of burgeoning cultures and periods – an interest that can be seen throughout his designs in Poland and elsewhere: unbuilt church designs, 'Warszawianka' sporting centre, the house in Sparoza, the school in Salem, and monument designs all point to this interest. From the late 1950s until the early 2000s, this idea was solidly binding Sołtan's architecture, regardless of whom he was working with, clearly signalling the continuity of thought. In addition, one can relate this interest to some approaches Sołtan took when teaching at Harvard, such as his encouraging students to work on essential and basic forms when designing the "place of spiritual retreat" (Chapter 8). Such correspondences between his design work and his teaching continued: one can point to the use of the Modulor – present in the school designs and in the house in Laconia and a constant element in the Workshops and at the Academy[82] – which was also studied during Sołtan's seminar 'Grassroots of Contemporary Architecture' at

75 Interview with Carl Rosenberg and Larry Philbrick.
76 Ibid.
77 *Jerzy Sołtan*, ed. by Jola Gola, p. 116.
78 In particular, the main similarity lies in the very idea of blocks using wind to create sounds and the similarity between the crevices from the 1950s design that can be seen in the sketch (ill. 10.74) that can easily point to the wind tunnel in the 'Diomede' competition (ill. 10.70, 10.71). Similarly, some of the 'Atlas' competition sketches illustrate the use of wind (ill. 10.63).
79 Interview with Urs Gauchat.
80 Underground transversal rooms can be seen in the sketches, where also interesting lighting conditions would have been created: light would pass from one side to the other of the structure (ill. 10.68).
81 Interview with Wojciech Wybieralski.
82 For example, Smyrski refers to the importance of the Modulor, remembering that Sołtan gave students and collaborators a Modulor tape,



ill. 10.68, 10.69, 10.70, 10.71, 10.72, and 10.73 - sketches of sections, elevations, and plans for 'Diomede' competition, showing the monuments' interaction with sunlight and wind; sketches show sunrays being reflected by a tall stainless steel slab placed at the centre of one of the elevations (top left and top right), and wind blowing through a narrow "wind tunnel" filled with resonating air chambers producing thus sounds (middle left and middle right)
ill. 10.74 - sketch of the Monument to the Heroes of Warsaw from the 1950s, showing already a similar interest to architecture creating sounds by the wind passing through crevices, which can be found in 'Atlas' and 'Diomede'; crevices at the centre of the slabs are similar to the "wind tunnel" in 'Diomede' competition

Harvard in the late 1970s. Similarly, the attention he gave to landscape, such as in 'Warszawianka', the Salem High School, house in Sparoza, and competition 'Diomede' entry, corresponds to a similar attention to the matter when design teaching at Harvard (Chapter 8).

The value of Sołtan's work is evident in the qualities of these designs – for example in the attention to detail, to innovation, to the study of perception, and in the close relation with the landscape. Designs such as the EXPO pavilion and the Berlin Museum of Art established new ways of conceiving such well-established schemes as an exhibition pavilion and a museum. The former refused the traditional concept of a pavilion as a box, and the latter introduced a museum type where one could move freely as in a fragment of the city. The care of perception, exemplified by Warsaw Midtown railway station, but developed in other works, such as in 'Warszawianka' and in school designs, with a particular care to the relation between the inside and outside can also be seen as an important and valuable aspect of Sołtan's work, underlining a very human-based approach to design, and aligning this interest with Aalto's attitude and his interest in "the little man"[83] – perception of the space by a normal individual rather than by an anointed architect. Furthermore, the importance of landscape in many designs, along with the references to history and the interest in the "grassroots" of architecture through forms, light, and materials puts Sołtan close to Kahn,[84] with their work as a reflection on the connection between history and modernity. Both refer to modernist architecture that has its roots in history, but looks towards the future. The reverence of the ingenuity of the early stages of architectural epochs can be also seen in Aalto, when he claims, referring to ancient Mycenae, "the architecture of these primitive days could well be called the fruit of the genius of discovery".[85] The very high spirituality of some of the designs, charged with emotional value – especially the church and monument designs – suggests a bridge between Sołtan and some designs by Tadao Ando, especially his churches. These shared interests show that Sołtan's design work stands as a part of larger modern architecture context: through his own reading of modern architecture history, and through his design work, he seems to build a bridge between history and modernist architecture, projecting at the same time these ideas into the future. Through his close links with Le Corbusier's work and theory, Sołtan's designs may be also considered as an extension of the Swiss-French architect's reach. Indeed, thanks to the connections with the Parisian atelier, Sołtan brought modernist ideas to Poland, which was dominated at the time by either socialist realism propaganda or by "matchbox" functionalist architecture, making his role very important as a connection with Western architecture (Chapter 9). However, as it will be discussed when analysing Sołtan's legacy (Chapter 11), his contribution was not a mere expansion of Corbusian influence, but also an expansion of its meaning and the integration of new ideas.

This aspect, aligning Sołtan's designs with "modernist values", leads to an important argument concerning the legacy of his work. Through extending the reach of Le Corbusier's influence, and through a very close relation between Sołtan's design and his theory, the built and unbuilt works gain another level of reading: they stand as an illustration of Sołtan's ideas, as statements of his theory, and as demonstrations of their validity. For example, the Berlin Museum of Art competition entry stands as a statement of Team 10 ideas orbiting around the themes of growth, flexibility, and systems, whereas designs such as 'Warszawianka' and the 1958 Polish EXPO pavilion point to the Corbusian idea of "ineffable space", where "places begin to radiate, physically they radiate" because of the "maximum of intensity, of proportion, of quality of execution, of perfection".[86] This very theoretical value was in fact highlighted by the city commission in Warsaw, which recognised the importance of 'Warszawianka' as an example of a Corbusian "learned game, correct and magnificent, of forms assembled in the light" (Chapter 9).[87] Moreover, Sołtan's designs underline the affinity between art and architecture thanks to the presence of artworks and to the close collaboration with artists when designing. The very composition of the design teams and the results achieved stand as a statement and demonstration of the importance of the concept of unity of arts, and even beyond: they illustrate the importance of cross-disciplinary intersections and syncretism between art, architecture, and science, as in the theoretical designs for monuments. Furthermore, this intangible and immaterial value of Sołtan's heritage, referring to its meaning and assimilating his designs almost to manifestos of architectural theory, relates to a much larger discourse concerning the question of architectural heritage.

see: interview with Bogusław Smyrski.

83 Alvar Aalto, 'The enemies of good architecture', in *Alvar Aalto in his own words*, ed. by Göran Schildt (Helsinki: Otava, 1998), p. 204.

84 Lecture given by Kahn from February 12th, 1969 at the Polytechnic of Zurich, see: Louis Kahn, *Silence et lumière*, 5th edn (Paris: Éditions du Linteau, 1996), pp. 163-174.

85 Alvar Aalto, 'Influence of structure and material on contemporary architecture', in *Alvar Aalto in his own words*, p. 98.

86 Sołtan's translation of Le Corbusier's words, quoted in draft of a book *On Architecture and Le Corbusier* from November 1995, p. 109, see: MASP-JS.

87 Official report by Miejska Komisja Urbanistyczno-Architektoniczna, 'Wnioski n/t opracowania programowo-przestrzennego terenów klubu sportowego Warszawianka' from March 1994, see: MASP-JS.

legacy: in-between theory and design

culture depends for its transmission in time upon the permanent record: the building, the monument, the inscribed word

– Lewis Mumford in *Technics and Civilization*[1]

Even though this statement by sociologist Lewis Mumford dates back to 1934, its implications still have a strong impact when considering Sołtan's heritage. Whereas explaining the reasons for looking at his work is connected to the main research question – *what is Jerzy Sołtan's legacy?* – the very connection between culture and records points to questioning why his work has not been analysed thoroughly until now. Modern culture is strictly linked to the recognition of modern architectural heritage, which must deal in Poland and in the rest of the post-communist European countries with problems due to omissions in scholarship and to the lack of protection for modern buildings. As discussed, modern architecture scholarship, while depicting the international situation, concentrates on its development in Western Europe rather than on the post-communist countries of Central and Eastern Europe (Chapter 3). In addition, modern architecture in Poland faces the challenge of being unrecognised and associated with communism, resulting in alterations and demolitions of significant buildings (Chapter 1). Sołtan's work suffers thus on one hand from the general condition of modern architecture scholarship and discourse, and on the other hand, from his own particular position. It has been illustrated how his work is faintly present in Polish historiographies of modern architecture from the communist period, and how the function-based analysis of Polish architecture made it difficult for his work to become more visible (Chapter 9). Moreover, with the hostility of Polish authorities leading to a possible *dannatio memoriae* concerning his legacy, with the attention in Poland centred on residential architecture, and with most of Sołtan's building designs developed following competitions and not commissions, the weight of his built work might appear minor in comparison to more 'productive' modern architects in Poland. Furthermore, Sołtan's activity in the United States concentrated on teaching, as shown by his discontinuing work with various teams (Chapter 10). With more time given to pedagogy and theory, his design work in the Harvard years was limited and attracted less attention. All of these explain reasons for the existence of the 'knowledge gap' concerning Sołtan – which is addressed in this thesis.

As a result, the chapter offers a possible conclusion to the research on Sołtan, but it does not intend to be the ending. On the contrary, it opens up to new paths and new directions: as to why Sołtan's legacy is important and how it can be dealt with. Through a reflection on the definition, threats, and protection of Sołtan's heritage based on the analysis developed in the previous chapters, the chapter answers the main question: *what is Jerzy Sołtan's legacy?* Firstly, the chapter points to the reasons why Sołtan's case study stands as a relevant illustration to modern architecture, and it explains which aspects – and why these aspects – of his work could be considered as heritage. Secondly, the analysis points to the major risks and dangers, based on the reflection on the research process and issues connected to examples of his built work. Finally, the chapter tends to discuss possible strategies and guidelines to deal with the previously mentioned issues as an opening to a broader reflection on conservation of modern architecture. In this context, this research aims to reassess modern architecture and its contemporary role through questioning and reviewing its cemented canon. Modern architecture is given a fresh interpretation, relating it directly to the present and to the future. Consequently, through this final chapter, the research aims to interact directly with the broader scholarship on modern heritage, contributing to the discussion on the process of recognition and protection strategies, but without entering into details of conservation, which is outside the possibilities of the research. Finally, the chapter takes the role of a conclusion to the thesis, and a reflection on its meaning.

why Sołtan?

Prior to discussing what exactly could be pointed to as Sołtan's legacy, it seems logical to gather different reasons regarding the importance of his work – both tangible and immaterial. First, the research follows the direction of changing modern architecture scholarship, distancing itself from the so-called 'master' figures of modern architecture in Western Europe and America, and recognising and analysing work of architects in other areas, like Latin America, Asia, and Central and Eastern Europe (Chapter 3). It is further accentuated by the recent scholarship on Team 10, which tends to dilute the initially biased reading of the group's work based on Alison Smithson's self-publication activity (Chapter 5).

1 Lewis Mumford, *Technics and Civilisation*, 2nd edn (Chicago: University of Chicago Press, 2010), p. 242.

revision of modern architecture

Through Sołtan's different reading of modern architecture, it is possible to see new connections between CIAM and Team 10, underlining the continuity between the two groups, and Team 10's connection to Le Corbusier. Simultaneously, one can observe a tendency to re-evaluate modern architecture in general, as in the case of the St. Louis residential complex Pruitt-Igoe, demolished in the mid-1970s and recently cleared of some of the criticism. Sołtan's reading of modernism and the idea of "grassroots" architecture referring to the origins of cultures follow this tendency wholeheartedly. Willing to cleanse the aura of modern architecture and to protect it from criticism coming from misunderstanding of its principles, Sołtan points his finger at the "inner enemy"[2] – those architects who misinterpret modern architecture through a formalist approach – and at postmodern critics who castigate modernism without understanding its foundations (Chapter 3). When reading modernism through his lens, radical postmodernist critique loses its sense, as "grassroots" architecture relates to history and is based on the elementary forms of burgeoning cultures. As such, Sołtan's reading of modernism opens it directly towards the future as an attempt to build a new culture and a new identity, which would reflect modernity. Such an idea keeps modernist thought alive and stresses its importance in contemporary architecture, defying scholars, such as architectural historian James Stevens Curl, who tend to attack modernism and accuse it of the issues architecture faces today. Through the wholehearted commitment to modern ideas, Sołtan should be considered as a 'missionary of modern architecture', righting its wrongs, cleansing its aura, and stripping faults in its interpretation.

One aspect of Sołtan's revisionist attitude towards modern architecture is his reading of Le Corbusier's ideas and work. Thanks to his direct connection with the latter, and through his involvement in the designs of La Rochelle and Saint-Dié, and in the study of the Modulor, Sołtan was able to provide a valuable testimony of his employer's practice and daily routine. In addition, through design work, analytical texts, and through the content of his teaching, Sołtan expanded the reach and nuance of Corbusian ideas, design attitudes, and models. One of his students' statement, "Jerzy Sołtan has brought to Harvard, and to other schools and forums, a sense that Le Corbusier, his own mentor and friend, has been alive for an extra generation", points exactly to this idea.[3] Indeed, remembered by the students as "Mr Modulor",[4] who personally knew Le Corbusier and who explained the theoretical concepts of regulating lines and ineffable space (Chapter 8), Sołtan was also involved in broadening the extent of these ideas through his involvement in a number of Le Corbusier-centred organisations, such as Friends of Le Corbusier, Association Internationale Le Corbusier, and Fondation Le Corbusier (Chapter 4). Refusing to consider his former employer as a functionalist architect, Sołtan's reading of Le Corbusier points in fact to poetic and aesthetic values, absent in analysis centred on the purist and machine-based character of the latter's work. However, both his designs and texts show Sołtan's critical and flexible approach to Corbusian heritage. Concepts such as the Modulor and ineffable space are not treated in a dogmatic manner, but are rather used as tools in Sołtan's work. He claims not to be interested in a universal version of the Modulor, but he looks at it as a flexible and mind-inspiring approach (Chapter 6). Furthermore, Sołtan extends these ideas and engages with a range of different issues that are only vaguely present in Le Corbusier's writings or designs. For example, themes such as landscape, syncretic teamwork, and attention to human perception are constantly present in Sołtan's design work, showing evolution from the raw Corbusian ideas. Thanks to this broadening of modernist horizons and engaging with Le Corbusier's concepts, Sołtan contributes to keeping modern architecture alive and extending it through the concept of contemporary architecture and building new culture on the foundations of modernism (Chapter 3).

contribution and future

While the importance of this connection has been repeatedly reported by the Harvard students and fellow faculty members, it had an additional value in communist Poland. Thanks to Sołtan and his connections to Le Corbusier and other Western European and American architects, it was possible to open up the Fine Arts Academy in Warsaw towards modernism in a cultural context, which through propaganda, censorship, political control, and repressions aimed at cementing socialist realism as the main approach to architecture (Chapter 4). Even after the 'thaw' and the abandonment of Stalinism, the Academy stood as a single oasis of "modernism with human face"[5] where the rest of the country plunged into a reductive matchbox vision of modern architecture (Chapter 9). Indeed, the first director of the Academy's museum Wojciech Włodarczyk stated that employing Sołtan was "the most important event in the history of the school in its sixty years".[6] Having introduced interior design teaching in Warsaw and being amongst those directly responsible for the creation of the Workshops, he was actively involved in Polish architecture. Not only did he bring an architectural 'fresh breeze', but also enabled Poland to enter international discussions on architecture, through presentation of his designs during Team 10 meetings and thanks to publications of some of his designs in the foreign press (Chapter 10). As such, he was both a "statement that indicated both East and West"[7] and a "myth within hearts"[8] – standing as a connection to what lay on the other side of the iron curtain and as an inspiration for his co-workers and students at the Academy.

In addition to Sołtan's contribution to Polish architecture, his involvement in CIAM and Team 10 similarly testify relevance of his work and ideas in the international context. Thanks to his involvement in the CIAM congress in Dubrovnik in 1956, he was able to meet with Western European and American modern architects – arguably during the first possible opportunity after the abandonment of the socialist realism propaganda in Poland. Thanks to these contacts, he became the Polish representative for CIAM after the unfortunate shift of the former Polish delegates who turned towards Stalinism and urged other members to do so during the CIAM congress in Bergamo in 1953 (Chapter 5). Sołtan's following success and involvement in CIAM's reorganisation as one of the 'group of thirty' selected architects worldwide led to his involvement in the preparation of the Team 10 meeting in Otterlo along with Jaap Bakema, as one of the co-opted members of the Coordination Group (Chapter 5), further showing the relevance of his vision of modern architecture as projected towards the future. Through these appointments, it is clear that he was an important player at the international scene of architecture, and his arrival at Harvard and later position as the Chairman of the Department of Architecture was a direct consequence of it.

In addition to the importance and contribution in the past, it is important to express the continued validity of many of Sołtan's ideas, both theoretical and those applied in designs, when compared to the development of present-day practice. Indeed, he often underlines himself that modernist ideas have been linked to the future, and they are not a mere remnant of the past. Issues that guided Sołtan, such as interdisciplinary approaches to design and collaboration with different specialists – whether scientists, artists, other practitioners, and technicians – are at the core of contemporary education and practice, especially in the Western world. Today, the focus has probably shifted from the poetics towards more environmental and social-based considerations, due to the rising awareness of the issues such as poverty, climate change, and sustainability. Nonetheless, Sołtan's *mode d'emploi* can interact vividly with this changing reality, and so do his ideas. Issues like offering appropriate shelter for the increasing population, relating to the contrasting needs of 'the masses' versus individuals and to the participatory design approach – part of Team 10's focus in architecture – cannot be underestimated today (Chapter 7). Similarly, Sołtan's sensitivity to the emergence of new topics, such as the role of computers in a combinatorial approach to architecture, and the early recognition of the need to address environmental issues in architecture through his teaching (Chapter 8) show that in many ways, his words have never fallen silent. His devotion to the idea of the programme, as a creative attitude towards a design theme, keeps the discussion on architecture vibrant, and through some of his designs – such as the 1958 EXPO pavilion and the Berlin Museum of Art – he illustrates new ways of approach to well-established schemes (Chapter 10). Present-day practices, like Pritzker-winning Alejandro Aravena's Elemental with their participatory design attitude or Bjarke Ingels Group with their innovative approach to design concept and function, show that the very same ideas are still present in architecture.

cohesive body of work

Furthermore, more practically, it is relatively easy to assess Sołtan's ideas, as he has shown particular consistency in his views throughout his life. For example, his attachment to Le Corbusier's vision of architecture can be traced back to the first reading of *Quand les cathédrales* étaient *blanches* in the 1930s, through Sołtan's imprisonment in a POW camp in Murnau during the war, and later in his professional and teaching life: first assisting Le Corbusier in his atelier, and later following his 'architectural will' in Poland and in the United

2 Sołtan refers to the "inner enemy" several times in his analysis of modern architecture, for example during his speeches at the Team 10 meeting in Otterlo, see: HNI-JB, AV49, audio 7.
3 Chermayeff to AIA Awards Department from January 4th, 1989, see: AIA-JS.
4 Interview with Anne Wattenberg.
5 Sołtan refers to "modernism with human face" in Andrzej Bulanda, *Rozmowy o architekturze* (Warsaw: Muzeum Akademii Sztuk Pięknych, 1996), p. 66. Translation from Polish (SR).
6 Wojciech Włodarczyk, *Akademia Sztuk Pięknych w Warszawie w latach 1944–2004* (Warsaw: Wydawnictwa Szkolne i Pedagogiczne, 2005), p. 264. Translation from Polish (SR).
7 David Crowley, 'Paris or Moscow? Warsaw Architects and the Image of the Modern City in the 1950s', *Kritika: Explorations in Russian and Eurasian History*, 9 (2008), 769-798 (p. 794).
8 Sołtan uses the expression when expressing doubts concerning exhibition of his work in 1995, claiming, "sometimes it is better to be a myth within hearts rather than a dumbass at the exhibition walls" in a letter to Włodarczyk from April 14th, 1987, see: MASP-JS. Translation from Polish (PS).

1 - Social Insurance Company, Vilnius (1938-1939)

2 - 'Warszawianka' sporting centre, Warsaw (1954-1972)

3 - 'Wenecja' bar, Warsaw (1959-1961)

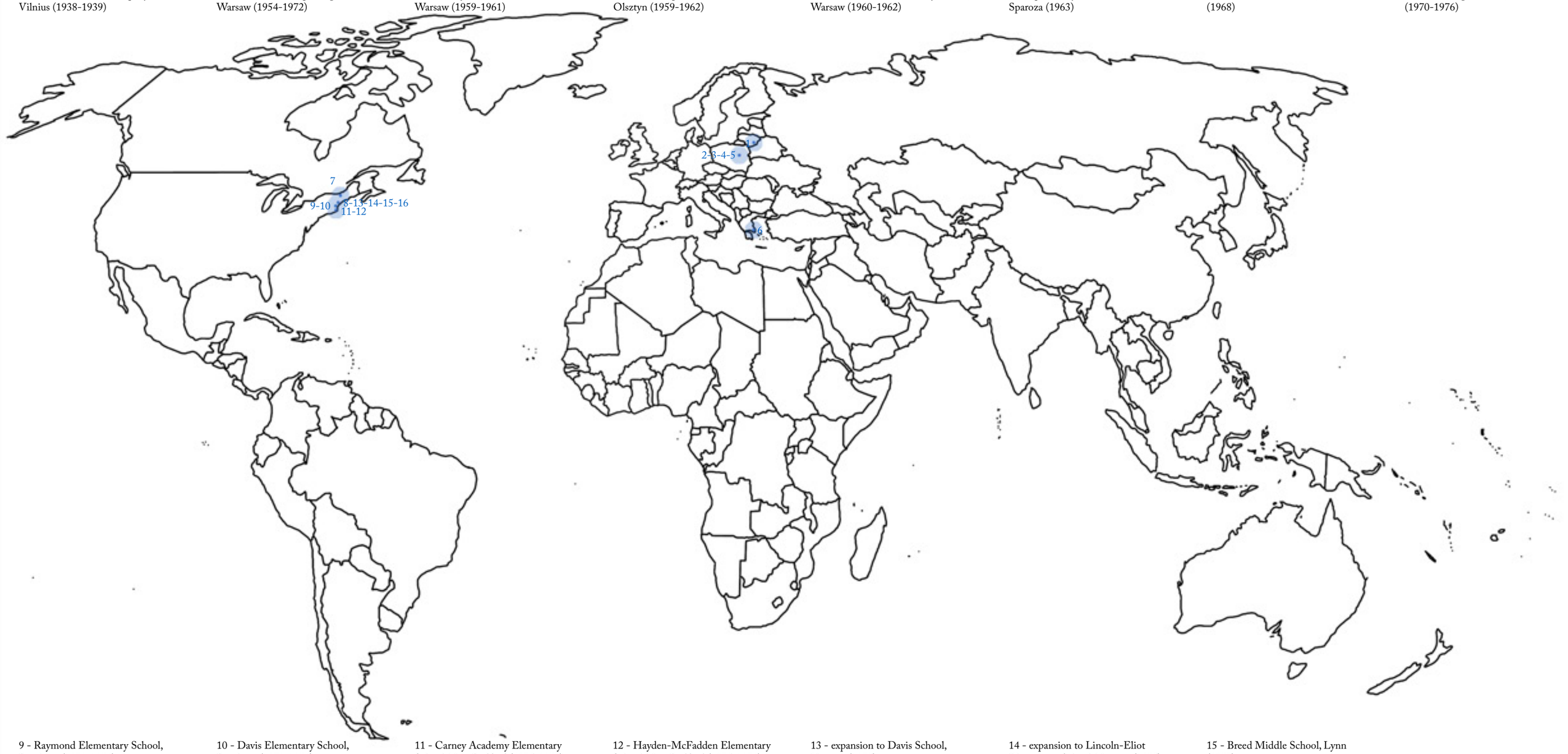
4 - 'Dukat' department store, Olsztyn (1959-1962)

5 - Warsaw Midtown railway station, Warsaw (1960-1962)

6 - Jaqueline Tyrwhitt House, Sparoza (1963)

7 - Morton Narva House, Laconia (1968)

8 - Salem High School, Salem (1970-1976)



9 - Raymond Elementary School, Brockton (1972-1976)

10 - Davis Elementary School, Brockton (1972-1976)

11 - Carney Academy Elementary School, New Bedford (1975-1976)

12 - Hayden-McFadden Elementary School, New Bedford (1975-1976)

13 - expansion to Davis School, Newton (1975)

14 - expansion to Lincoln-Eliot Elementary School, Newton (1975)

15 - Breed Middle School, Lynn (1977)

ill. 11.1 (chapter cover) - detail of Hayden-McFadden school in New Bedford
ill. 11.2 - location of all existing buildings by Jerzy Sołtan

States (Chapter 4). Sołtan's reading of modern architecture, and his fierce opposition to socialist realism in the 1950s can be compared to his disdain for postmodernism since its apparition until the 1990s (Chapter 3). Even more strikingly, his articles and lectures point to similar ideas throughout his life: references to the origins and elementary forms in architecture, distilled as the concept of "grassroots" architecture can be seen as early as in the 1950s, and they are consistently present in Sołtan's narration of modern architecture ever since (Chapter 7). Similarly for concepts rooted in Corbusian ideas, such as the Modulor, the question of scale, and the importance of programme: they emerge from Sołtan's work in Le Corbusier's atelier and they continue to be present in his teaching and designs, even in the last ones, as the conceptual design for a church and the competition 'Diomede' (Chapters 9 and 10). Indeed, these early aspects of his formation, as the work with Le Corbusier and collaboration against all the odds with artists in Murnau, marked Sołtan's design and ideas throughout his life – hence his own statement: "the human life, probably any human life can be divided in relation to the place – area – in which the person resided. In my case, an important role was played by Western Europe".[9] Thanks to this consistency of vision of architecture, both in time and throughout various fields of his activity – practice, teaching, and theory – Sołtan's ideas can be clearly identified.

from ideas towards Sołtan's legacy

Following these aspects, the first conclusion regarding Sołtan's legacy is centred on the immaterial values and ideas, which are embodied by his articles, lectures, and teaching, and which relate closely to his design work. Indeed, aligned with the recent tendency to recognise intangible aspects of heritage, Sołtan's ideas and theory stand as a testimony of modern architecture ideals and spirit. Their most visible application can be seen in teaching, where Sołtan introduced modernist thought (as at the Fine Arts Academy) and contributed to the curriculum already present at the school (as at Harvard). At the same time, Sołtan's designs seem to reinforce these ideas.

teaching – contents and approach

For example, during his work at the GSD, Sołtan was actively maintaining the connection between Europe and America. Inviting other Team 10 members, participating in the organisation of the Carpenter Center, and simply giving testimony of his own experience of work with Le Corbusier was part of Harvard's modernist-centred "unilateral curriculum". Such a consistency and compactness of teaching was necessary according to Walter Gropius: it would give students critical tools to judge different approaches to architecture.[10] Aligned with that modern profile of the school, Sołtan passed his ideals on to the students. Although of course not everyone followed modernist thought in their later professional careers, many referred in their later works later to Le Corbusier, to Team 10, and to the "grassroots".[11] In addition, due to the international fame of Harvard, the school gathered students from various countries, making it easier to spread these ideas worldwide and – furthermore – as many of Sołtan's students became teachers themselves, it made possible for some of them to pass on his teaching and build on his experience (Chapter 8). That aspect was highlighted in the application for the Topaz Medallion for Sołtan's architecture teaching: it included a series of names of renowned architects and educators who were once his students.[12] Whereas to draw an analysis of the lineage 'Sołtan – his students – their students' seems difficult (due to insufficient data and incomplete list of his own former students and therefore also partial data on their students), from many of the testimonies collected, it is possible to conclude that his teaching model has been often shared by the next generation of architects and teachers.

