I. M. Pei's Museum Architecture

A Reading of Identity and Language

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Abstract

This thesis comprises four case studies of the Chinese-American architect I. M. Pei's museum projects to consider the representation of identity in architecture, and the role of the museum as an architectural type. The reading of Pei's projects also encompasses debates on architectural styles, the relationship between modernity and history, as well as the political and cultural role of the museum in the city.

The thesis has three parts. Part One looks into the representation of national identity, while also considering the manifestation of Pei's cultural identity in their given context. The two chapters in this part delve in Pei's earliest museum design, the Museum for Chinese Art, and a contemporary project of the extension to the German Historical Museum in Berlin, to evaluate the connection of Pei's projects with their historical contexts, and consider the extent to which Pei's museum projects respond to the notion of national identity and nationalism respectively.

Part Two makes enquiries in the often-related relationship of architecture and language. The significance of architectural language is seen from its role in developing the meaning of the museum building as architecture. By taking the Grand Louvre as a case study, Chapter 3 and 4 discuss how the museum operates as a building type, which incorporates languages by architectural criticism and also the language of architectural drawings.

Part Three is a conclusion section in my thesis and it provides an overview of Pei's Museum of Islamic Art. While the project provides an especially helpful focus on the problems discussed in the thesis, it also provokes thinking on Pei's role in developing the museum to its current form as an international cultural phenomenon.

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York, UK, September 2017.

Declaration

I hereby declare that except where specific reference is made to the work of others, the content of this dissertation is a presentation of original work and I am the sole author. This work has not been previously presented in whole or in part for consideration for any other degree or qualification in this, or any other, University. This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration, except where specifically indicated in the text. This dissertation contains fewer than 90,000 words including the text of the thesis and footnotes and has less than 150 figures.

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Part One: architecture and identity

Introduction: I. M. Pei and his museum architecture

In April 2017, the Harvard Graduate School of Design (GSD) arranged a lecture on Ieoh Ming Pei to celebrate the architect's hundredth birthday.[1] The event, chaired by Mohsen Mostafavi, dean of the GSD, with speakers including Henry Cobb, the co-founder of the international architectural firm Pei Cobb Freed & Partners, and Carter Wiseman, the author of *I. M. Pei: A Profile in American Architecture*, acknowledged Pei's contribution to architecture by looking back on his formative years of architectural practice and some of his iconic designs.[2] In his keynote speech, Mostafavi pointed out how the reading of Pei can be linked to a variety of thematic studies in architecture after the specific period of classical modernism. These include, to name a few, "the relationship between modernity and monumentality, between modernity and tradition, and the connections between the US and China in terms of one's … roots and traditions," "the role and status of architect in a society," and "the role and influence of construction and materials."[3] The diversity of these thematic concerns, while conveying the importance of Pei as a leading figure of the discourse of modern and postmodern

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[1] Harvard University Graduate School of Design, "I. M. Pei: A Centennial Celebration," *Event*, March 30, 2017, accessed August 17, 2017, http://www.gsd.harvard.edu/event/i-m-pei-a-centennial-celebration/.

[2] Carter Wiseman, *I. M. Pei: A Profile in American Architecture*, Rev. ed. (New York: Harry N. Abrams, 2001).

[3] Introduction (Chair: Mohsen Mostafavi), Harvard University Graduate School of Design, "I. M. Pei: A Centennial Celebration," 00:06:21.

architectural movements, also suggests the difficulty to label Pei or define his architectural career in any singular way.

I. M. Pei

Born in China in 1917, Pei migrated to the US in 1935 to pursue an architectural career. His architectural study with Walter Gropius and Marcel Breuer at Harvard, as well as his collaboration with Gropius as The Architects Collaborative (T.A.C.), provided him with the connection to not only modernism, but also the Bauhaus legacy in America.[4] Pei's subsequent working experience with American real estate developer William Zeckendorf helped him expand his influence in building development.[5] Pei's subsequent major public projects, while consolidating his image as an international modernist architect, also indicate his focus on museum designs. Among them are, for instance, the John F. Kennedy Library (1964–79), the East Wing of the National Gallery (1968–78), the Rock and Roll Hall of Fame and Museum (1987–95), the Grand Louvre (1983–89; 1989–93), the Miho Museum (1991–97) in Japan and the Museum of Islamic Art (2000–

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[4] As the former student and later collaborator of Walter Gropius, Pei has been recognised as a representative figure relating to the notion of a post-Bauhaus identity in the US. As Klaus Herdeg points out, during the years when Gropius taught at the GSD from 1937 to 1953, the school was turned into a field of "Bauhaus/Harvard." Gropius introduced an educational system primarily modelled on the Bauhaus system, which resulted in the school featuring a symbolic link between itself and a sense of the Bauhaus ethos. See Klaus Herdeg, *The Decorated Diagram: Harvard Architecture and the Failure of the Bauhaus Legacy* (Cambridge, MA: The MIT Press, 1983), 2–35, 78–97.

[5] One example is Pei's work in early 1950, the Gulf Oil Building, which corresponds to Mies's machine aesthetics of combining marble, glass and steel. The Pei Residence (1952) also suggests a strong visual resemblance to the Farnsworth House, while the form of the Mile High Centre (1952–56) is reminiscent of the Seagram Building. The influence of Le Corbusier initially emerged in his National Centre for Atmospheric Research, Colorado (1967–70). The curved form of the Luce Memorial Chapel in Taiwan (1956-63), supported by a structure in reinforced concrete, indicates a visual connection to Le Corbusier's Philips Pavilion at Expo 58 in Brussels. See Shixuan Yang, "Bei Yuming De Shiye Yu Yishu," [Renowned architect: the career and art of I. M. Pei.] *Architectural Journal* 290, no. 10 (1992): 10.

8). These projects have not only allowed Pei to establish a reputation in museum architecture, but also fostered his successful collaboration with governmental sponsorships. In these projects, Pei created a version of architectural signature through employing iconic geometrical strategies and glass materials, fabricated into different forms in each specific design. His success in carrying out museum projects and building up an image of his architectural principles in the global museum market further emphasise the necessity to examine Pei and his work concerning the issues such as identity and architectural representation.

However, existing publications on Pei show signs of lacking critical distance in reviewing his position in architectural history, especially in terms of museum architecture. Predominantly presented in the form of personal biographies, interviews and documentaries, they are, in most cases, the "permitted" version of writing after consultations with Pei via his architectural office. As a result, the outcomes are usually celebrations of Pei for his hybrid of cultural identity and very Modernist approach, which to some extent have precluded a more comprehensive understanding of significance of Pei and his architectural designs.[6] Wiseman's book is a typical example that provides an overview of Pei's work through a narrative of his life and architectural career. However, a problem emerging from the book is that the relatively celebratory narratives, rather than descriptive accounts, of Pei's architectural career have either circumvented more critical responses to Pei's projects, or limited the potential of a more in-depth and creative

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[6] This observation came from my experience of reading some of the correspondences between the authors and Pei, collected in the Pei's Paper Collection at the Library of Congress in 2014. Furthermore, the publication of Pei's materials is also to some extent regulated by copyright issues.

evaluation of the works in their urban and historical contexts. Another example is Gero von Boehm's collection of interviews with Pei, *Conversations with I. M. Pei: Light is the Key*.[7] Similarly, while the book presents Pei's own opinions of his architectural works and design intentions in the form of conversations with the author which thus suggests a sense of authenticity, it is still necessary to further examine these projects in relation to wide-ranging themes besides Pei's own statements.

The assessment of Pei and his work thus necessitates more critical and analytical engagements with the subject. One of the most recent and extensive overviews of Pei's architecture is Philip Jodidio and Janet Adams Strong's *I. M. Pei: Complete Works*.[8] The book makes an inventory of Pei's projects up until his most recent, the Museum of Islamic Art in Doha (2000–8), along with an introduction by Wiseman that gives a brief account of how Pei has achieved an international reputation, as well as a preface by Pei, in which he recollects the key moments in his architectural career.[9] In one of the commentary essays on Pei, Strong expresses how Pei's works incorporate multi-layered themes concerning architectural form, style and identity:

> The senior statesman of modernism is a traditionalist in the purest sense. Notwithstanding his use of geometry as basic building blocks and technical means in the achievement of aesthetic goals, Pei has steadfastly resisted a signature style, preferring to draw inspiration from place and history it encompasses. His remarkably consistent buildings have been evolutionary rather than revolutionary, yet on technology's cutting edge—confidently unaffected by architecture's shifting –isms.[10]

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[7] Ieoh Ming Pei and Gero von Boehm, *Conversations with I. M. Pei: Light Is the Key* (Munich; London; New York: Prestel Verlag, 2000).

[8] Philip Jodidio and Janet Strong, *I. M. Pei: Complete Works* (New York: Rizzoli, 2008).

[9] I. M. Pei, "Architecture Is Art and History," in *I. M. Pei: Complete Works*, ed. Philip Jodidio and Janet Adams Strong (New York: Rizzoli, 2008), 6–7. Carter Wiseman, "Introduction," in *I. M. Pei: Complete Works*, ed. Philip Jodidio and Janet Adams Strong (New York: Rizzoli, 2008), 9–15.

[10] Janet Adams Strong, "1948–1995: I. M. Pei, Continuum and Evolution," in *I. M. Pei: Complete Works*, ed. Philip Jodidio and Janet Adams Strong (New York: Rizzoli, 2008), 18.

Strong draws together four binary oppositions to Pei, ones that correspond to Mostafavi's comment and thus can reflect a general perception of the characteristics of Pei's works. These include the label of modernism vs a pursuit of tradition, the employment of geometry vs the realisation of specific aesthetics, the emphasis on local and historical elements vs the employment of up-to-trend industrial technology and, lastly, Pei's resistance to any signature style among "shifting-isms," in contrast to the sense of consistency reflected from his designs. However, Strong moves on to comment generally on Pei's career, his preferred working mode and his strong connection to China, without further stepping into these different complex areas. Although these issues are to some extent addressed through the evaluations of individual projects in their architectural contexts, a systematic examination in regards to Pei's architecture is yet to be presented in the discussions.

All of this inspired me to use the thesis to examine Pei and his architecture beyond the scope of current discussions concerning the different complex themes. To do so, I then decided to distance my discussion from the narrative approach of acknowledging Pei's architectural achievements. Instead, I develop my examination as a critical engagement with the subject from the perspective of identity and language, the two often-considered conceptions in architectural criticism. These two conceptions also help connect the manifold themes surrounding Pei and his work. Further to my intention of distancing my discussion from biographical account of Pei's architectural career, I will develop the case studies based on secondary research, yet at the same time focusing on alternative interpretations of the meaning and effect of Pei's projects within their wider

architectural contexts. In the meanwhile, this research is also a result of the condition of existing collections on Pei. The available research materials, largely held by the Library of Congress, on the one hand, mainly contain his correspondences with interviewers and authors on his career and architecture, or with commissioners and colleagues on the progress of the architectural projects, while Pei's own architectural writings hardly appear. This has made it difficult for me to extrapolate Pei's direct thoughts on his designs and methods, and therefore, I decided to focus more on secondary resources to evaluate Pei and his projects in their wider architectural contexts. In addition, there are relatively substantial architectural sketches that Pei has made for his projects, particularly ones on the Louvre. This has then encouraged me to look at the drawings as a way to get closer to Pei's own thoughts on his designs.

Identity: cultural, national and architectural identity

My discussion firstly focuses on identity as a keyword. Surrounding this idea of identity, there are three interrelated conceptions relevant to the reading of Pei and his projects that derive alternative interpretations following the change of architectural contexts: cultural identity, national identity and architectural identity. Among these aspects, Pei's cultural identity is already in vaguely defined boundaries that thus affects the perception of three other forms of identity. In his overview of Pei's architectural career in the *Architectural Review* in 2012, the Canadian critic Trevor Boddy summarises in his essay that, Pei's work, in general, has followed the capitalist expansion of global businesses, which also suggests a distance from an effective representation of his Chinese

identity.[11] Boddy considers two factors to acknowledge Pei's position as being among the most celebrated architects of the twentieth century: one being the first non-Western—yet not precisely, Chinese—architect to reach the height of international importance; the other is Pei's aptitude for managing his architectural business, a strength also shared by Gropius.[12] Boddy traces Pei's architectural career since his study in the US to support this idea of Pei as an architectural businessman, and finishes his article with Pei's recent commission of the Suzhou Museum, which leads back to his Chinese orientation, which is one, however, that has been Westernised.

Consequently, the blurred boundary of Pei's cultural identity leads to perception of two contrasting representations (Western vs. non-Western) in his work. As Pei's biographer, Wiseman considers the representation of Chinese identity has been "inescapable" and "enduring" in Pei's works, and that this aspiration for Chinese characteristics has "remained deeply loyal" and "beyond politics."[13] Two of Pei's projects, meanwhile his only representative cases in China, are the Fragrant Hill Hotel (1979–82) and the Suzhou Museum (2000–6). In Wiseman's preface to *I. M. Pei: Complete Works*, he comments on how the Fragrant Hill Hotel is "an example of modern design that was still sensitive to Chinese traditions," and how the Suzhou Museum

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[11] In comparison, Boddy considers that Wang Shu, the second Chinese Pritzker Prize Winner, has made a more explicit reference to Chinese tradition in his designs. Trevor Boddy, "I. M. Pei," *Architectural Review* 232, no. 1387 (2012): 102–3.

[12] In December 1921, Oskar Schlemmer once mentioned in a letter to Otto Meyer that Gropius was "the only other person who qualified as a director" but also "an excellent diplomat, businessman, and practical genius." See Oskar Schlemmer, "Letter to Otto Meyer, 1921," in *The Letters and Diaries of Oskar Schlemmer* ed. Oskar Schlemmer and Tut Schlemmer (Middletown, Conn: Wesleyan University Press, 1972), 114. Boddy, "I. M. Pei," 102.

[13] Wiseman, *I. M. Pei*, 29.

celebrates the occasion when Pei could "go home again."[14] However, Boddy only mildly acknowledged such architectural association with Chinese memory: "My Chinese architectural colleagues always think of Pei's architecture as being American, not Chinese, and never more so than in such projects as Suzhou."[15] Boddy only briefly mentioned Pei's 1989 Bank of China project in Hong Kong, regarding it as work introduced to Pei because of his family connection, as was the case with the design of the Bank of China head office in Beijing in 2001. Withholding any acknowledgment of the Chinese representation in the projects, Boddy implies how he has categorised these with Pei's older commercial and housing projects of Western-based architectural firm designs. In contrast, for those audiences who are more familiar with the context of the building, Pei's designs have indeed made evident references to Chinese traditions. As Chinese architect and critic Yang Shixuan observes, Pei originated his ideas from a patch of four sticks and by using the frame structure of the building as a metaphor of the growing Chinese bamboo (in Chinese proverb, *Zhuzi Jiejie gao*), has provided an explicit reference to Chinese traditions.[16]

This debate on the cultural representations in Pei's work further connects to the position as regards a specific architectural style—in other words, an architectural identity—that can be recognised from his designs. While Pei has been most of the time labelled as a typical modernist, there are nevertheless discussions on the architectural style that Pei has followed, particularly in concern with his projects that connect to a

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[14] Wiseman, "Introduction," 15.
[15] Boddy, "I. M. Pei," 103.
[16] Yang, "Bei Yuming," 10.

representation of his Chinese identity. Yang further pointed out how the Fragrant Hill Hotel was not a postmodern structure, as might be perceived by Western-based critics, but an exception among Pei's many modernist practices: the design in effect strongly reflects Pei's intention to explore his cultural roots.[17] However, it was also because of the building's emphasis on representing Chinese traditions instead of more modernist features, the Fragrant Hill Hotel hardly attracted interests of either Western estate agents or Chinese owners. Reflected in his architectural strategies, Pei's museum designs particularly reflect an approach of combining elements relating to both Chinese identity and Western background, not only in commissions in China, but also in the West. This also leads to the multiple representation in his work, which thus involves interpretations of different cultural references. In the Grand Louvre and the extension to the German Historical Museum, where Pei inserted a circular opening between the floors that resembles the Moon gate of a Chinese garden, the symbolism of which the thesis will address in detail in the first chapter (Figure 24; Figure 72). The square opening on the wall in the bookstore of the Louvre also resembles a kind of aesthetics derived from the Chinese garden, different from the classical architectural elements (Figure 71). While modern architects can be inspired to design structures in the Oriental sphere, such as Gropius-led design of the Huatung University campus or Le Corbusier's National Museum of Western Art, Pei presents an example of exporting Chinese elements to the West.[18] The positions of the Western and the non-Western characteristics and the

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[17] Ibid., 6.