Meanwhile, as the impact of his ideas was increased by the later pedagogic activity of his students, it is important to recognise the importance of transitive values underlying his teaching. On the one hand, his reading of modern architecture could be referred to by some as exclusionist, due to his clear alignment with Le Corbusier and excluding others – for example Alvar Aalto – from the broader discourse (Chapter 8). On the other hand, if some former students point to the limits of his ideas, they agree broadly on the importance of his approach. One of his students, Thomas Mayne, suggested that whereas Sołtan was "rather orthodox in his modernism, his contribution [...] was deeper and of a more personal nature through his example of how to live".[13] As a result, dedication, involvement, and professional ethos seem to be values broadly recognised as important in his teaching. Amongst the reference letters for the Topaz Medallion application, one can read about kindness, energy, warmth, devotion, enthusiasm, and insightfulness.[14] "I have won the lottery", commented Parsons referring to him having Sołtan as thesis advisor.[15] Amongst direct testimonies from his students, a number of them refer to passion, help, and intensity in teaching, and only a couple remember him as less sympathetic.[16] In this context, his teaching shows many aspects of what present-day educators suggest as best practice when coaching, tutoring, and supervising students. In addition, his playful character and a very specific sense of humour were other aspects which remained as a memory amongst many students. Images of Sołtan riding along the classroom in a janitor's trash bin, impersonating a priest, simulating his own death, and "puncturing a balloon"[17] with irreverence to the well-established canons come out very often in recollections from Harvard life.[18]

If he was praised by his students for his pedagogic approach, one may ask why there has been no evident 'school of Sołtan' amongst Harvard students. Especially in the later years, some remember that a number of other teachers within the school were more attractive as tutors, as for example Richard Meier or Gerhard Kallmann.[19] Arguably, this could be related to Sołtan's approach: he worked along with the students, without pushing them towards a specific direction. Indeed, Michael Graves remembers Sołtan as addressing individual needs and as having the capacity to work with students' ideas.[20] Similarly, many others refer to Sołtan being able to follow the initial idea of the students (Chapter 8). Differently from some teachers who would push their studios following their own master vision of architecture, Sołtan was apparently much more permissive and flexible, making his approach closer to "growing theory" interested in the students' personal growth rather than "shaping theory" where the students are moulded to fit the teacher's viewpoint.[21] His former student Atef Tabet qualifies Sołtan's teaching as "coaching", aimed to bring the students closer to their true selves. On the one hand, Sołtan's devotion to modernism and Le Corbusier were clear to the students, and his views could be defined as "purist" – not referred to the movement in architecture but to the attitude in general – as he limited his vision of modern architecture to those architects who had a similar vision to himself (for example he claimed Aalto's views were difficult to be applied more broadly).[22] On the other hand, it did not affect his students' designs unless they wanted to.[23] Tabet claims there was a clear distinction between Sołtan's teaching theory and tutoring in the design studio: the former served to explain Le Corbusier's and the ideals of modern architecture, the latter was to develop consistently students' own ideas. Furthermore, thanks to the Socratic approach and the capacity of stimulating curiosity, discussion, critical thinking, and questioning one's own design decisions, Sołtan's teaching offered transitive qualities going beyond following modern architecture ideals (Chapter 8). It prevented him from creating a formal 'school of Sołtan' – but some of the students refer to "Sołtan's method" deeply enrooted in questioning and critical reflection,[24] making it a core aspect of Sołtan's legacy. His teaching model could be therefore referred not only to architecture, but also to the critical process in general, and as such, it stands as an illustration of pedagogic approaches aimed at active learning, critical reflection, and de-constructing existing assumptions. When Christopher Benninger commented on Sołtan's teaching as aimed to create new leaders, it was strictly related to that process.[25]

design as a theory manifest

Whereas the theoretical and pedagogic legacy of Sołtan clearly stands out, his built designs seem to have had less impact, due to their limited number and poor state of conservation. As shown in the map illustrating all the remaining built designs (ill. 11.2), only a handful remains. As he was often involved in designs of exhibition pavilions, temporary and interior designs, actual buildings standing today are limited. In that context, his design work can be considered as a statement that confirms the validity of his ideas. Indeed, the position of Sołtan's

9 Article on Claude Laurens from May 2001, see: MASP-JS.
10 Walter Gropius, *Scope of Total Architecture* (New York: Collier Books, 1955), p. 49.
11 Interviews with Edward Baum, with Paul Krueger, with Christopher Benninger, and with Anthony Ames. One can also recall Charles Gwathmey's work and earlier designs by Michael Graves – the two were also Sołtan's students.
12 AIA-JS.
13 Thomas Mayne to AIA Awards Department from December 12th, 1995, see: AIA-JS.
14 Frampton to AIA Awards Department from December 4th, 1995; Chermayeff to AIA Awards Department from January 4th, 1989; undated letter from Joan Goody to AIA Awards Department; Nos Santos to AIA Awards Department from December 7th, 1995; undated letter from Alan Chimacoff to AIA Awards Department, see: AIA-JS.
15 *Architecture Education at Harvard Then (1965) and Now (2015)*, ed. by David Parsons (Create Space, 2016), p. 54.
16 A number of former students referred to the "gentle" aspect of Sołtan's teaching, see: interviews with Susan van der Meulen, with Anne Wattenberg, with Anthony Ames, and with Umberto Guarracino. However, a couple of them reported that he was less sympathetic to their particular situation, see: interview with Joanna Lombard and statement from Kiyohide Sawaoka from September 15th, 2020.
17 Interview with Urs Gauchat.
18 Interviews with Urs Gauchat and with Edward Baum; Richard Wesley's lecture 'All Men Are Born Fools: a Tribute to Jerzy Sołtan, 1913-2005' at Harvard from March 3rd, 2006; Frampton to AIA Awards Department from December 4th, 1995, see: AIA-JS.
19 Interviews with Anne Wattenberg and with Joanna Lombard.
20 Graves to AIA Awards Department from December 7th, 1995, see: AIA-JS.
21 Dennis Fox, 'Personal theories of teaching', *Studies in Higher Education*, 8 (1983), 151-163 (pp. 153, 157).
22 Undated notes from a seminar, see: HGSD-JS, AA010.
23 Interview with Susan van der Meulen.
24 Interview with Stan Szaflarski.
25 Interview with Christopher Benninger.

designs in his body of work accentuates the issue of "meaning" – although much far from the postmodern sense of the word, which is explained for example by Robert Venturi in *Complexity and Contradiction in Architecture* (1966). "Meaning" would not refer to some collective memory or formal schemes that could be recognised by the users. Instead, it points to the position of the design in its context, and its meaning as a manifestation of a specific design approach, architectural theory, and broader current of thought. Sołtan's designs are illustrations of his ideas and concepts in their own time and space: and it applies to both built and unbuilt projects. The unbuilt designs fit this particularly well: the 1958 EXPO pavilion shows possible results of close collaboration of construction specialists, architects, and visual artists; the Berlin Museum of Art identifies flexibility and the relation between the building and the city; and the church designs in Poland show the connection to Corbusian architecture and to the "grassroots" architecture. All of those unbuilt designs commented in the previous chapters are in fact tightly connected to Sołtan's ideas and theory, and as such, they can be considered as strong architectural statements (Chapters 9 and 10).

Similarly, the built designs, thanks to practical application, show the validity of Sołtan's ideas and theory, standing as a demonstration of his vision of architecture, which places the conservation process in a new light. In order to understand their importance within Sołtan's body of work, the most relevant examples were analysed with his theory in the previous chapters. They can be found today in four countries – Poland, Lithuania, Greece, and the United States – and they show different aspects of Sołtan's work. Amongst the Polish works, 'Warszawianka' sporting centre, Warsaw Midtown railway station, 'Wenecja' bar, and 'Dukat' Department Store are those designed within the Workshops, whereas the building of social insurance company in Vilnius from 1938 is a much earlier architecture, before Sołtan's work with Le Corbusier. Scattered across Massachusetts, a series of school designs dominates Sołtan's buildings from the Harvard years, with the only exception of two private residences: Jaqueline Tyrwhitt's house in Sparoza and Narva House in New Hampshire. As of today, many of these constructions have had to cope with alterations, poor management, and decay, making it virtually impossible to see signs of Sołtan's work. 'Wenecja' bar in Warsaw and 'Dukat' department store in Olsztyn have been recently heavily modified, and with the alterations, in 'Wenecja' and in 'Dukat' there are no more traces of the original interiors, of the proportions, and of colour studies for the elevations. In addition, 'Wenecja' no longer has its original function: instead of a bar, it is a private health centre. As such, these buildings have very little in common with the original designs – differently from the sporting centre and the railway station. 'Warszawianka' and Warsaw Midtown railway station, partially due to the continuous ownership by the same sporting club and the national railway company, keep their original function, which shows the 'legacy of use' of the buildings. The former is heavily damaged due to years of mismanagement, but the concept of the design, based on the relation with the land and landscape can still be perceived, and the city commission already indicated that it should be preserved as an example of original interpretation of Corbusian principles (Chapter 9). The railway station stands arguably as the best-preserved example of the Workshop's activity in Poland, and as such, it has been recently listed by the regional heritage office.[26] Amongst Harvard-based building designs, Jaqueline Tyrwhitt's house emerges as one of the most interesting designs, thanks to the connection to landscape and to the references to the "grassroots" architecture. Thanks to a limited number of alterations and a continuous ownership of the building,[27] it still stands similar to the original construction (Chapter 10). The second residential building, the Narva House, contributes to illustrating the importance of the landscape, the use of the Modulor, and the interest in vernacular architecture. The educational designs, most numerous, show consistency in approach, to the point of showing certain repetitiveness of designs (for example, two schools in Brockton follow the same layout in plan and differ only chromatically, and two schools in New Bedford have very similar functional and formal solutions). In addition, the series of schools, apart from the expansion to Davis School in Newton, still has educational function, adding to their value as a part of 'inhabited space legacy'. Through the continued use of those spaces, it is possible to see many aspects of the design concepts. Amongst them, the Salem High School stands out as the first of the series, with connections to the building-city relation, landscape, "grassroots" architecture, and the use of Modulor (whereas other school designs do not illustrate all of these issues, Chapter 10).

26 Warsaw Midtown railway station was listed on December 31st, 2020 by the regional heritage office thanks to its "artistic, historical, and scientific values", see: Tomasz Urzykowski, 'Dworzec Warszawa Śródmieście jest zabytkiem. Jest nowatorskim dziełem wybitnych konstruktorów, architektów i artystów', *Gazeta Wyborcza*, 1 January 2021 <https://warszawa.wyborcza.pl/warszawa/7,54420,26652495,dworzec-warszawa-srodmiescie-w-rejestrze-zabtrkow.html> [accessed on January 9th, 2021].

27 The building was donated in Jaqueline Tyrwhitt's will to the Mediterranean Garden Society, part of the Goulandris Natural History Museum, which keeps and maintains the building until today.

ill. 11.3 - comparison of the present-day state and level of protection of existing Jerzy Sołtan's buildings

All these issues have been reassumed in a table (ill. 11.3) in order to compare the existing buildings against a series of pertinent measures. This leads to the argument that 'Warszawianka' sporting centre, Warsaw Midtown railway station, Tyrwhitt House, Narva House, and Salem High School seem to be most fitting as ongoing demonstrations of Sołtan's vision of architecture. At the same time, other buildings seem to be too far from Sołtan's ideas (social insurance building), too heavily modified ('Wenecja' and 'Dukat'), or of little originality in his body of work (minor designs of schools in Massachusetts).

threats to Sołtan's legacy

The intangible aspect of Sołtan's heritage centred on the ideas and their values, along with the designs as manifestos, influences the nature of challenges concerning conservation of this legacy. As a result, misunderstanding and lack of recognition stand as main threats, with implications on the existing buildings. These issues are linked to the general discussion and situation of modern architecture, and to the context where the value of modern buildings is not recognised, as in the case of some examples illustrated initially (Chapter 1). At the same time, modern values have been under heavy criticism since the appearance of postmodernism, and modern architecture as a whole is still criticised by some scholars (as for example James Stevens Curl, Chapter 1). Even though modern architecture historiography underlines the present-day importance of the modern thought (Chapter 3), the possible threat to Sołtan's heritage lies in being associated with the faults of modernism – with the "bad modernists"[28] as Sołtan referred to them himself. In addition, due to the position of Polish architecture in modern architecture historiography, Sołtan's work does not stand out amongst the emerging themes. Whereas recent attention has been given, in part, to African, Asian, and Latin American countries and their contribution to modern architecture, Central and Eastern Europe remain rather neglected by the recent scholarship (Chapter 3). Such issues related to recognition and misunderstanding can be relevant factors for further threats to built heritage.

Indeed, looking at the previous table, it is clear to see that Sołtan's buildings face similar threats as other modern architecture buildings: lack of recognition and misunderstanding can lead to decay, abandonment, and partial demolition, as in the case of 'Warszawianka'. Its main stadium lies almost abandoned to vegetation overgrowing the seating areas (Chapter 9). However, lack of recognition could lead to another attitude: uncontrolled modifications and mismanagement, such as in the case of 'Dukat' and 'Wenecja', which lost their original aspect and appeal. Similar threat may be faced by Warsaw Midtown railway station, which is planned to be expanded by the national railways, which manage the building.[29] As a result, the unique interior might be facing the same fate as 'Dukat' and 'Wenecja', which due to altering their original aspect without understanding the design concept and the underlying values, lost their 'manifesto' aspect and clear reference to Sołtan's and modern architecture ideals in general. Specifically, the change of the function of 'Wenecja' from a bar to a private health centre meant that a massive interior refurbishment was needed, illustrating how much the change of function can be a particularly compelling threat to modern buildings, which were often based on the function analysis (one needs to think only about Sołtan's attention towards the question of the programme). Lack of understanding can lead also to minor losses, which do not discredit the entire building, but lead to reversible modifications linked to some of the core concept issues. One can point for example to the renovation of the Salem High School, where the central courtyard (core of the open space for the students' free time) has been used for the new HVAC system, and to two large-scale gym hall graphics in New Bedford, which have lost their original meaning of a graphic element the students would interact with. Playground in front of one of them was transformed into a parking lot and the second one has been partially painted in white covering the original motif (Chapter 10). Similarly, in Warsaw Midtown railway station, the colour schemes are no longer present, and the present-day lighting and divisions do not respect the initial intention to increment visually the underground space (Chapter 9).

The limited number of built designs is linked to another issue: accessibility, which is directly linked to the previous issues. Limited access to Sołtan's buildings and to information on his unbuilt designs, on his ideas, and on his teaching, is directly connected to their missed recognition. As a result, access to both archival records and testimonies of his teaching stands as another challenge. On the one hand, it relates to the limited reach of the information and elitist aspect of the archival records. Unbuilt designs play an important role in demonstrating Sołtan's ideas – such as the 1958 EXPO pavilion, church in Sochaczew, Berlin Museum of Art, and competition 'Diomede' – but they have a much-limited visibility for the larger public. On the other hand, the challenge relates to the lack of records on many aspects of Sołtan's teaching, which can be illustrated only by the series of interviews collected during this research. Therefore, the interest in Sołtan's designs and teaching could be unwillingly limited to the 'specialists' and those personally involved with the topic of the research, which would be directly connected to the previously mentioned issues of recognition and misunderstanding. As an attempt to reflect on these issues, and in relation to a broader application in the field of modern architecture conservation, the last part of this research is interested in the manner in which these challenges – accessibility issues, lack of recognition, and misunderstanding – could be faced and mitigated.

conservation – Sołtan and beyond

Whereas for the existing physical heritage, there are clear methods of conservation strategy, the intangible aspect of Sołtan's legacy deals with a relatively new aspect to the scholarship and to the very understanding of the term 'intangible heritage'. Through revisiting this concept, this research aims to attract attention to the need to reformulate or update the meaning of immaterial heritage. At the same time, it proposes itself as one element to that conservation process.

redefining and conserving the 'intangible'

During the 2003 ICOMOS Symposium 'Place, memory, meaning: preserving intangible values in monuments and sites', the concept seemed still vague to the point that some participants considered as intangible heritage such elements as inscriptions, drawings, and books[30] – all of those much more "tangible" than the ideas and methods represented by Sołtan's pedagogy and theory. The following definition of the "intangible" by *The Convention for the Safeguarding of the Intangible Cultural Heritage* narrowed the application of the term to a series of elements: oral traditions and expressions, language, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature, and traditional craftsmanship.[31] The same convention has framed the research by ICOMOS on the intangible heritage.[32] Indeed, most of the discussion on the intangible aspect of heritage is centred around folklore, traditional knowledge, beliefs, ethnographic and indigenous aspects to the culture – and with such a restricted vision of what is considered as heritage. One of the interventions from the 2003 Symposium seems particularly relevant and still up-to-date: "we need to move beyond the old dichotomy between 'civilised' Western (tangible) heritage and 'primitive' non-Western (intangible) heritage".[33] Whereas from the position of the speaker, with her interests centred on Africa, the purpose of this call was to recognise non-Western heritage, it is also important to detach the concept of "intangible heritage" from the "primitive". Due to the yet incomplete concept of "intangible", there is little scholarship, which could be applicable to the case of Sołtan. The question of how to preserve the legacy of his ideas and pedagogy can be hardly framed by the existing conventions, therefore it shows how much it is important today to continue to investigate and to review and expand the meaning and the application of "intangible heritage". According to Deacon, "it raises the question of whether our understanding of 'heritage' should be restricted to that which is old, traditional, indigenous, tied to ethnic identities, and so on".[34] Reflection on Sołtan's legacy fits therefore tightly into the revision of that canonical understanding of "intangible heritage".

Nonetheless, some aspects of the policies relating to these more ethnographical manifestations of intangible heritage could be referred to the issues raised by Sołtan's legacy as the challenges faced by both could be similar. The problems of accessibility, misunderstanding, and lack of recognition point to the idea of transmission to the future generations, which is the core issue in the canonically understood intangible heritage related to ethnographic traditions. Whereas re-enactment and work of associations interested in preserving these aspects of heritage could be applied for the latter, in case of ideas and models of teaching, which are at the core of Sołtan's legacy, it is different. In particular, the immaterial aspect of his heritage underlines the challenge of temporality of ephemerality: how long could these ideas remain accessible? How long until the testimony of

28 Sołtan refers to the "bad modernists" several times in his analysis of modern architecture, for example during his speeches at the Team 10 meeting in Otterlo, see: HNI-JB, AV50, audio 7.

29 Krzysztof Śmietana, 'PKP szykuje rewolucję na Dworcu Śródmieście. Dobudują perony', *Gazeta Wyborcza*, 27 June 2016 <https://warszawa.wyborcza.pl/warszawa/1,34862,20309057,komunikacja-kolejowe-rewolucje-na-dworcu-srodmiescie.html?disableRedirects=true> [accessed on January 18th, 2021].

30 Nobuo Ito, 'Intangible cultural heritage involved in tangible cultural heritage', in *Proceedings of the International Scientific Symposium 'Place, memory, meaning: preserving intangible values in monuments and sites'* (2003) <https://www.icomos.org/victoriafalls2003/papers/A3-2%20-%20Ito.pdf> [accessed on January 24th, 2021].

31 'Text of the Convention for the Safeguarding of the Intangible Cultural Heritage', *UNESCO* (2003) <https://ich.unesco.org/en/convention> [accessed on January 24th, 2021].

32 The extensive bibliography collected by ICOMOS on the theme of intangible heritage refers clearly in the introduction to the definition given by the 2003 convention, see: 'Conservation of intangible heritage', *ICOMOS* (2018) <https://www.icomos.org/en/documentation-center/43618-nouvelle-bibliographie-conservation-du-patrimoine-immateriel-3> [accessed on January 24th, 2021].

33 Harriet Deacon, 'Legal and financial instruments for safeguarding our intangible heritage', in *Proceedings of the International Scientific Symposium 'Place, memory, meaning: preserving intangible values in monuments and sites'* (2003) <https://www.icomos.org/victoriafalls2003/papers/C3-2%20-%20Deacon.pdf> [accessed on January 24th, 2021].

34 Deacon.

teaching at Harvard and the Fine Arts Academy will not be available anymore? To guarantee survival would mean to make these immaterial manifestations of legacy at least partially material and accessible. It points in particular to the data stored by the Harvard Special Collections and those held by Sołtan's relatives, which until now have not been digitised nor – in case of the latter – catalogued or made publicly available. Assuring the availability of drawings, audio recordings, and written records, as well as digitising them would be an important aspect of Sołtan's heritage. Similarly, making the oral histories collected during the research process available for other researchers – for example those interested in teaching at Harvard in general – would be a vital element of that conservation process.[35] In addition, the research itself and its publication could be also considered as an informed tool for conservation of some parts of Sołtan's ideas: through explaining and analysing his ideas, commenting on his teaching, and helping to identify the important aspects of the designs, it contributes to the recognition of the values of his work. Moreover, a written record of Sołtan's ideas and analysis of his built designs stands at the same time as an important tool in conservation of built heritage.

conservation of a symbol

The international discussion on the relation between the intangible and tangible heritage dwells on the problem of the atmosphere and the spirit – *genius loci* – of a place. Referred often to marketplaces, to historical towns, it is centred on the traditional aspect of these places. It underlines that in addition to the material aspects of such heritage, it is important to recognise "the cultural value that makes them unique and inter-relatable with a universal sense, in their historicity as well as in their authenticity".[36] In this context, the theoretical value of the present research would make an important contribution to the protection of Sołtan's built heritage: thanks to the analysis of the buildings and of the values of his theories, it constitutes an informed framework, a reference system – ideally, the first part of a Conservation Management Plan, which helps in defining conservation policies and finally in implementing the conservation strategies. As it has been pointed out by Deacon, "the conservation of objects and places does not always preserve their significance if it does not take account of intangible values", making the protection of the underlying ideas an important cause. In the light of Sołtan's built architecture taking the role of a manifesto or illustration of his ideas, this aspect is particularly strong in case of his legacy. It would be of utmost importance to evaluate and to plan new interventions accordingly, helping to avoid such simple errors in management decisions like covering the gym hall graphics in some of the schools in Massachusetts, changing the illumination and dividing visually the interiors of Warsaw Midtown railway station, and introducing unsuitable PVC in Sparoza. A recognition of these values could have probably prevented the uncontrolled alterations to 'Dukat' and 'Wenecja', which both lost their authenticity, and a regularly planned maintenance interventions planned based on such a research could have probably prevented the decay of 'Warszawianka'.

However, it would be futile here to plan in precision the work needed for each of the buildings that make part of Sołtan's heritage, as it demands more interdisciplinary effort, confrontation with the present-day use, with the economical context, and so on. The purpose of this chapter is different – to indicate the direction to follow in conservation of Sołtan's heritage, centred on the close connection between the values it represents and the built form: the conservation process needs to be enrooted in the theoretical research and use it in order to make sure the values and ideas recognised as Sołtan's heritage can be maintained.

conclusion – something ends, something begins

In this sense, this research aims to be an example of informed approach to conservation and a planned attempt to assess the values residing within modern architecture legacy. In the changing context of both modern architectural heritage and intangible heritage, it tackles the common issues of the lack of recognition, misunderstanding, and lack of protection through reviewing the canonical vision of these concepts, whose present-day understanding is incomplete. Recognition of immaterial ideas and of Central and Eastern European modern architecture are amongst the core challenges facing the present-day reality and scholarship. As a response, it gives a holistic image of Sołtan's work as a case study, which illustrates not only the values in his work, but also the meaning of it in the context. Through this analysis, the research stands not only as a reflection on Sołtan, but also as a mirror of the era – an insight into the discussion on modern architecture in Poland, into the transformations undergone by CIAM and Team 10, and into architectural teaching at Harvard. Looking at his architectural legacy, residing not only in the buildings, but in the ideas and in the values he was teaching, this research restores a complete image where ideas, pedagogy, and built work connect. Connected to issues that even today need answers – such as the problem of habitat – it points to the continued importance of modern ideals in today's practice. Similarly in his pedagogic activity, the theoretical values taught along with the design teaching critical and reflective approach stimulated his former students, many of whom continue with a similar approach to educate a new generation of architects. Recognising these intangible aspects to Sołtan's heritage, the research finally connects the ideas to the buildings, which become manifestos of these ideas, theoretical statements demonstrating the feasibility and validity of modern ideals. These different aspects of his work are finally assessed and analysed in order to answer the question: what is Jerzy Sołtan's legacy and how to conserve it? In this final reflection on conservation, it is clear that the connection between such historical and theoretical research and the conservation practice is vital in determining the framework to work within when planning conservation strategies.

In addition, the research wants to be not only an example of approach to conservation, but also of studying modern architecture through less canonical methods in addition to material culture, drawings, and buildings (Chapter 2). Research on architecture based in part on oral histories seems to be particularly important in the context of modern architecture, where ideas and ideals have been much relevant. Arguably, giving voice back to the architects and architectural educators could be an interesting alternative to the 'fact-based' approach, and a contribution to the larger context of rehabilitation of modern architecture, which still suffers from the criticism originated with postmodernism. Not only it shows that our investigation techniques evolve, enabling us to analyse and to understand material records and buildings differently and more in depth, but also because we still value the ideas modern architecture embodies.

...et aujourd'hui, eh bien oui!

aujourd'hui aussi est jeune,

est frais, est neuf.

Aujourd'hui aussi le monde recommence...[37]

35 All of the collected oral histories interviews (series of twenty-six interviews with Anthony Ames, Shamay Assif, Edward Baum, Christopher Benninger, Jacek Damięcki, Marleen Kay Davis, Karl Fender, Urs Gauchat, Umberto Guarracino, Thomas Holtz, Paul Krueger, Joanna Lombard, Edward Lyons, Rocco Maragna, Larry Philbrick, Carl Rosenberg, Simon Smithson, Bogusław Smyrski, Joanna Sołtan, Stan Szaflarski, Atef Tabet, Susan van der Meulen, François Vigier, Makoto Shin Watanabe, Anne Wattenberg, and Wojciech Wybieralski) have been deposited in the Online Research Data at the University of Sheffield. In addition, written statements by John Carney, Lydia Rubio, Kiyohide Sawaoka, and Bartholomew Voorsanger were added to the transcripts.

36 Joao Campos, 'The cultural consistence of built heritage constitutes its intangible dimensions', in *Proceedings of the International Scientific Symposium 'Place, memory, meaning: preserving intangible values in monuments and sites'* (2003) <https://www.icomos.org/victoriafalls2003/papers/A1-6%20-%20Campos%20%2B%20photos.pdf> [accessed on January 24th, 2021].

37 Le Corbusier, *Quand les cathédrales étaient blanches* (Paris: Bartillat, 2012), p. 11.

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CHAPTER 1
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9.68 – church in Sochaczew, design by Mieczysław Gliszczyński (photograph by Abramcewo); see: 'Wnętrze kościoła świętego Wawrzyńca w Sochaczewie', *Wikimedia Commons* (2014) <https://commons.wikimedia.org/wiki/File:Sochaczew_ko%C5%9Bci%C3%B3%C5%82_%C5%9Bw_Wawrzy%C5%84ca1.jpg> [accessed April 13th, 2021]
9.69 – church in Sochaczew, design by Mieczysław Gliszczyński (photograph by Przykuta); see: 'Sochaczew - kościół św. Wawrzyńca', *Wikimedia Commons* (2009) <https://commons.wikimedia.org/wiki/File:Sochaczew_ko%C5%9Bci%C3%B3%C5%82_%C5%9Bw._Wawrzy%C5%84ca_01.05.09_p.jpg> [accessed April 13th, 2021]
9.70 – church in Sochaczew, design by Mieczysław Gliszczyński (photograph by StudioArtFilm); see: Szymon Ruszczewski private collection
9.71 – church in Sochaczew, design by the Artistic and Research Workshops (elevation sketch); see: MASP-JS, MASP 1930
9.72 – study of a church, design by Jerzy Sołtan (elevation sketch); see: MASP-JS, MASP 7410
9.73 – study of a church, design by Jerzy Sołtan (elevation sketch); see: MASP-JS, MASP 7409
9.74 – study of a church, design by Jerzy Sołtan (elevation sketch); see: MASP-JS, MASP 7413
9.75 – study of a church, design by Jerzy Sołtan (elevation sketch); see: MASP-JS, MASP 7411
9.76 – study of a church, design by Jerzy Sołtan (perspectives); see: P-JS
9.77 – study of a church, design by Jerzy Sołtan (elevation); see: P-JS
9.78 – study of a church, design by Jerzy Sołtan (elevation); see: P-JS
9.79 – study of a church, design by Jerzy Sołtan (section); see: P-JS
9.80 – study of a church, design by Jerzy Sołtan (section); see: P-JS
9.81 – study of a church, design by Jerzy Sołtan (section); see: P-JS
9.82 – study of a church, design by Jerzy Sołtan (plan); see: P-JS

CHAPTER 10

10.1 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph); see: MASP-JS, MASP
10.2 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (plan); see: P-JS
10.3 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (section); see: P-JS
10.4 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (elevation); see: P-JS
10.5 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (elevation); see: P-JS
10.6 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph); see: MASP-JS, MASP
10.7 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (elevation); see: MASP-JS, MASP
10.8 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (elevation); see: MASP-JS, MASP
10.9 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (section); see: MASP-JS, MASP
10.10 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph); see: MASP-JS, MASP
10.11 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph); see: Sparoza, Mediterranean Garden Society, Sparoza Archive
10.12 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph); see: Sparoza, Mediterranean Garden Society, Sparoza Archive
10.13 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (section); see: MASP-JS, MASP
10.14 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph); see: Sparoza, Mediterranean Garden Society, Sparoza Archive
10.15 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph by S. Ruszczewski)
10.16 – Athenian Treasury in Delphi (elevation by Davide Mauro); see: 'Reconstruction of the Treasury house of Athens in Delphi', *Wikimedia Commons* (2018) < https://commons.wikimedia.org/wiki/File:Reconstruction_of_Treasury_house_of_Athens_in_Delphi.jpg> [accessed April 13th, 2021]
10.17 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (elevation); see: MASP-JS, MASP
10.18 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph by S. Ruszczewski)
10.19 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph); see: MASP-JS, MASP
10.20 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph by S. Ruszczewski)
10.21 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph); see: Sparoza, Mediterranean Garden Society, Sparoza Archive
10.22 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph by S. Ruszczewski)
10.23 – Jaqueline Tyrwhitt House, design by Jerzy Sołtan with Henryk Marconi (photograph); see: Sparoza, Mediterranean Garden Society, Sparoza Archive
10.24 – Art Museum in Berlin, design by Jerzy Sołtan, Zbigniew Ihnatowicz, Wilhelm von Moltke, and François Vigier (model photograph); see: MASP-JS, MASP
10.25 – Art Museum in Berlin, design by Jerzy Sołtan, Zbigniew Ihnatowicz, Wilhelm von Moltke, and François Vigier (plan); see: MASP-JS, MASP
10.26 – Art Museum in Berlin, design by Jerzy Sołtan, Zbigniew Ihnatowicz, Wilhelm von Moltke, and François Vigier (elevation); see: MASP-JS, MASP
10.27 – Art Museum in Berlin, design by Jerzy Sołtan, Zbigniew Ihnatowicz, Wilhelm von Moltke, and François Vigier (elevation); see: MASP-JS, MASP
10.28 – Art Museum in Berlin, design by Jerzy Sołtan, Zbigniew Ihnatowicz, Wilhelm von Moltke, and François Vigier (section); see: MASP-JS, MASP
10.29 – Art Museum in Berlin, design by Jerzy Sołtan, Zbigniew Ihnatowicz, Wilhelm von Moltke, and François Vigier (section sketches); see: MASP-JS, MASP
10.30 – Art Museum in Berlin, design by Jerzy Sołtan, Zbigniew Ihnatowicz, Wilhelm von Moltke, and François Vigier (section sketches); see: MASP-JS, MASP
10.31 – Art Museum in Berlin, design by Jerzy Sołtan, Zbigniew Ihnatowicz, Wilhelm von Moltke, and François Vigier (axonometric scheme); see: MASP-JS, MASP
10.32 – Art Museum in Berlin, design by Jerzy Sołtan, Zbigniew Ihnatowicz, Wilhelm von Moltke, and François Vigier (axonometric scheme); see: MASP-JS, MASP
10.33 – Salem High School, design by Haldeman and Goransson Architects (perspective); see: P-JS
10.34 – Salem High School, design by Haldeman and Goransson Architects (photograph by E. Jaworowska); see: MASP-JS, MASP
10.35 – Salem High School, design by Haldeman and Goransson Architects (photograph by E. Jaworowska); see: MASP-JS, MASP
10.36 – Salem High School, design by Haldeman and Goransson Architects (elevation); see: P-JS
10.37 – Salem High School, design by Haldeman and Goransson Architects (elevation); see: P-JS
10.38 – Salem High School, design by Haldeman and Goransson Architects (photograph by J. Gola); see: MASP-JS, MASP
10.39 – Salem High School, design by Haldeman and Goransson Architects (photograph by J. Gola); see: MASP-JS, MASP
10.40 – Salem High School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.41 – Salem High School, design by Haldeman and Goransson Architects (plan); see: P-JS
10.42 – Salem High School, design by Haldeman and Goransson Architects (plan); see: P-JS
10.43 – Salem High School, design by Haldeman and Goransson Architects (plan); see: P-JS
10.44 – Salem High School, design by Haldeman and Goransson Architects (plan); see: P-JS
10.45 – Salem High School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.46 – Salem High School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.47 – Salem High School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.48 – Salem High School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.49 – study for school walls, design by Jerzy Sołtan (elevation sketch); see: MASP-JS, MASP
10.50 – study for school walls, design by Jerzy Sołtan (elevation sketch); see: MASP-JS, MASP

10.51 – Raymond Elementary School, design by Haldeman and Goransson Architects (photograph by J. Gola); see: MASP-JS, MASP
10.52 – Davis Elementary School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.53 – Davis Elementary School, design by Haldeman and Goransson Architects (model photograph); see: MASP-JS, MASP
10.54 – Davis Elementary School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.55 – Carney Elementary School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.56 – Carney Elementary School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.57 – Hayden-McFadden Elementary School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.58 – Hayden-McFadden Elementary School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.59 – Hayden-McFadden Elementary School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.60 – Hayden-McFadden Elementary School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
10.61 – Hayden-McFadden Elementary School, design by Haldeman and Goransson Architects (section); see: P-JS
10.62 – Holocaust Memorial Competition, design by Jerzy Sołtan with Thomas Fodor, Edward Lyons, Edward Vitigliano, and Edward O'Connell (plan); see: P-JS
10.63 – 'Atlas' Competition, design by Jerzy Sołtan with Thomas Fodor, Walter Lewin, and Carl Rosenberg (section); see: P-JS
10.64 – 'Diomede' Competition, design by Jerzy Sołtan with Wacław Zalewski, Andrzej Sołtan, Larry Philbrick, and Carl Rosenberg (plan); see: P-JS
10.65 – 'Diomede' Competition, design by Jerzy Sołtan with Wacław Zalewski, Andrzej Sołtan, Larry Philbrick, and Carl Rosenberg (plan); see: P-JS
10.66 – 'Diomede' Competition, design by Jerzy Sołtan with Wacław Zalewski, Andrzej Sołtan, Larry Philbrick, and Carl Rosenberg (perspective sketch); see: P-JS
10.67 – 'Diomede' Competition, design by Jerzy Sołtan with Wacław Zalewski, Andrzej Sołtan, Larry Philbrick, and Carl Rosenberg (section); see: P-JS
10.68 – 'Diomede' Competition, design by Jerzy Sołtan with Wacław Zalewski, Andrzej Sołtan, Larry Philbrick, and Carl Rosenberg (elevation); see: P-JS
10.69 – 'Diomede' Competition, design by Jerzy Sołtan with Wacław Zalewski, Andrzej Sołtan, Larry Philbrick, and Carl Rosenberg (elevation); see: P-JS
10.70 – 'Diomede' Competition, design by Jerzy Sołtan with Wacław Zalewski, Andrzej Sołtan, Larry Philbrick, and Carl Rosenberg (plan); see: P-JS
10.71 – 'Diomede' Competition, design by Jerzy Sołtan with Wacław Zalewski, Andrzej Sołtan, Larry Philbrick, and Carl Rosenberg (elevation); see: P-JS
10.72 – 'Diomede' Competition, design by Jerzy Sołtan with Wacław Zalewski, Andrzej Sołtan, Larry Philbrick, and Carl Rosenberg (plan); see: P-JS
10.73 – Monument Competition, design by Jerzy Sołtan (perspective sketch); MASP

CHAPTER 11

11.1 – Hayden-McFadden Elementary School, design by Haldeman and Goransson Architects (photograph by S. Ruszczewski)
11.2 – existing buildings by Jerzy Sołtan (map by S. Ruszczewski)
11.3 – existing buildings by Jerzy Sołtan (spreadsheet by S. Ruszczewski)

appendix: designs timeline

LEGEND

design groups

designs developed alone, with occasional help of draughtsmen

designs developed with fellow students at the Polytechnic of Warsaw and their families: Hanna Borucińska (later Hanna Sołtan), Michał Boruciński, and Stanisław Murczyński

designs developed while working for Kazimierz Marczewski, Zbigniew Skibiniewski, and Rudolf Świerczyński

designs developed with fellow prisoners from Murnau: Bohdan Bocianowski, Zbigniew Ihnatowicz, Gustaw Majewski, Roman Owidzki, and Bohdan Urbanowicz

designs developed while working for Le Corbusier

designs developed while working for Claude Laurens and Jacques Gauthier

designs developed with the staff of the Fine Arts Academy before the creation of the Workshops: Oskar Hansen, Zbigniew Ihnatowicz, Krzysztof Meisner, Józef Mroszczak, Włodzimierz Wittek, and Marek Włodarski; with occasional collaboration of others: Tadeusz Błażejewski and Jerzy Hryniewiecki

designs developed with the Workshops, with collaboration of a number of faculty teachers, artists, construction specialists, and students from the Academy: Zofia Antosiak-Tomaszewska, Tadeusz Babicz, Edward Bartman, Tadeusz Barucki, Jolanta Bieguszewska, Jerzy Brejowski, Lech Chmielewski, Viola Damięcka, Jacek Damięcki, Kazimierz Danielewicz, Wojciech Fangor, Mieczysław Gaszczyński, Wiktor Gessler, Stanisław Grabowski, Jan Hempel, Julian Hulnicki, Zbigniew Ihnatowicz, Elżbieta Kosacz-Gessler, Stanisław Kargol, Bohdan Koy, Antoni Kubicki, Stanisław Kucharski, Józef Mroszczak, Wiesław Nowak, Jerzy Nowosielski, Julian Pałka, Zbigniew Pałka, Barbara Pawłowska, Andrzej Pinno, Janina Pol-Teliga, Krystyna Policzkowska, Maciej Rudnicki, Jacek Sempoliński, Stanisław Skrowaczewski, Bogusław Smyrski, Franciszek Strynkiewicz, Alina Szapocznikow, Adolf Szczepiński, Roman Terlikowski, Lech Tomaszewski, Bogusław Winiarski, Henryk Wiśniewski, Włodzimierz Wittek, Wacław Zalewski, and Elżbieta Znarowska

designs developed with a group of GSD faculty and students: Edward Baum, Paul Krueger, Zbigniew Ihnatowicz, Wilhelm von Moltke, and François Vigier

designs developed with GSD faculty Albert Szabo

designs developed with Haldeman and Goransson and later with SWECO USA: Alan Baer, Robert Carlson, Wojciech Fangor, Edward Lyons, Edward Vitigliano, and William Whitney

designs developed as a consultant for Project Planning Associates of Toronto

designs developed with former GSD students: Thomas Fodor and Paul Krueger

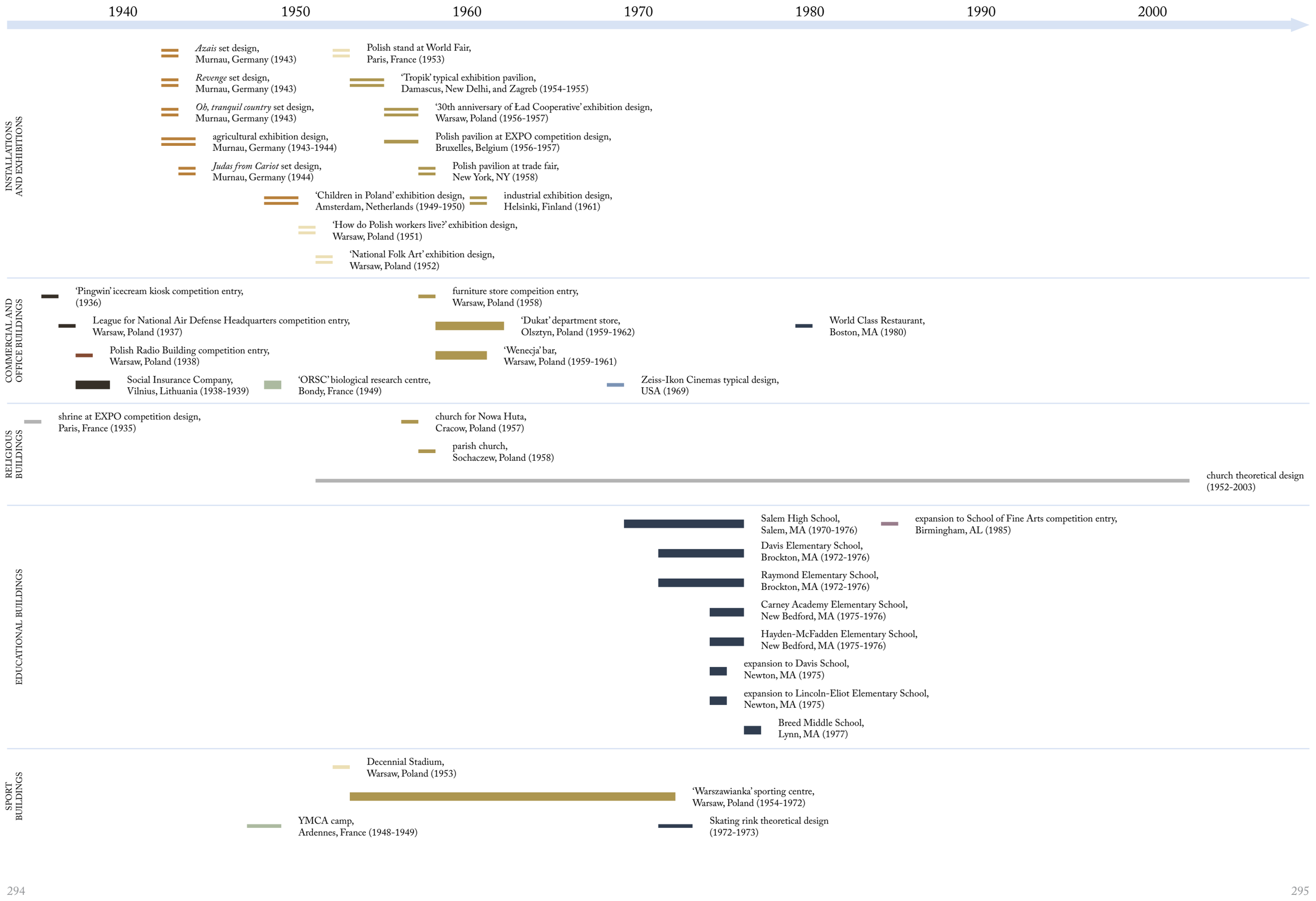
last designs developed in *ad-hoc* built groups: Thomas Fodor, Walter Lewin, Edward Lyons, Edward O'Connell, Larry Philbrick, Carl Rosenberg, Andrzej Sołtan, Edward Vitigliano, Wacław Zalewski

state of the designs

not built

built but dismantled/temporary

built and existing


1940
1950
1960
1970
1980
1990
2000
INSTALLATIONS AND EXHIBITIONS
Azais set design, Murnau, Germany (1943)
Revenge set design, Murnau, Germany (1943)
Oh, tranquil country set design, Murnau, Germany (1943)
agricultural exhibition design, Murnau, Germany (1943-1944)
Judas from Cariot set design, Murnau, Germany (1944)
Polish stand at World Fair, Paris, France (1953)
'Tropik' typical exhibition pavilion, Damascus, New Delhi, and Zagreb (1954-1955)
'30th anniversary of Ład Cooperative' exhibition design, Warsaw, Poland (1956-1957)
Polish pavilion at EXPO competition design, Bruxelles, Belgium (1956-1957)
Polish pavilion at trade fair, New York, NY (1958)
'Children in Poland' exhibition design, Amsterdam, Netherlands (1949-1950)
industrial exhibition design, Helsinki, Finland (1961)
'How do Polish workers live?' exhibition design, Warsaw, Poland (1951)
'National Folk Art' exhibition design, Warsaw, Poland (1952)
COMMERCIAL AND OFFICE BUILDINGS
'Pingwin' icecream kiosk competition entry, (1936)
League for National Air Defense Headquarters competition entry, Warsaw, Poland (1937)
Polish Radio Building competition entry, Warsaw, Poland (1938)
Social Insurance Company, Vilnius, Lithuania (1938-1939)
'ORSC' biological research centre, Bondy, France (1949)
furniture store compeition entry, Warsaw, Poland (1958)
'Dukat' department store, Olsztyn, Poland (1959-1962)
'Wenecja' bar, Warsaw, Poland (1959-1961)
Zeiss-Ikon Cinemas typical design, USA (1969)
World Class Restaurant, Boston, MA (1980)
RELIGIOUS BUILDINGS
shrine at EXPO competition design, Paris, France (1935)
church for Nowa Huta, Cracow, Poland (1957)
parish church, Sochaczew, Poland (1958)
church theoretical design (1952-2003)
EDUCATIONAL BUILDINGS
Salem High School, Salem, MA (1970-1976)
Davis Elementary School, Brockton, MA (1972-1976)
Raymond Elementary School, Brockton, MA (1972-1976)
Carney Academy Elementary School, New Bedford, MA (1975-1976)
Hayden-McFadden Elementary School, New Bedford, MA (1975-1976)
expansion to Davis School, Newton, MA (1975)
expansion to Lincoln-Eliot Elementary School, Newton, MA (1975)
Breed Middle School, Lynn, MA (1977)
expansion to School of Fine Arts competition entry, Birmingham, AL (1985)
SPORT BUILDINGS
Decennial Stadium, Warsaw, Poland (1953)
'Warszawianka' sporting centre, Warsaw, Poland (1954-1972)
YMCA camp, Ardennes, France (1948-1949)
Skating rink theoretical design (1972-1973)

1940 1950 1960 1970 1980 1990 2000

URBAN PROJECTS

urban plan,
La Rochelle, France (1945-1947)

urban plan for Wola competion entry,
Warsaw, Poland (1958)

King Abdulaziz University campus,
Jeddah, Saudi Arabia (1974-1977)

urban plan,
Saint-Dié, France (1946)

Museum of Art competition entry,
Berlin, Germany (1965)

'Persian Gulf' urban plan,
Jubail, Saudi Arabia (1979)

urban plan,
Saint-Gaudens, France (1945)

urban plan for Mokotów escarpment theoretical design,
Warsaw, Poland (1966)

'Jacob's Pillow' landscape and plan competition entry,
Beckett, MA (1984)

urban plan,
Izmir, Turkey (1948-1949)

Palace of Science and Culture theoretical design,
Warsaw, Poland (1992)

INTERIOR DESIGNS

Służewiec State Race Course interior design,
Warsaw, Poland (1951-1952)

'Charity Fund' interior design,
Boston, MA (1970)

Commercial centre theoretical design
(1953)

Mellon Bank interior design,
Boston, MA (1982)

Warsaw Midtown railway station,
Warsaw, Poland (1960-1962)

RESIDENTIAL BUILDINGS AND INTERIORS

residential building for countries destroyed
by the war competition entry (1943-1944)

Czerwiński apartment interior design,
Warsaw, Poland (1963)

expansion to Peter Galbraith House,
Townshend, VT (1976)

Unité d'Habitation,
Marseille, France (1945-1946)

Jaqueline Tyrwhitt House,
Sparoza, Greece (1963)

Prince Fawaz Coop Housing,
Jeddah, Saudi Arabia (1976)

residential building competition entry,
Antony, France (1946)

Gwen Bell House,
Sparoza, Greece (1967)

apartment interior design competition entry
(1935)

private residence,
Uccle, Belgium (1948-1949)

Morton Narva House,
Laconia, NH (1968)

private residence,
Wisła, Poland (1938-1939)

miners' housing,
Saint-Dié, France (1949)

M. Glenn House,
Manchester, MA (1968)

residential skyscraper competition entry,
Cracow, Poland (1952)

terraced houses competition entry
(1951)

house interior design competition entry
(1954)

PROPORTIONS STUDIES

Modulor measurement system
(1945)

Gym hall wall typical design,
USA (1970-1977)

Railway engines depot theoretical design
(1952)

MONUMENT DESIGNS

'Monument' theoretical design,
Warsaw, Poland (1949-1950)

Włodzimierz Zonn tombstone,
Warsaw, Poland (1976)

'Diomede' competition entry,
Bering Sea (1989)

City Gate,
Jubail, Saudi Arabia (1979)

'Atlas' competition entry,
USA (1990)

Holocaust Memorial competition entry,
Boston, MA (1991)

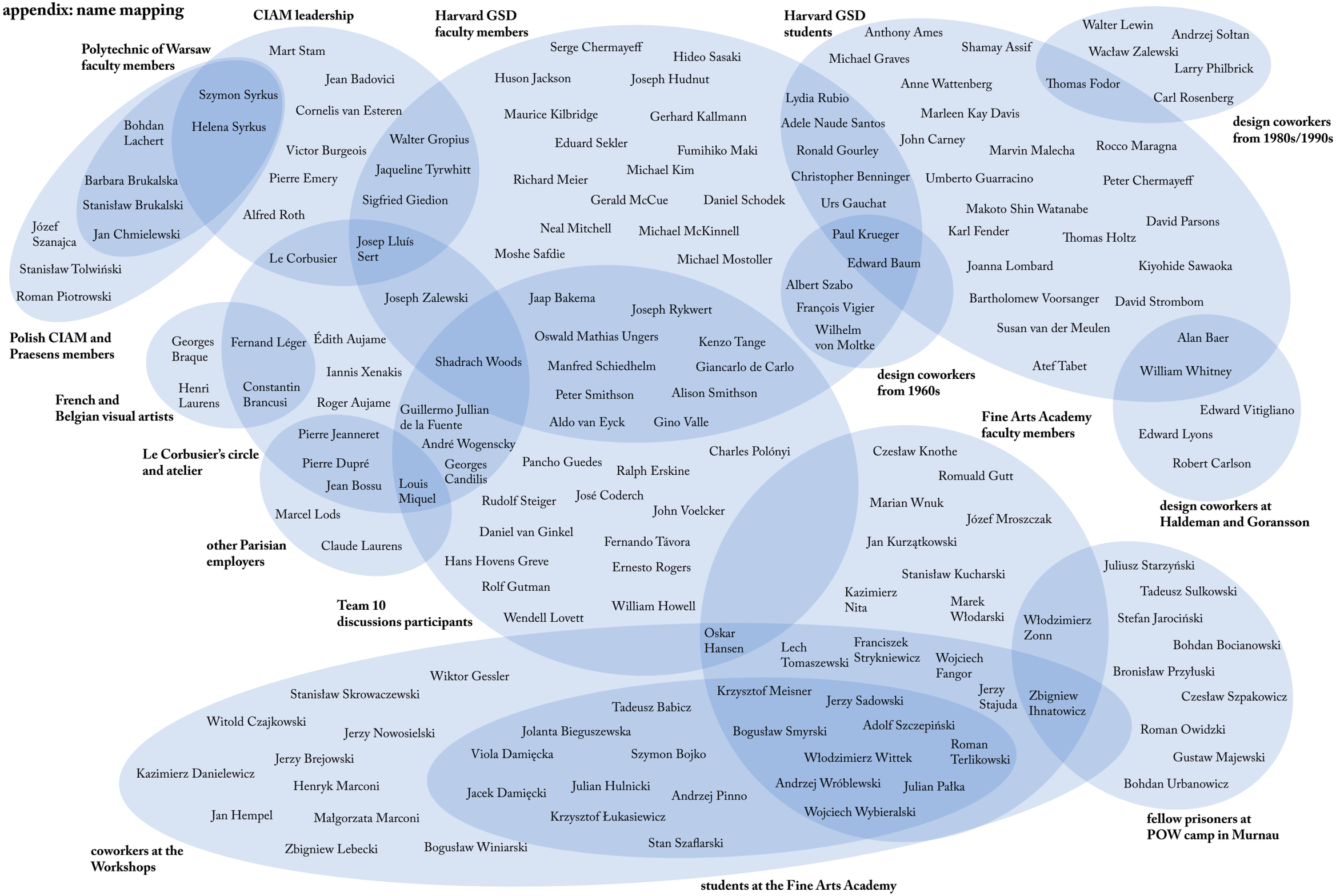
OTHER

agricultural centre competition entry
(1943-1944)

infectious diseases hospital
(1948-1949)

loading depots competition entry,
Dunkirk, France (1949)

appendix: name mapping



appendix: oral histories

This annex contains documents helpful in illustrating the research process consisting in oral histories interviews on Jerzy Sołtan's work, teaching, and ideas, which were commented and analysed in the main part of the thesis. It contains detailed research statistics and exemplary interview transcriptions. The entire process was approved by the University of Sheffield on February 19th, 2019 with the reference number 024608. All the complete interview transcripts are attached at the end of the document.

statistics

During the research process, twenty-six interviews and four written statements were collected, whereas further fourteen participants either declared themselves available for interviews, participated in casual conversations, or provided the researcher with suggestions and useful information concerning the research theme. The statistics below indicate location of the face-to-face interviews or locations of the interviewees in case of video interviews. The three highlighted interviews are selected to illustrate the process.

recorded interviews: 26

Anthony Ames, architect (Atlanta, GA), 05/10/2020
Shamay Assif, architect (Tel Aviv, Israel), 22/04/2020
Edward Baum, architect, dean at the University of Texas Arlington (New York City, NY), 12/04/2019
Christopher Benninger, architect, teacher at the Ahmedabad Educational Society (Balewadi, India), 29/11/2020 and 20/01/2021
Jacek Damięcki, architect (Warsaw, Poland), 28/09/2019
Marleen Kay Davis, architect, dean at the University of Tennessee (Knoxville, TN), 15/01/2021, 02/02/2021, and 13/04/2021
Karl Fender, architect (Melbourne, Australia), 19/10/2020
Urs Gauchat, architect, dean at the University of New Jersey (Cambridge, MA), 04/04/2019
Umberto Guarracino, architect (Boston, MA), 11/05/2020
Thomas Holtz, architect (Hyattsville, MD), 11/04/2019
Paul Krueger, architect (Watertown, MA), 27/03/2019
Joanna Lombard, architect, teacher at the University of Miami (Miami, FL), 06/10/2020
Edward Lyons, architect (Sharon, MA), 02/04/2019
Rocco Maragna, architect (Montreal, Canada), 25/06/2020
Larry Philbrick, architect (Cambridge, MA), 03/04/2019
Carl Rosenberg, architect (Cambridge, MA), 03/04/2019
Simon Smithson, architect (London, UK), 21/05/2020
Bogusław Smyrski, architect, teacher at the Fine Arts Academy (Warsaw, Poland), 27/09/2019
Joanna Sołtan, artist (Watertown, MA), 28/03/2019
Stan Szaflarski, architect (St. Catharines, Canada), 29/06/2020
Atef Tabet, architect (Beirut, Lebanon), 20/01/2021
Susan van der Meulen, architect (Chicago, IL), 06/01/2021
François Vigier, urban planner, teacher at Harvard GSD (Cambridge, MA), 25/03/2019 and 01/04/2019
Makoto Shin Watanabe, architect, teacher at Hosei University (Tokyo, Japan), 28/12/2020
Anne Wattenberg, architect (Denver, CO), 24/04/2020
Wojciech Wybieralski, designer (Warsaw, Poland), 27/09/2019

Written statements: 4

John Carney, architect (Wilson, WY), 14/09/2020
Lydia Rubio, artist (New York City, NY), 29/03/2021
Kiyohide Sawaoka, architect, teacher at Kogakuin University (Tokyo, Japan), 15/09/2020
Bartholomew Voorsanger, architect (Napa, CA), 13/05/2019

Casual conversation, availability, and suggestions: 14

Refusal: 2

No answer: 6

Christopher Benninger

November 29th, 2020 and January 20th, 2021, phone interview

Harvard alumnus, student in Jerzy Sołtan's Master Class design studio (1966-1967), member of the Harvard faculty and assistant professor (1969-1971). In 1971, he settled in India founding the School of Planning in Ahmedabad as a Ford Foundation Advisor. Since 1973, advisor to the World Bank for housing projects. Practicing architect and founder of CCBA Designs in Pune, India.

S.R.: Do you remember your first impression of Jerzy Sołtan?

C.B.: Professor Sołtan was an imposing figure, but for an American boy, he appeared as a strange bird. He was very clear in what he spoke, but he had his unique sense of humour, and he would smile when he said something, he felt to be humorous. He had his own sarcasm which always bordered on humour. He was fast to correct incorrect or 'show-off' talk. He and his team partner, professor Albert Szabo, did not put up with small talk. On the first day of classes, Sołtan gave us a "sketch problem" to design a lecture poster for a famous architect of one's choice to be executed over the first weekend and presented at the studio on Monday. I chose Mies and did white lines on a red background, with black lettering. Both Sołtan and Szabo expressed that they liked it, but they were blunt about the few bad ones.

S.R.: In general, what do you remember from the studio that followed?

C.B.: Sołtan was very involved with each student and he made it a point to come to our drafting tables and interact, asking us puzzles about our work and approach.

S.R.: What do you remember about those puzzles?

C.B.: He was very insightful and 'caught on' to things immediately and deeply. He would often frown showing wrinkles in his forehead and cheeks, and wait a few seconds before throwing out his critical question – and never a statement that he did not like the work. His technique was to ask the student a question that needed analysis to answer, and often it would be that there was no possible answer! That silence was the conclusion.

S.R.: Do you remember any of those puzzles in particular?

C.B.: I think so. When I was working on the studio project, it involved a lot of analysis of streets, blocks, layout, utilities... and Sołtan would ask questions about that, but what he really wanted to know was to go deeper and even if his questions were small technical ones, he was actually trying to push me into thinking about the social consequences. As a result, it was like a normal architecture course, but he was working around the idea that design is a social tool. It was more a Socratic method of asking questions to get to another step. I think it helped me to build a relationship between the physical built form and planning on the one hand, and the social impact and economic impact on the community on the other one. That was a brand new way of thinking! He asked questions, which did not require an answer – that was the positive aspect. He wanted you to think about something deeper, using questions to get you into a thinking process, to look at different problems.

S.R.: How was Sołtan's relationship with the students?

C.B.: I respect him as a brilliant and honest man who called a spade a spade. He was critical but inherently fair, and in favour of every student's development and evolution into a better human being. I think he was more interested in creating future leaders and better human beings than he was in teaching architecture. Teaching architecture for Sołtan was just a vehicle to mould more considerate, thoughtful and humanistic professionals... and human beings!

S.R.: Did you colleagues think the same? Were they also similarly positive concerning Sołtan's teaching?

C.B.: Even in a very small class, you had students with very different agendas. Many people come to Harvard to get a Harvard degree as a passport. I would say that amongst the twelve 'survivors' of the studio, there were six of us who were Sołtan-type of students. Speaking for myself, I was twenty-two, I wanted ideas, I wanted new ways of thinking, while some of the older people in my class had already worked and they simply thought

that a Harvard degree would be useful.

S.R.: Do you remember whether Sołtan could have been favouring some students over others?

C.B.: Sołtan had no patience for clichés and 'cut and paste' thinking, and he could quickly get bored with people who had little insights to offer. But this was not unique to him. At the time, Harvard had no pretensions of being a place to lift up the weak. Instead, it felt its duty was to create leaders of the future. The idea was to have a strong intake of potential leaders and weed out the weak. Many of the faculty choose to ignore and not waste time with insincere and uninterested students who never read anything, or thought of new ideas. I actually believe that Sołtan, like many at that time, thought that certain people were endowed with superior minds, attitudes, and creativity – and that these people should be encouraged. I think he thought that people who associated with him missing these basic components could not be radically changed and that 'building concepts and ideas' with more advanced thinkers was the way to go, rather than trying to change every-day-and-average-thinking 'architects'.

S.R.: At the beginning of the year, you were given a list of readings including Giedion's *Space Time and Architecture*, Le Corbusier's *When the Cathedrals were White*, Lewis Mumford's *Technics and Civilisation*, and Eduardo Torroja's *Philosophy of Structures*. Do you remember how these readings were important for the course?[1]

C.B.: I think these laid down the basic values and theories we were to accept in the course. Sołtan knew Jackie Tyrwhitt who knew everyone... She was very involved with Doxiadis, the editor of *Ekistics*.[2] Sołtan designed her house, where I usually spent a couple of weeks in the summer and visited on my way back and forth between India and America in the early 1970s when I was setting up the School of Planning at the Center of Environmental Planning and Technology in Ahmedabad. I must now add that Giedion was Jackie's lover: he had given her the Volvo car she drove with to the city. But you asked about the books... you see, these were like the family Bibles of a close-knit family and they were not just academic, but sacred.

S.R.: Let us come back to Master Class. In a brief from the course, I have found information that the students were asked to prepare a submission on the books I mentioned earlier, including a commentary and an annotated list with quotes from the books. Do you remember it, and was it important for Sołtan?

C.B.: I think this was more of a way of assurance that we really did read the books! It was really not Jerzy Sołtan's nature to examine like in a high school, but rather to question like Socrates, and to assess the intellectual quality of the answers. It was more in Albert Szabo's nature to have checks on us, and that was a really good balance between the two of them.

S.R.: When I talked to Urs Gauchat, he mentioned two quotes, "so what" and "going from the general to the particular and from the particular to the general" referred to Sołtan's teaching. He actually agreed when I asked him whether Sołtan's approach was Socratic.[3]

C.B.: "So what" was just the way Sołtan showed contempt for platitudes and clichés. As I noted before, he liked the Socratic method and its way of thinking, and I think "going from the particular to the general", *et caetera* was very much in line with a group of such insightful questions he would throw at a student, to make them think of their work in a larger canvas and more complex social and cultural settings.

S.R.: Do you remember your own designs for Sołtan's studio?