[18] The campus design of the Huatung University in Shanghai was a collaborative project by Gropius, I. M. Pei and Chen Qikuan. Both Pei and Chen had studied at Harvard GSD and worked with Gropius in TAC. Due to the interruption of the Chinese Civil War, the project was suspended in 1948, but was later

architectural perception of modern or postmodern features thus become interrelated in understanding Pei's cultural and architectural identity.

The understanding of Pei's cultural and architectural identity necessarily relates to the representation of national identity in his work. The formative years of Pei's architectural career already witnessed his growing attachment to American post-war nationalism. During his years at Harvard, Pei was trained in Gropius's architectural pedagogy, with examples including prefabricated housing constructions. The strong impression Gropius made as the former founder of the Bauhaus and a representative of European modernism helped develop an image in the GSD, of a new generation of architectural students in architectural schools that focused on collaboration. Pei was also among those whom, in some way, continued the Bauhaus principle in the formation of American modernism.[19] In March 1943, Pei designed a "Post-War Shelter" for the architectural competition "Designs for Postwar Living" organised by *Arts and Architecture* and won second prize. The project, on the one hand, suggested an apparent accordance with Gropius's belief in making prefabricated buildings. On the other, it also demonstrated Pei's earliest devotion to post-war American architecture.[20] As architectural historian William Curtis suggests, Pei was among the "new generation of Americans" who succeeded Gropius in the 1940s seeking a new concept of European

transferred to Taiwan in 1954 and continued by Chen, Pei and Zhang Zhaokang, another Chinese student who had worked with Gropius on his graduation project and at TAC in 1951.See Eduard Kögel, "Zhongguo Yu Baohaosi, Zhongguo Jianzhu De Xiandai Yundong Guiji 1930–1960," in *Chinese Modern Design and the Bauhaus*, ed. Jian; Hang and Tai-Keung Kan (Beijing: People's Fine Arts Publishing House, 2014), 136–37.

[19] Jill Pearlman, *Inventing American Modernism: Joseph Hudnut, Walter Gropius, and the Bauhaus Legacy at Harvard* (Charlottesville and London: University of Virginia Press, 2007).

[20] Matthew W Fisher, "Prefabrication and the Postwar House: The California Manifesto" (paper presented at the ACSA Annual Meeting, Portland, Oregon, 2009).

modernism.[21] One of the representative designs that mark his modernist identity is the Mile High Center in Denver, Colorado, completed in 1955.[22] In the 1950s and 60s, Pei established a reputation in skyscraper architecture that embraced the idea of corporate modernism, along with figures such as Philip Johnson and Welton Beckett.[23] Henry-Russell Hitchcock points out Pei's Mile High Center, which he specifically refers to as a "Western skyscraper" and "extremely Miesian," has a strong resemblance to Mies's Lake Shore Drive Apartments in Chicago, in terms of both architectural form and techniques.[24] The development of Pei's architectural practice witnessed an integration of modernist identity with American national identity.

However, this label of America-trained modernist on Pei has been so overwhelming that his "unconventional" practices have not been taken into sufficient account. During his study with Gropius, Pei nevertheless disagreed with his teacher's belief in the International Style and strict conformity with the modernist axiom of form follows function.[25] Pei has also been known for his preference of combining natural landscape with his modern structures.[26] As Wiseman noted, Pei was looking for a

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[21] Gropius's role in America is itself very controversial. For instance, rather than regarding Gropius as the pioneer who brought a new ethos to American architecture, Karen Koehler views Gropius's migration to the US as a move in exile. See William Curtis, *Modern Architecture since 1900* (Oxford: Phaidon, 1996), 353. Kathleen James-Chakraborty, "From Isolationism to Internationalism: American Acceptance of the Bauhaus," in *Bauhaus Culture: From Weimar to Cold-War*, ed. Kathleen James-Chakraborty (Minneapolis: University of Minnesota Press, 2006), 153–170. Karen Koehler, "Angels of History Carrying Bricks: Gropius in Exile," in *The Dispossessed: An Anatomy of Exile*, ed. Peter Isaac Rose (Northampton: University of Massachusetts Press, 2005), 257–80.

[22] Jürgen Joedicke, *A History of Modern Architecture*, trans. James C Palmes (London: The Architectural Press, 1959), 231, 235.

[23] Patrick Nuttgens, *Understanding Modern Architecture* (London; Sydney; Wellington: Unwin Hyman, 1988), 192.

[24] Henry-Russell Hitchcock, *Architecture: Nineteenth and Twentieth Centuries* (Harmondsworth, Middlesex: Penguin Books, 1958), 416.

[25] Wiseman, *I. M. Pei*, 44.

[26] Ibid., 25.

"regional or 'national' expression in architecture" already as early as he was working on his graduation project at GSD. Pei's emphasis on the architectural representation of regional and national characteristics developed in parallel to his practice of modernism, which, in the context of GSD in the 1940s, particularly connected to the idea of a universal or international architectural language.[27] Consequently, Pei has been labelled as, for instance, noted by Strong, a "senior statesman of modernism," who is meanwhile embracing traditional aesthetics.[28]The contradictory concepts are then reflected in his approach of employing of various contrasting elements in his design, including geometry, high-tech materials and the patterns of historical and local characteristics. These, altogether, constitute the architectural identity of Pei's work, which, complex and eclectic as it is, seems to have nevertheless put the emphasis on a variation of international modernism.

In fact, one aspect so far less considered when it comes to Pei's modernist identity is that his search for an architectural expression of a national identity between 1944 and 1946 was also a question discussed in America throughout the 1940s, which must have exerted certain influence on Pei in forming his architectural concepts. Since the 1930s, the International Style, termed by Philip Johnson and Henry-Russell Hitchcock in the 1932 exhibition in the Museum of Modern Art, became the new aesthetics to follow in the development of modern architecture. The principles included the use of modern structure and materials in architectural planning, the emphasis on volume instead of mass of a building, the regular layout of architectural form and proportion, with flexibility in

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[27] Ibid., 44.
[28] Strong, "1948–1995," 18.

floor planning and, last but not least, the elimination of ornament or decorative pattern in the design.[29] One of the leading architects of the International Style is Gropius, and the Bauhaus building in Dessau is a clear demonstration of the International Style.

While this image of modern architecture became a way to represent modern identity of America, the years between 1934 and 1945 witnessed the prominence of regional characteristics in American architecture.[30] This was mostly represented by the MoMA exhibition *Built in USA: 1932–44*, curated by Elizabeth Mock, who had openly criticised the International Style as the rigid European modernism that limited the various manifestation of American modernity.[31] In Mock's catalogue for the exhibition, Philip Goodwin, then Chairman of the Architecture Committee of the MoMA and also the co-designer for the museum, suggested that the International Style was of "foreign" influence, whereas the regional architecture was more a reflection of "an authentic modern American style."[32] Typical examples of regional architecture enlisted in the exhibition included Frank Lloyd Wright's Falling Water and the wooden superstructure, House for Chamberlain, designed by Gropius and Breuer. Mock perceived regional structures, with emphases on traditional or local materials, creative forms, meeting individual needs in their architectural settings, offered a contemporary direction for

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[29] Alfred Barr, "Foreword," in *Modern Architecture: International Exhibition*, ed. The Museum of Modern Art (The Museum of Modern Art: New York, 1932).

[30] Liane Lefaivre, "Critical Regionalism: A Facet of Modern Architecture since 1945," in *Critical Regionalism: Architecture and Identity in a Globalised World*, ed. Liane Lefaivre and Alexander Tzonis (New York: Prestel, 2003), 44.

[31] Ibid.
Elizabth Mock, *Built in U.S.A. - since 1932* (New York: The Museum of Modern Art, 1945).

[32] Philip Goodwin, "Preface," in *Built in USA: Since 1932*, ed. Elizabeth Mock (New York: The Museum of Modern Art, 1945), 5.

American modernity to departure from European modernism of the 1920s.[33] Pei's search

for a national architectural language independent from the International Style might have

well collapsed with this prominence of regionalism, which advocated a more direct

response to local community and characters.[34]

In the same year, Sigfried Giedion, then appointed professor at the GSD,

published *Nine Points on Monumentality* that called for a modern version of architectural

monumentality to accord with new city planning. In contrast, Lewis Mumford criticised

Giedion's new monumentality and identified the Bay Region style of the San Franciscan

architects as a native form of American modernism in contrast to the European-oriented

International Style.[35] Furthermore, following Johnson's return to MoMA and the

modernists' dispute over regionalism, the conception of universal modernism gradually

regained its influence in the late 1940s.[36] This was firstly initiated by a round table

discussion on "What is happening to Modern Architecture?" in the MoMA to address the

tension between the International Style and the Bay Region architecture.[37] In 1952,

Hitchcock and Arthur Drexler adopted the name of Mock's exhibition for *Built in USA:*

Post-war Architecture, to reclaim the sovereignty of modern architecture and the

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[33] Mock, *Built in U.S.A. - since 1932*.

[34] Already in 1954, Vincent Scully discussed the inherent tensions between Wright's architecture and the claims of the International Style. Scully points out that Wright's works were ultimately an inspiration for International Style architecture. This discussion of the antithesis of international modernism further relates to the discussion of Regionalism. See Vincent Scully, "Wright Vs. The International Style," in *Modern Architecture and Other Essays*, ed. Neil Levine (Princeton; Oxford: Princeton University Press, 2003), 54–63. Steven Best and Douglas Kellner, *The Postmodern Turn* (New York: The Guilford Press, 1997), 139–48.

[35] Frederick Koeper, *American Architecture: Volume 2 1860–1976* (Cambridge, Mass.: The MIT Press, 2001), 375.
Lefaivre, "Critical Regionalism," 25.

[36] Lefaivre, "Critical Regionalism," 24–7.

[37] Alfred Barr et al., "What Is Happening to Modern Architecture?," *The Bulletin of the Museum of Modern Art* 15, no. 3 (1948).

International Style. The debate over architectural style and criticism on all of labels of shift-isms only progressed to a more complicated degree, followed by the rivalry between modern and postmodern architecture in the 1960s. The complexity reflected in this process of identifying a definite version of modern architectural form to represent American national and architectural identity might have explained the inclusive or eclectic philosophy Pei had been developing since his early years of studying architecture in America.

This is one of my first arguments when it comes to the understanding of Pei's architectural and national identity: the celebration of Pei for being a modernist spokesperson might not have necessarily considered the definition of modernism itself is complicated and plural, thus difficult to define. In other words, while reading Pei's work, modernism does not necessarily equal to the classical conception of Modernism specifically represented by the International Style. In this way, the seemingly contradictory elements in Pei's designs of regional or native characteristics with, meanwhile, an emphasis on modern architectural aesthetics, can be perceived as a reasonable influence from the complicated search for American national identity that Pei has witnessed. Furthermore, Pei's quest for an expression of Chinese national and cultural identity through a modern architectural vocabulary consequently resulted in a more diverse employment of regional and modern that blurs the boundaries between regional and Modernist identities, in contrast to a fixed form of International Modernism. Thus, reflecting on Strong's observation of how Pei's approach was not affected by shifting style-isms, it may be more accurate to assume the formation of Pei's architectural

principle corresponded closely to the evolution and integration of changed architectural styles in America that particularly linked to the representation of national identity.

Transnational practices of museum design and Pei's "international style"

Pei's shifted attention on museum architecture further developed his transnational practices that incorporated both the universal and modernist language of architecture, and vocabulary of regional characters as reflected in different projects. Through his museum projects worldwide, Pei also established his architectural language of employing consistent design elements as his architectural signature. Following the expansion of Pei's architectural projects from America to Asia and Europe, the architectural themes also diversify from Eastern to Western subjects. The East Wing of the National Gallery of Art (1968–78) was one of the earliest example for Pei to build his architectural reputation in conducting museum project. As Strong and Jodidio put it in Pei's catalogue raisonné, the success of the East Wing "positioned Pei solidly in the forefront of the profession, champion of a new museum type at the centre of popular culture," judging by the record-breaking number of visits to the building within two months of its opening.[38] In many ways, the East Wing provided the foundation for the form, technique and representation of the later projects. For instance, in terms of stylistic debates, Anthony Alofsin considered despite the celebration of the building for its strong sense of architectural monumentality, the building was nevertheless dismissed from the discussion of modern

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[38] Jodidio and Strong, *I. M. Pei*, 133.

architectural history. The reception East Wing was still lacking among scholars who mostly focused on classical modernism, while it also encountered the prominence of postmodernism since the 1960s, which on the contrary advocated a visible representation of historical elements generally absent from modern architecture. [39] The project's engagement in the debate between architectural modernity and the interaction with history is thus visible. In terms of reading his architectural identity, the East Wing project also allowed Pei to establish reputation for conducting government-sponsored constructions, which was later connected to his commissions of the Grand Louvre and the German Historical Museum. The design purpose of connecting the new wing to the historical structure of the main museum also became a shared feature among Pei's many of museum designs. My queries into Pei's projects in this thesis are built on the foundation of the East Wing project, in the sense that I examine the questions of identity and vocabulary of architecture in a transnational context, by looking at the trajectory of his design from China to Europe which was further developed on the basis of Pei's practice in America.

Pei's transnational practices reveal one of his iconic strategies of combining Eastern—in most cases, Chinese—motifs and Western modern structure, materials and planning principles in his work. Pei's first built museum project, the Everson Museum in Syracuse (1968), New York, presented an explicit Brutalist style that Pei suggested was inspired by Louis Kahn.[40] The building was constructed for travelling exhibitions, while

[39] Anthony Alofsin, "The Opening of the East Wing: Accalim and Critique," in *A Modernist Museum in Perspective : The East Building, National Gallery of Art*, ed. Anthony Alofsin (New Haven; London: National Gallery of Art, 2009).
[40] Jodidio and Strong, *I. M. Pei*, 87–91.

Pei designed an all-solid concrete surface to create a stable and monolithic effect.[41] The

main space of the museum is designated underground, an approach declaring an

inspiration from the Neue Nationalgalerie and later most famously used by Pei in his

Grand Louvre. Despite these Western architectural marks, Strong points out that the

interior arrangement, regarding the gallery spaces, corresponded to the traditional

quadrangle houses (*Siheyuan*) in China, hinting at the synthesis of Chinese elements in

his Western-looking building.[42] This alludes to his graduation project at GSD, a museum

for Chinese art in which Pei employed the theme of the Chinese garden in the building

structure. The last project at which the thesis will look, the Museum of Islamic Art,

provides a case of Islamic architectural motifs being integrated with his employment of

pro-modernist forms that assimilate to Pei's other designs. The architecture also suggests

a formal connection to the Suzhou Museum that invites the audience to reconsider how

these projects helped establish an image of Pei's transnational identity.

It has to be noted how this transnational identity is distinguished from the strict

Modernist concept of the International Style. As already discussed, Pei's design strategy

corresponded to the progress of the search for architectural modernity from the

International Style and Modernism to a variation of modernism with regional

characteristics. While Pei's work in general presents a modernist prototype that can be

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[41] The architectural design is, however, not so dissimilar to Pei's design of the Herbert F. Johnson Museum of Art (1973) in Cornell University, also a concrete museum, built in a Brutalist style also reminiscent of Kahn's concrete structures. Herdeg is particularly critical of the fact that the building demonstrated the failure of the Bauhaus-based GSD curriculum, in terms of the complicated physical plan and overworked modernist elements which had not contributed to the debates on modern architecture since the late 1960s. Herdeg, *The Decorated Diagram*, 68–71.