C.B.: After the brief poster assignment, we were divided into four groups of four guys each – there were no women in our class – and all sixteen were told to design a national pavilion for a different country, and each team had to coordinate their designs to integrate within a common theme or even structure of the other three team members. Influenced by the Modulor, I evolved a 'space box' three levels high, composed of modular panels, and joining extruded aluminium elements that could be disassembled and packaged, allowing one to move the exhibition from place to place. Sołtan liked my application of a machine-made system of modular parts. There was a review, after which one of the students in our class was asked to leave. He was a Korean student, and maybe thirty years old, and he'd submitted a portfolio in which there were large commercial buildings, unexpected from a thirty years old architect. After that, we were told that the semester project would

1 Reading list for the Master Class in Architecture from July 1st, 1966, see: HGSD-JS, AA003.
2 Constantinos Doxiadis (1913-1975), Greek architect and town planner, architect of Islamabad and the creator of *Ekistics*, along with the organisation of the Athens *Ekistics* Week and the Delos Symposia.
3 Interview with Urs Gauchat.

be mass housing for some countries. I chose self-help housing in Medellin, Colombia. I had visited there as my father founded a local school of management, and we had an apartment on the top of the tallest structure back then in 1966 in the city, the Nutibara Annex, an eighteen-storey attachment to the old hotel. I spent a lot of time exploring the city on foot and I loved the informal *barrios* and street vendors. Meanwhile, in the Master Class at Harvard, we were allowed to take – in addition to the studio and a seminar that was run by the studio teachers – whatever we wanted to do, and we could also cross-register at MIT. I took Kevin Lynch's course there and I started working with a new group of advocacy planners, like John F. C. Turner and Lisa Peattie at MIT and at the Joint Center for Urban Studies.[4] Turner was very famous back in the 1950s and 1960s. He wrote a book, *Freedom to Build*, and he did some first studies on how people in Peru build their own houses and how that was a better system than a government low-cost housing. He actually was the major of the year, and Sołtan let me use him as a guide. For this design, there was a mid-term presentation in late October after which our Japanese classmate from Watanabe University was asked to leave! A few weeks later a student from Taiwan was asked to leave.

S.R.: May you tell more about the self-help housing design?

C.B.: I took it up as self-help housing for the poorest of the poor in Colombia, South America. I invited poverty experts in for my reviews and also, I invited John F. C. Turner. Other boys were doing high-art kind of buildings. Louis Kiszonak, my friend from the University of Florida, chose Russia and precast reinforced cement concrete modular housing and he got the highest score, while I was looking at small, narrow plots, community toilets, and pedestrian paths. Sołtan saw this as a kind of revolutionary thing to do and thanks to him, I did almost something that was anti-architecture, there was almost no architecture in my proposal... and Sołtan supported and let me do that. Since I was doing this unusual design problem, other faculty members at Harvard took a strong interest, like Jackie Tyrwhitt, who was the editor of *Ekistics* and she introduced me to Barbara Ward who later noted me in the introduction to *The Home of Man*.[5] She was a big name back in the 1960s. She wrote a book, *Only one Earth*, and she initiated sustainable conferences with the one in Stockholm, and the United Nations Environment Program headquartered in Nairobi was formed because of that. She had tremendous contacts, and she was teaching just across the street. So, I was invited to lunch with Barbara Ward who took much interest in my Sołtan's studio project. She asked casually what I was doing across the street at Harvard, and when I answered her that I was doing self-help housing, she said, "what, is Harvard University allowing students to do things like that?" – and I told her about Sołtan. At that very lunch, she invited me and paid my way to the Athens *Ekistics* Week and the following Delos Symposium in Greece. The symposium was a drinking party at which ideas are discussed, but a week before that, the Athens *Ekistics* Week was a seminar where very serious papers were presented. At the symposium, which lasted a week or ten days, there was a swimming pool, and there were Doxiadis with his wife and children, maybe ten other guests, but he told that each of the guests had to invite someone under thirty as their courtesy... because the people he invited were older, generally over seventy-five, even though they were full of life.

S.R.: Let us come back to the housing design. In Sołtan's texts, he often referred to the need of the masses to have shelter and he often quoted the issue of "habitat".[6] It seems actually very much linked to the path you have taken here...

C.B.: "Habitat" was a central issue at both Harvard and MIT, and in Sołtan's studio we were made to act on our talk! Sołtan was intrigued that I took up the poorest of the poor as a problem, though I did not handle it as something beautiful to look at, but as a process and social-economic tool for households to evolve and change for the better. At that time, at the GSD most faculty did not see architecture with a capital "A" like that. I think that some of the faculty would have me failed with such a design. Sołtan and Szabo had to argue in my final jury with the other faculty members explaining that while my design was not high art, it was where the GSD should be going! I think most of the people were into high art, such as Gerhard Kallmann and Sert with Boston City Hall, Peabody Terrace, Holyoke Center... these were the kinds of buildings that the faculty showed as examples of buildings to be built. As I worked for people who were homeless, actually at my jury, some people said that this was not it, claiming that at Harvard we should not be planners as people from MIT. As a result, my jury was a bit of a fight... In the next semester with Sert, I did a capital "A" project for the library and stood first in the class. That is what other people came up with in the first semester... I was the 'odd' guy in my group.

4 John F. C. Turner (1923-), American architect and planner who worked on the informal settlements in Latin America between the 1950s and 1960s. Lisa Peattie (1924-2018), professor of urban anthropology at MIT, interested in the social change in urban planning. The Joint Center for Urban Studies was founded in 1959 as a research institution backed by Harvard and MIT.
5 Barbara Ward, *The Home of Man* (New York City: W. W. Norton and Company, 1976).
6 Chapter 6.

Sołtan was of course also interested in architecture as high art, there is doubt about that, but he had also that 'other side' dream.

S.R.: You have just mentioned that Sołtan and Szabo had a similar attitude towards your design. Do you remember what Sołtan's role in the studio and in the Master Class programme was?

C.B.: Sołtan was the leader between the two, as professor Szabo had huge respect for Sołtan, and he followed his lead. But they 'clicked' well and it was a team effort of equals. Jerzy Sołtan made it a point to invite famous people to our seminar room in the old now-demolished Hunt Hall. Yona Freidman came in on one Wednesday and gave a very interesting lecture on the nature of 'structures' and he had actually been invited by the Harvard Physics department to speak on the topic. After his talk, a few days later we had a review of the talk, and one of our New York City classmates, Gerry Jonas, said he thought the lecture was utter nonsense. Sołtan asked for a reason and this arrogant young man said, "any of us could have given a more original and informative lecture", so Sołtan said, "OK, the upcoming Wednesday is your lecture, Mr Jonas". This lecture actually happened, and it was an utter disaster. At the end of the term, Gerry came up with nothing for his design review and left for Christmas break never to return leaving only twelve of us students. I feel that this had more to do with Gerry's own ego and self-esteem rather than fundamental differences.[7]

S.R.: Do you remember anything concerning Sołtan's position in the school when you were studying?

C.B.: I recall that I never liked the way structural design was taught to students, so I did not sign up for the elective by professor Mitchell, who was literally bullying the boys to take it, and whose classes were art night and really boring. I attended, even though I was not registered for it, and when he realised that, he threatened me that I would be out of Harvard unless I signed up. He had a laboratory down the river and he wanted us to come and make some very hands-on experiments with grids of copper. About that time, the other guys were getting really fed up, and we all, with great hesitation, decided to approach Jerzy Sołtan in this regard. We met and expressed our analysis, as well as our feelings, saying that the course was not at all theoretical, that we were only doing that donkey work in the lab... After hearing us, Sołtan asked us, "does it mean that you want to stop this course?", and everybody said, "yes", so he said, "it is done – I conclude that you do not see getting anything out of this course and, as that is an unanimous conclusion, the course is hereby cancelled". We had to control ourselves not to hoot and applaud with joy. We all hated that course and disliked the teacher.

S.R.: How was it possible for him to decide that?

C.B.: At that time, Benjamin Thompson was our head of the department. He was a very good architect and an interesting person, but he had no time for this administration job, so basically, our department was being run by a very brilliant secretary. As a result, Benjamin Thompson had really no strength in the department, and at the same time, Sołtan was to become the head himself. Thus, since the head was not that available, people started to go to Sołtan with such issues. I do not think you could do that in today's world... a senior professor cannot, without a meeting, just cancel a course. You know, the Graduate School of Design was like a tribe village. We had the leaders, like Sert and – to a certain extent – Sołtan, who were able to make decisions.

S.R.: Through his entire life, Jerzy Sołtan was fascinated with Le Corbusier's work – was it possible to see that during the modules or courses you have followed with him?

C.B.: I think I personally was a great fan of Le Corbusier's, and owned every book by, or about him, and I just fit naturally into the ethos and thinking. Sołtan knew that Le Corbusier was not only about Ronchamp and high art, but he was more about social and technological change. I think we were all on a joint search for the truth of things and at that time, we all saw Le Corbusier as our guru and leader. Sołtan was famous to me for his work with Le Corbusier on the Modulor. Once, he happened to be in a chatty mood, and he told me how he was hired to work with Le Corbusier: he wrote to Le Corbusier explaining that he was a mathematician interested in modular construction systems and Le Corbusier wrote to Sołtan inviting him home on a Sunday morning for an interview, and when he arrived at the door, Le Corbusier opened and asked, "who is this?" and when Sołtan said, "it is me, Jerzy Sołtan", Le Corbusier gave him a funny look and said, "but you are too tall", and laughing invited Sołtan in.[8]

S.R.: What about Team 10? Since 1959, Sołtan was a member of Team 10: was his connection to Team 10 visible during his teaching?

C.B.: Yes, Sołtan was with me on my self-help project, because the idea and attitude was really more of a Team 10 aligned one than the more physical and material approach of most CIAM members. When Sołtan hired me later, we also had Shadrach Woods on the faculty, and others. However, Sołtan was more focused on the trajectory of each student and their growth instead of being obsessed with pushing any group or theory. I would go so far as to say, most of our batch of students did not even know he was a member of Team 10. When I was teaching, Woods became my friend and I used to visit his apartment in Paris, but frankly, there was this 'big family' feeling and mutual support in a group of teachers and students, where everyone was on his or her own trip. I think it was just assumed that smart kids read and know these things and there is no need to repeat things and push anything down anyone's throat.

S.R.: Was it possible to see Sołtan's interest in art when he was teaching?

C.B.: I do think that Sołtan cherished the concept of 'the ideal man' and the idea that we need to create a new culture of advanced humanism and care for people. In this, there was a strange beckoning back to classical Greek concerns with harmony, ideal beauty, fundamental truths, and the like. Sołtan was a modernist, and he was contemporary, but while we all thought we were looking forward, we all had roots in the past, and I think that Sołtan somehow was a classicist. He believed in proportions, modular systems... I do not think he articulated that a lot, but you knew he was interested in harmony and these issues. I think that according to him, a way forward meant to build a civilisation. That was a unique thing about Sołtan, it was a value system – and finding value systems amongst people who are teaching is not easy.

S.R.: Was there something different or particular in Sołtan's approach compared to the other teachers?

C.B.: Sołtan knew that there were some great architects on hand, like Kallmann and Sert, and he knew that many, many of the thought leaders of the mid-twentieth century were Harvard graduates, such as Pei, Johnson, and others, and he wanted to build on that. But he *knew* that the pure formalists and people making sculptures out of buildings were not going to be future leaders.

S.R.: How exactly did he help you in becoming leaders?

C.B.: For example, because he 'lured' me to continue this self-help project, and I think he knew I had to develop a personality and develop a strong stand, and I would have to argue my case. This is also a good learning device for a person, not only for a designer: you head off to something where there will be heavy storms, but in the end you become an advocate of your ideas, and you become a leader. For example, each of us should have given a talk about their ideas to the other students. Every Wednesday, we had a long afternoon, where Sołtan would invite someone for one or two hours and when they left, he would say, "Christopher, would you explain your project to the other kids in the class". Sołtan and Szabo would both ask questions and would have smirks on their faces to make us think... I think that both of them sort of forced us to make ideas come out. They would challenge us, and particularly Sołtan, he made people argue their case. I think it was the way he led the studio and the seminars, there were always a lot of questions... and it is another important thing in leadership.

S.R.: Do you think that Sołtan tried to cement that kind of influence – Le Corbusier, CIAM, Team 10 – at Harvard through his chairmanship?

C.B.: Yes, I feel to be in his faculty you needed a base in one of those 'schools of thought'. He was very aware of the historiography of the evolution of architectural and urban thinking in the twentieth century, and he knew we had to be a part of it. I think my association with Sert's studio and with Barbara Ward, enrolment in a PhD programme at MIT, and involvement with Doxiadis, Jackie Tyrwhitt, Balkrishna Doshi, Dolf Schnebli, Fumihiko Maki, and other 'fellow travellers' influenced Sołtan to hire me. Actually, when I was at Fulbright, Sołtan out of the blue invited me to teach at Harvard.

S.R.: How do you remember your teaching at Harvard?

C.B.: The first studio I taught at the GSD was as the assistant to Jane Drew. When I was to start, Sołtan told me, "you are going to teach along with Jane Drew, because nobody else can teach with her". She had lived in Chandigarh, she worked really closely with Le Corbusier together with her partner Maxwell Fry, and they were both involved in MARS and with the Architectural Association in London. She was also a trustee of Victoria and Albert Museum, and she became another lifelong friend and guide. It is interesting, because even if Sołtan was not a party-going person, he knew everyone! He was a really friendly person, even if his sense of humour was a little *risqué* – and Jane Drew was the same. When I was to meet her for the first time, she sent a message

7 Interview with Urs Gauchat.

8 The complete account of Sołtan's work in Le Corbusier's atelier may be found in his article, 'Working with Le Corbusier' and published in *Le Corbusier: the Garland essays*, ed. by H. Allen Brooks (New York: Garland, 1987).

that I should have tea with her... I was wearing a blue jacket, a shirt with a tie. I went up to her room, and there she was – an over-sixty-years-old and overweight woman, wearing black scuba skin-tight bodysuit, where you actually could see all her body... She had the zip down – and this was her stunt to see what I would do. Sołtan was similar – he would do these things to test people, to see whether they were free-thinkers or 'square'. I have some very fond memories of that. However, Sołtan's sense of humour would not fit today's schemes, and I think that is bad – Sołtan really kept us on our toes. He was unusual and full of life, and that was one way of communicating with people. In a faculty meeting, somebody would have said something, and he would have turned that into a sexual joke. Jane Drew used to do that too. Today, it would not have been considered well.

S.R.: It was a different atmosphere then...

C.B.: It was also a very different type of community back then. Many times students would throw a party, and teachers would come and tell jokes. Even in our juries, the head of each jury had to bring wine to drink after the last project for the students and teachers to drink. We were pretty high. We had a discussion, and eventually Woods said, "OK, everybody comes to my apartment". He was a visiting professor, and he was living in Peabody Terrace. We had pizza, wine, and after that, we became close friends with Woods. At the juries, there was always some beer and cheap Chianti wine, which now would have been illegal... the insurance companies would not allow that. Now you cannot have parties with students having drinks.

S.R.: What contact did you have with Sołtan when teaching at Harvard?

C.B.: I got a grant to study local housing, so I had a one-man office in Harvard Square above the old Harvard Trust. It was a small fifteen-foot-by-fifteen-foot affair, but guess who had the next office: Jerzy Sołtan! Next to my office, Sołtan was a designer for some large Boston practice and that office shared a wall with mine. That was interesting – we were together at the GSD, and then over the weekends and at night, we were over there doing designs. Actually, in the meantime, Sołtan made me an assistant professor. A lecturer was an annual contract job, but an assistant professor was a genuine position. You were a member of the senate, you were a member of the faculty... so that was a big deal. However, not even nine months after that, I had to tell Sołtan that I was going to India to set up a school of planning and he was upset with me. I think though that over the long term, he realised it was good for me.

S.R.: While you were working next door, did Sołtan show you his designs? Were you able to realise what was Sołtan's attitude when designing these buildings, how he was working with the team?

C.B.: At times, I would open my door, and he would open his, and he would say, "come and see something". He would show me some very rush free-hand sketches. I think he was working on some school buildings. He would show me those sketches of the outdoor connections and the human scale, very creative type and diagrammatic. I remember it was about how the outside penetrates into the classroom, how you use scale, and things like that... He was not into realistic sketches, but he really was into ideas and diagrams. However, I did not sit with him for long: it was like he was just having a break and he was simply showing this young person what he was doing.

S.R.: What was the general 'architectural climate' of the school when you were teaching there?

C.B.: Around this time, there were people who wanted to change the GSD. There was in fact a challenge from 'management' and managers, to get out to the 'studio' and elite designer mode. They were not part of the Le Corbusier, CIAM, Team 10 *milieu*. Thomas Stifter, Edward Baum, and others also wanted to oust the old guard and bring in more hands-on and skill oriented staff, instead of creation-oriented teachers. One day I was invited by them to a faculty club where the topic was "how to deal with Sołtan". I was a little aghast... Probably they thought that as I was young and doing planning at MIT, I could not be part of those romantic and utopian ideas. They thought we needed to have more students and to concentrate on more practical matters. They thought that even if some of the great designers came out of the GSD, the whole school should not be trained to become such. But I actually was with Sołtan: he hired me, I was his student, and I stayed at the house he designed... They even came up with a plan that Sołtan would go to a sabbatical year. At that time, every eight years, you had one year where you were allowed to take sabbatical with full pay. They thought to tell Sołtan that he had to take that gap year, and someone else would become the chair of the department, and after his return, Sołtan would not have returned as a chair. Another thing, it was the new dean, Maurice Kilbridge. He was from the School of Business and he came in to make the GSD more profitable per square foot, to use the floor space more effectively to generate fees. He even once told me that the GSD had more carpet area per fee paying student than any other faculty at Harvard. It never occurred to me that Harvard judged its quality based on the fees-per-square-foot index – that was a totally new idea, but that is how he thought. He wanted to increase the student body, which was the worst thing that happened to Harvard. Back then, with small groups, we knew each other, and now it is impossible. When I went with Kilbridge to the Carpenter Center when the classes just ended, I showed him around, we walked along the ramp, and we walked into the two-storey space. He said to me, "this is a total waste of space, we should enclose this and we should use the upper part as offices or something". I said to him, "professor Kilbridge, do you know a holy cow in India? You cannot change this building – this is a holy cow. It is not just for the people in the GSD, but for people worldwide". He was actually a good guy, but totally unaware of what the GSD, art, and design were. These groups all in effect wanted more students with more fees, more teaching of practical skills and knowledge. Teaching design, amongst this group, was considered *passé*.

S.R.: Why did you decide to leave the GSD?

C.B.: While on my fellowship in India, I proposed that a school of urban planning should be initiated at the Center of Environmental Planning and Technology, I had made an outline and brief for that, and I had shared that with Preston Andrade from the Ford Foundation. All my teachers at MIT said that I should not miss this opportunity, that never again will I be twenty-eight and leading my own institution. Joseph Zalewski and Sert too, they told me to get out of Harvard because I would get stuck there. Sołtan was the one who really helped me with my career, he brought me to the school, so I think he looked at it from a different position, he could have expected me to be more loyal and to remain with him – which of course is understandable. So, soon after being promoted to a tenured post I left Harvard in 1971, travelling overland to India to set up the School of Planning in Ahmedabad and to live in India since then. I still remain in the Governing Body of the Center of Environmental Planning and Technology and I am now designing new studios there.

S.R.: You have mentioned Jaqueline Tyrwhitt's involvement with Doxiadis and the Delos Symposia. What do you think Sołtan's connection to them was?

C.B.: As far as I know, Sołtan never attended the Delos Symposia nor the Athens *Ekistics* Weeks, which happened every year. It is interesting, but the Le Corbusier gang saw Doxiadis, even if definitely part of the CIAM group, as a different group. Doxiadis was also very self-aware of his own personality and he was the very centre of *Ekistics*. People like Buckminster Fuller liked that – he was a doer, he did designs all over the world, but his designs were never high art: they were very functional buildings. I think that people like Sołtan did not see Doxiadis as a good designer, not appreciating his mathematical approach. Doxiadis was a very good organiser, but he was not a romantic like Sołtan was. Sołtan believed in humanism, in harmony, balance, and beauty. Back then, Doxiadis was simply one big force, and Harvard in the 1960s was another one. I think there was an element of competition. Somehow, Jackie Tyrwhitt was able to have connections amongst both, everybody liked her.

S.R.: Let us come to the house in Sparoza designed by Sołtan for Jaqueline Tyrwhitt. What do you remember about this house?

C.B.: It is a very lovely small stone house in Attica, overlooking a great valley. I went there first when I was invited for the Delos Symposium I mentioned to you before, and later I stayed there many, many times. When working for the Ford Foundation, I started to travel back and forth between America and India. Today, they would give you an economy class to Newark, as a fourteen-hour flight. But then, they said that their people could not do that. So they said that I was able to stop on my way, and they would pay for any hotel. Every time you were on your home leave, you were staying two nights in a great hotel, and the same thing on the way back. I would fly often to Athens or to Milan, Paris, London. As a result, I stayed in Sołtan's house many times in the early seventies. Jaqueline became almost like my aunt, I can say. The first time, I wound up painting the metal garage door and cleaning things... There was a garage metal door at the rear of the house, and she told me that she needed to do something with it as it was starting to rust, so I took orange anti-corrosive paint, and the colour stuck and we left it. In general, I was getting to know Jerzy Sołtan's work intimately. That house had a lovely situation, and at that time, you had a great view. The bedrooms were to the back of the house, but there was an open indoor dining area, and you could look through the veranda in the front. There are also two parallel walls that create the house, but that rule is broken because of a glass opening towards a small terrace next to the kitchen. I thought it was a great idea: you broke the rule and opened a wall, and you were able to sit in the garden. I liked that a lot. When I designed the United World College,[9] a very elite institution in India, I remembered that house, especially when designing the headmaster's bungalow. It does not look incidentally

9 United World College in Pune designed by Benninger was opened in 1998. The building won different awards between 1998 and 2002.

like Jaqueline Tyrwhitt's house, but if you study the plan, it is the same: there are parallel walls and when you step into the living room, there is a higher ceiling, and it also has a veranda. There is also a kitchen, a bigger one, with an outdoor off-the-site place where you could just go and have breakfast. Basically, I remember a lot about that house, because I worked on these themes. It is an entire vocabulary, and I used it many times in my early work, like the Alliance Française building.[10] Ideas from Le Corbusier and Louis Kahn, such as the Modulor, grid structure, exposed materials, using brick and concrete – it was a whole school of thought.

S.R.: What would you say was the most important aspect that the contacts with Sołtan gave you?

C.B.: My studio with him became the basis of the most important work that set my career trajectory in motion, and I actually realised that in very critical points of my career, Sołtan played a role. He influenced me to go on for a degree in city and regional planning at MIT, to apply and to get a Fulbright Fellowship to India in 1968-1969, and to pioneer the concept later. During Fulbright in India, I met Sanat Mehta who was a social worker at that time whose wife was teaching in a slum school. We discussed and I took Sołtan's studio design trying to implement it, but we could not move... he was just a social worker, and no local body would support that. However, I effectively took Sołtan's studio design on self-help housing and I carried out a self-help shelter project in Vadodara for Mehta who in 1972 became the Minister of Housing in Gujarat and engaged me to design the very first Housing and Urban Development Corporation funded Economically Weaker Sections housing project in India.[11] Later, I morphed it into a massive solution for the poor through the Site and Services Project[12] as a World Bank consultant creating fifteen thousand plots in Madras, now Chennai, in 1973-1979. It also changed the thinking of the World Bank and other international agencies to lean more toward people's power, self-help, and participatory development. That first self-help Site and Services Project for the World Bank set a new global trend of investment in such schemes around the world. This little space ship that was boosted off the ground in Robinson Hall in 1968 is still in orbit here in India having worked in China, Bhutan, India, Sri Lanka, Malaysia, Indonesia, and Africa. If you want to have an example of lineage, this is how a student project may become a living one: just about eight years later, it became a real thing. Without the influence, encouragement, and guidance of Sołtan, I would not be here today.

S.R.: You are teaching yourself. Is there anything that connects your own teaching to Jerzy Sołtan, like methods, approach, content, *et caetera*?

C.B.: You see, when I started the School of Planning in Ahmedabad, that is where I really had impact on education and on how planning was taught – that is where I used actually a lot of Sołtan's thinking, holistic and multidimensional, as opposed to making physical layouts of roads and parking lots, urban spaces, shopping, and industry. At that time, there were maybe two or three schools of planning in India. You had to be an architect or civil engineer or a geographer: nobody else was allowed to enter those courses. When I started the school, I said, "no, we should bring an economist, a social scientist, an anthropologist, a social worker". I came up with some ideas that were somehow 'Sołtanesque', in the sense of social and economic planning linked to physical planning: we were looking at social and economic phenomena, but the plans were their mirror. In practice, in a lot of work done with our students, I insisted that they go and study slums, that they go to villages, and I think all of this was very much the way Sołtan looked at things, holistically and multi-dimensionally. That is the way Sołtan looked at things: he would create puzzles... and I definitely do that. It is not necessarily about philosophy, but about how I ask questions. It was very how he taught, with questions leading to questions, leading to questions... and I would say windows opening windows, opening more windows. Each question opened a new way of looking at things, and by looking at things, you asked more questions, and you were getting a bigger and bigger landscape... That was his method of teaching, and I certainly have been using it. Another thing, I believe that Sołtan had great fun teaching. I have learned that: if you teach, it is about a great sense of adventure and joy. He was very sociable with the students, while being strict... he was strict in the studio, but if you walked outside and had tea with him, he was a different person, a friend. I do not know where he learnt to teach like that, but he was a born teacher, there is no doubt about that.

10 Alliance Française in Ahmedabad designed by Benninger was opened in 1976.
11 Housing and Urban Development Corporation, an Indian government-owned corporation working in the field of housing. Economically Weaker Sections refers to the part of the Indian population with lowest family revenue.
12 Site and Services Project are operations of the World Bank aimed at self-help housing in less developed countries.

Marleen Kay Davis

January 15th, February 2nd, and April 13th, 2021, phone interview

Harvard alumnus, student in Jerzy Sołtan's M. Arch. II design studios (1978-1979), including an "energy-conscious design studio". FAIA architect and member of the faculty at Syracuse University (1981-1994), and at the University of Tennessee (1994-), where she was also dean (1994-2003).

S.R.: Do you remember your first meeting with Jerzy Sołtan?

M.K.D.: Well, the first time I met Jerzy Sołtan was as a graduate student at Harvard. I cannot recall if I actually met with him during an interview before I enrolled in that fall semester. I believe I could have, but for sure, I met him – bigger than life – during the fall of 1978. I was in the M. Arch. II programme, which was a small, one-year programme for people who had had an undergraduate professional degree in architecture. My class had around thirteen, fourteen, up to eighteen students, and we were from around the world. We were the advanced students, not the basic architecture students, and we all had a seminar course, and an advanced studio, so we were all going to be together in the fall semester with Jerzy Sołtan.

S.R.: Did you know him before enrolling in Harvard?

M.K.D.: I would say I knew of him, but I did not know him well. One of my classmates, Val Warke, had been his student two years previously in the same programme. Val had been in that programme, and I believe he was teaching that semester when I showed up at Harvard... He became a career educator, as I have, and he is still teaching today at Cornell University. He of course spoke very highly of Jerzy Sołtan, and he knew that Jerzy Sołtan and I would be kindred spirits.

S.R.: What do you remember from the "spiritual retreat" studio?

M.K.D.: Actually, I remember quite a bit. It was a wonderful endeavour. It was a great site. I worked on an urban site for what we would usually think of as a retreat away in the countryside. The precedent of a monastery with La Certosa in Florence and with La Tourette was actually very much present in my mind. Whereas it started as a retreat, I remember that very quickly I wanted my design to be an exploration of an urban monastery. When I pull out my drawings, they are labelled "Roman Catholic Retreat", I know I focussed on a Catholic chapel design and rituals during the studio, as in an urban monastery.

S.R.: You said it was an urban lot, whereas I have found that most of the students working on that design were working in the Walden Pond area... Was it different when you were taking the studio?

M.K.D.: The studio had students from around the world, and the initial site at Walden Pond was meant to be very emblematic of Massachusetts. I believe I selected, and proposed, the site on the Charles River as an antidote to that natural location, but equally meaningful and connected with nature because of the water, the sky, and the vista. Somehow, I moved quite quickly to that urban site and developed an urban monastery with very Catholic aspects. Actually, another thing that was important for me when being with Jerzy Sołtan, was the fact that we are both Catholic. I do not want to say that it was a big thing, but there was some kind of a bond.

S.R.: Was it heavily influenced formally by Corbusian architecture?

M.K.D.: Oh, there is no question, yes. I think this is where my own background made a difference. That is why I decided to study with Jerzy Sołtan, and why – I believe – he enjoyed working with me, and why I learnt so much from him. I graduated from Cornell, from a five-year Bachelor of Architecture programme. I was at Cornell in a wonderful period, with many great faculty. Cornell was often known as a very formalist Corbu school. I certainly loved the formal emphasis. At Cornell, because of Colin Rowe, we had a great deal of history, but it was not just Corb: we had Italian history, Renaissance, and urban design. History and precedents were very important for the faculty, from the design point of view. Thus, we did so much analysis and study of Corbusian architecture. This influence was there in a formal approach, so I was very aware of formal issues coming into Jerzy Sołtan's studio... probably more so than most of the other students. Another interesting thing to note about my last two years at Cornell, is that I did all my projects in the Modulor. So here I was, a

student who knew the Modulor, knew the dimensions, and had design projects using those dimensions. The project I subsequently did with Jerzy Sołtan was again engaged with the Modulor. That system did underline the inherent harmony to whatever you designed. I loved to hear his stories and anecdotes about the Modulor and about how he worked on that with Le Corbusier in the atelier.

S.R.: Was there a difference of attitude between Cornell and Sołtan?

M.K.D.: Yes, the big discovery for me when working with Jerzy Sołtan was that he definitely emphasized the social-political agenda, rather than the formal agenda which had been emphasized at Cornell. I had not encountered any real social/political agenda at Cornell. Yes, we had talked about housing, but from a formal point of view: aesthetics, efficient circulation, intervention in the city, the contribution to the city, space-making at the scale of the city, space-making at the scale of the unit... Jerzy Sołtan talked about housing from a social-political point of view. Actually, everything he talked about was much more about social-political point of view. That was new for me, that was exciting and meaningful. This was a wonderful compliment to the undergraduate background I had. Jerzy Sołtan's emphasis on a sense of poetics was another surprising value that I had not encountered in the Corbusian emphasis at Cornell. He used the word "poetics" quite often, and that would not be something that was emphasized or discussed at Cornell. It would have been too ephemeral... but Jerzy Sołtan was fascinated by the ephemeral, by the poetics, and by that kind of aspect of Corbusian thinking.

S.R.: Do you remember in what sense he was referring to the poetics of Le Corbusier? Did you have discussions or readings about that?

M.K.D.: It would be discussions. I do not recall many readings. He loved to talk, and I was a great listener. I recall him discussing the poetics with the exact word: "poetics". He would discuss that in jury, sometimes he would like a project that was almost childish in nature, and he would refer to that as having beautiful poetics.[1] He had a term, a cubist one, which is present in Corb's writings: "ineffable". He talked about the ineffable, and from my Cornell formalist background, it seemed strange to do that. It is hard to capture. Sołtan was very comfortable with the vocabulary of the poetics, of the ineffable, of the transcendent, and he advocated for that kind of experience in architecture. For example, during the retreat studio, it was very much about solitude, about the specific place, and about the way architecture connected you to that place. These were the poetic and ineffable aspects.

S.R.: Do you remember specific discussions you had on your design?

M.K.D.: Yes. [laughing] He did like desk crits. I have to say that in my group, I was somehow disappointed that many of the fellow students found employment in Boston, they were working in architecture firms, and so with a job, they did not always come to the GSD, to the studio. Me, I was there for the Graduate School. I was there to be in the studio from 8:30 in the morning until 9:30 or 10:00 at night. I was often the only one. I asked my classmates why they spent most of their time in local offices, and they answered that they needed money, experience... I was completely focussed on being a full-time student. Jerzy Sołtan would like to see what I was working on, while the other students were not there, so he spent a great deal of time with me. He did actually like my free-hand drawings. He loved drawings, I love drawing too, and it of course influences my teaching. I specifically remember at a mid-term review for the retreat, I did a complete free-hand presentation, and I remember him saying, "you draw like an angel". Later, the final drawings are very Cornell-style, with beautiful lineweight, line drawings. The other thing to mention in design crits, it was about designing in section. We spent quite a bit of time working on the building section. That is where you have the Modulor dimensions. Sectionally, this urban retreat was a sequence that took you up.

S.R.: Like a *promènade architecturale*?

M.K.D.: Exactly.

S.R.: Actually, when I talked to another student from those years, she mentioned that what she found interesting in Sołtan's teaching was a plan-based approach to design, with looking at different problems separately, and linking the solution to the concept, to the *parti*.[2] Does it sound familiar at all to you?

M.K.D.: It was very drawing-based. Perhaps to that student, the easiest drawings were plans, but for me, with the three projects I designed with Sołtan – the retreat and two projects in the spring semester – all of those were three-dimensional, with many sections. The third was perhaps more plan-based, because it was a school and it was repetitive. We developed a module and then we repeated it. But the retreat was definitely section-based and three-dimensional. Essentially, I designed a cube that floated behind a wall on the Charles River at the urban scale, about six stories high. It was deeply embedded with ideal proportions, with the golden section, and with the Modulor. It also had all the Modulor dimensions, as a square by definition is part of it. I think the *parti* diagram was a chapel as a cube embedded in a cube. There was a lot of geometry, but the circulation worked too.

S.R.: There are some very Corbusian elements, in addition to the Modulor. Skylights, their sculptural forms at the courtyard at the last level, pilotis and free ground floor plan, horseshoe-shaped stairs as an isolated element in space... Was this again influenced by Sołtan or by your previous Cornell background?

M.K.D.: It would just be both. It would simply be both... That was why I had such a wonderful education, with my understanding of Corbusian formalism at Cornell, while Sołtan was more focused on the poetic aspect of design. For example, the light tower in my design and the spatial sequence of moving up. He consistently connected experience and meaning to the form, not to mention the social agenda.

S.R.: The form, the organisation, it also makes me think about Terragni and his Casa del Fascio in Como...

M.K.D.: Because of Eisenman's work, Casa del Fascio was something of a biblical phenomenon at Cornell.

S.R.: Was Sołtan mentioning Terragni's architecture too?

M.K.D.: I would not recall... However certainly, what both he and I loved about the design was the abstraction of the cube, in the sense that it was Platonic. That would be appropriate for the abstraction of church, religion, and space.

S.R.: Do you remember anything else you were discussing about with Sołtan?

M.K.D.: Well, he loved the idea of the movement up. It was always about the idea of moving up. I did find a piece of trace, where he had drawn with charcoal on my section drawing, and he had drawn a diagram going up. When I look at my work in general, there was a definite emphasis on section during that whole year. I know that another thing he loved was the dialogue of being in a city and connecting to nature. The trees, the sky, the river... and the surprising peacefulness of the urban context.

S.R.: Were you somehow encouraged to use specific techniques for drawings and conceptual work, like charcoal and clay, which Sołtan used himself and, sometimes, encouraged students to do so?[3]

M.K.D.: He did not advise me to do that.

S.R.: Was the studio co-taught by Jerzy Sołtan and Gerald McCue?

M.K.D.: Not that I could really remember. Gerald McCue was the department chair, so he was extremely busy. He would show up, he might have come to a review, but Jerzy Sołtan was definitely the intellectual leader.

S.R.: How did you end up making the other two projects with Sołtan in the spring semester?

M.K.D.: Well, I had such a good experience in the fall... Going into the spring semester, we had so many choices, but above all the others, that was the best one.

S.R.: Was it another design studio?

M.K.D.: It was the Sołtan and Michael Kim "energy conscious design studio". I do not remember what the other choices were. Whereas I was in a programme of two semesters only and certainly, I wanted to maximise the exposure to as many different individuals as I could, something was odd with the other choices. It might have been a faculty member I had been already familiar with from Cornell. At the same time, I was interested in energy-conscious design. However, I selected the studio not because of the topic, but because of Sołtan. That is how I ended up doing three projects with him. It was not a requirement for me to be in Michael Kim's studio and I do not remember who else was in the studio, I think these were the M. Arch. I students. Maybe they were in lower level studios, taking Michael Kim's required course and they were going to apply these principles in their design studio... Again, I was totally focussed on the design, I did not need to take Michael Kim's class, and I did not need to do any engineering-type calculations, but I was doing a design studio with Jerzy Sołtan. At the same time, I had other seminars with other faculty.

1 Similar aspect and relationship to the "grassroots" of architecture could be seen in some of his designs, where he used childish drawings, like the some of the schools in Massachusetts and the design for the 1958 EXPO Polish Pavilion in Brussels and the use of childish drawings (Chapter 8).
2 Interview with Anne Wattenberg.
3 Interview with Umberto Guarracino.

S.R.: What were you to design for this studio?

M.K.D.: It was an "energy-conscious" design, and there was a pavilion. I believe it was for some kind of World's Fair and it was in Egypt, as it was to be climate-based. It was going to be open-air, and there was going to be a lot of foot traffic, a lot of movement of people. Then, the larger project was a school in Massachusetts, an American school. I know that we worked on a typical classroom, on the common spaces, and on things like that.

S.R.: Are you aware that Jerzy Sołtan designed a series of schools in Massachusetts?[4]

M.K.D.: He certainly did not talk about or take us to those schools, no. To be honest, I would say that I was not aware that Jerzy Sołtan had a practicing body of work. It sounds awful that a student would not know that about their own faculty member, especially someone like me who had deep respect for him. Through the semester, I do not recall him showing his work or him advising us to learn about his schools. He certainly knew about how schools worked, about classrooms, circulations, and places for students to come together.

S.R.: What do you remember from the discussions on the school design?

M.K.D.: We spent quite a bit of time on orientation, on solar energy panels, on natural light coming in – natural light but not direct sunlight. My design itself was this idea of having an ideal classroom, and then I know that I was concerned with keeping students of a certain age together. There might be three classrooms for the third grade, three for the fourth grade, and three for the fifth grade. Thus, I had that repeating module, which was the ideal classroom with ideal orientation, and ultimately, my design had a metaphorical concept of a city. There were repetitive energy-efficient building blocks, streets for the circulation, and the public spaces.

S.R.: Was the idea of the city coming from Sołtan?

M.K.D.: You know how it is: discussions, brainstorming... Certainly, if I was sitting at a desk for six weeks, I would not have come up with this alone. On the other hand, he was talking to fifteen students, and fifteen students did not come up with the metaphor of the city. It was a dialogue. The idea of the city was definitely very appealing to me, and it goes back to Cornell, which had a very strong urban design emphasis. I was very aware of the urban design issues from my experience there. I was definitely applying these urban design principles to this metaphor of a city for young students.

S.R.: Looking at the plans of your design, I can see the different grades in different wings of the building... They are divided by open-air areas, which seem to have been thoroughly studied, with trees, recessed elements... Was it an important element for Sołtan?

M.K.D.: Actually, I cannot remember well what he emphasized, but the idea of that space was that architecture is not about looking at a building, and the children were not in a closed classroom.

S.R.: Was it common to have such open-air classroom areas in schools back then?

M.K.D.: Well, I would not be an expert on schools, but what was being built in the United States in the 1970s was called "the open classroom". It was a free plan inside, with no windows and no exterior spaces. Open classrooms were for teacher flexibility and it was an acoustical nightmare, as you would just have everything together, just with subdividers. That was the dominant theory... and that is why people come to hate architects... There were so many buildings with no windows, and the teachers felt trapped inside. It was artificial lighting all day long, it was noisy, teachers did not have their own classroom space to control, and it was just "open space." These "open classroom schools" were a dominant American viewpoint. In class, we might have criticised that as we talked about schools. I remember by the end of the 1970s, and of course, it was 1979, the hermetic "open classroom school" was not viewed favourably in the press, but many schools were still designed that way. Even today, when you drive past a building, you can say, "seventies – no windows, fortress". It is just so sad. I do not believe we talked much about that however. I think the design emphasis was linked to the whole idea of a sustainable studio and natural light. The idea of having an outdoor space for every classroom was rather unique. Today, you can see that everywhere. I do not know if outdoor spaces were unique to my design or whether it was common to all the students.

S.R.: It looks a little bit Team 10-ish to me...

M.K.D.: Exactly.

4 Schools in Salem, New Bedford, Brockton, Lynn, and Newton (Chapter 10).

S.R.: Just coming back to what you have said, it looks to me that Sołtan in the school designs criticised that "open classroom" model – there were divisions, there were windows, and there were open-air spaces...

M.K.D.: Again, I do not remember him showing us his own work. It did not make an impression on me that he was an active building architect. I really wish that we had done a field trip to one of his schools. That would have been so helpful for students...

S.R.: Did you do field trips with him to any kind of place?

M.K.D.: No.

S.R.: Let me share with you some drawings and photographs of the Salem High School in Massachusetts Sołtan designed in the 1970s. I would like to know whether you can see any elements you find familiar from the studio or which could make you think about your own design. [showing photographs of the Salem High School]

M.K.D.: Looking at this, you can see *brise-soleil* casting shadows... I can also see that the horizontal lines are Modulor-based. When I look at these elevations, [looking at the photographs of the courtyard] these are the guidelines, you can see the repetitive harmonic proportions. You could study how it overlays with the Modulor.

S.R.: Actually, when Sołtan was talking about this design, he claimed that it was built with the Modulor.[5]

M.K.D.: I can see it. Do not forget that my professors at Cornell had used that in their projects, and I had already visited Corbu's projects. You could feel it the minute you entered the space, and you can see it in this one: the repetitions are not regular, they are harmonic. I remember that I missed the first week of school, so perhaps he talked about these when he launched the module, but I do not recall it... Actually, in 1979-1980, I worked for Josep Lluís Sert who also worked completely with the Modulor dimensions. He consistently drew interior elevations, which were so similar to the interior elevations of Sołtan that you have shown. I could tell immediately that the Modulor created regulating lines for the design. What is curious to me is that Sołtan did not talk at all about his own work. It was invisible to the students. Now, what he loved to talk about, it was Le Corbusier. He loved to talk about his personal experiences with him. That entire year, he also loved to talk about the Pope John Paul II. He was so excited about a Polish Pope, and there was also a plan for him to come to Boston in the fall of 1979, I believe. There was quite a lot of excitement about that.

S.R.: Actually, when I was talking to Sołtan's daughter, she mentioned a car Jerzy Sołtan had, where apparently he was driving Karol Wojtyła before he became the Pope during his visit to Boston as a cardinal...

M.K.D.: Sołtan gave me a ride in that car, and he was very strong to say, "you are sitting in the seat where the very Pope John Paul put his...". He was very proud of having driven Pope John Paul in his car, and anyone in that car was reminded that they were sitting in the seat of the Pope.[6]

S.R.: Actually, Sołtan was feeling connected to the religious aspects of architecture, and in the last years of his life, he was working on a conceptual design of a church, which he wanted to present to the Pope. It was linked to the church designs he drew in the 1950s in Poland.

M.K.D.: You can see how many overlapping experiences – being raised a Catholic, knowing Le Corbusier, appreciating Pope John Paul – made it a special year when I studied with Jerzy Sołtan.

S.R.: Coming back to the second studio, what were the roles of both Michael Kim and Jerzy Sołtan?

M.K.D.: There was no question: Jerzy Sołtan was the designer and Michael Kim was more of a specialist consultant. Undoubtedly, the studio was inspired by the Le Corbusier diagram, with the engineer and the architect interlocking hands[7] to demonstrate their reciprocal strengths. Sołtan brought this incredible design approach that we were going to work together with both perspectives. He was very respectful of Michael Kim and all the technical aspects. Sołtan did not treat him as a technology consultant while he was in charge himself... He wanted Michael Kim to be very present. It was fascinating. It was not about number crunching and it was not just solar angles and things like that. He would ask Michael Kim what the best solar angle was, what the best way to solve a given problem was.

S.R.: Do you remember any discussions from this studio?

5 Interviews with François Vigier and with Stan Szaflarski.
6 The same memory was shared by another student from 1976-1977, Emily Kuo, see: Kuo to Brenda Levin from October 19th, 2020.
7 Sketch 'Les tâches de l'ingénieur, les tâches de l'architecte' by Le Corbusier from July 31st, 1960.

M.K.D.: I remember a long afternoon with a big emphasis on designing sunscreens, *brise-soleil*. How do you design *brise-soleil*? You look at the angles of the sun, coming from the South, from the East, and from the West. You prevent direct sunlight from entering... I remember he could do all these diagrams about designing *brise-soleil*, and that he brought this amazing approach enabling you to calculate visually the forms and the shadows. You would end up with *brise-soleil* that curve in profile, and you would have complete shade on your primary surface. In fact, he claimed *brise-soleil* elements do not have to be straight nor identical. Although he was very technical and very energy-efficient, the design result was whimsical, poetic, and unexpected. That was what Jerzy Sołtan wanted to do: he was fascinated with the *brise-soleil*, providing shading devices that were also poetic and beautiful.

S.R.: What do you mean saying that the result was "whimsical and poetic"?

M.K.D.: "Poetic" was one of his favourite words and for me, as a formalist coming from Cornell, that was a subjective thought process. On reflection, perhaps whimsical and poetic may imply intuitive form making, rather than analytical formalism, or formalism with a rational basis. That is why it was such a nice complement to my undergraduate background.

S.R.: Do you remember their discussions, between Kim and Sołtan?

M.K.D.: Not too much. Michael Kim would be pretty quiet, and Jerzy Sołtan had a big presence on reviews. The bigger Jerzy Sołtan would become, the quieter Michael Kim would be. I would have to say, I do not know whether it was the greatest studio, but I certainly enjoyed it.

S.R.: Was it an innovative approach at that time?

M.K.D.: Yes. In the United States, 1976 was the energy crisis. After that, architects all around the country were looking into innovative and energy-efficient architecture. That was the word. In the 1990s, we would say, "sustainable architecture", and now we would say, "performative architecture". But "energy-efficient architecture" in the late 1970s and early 1980s was emphasized everywhere. This was not uncommon: many schools were developing programmes on energy-efficient architecture and solar architecture back then. However, when I was at Cornell just before that, there were no energy-efficient questions in architecture. During the studio, Jerzy Sołtan and Michael Kim spent a lot of time talking about vernacular architecture, windmills... We spent a lot of time on air circulation and on indigenous architecture because my pavilion design was very much about air circulation.

S.R.: Actually, that is another connection to Sołtan's work. In the 1950s, he was working on a typical pavilion for tropical countries,[8] which made use of natural ventilation, shading, *et caetera* – there seems to be a clear connection between teaching and Sołtan's design work...

M.K.D.: Not just Sołtan's, but also Le Corbusier's. Sołtan talked about how Le Corbusier was adamant about energy-efficient and climate-sensitive design. Take the Salvation Army building in Paris, with a curtain wall... Le Corbusier was horrified that it was an internal climate disaster. After that, he never did a building without considering ventilation and amelioration of the sun. That was the agenda Jerzy Sołtan brought to the whole issue. It was very much about design, it was about poetics, and it was about comfort. It was different from other American solar and energy-efficient projects, which was rather "find-the-angle-and-get-the sun". For Sołtan, it was more about air movement, sunscreen, the aesthetics, and the experience of living there.

S.R.: Let us have a look at the design for the typical pavilion for tropical countries, do you recognise any familiar or important elements? [showing drawings of the 'Tropik' typical pavilion]

M.K.D.: It reminds me of the Esprit Nouveau, with its metal substructure. I distinctly remember a section diagram with the floor plane and the undulating roof, which would be in contrast. It is very Corbusian in the sense of a 'kit of parts', which are then assembled. There is the 'kit of parts' in the metal substructure underneath the main structure of Esprit Nouveau. That was also the *parti* for my own pavilion. The idea was that of a uniform roof structure contrasting with what was below. It is very much present in Esprit Nouveau, in the Philips Pavilion, and in my own design. The roof was independent. In my studio design, to the point my roof moved in an energy-conscious way. The idea was that when people came in, that would generate power... Such an approach was how he was constantly challenging you: to be energy-conscious with solar energy, but to be also more than that. In my case, the idea was that the movement of people could generate power with a solenoid.

S.R.: When I looked at an assignment from the "energy conscious" studio, there was the idea of an approach where a group prepares ground rules, which are to be followed by the individual designs.[9]

M.K.D.: Yes, the ground rules were the climate and responding to it...

S.R.: Were you involved in drafting these ground rules as students?

M.K.D.: Not that I remember.

S.R.: The moving roof, which you mentioned was also linked to the idea of guaranteeing breeze and natural ventilation, managing heat storage... What was the inspiration to think of such a mechanism? Was it coming more from yourself, from Sołtan, or from Kim?

M.K.D.: Oh, it was definitely a dialogue between Jerzy Sołtan and myself. Kim did talk a lot about ventilation, especially about the climate of the desert. He talked about radiation cooling at night. The moving would flip up to promote that cooling at night before a new hot day. During the day, all the little flips would move to have ventilation so that the hot air would rise and go through the roof. That was to be sustainable ventilation. I just loved working on that project, and I loved the poetics of it. Before Harvard, I had a minor in structures and I had worked in a structural engineering firm – that is what you mentioned Sołtan had in his notes about myself: "worked for engineers".[10] I thought the idea of a single-point cantilever truss, with moveable ventilation flaps, would be a minimal structure. Then, I vaguely recall that Sołtan could say (and draw) something like "why doesn't it all move and go up? To expose the floor to the night-time sky for cooling?", and that would be a big breakthrough. There were also many discussions. The perimeter was to be like an Egyptian wall, and it was battered on one side. There were many details we had a blast talking about... I came up with the idea to generate electricity on a treadmill. Crazy things! It was really fun to be really pushing it, but I do not think other students were as excited about the project as I was. It was more like an obligatory course led by an older professor with an engineer... However, to say just something about that studio in 1979, for Sołtan, to embrace an engineer and go full into energy conservation, it was remarkable to do that. That was again the "save the planet" agenda, together with making a great design at the same time. His idea of design, with the poetic and with the imaginative, was about the poetry of the high-tech aluminium craziness and the low-tech Egyptian battered solid wall. It was his idea, to contrast the old and the new. That word, "contrast", came up all the time. I really loved those two designs, the pavilion and the retreat. They were clearly better because of Sołtan. It was definitely a joy to talk to him about them.

S.R.: What would be the common ground between the two studios – the first and the second semester ones?

M.K.D.: Certainly, the social agenda was something I learnt from him... Then, it was about going beyond the pragmatic agenda and aiming for the ineffable, aiming for something beyond functionality.

S.R.: Let us move to the theoretical seminar taught by Sołtan you attended. Have you read through your notes from that 'Grassroots' seminar?

M.K.D.: Yes, and actually, when we talked first I had not remembered there had been an entire separate course.

S.R.: Was there anything that struck you like "oh, yes, that was so important"?

M.K.D.: To be honest, not really.

S.R.: Do you remember him mentioning other architects' works, apart from Le Corbusier?

M.K.D.: He did like Shadrach Woods, and he loved Hassan Fathy. He talked about Hassan Fathy all the time. He liked him as he was a formalist, sympathetic to cultural issues, and he had a social agenda. I think he talked about Hassan Fathy about ten times throughout the year.

S.R.: I have seen there was a scheme of Sołtan's reading of modern architecture and its different shades – formalism, functionalism, postmodernism, optimism, pessimism – in your notes. [showing the diagram] Was it different from the reading you were familiar with?

M.K.D.: Well, this diagram, he drew that on the board. It was not me trying to interpret him, and even if I

8 Design for the typical exhibition pavilion 'Tropik' (Chapter 8).

9 Brief for 'Energy Conscious Design Studio' from 1979, see: HGSD-JS, AA023.

10 Student list for M. Arch. II design studio from 1978, see: HGSD-JS, AA021.

do not have a mental picture of him drawing that on the board, I can 95% guarantee that he was drawing that himself. The whole business of optimism was important, and it was unique to him...

S.R.: ...and you wrote an essay on optimism too. Was it influenced by himself?

M.K.D.: On optimism, pessimism, and cynicism, yes. That was inspired by Sołtan. At that time, I was so mad at postmodernism, and I could not stand Philip Johnson. He was a complete cynic. I do not remember Sołtan saying anything bad about Philip Johnson, but the whole idea of the International Style, as defined by Philip Johnson's MoMA exhibition with that name is just ridiculous to Europeans. Modernism was not a style. It was not an ethos. It was a social agenda. That was a complete message I got the year I was at Harvard. There was no such social/political discussion at Cornell, nor in most American writing that I can recall.

S.R.: The criticism of the International Style, it would not be specific to Sołtan, would it?

M.K.D.: Actually, it was definitely specific to Sołtan because of his European background and social agenda in housing. At Cornell, it was always about the form, pilotis, the whiteness, and space... Even the approach to urban design was not social agenda-driven, and it was not about the need for housing in American cities. I think it was very European, Team 10 and CIAM-influenced.

S.R.: Do you remember any of his criticism of postmodernism?

M.K.D.: Oh, that was just before postmodernism exploded.

S.R.: You mentioned that he was an influential person for your teaching. In what sense did he influence you?

M.K.D.: I can certainly hear Jerzy Sołtan in key moments when I am talking to students, as when saying, "design in section". I remember distinctly that he talked about sections: when you had a flat roof, you would have an undulating floor, and if you had a flat floor, you wanted an undulating roof. I also hear Jerzy Sołtan when I talk about the contrast: contrast between the roof and the floor, between the very big and the very small. He always talked about contrast: flat versus curved, and big versus small. Contrast was a very important design strategy. As a direct quote, "you only know the very, very large in contrast to the very, very small". I also have taken with me the social agenda. It was a revelation for me to see the social agenda in Jerzy Sołtan's approach to architecture as an improvement and as making lives better... He thought architecture was very much part of that, and that Le Corbusier was very much part of this social urban agenda. That, I took it from him in a very strong way. That contrasts very directly with the American version of "Le Corbusier as a formalist" understanding. Philip Johnson with the MoMA exhibit 'The International Style' simply identified European modernism as a visual aesthetic, having nothing to do with social political agenda. Connecting a visual, formal aesthetic to a larger social/political agenda is what I learnt from Jerzy Sołtan. That is what I take to my students.

S.R.: Have you used your experience with Sołtan when you were planning architecture teaching at the University of Tennessee?

M.K.D.: Actually, there is another experience I had with Jerzy Sołtan... In May 1979, he was hired as a consultant to start an architecture programme at a university in Saudi Arabia.[11] I was his assistant then and I worked with him, so I saw his vision of the entire school education. He felt that the cultural context was very important and that the cultural experience should be very respectful of Saudi Arabia. It was not to superimpose Western values, but it should be global, it should be in a large context. There was a social political agenda, and there was importance of the context, history and theory, and technology. If it was not about planning the entire curriculum, it was about the introductory course, which was to embrace all the elements of architecture. Having the opportunity to work one-to-one with him was for me significant as a learning experience and later when I became an educator.

11 Documents on Jerzy Sołtan involvement as a consultant for the King Abdulaziz University in Jeddah, Saudi Arabia concerning the creation of the School of Environmental Design and its curriculum are part of the restricted collection at Harvard, which will be accessible from 2040, see: HGSD-JS, BB series.

Bogusław Smyrski

September 27th, 2019, in Warsaw, Poland

Graduate from the Fine Arts Academy in Warsaw (1953-1959), student in Sołtan's specialisation studio, and member of the Workshops (1959 until closure), architect working in Warsaw, Poland. In the Workshops, he was coordinating the design of Warsaw Midtown railway station. Teacher at the Academy of Fine Arts (1972-2002).

S.R.: You worked in the Workshops on a number of designs, but you also studied at the Academy in Warsaw. Was it back then when you first met Sołtan?

B.S.: I met Sołtan for the first time when I was taking the entrance exam at the Academy. There was an artistic part, which I had passed, and then there was a practical design exam – and that was when I first saw him. We were to design some kind of a monument in a park... and then that tall professor entered and started to look at the designs – that was my first contact with Sołtan. The second one was when I was already a student and Sołtan started to lecture on construction. He was was not allowed to teach design subjects due to some political issues... but they let him teach technical ones. [with emphasis] He started to talk about a carriage with six white stallions, and with Marysieńka sitting inside... it was just an introduction, and then he talked about [the palace in] Wilanów.[1] The third time was when I had already finished my first two years, and when specialisations came, and I had to choose the studio. It was possible to choose from among furniture, exhibition, and architectural design, which were led by Professors Gutt, Zieliński, and Sołtan. At that time, I was increasingly interested in space and architecture... and I wanted to go to Sołtan's studio – everyone back then wanted to study with him. There were also seven or eight architects, already with a degree, who enrolled at the Academy – and that was a huge number as there were around ten people admitted to that architecture studio...

S.R.: Already with a degree?

B.S.: Yes, because back then it was possible to study for three years at the Polytechnic and then work on the diploma at the Academy. Such people were able to start directly in the third year and promptly enrol for the specialisation. I remember Sołtan told me, "Bogusław, you must be careful – these people have already won some competitions". He made it clear that I had to hold on – and indeed, with my colleagues from the Academy, we were holding onto it, while the architects from the Polytechnic were gradually dropping out. One of them told me just before he left, "listen, it is easier to design a hotel than an armchair". Eventually, only two of them remained... They seemed so great and proud, nevertheless they did drop out. When Sołtan was travelling – he spent half a year here, half a year in the United States – we had an important critique. I was preparing a lot for this... but one of them arrived with a car and clad half of the classroom with drawings, and when the critique started, Sołtan asked, "what is it here?" – and the student answered, "this is my design, Professor". Sołtan replied, "but we do not know each other – when we get to know each other, you can come with this design" – and that student also left the Academy. As I mentioned, there were many of us who wanted to enter his studio, so Professor organised a kind of admission exam to the studio, because he wanted to select students in an elegant manner. I do not remember exactly what it was about, but it had also something to do with languages...

S.R.: Indeed, I have seen that there were foreign languages in the entrance requirements at Sołtan's studio.[2]

B.S.: And it was not Russian... When socialist realism came, we had compulsory subjects such as Russian, Marxism, and military training... I was there when all of it began, and our year was the first one. The military training took an entire day without other courses... but it lasted from seven in the morning until six in the afternoon – and it was the most important subject. We had many issues with those modules. I had problems especially with Marxism: I have an "unstatisfactory" grade in my credit book, which I asked the professor to write down – and he did, but when that ideological stage ended, he left the Academy.

1 Marysieńka is the unofficial diminutive name of Marie Casimiere d'Arquien, queen consort to king John III Sobieski, whose official residence was the palace in Wilanów, close to Warsaw.
2 'Programme of Studio No. 1 1962/1963', in *Ineffable Space* ed. by Jola Gola and Agnieszka Szewczyk (Warsaw: Museum of the Fine Arts Academy, 2018), pp. 197-198.

S.R.: Why did you decide to study at the Academy?

B.S.: I graduated from an artistic high school in Zamość and I was applying for studies at the Faculty of Architecture at the Polytechnic of Warsaw, but minister Sokorski[3] redirected my application to the Fine Arts Academy as from that year – 1953 – the Faculty of Interior Design was to be recognised equally to the Polytechnic of Warsaw. At the beginning we had modules like mathematics, statics, economy, and urbanism at our Faculty of Interior Design... The same ones that were also taught at the Polytechnic. Of course, as usual, there were tensions between visual artists and architects – which continues up until today. It was something Sołtan himself was fighting against. The Polytechnic and other schools were fighting to keep the title of "Professor" to themselves, and to call the staff at the Academy "artist-researchers". Sołtan was calling for equal rights, and he insisted that there could be "Professors" at the Academy too. He said, "on 22nd of July 1944, in Poland there was a manifesto which introduced equal rights, so it seems to me that they should be applied here too".[4] True and productive collaboration between architects and visual artists was really rare. I was fortunate because I was working in design offices, and because professors from the Academy were giving me these opportunities. For example, Professor Ihnatowicz, Sołtan's closest colleague, brought me to the best design office in Warsaw after I graduated from the Academy. It was founded as early as in the 1940s in the Arsenal, then it underwent modifications and many changes until it was structured in the chemical industry and it was named Office of Chemical Industry Constructions.[5] He asked me to create a small team working on interior designs there, since the director wanted to have such a section... He was dreaming of a huge one, but he did not last to see it, as he got sacked when the changes of 1955 came... They sacked him in twenty minutes.