[42] Jodidio and Strong, *I. M. Pei*, 90.

placed in different locations, it has more importantly emphasised an interaction between modern-constructed geometric forms and elements drawn from the localities in which they are situated. In other words, Pei's design takes into account regional and historical representations not included by the strict conception of Modernism or the International Style. Furthermore, in terms of employing geometric forms, Pei's preference for triangular or other geometric patterns also suggests a divergence from conventional modernist elements such as horizontal strip windows or a flat roof. Correspondingly, some of Pei's practices suggest a move from a Modernist to a more regional, or even, "Postmodern" strategy of employing traditional forms to evoke history, while there are also occasions when Pei's schemes are thoroughly modern, they nevertheless correspond with the historical features of the architectural context, as suggested by Pei. I consider the consistent but undefinable architectural signature Pei has established as his "international style" which thus cannot be defined by a singular definition of a specific architectural style.

For instance, in the Miho Museum (1991–97) in Japan, Pei made a reference to the Chinese poem of the Peach Blossom Spring (*Tao Hua Yuan Ji*) when designing the serpentine passage leading to the museum entrance.[43] A similar approach can generally be witnessed in the Suzhou Museum (2000–6) and the Museum of Islamic Art (2000–8), where Pei has suggested how the architectural forms were inspired by historical cultural elements.[44] In comparison, the Grand Louvre was also a typical example of how Pei emphasised the historical relevance of his design with the architectural context of the

[43] Ibid., 265–77.
[44] Ibid., 311–38.

constructing space, as the formulation of the scheme was inspired by Le Nôtre's landscape architecture. [45] Even in those cases when the architectural forms do not necessarily evoke a historical form of the architectural context, such as the pyramid entrance to the Grand Louvre and the extension to the German Historical Museum (1996–2003), Pei nevertheless insists that there is a correspondence between his modern design and the historical environment of the original building through the transparency of glass. However, already in the East Wing of the National Gallery of Art, Pei's work aroused controversy over an effective interaction between historical traditions and a modern structure. Peter Blake refers to Pei's extension as an "anonymous addition" which functioned as "a backdrop" that deliberately disengages with John Russell Pope's original structure, except the similar effect of the marble used to that of the architectural surface, and the overall contour of the architectural form. [46]

Furthermore, Pei's practice of his "international style" invites thinking on the representation of national identity of his projects, which reasonably relate to group or community identity in a contemporary background. In terms of political implications, the trajectory of Pei's international projects also reflects his correspondence with different government sponsorships. Ernest Gellner gives a definition of nationalism in his *Nation*

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[45] Stephen Rustow, "(Re)Reading, (Re)Writing—the Expansion of the Louvre," *Student Invitational Series at the Cooper Union of New York*, The University of Illinois; the Cooper Union for the Advancement of Science and Art, New York, 2009.

[46] In the same conference, Pei's East Wing of the National Gallery of Art was mentioned several times as a typical case study of a new design to a historic structure. Jean Pail Carlhian puts the criticism more straightforwardly, claiming that Pei's structure failed to correspond to Pope's original structure.
Peter Blake, "The Architecture of Courtesy," in *Old & New Architecture Design Relationship*, ed. National Trust for Historic Preservation (Washington D.C.: The Preservation Press, 1980), 92. Jean Carlhian Pail, "Guides, Guideposts and Guidelines," in *Old & New Architecture Design Relationship*, ed. National Trust for Historic Preservation (Washington D.C.: The Preservation Press, 1980), 49–68.

and Nationalism as "a theory of political legitimacy" which "holds that the political and national unit should be congruent"; it "requires that ethnic boundaries should not cut across political ones, and in particular, that ethnic boundaries within a given state…should not separate the power-holders from the rest."[47] The definition of a national identity, as Lawrence Vale suggests, is fundamentally connected to the recognition of nationalism.[48] In terms of the construction of architecture in capital cities, Vale perceives "the government's interest in pursuing international identity through modern architecture and planning," while meeting the demands of economic development, is "in reality a product of the search for subnational, personal and supranational identity."[49] Reflecting on Pei's Grand Louvre and German Historical Museum, it is apparent how the building contexts in capitals (Paris and Berlin) suggest a strong reference to political symbolism and the role of architecture in connection with the government.[50] The Louvre Pyramid provides an essential addition to the urban structure of central Paris as it redefines the axis of the city, which extended to La Défense, and restates its capitalist power.[51] Similarly, the original site of the German Historical Museum, the old Prussian armoury, contributed to the historical urban structure of the axis of central Berlin, once again demonstrating the role of architecture in the shaping of the historical urban image.[52] Berlin's historical identity as the Prussian capital implies a military and cultural

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[47] Ernest Gellner, *Nations and Nationalism*, ed. John Breuilly, 2nd ed. (Malden, MA; Oxford: Blackwell, 2006), 1.
[48] Lawrence J. Vale, *Architecture, Power, and National Identity*, ed. Hardy provenance Brownstein (New Haven: Yale University Press, 1992).
[49] Ibid., 48.
[50] As Lawrence Vale defines the "evolved capitals." Ibid., 16–27.
[51] Rustow, "The Expansion of the Louvre."
[52] The originally proposed site for the German Historical Museum also sustained Hitler's dream of the Great Hall.

symbolism that had to be addressed in Pei's extension to the German Historical Museum.[53]

In his discussion of the historical development of the conception of a "national identity" in modern Britain (more specifically defined by Mandler as England), Peter Mandler points out the need to identify the difference between nationalism and national identity. This is because the idea of "national identity" can incorporate different psychological and sociological attitudes of the community group. In comparison, "nationalism" can refer to a specific and historical concept of group identity largely developed in the second half of the twentieth century.[54] While conducting case studies on Pei's museum projects, although the subjects chosen are scattered in China, Germany and France, the consideration of this thesis of the conception of "national identity" through Pei's architecture nevertheless takes into account a distinction between nationalism and national identity. To be more specific, the first two projects to be discussed relate more closely to the idea of nationalism, as well as the distinction between a sense of nationalist identity and national identity, while the Grand Louvre focuses more on the representation of a contemporary national identity of Paris through Pei's transformation of the Louvre.

Besides considering the representation of specific national identity of a project in a given architectural context, Pei's hybrid cultural identity makes it necessary to take into account the representation of Pei's personal identity in these projects, represented as his signature forms in these projects. The Grand Louvre provides a particular case in which

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[53] Vale, *Architecture, Power, and National Identity*, 22.
[54] Peter Mandler, "What Is 'National Identity'? Definitions and Applications in Modern British Historiography," *Modern Intellectual History* 3, no. 2 (2006): 272–82.

one witnesses the tension between Pei's cultural identity and the manifestation of national identity in the urban image of Paris, in terms of race, language and religion, etc.[55]

The museum architecture

In the burgeoning development of museum constructions globally, the Grand Louvre in particular is a significant international museum landmark.[56] The examination of Pei's projects will also to some extent contribute to the historical and theoretical research on museum studies.[57] The reading of the representation of Pei's identity, national identity and communtiy identity also closely corresponds to the characteristics and social roles of museum architecture, which can be considered from three aspects: firstly, the museum as a specific building type; secondly; the role of the museum in the city in terms of its cultural, historical and political representations; and lastly, the purpose of the museum concerning the presentation and preservation of time.

While considering the museum as a specific building type, it is necessary to identify the difference between an architecture and a building. Adrian Forty refers to Roland Barthes's definition of the fashion system which distinguishes clothing from fashion to suggest how architecture operates as a system that comprises the production of a building, the image (architectural drawing and architectural photography) and the language (commentary from architectural critics and the architects themselves).[58] As a

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[55] Vale, *Architecture, Power, and National Identity*, 50.
[56] Suzanne Macleod, *Museum Architecture: A New Biography* (Abingdon: Routledge, 2013), 2.
[57] Victoria Newhouse, *Towards a New Museum*, Expanded ed. (New York: Monacelli Press, 2006), 2–10.
[58] Roland Barthes, *The Fashion System*, trans. Matthew Ward and Richard Howard (Berkeley and Los Angeles: University of California Press, 1990).

constituting part of the architectural system, language itself also operates as a system in parallel to building.[59] Suzanne Macleod considers that the language of architecture, incorporating commentary from architects, but predominantly that from other reviewers or architectural historians, has led to the tendency "to limit museum architecture to the activity of the architect, ignoring the institution and the people who use the building," which has thus generated a prototyped impression of museum buildings.[60] Furthermore, Macleod warns of the issue of incorporating the reading of architecture and museum buildings, as the language surrounding museum projects has to some extent generated its own version of "reality" against that of the museum buildings. This tendency necessitates a redefinition of the museum as a result of cultural activities and as a product of the social environment.[61] Thus, my second argument is that in order to further evaluate the role of museum buildings as architecture, it is necessary to incorporate considerations of both the actual contexts of the buildings and their connections to architectural language. As the thesis will discuss later, the examination of architecture and language also opens up the possibility of theoretical approaches to Pei's projects.[62] Reflecting on the reading of

Adrian Forty, *Words and Buildings : A Vocabulary of Modern Architecture* (London: Thames & Hudson, 2000), 13–14.

[59] Forty, *Words and Buildings*, 13.

[60] Further to the distinction of the role of museum from merely the architect's "architecture," Macleod also provides a thorough summary of the role of the museum as a building type. This includes its reflection of the stylistic discourse of architecture, the design of a museum which involves the progress of modern technology, the distinction of architecture from art, and the function of the museum as a cultural product of everyday life in the community. Macleod's thoughts on the role of museum as architecture provokes discussions of Pei's museum projects in social, cultural and architectural terms. Macleod, *Museum Architecture*, 11–35; quote from 16–17.

[61] Forty, *Words and Buildings*, 13. Macleod, *Museum Architecture*, 16.

[62] Rhiannon Mason perceives that museums, as a cultural phenomenon, have been evaluated through a variety of cultural theories. These include, for instance, Semiotics and Structuralism, Poststructuralism, Derrida's deconstructive discussion of *Différance*, postcolonial debates on cultural identity, Foucauldian theories, and the textual analysis of museum objects, exhibitions, museum space and architecture. While especially the "museum-as-text" approach has its impact, as it might have over-complicated the subject,

Pei's identity and the role of museum architecture, the thesis will examine both the cultural and social roles of Pei's buildings, and the language of the architecture, so as to further approach a more comprehensive view of the museum projects as not only Pei's designs that can represent his identity, but also a building type which is specifically developed for the purpose of museum activity.

One cultural role of museum architecture, as Carol Duncan and Alan Wallach point out, is that a museum is initially developed as a type of architectural monument for ceremonial purposes and stands as a representation of the state. [63] On the basis of Foucault's discussion of the heterotopia, Beth Lord considers how the museum acts as an embodiment of the power and capitalised control of the state.[64] The public museum consequently plays an essential role in representing national identity and functions as the agency between the public and the state.[65] The Louvre is a project that attracts particular attentions. As Duncan and Wallach consider, the Louvre, as the pivotal example of a museum, has not only incorporated the early aristocratic iconography, but also developed its cultural and political identity in contemporary society. It is thus a symbol of the

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Mason considers it nevertheless helps reflect the complexity of museum studies and contributes to the "theoretical museology" produced in museum architecture. Rhiannon Mason, "Cultural Theory and Museum Studies," in *A Companion to Museum Studies*, ed. Sharon Macdonald (Malden, MA; Oxford: Blackwell, 2006).

[63] Carol Duncan and Alan Wallach, "The Universal Survey Museum," *Art History* 3, no. 4 (1980).

[64] Beth Lord, "Foucault's Museum: Difference, Representation, and Genealogy," *Museum and Society* 4, no. 1 (2006).

[65] Moreover, as Macdonald perceives, museums have been increasingly contributing to the representation of transnational identities, although mostly through art exhibitions rather than museum architecture. Sharon Macdonald, "Museum, National, Postnational and Transcultural Identities," *Museum and Society* 1, no. 1 (2003).

For a brief discussion of the discourse of museum architecture see Michaela Giebelhausen, "Museum Architecture: A Brief History," in *A Companion to Museum Studies*, ed. Sharon Macdonald (Malden, MA; Oxford: Blackwell).

civilisation of France.[66] To consider the representation of identity in the context of the state, my case studies will focus on Pei's work of public museums. In particular, the significance of the Louvre as a museum prototype underlies my discussion of Pei's transformation of the Grand Louvre in terms of its representation of cultural identity in contemporary society.

Furthermore, the character of the museum as monumental architecture links to the debates on the representation of architectural monumentality in the discourse of modernism. In her discussion of post-war architectural monumentality, Sarah Williams Goldhagen perceives the shared characteristics of post-war Western monumental architecture, through which their connection to governmental intentions have been strongly expressed ("the discursive narratives of power"): "an apparently large scale; clear, simple, geometrically controlled forms; distinctiveness in the urban landscape; imageability; and references to architectural precedents."[67] These characteristics also well fit into the categorisation of Pei's architecture. As it will be discussed later, Pei's strategy of combining local characteristics and historical traditions with modern motifs and materials necessarily invites consideration of his architectural identity in the debating discourse between modernity and tradition.

Michaela Giebelhausen emphasises that the museum, as a specific building type that has only existed since the late eighteenth century, plays a significant role in the

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[66] Duncan and Wallach, "The Universal Survey Museum," 457–63.

[67] Sarah Williams Goldhagen, "Monumentality in the Pictorial Still," in *Architecture between Spectacle and Use*, ed. Anthony Vidler (Williamstown, MA: Sterling and Francine Clark Art Institute, 2008), 94.

representation of historical traditions and the configuration of the urban image.[68] One of the most typical cases she discusses is the Altes Museum, built in the form of classicism, which contributed to the cultural and political symbolism of Berlin in the nineteenth century.[69] The discussion of the role of museums in the urban landscape necessarily returns to the specific idea of national identity, as discussed in the previous section. While the display of political influence, due to patronage, in terms of aesthetics and design intentions, has been a prominent feature among architectural practice since the 1980s, this connection is particularly visible in Pei's museum commissions. Especially in the commission of the Grand Louvre and the German Historical Museum, Pei's designs provoke consideration of how they correspond to governmental patronage and contribute accordingly to the image of the urban landscape. Kenneth Frampton positions the Louvre project among the architectural practices of the 1980s in which the patronage of the government played a role in the success of the construction.[70] In terms of its urban role, Pei's design of the Grand Louvre fundamentally served the expansion of Mitterrand's *Grands Projets*, marked by some typical features such as geometric forms, a vast amount of glass used and the manifest employment of steel. The common feature of glass surface led to Anthony Vidler's analysis of how Paris's new urban identity of technology and modernity, highlighted by transparency, suggests an intricate and opposite image of

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[68] Michaela Giebelhausen, "Introduction: The Architecture of the Museum – Symbolic Structure, Urban Contexts," in *The Architecture of the Museum*, ed. Michaela Giebelhausen (Manchster: Manchster University Press, 2003), 8.

[69] Giebelhausen, "Museum Architecture," 228–9.

[70] Kenneth Frampton, *Modern Architecture: A Critical History* 4th ed. (London: Thames & Hudson, 2007), 333.

translucency and opacity.[71] The subsequent project for Pei came to be the extension of the German Historical Museum in Berlin, which, as Kathleen James-Chakraborty perceives, corresponded to the patronage of the Christian Democratic national government to support a modernist approach to represent the historical features of the city, in opposition to the Socialist Berlin government's sponsorship of a postmodern approach to preserve historical elements.[72]

Another purpose of museum architecture is its staging of the permanent presence of history and time, in contrast to the passage of real time: "the architecture of the museum has remained a strangely timeless place which has denied its own participation in the temporal processes."[73] The two examples Giebelhausen provides present two different strategies to deal with history and time: while in the Altes Museum, the rotunda function as an agency "between 'real time' and 'museum time', between the mundane and the ideal," the Neues Museum suggests "a Hegelian concept of history: forever onward and upward."[74] This presentation of time thus becomes an aspect to consider in Pei's projects, not only because of its significance in museum architecture, but also due to the fact that it has been emphasised in Pei's design strategy. Douglas McBride suggests the museum

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[71] Anthony Vidler, *The Architectural Uncanny: Essays in the Modern Unhomely* (Cambridge: The MIT Press, 1992), 217–25.

[72] Moreover, similar to the situation in France, where there was a significant anti-foreign atmosphere during those years, the construction in Berlin relied on foreign architects, and Pei is an example of how foreign and modern architects have contributed to the new urban identity of a city that features historical symbolism. See Kathleen James-Chakraborty, "Beyond the Wall: Reunifying Berlin," in *Debating German Cultural Identity since 1989*, ed. Anne Fuchs, Kathleen James-Chakraborty, and Linda Shortt (Rochester, N.Y.: Camden House, 2011).