S.R.: Could you tell me please how you ended up in the Workshops?

B.S.: The Artistic and Research Workshops were another connection to Sołtan. Towards the end of my studies, just after the discussion of the final diploma, I was leaving the library building. It was an evening before Christmas, I think. I heard someone calling after me, "Bogusław!". I turned to see Professor, who asked me, "Bogusław, are you in a rush?" – and I actually was asI was going to have dinner in the students' lodgings. However, since Professor was asking me whether I was in a rush, I thought that something must have been going on, so I said, "not at all, Professor". "Let's go then", he said. Just in front of the Academy, there was a bus stop, so we got on a bus and went to Myśliwiecka Street to the Workshops. We entered and Professor introduced to me the head of the office, Gessler, "this is our new employee and Wiktor, please give him something to do". It was already seven o'clock... I got a board and a sheet of paper with three ovals drawn there, with some dots. As I learnt later, it was a drawing that Jacek Damięcki was working on – he was making a model and that was a base for that model. I had to cover the dots with ink. That is how our collaboration started.

S.R.: So it was even before graduating.

B.S.: Yes, it was. I became very engaged in this work and I really enjoyed it, even though I still had the diploma to work on... Back then, the Academy lasted six years and the final year was for preparing the diploma, and I was already working in the Workshops. A commission came for Warsaw Midtown railway station and Sołtan told me, "you are going to coordinate it". I thought, "I am a young student, still without a diploma, and he wants me to be a coordinator?" – but the project started and the first thing I had to do was a model of the railway station. In the studio Professor noticed that I was manually skilled and I worked well – especially because at the very beginning I had been attending a studio of residential construction structures under Professor Tomaszewski. It was about imagining various structures and constructions for the future residential architecture. I had made dozens of small models, which were later published and filmed. Sołtan had seen these small models, so he knew what I was able to do... and he gave me the task to make a model of the station. And it was almost five metres long! I started to work on it in the old chapel at Myśliwiecka Street and in the meantime, Sołtan left for the United States and brought me back a small prism and said, "Bogusław, when you want to understand the human scale of the building, you must put this thing inside along with a mirror and you will see on this 1:50 scale how a person would see the interior, you will see what the proportions of these elements are". So I made this five-metre-long model, and at the same time I was working on the drawings: not only technical drawings, but also the construction ones. As a result, I was working on stone cladding and electricity too... I drew the entire station on the right scale and I was coordinating the project simultaneously. One of the most important tasks Sołtan gave me was the visual information at Warsaw Midtown. Even though I had to supervise everything, I was also given this very specific task. Actually, coordination alone was a huge responsibility, as it was customary back then to have meetings with both employees of the railroad traffic services and designers from the Academy – which sometimes meant meeting several dozen people. The workers could earn as little as thirty złoty – it was almost nothing, but for them, it counted. I would like to mention some things related to this collaboration...

S.R.: Of course.

B.S.: To begin with, I shall mention that I was one of the first students who descended to where the station was to be built, and I could see these four hundred columns. The smallest ones were about fourteen metres high... The entire concrete structure which covered the station – the one that we walk on today – was designed by my construction teacher, Professor Wasiutyński.[6] When we were students, Professor showed us what you needed to do, how much you needed to make it vibrate, in order to make it stronger. It was so strong that later, when we were working on the interiors of the station, we were unable to hang the suspended ceiling. No pistols, which were available back then, were strong enough, and everything was falling into pieces... the concrete was so strong.

S.R.: You mentioned the visual information. What did it consist of?

B.S.: There were two main elements – lettering and colours. It started in Jerozolimskie Avenues with the two entrance pavilion buildings parallel to the Palace of Science and Culture. The short elevations of these pavilions were marked with colours on both sides: eastbound direction marked in red and westbound direction marked in blue. Changeable letters were clad with artificial material and thanks to them everyone in the street was able to see in which direction and at what time trains were leaving. When entering the pavilion you could see the stairs marked in red on one side, and marked in blue on the other. Following these corridors, you would take the stairs to the hall and further on, to the platforms. The system worked like this: there were three platforms, southern, northern, and a central one. The two lateral ones were for departing passengers, while the central one was for arrivals. As a result the passengers leaving and boarding the trains were not confused. Additionally, the platforms were connected by a passage below the tracks, which is now closed.[7] At the end of the station there is also a space, today inaccessible and walled off, which was intended to be a passage to the underground, something that very few know about.

S.R.: Was it decided back then that the underground was planned?

B.S.: Yes, we knew that there would be underground, and we also knew there would be the new central station. We designed a connection with Warsaw Central railway station and it still exists, but that other one was walled off – probably when that disastrous renovation took place, when the divisions between the platforms and the waiting rooms were walled off too. Today, the original feeling of the open space is no more... Anyway, at the same time, we started to work on the lettering. Professor Noszczak was our lettering consultant: I chose the typeface, and he accepted it. In the meantime, we needed to add some mechanical elements to the basic information: those rolling panels with destinations and station names. They had been made by Italians, who had their own lettering... but I do not know whether they were mocking us – we did not accept what they had done. It was a horrible font, and we did not want to agree to that... so I took this task over.

S.R.: Could you tell me more about the lettering across the station, please?

B.S.: Apart from the colours, the passengers were also guided by the lettering. For example, in order to exit to Marszałkowska Street, there were three signs, and when one was approaching, the first sign was gradually staying behind, the second one was moving closer, and the third one was at the very end. These were carefully custom-designed thick light-boxes. They were designed in such a manner so that they would be very easily accessible and that the light bulbs were easily replaceable. One panel at the bottom was removable in order to replace the light bulbs, which were fixed in such a way as not to create any shadow between the two glass panels. The second kind of lettering was a carefully studied font applied on the walls. I remember making models on these in 1:1 scale. For example, under the pavilions, there are big letters "Warsaw", and smaller ones "Midtown" – these elements actually remained until today. There were also letters "Platform 1" and "Platform 2". Other information was painted directly on the wall surfaces, and it should have survived somewhere. Those

3 Włodzimierz Sokorski (1908-1999) was Minister of Culture and Arts (1952-1956) and member of communist parties since 1924.
4 The Polish Committee of National Liberation Manifesto of July 22nd, 1944 was a political manifesto released by a puppet Soviet-supported local authorities, in contrast to the Polish government in exile in London.
5 Office of Chemical Industry Constructions (Biuro Budownictwa Przemysłu Chemicznego) was the official name of PROCHEM in 1963-1971, a design office created in 1947, and afterwards renamed several times. The name PROCHEM appeared in 1963 and since then has remained in the official company name.
6 Zbigniew Wasiutyński (1902-1974) was a Polish engineer specialised in construction of bridges using pre-compressed concrete. He was also a teacher at the Polytechnic of Warsaw.
7 The passage between the first and the third platforms is presently inaccessible for the public.

were letters painted on the stone walls... Stone walls, because in the end, in spite of the initial version, bricks were replaced by stone. It was a higher standard. Still, it was a very simple and natural stone: travertine stone, whose texture in some places looked as if there was a grenade explosion. Sołtan agreed to that...

S.R.: The walls were to be made in bricks then...

B.S.: That was the first version of the station, brick-clad. The idea was that there would be no possibility to incise hearts or other things with a knife – because with a PVC board it would have been possible. It was studied in a ceramics institute, but it was too simple for the investor... so they asked for marble. There were some thirty versions of the station before with different versions of patterns in the floor and wall cladding... When they finally decided to use travertine, I drew all the wall proportions: and there is an important aspect which nobody notices... There is a stripe at the eye-level, which brings the walls to the human scale. On the one hand, it gives scale, on the other one, it breaks the monotonous rhythm.

S.R.: Do you mean a stripe of differently cut stone elements?

B.S.: It is simply a fifteen-centimetre-high stripe of stone. It was a stone cladding – and it should be clear from the beginning that it was cladding and not structural elements. Architects often get them confused... It is why there is that decorative pattern: not an elaborate motif, but the large panels at the top and at the bottom are simply interrupted by a stripe, which has different dimensions.

S.R.: Sołtan was complaining about lack of construction materials when building 'Warszawianka' – did you encounter similar problems when working on the station?

B.S.: For example, the lettering applied to the walls was made of steel sheets painted in graphite colour. It was a problem – where to get graphite pigment at that time... The letters on the displays – both light-boxes and regular ones – were painted on the glass and were of different size: small and larger, with different heights... When I had already designed those and when we had accepted that, the railway workers 'woke up' and started to claim that the letters were too small. I went to the ministry and a department director told me, "you have to change it: until now, you have assumed that a letter was seven centimetres high, and now you should make it higher, up to ten centimetres". I replied, "all right, we will make it up to ten centimetres high, but finally you will choose the letter size yourself". We scheduled the next meeting ofr the following week and I made both ten-centimetre-high and seven-centimetre-high letters, I made two panels, I went to the Ministry of Communication, I hung it at the end of the corridor and I asked the director to go out of the office and choose which font size he preferred – which was readable for him. And he chose the ten-centimetre one. I said, "let us come closer", and the director chose the seven-centimetre letters... These were the problems we were to solve. One day, Sołtan called me and said, "Bogusław, bad news – a meeting about the lettering with the railway workers is coming, with the minister himself". But he immediately added , "do not worry though – they are coming with a minister, but I asked for the deputy prime minister". He had good contacts with the deputy prime minister thanks to the industrial design work. And thanks to that, Sołtan was able to find a way around. When we were about to leave for the meeting, he said to me, "you know, they cancelled it – probably they were afraid that the deputy prime minister would be there". It is not commonly known that we had to overcome all these problems. Mrs Lipkowa wrote[8] for example that Sołtan went to Rosa Luxemburg Factory[9] in a freezing blizzard to get fluorescent tubes for the station design – but it is not mentioned why he had to do that... We designed those mistreated and now desecrated mosaics and mosaic stripes... They were made out of small tiles, small convex square tiles. We had numerous trials, we burned these elements, but they were collapsing. Only afterwards, a specialist told us that the shell should be uniformly thin. The final elements were to be made in Włocławek,[10] and the faience production in the factories had to be partially halted and one of the production lines was assigned to produce those tiles. However, as it was normal back then, some ceramic producers appeared and they were given the commission by the Visual Arts Laboratories,[11] quite a corrupt institution... There was a group, which had already worked on the mosaics: Viola Damięcka, myself, Adolf Szczepiński, and Jolanta Bieguszewska. We were to make them through those Visual Art Laboratories, but the director said, "who are Smyrski and Szczepiński? I do not know them, and I am not sure whether they would be able to do that. It will be done by those who know how to make mosaics". That is why they were commissioned from Grzeszkiewicz.

8 Barbara Lipkowa, 'Myśliwiecka', 1978, see: MASP-JS.
9 Production Factory of Electric Lamps (Zakłady Wytwórcze Lamp Elektrycznych) named after Rosa Luxemburg was a lamp and lightbulb manufacturer in Warsaw.
10 Włocławek has been known for faience production since the nineteenth century, and faience factories are still operating in the city.
11 Visual Art Laboratories (Pracownie Sztuk Plastycznych) created in 1949 was an artistic organisation aimed to gather artists and promote the reconstruction of Poland after the Second World War.

S.R.: Apart from the realisation, the design was still the same that had come out from the Workshops, wasn't it?

B.S.: Yes, the design was by Fangor and it remained unchanged. However, with these tiles in Włocławek, it would have cost some ninety dollars for the pigments alone, because they had to be imported...[12] We were yelled at that it was impossible and instead those who were to produce the tiles were sent to Italy with dollars to pay for the pigments. As a result, the station was opened three months later, because they delayed the production. What is more, not all the mosaic tiles, even if they were made, had the right colours. They were to be beautiful, saturated colours. Whereas red was perfect, orange was perfect, and ultramarine was pretty, all the green shades were somehow faded... In order for those mosaics to sparkle, we needed to add coloured lights there... A complete nonsense: add coloured lighting to the mosaics. That is why Sołtan had to go to Rosa Luxemburg Factory: they were to produce these coloured fluorescent tubes...

S.R.: Were these tubes finally coloured?

B.S.: Yes, they were coloured, some were white, some were blue... Somehow, they brought the mosaics back to life... Another thing, which united visual information and acoustics were the track ditches. There were perforated panels so that if someone fell down into the ditch, it was possible to hide behind them. It was also the biggest sound insulation device within the station. Inside, there was sound-absorbing material, similar to the one filling the aluminium rack at the top. I think they are still there, but one cannot see them today, because there is no lighting and no colours... Owing to the acoustics properties of these elements a train entering a platform was actually inaudible because of the sound absorbing elements in the ditch, around the columns, and along the walls... Everything was somehow sound-absorbing. The rail ditches were once again coloured – one was red, and the other blue. At the same time, they were squeaky clean and they were illuminated... It was one of the most common criticisms against the Academy back then: we were said to "illuminate rubbish". But when I went there a week after the opening, I talked to a railwayman working at the station, and I asked him, "please show me a cigarette butt in this ditch", and he told me, "you see – no one throws them away there, there is nothing there". It lasted for a long time – the lighting was very useful for that. And the visual information itself, together with the coloured elements, was present throughout the station in the vertical mosaics, in the ditch panels, and in the ceiling mosaics, which today are either blackened or covered by some kiosks...

S.R.: You were the design coordinator – so what was Sołtan's role in the design?

B.S.: Sołtan was our master. The very word "master" at that time referred to the programme of the school. According to socialist realism, which was already in decline, a master would have his programme, and he would influence his students... It was the same in the Workshops. Sołtan was the leader, the leading designer. Ihnatowicz was the co-author, and he took the role of a construction specialist. And there was Fangor, who designed the mosaics. The group consisted of the professors and of the rest of the team. Of course, there were also specialists, like acousticians. For example, instead of having two loudspeakers, the so-called "columns", we had around four hundred small "whispering speakers", which you could hear anywhere at the ration. It is also often forgotten that Lebecki designed the rack... That is a core element of the station.

S.R.: You mentioned the rack was acoustic too, right?

B.S.: Yes, definitely! That rack is very light, made of a very thin steel sheet: it is a kind of four-centimetre-high perforated U-profile... Another question was who would perforate that... We found someone who had a sieve production site and had ready-made perforating elements with nails... We needed to find a technology to make it, because it had to be perforated and – at the same time – the construction had to be rigid enough as some of the elements were to be four-metres-long. These steel sheets were filled with an insulating material, so the rack became one of the main sound-absorbing elements: at the same time, it absorbed noises, hid the construction, and hid the speakers. Moreover, the rack was related to the issue of lighting and its dispersion. I prepared a concept and showed it to Sołtan, and he approved it: the fluorescent tubes were to be positioned in rows, either more densely or more sparsely. Where the main part of the platform was and where people were staying, they were positioned more densely so that the light was brighter, whereas the areas used only as passages were darker. That was another issue, since the railway company invited its employees to the meetings and some of them – elderly retirees, who remembered lighting gas lamps at railway stations – claimed to know better how

12 The value of ninety dollars in 1961 was equivalent to around 7,300 Polish złoty according to 'Historical Currency Converter', *Historical Statistics* (2021) <https://www.historicalstatistics.org/Currencyconverter.html> [accessed on March 25th, 2021]. The average one-year wage in Poland in 1961 was 19,500 Polish złoty, see: 'Przeciętne wynagrodzenie od 1950 r.', *ZUS* (2021) <https://www.zus.pl/baza-wiedzy/skladki-wskazniki-odsetki/wskazniki/przecietne-wynagrodzenie-w-latach> [accessed on March 25th, 2021.

to organise lighting within a station. During that discussion on lighting, we had our lighting specialist and two professors from the Polytechnic of Warsaw who wrote a study about the optimal lighting for a railway station. I must here add that Sołtan really wanted the interior to be bright. Back then, according to standards in Moscow there should be around one thousand or five hundred lux of light... We quite modestly proposed around three hundred lux – because nobody would have agreed for five hundred – but one of the two professors proposed twenty-five lux... When he was reading that, our electrician took out the national standards and said, "Professor, our Polish standards say that twenty-five lux is used in toilets and secondary military spaces".

S.R.: ...not inside a railway station in the very centre of the city.

B.S.: No, not in the centre... That is how we defended it. I can tell you about yet another discussion, because it really well illustrates the atmosphere we were working in... There were so many of those... At the beginning, when we were talking about the materials, and in particular about the spatiality of the platforms and the waiting rooms, we assumed that there would be a glass wall dividing platforms from the waiting rooms. Back then, it was a problem to get glass which would not deform human faces... Only such a low quality glass was available in Poland. Back then, dollar was very highly valued, and since the cost of importing them from the West would be around – I think – ninety dollars, our government refused. You simply could not import it from the imperialists. You could import only from socialist countries. Finally, they chose Czechoslovakia, which had good quality glass. But apart from that, Sołtan got a list of materials, which were to be used in a railway station construction.

S.R.: An imposed list?

B.S.: Yes, imposed, directly from the ministry. There were some twelve or sixteen materials, which we could use. Sołtan started reading it aloud during one of those big meetings, "hard fibreboard, soft fibreboard, brick, chipboard, glass, steel", and at the end, Sołtan asked, "dear Minister, I am really sorry, but can we also design a station out of dried shite?" – and the discussion ended there...

S.R.: Was it one of the first meetings?

B.S.: Yes, but in general, there were many stories like these, because Sołtan was attending those meetings. As far as the stone is concrned, there is yet another story about the samples we got and what we actually received. It was a disaster.

S.R.: Among all of these elements – cladding, colouring, lighting, acoustics, mosaics, lettering – were there any elements that were particularly important for Sołtan in this design?

B.S.: He was interested in the general outcome... But the mosaics were a kind of central aspect to it. However, one of the first ideas was not to give travellers a kind of a cellar feeling. The idea was to avoid the sensation of leaving a dark dungeon when going outside into bright sunshine – that was the first task. It was achieved thanks to the rack and the lighting. The exits had to have more artificial light, because one was leading outside directly toward the sun. In the evening, these lights were dimmed because it was dark outside. All these things were designed and studied very carefully. It was something that Sołtan paid a lot of attention to. I remember for example that later, when I was working in a design office, people were coming to me with projects so that I would design the lighting, its layout and its colour. Sołtan, when he was designing a building, was telling that it ought to be clearly read both during the day and at night. That is why he was so careful about how the night illumination would look like, in order not to allow a cacophony of five different types of lighting... He made us sensitive to that. A second important thing at the station was the passengers, both arriving and departing, which was connected to the mosaics and how they were perceived. Viola Damięcka did some studies after Fangor with diagrams showing how these mosaics would be perceived by someone in a moving train.[13] Of course, there were also some minor facts, like a nursery space in the waiting rooms. The waiting rooms were a completely different world. At the platforms, the light was coming from fluorescent tubes, while in the waiting rooms there were normal lightbulbs. The walls were clad with black suede in order not to have flashing lights... it was quiet, there were some benches for the passengers to sit. That was the third thing. Then, there were some minor elements – for example cleanness – that was also a success. Once the New Year's Eve gala was organised at the platforms – the movie chronicle shows for example Jacek Damięcki dancing... Back then, the station was called "Warsaw's salon". We also used very simple materials. A special study was made for those four hundred columns, which sustain the square above – they were to be clad with the simplest, the roughest lacquered fibreboard, which was soaked with water in order not to bend. All the installations were hidden there – heating, ventilation, *et caetera*. They also included acoustic panels. Sołtan wanted to show it was possible to be creative even with such simple materials. It was later repeated in other designs in many cities.

13 Drawings of the perception studies are kept by the Museum of the Fine Arts Academy, see: MASP-JS.

S.R.: Do you know Sołtan's opinion – or a general opinion in the Workshops – concerning the realisation? Were all the things realised as they should have been?

B.S.: I think it was received as it should have been. By the way, I am very grateful to Sołtan for taking me on board for this design, even if I was not there during the last days of the work, because I was conscripted into the army. But people were still calling me when I was in the barracks in Wrocław and they were asking me different questions...

S.R.: Did you work on other designs in the Workshops?

B.S.: I worked a little on the stadium, but it was mainly with Ihnatowicz. I also worked on 'Wenecja' bar and on a competition design for a complex for the Voivodeship National Council buildings in Kielce. The design group – Ihnatowicz, Brejowski, and myself – won this competition, we took the first prize and the design was assigned to be built, but eventually it was not realised. The design consisted of three main volumes. One was a ten-floor office building, another was a theatre hall, and the third one was another office building. I was working on that thirty-metre-high office building. This design was a kind of Sołtan's prize, because I had been taking part in a design of another high-rise building, and then I had to leave the group, but Sołtan told me, "Bogusław, please do not worry, there will be a design you will be doing here".

S.R.: What was the work in the Workshops like?

B.S.: There were groups working on specific designs: for example 'Warszawianka' stadium was led by the head of the office, Gessler, 'Wenecja' was led by Szczepiński, 'Dukat' department store was led by Brejowski, and I was leading the railway station. Actually, the design was led by Sołtan, but I was managing coordination and organisation. Then, there were also other designs... But these were the most important ones back then. 'Warszawianka' and its stadium continued for many years, because it was quite a long design. In general, the entire team was at the office head's disposal, but the design coordinators were helped by others. For Warsaw Midtown railway station for example, the speakers were studied by Brejowski. My schoolmate, a graduate from the Polytechnic and Sołtan's student, Tadeusz Stefański, worked on the kiosk design for the station. Terlikowski designed three phone booths in the middle of the central platform, which were introduced there by Ihnatowicz – even if you cannot see them in the drawings. Apart from those, there were also some booths at the very end of the first and third platforms at the exit to Emilia Plater Street. There were around five booths with doors. Another very important design, which disappears in the descriptions, was the cladding of the columns designed by Bogusław Winiarski. Szczepiński was working on a beautiful design of the ticket desks... He was drawing them with a one-millimetre felt pen in 1:1 scale. In the meantime, I was drawing the handrail, stone cladding divisions for the floor and the walls... Lebecki was the mechanic for the rack, and Sadowski was working on the acoustics. In general, people were leaving other designs when more work was needed. It was typical of many designs. In addition, Sołtan treated all of us equally, whether one was a professor or a janitor. The carpenters – he called them "artists". He always greeted everyone, he talked with everyone. Everyone was an equal member of the Workshops.

S.R.: What were you doing for the design of the stadium?

B.S.: I was working mainly with Ihnatowicz. There was a building with a cafeteria, and I was designing its interior. But at that time I was already working on the railway station. For 'Wenecja' I had to design the staircase and the main hall. It was like this – someone was working on the stools, someone else on the counters...

S.R.: So the role of Sołtan and Ihnatowicz was to make sure all of these elements would work together, wasn't it?

B.S.: Naturally. The atmosphere was fantastic. By the way, everyone came when they could, and everyone would mark on a piece of paper when they would be there.

S.R.: Is it possible to say that in the Workshops some designs were more by Ihnatowicz, and others were more by Sołtan?

B.S.: In the Workshops it was not that like one design belonged to the former and another to the latter. Ihnatowicz was leading Olsztyn and he was the main designer for 'Wenecja', but Sołtan was involved in those

too – as our entire team was. The only thing – one of them was the project leader, and the other was not.

S.R.: Well, someone had to...

B.S.: Yes, they were the main designers, and apart from that there were different design coordinators responsible for the organisation – like I was in charge of the railway station design.

S.R.: When you finished your military service, did you come back to the Workshops?

B.S.: Yes, but only much later. Then Ihnatowicz dragged me to a design office. When the Workshops were dissolved, I remained at the Academy. That dissolution was a terrible mistake... I was there and I saw it happening. It was because of envy and jealousy of one another, even though the Academy itself owed much to the Workshops, and the students could also learn a lot. There was some kind of envious feeling all the time, and Sołtan was the one whom many felt jealous of, for example of his freedom. The fact that he was able to travel freely – that was just adding to that feeling. But we did gain from his travels. Groups of Japanese were coming to Warsaw Midtown to see that famous railway station, and articles were written about it... Once I was asked by Tomaszewski, "Bogusław, please let me know, what the Academy gave you?", and I answered him "Professor, almost nothing – but the Workshops, they did". There I learned about design and about realisation. At school there was little concern about that: Sołtan was often leaving and we were doing one design per semester... When working in the Workshops, one could have a look at what the colleagues were doing. It was a fantastic school...

S.R.: Do you remember any moments when your work was criticised by Sołtan?

B.S.: It was during one of his longer stays in Poland, on the first day after his arrival at the Academy from the United States. He criticised me so much that I could have hidden under the table... I was working on a design for Sołtan's studio, it was a cinema building, for which I had also done a model. Tomaszewski had seen that model and got interested, because it was a completely different cinema layout, a completely different form. I was told then that I should stick with this design as it was to be continued to be studied and further developed by the graphics students – apparently Professor Mroszczak asked for this. That is why I had to make some technical drawings, and since Sołtan was to come, and those graphics students were starting to work on that design too, I started to make more detailed drawings on 1:1 scale. When drawing these, I started to add some structural elements, and I think I drew something like three steel bars in reinforced concrete... When Sołtan saw that, he got furious: "do you think I know how many bars there will be? Do you? Because I don't! That is something for a structure specialist".

S.R.: So it was not about the form of the building, was it?

B.S.: No, it was about the details. He meant that I drew these bars without a reason. The drawing was clear in showing it was reinforced concrete, and that would have been enough... Afterwards, it was completely different to look at the designs and to prepare them.

S.R.: Let us talk more about when you were a student...

B.S.: From the very start Sołtan was a demigod for us. Everyone tried to get into his studio. That is why he had done what I told you about before: he had organised a studio admission exam to select the students. He was surely demanding and he forced us to think. He was also famous for his drawing line, a Corbusian line... Somehow, I had a similar way of drawing. I am not sure why, but probably it came from following Sołtan's example. Anyway, in the Workshops, Mrs Lipkowa was calling me "Little Le Corbusier". I was doing Sołtan-style drawings, and probably because of this he somehow dragged me along. Then it was also a question of punctuality and discipline. Until today, I have been like this thanks to Sołtan. When we arranged to meet at the station with Sołtan, he was coming from one side, and I was coming from the other one, and we were meeting right at the place. He would look at his watch, and say, "Dolo [diminutive for Adolf Szczepiński] should come in twenty minutes". Up until today, I cannot enter someone's house more than a minute earlier – I would wait in front of the door but I would not enter... Besides Sołtan had such a strong sense of freedom and duty... When we were working in the Workshops, it was not a full-time job, we were just coming to work for the professor. I had my key to the Academy and I used to come on Sundays or in the evening to stay until midnight. When we had a deadline, Professor Sołtan was coming, as did Professor Ihnatowicz with his wife and his son. His wife was cutting the drawings, and his son was folding them. It had a huge impact on the students, to show that kind of working culture. There was also a great freedom of life in general – not to mention Sołtan's sense of humour and wit... Sołtan could go around wearing a white suit with a red bow tie, but he also could wear black trousers and a red chequered shirt with holes at the elbow level as well. In the Workshops, he was sporting a cleaning woman's apron tightened with a string. It was so normal...

S.R.: How about the Academy and the Workshops as regards Le Corbusier, CIAM, and general contacts with the West? How were they mentioned?

B.S.: Actually I know the others much less, I did not have good contacts with them...

S.R.: With whom?

B.S.: With other teachers... I do not know whether it was envy because I was following Sołtan and not them... Through my colleagues, I can say that they were well aware of Le Corbusier's work. For them, it was a completely different story, but they definitely were not opposed to his work. They were simply doing other things. The difference was huge. In our studio, we were all very close to these issues. Sołtan gave us all Modulor tapes and everyone was keeping them. When I received mine, I tried working out a different scale based on the Polish medium height – which was much appreciated by Sołtan by the way. I started to apply this and I do still apply it until today. These dimensions are now part of me and I use them when I design.

S.R.: How was Le Corbusier's work present in Sołtan's studio and practice?

B.S.: All the designs he knew or had worked on, he studied with us. His assistant Wittek – it was also his life. Sołtan said to me once, "Bogusław, if you have any difficulties with Le Corbusier, just go to Włodzimierz", as the latter was a walking encyclopaedia.

S.R.: As you talk, I get an impression that Sołtan was somehow different from other teachers...

B.S.: He was different due to his general style. I can compare Sołtan to Ihnatowicz and Zieliński – to those who were also teaching architecture. Those were the three architecture studios that we were able to choose from. Other professors were not architects. Whereas Ihnatowicz was very similar to him, in that other studio it was different. You could have seen that through designs and discussions.

S.R.: Could you tell me more about these differences? Were there more discussions in Sołtan's and Ihnatowicz's studios?

B.S.: Well, the amount of discussion perhaps was the same, but the approach was completely different. In Sołtan's studio there was that intellectual atmosphere, a connection to the broader world. We were working with universal issues... It was like what I mentioned at the beginning, when Sołtan was lecturing construction. He started talking about that carriage and everyone remembered it. It was his ease in teaching. A part of his lifestyle.

S.R.: You mentioned that many people – whether they were Sołtan's students from the Academy or were coming from elsewhere – wanted to work in the Workshops... Were the Workshops something exceptional when compared to the rest?

B.S.: It started with a very small workshop producing pigments for students, and afterwards, thanks to Sołtan and thanks to the connections he had, and thanks to the dean – the actual Workshops opened. However, at the end, when Sołtan had already left, I could see some things going on there... but still, many people from other faculties – for example from the Faculty of Sculpture – were amazed by Sołtan and the Workshops.

S.R.: How was it possible to organise something like that in communist Poland?

B.S.: It should actually be credited Sołtan, who had some connections thanks to his fellow prisoners from the camp.

S.R.: For example, Urbanowicz worked in the ministry...