[73] Michaela Giebelhausen, "In the Museum's Ruins: Staging the Passage of Time," in *Museum Making, Architectures, Exhibitions*, ed. Suzanne Macleod, Laura Hourston Hanks, and Jonathan Hale (Abingdon: Routledge, 2012).

[74] Ibid., 238.

is a building type which relates to the notions of time and purpose, and a museum is both a place for collection displaying and a social space.[75] In a similar way, Pei explains his design approach as "analytical," which works for "an ideal balance" between the three aspects that Pei considers to be the most essential in his architecture: "time, place and purpose."[76] In this concern, the relationship between tradition and modernity reflected in Pei's museum projects also relates to the role of architecture of incorporating history and time in contemporary urban landscape.

I. M. Pei's museum architecture: a reading of identity and language

These questions surrounding the unfixed nature of Pei's identity and the significance of museum architecture lead the thesis to look into Pei's museum architecture through four case studies of his projects. The four architectural commissions selected have incorporated to different degrees all these intricate aspects of the identity of Pei and his work, as well as museum as a building type. The sequence of examining these projects not only takes into consideration the geographical expansion of Pei's projects, but also engages with different aspects concerning the plurality of the architectural, cultural and national identity reflected from each case. Overall, the examination of the architectural commissions aims to identify the specific manifestation of Pei's engagement with these projects in their relative contexts, and the impact on the

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[75] Douglas McBride, "Modernism and the Museum Revisited," *New German Critique* 33, no. 99 (2006).
[76] Pei and Boehm, *Conversations with I. M. Pei*, 133.

understanding of the many versions of identities of Pei and the role of his museums. Combining a hybrid cultural identity, post-war American national identity and post-Bauhaus identity, Pei has also provided a unique example of developing his version of the "international style" in modern and contemporary architecture.

The thesis progresses with its examination in three parts. The first part focuses on the representation of national identity, specifically identified in their historical contexts, complicated by Pei's hybrid cultural identity and his pro-modernist architectural identity. The second part reviews Pei's museum as a cultural product in the urban context of the state and, meanwhile, a textual work of architecture which can be assessed from a theoretical perspective. These two aspects are incorporated in the relationship between architecture and language, which will be addressed later in the chapters. The reading of the building both as a cultural product in society and as one of the architect's production connects to the role of museum architecture and helps reveal the complexity of Pei's identity and museum architecture.

In the first part, reading architecture and national identity, the thesis will begin from the Museum for Chinese Art in Shanghai, one of Pei's earliest projects that demonstrated his modernist background and created a modernist identity for the architecture, as a response to a specific expression of Chinese nationalist identity. Pei envisaged his modern museum as challenging the architectural context of the Greater Shanghai Plan, a site on which the Chinese Nationalist Party had decided to develop an architectural style that could represent a contemporary sense of national identity. Alex Tzonis notices that nationalism can be seen as an opposing strategy against globalisation

in architecture.[77] In a way, the International Style can be used to promote an idea of nationalism, as Eva Eylers discussed in the case of Alvar Aalto's practices in Finland, which promoted the establishment of a modernist identity that symbolised the country's renewed social and political identity.[78] In light of providing an architectural representation of nationalist identity, Pei's envisaged museum also conveyed a message of constructing a new cultural and political identity in China.

Pei's commission for the extension to the German Historical Museum reflects a similar role of the museum to correspond to the representation of nationalism. Being the former museum of the German Democratic Republic (GDR) and the previous Prussian armoury, the current site of the German Historical Museum not only recollects the tension between the former East and West Germany in terms of political and cultural ideologies, but also raises a concern of how Pei's modern structure corresponds to the historical significance of the site, mostly conveyed through the presence of the Zeughaus.[79]

Both projects connect to the manifestation of Pei's hybrid cultural identity. The Museum for Chinese Art reflects his modernist identity, formed from the review of Western architectural criticism. However, it also represents his personal identity as the museum was inspired by the Chinese garden that Pei has been attached to. The German Historical Museum provides the opportunity to delve into the more eclectic modernist

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[77] Alex Tzonis, "Notes on Regionalism," in *Theoretical Currents: Architecture, Design and the Nation* (Nottingham: Trent University, 2010). Cite from Raymond Quek, "Nationalism and Architecture: An Introduction," in *Nationalism and Architecture*, ed. Raymond Quek, Darren Deane, and Sarah Butler (Farnham: Ashgate, 2012), 11.

[78] Evain Eylers, "Constructing National Identity through the International Style: Alvar Aalto and Finland," in *Nationalism and Architecture*, ed. Raymond Quek, Darren Deane, and Sarah Butler (Farnham, Surrey, England ; Burlington, VT: Ashgate, 2012).

[79] Wolfgang Thöner, "From an "Alien, Hostile Phenomenon" to the "Poetry of the Future": On the Bauhaus Reception in East Germany, 1945–70," *GHI Bulletin Supplement* 2 (2005): 121.

identity of Pei, which nevertheless corresponds to the historical image of Germany as the place where the technical and formal experiments of modern architecture originated.[80] More importantly, this eclectic modernist identity also correlates with the current image of Berlin as a metropolitan city, with an urban and, especially, museum culture constructed by international architects.[81]

The second part examines Pei's Grand Louvre through the often-considered relationship of architecture and language. The analysis develops through two interpretations of the language of architecture. Chapter Three considers the language of architecture as composed of readings by not only architectural critics, historians and the architect, but also by the public. On the one hand, the language surrounding the Grand Louvre corresponded to Macleod's perception of how these external readings of the architecture have negatively fixed the interpretation of museum architecture as solely the production of an architect, which consequently affected the reception of the project. On the other hand, this process also suggested the problematic role of the museum as an instrument of the state. This recalls the function of the museum as an architectural monument. Goldhagen perceives modern architecture as representing a new type of monumentality, that of "monumentality-as-pictorial still."[82] The contradiction between the reading of architecture as a still image and the reception of a building by its users is particularly visible in the reviews of the Grand Louvre, mostly represented by Jencks's

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[80] Kathleen James-Chakraborty, *German Architecture for a Mass Audience* (London; New York: Routledge, 2000). Barbara Miller Lane, *Architecture and Politics in Germany, 1918–1945* (Cambridge, MA: Harvard University Press, 1968).
[81] James-Chakraborty, "Beyond the Wall."
[82] Goldhagen, "Monumentality in the Pictorial Still," 102.

fierce criticism of the ornamental nature of the Glass Pyramids and Pei's claim that the glass roof of the pyramids provides a source of light for the entrance hall and a sense of historical interaction between the visitors (the intended users) and the main façades of the Louvre. However, in the public's reception of the Louvre Pyramid, one can nevertheless sense a tendency to read the architecture as "image." Furthermore, the controversy over the Grand Louvre nevertheless relates to the architectural debates on Pei's design, between modernism and postmodernism that connects to his architectural identity.

Forty points out that architectural drawing is a major instrument for the architect to convey their language.[83] Chapter four considers the language of architecture through architectural drawings, also the main archival resources on the project. This opens up the interpretation of the Grand Louvre from a variation of linguistic approaches of reading architecture, particularly through a deconstructive approach and by employing Peter Eisenman's reading of the architectural diagrams. Eisenman reads architecture as text and suggests the autonomy of architecture manifested through the freedom of form and space.[84] In a similar manner, the thesis considers that Pei's architectural drawings of the Grand Louvre particularly present the intricate interactions of architectural forms and space in the process of developing architectural conceptions, the unfixed form of which demonstrates how the museum can be understood as a work of architecture. Moreover, the architecture develops its meanings as a system of autonomy beyond a historical context. This attempt provides another way to approach the question which emerged from

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[83] Forty, *Words and Buildings*, 29–41.
[84] Peter Eisenman, *Inside Out: Selected Writings, 1963–1988* (New Haven; London: Yale University Press, 2004).

Strong's comment concerning the extent to which Pei's architecture can be independent of the shifting-isms and therefore distanced from architectural contexts and the labels of architectural styles.

In the last part, the thesis evaluates Pei's latest project, the Museum of Islamic Art in Doha, as one that incorporates the notions of architecture and identity, as well as architecture and language. On the one hand, the understanding of the museum in its historical context necessitates a consideration of the architecture's presentation of local identity. On the other hand, the building provokes consideration of the relationship between architecture and language, in terms of the external readings of the building's representation of Islamic identity as well as the connection of the visual language of the architecture to Pei's design for the Suzhou Museum. The link to the Suzhou Museum recalls Pei's effort to explore his cultural roots in his designs through his own "international style". Moreover, the two versions of the Oriental contexts, having found their common ground in Pei's two projects, have provided new thoughts on the globalised image of museum architecture in contemporary society.[85]

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[85] Edward W. Soja, *Postmodern Geographies : The Reassertion of Space in Critical Social Theory* (London; New York: Verso, 1989).

Chapter 1　The Museum for Chinese Art, Shanghai: modernity vs tradition, nationalism vs national identity

In February 1948, the recently re-organised American journal *Progressive Architecture* (*P/A*) celebrated Pei's graduation project at Harvard GSD (1946) in its latest issue (Figure 1).[1] The title itself explained the building: it was a museum of Chinese art, situated in Shanghai, China. The layout of the page distinguished the article's title through the enlarged and capitalised word MUSEUM from the rest of the description. This visual arrangement nevertheless implied the editor's extra emphasis on the architectural type of the building as a museum rather than on the project's specific location in Shanghai, China.

The work was celebrated by *P/A*, as can be seen from the brief abstract following the title, which defined it as "an excellent synthesis of progressive design in addition to providing a much-needed architectural statement of a proper character for a museum today."[2] *P/A* used the word "progressive" to describe Pei's design, a remark that also

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[1] *Progressive Architecture* was established in 1920 as *Pencil Points*. In 1945, the journal was relaunched under the name *Progressive Architecture*, with the early issues titled *Progressive Architecture Pencil Points*. "Progressive Architecture," *The Online Books Page*, University of Pennsylvania, accessed July 11, 2017, http://onlinebooks.library.upenn.edu/webbin/serial?id=progarch.

[2] "Museum for Chinese Art, Shanghai," *Progressive Architecture* February, no. 29 (1948): 50.

echoes the name of the magazine. As "an excellent synthesis," the scheme becomes a role model of integrating Eastern and Western elements in architecture. Moreover, the emphasis on its immediate and essential relevance to contemporary museum practices further confirmed the significance of Pei's design in the ongoing trend of international modernism.

The article introduced Pei's design through images of the architectural model and the plan, along with some descriptions provided by Pei. There was also a review from Walter Gropius, who supervised the project. The images reveal that the museum was conceived through the theme of a Chinese garden. Gropius provided a brief account of the design process and explained how the project demonstrated an aesthetics of architectural monumentality.[3] The design, on the one hand, put forward a Westernised conception of modernity and aesthetics praised by *P/A* as a proponent of American modernism. On the other, it also corresponded to an image of architectural monumentality promoted by American and European spokesmen, such as Henry-Russell Hitchcock and Gropius, of representing tradition through modern structures.

However, a closer look at the article reveals that the modernist interpretation of the project, dominated by the modernist conception of post-war architecture, was incomplete. One reason was that Gropius's elaboration of the representation of traditional Chinese characteristics was established on a position only advantageous to the modernists, which means there were limitations when identifying the essentially

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[3] Ibid., 52.

historical characters in architectural representation. Furthermore, it was also because important considerations of Pei's previous experience in China, and the project's contribution to architectural development in China, were generally omitted.[4] In effect, the specific architectural context of the Museum for Chinese Art reveals the design's role of meditating between the architectural representation of nationalism and modernity, intentionally or unintentionally omitted by *P/A*.

This chapter proposes that Pei's design incorporates two versions of interpretations, one relating to the perception of post-war modernist identity and the other with the symbolism of modernity in China, which was dismissed by the Western-dominated modernist perspective. Considering the specific location of the museum and Pei's descriptions of the design, the project reveals its contribution to the struggling status of architectural symbolism of nationalism and national identity in China, inextricable from the complicated development of colonial and postcolonial architecture in Shanghai. Looking through this perspective, the "white" wall becomes an intermediate element of Chinese architecture and Western modernism, and no longer an impediment to modernity and modernisation in China. Furthermore, the reading of the design in view of Pei's own background also suggests its role in representing Pei′s architectural identity.

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[4] Barry Bergdoll argues that Pei's representation of tradition corresponded with Marcel Breuer's research on American traditionalism in New England architecture, though Pei considered his project a challenge to the International Style that Gropius and Breuer supported. See Barry Bergdoll, "I. M. Pei, Marcel Breuer, Edward Larrabee Barnes, and the New American Museum Design of the 1960s," in *A Modernist Museum in Perspective : The East Building, National Gallery of Art*, ed. Anthony Alofsin (New Haven and London: National Gallery of Art, 2009).

To further evaluate possible interpretations of Pei's design, this chapter will address the complex relationships between nationalism and the representation of modernity in four parts. Firstly, it will examine Pei's design from the perspective of *P/A*, which emphasised the Western attributes of the project. The design offers strong references to the modernist projects of Le Corbusier and Mies van der Rohe, and suggests a position aligned with a typical post-war American identity.[5] The second part questions the extent to which this Western perspective can be an exclusive way to interpret the architectural and cultural contradictions in Pei's design. To do so, the chapter looks into the review of Pei and his project by Gropius and *P/A*. The third part investigates the architectural context of the design in Shanghai not considered by *P/A*. This allows the chapter to focus on the envisaged architectural setting of Pei's museum in China—so distanced from Western attention that it was not acknowledged by the American modernists. This reveals the role of the building as an implicit challenge to the existing architectural symbolism of Chinese nationalism. Finally, the fourth part will discuss the textual interpretation given by Pei himself, which brings out another interpretation of the project as a representation of Pei's personal identity. Albeit this was Pei's first conception of a museum, it already demonstrates the role of architecture in intervening between the stylistic debates on architectural monumentality. The project reveals its intermediate position in different dimensions of temporality, place and purpose.

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[5] This point will later be further explained. Ibid., 111.

1.1 **The Museum for Chinese Art**

The first image of Pei's museum was a photo of the architectural model, covering almost half the first page (Figure 2). This image provided a distinctive look of the very modernist characteristics in Pei's design. The building is presented as correspondent to Le Corbusier's Five Points on Architecture.[6] One of the most evident features was the combination of the *pilotis* and a flat roof, echoing the approach that Le Corbusier used in the Villa Savoye.[7] The open structure of the front of the building suggested the free design of the façade, independent from the structural function of the supporting *pilotis*. Furthermore, the front view of the model presented an absence of supporting walls and the open space of the interior, corresponding to the principle of constructing a free plan. The perspective of the photo produced a visual effect that the *pilotis*, seen through the openings of the ceiling, were transformed into the mullions of the horizontal windows of the building. The opening on the ceiling provided a view of the internal garden through the top, which to some extent also assimilated the roof garden in Le Corbusier's Five Points. The entrance was covered by a modern portico and connected by a modernist slope leading to the open interior of the courtyard. This was also reminiscent of Le

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[6] Le Corbusier's five points on architecture, written in 1926, include: The supports; the roof gardens; the red designing of the ground-plan; the horizontal window; free design of the façade. See Le Corbusier, "Five Points toward a New Architecture," in *Programs and Manifestoes on Twentieth Century Architecture*, ed. Ulrich Conrads (Cambridge, MA: The MIT Press, 1970).

[7] Trevor Garnham perceives that the design of the Villa Savoye also well demonstrated Le Corbusier's statement that "A house is a machine for living in," seen from the machine form and structure of the building. The machine-like building is situated on a natural landscape, with a driveway for cars, another symbol of the machine facility. Trevor Garnham, *Architecture Re-Assembled: The Use (and Abuse) of History* (New York: Routledge, 2013), 121.

Corbusier's iconic ramp, as seen in, for instance, the internal slope at the Villa Savoye or the external passage of the Carpenter Center at Harvard (1962).

The design of the structure was also visible in two more photos with views overlooking the model from above (Figure 1). They clearly presented the architecture as a flat-roofed cubic structure, with many openings asymmetrically arranged to reveal the interior court. This arrangement was also present in another of Pei's designs, for the competition "A Realistic House For A Family in Georgia" (1946), which received a mention for its appearance and structure, especially with the employment of the interior court (Figure 3).[8] The appearance of the courtyard and the block-like layout of the house is also reminiscent of Mies's plan for the Court House Project (1945–46) and thus further indicates congruity with a Western design prototype (Figure 4).

P/A provided a short description of the design between the two model photos (Figure 1 *Right*). The museum was intended to replace an "inadequate structure" in the Civic Centre of Shanghai, the plan of which was finished in 1933, with the intention of "befitting the dignity of Shanghai."[9] The structure was designed to be a cubed two-story gallery space in concrete. The entrance is situated halfway between the upper and lower levels of the building, which suggested the structure was built half beneath the ground.[10] This, as written in the description, would make the structure lower than the surrounding

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[8] "A Realistic House for Georgia: Progressive Architecture Rich's Inc Competition," *Progressive Architecture · Pencil Points* 27, no. April (1946).

[9] "Museum for Chinese Art," 51.

[10] The placement of the floor level beneath the ground was later best-known in Mies's design of the Neue Nationalgalerie.

buildings in the Civic Centre. The building surface was therefore entirely covered by marble so as to eliminate the disadvantage of the height, and to "enhance the plastic and sculptural quality of the structure."[11] The emphasis on the sculptural effect of the marble nevertheless coincided with that of the Barcelona Pavilion.[12]

The architectural plan of the museum presented the arrangement of the inner galleries, along with short descriptions of the design in *P/A*. The Lower Floor underground featured a Chinese garden, extending the museum space from the centre to the walled courtyard located at the rear end of the building (Figure 5). In his description, Pei suggested "the traditional Chinese garden is literally a garden of walls."[13] Thus two themes can be recognised: The first was that the Chinese garden connected each part of the architecture. The second was that the walls were constructed as an integrated part of the Chinese garden. The tea pavilion and natural plants were also part of the integrated Chinese garden. William Curtis suggests the design of the Villa Savoye provides the possibility of different viewpoints.[14] Similarly, the design of the courtyard created multiple viewpoints onto the Chinese garden. As *P/A* further quoted Pei: "This building is sunk half a level below ground in order to create walls for the main garden while permitting a view into it from outside."[15] The inside and outside were to be fully

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[11] "Museum for Chinese Art," 51.

[12] Kenneth Frampton, "Modernism and Tradition in the Work of Mies Van Der Rohe, 1920–1968," in *Mies Reconsidered: His Career, Legacy, and Disciples*, ed. Robert V. Sharp (New York: The Art Institute of Chicago; Rizzoli International Publications, Inc., 1986).

[13] "Museum for Chinese Art," 50.

[14] Curtis, *Modern Architecture since 1900*, 280.

[15] "Museum for Chinese Art," 50.

connected by the openings in the roof, façade and interior, creating a full visual experience of flowing space.

The plan of the Upper Floor indicates that the exhibiting rooms were arranged by collection type, such as bronze, clay, painting and calligraphy (Figure 6). Items in each room were then displayed in chronological order. The Chinese garden partitioned, while also connecting, the inner galleries. Natural elements such as lotus, bamboos and flowers were scattered around the garden and the tea pavilion. As Pei explained, this arrangement would help the collections to be "best displayed in surroundings which are in tune with them, surroundings which incorporate as much as possible the constituting elements of natural beauty."[16] The presentation of nature, as Pei indicated in a rather non-modernist manner, also corresponded to the theme of a Chinese garden, because "all forms of Chinese art are directly or indirectly results of a sensitive observation of nature."[17]

In the description of the section plan, *P/A* explained this very specific installation of the Tea Garden, a feature usually situated either in a market as a social place for people of different classes, or around temple architecture as a venue for intellectual conversation. Pei suggests the Tea Garden refers to tea houses in Chinese culture, not necessarily affiliated to any specific context, e.g., a tea pavilion in the Chinese Garden.[18] By arranging the Tea Garden in the museum, Pei expressed his design intention to "make the institution a living organism in the life of the people, rather than a cold depository of

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[16] Ibid., 51.
[17] Ibid.
[18] Ibid., 52.

masterpieces."[19] The purpose of arranging the very specific theme of the Chinese Tea Garden thus corresponded to the modernist aspiration towards post-war American building, as further implied in the section drawing.

The section provided a view of the functional construction of the internal gallery space looking through the two-story structure and the Chinese garden (Figure 7). The design suggested the gallery was an open space across the upper and lower levels of the building, connected both to the courtyard of the museum and the long corridor. The roof level was constructed in modern materials of marble veneer, sand and concrete consolidated on a slab and with acoustic panels installed. The ground level, presenting a sense of firmness, was layer by layer constructed by a slab, materials of tile, concrete and cement mortar with a marble tile finishing. While the use of marble on both interior and exterior suggested architectural monumentality, as Pei claimed, it also created a sense of consistency in the employment of constructing materials.[20]

On view in the section were three iconic Chinese objects that manifested an emphasis on Chinese characters. The bottom left of the section featured a bronze Buddha bust, to the right of which was a statue of Lao Tzu riding a buffalo. In the background of the section can be seen a large embroidery of a Chinese dragon (*Long*) that created a spatial division from the ceiling. On the left side, the Buddha signified a relationship

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[19] Ibid.
The Chinese Garden mentioned here refers to a type of Chinese architecture, which thus incorporates the general ideas towards a Chinese garden form, but meanwhile distinguished from any specific garden. The chapter will further discuss the architecture of the Chinese Garden and Pei's reference to a specific Chinese garden in sections 1.2 and 1.3.4.
[20] Ibid., 51.

between the wall and the floor. Rather than simply being displayed *as* artworks, these objects altogether created an impression as if being designed as part of the space and functioned for the creation and separation of space. The figures beneath the embroidery and at the far end of the aisle (the next exhibiting room), in typical traditional Chinese costumes, indicated the scale and height of the interior while suggesting free movement in the space.

Overall, the multiple displays of objects originating from Chinese culture, with the building's connection to the Chinese garden, provided a strong representation of Chinese symbolism. However, the installation nevertheless suggested a resemblance to Mies's project for a "Museum for a Small City" in 1943, indicating the design's apparent modelling on a Western modernist prototype (Figure 8).[21] Mies envisaged the museum as an ideal, but also presumably practical, proposal for the "architecture of 194x," on the occasion when twenty-three architects, including Louis Kahn and Mies, were invited by two American magazines, *Architectural Forum* and *Fortune*, to envisage an ideal city in post-war America.[22] Different architects contributed to different segments of infrastructure, including, for instance, library, city hall, museum and office buildings,

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[21] Josh Conrad, "A Look at the 1948 Publication of I. M. Pei's Collage Rendering of Museum for Chinese Art, Shanghai (1946)," in *American Architecture* (The University of Texas, 2001), 3–4.

[22] The prototype of this ideal city was Syracuse, New York. Mies's museum design was inspired by the thesis project of George Danforth, one of his students at IIT. Mies's museum design reflected his previous interest in the composition of "continuous floor and roof planes leading to an open horizon." As it can be noticed from the illustration, Danforth also delineated the drawings of the design. Levent Ozler, "194x–9/11: American Architects and the City," Dexigner, July 4, 2011 accessed September 6, 2017, https://www.dexigner.com/news/23328. Phyllis Lambert, "Mies Immersion," in *Mies in America*, ed. Phyllis Lambert (Montréal: Canadian Centre for Architecture; New York: Whitney Museum of American Art; Harry N. Abrams, 2001), 426–9.

which helped "redefine urban community life and the relationship between architecture and urban planning."[23] In the proposal, Mies emphasised his design intention to create a museum for the enjoyment of the community, realised through the design of the garden in the centre of the building to eliminate "the barrier between the art work and the living community" in "a noble background for the civic and cultural life."[24]

Not only in terms of design philosophy did Pei's scheme present evident resemblances to the concepts Mies had initiated. It also did so in the aspects of structure, materials and the formation of space. Pei's emphasis on the socialising and entertaining purpose of his tea pavilion, which was for people of different classes, echoed what Mies suggested to create a cultural background shared by the whole community, as quoted above. To achieve this connection with the entire community, Pei developed his scheme around the theme of the central courtyard, while Mies also positioned a garden as a primary element to bridge the gap between artworks and visitors from both aesthetic and cultural considerations. In his gallery design, Mies presented an open space, composed by the modernist elements of a floor slab and a roof plate.[25] The structure was supported by steel roof trusses that minimised the use of columns.[26] Pei's detailed descriptions of the materials of the slabs for his roofed structure, supported by the main frame, the plinths of which suggested its role as the main columns of the building, nevertheless conveyed a

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[23] In the realistic context of American architecture, Mies's scheme came out when museum architecture had not yet fully begun to thrive, as Barry Bergdoll recognised the museum boom in America only came in the 1960s. Ozler, "194x–9/11." Bergdoll, "Pei, Breuer and Barnes."

[24] "Museum for the Small City, Mies Van Der Rohe," *The Architecture Forum* 5, no. 78 (1943): 84.

[25] Ibid.

[26] Pauline Saliga and Robert V. Sharp, "From the Hand of Mies: Architectural Sketches from the Collection of A. James Speyer," *Art Institute of Chicago Museum Studies* 21, no. 1 (1995): 56–69, 77–78.

similar idea of modern materials to create a large and free space for exhibiting uses and for a large group.

In terms of the gallery settings, the section of Pei's large gallery particularly conveyed a visual equivalence to the interior perspective of the Museum for the Small City, which also indicated the spatial composition of the artworks against the structural support of the building (Figure 9; Figure 10). The spatial combination of the two Chinese bronze statues and the *Long* embroidery corresponded well to the photomontages of the interior space , constructed through the display of Aristide Maillol's sculptures of *Étude Pour Le Monument à Cézanne* (1912), *L'Action enchaînée* (1908) and Night (1909), Paul Klee's Colourful Meal (1928), and Pablo Picasso's painting Guernica (1937).[27] Mies specifically suggested the extra function of Picasso's Guernica as part of the spatial structure as a freestanding wall that divides the space.[28] Pei's use of the artworks similarly presented the idea of spatial divisions and the sense of artworks being part of the open architectural space.[29] In addition, the openings in the roof ceiling of Pei's model echoed the openings in the roof ceilings of Mies's design which provided the light access from

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[27] This kind of photomontage has appeared in other of Mies's projects, such as the interior view of the living room of the Resor House Project, which features Klee's painting, and the Georg Schaefer Museum Project in Schweinfurt, Germany (1960–63), in which a photomontage of the living room includes Maillol's L'Action enchaînée. The next chapter will discuss how the Museum for a Small City becomes a prototype in Mies's architectural projects. In contrast, despite the resemblance of Pei's Museum for Chinese Art to Mies's modernist conception, it did not necessarily become a standardised approach for other projects. Interestingly, while Pei employed a typical modernist strategy for a museum in China, in the commission of DHM in Berlin, where modernism had its architectural "roots," Pei's response is not an entirely modernist scheme, but rather one that corresponds to the role of the museum in contemporary image of Berlin.

[28] Ozler, "194x–9/11."

[29] Ludwig Mies van der Rohe, "Museum for a Small City Project (Interior Perspective)," 1941–1943, accessed 2017, March 16, https://www.moma.org/collection/works/777?locale=en.

the outside. By employing glass walls in the interior, Mies created a visual connection between the internal galleries and the garden court.[30] A similar effect in Pei's museum was evident from the visual connection of the internal space, as seen from the section plan.

The Museum for the Small City reasonably corresponded to the architectural background of post-war American city construction. The use of the steel technique, widely demonstrated in other projects of Mies in Chicago, was a recognition of the American steel industry that nevertheless echoed with the sense of American identity that Mies had obtained since he left Germany.[31] As discussed above, the open and flowing space of the Museum for a Small City was also realised through the application of the steel frame, which therefore corresponded to the architectural context of the post-war American city of the "194x." Pei's modelling on the Museum for the Small City thus responded to this modernist and post-war American architectural identity. However, in terms of construction materials, there was one variation which suggested a less likely sense of industrial techniques: the layered elements carefully depicted in Pei's section of the gallery, from marble veneer, sand and gravel to concrete and slab, if not implying any symbolism of Chinese elements, in effect featured a distance from the industrial concept of the steel frame.

Overall, this intentional resemblance of Pei's Museum for Chinese Art in Shanghai to the Museum for the Small City in a post-war American city certainly

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[30] "Museum for the Small City."
[31] Ozler, "194x–9/11."

indicated the role of the design as a variation of the International Style.[32] It presented the prospect of using a modernist language to transform Chinese themes into a possible architectural form to be built in China. Pei's museum actually coincided with the American-conceptualised idea of post-war architectural monumentality, although the project itself was envisaged for Chinese art and situated in China. However, this strong modernist vocabulary led to the exclusion of the Chinese context of the project in its discussion in the American architectural press.

1.2   The architectural language defined by Western modernists

Of equal importance to the architectural model and plans of the project was a review of the project by Gropius, displayed next to the photos of the model, which further supported the effective result of the modernist approach (Figure 1).[33] Gropius, who supervised this project, greatly acknowledged the emerging debate of tradition and modernism. He praised Pei's project for integrating "basic traditional features" with "a progressive conception of design."[34] While rejecting the pure imitation of "bygone aesthetic forms," Gropius suggested the modernist "respect for tradition … has always meant the preservation of the essential characteristics" reflecting the "eternal habits of

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[32] The term was invented by Henry-Russell Hitchcock and Philip Johnson on the occasion of the Modern Architecture exhibition at Museum of Modern Art in 1932. Henry-Russell Hitchcock and Philip Johnson, *The International Style* (New York: W.W. Norton, 1995).
[33] The full text of Gropius's review, see Appendix A. "Museum for Chinese Art," 52.
[34] Ibid.

the people."[35] In the case of Pei's design, Gropius referred to the pure imitation of bygone forms by way of the "superficial" application of "Chinese motifs of former periods" on some contemporary buildings in Shanghai.[36] The result of this position was Pei's decision to utilise "the bare Chinese wall" and the "small garden patio," which Gropius identified as "two eternal features which are well understood by every Chinese living," as the two central themes that represented "the character of Chinese architecture." [37] Gropius concluded his assessment with the judgement that Pei's project was representative of the entire Harvard Design faculty, "because we thought that here a modern architectural expression on a monumental level was reached."[38]

Gropius's pinpointing of the representation of architectural monumentality as the essential criterion for modern architectural design might explain the reason for his welcoming of Pei's scheme, as it precisely reflected and emphasised the aesthetics of architectural monumentality that modernists were seeking in their contemporary practice. The time of the publication of Pei's project also coincided with the symposium "In Search of a New Architectural Monumentality," initiated by the *Architectural Review* to encourage a modernist discussion of monumental architecture. Proceedings were published in the September issue of the magazine in 1948.[39] Among the speakers were Henry-Russell Hitchcock and Walter Gropius, both of whom expressed opinions on the

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[35] Ibid.
[36] Ibid.
[37] Ibid.
[38] Ibid.
[39] Gregor Paulsson et al., "Symposium: In Search of a New Monumentality," *Architectural Review* 104, no. 621 (1948).

conceptions of monumental architecture, specifically in the context of post-war America, that identified their modernist positions.

Hitchcock suggested several characteristics for a broader recognition of the concept of "monument," including architectural durability and the visual effect of solidity, immovability and the rhythmic effect of the structure, as well as a sense of unity, which help create an awareness of identity among the audience.[40] Although Hitchcock's claim for architectural monumentality identified some essential elements of monumentality, it was in the end a statement representing the position of a typical modernist, as Goldhagen points out, Hitchcock excluded, for instance, references to history and tradition, and the use of precious elements.[41]

Gropius indicated his modernist position more straightforwardly than Hitchcock by totally breaking with the architectural principles "in the past."[42] Therefore, he considered "spiritual greatness," rather than any physical or material forms, to be the essential element of an architectural monument, in addition to the monolithic appearance of the structure.[43] Gropius called for creative art from "the modern man" as a "higher

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[40] Ibid., 123–25.