B.S.: He was a department director. Still, he did not always agree with Sołtan. There was a controversy about how many faculties should be at the Academy. The authorities wanted only the three classical ones – painting, sculpture, and graphics. Not architecture, because it was already taught at the Polytechnic and they did not want to double the curriculum. Then, there was an idea that there actually could be two architecture faculties. Then someone claimed there should be one faculty only. It was constantly changing. I entered the Fine Arts Academy, then I attended the Higher School of Visual Arts, and then I was back again at the Fine Arts Academy. I got the graduation diploma from the Fine Arts Academy, and the following year I got the title of Master of Art. All the time there were controversies concerning professors, and concerning artists... Sołtan

did believe that architecture was related to arts, and many were unable to understand that. The same was with the Polytechnic. A fellow faculty member who was teaching construction at the Academy before I took the module over, graduated from the Polytechnic, and students from the Polytechnic were coming to us to attend his lectures. I had knew him since he was a student and when he was preparing the diploma at the Polytechnic under Professor Pniewski, he asked another colleague of mine and myself to help him to develop his design visually. We made two-metre-long drawings, almost as the drawings for the Brussels EXPO pavilion from the Workshops. When the professor's assistant came, he said, "well, it will be a graduation with honours". But then came Professor Bogusławski whom Sołtan disliked. Pniewski did a very short presentation and concluded, "what more shall I say, let the work defend itself". The former started to criticise details, and basically two camps of professors were formed... As a result, the student barely passed with a "satisfactory" mark.

S.R.: You have mentioned a few times the unwritten conflict between the Academy and the Polytechnic. Does this mean that the Academy had more freedom or leeway than other schools?

B.S.: I think it did. What we heard about the Fine Arts Academy in Cracow, it seemed much more schematic. In our Academy, at the Faculty of Interior Design, I think there was only one Party member as a teacher and another one as a student. That Party professor once said to Kamiński to shut up, "because I am from the Party and I actually can say something about socialist realism".[14] Moreover, I worked for a while in Pniewski's practice and elsewhere, and I could see and tell the difference... and the discussions... the discussions were the worst. When I once read in some study that Sołtan was criticising Bogusławski, that was really heartening... because I know that Bogusławski was fine when working on the concept, but when speaking about the details, he was not so good. That was the difference between the Academy and the Polytechnic – we studied details. As I mentioned, students from the Polytechnic were coming to audit construction lectures. Lectures in mathematics by Professor Zonn were audited by some girls from the University of Warsaw from the Faculty of Mathematics and Physics. Statics by Professor Hempel, the designer of the Poniatowski Bridge, were audited by actual constructors... That was the difference between the Polytechnic and the Academy. Sołtan once told me, "dear Bogusław, the fact that you are here at the Academy and not at the Polytechnic, has been like winning a lottery ticket. Here you can think. And there they just draw". That was the difference – and that was so true.

S.R.: So the Academy was much more interested in the details...

B.S.: It was! I once asked an engineer to calculate one letter from the "Warsaw Midtown" sign. Later, I was working on very similar letters, but bigger, for a three-metre-high neon on a metal rod support for Zakłady Azotowe in Włocławek.[15] I made a drawing of that support and gave it to make calculations, and an engineer came to me and asked, "please let me know your secret and tell me how it is possible that you draw something, I make the calculations, and they simply confirm your drawings". I told him, "that's because it's Sołtan's and Ihnatowicz's school – drawing and observing things in real life". When the American Embassy was built in Warsaw and there was an exhibition of graphics there, I went there with some papers, I sat next to the window, I took a sheet of paper and a pencil, and with the pencil I started to measure aluminium profiles from the window's frame to use them in a design later. They were the first ones in Poland!

S.R.: Was it difficult for the Workshops to get commissions?

B.S.: I think that one somehow dragged another. When people saw that what we were doing was good, then other things came. On the other hand, some connections were helpful. For example, Sołtan knew the communication department director Kupciński – who collaborated with the Academy very well

S.R.: Can we say that there was a difference between what was designed in the Workshops and what was designed in Poland in general?

B.S.: There was a tremendous difference, for sure. It is enough to look at the designs we now try to restore – for example the Central Department Store in Warsaw designed by Ihnatowicz. If you look at 'Wenecja' – it was once a beautiful building, but it was painted with pink oil paint... Now it came back to how it looked before. There was a cafeteria and a fountain inside, and everything was so connected within the space... it was very much unusual back then. Take even the heating plant building in Dzierżoniów. It was a complete revolution too. There were many factories back then, but this one stood out easily. Such things were simply neglected in general... In 'Wenecja' someone was making installations without looking at the design, and when Ihnatowicz

14 Sołtan's lack of appreciation for Kamiński and criticism of the latter's allegiance to the Party's propaganda, see: Andrzej Bulanda, *Rozmowy o architekturze* (Warsaw: Muzeum Akademii Sztuk Pięknych, 1996), p. 43.
15 Zakłady Azotowe in Włocławek is a chemical industry company, which produces nitrogen-based chemical products.

came, he said, "wait, there is a window here and barrels will be entering through here, and you have traced the installations in the middle of the window".

S.R.: How was it in the Workshops when Sołtan started to go back and forth between Poland and the United States?

B.S.: I think it was simply about us waiting for him. Afterwards, after these six-month periods, he went there permanently quite soon – and of course he was not there in the Workshops. After a while, the school's administration was dominated by some Party-based colonels, who did not feel that – they did not feel the atmosphere of the school.

S.R.: You mentioned before your own didactic work. What were you teaching?

B.S.: These were different things. The first lectures were part of a technical study. It consisted in studying elements of the outer shell and everything inside: division walls, interior decor, elevations, and cladding. It was led by three lecturers. One was specialised in concrete, another one in plastic and artificial materials, and the third one in wood – and I was the third one. It was a module continued from the second year up until the diploma, and it was supposed to help in working on the designs and diplomas... But then I was burdened with teaching construction for the first-year students. I was leading this module for many years... It was possible back then to feel that architects did not have contact with the design, and sometimes I was pointing to that. For example, I rigidly opposed the use of the scale 1:2... It does not exist. Ihnatowicz was drawing in 1:1. But architects use the 1:2 scale, which is a very misleading scale, because the drawing actually could be in 1:1 or in 1:2... It occurred to me once when I was looking at a drawing of a suspended ceiling. I thought it was in 1:1, but it appeared it was in 1:2. I thought it was a two-millimetre layer of fibreboard, while it was a four-millimetre steel sheet... It was a ceiling which weighed some sixty tons. It also meant lack of critical thinking. Sołtan was different – he was very thorough and everything had to be thought through. When I was teaching in a studio, everything started from thinking – and not as it happened once when a student came claiming that she knew more things than I did because she had worked three years in an advertisement company... I showed her kindly – as Sołtan would have – that she knew nothing... During one review, during two reviews, during three reviews... for the fifth one, she came in and apologised.

S.R.: When you were teaching at the Academy, were you somehow referring to your experience with Jerzy Sołtan?

B.S.: All the time, all the time – and I had been within these walls in Myśliwiecka Street for fifty-five years.

S.R.: And concerning the construction module taught by Sołtan...

B.S.: It was very short... I do not remember the whole story, why Sołtan was removed from architecture and design studio teaching and why it was decided that could teach technical subjects only. He lectured that only for a couple of weeks, and then Zieliński stepped in and lectured construction himself. I do not remember many lectures by Sołtan from this construction module, probably because he was away... Zieliński taught it as 'interim', somehow replacing Sołtan, but then more construction specialists came from the Polytechnic, as for example Wasiutyński, who lectured it for two years and who designed that square structure above Warsaw Midtown railway station. But it was clear that it was Polytechnic-style teaching. The professor came for the inauguration and for the final exam, and assistants were actually lecturing... Wasiutyński had about seven assistants.

S.R.: In one of her texts Jola Gola writes that Sołtan had an extraordinary capacity to find talent in people[16] – how would you comment on that?

B.S.: Yes, and an example could be the fact that he realised I had some manual and drawing skills. Afterwards, in 1984, when he was in America, a postcard came from him to the Academy because he saw a design of a house in New York I did. He wrote then, "dear all, Eugeniusz Bolesławski showed me drawings of his house. I was touched by the quality and by the elegance of these drawings so much that I need to write to congratulate you. Best regards, Sołtan". That is what he was like... Until today I regret that I did not send him the design of a church I made for a competition...

S.R.: Church designs were important for him...

16 Jola Gola, 'Jerzy Sołtan', in *Ineffable Space*, p. 100.

B.S.: Very important – and he got burnt with the one in Sochaczew... I think that he would have liked my design for a church in Siedlce very much.

S.R.: What were your contacts with Sołtan after he emigrated permanently?

B.S.: I was preparing the specialisation under Sołtan and somehow, I continued to live that vision all the time... It accompanied me at each step throughout the school: Sołtan was somehow present, and we even called it "Sołtan school". However, I have to tell you that about five years ago I was talking to some colleagues who continue to work at the Academy and a couple of them snorted in disdain, "what is Sołtan and what is Le Corbusier?". Towards the end of my work at the Academy, in 1995 when Sołtan came, I got an award from the dean and I was called by him. I was given the award, I turned back to sit at my place, but Sołtan jumped from where he was sitting, hugged and congratulated me... Wittek told me afterwards, "See, Bogusław, the award – it's not worth anything – but look at Sołtan's reaction".

S.R.: His congratulations were worth much more...

B.S.: But of course. Even more, once Sołtan helped my colleague to find a job in the United States. Everything was scheduled, but just before the departure, when everyone knew that he was leaving, he went to the American Embassy and it then turned out that he had water in his lungs and he would not be permitted to leave the country in such a state. Instead of the United States, he had to go to Zakopane to take care of himself. But still Sołtan told him, "Andrzej, do not worry, they are waiting for you". He got better and left. When Sołtan said that someone was good, it meant they were worth waiting for...[17]

17 Collection of articles by Andrzej Pinno, 'Wędrówki architekta', 2004, see: Warsaw, Library of the Fine Arts Academy, PM 656.

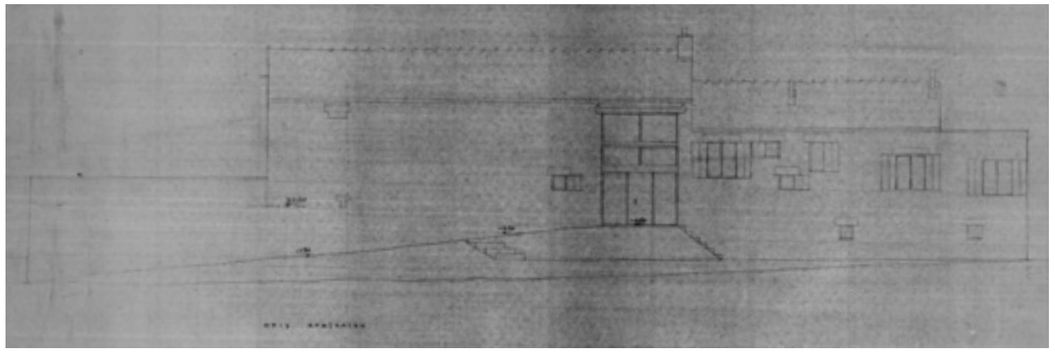
appendix: archival documents

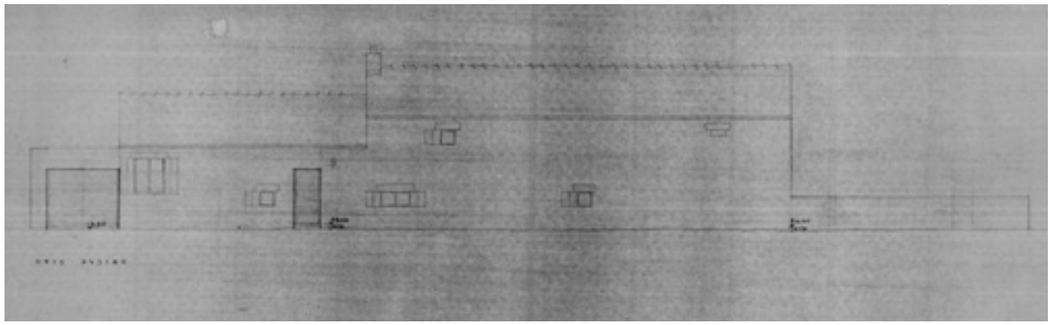
This annex contains archival documents retrived from private collections, inaccessible to the general public, differently from the institutions such as Frances Loeb Library at Harvard or the Museum of the Fine Arts Academy in Warsaw. Tracing these graphic materials made it possible to have a more complete documentation of a number of projects designed by Sołtan after he left Poland. During the thesis, the drawings were scanned with the consent of the private owners and the scanned versions were shared with the Museum of the Fine Arts Academy in Warsaw in order to guarantee further accessibility of the records.

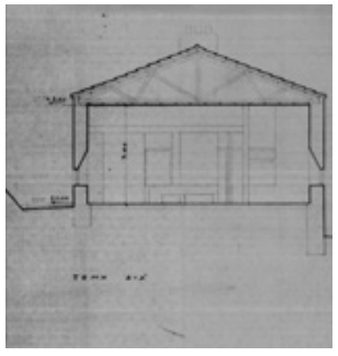
Identification and scanning of drawings from private archives regarded the following designs:

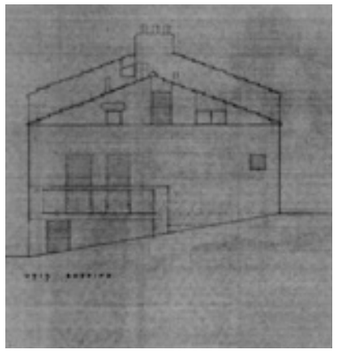
Jaqueline Tyrwhitt House, Sparoza, Greece (1963)
Salem High School, Salem, MA (1970-1976)
Hayden-McFadden Elementary School, New Bedford, MA (1975-1976)
Carney Academy Elementary School, New Bedford, MA (1975-1976)
Breed Middle School, Lynn, MA (1977)
'Diomede' competition entry, Bering Sea (1989)
'Atlas' competition entry, USA (1990)
Holocaust Memorial competition entry, Boston, MA (1991)
World Class Restaurant, Boston, MA (1980)
church theoretical design (1952-2003)

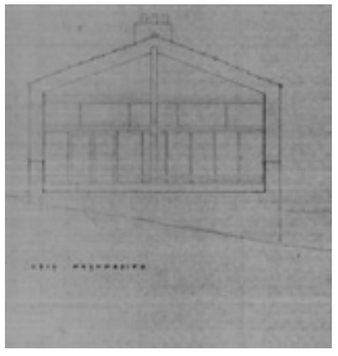
Jaqueline Tyrwhitt House,
Sparoza, Greece (1963)
source: Joanna Sołtan private collection
& Mediterranean Garden Society

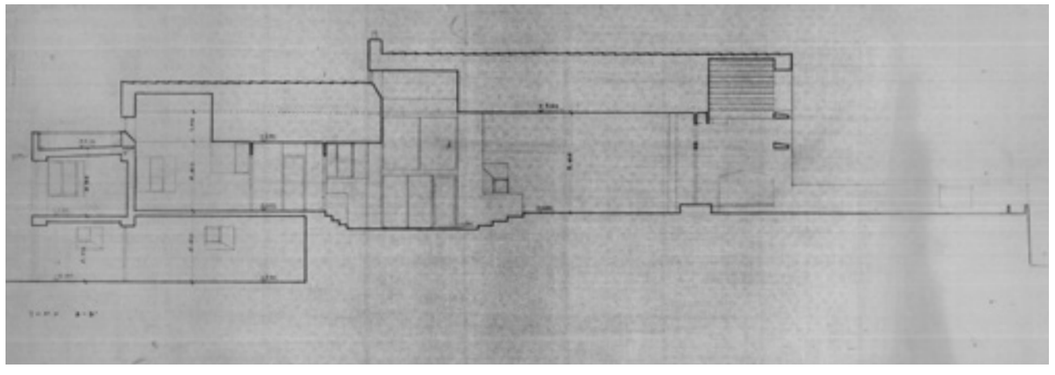


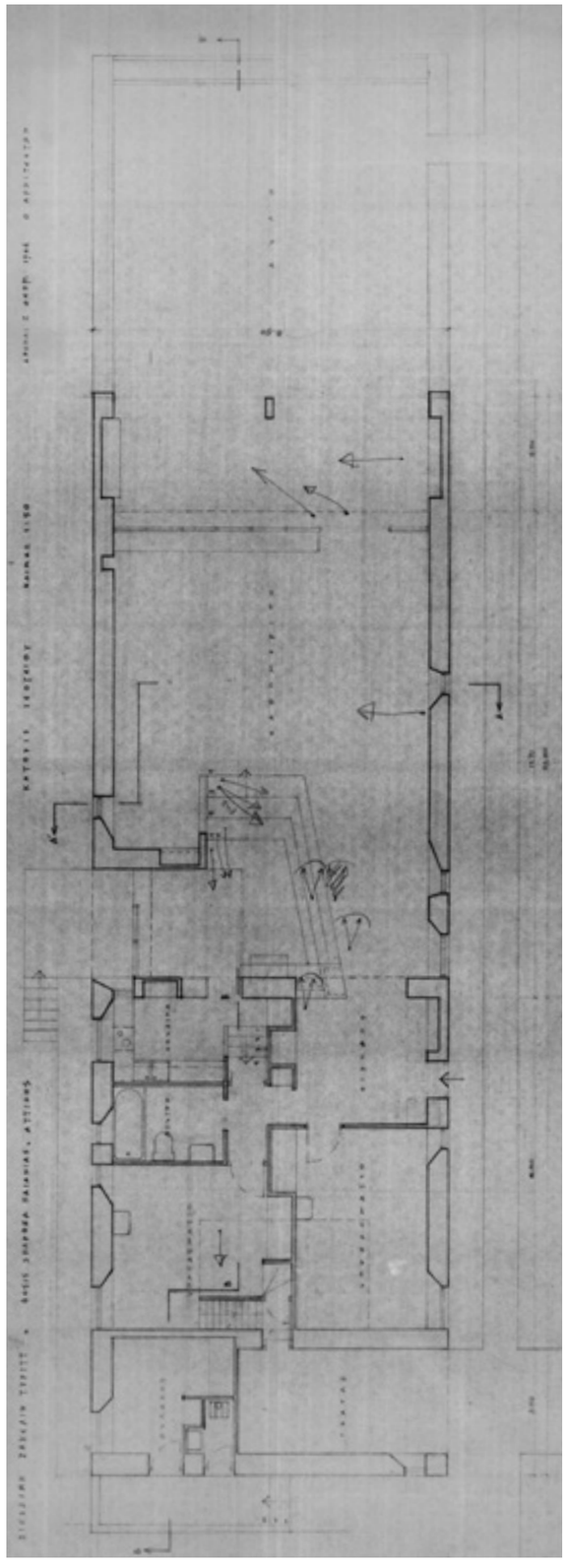




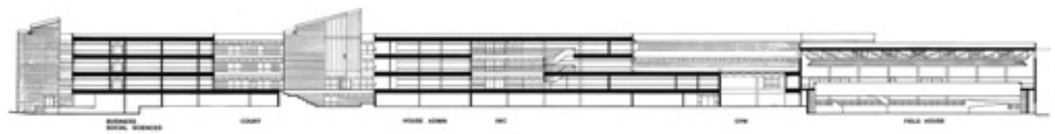


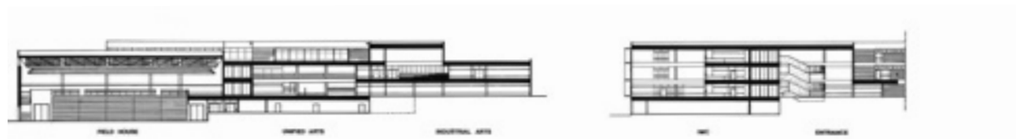


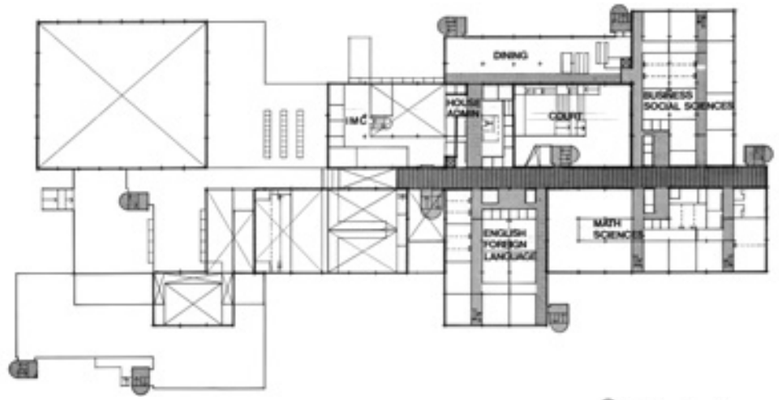


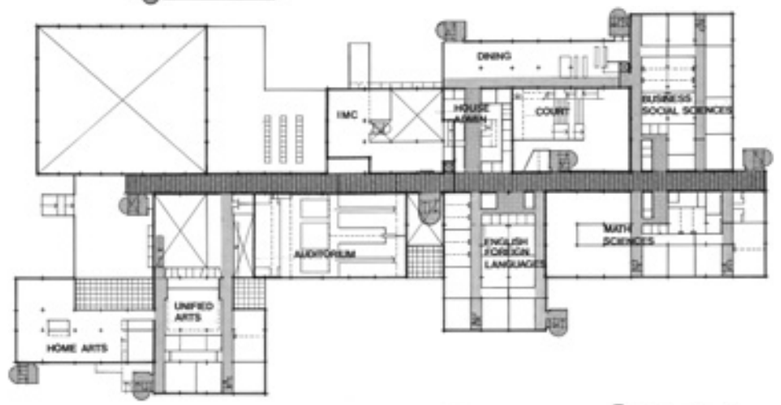


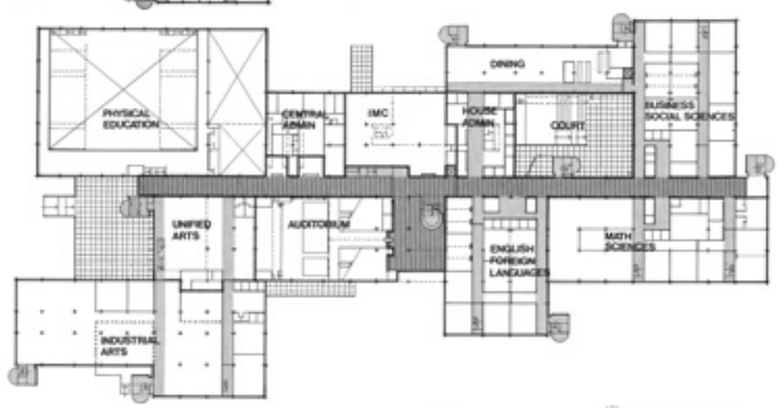
Salem High School,
Salem, MA (1970-1976)
source: Joanna Sołtan private collection
& Edward Lyons private collection

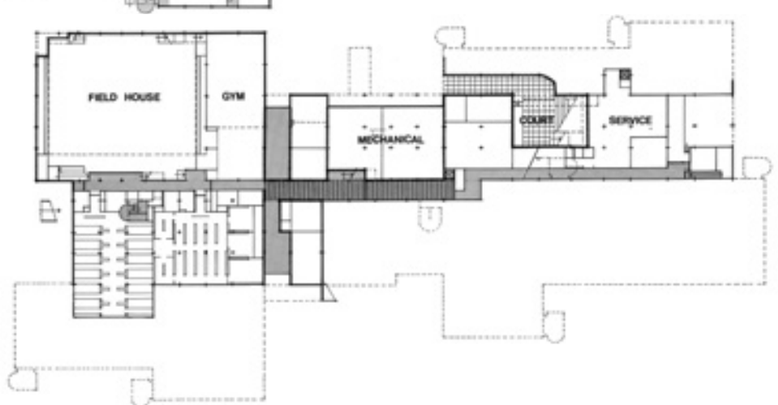


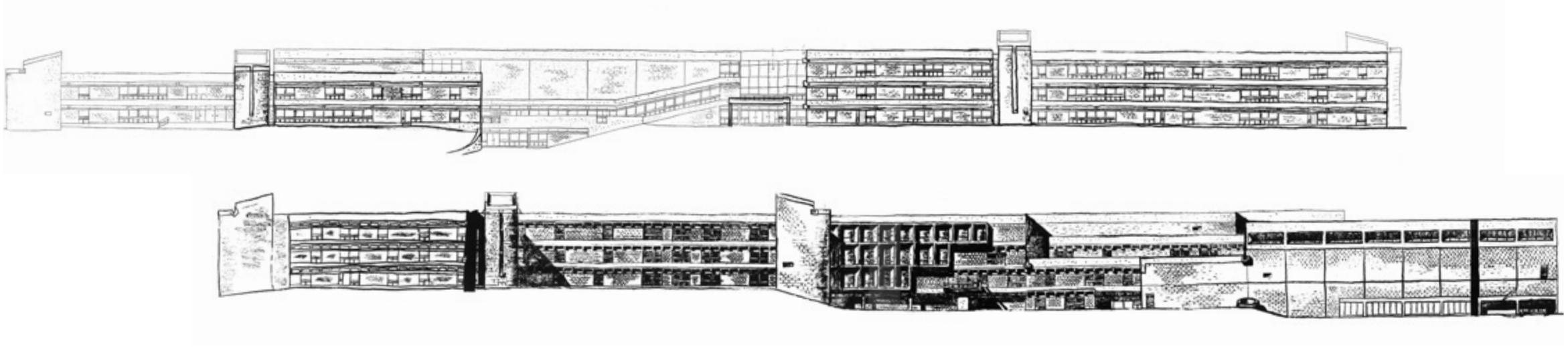




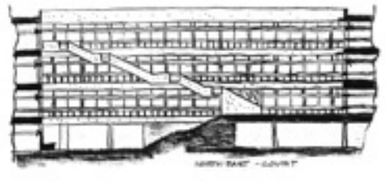


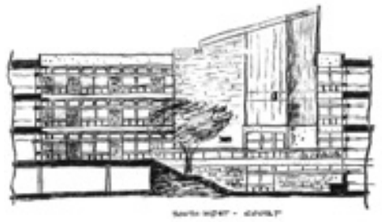


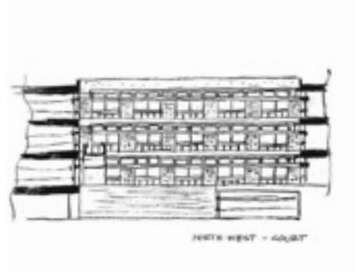


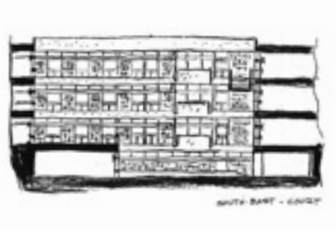



SOUTH- EAST

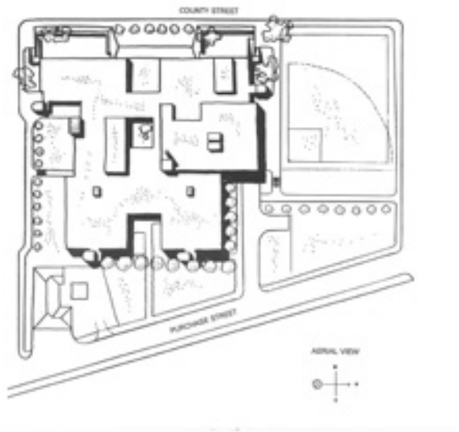


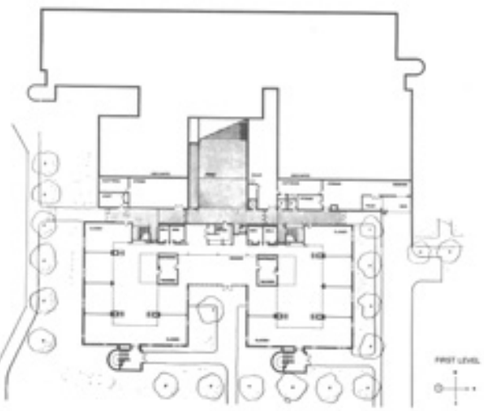


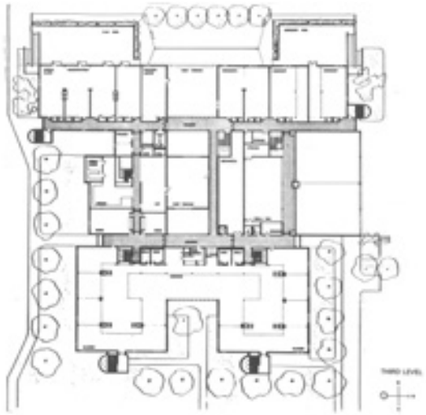


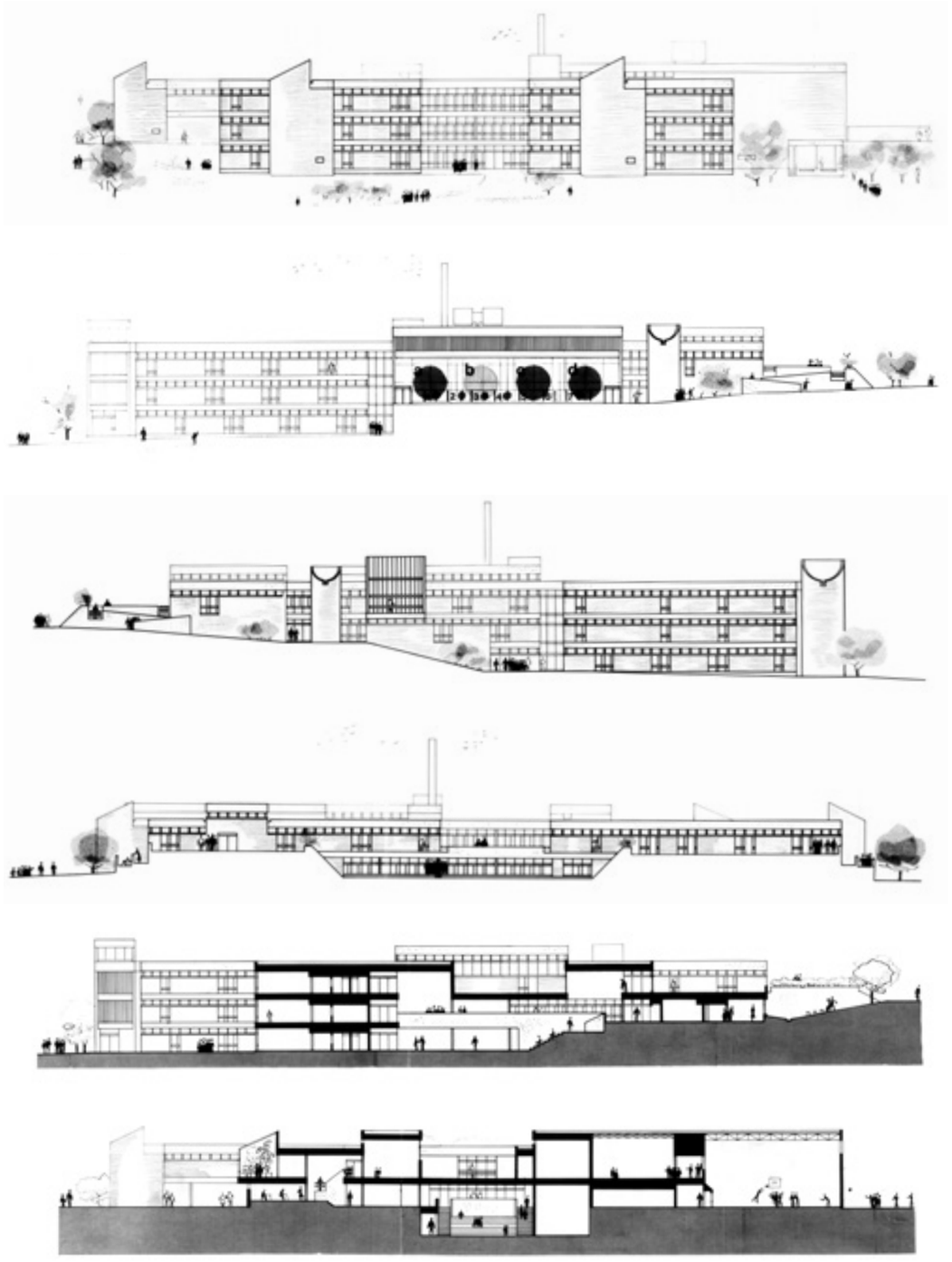


Hayden-McFadden (formerly Knowlton) Elementary School,
New Bedford, MA (1975-1976)
source: Joanna Sołtan private collection
& Edward Lyons private collection