[41] Hitchcock especially opposes the practices among twentieth-century architects of simulating traditional and historical forms which only create a false sense of monumentality. Modern architecture, on the other hand, emphasises functionality of the construction and therefore produces a building that can last only one to two generations.
Garnham gives a general account of the modernist discourse, known for its opposition against history and tradition (except Le Corbusier's switching attitudes between modernism and history). The International Style was developed as the most representative form of modern architecture.
Goldhagen, "Monumentality in the Pictorial Still," 89–90. Garnham, *Architecture Re-Assembled*, 102–29. William Curtis, *Le Corbusier: Ideas and Forms* (Oxford: Phaidon, 1986). Kenneth Frampton, *Le Corbusier* (London: Thames & Hudson, 2001).

[42] "Museum for Chinese Art," 52.

[43] Paulsson et al., "In Search of a New Monumentality," 127.

spiritual" production and "a higher form of civic life," in contrast to the static symbols of the past, as he termed "the pseudo-monumentalism of imitative eclecticism."[44] Gropius had rejected the idea of eternity, stating "there is no such thing as finality or eternal truth.[45]

These concerns about architectural monumentality are worth reading alongside his review of Pei's design. The reading of the "eternal features" of Chinese characteristics in Pei's scheme was itself contradictory to the claim on architectural monumentality, published in the *Architectural Review*: "for modern man has made the important discovery that there is no such thing as finality nor eternal truth."[46] In a similar manner to that suggested in the *Architectural Review*, Gropius rejected the traditional forms or features of Chinese architecture, and only equated the themes of the Chinese wall and garden with the monumental vocabulary of Chinese character because of their coincidence with Western modernism. Nevertheless, concerning the modernist attitude of the review, Gropius might have to some extent avoided evaluating the Chinese symbolism in Pei's project in historical terms.

More specifically, Gropius's assessment of the "bare Chinese wall" and the "small garden patio" reflected an attempt to impose a modernist reading on Chinese architecture rather than referencing precisely the features of tradition. (In other words, the claim of the "eternal" was questionable.) As will be discussed later in the chapter, one of the most

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[44] Ibid.

[45] In addition, Gropius proclaimed the design practices through collective effort, which was nevertheless reminiscent of Gropius's own preference of architectural collaboration, which was actually a modern concept especially suitable for office culture. Ibid. Michael Kubo, "The Anxiety of Anonymity: Bureaucracy and Genius in Late Modern Architecture Industry" (paper presented at the ACSA Annual Meeting San Francisco, 2013).

[46] Paulsson et al., "In Search of a New Monumentality," 127.

distinguishable characteristics of Chinese architecture is the employment of ornamental structures and bright colours on certain constructing elements. The most typical examples are found in imperial and religious architecture, which usually featured the lavish use of colour on the surface of architectural constructions, and carved decorations on balustrades, steps and walls. These characteristics from traditions were preserved in Chinese architecture contemporary with Pei's practice in the 1940s. In this regard, the modernist rejection of these traditional elements, except the bare Chinese wall and the garden patios, was too universal to completely represent Chinese symbolism. Moreover, whether or not the bare garden wall and the small garden patio can fully represent the characteristics of the Chinese garden remained questionable, since having ornamentation on architecture, such as pierced Chinese windows in the Chinese garden, was itself part of Chinese people's living style.

On this account, Gropius seemed to prejudge the modernist features of Chinese architecture rather than thoroughly exploring the representation of tradition. The emphasis on the bareness of the garden wall was reminiscent of the unornamented wall favoured by modernists. Indeed, the wall structure exists as an essential structure in Chinese Garden architecture, which can be distinguished from the walls for imperial palaces and courts, local courtyard houses or the renowned Chinese walls. However, although the walls of the Chinese Garden are white, they can never be fully considered as "bare." The function of the white garden walls with grey tiles, as pointed out in Maggie Keswick's *The Chinese Garden*, is to provide a backdrop to silhouette the plants, such as

bamboos, to create a harmonious sense of naturalness in the garden. Walls are also decorated with pierced windows of articulated shapes or moon gates as doors in order to create an implicit view to the new court.[47] Some individual walls in a Chinese garden also present wave-like styles to achieve changes in beauty by various heights. In this sense, the walls in a Chinese garden cannot be simply categorised as "bare," since "bare" walls would be able to present no specific Chinese architectural features.

Furthermore, the white wall, combined with the grey tile, only functioned as a part of the Chinese garden. This is because the structure only contributed to the architecture while interacting with other natural elements such as bamboos, lotus, rocks and rivulets, as well as small garden patios, as presented in Pei's lower and upper floor plans.[48] This essential interaction between the artificial landscape and the architectural structure for the complete meaning of the Chinese garden suggested a thorough difference between Pei's design and the Museum for a Small City as, in the former, nature was an indispensable part of the architecture itself. This relationship between the garden patios and the natural surroundings was also not fully considered in Gropius's analysis, which

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[47] Maggie Keswick, Alison Hardie, and Charles Jencks, *The Chinese Garden: History, Art and Architecture* (London: Frances Lincoln, 2003), 134.

[48] However, an important feature that had not been presented in the project was the use of grey tiles upon the white walls. Pei himself must have noticed this problem, as in his later projects for the campus design of the Hua-Tung University commissioned under Gropius's The Architects Collaborative (T.A.C) in 1948, the design of individual courtyards and patios of white walls have been combined with grey tiles. In the later commission of the Suzhou Museum, Pei has intentionally added grey roofs and tiles for the architecture. Moreover, in the Fragrant Hill Hotel and the Suzhou Museum, Pei also used pierced windows in his architecture, another less represented element in his graduation project at Harvard. Paul Rudolph, "Walter Gropius Et Son École Walter Gropius, the Spread of an Idea," *L'Architecture d'aujourd'hui* 20, no. Special Issue (1950): 26–9.

suggested an incomplete evaluation of the meaning and effect of employing the garden forms to render a Chinese art museum in China.

While this modernist position itself was already problematic as regards its exclusion of traditional elements, Gropius's review also omitted the consideration of the architecture in its given context, specifically located in China, which was an impression also reflected in the point of view of *P/A*. Likewise, this "Westernised" reading of Pei and his project is visible in a short biography of Pei provided next to Gropius's review. To some extent, the description of Pei situated him straightforwardly as an immigrant to America, who came to pursue his architectural training at M.I.T and later, Harvard, in 1935; and obtained a teaching position at Harvard afterwards.[49] In comparison to the American identity that Pei seemed to have already possessed, his Chinese background was entirely dismissed in the introduction. As a result, his design of the museum, to be envisaged in China, was celebrated as a modernist and even postcolonial product under the Western architectural education.[50]

The negation of the Chinese background of the project and of Pei suggested a rejection of the architectural context in China for the museum and, thus, an incomplete evaluation of Pei's design. According to Pei's account of his design, the project was envisaged to be constructed in "the city's Civic Centre, plans for which were completed in 1933."[51] While the article presented the integration of the theme of the Chinese garden

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[49] "Museum for Chinese Art," 51.
[50] For a general introduction to colonial and postcolonialism, see Ania Loomba, *Colonialism/ Postcolonialism* (London and New York: Routledge, 1998).
[51] "Museum for Chinese Art," 51.

and modernist approaches through the architectural drawings, the specific context in China was only briefly mentioned by *P/*A, without any further indication of how the building would fit into the intended architectural context or manifest "the dignity of Shanghai."[52] Pei's biography only covered his architectural study in America since 1935, already two years after the Greater Shanghai Plan had been drawn up, yet his previous experience in China in relation to the Plan and the city was not discussed at all. The *P/A* article, along with Gropius's review, excluded any consideration of the role of Pei's project in terms of his own experiences or the context of Chinese architectural discourse. This chapter will thus analyse the project more closely in its predetermined context in China, and investigate the alternative language of the museum.

1.3   **The museum in the context of the Civic Centre, Shanghai**

To fully evaluate the extent to which the project can be regarded as "Chinese" or "progressive," it is necessary to investigate the effect of Pei's design in its predetermined context of the Civic Centre, as introduced but not yet addressed in *P/A* and Gropius's reviews. While the project was published at a specific moment of post-war aspirations in the US, it also reflected on the inter-war transitions in China, when the Nationalist Government (officially the National Government of the Republic of China, 1927–48) was attempting to challenge the colonial image of the city of Shanghai. The Civic Centre, for

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[52] Ibid.

which Pei envisaged his museum, belonged to an inclusive urban planning project named the Greater Shanghai Plan. Initiated by the Nationalist Government in 1929, the Greater Shanghai Plan was an attempt by the Kuomintang (KMT) to tackle the tensions in the city, resulting from its colonial status, and civil conflicts over the imperial power of the government. The conflicted situation aroused an aspiration to claim a version of Chinese national identity. This complex context designated by Pei is essentially associated with the evaluation of the project. Furthermore, it is necessary to consider the relationships between this context and the two themes Pei employed for his museum, namely the Chinese garden and the wall(s). Specifically, the application of Chinese walls also suggested references to the search for an architectural representation of national identity.

1.3.1 Shanghai: The disparity between the Chinese district and Western concessions

The colonial history of Shanghai since the eighteenth century, as witnessed by the export of European ideology to China, was essentially related to the formation of the Greater Shanghai Plan in the 1920s.[53] Shanghai opened up as a treaty port upon the arrival of the British officials in 1843, one year after the First Opium War between the Qing Government and the United Kingdom. The Shanghai Circuit intendant, or *Daotai*, only permitted the British officials land of 832 mu (56 hectares) on the bank of the Huangpu

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[53] Marie-Claire Bergère has given a detailed account of the history of Shanghai in Marie-Claire Bergère, *Shanghai: China's Gateway to Modernity*, trans. Janet Lloyd (Stanford: Stanford University Press, 2009). Loomba addressed the different types of colonialism in Loomba, *Colonialism/ Postcolonialism*, 107–83.

River to the north of the old city walls of Shanghai, enclosed by the Suzhou River to the north and the *Yangjinbang* to the south, so as to segregate European activities from the Chinese people.[54] The old city wall signified the boundary between the Western concessions and the Chinese district, and separated the colonial identity from the identity of the old city, then represented by the power of the emperor.

The expansion of the colonial power of the Europeans and, later, the Americans, witnessed their increasing administrative participation in the city by establishing the Shanghai International Settlement, the French Concession and the Shanghai Municipal Council in 1863.[55] They also contributed to the development of infrastructural construction through, for instance, building roads around the district of Western concessions as extra-settlement possessions. During the mid-nineteenth and early twentieth century, Shanghai benefitted greatly from foreign trade and commercial activities after the opening of the city, developing rapidly into a metropolitan city which attracted an increasing number of European and American tradesmen and missionaries for permanent residency. The International Settlement and the French Concession witnessed a prosperous urban and economic development.[56] The most prominent area

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[54] The land, namely the British Concession, was later expanded to 2820 mu (199) hectares in 1848. *Yangjingbang* was a creek of the Huangpu River. When the French Concession was established in 1849, it became the border of the French and British Concessions. Bergère, *Shanghai*, 14–5.

[55] In July 1854, the British, American and French Concessions established the Shanghai Municipal Council, but in 1862 the French Concession withdrew from the group. In September 1863, the British and American Concessions amalgamated into the International Settlement, while the French Concession remained separate, with its own Municipal Council. Ibid., 31, 46, 91–97.

[56] For example, the construction of educational institutions and hospitals, emergence of a large number of trading companies (Foreign *Hongs*) and guilds, improvements to ports and drainage systems, as well as the invention of the first modern waterworks in Asia in 1883. Ibid., 62–5. Shu Wei, *Dasahanghai Jihua: Jindai Shanghai Shi Zhongxin Quyu De Guihua Bianqian Yu Kongjian Guanxi* [The Greater Shanghai Plan: The

was the Bund (*Wai'tan*), originally used as the dock in the British Concession, which soon developed into a symbol of old Shanghai, especially for its modern architecture and trade businesses. Until at least the 1930s, districts around the International Settlements and the French Concession dominated the prominent image of Shanghai, while the old Shanghai inside the city walls, namely the Chinese district, slumped into a largely undeveloped area.

In the late nineteenth century, the revolts against the Qing Government further defined but also obscured the boundaries of the Chinese district and the Western concessions. In the midst of the Taiping Rebellion, followed immediately by the revolt of the Small Swords Society in the 1850s, Britain, America and France roughly maintained their neutrality.[57] The constant safety of the concessions led to the inflow of local elites, businessmen and the homeless seeking refuge.[58] Meanwhile, the expansion and increased privilege of the concessions led to the decline of the Qing Government's control over the area. The prominent business opportunities and mixed modern cultural environment began to attract more immigrants from other provinces such as Guangdong,

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planning and spatial relations of the contemporary urban areas in Shanghai] (Nanjing: Dongnan University Press, 2010), 58.

[57] In 1850, the movement led by Hong Xiuquan against the late Qing Dynasty soon expanded its influence to Shanghai, following which the Small Swords Society was immediately founded in Fujian by peasants, vagrants, workers and businessmen, and moved to Shanghai as an active rebel force. In 1853, the Taiping armed forces occupied Nanjing and made it their capital city, intending to further capture northern China, while the Small Swords Society attempted to collaborate with the Taiping forces (but ultimately failed). The Small Sword rebels, supported by the American and British in China, were ultimately defeated by the Qing government and the French army in February 1855. In 1860, the Taiping forces seized the Zikawei region outside the old town of Shanghai. To defend the concessions and trading businesses, the British and French allied with the Qing government to tackle the Taiping Army. Bergère, *Shanghai*, 38–44.

[58] In 1854, there were 20,000 Chinese refugees in the Concessions. Ibid., 44, 98, 111.

ranging from landlords, traders and elites to craftsmen and homeless migrants. By 1910, the population in Shanghai had reached 1.3 million, of which there were 500,000 Chinese residents in the International Settlement and 116,000 Chinese in the French Concession. By 1914, 98% of the residents in the concessions were Chinese, while the old walled town remained almost unchanged both in regards to the increasing population and urban development.[59]

The imbalanced situations in the Chinese district and the Western concessions aroused the aspiration of the Qing government to reform the urban and social structure of the city in the late nineteenth century.[60] Meanwhile, emerging figures among intellectuals and students criticised the corruptness and ineptitude of the Qing government and the imperialism of European and American colonialism, and called for the reform of the country so as to reclaim national identity. The reforming spirit among the revolutionary activists ultimately brought about the Xinhai Revolution in 1911. In November 1911, the newly appointed governor, Chen Qimei, assigned several important posts to the local elites including compradors, merchants and scholars, which allowed them to propose new

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[59] Ibid., 98–108, 111.

[60] In 1898, the Qing government opened a trading port at Wu-sung, a district in the north of Shanghai, with urban constructions such as roads, bridges and factories, so as to cope with the foreigners' control over the docks in the Concessions. However, work was suspended for the dredging of the Huangpu River. In 1920, the Beiyang Government appointed Zhang Jian as the new Governor to continue the opening of Wu-sung, but the project was announced as having failed in 1925 due to the constant political turmoil. In 1917–1920, Sun Yat-Sen envisaged a blueprint for the future Capitalist Republic of China. In a book entitled *The International Development of China*, Sun initiated the plan to develop a great port in the east of Shanghai. Wei, *Dasahanghai Jihua*, 24. Yat-sen Sun, *Jianguo Fanglue* [The International Development of China] (Shenyang: Liaoning Fine Arts Publishing House, 1994), 126–32.

measures to manage and construct the city. One of the proposals was to knock down the city walls and build new roads on the old site.[61]

The destruction of the old city walls reflected the ambition of the local elites to eliminate the boundary between the old Chinese district and the developed concessions.[62] It also reflected Sun Yat-sen's political ambition to overthrow the government and reclaim the national identity of the country. However, the fundamental issues of urban construction in the Chinese district and social structure remained unresolved. [63] Immediately before the implementation of the Greater Shanghai Plan in 1927, the urban image of the city was dominated by the tensions between Western imperialism and Chinese nationalism, the disordered situation within the concessions and the social disconnections between the old Chinese district and the modern concessions. The Chinese district was much less developed than the concessions in regard to urban construction and infrastructural facilities, including electricity, water and gas supply, hygiene and transportation, not to mention the construction of trading ports and railways. The Western concessions featured modern highways that were over twenty metres in width, whereas most roads in the Chinese district were disorderly lanes of about six metres in width.

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[61] Sun, *Jianguo Fanglue*, 139. Kerrie L. MacPherson, "Designing China's Urban Future: The Greater Shanghai Plan, 1927–1937," *Planning Perspectives* 5, no. 1 (1990): 47.

[62] At this moment, the "old Shanghai" format should have begun to be unwrapped and expanded for a new Shanghai blueprint. However, the failure of the Xinhai Revolution in the following year and the establishment of the Yuan Shikai government led to the suspension of urban reform. After the First World War, the great demand for exports to Western countries and the development of industrialisation finally stimulated the Shanghai economy to a great extent. Thomas J. Campanella, *The Concrete Dragon: China's Urban Revolution and What It Means for the World* (New York: Princeton Architectural Press, 2008), 63. Bergère, *Shanghai*, 147–161.

[63] Efforts to reform the urban image of Shanghai in fact began in the late nineteenth century. Wei, *Dasahanghai Jihua*, 22–4. Sun, *Jianguo Fanglue*, 126–32.

Public buildings and bridges in the Chinese district were frequently witnessed collapsing.[64] The Western concessions symbolised the centre of Shanghai, with most of the urban, economic and social advantages, while the Chinese district, geographically restricted within the walled area of Shanghai, was deprived of urban administration and construction, and thus lost a sense of national identity.

1.3.2 The Greater Shanghai Plan

The urge to transform the old image of the Chinese district and restructure urban and social conditions in Shanghai remained a priority of the Nationalist Government of the Nanjing Decade (1927–1937). In July 1927, Chiang Kai-Shek set up the Shanghai Special City Government, two years after which the Nationalist Party (KMT) initiated the Greater Shanghai Plan, following the direction of Sun Yat-sen's *The International Development of China*.[65] The plan was to develop land of over 6,000 *mu* (400 hectares) in the Jiangwan District as the new administrative centre of Shanghai with a series of infrastructural constructions so as to establish a Chinese-built city centre that could transform the urban structure between the concessions and the Chinese district and reclaim the (new) Chinese District as the centre of Shanghai.[66]

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[64] Wei, *Dasahanghai Jihua*, 20–4.

[65] Kai-shek Chiang, Inauguration Speech of the establishment of the Shanghai Special City Government. "Jiang Zongsiling Jiuzhi Yanshuo," *The Shun Pao*, July 8, 1927, 13. Cite from Wei, *Dasahanghai Jihua*, 37.

[66] The Plan also involved the urban construction of the Wu-sung, Qing Pu and Bao Shan areas. The Chinese district, especially in terms of the old walled Chinese town, had been lacking a regulatory administration. This was also a reason for its deterioration and disorder. MacPherson, "Designing China's Urban Future," 48–9. Wei, *Dasahanghai Jihua*, 21.

The project itself was a similar but more systematic transformation of the Capital Plan of Nanking (Nanjing) in 1927-1937, the first large-scale urban planning project initiated by the Nationalists to regulate Nanjing as the new seat of the government. However, the former was nevertheless formulated from local and urban considerations in Shanghai. As "Nationalist" as the project was, the Greater Shanghai Plan was nevertheless also a "national" project because of the dominating position of the Nationalist Party in domestic conflicts in China. In terms of urban development, it also provided the foundation for the restructuring of the city between 1945 and 1950, which thus made the initiative far exceed the political category of "Nationalist" only. [67] Therefore, one important aspect to be considered is the conception of nationalism represented through the initiative of the Greater Shanghai Plan, as it was this idea of national identity in the Civic Centre that Pei's design challenged.[68]

The formulation of the Greater Shanghai Plan involved considerable consultation with international experts, including American engineer Dr Carl E. Grunsky and city planner Asa Phillips, with the former playing a significant role in the selection of the new district areas, the construction of the new trading port and railroads, and the reviewing of the entire plan. [69] In December 1929, the preliminary plan was formulated after

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[67] Wei, *Dasahanghai Jihua*, 208–77. Shanghaishi Chengshi Guihua Sheji Yanjiuyuan, *Dashanghai Dushi Jihua*, 2 vols. (Shanghai: Tongji University Publishing House, 2014).

[68] Many buildings with representation of national identity in China in the 1920s and 1930s were constructed by the Nationalist government. These buildings became typical examples of Chinese architecture in this period for their exploration of nationalistic architectural language. Delin Lai, *Zhongguo Jindai Jianzhushi Yanjiu* [Studies in Modern Chinese Architectural History] (Beijing: Tsing Hua University Press, 2007), 181–236.

69 MacPherson, "Designing China's Urban Future," 52.

consultation with Grunsky (Figure 11). The Greater Shanghai Plan constituted an administrative zone, a commercial zone and two types of residential zones. The administrative zone was the Civic Centre for Greater Shanghai. Located at the intersection of the central axis, the Civic Centre was the focus of the project, and more importantly, a political and administrative symbol of the municipal government. The commercial zone was placed to the north to be adjacent to ports, railways and main roads, and the rest of the district was used as residential zones.[70]

Though the overall city plan used American and European urban planning approaches, the Civic Centre was planned in strict accordance with historical Chinese forms, as emphasised by the City Planning Commission in a design competition for the Civic Centre proposal in 1929, that stated the architecture of the Civic Centre, as the epitome of Greater Shanghai, should be practical and monumental in its form, while preserving traditional Chinese features to become fine examples of new Chinese architecture.[71] The City Planning Commission considered three reasons to construct Chinese-style architecture in the Civic Centre in a report in 1930.[72] Firstly, the

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70 Ping Sun, *Shanghai Chengshi Guihuazhi* [Shanghai Urban Planning Chronicles] (Shanghai: Shanghai Academy of Social Sciences Press, 1999), 71–2.

71 The original Chinese text claims: "市政府为该区域之表率，建筑须实用、美观并重，将联络一处，成一庄严伟大之府第。其外观须保存中国固有之建筑之形式，参以现代需要，使不失为新中国建筑物之代表。" Report by the Shanghai Municipal Commission of City Centre Construction in 1930. Cite from Wei, *Dasahanghai Jihua*, 68.

72 Report on the initiative of the Civic Centre Plan in 1930, as quoted here: "上海为中国领土，市政府为中国行政机关，苟采用他国建筑式样，何以崇国家之体制，而兴乔旅之观感，此其一！建筑式样为一国文化精神之所寄，故各国建筑结构表示其国民性之特点。前此市内建筑，侵有欧化之趋势，固有十里洋场之称，吾人应力加矫正，以尽提倡本国文化之责任，市政府建筑采用本国式

architecture of the Civic Centre, as the administrative and political centre of the municipal government, should function to represent the national identity and nationalism proclaimed by the Nationalist Government, and thus rejecting the Western influence on architecture previously built in the city. In this sense, the public buildings of the government should be "Chinese" buildings both in cultural and political terms. Secondly, the use of historic styles would help resume Chinese social morality and promote Chinese culture in the city, whereas the existing buildings had shown a great European influence. Thirdly, considering the limited budget, it would be easier to build a Chinese-style structure that could rival existing buildings in the city rather than experiment with new styles. The overall statement suggested a strong emphasis on the architectural representation of nationalism and an idea to construct a version of national identity as a response to the colonial and disunited situation of Shanghai.[73]

1.3.3 The Adaptive Chinese Architecture

The Chinese architectural forms, especially for political and governmental buildings, had already been emphasised in the Capital Plan of Nanjing, which resulted in a specific architectural style that adapted traditional elements for the purpose of modern

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样，足示市民以矜式，此其二！世界之公共建筑物，奚啻万千。建筑费用，以亿兆记者，又不知凡几。即在本市，亦不乏伟大之建筑物，今以有限之经费，建筑全市观瞻所系之市政府，苟不别树一帜，发挥吾国固有建筑之式样，殊难与室内外著名建筑物争长，此其三！" Cite from ibid.

[73] Lawrence Vale discusses the political representation of national identity and nationalism in public and especially governmental buildings. Vale, *Architecture, Power, and National Identity*.

construction (Figure 12).[74] Following the architectural practices promoted by the KMT, the adaptive traditional style became one of the general design principles among Chinese architects, especially in the 1920 and 1930s. This design principle, as pointed out by Delin Lai, was an adherence to Chinese imperial architecture, as typically represented by a large gabled roof and lavish decorations.[75] However, this re-presentation of imperial architectural styles developed further than the historical buildings it was modelled on due to its integration of traditional Chinese elements, particularly expressed on the exterior, with Western construction techniques, which were applied more extensively in the interior structure.[76]

This adaptation of Western structure for a more scientific architectural design in Chinese traditional styles was given the name, as translated into English, of "Adaptive Chinese Architecture" or "an Architectural Renaissance in China," and was later referred to as the "Chinese Renaissance Style."[77] Both the concept and practice of Adaptive

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[74] "以大体言，政治区之建筑物，宜尽量采用中国固有之形式，凡古代宫殿之优点，务当一一施用。……凡外墙之周围，皆应加以中国亭阁屋檐之装饰物……"
Hairong Li and Chengping Jin, eds., *Shoudu Jihua* (Nanjing: Nanjing Press, 2006).

[75] Lai, *Studies in Modern Chinese Architectural History*, 198.

[76] "总之国都建筑，都应采用中国款式，可无疑义。惟所当知着，所谓采用中国款式，并非尽将旧法一概移用，应当采用其中最优之点，而疑义加以改良，外国建筑物之优点，亦应多所参入。大抵以中国式为主，而已外国式副之，中国式多用于外部，外国式多用于内部，斯为至当。" Li and Jin, *Shoudu Jihua*, 61.

[77] It is necessary to note that the English name of the "Chinese Renaissance Style," translated from *Zhongguo Gudian Fuxing shi*, ironically implied a postcolonial identity of the architecture, although the original purpose of developing this adaptive style was precisely to challenge this postcolonial identity and reclaim Chinese national identity through it. Jeffrey W Cody, *Building in China: Henry K. Murphy's "Adaptive Architecture," 1914–1935* (Hong Kong: Chinese University Press, 2001), 3–5. Henry Killam Murphy, "An Architectural Renaissance in China: The Utilization in Modern Public Buildings of the Great Styles of the Past," *Asia* (1928). Christopher A Reed, "Building in China: Henry K. Murphy's "Adaptive Architecture," 1914–1935 by Jeffrey W. Cody," *The Business History Review* 76, no. 3 (2002).

Chinese Architecture came from American architect Henry K. Murphy, who obtained his architectural degree from Yale and started his Chinese commission from the Yale-in-China University in 1913–1914. Murphy expanded his practice from university designs – in Beijing and Shanghai to collaborations with the Nationalist Government for urban constructions in China, such as the mapping out of the Capital Plan during 1928–1929.[78] Murphy identified five essential features of Chinese architecture in his research into Adaptive Chinese Architecture, focusing on the imperial architectural style. These included "its curving, upturned roofs, its orderliness of arrangement, its frankness of construction … its gorgeous exterior and interior color" and "the perfect proportioning, one to another, of its architectural elements." [79] Following the trend of Murphy, the Chinese Renaissance Style became a frequent practice in China and, later, a specific form of the architecture of Chinese political nationalism, particularly preferred by the KMT in the 1920s and 1930s.[80] The KMT continued its urban construction of Shanghai with the Chinese Renaissance Style as its governmental and national architecture so as to correspond with its political and urban expansion from Nanjing to Shanghai. In addition, the main architect of the Greater Shanghai Plan, and the Civic Centre in particular, was

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[78] Cody, *Building in China*, 34–50.

[79] Murphy, "An Architectural Renaissance in China," 472.

[80] Lai, *Studies in Modern Chinese Architectural History*, 196.
Eduard Kögel argues that the claim for an 'architectural renaissance," represented by a new style combining Western forms and traditional Chinese architectural style, was inspired by the movement of "cultural renaissance" since the May Fourth Movement in the 1920s. The phrase had been referred to by architects Henry K. Murphy, Fan Wenzhao and Dong Dayou, the main architect of the Greater Shanghai Plan, in several publications in 1933–1936. Eduard Kögel, "Using the Past to Serve the Future – the Quest for an Architectural Chinese Renaissance Style Representing Republican China in the 1920s–1930's," in *Architecture and Identity*, ed. Peter Herrler and Erik Wegerhoff (Berlin: LIT Verlag, 2008).

Dong Dayou, who collaborated with Murphy and was also a significant advocate of the Chinese Renaissance Style.[81]

The design competition for the Civic Centre received nineteen proposals in early 1930. In October 1930, the Commission formulated a preliminary plan of the Civic Centre according to the winners' designs (Figure 12).[82] The Civic Centre had a cruciform layout that was almost identical with the that of the central political zone of Nanjing as initiated in the Capital Plan in 1929 (Figure 13). Both the plans were formulated according to Western urban layout, especially that of Washington D.C. in the 1920s, that further implied the government's ambition to build up the image of the city as a capital.[83] The Civic Centre included both governmental properties and public buildings. A Chinese pagoda was placed at the centre of the square to indicate the entrance of the Civic Centre, to the north of which was the Mayor's Building. The rest of the constructions, including "the Municipal Auditorium ... accommodating 3,000 persons, ... the Library, the Museum, Art Gallery, Court Houses, and other public or semi-public buildings" would be scattered around the Mayor's Building.[84] A five-arched ceremonial gate (*pailou*), a traditional symbol to indicate an entrance to an imperial architectural complex, was to be constructed at the south end, where "a huge reflecting pool about 2,000 feet long with

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[81] Dayou Dong, "Greater Shanghai – Greater Vision," *The China Critic* 10, no. 5 (1935): 105. Kögel, "Using the Past to Serve the Future," 463. Delin Lai, "Building in China: Henry K. Murphy's "Adaptive Architecture," 1914–1935 by Jeffrey W. Cody," *Journal of the Society of Architectural Historians* 63, no. 1 (2004). MacPherson, "Designing China's Urban Future," 54.

[82] Wei, *Dasahanghai Jihua*, 68–74.

[83] Ibid., 41–44.

[84] Dong, "Greater Shanghai – Greater Vision." MacPherson, "Designing China's Urban Future," 54.

impressive boulevards on both sides" was also envisaged.[85] To the east, west and south, rectangular pools, rivulets and arched bridges were arranged as ornamentation in the square.[86]

The Mayor's Building (1931–33) was the first building to be finished in the architectural complex, and was also a typical example of the Chinese Renaissance Style (Figure 14). As the most significant representation of the municipal government's administration in Greater Shanghai, the Mayor's Building, located at the north axis of the Civic Centre and facing south, was the most representative state building of the new Chinese district. It was a reinforced concrete four-story construction in a traditional Chinese form. Occupying 8982 square metres, the architecture featured a main structure of 25 metres in width and two wings of 20 metres in width, the scale of which already indicated the monumentality of the design. The four-story structure was specifically required by the municipal government as an architectural improvement to the conventionally low structure of Chinese buildings, which not only represented a traditional Chinese feature, but also provided the monolithic sense of the architecture as the administrative building of the state.[87]

The explicit and intentional representation of Chinese identity can be seen from the section drawing of the architecture (Figure 15). First of all, it presented three sets of gabled roofs, also named "the big roof" (*dawuding*), which imitated the architecture of

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[85] Dong, "Greater Shanghai – Greater Vision," 106.
[86] Sun, *Shanghai Urban Planning Chronicles*, 72. Campanella, *The Concrete Dragon*, 67.
[87] The requirement for a four-story structure was specified in the municipal commission's report on the Civic Centre construction in 1933. Wei, *Dasahanghai Jihua*, 99–100.

previous dynasties. Beneath the roof the architecture featured a bracketing system (*dougou*), although it would function here more as a decorative than actual supporting structure. The upper part of the building was decorated with painted and carved totems of bright colours, and the supporting wooden columns were transformed into built-in structures, also painted in red to correspond to imperial and religious architecture. Last but not least, the architecture was built on a platform (*yuetai*) that indicated not only a sense of administrative authority, but also the architectural monumentality of the building.

However, the concrete reinforced structure of the building suggested revision of conventional form and structure, and the constructing materials of brick, stone and timber (Figure 16). The traditional portico at the entrance was removed to highlight the ornamented façade with built-in columns. The concrete structure of the two ends of the façade emphasised the contrast between the façade and the modern architectural form, which revealed the fact that the Chinese elements were functioning more as external ornamentations, while the internal structure of the building was designed with modern (or Western) techniques.[88] The mixed approach of integrating a modernist structure with Chinese forms reflected an intention to represent the Chinese identity of the building from a more practical and contemporary perspective.