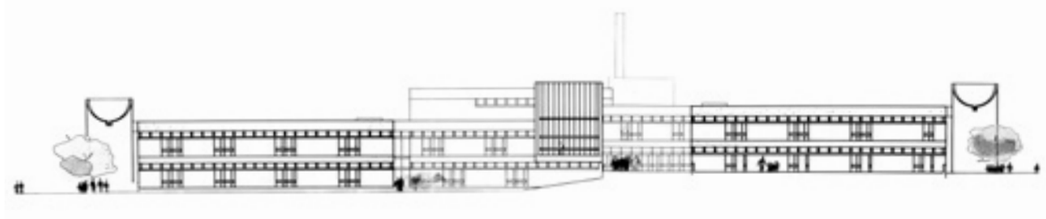


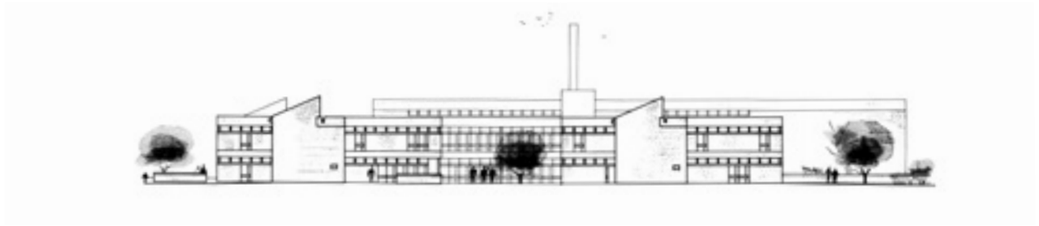


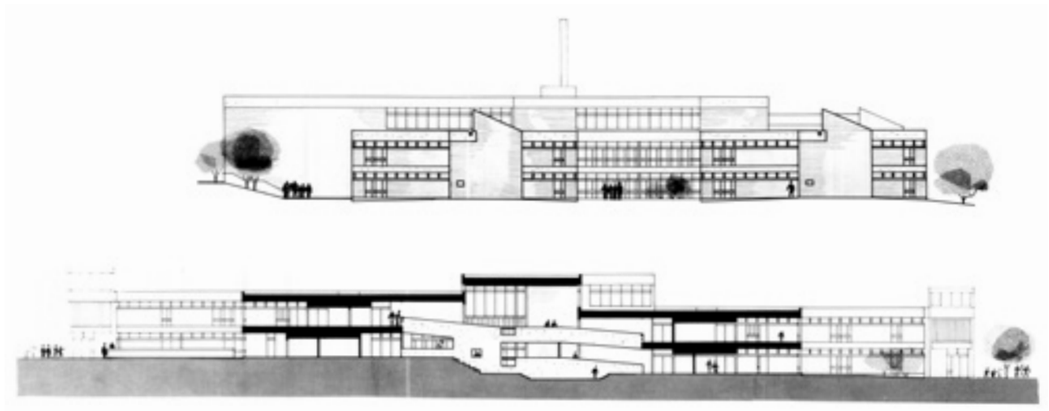




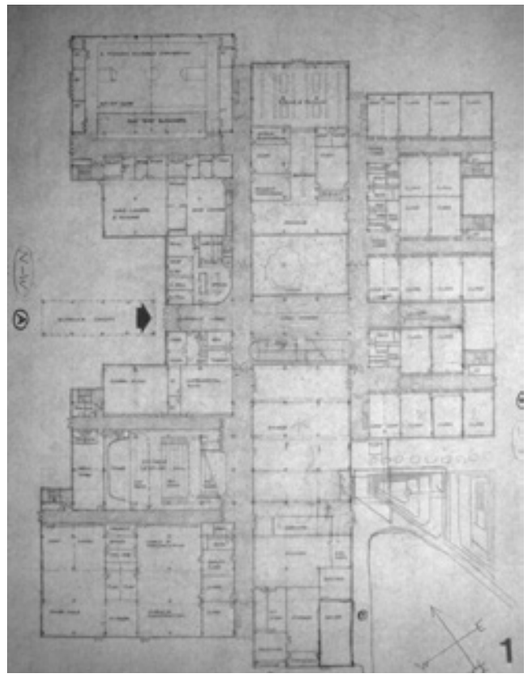
Carney Academy Elementary School,
New Bedford, MA (1975-1976)
source: Joanna Sołtan private collection
& Edward Lyons private collection

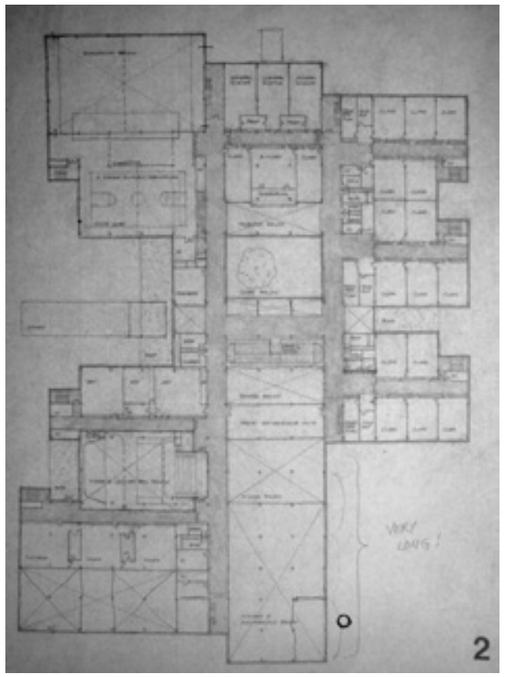




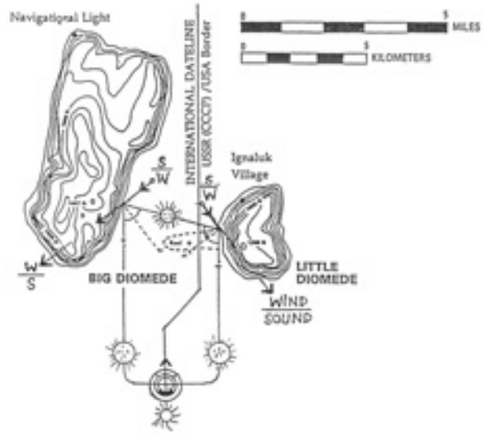


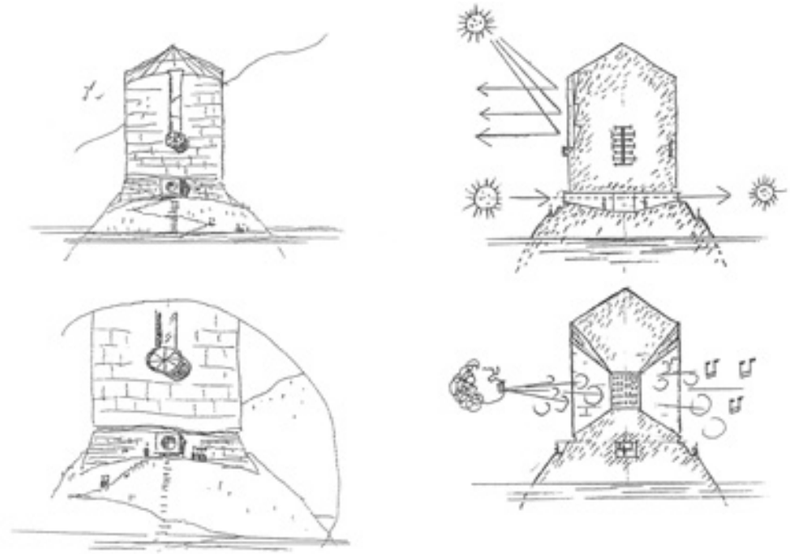
Breed Middle School,
Lynn, MA (1977)
source: Joanna Sołtan private collection
& Edward Lyons private collection

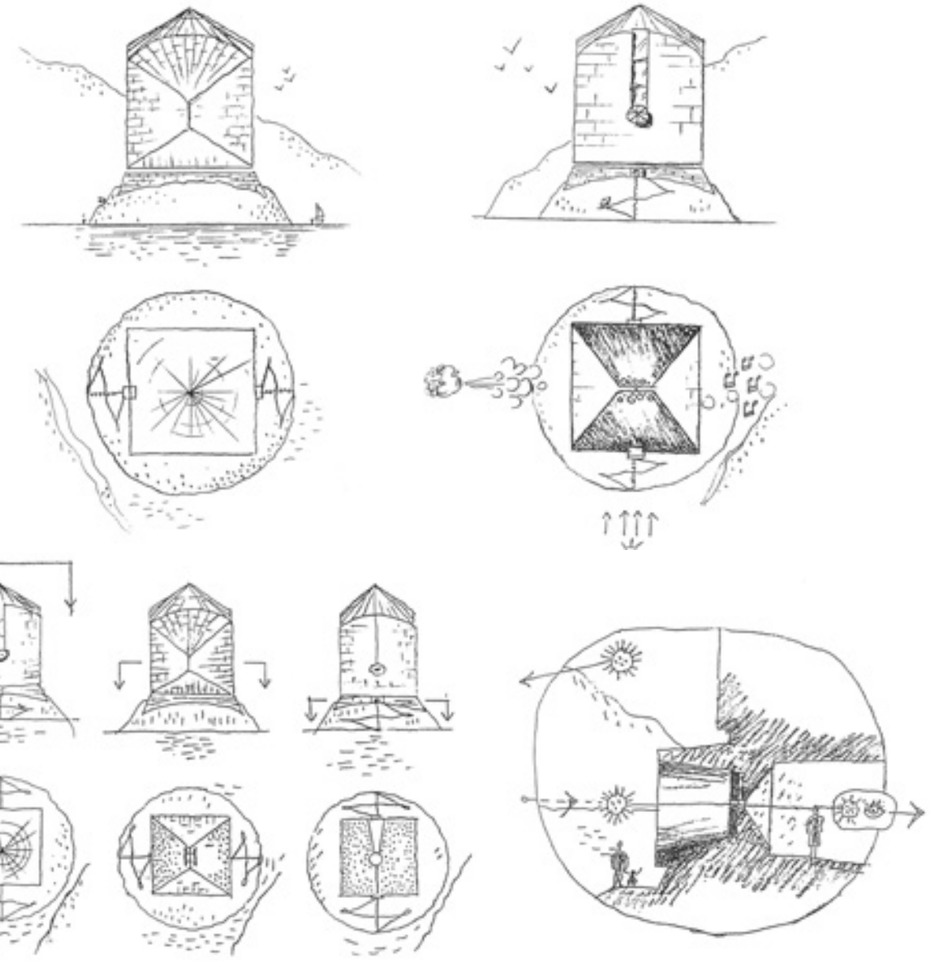




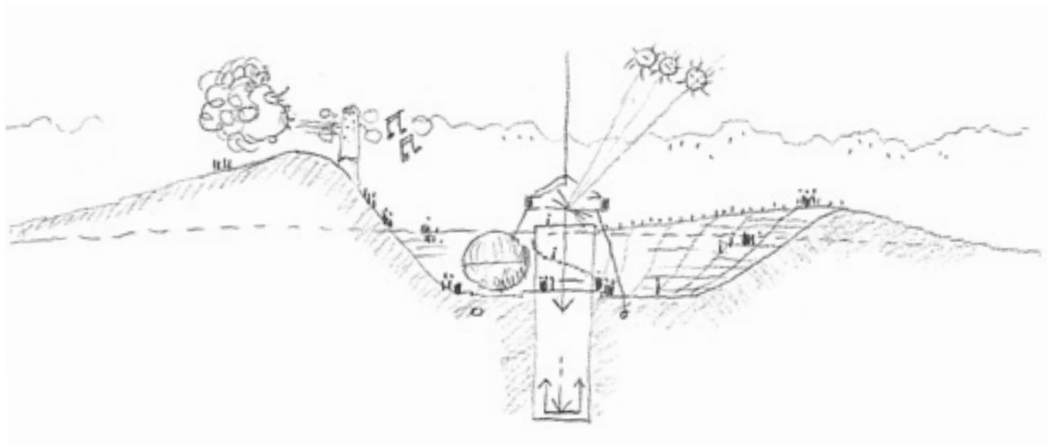
'Diomede' competition entry,
Bering Sea (1989)
source: Joanna Sołtan private collection



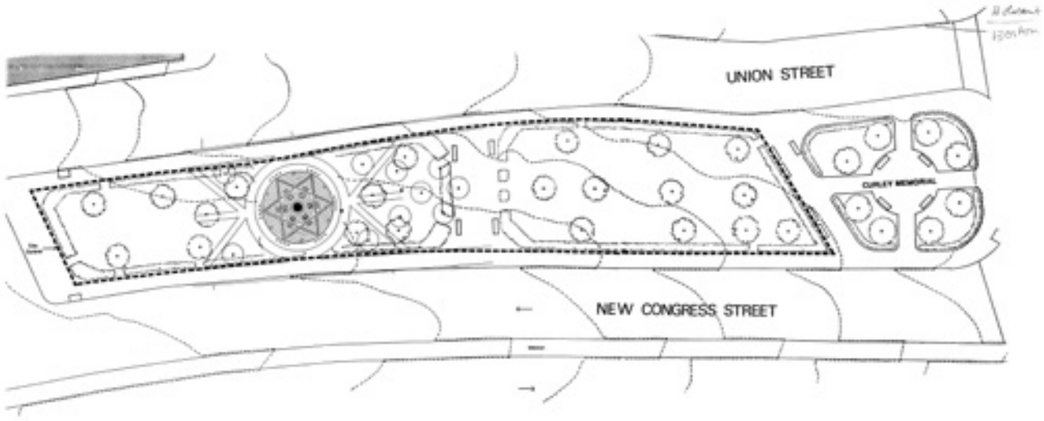




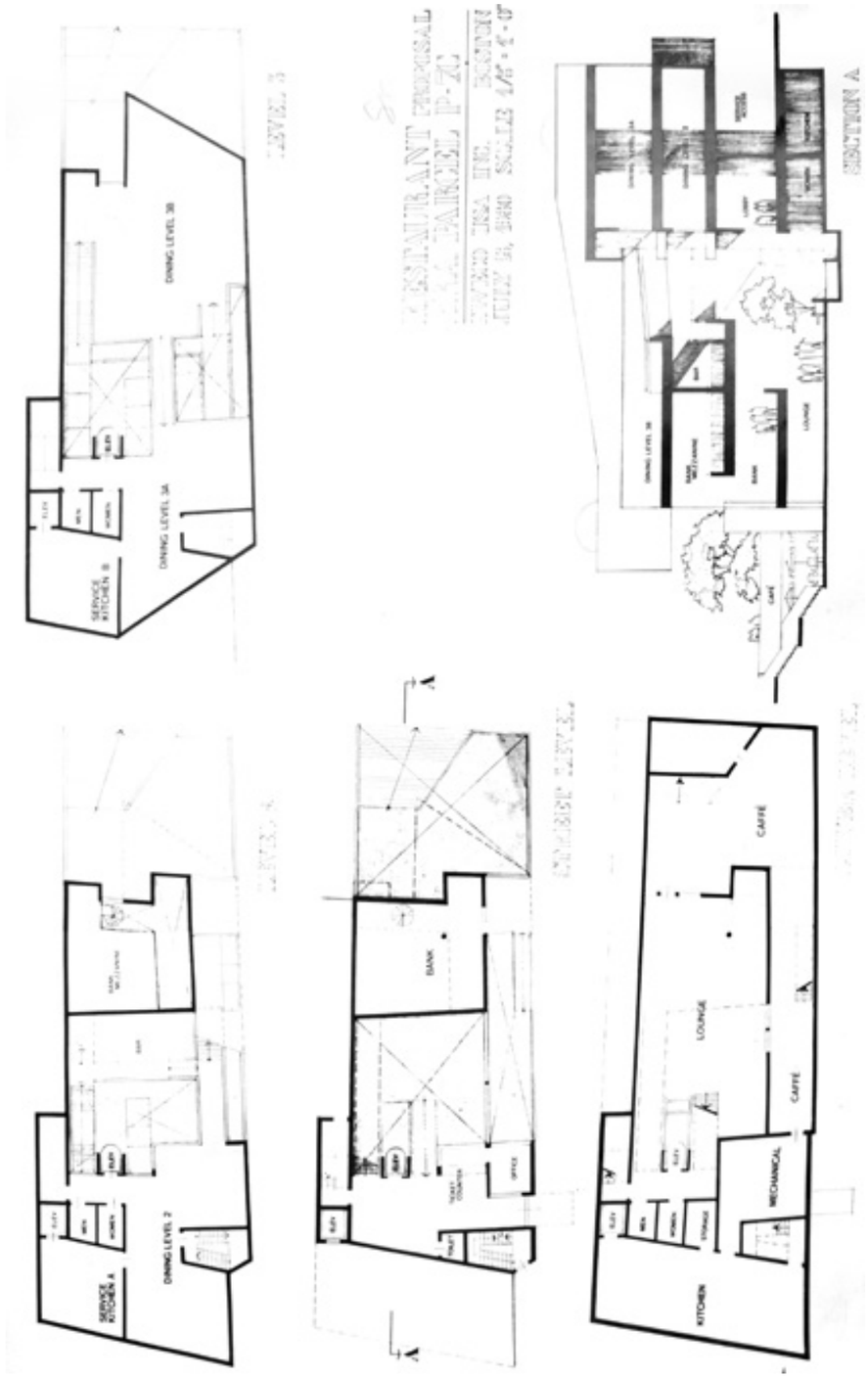
'Atlas' competition entry,
USA (1990)
source: Joanna Sołtan private collection



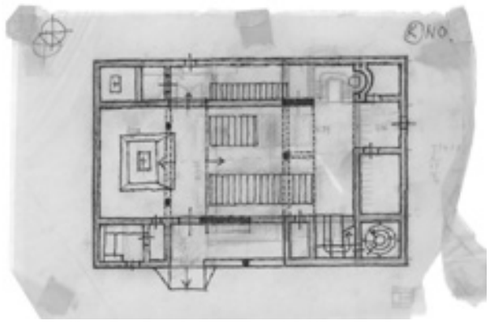
Holocaust Memorial competition entry,
Boston, MA (1991)
source: Joanna Sołtan private collection

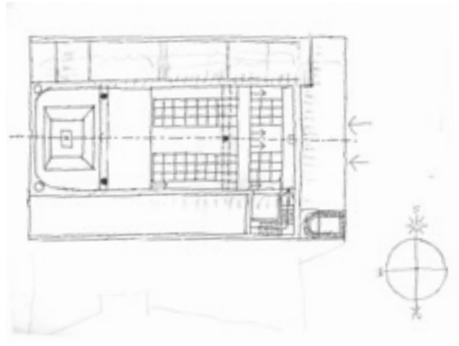


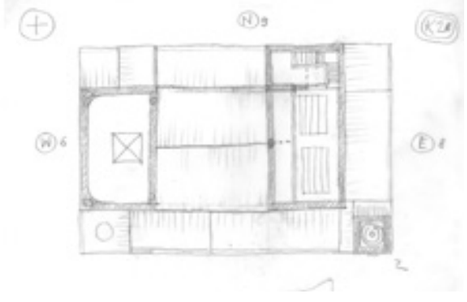
World Class Restaurant,
Boston, MA (1980)
source: Joanna Sołtan private collection

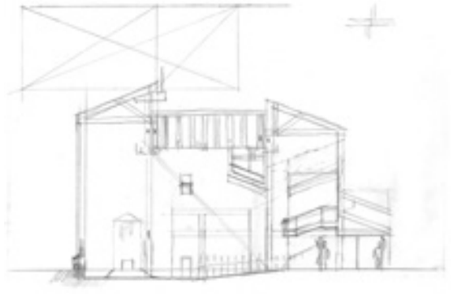


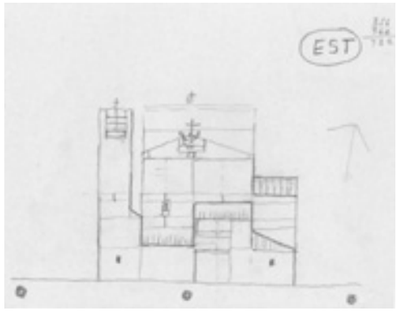
church theoretical design,
(1952-2003)
source: Joanna Sołtan private collection

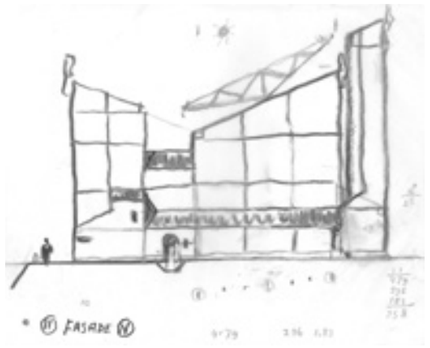


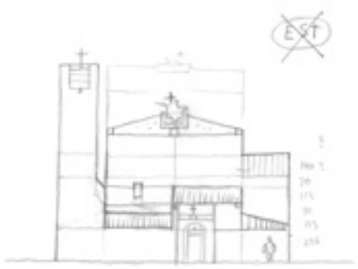


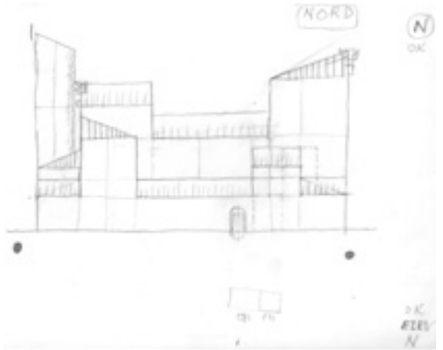


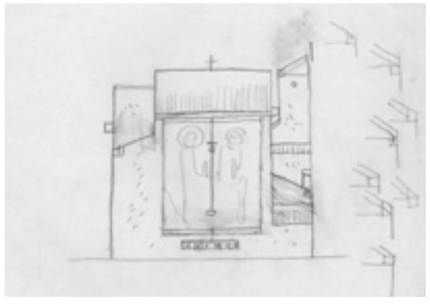


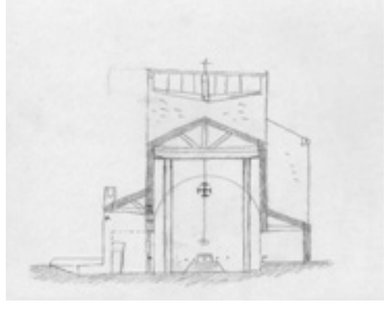


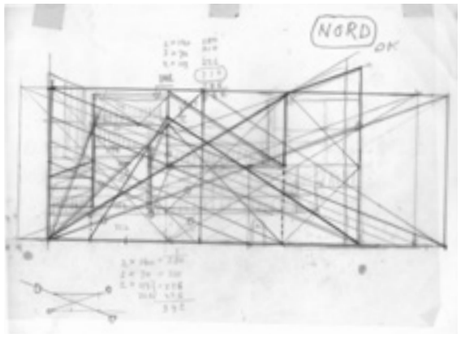


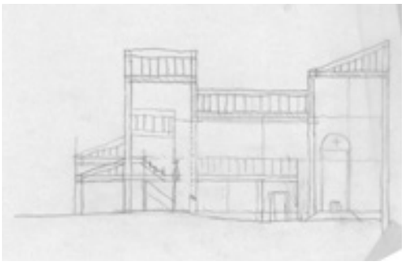


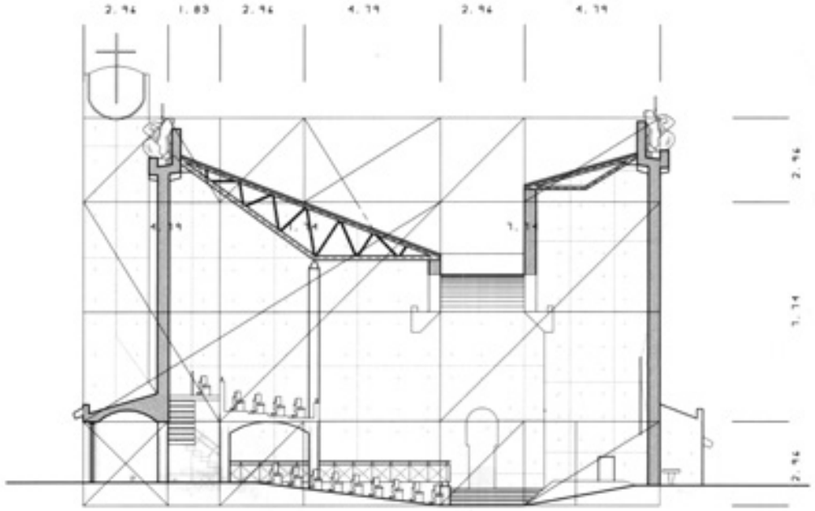








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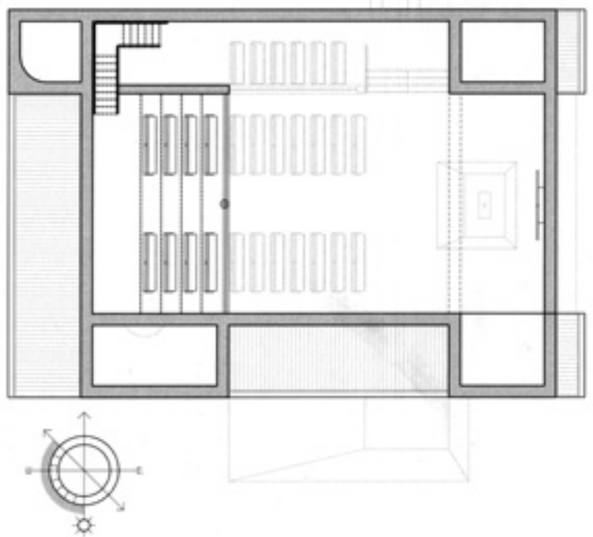

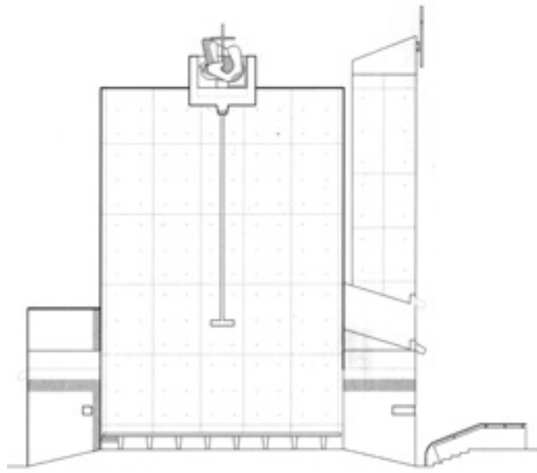

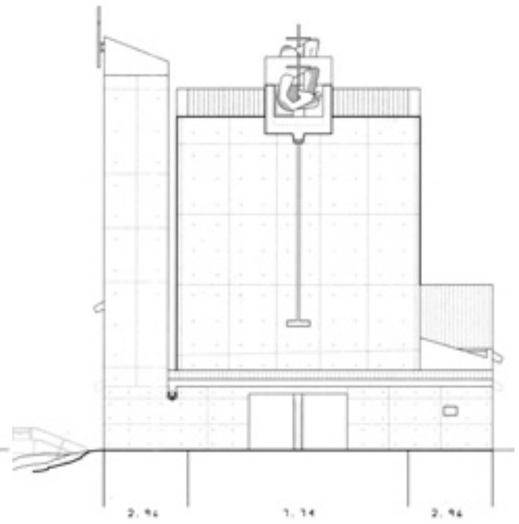
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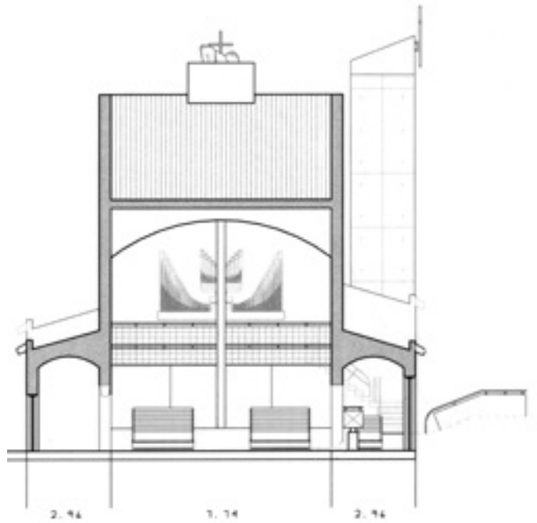
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