The subsequent buildings of the architectural complex, including the museum, the library and the aeroplane-shaped Aviation Association building, all designed by Dong

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[88] The sections of the Mayor's building indicate the concrete and wooden structure of the construction in accordance with traditional Chinese architectural forms.

Dayou and built in 1934–35, witnessed a transition of architectural style to less involvement of Chinese ornamentation and more inclusion of modern elements, defined by Lai as a transition from Adaptive Chinese Architecture to a more integrated synthesis of Chinese and Western styles, and finally to a form of modern architecture.[89] The museum and the library featured a high structure similar to the Mayor's Building, which also suggested an emphasis on the monumentality of the architecture (Figure 17; Figure 18). The buildings had symmetrical structures, with their upper part constructed in the form of Chinese gate designs, while the lower part and the wings present flat roofs and modern openings.[90] The main body of the two buildings suggested a modern, less-ornamented style, and traditional decorations only existed on small sections of the exterior, such as along the edges and on the balusters, both because of the awareness of the limited budget for construction and the inclination for modern architectural designs. However, the interior of the buildings remained largely decorated.[91] The combination of modern styles and traditional decorations on the two buildings again demonstrated the architect's effort to achieve functional architectural designs and present a new version of "Chinese" architecture.

The Aviation building presented a different style of assimilating the form of an aeroplane to indicate the function of the architecture (Figure 19). Consistent with other structures in the Civic Centre, the building also featured traditional decorations. Its

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[89] Lai, *Studies in Modern Chinese Architectural History*, 233.
[90] An example of Chinese gate structure is the Meridian Gate, *Wumen*, at the south of the Forbidden City.
[91] Wei, *Dasahanghai Jihua*, 95–115.

specific rendering of an aeroplane-like form even suggested a sense of postmodernism, reminiscent of Robert Venturi's architecture of the decorated shed vs. the duck.[92] This evinced the enthusiasm and ambition of the architect to design other modern forms of Chinese architecture. All these different architectural experiments in representing Chinese identity can hardly be defined by what Gropius summarised as "a simple imitation of bygone esthetic [*sic*] forms."[93]

The construction of the Civic Centre was suspended from 1937 onwards due to limited funds and continuous civil warfare, with only a few buildings finished between 1933 and 1937. The plan to reclaim Shanghai and present a modern city image was therefore discontinued, followed by comments that were generally mild, if not all negative. [94] However, this ambitious Plan for Greater Shanghai, particularly the formulation of the Civic Centre, was of significance as a well-projected attempt to transform the cultural, administrative and political structure of the Chinese district against the dominating status of the International Settlement and construct a metropolis with the very specific architectural vocabulary of Chinese nationalism.[95] Architecturally speaking, the project presented an example of urban and building constructions of nationalism in Shanghai, which transitioned from the political representation of the Chinese Renaissance

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[92] Robert Venturi, Denise Scott Brown, and Steven Izenour, *Learning from Las Vegas: The Forgotten Symbolism of Architectural Form* (Cambridge, Mass: MIT Press, 1977).
[93] "Museum for Chinese Art," 52.
[94] However, in Macpherson's article she quoted a criticism from Chinese scholars saying the Plan had proved of little value. Wei also points out that the project lacked practical considerations as regards urban and infrastructural construction for Greater Shanghai. MacPherson, "Designing China's Urban Future," 40. Wei, *Dasahanghai Jihua*, 150.
[95] MacPherson, "Designing China's Urban Future," 59.

Style architecture to a gradual integration of Chinese and Western modernism for the purpose of representing a version of Chinese national identity.[96]

Pei's envisaged museum thus engaged in the architectural vocabulary of the Civic Centre of the Chinese Renaissance Style. Although the "inadequate structure" that Pei intended to replace was not specified in the project description, it can be presumed that it was this concept of combining expressive traditional Chinese forms with a modern structure in order to create a somewhat "modern" sense of Chinese architecture that Pei essentially challenged. The "superficial" employment of traditional forms in Chinese architectural practices, as mentioned in Gropius's review, would refer to not only Adaptive Chinese Architecture, or the Chinese Renaissance Style, as represented by the Mayor's Building, but also the slightly modern architectural attempts such as the library and the museum, since they all present a combination of traditional Chinese features, through either form or ornamentation, as well as a set of principles of nationalistic symbolism.[97]

Interestingly, both the Adaptive Chinese architecture and Pei's museum project implicated a Western attempt to interpret and represent Chinese architecture. The former had been already greatly accepted in China, and later coincided with other attempts to reinvent Chinese forms in contemporary period. As the Chinese architect Liang Sicheng emphasised, it was necessary to develop the representation of Chinese identity through

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[96] Lai, *Studies in Modern Chinese Architectural History*, 216–23.
[97] Considering Gropius had already participated in the Huatung University Campus project in Shanghai around 1946, there is also a possibility that Gropius might have been aware of the development of the Greater Shanghai Plan contemporary to his project.

the traditional-modern-integrated approach, which enabled a new vocabulary of Chinese architecture through new materials and techniques rather than "the blind imitation of 'periods'." One of the most refined cases of Liang's architectural statement is the design of the National Central Museum in Nanjing (1935–48), which provided a contemporary example to Pei's design as a state building under the reign of the National Government of the Republic of China (Figure 20).[98] By integrating the architectural styles from the *Liao* (916–1125) and *Song* (960–1279) dynasties, Liang proposed a structure of explicit symbolism of Chinese identity, with relatively implicit use of modern techniques. The architecture presented traditional features such as the gabled roof, the bracketing support, the portico with columns and the high platform of the structure (*yuetai*).[99] Liang's architecture suggested an example of Chinese modernism, promoting Chinese features boldly by integrating them within an industrial structure. In comparison, although Pei's design emphasised the representation of the Chinese garden and the sense of Chinese identity, his rendering of the modernist structure conveyed a stronger conception of international modernism that would have seemed exotic to the adaptive and palatial structures developing in the 1940s.

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[98] Sicheng Liang, *A Pictorial History of Chinese Architecture: A Study on the Development of Its Structure System and Evolution of Its Types*, ed. Wilma Fairbank (Cambridge, MA: The MIT Press, 1984). Sicheng Liang, *Liang Sicheng Quanji* [The Complete Works of Liang Sicheng], vol. 8 (Beijing: China Architecture and Building Press, 2001), 207. Delin Lai, "Idealising a Chinese Style: Rethinking Early Writings on Chinese Architecture and the Design of the National Central Museum in Nanjing," *Journal of the Society of Architectural Historians* 73, no. 1 (2014).
[99] Lai, "Idealising a Chinese Style."

1.3.4 The Chinese garden and the "bare Chinese wall"

The architectural context of Shanghai and the Civic Centre suggests possible ways to reinterpret Pei's architecture, not yet fully considered in *P/A*'s and Gropius's Western-dominated modernist positions. While the design suggested an influence of international modernism, the two themes of the garden patios and the walls, integrated in the architecture, can be considered as the representation of traditional and "Chinese" characters that suggested further implications relating to Pei's predetermined architectural context, beyond the direct reference of these elements to modernist features.

First of all, the wall structure in Pei's design functioned as an integral part of the Chinese garden. The walls functioned to create passages in the Chinese garden intertwined with natural landscapes. They provided visitors with a constant change of viewpoints in the garden for the purpose of enjoyment. At the same time, the use of the bare wall also corresponded with Pei's aspirations for modern architecture. From the perspective of modernists, the unornamented, enclosed wall structure suggested a blank, silent and masked exterior encompassing a private Chinese garden courtyard and an open plan structure inside. The walls therefore became both the exterior for the modernist architectural style and the structure to accommodate a traditional Chinese garden.

Furthermore, the meaning of walls in Pei's garden extended from the Chinese garden walls to a more general reference. This can be seen from the fact that the "walls" of the museum, being part of the Chinese garden as described by Pei, were also emphasised as a separate structure from "the small garden patios" in Gropius's review,

which was based on previous discussions of the project with Pei. Keswick mentioned the general symbolism of the garden wall: the "white wall" of the Chinese garden also suggests "obvious defensive and heroic overtones. *Ch'eng*, meaning wall, also came to mean "city" and the Great Wall is often regarded as *the* symbol of China."[100] This suggested that while the walls were part of the Chinese garden, they were also comparable to a more general use of walls such as those of other public buildings in China and even modern architecture in the West.

Therefore, this aspiration for modern architecture can also be connected with an earlier attempt to develop modernism in China, which was, the demolition of the old Chinese city walls so as to transform the image of Shanghai in 1911. The old city walls had functioned as the border of the Chinese Castle Town (*Chengchi*) of Shanghai since ancient times and as a military defence to prevent the access of invaders. However, they had also been a margin between the deprived and sluggish (yet "authentic") Chinese district and the prominence of the concessions. The demolition of the Chinese city walls symbolised a break with the old city structure of Shanghai, as well as an aspiration among elites to revive the image of the Chinese area. Architecturally speaking, the purpose of building a new Chinese district, distinguished from the Western architecture in the city through the Greater Shanghai Plan, suggested a continuation of this attempt to revive and represent Chinese modernity ultimately demonstrated by the very nationalistic appearance of the Chinese Renaissance Style.

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[100] Keswick, Hardie, and Jencks, *The Chinese Garden*, 134. Osvald Sirén, *Gardens of China* (New York: Ronald, 1949).

On the contrary, in Pei's modern museum of Chinese art, walls were to be constructed to achieve "the garden of walls."[101] Walls would not necessarily be an impediment to modernisation, but rather, the most essential element to represent tradition and produce modernity in the image presented to the Western modernist world. By retaining traditional walls, Pei put forward an architectural representation of Chinese symbolism as a connection with the past. Modernity can therefore be achieved from tradition (an idea that Gropius would necessarily refuse, considering his rejection of eternal elements in architectural monuments). The walls, integrated with the symbolic Chinese garden in the Civic Centre specifically, became an aesthetic representation of Chinese culture and, meanwhile, a connection between the old and modern Chinese image. The inside and outside of the museum, which should have been architecturally and thematically antithetical as a contradictorily modern-or-traditional architecture, were connected to suggest a two-fold sense of Chinese symbolism: the maintenance of tradition and the aspiration to modernity. The walls became both traditional and modern, a Chinese and Western construction. The notions of modernism and Chinese nationalism were therefore connected, and corresponded with the prospect of Chinese modernisation. Pei provided an alternative approach to reclaim Shanghai and build a modern image of China.

The "bare Chinese wall" also functioned as a connection between Chinese tradition and Western modernism. In his statement of the essential characteristics for the potential Adaptive Chinese Architecture, Murphy also identified the cultural symbolism

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[101] "Museum for Chinese Art," 50.

of the Chinese garden, though he had not yet touched upon this theme in his own practice: "No disquisition on Chinese symbolism, however brief, could fail to include the garden. Our occidental garden is a decoration and a pastime; the Chinese garden is the fulfilment of a life."[102] Furthermore, he considered the garden wall structure an essential feature of Chinese architecture.[103] Returning to Keswick's reading of the architecture of Chinese gardens, the white feature of the garden wall has been an indispensable factor in aesthetic composition.[104] In this sense, Pei's reinvention of the Chinese Garden was nevertheless an integration of Chinese traditions with Western modern architecture: the preservation of tradition can be separated from ornamentation, and modernism was proved to be valid in an international context. The Corbusian ramp at the entrance resembled the narrow path leading to the open courtyard of a Chinese garden.[105] The unornamented walls of the building also corresponded with the white walls used as a general practice in Chinese gardens.[106] The allocation of pavilions, exhibiting rooms and natural settings in the enclosed, walled structure of the building echoed Jencks's reading of the "spaceless" nature of a Chinese garden.[107] Following this reading, the modernist ethos had been thoroughly conveyed, but originated from a Chinese context, indicating the great

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[102] Murphy, "An Architectural Renaissance in China," 474–5.
[103] "While we are in the garden, we must not fail to note the characteristic stucco wall, reaching just above our heads, the upper part pierced by latticed openings in a pleasing variety of tile-patterns, through which one can see-but not too well-into the next court. The Chinese garden wall invariably follows the contours … and is sometimes undulated in short, quick waves to form the protecting 'Dragon Wall'." Ibid., 475.
[104] Keswick, Hardie, and Jencks, *The Chinese Garden*, 134.
[105] Ibid., 21.
[106] Ibid., 134.
[107] Jencks considers the Chinese garden a "magical space" which is "spaceless": "with its abnormal and incomprehensible patterns, it interrupts the normal social and functional relationships of the city." Ibid., 198.

potential for Chinese architecture to be modernised. Pei's experimentation with modernism and tradition can be read as a case of modernity's capacity of historicity.[108]

It is in this manner that Pei's project can be considered as a challenge to both the Chinese Renaissance Style and Western modernism. Here, another question has been raised regarding the effect that Pei's design would bring to the specific context of the Civic Centre in 1933. Considering the nationalistic purpose of the Civic Centre architecture, to what extent would Pei's project fit with this architectural language of national identity? Or contrarily, was Pei's scheme only challenging rather than corresponding to the architectural context of the Civic Centre?

Evidence can be found to support the assumption that Pei's Chinese-garden-themed museum contributed to the architectural setting of the Civic Centre and the representation of Chinese identity. In the official publication of the Capital Plan that involved Murphy as a consultant, the Chinese garden was correspondingly recognised to be a Chinese architectural language not outside the realm of the palatial form of the Chinese Renaissance Style.[109] Reflected in the planning of the Civic Centre, the arrangement of artificial landscape elements such as rivulets, bridges and plants was consistent with the language of the Chinese garden. Pei's more explicit rendering of a Chinese garden might also be accepted as a necessary exception to the Greater Shanghai

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[108] Tafuri once discusses the representation of historicity in modern architecture, following Sibyl Moholy-Nagy's view on the role of historians in the history of modernism. Manfredo Tafuri, *Theories and History of Architecture*, trans. Giorgio Verrecchia (New York: Harper & Row, 1980), 11–64.

[109] "中国花园之布置，亦复适宜，应自采用。惟关于此项建筑之款式，无需择取宫殿之形状，只于现有优良住宅式样，再加改良可耳。" Li and Jin, *Shoudu Jihua*, 63.

Plan. Thus, the Museum for Chinese Art might in turn add the unaccounted Chinese garden architecture in the Civic Centre for a complete representation of Chinese architectural styles. Pei's sophisticated arrangement of wrapping the Chinese garden in a "museum" for Chinese art—the very institution of culture and art history—made his design a workable solution. This exception of museum design from other public buildings nevertheless corresponded to design intention of Mies, as he stated, "The museum for the small city should not emulate its metropolitan counterparts. The values of such a museum depends upon the works of art and the manner in which they are exhibited."[110]

However, the disappearance of the Chinese garden from the architectural complex of the Capital Plan and the original site of the Greater Shanghai Plan nevertheless suggested the unnecessity to employ a garden structure to represent the sense of national identity and nationalism. A garden structure is, after all, a symbolism of a cultural and even pastoral place for viewing nature and relaxation, rather than one for the governmental purpose of representing national identity. Therefore, if we were to put Pei's solution ten years earlier, in the specific period of the Civic Centre's construction, the validity of the design as a building which was a political symbol of the national government would be dubious. In other words, the design provided a version of Chinese identity, but not one necessarily corresponding to the representation of national identity or governmental power.[111]

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[110] "Museum for the Small City," 84.
[111] Vale, *Architecture, Power, and National Identity*.

1.4 **Memories of China**

Besides the architectural context of the Civic Centre associated with the representation of national identity, the employment of the theme of the Chinese garden was fundamentally connected to Pei's early memory of China. The reading of this early inspiration of Pei further revealed the Museum's architectural representation of national identity and Chinese symbolism. Born and brought up in a conventional and renowned family, Pei's early years were spent in Guangzhou and Hong Kong, where his father, a prominent banker who had worked for several branches of Bank of China, was transferred. Pei moved to Shanghai at the age of ten in 1927, following his father's appointment as chief manager at the Shanghai headquarters of the Bank of China. The young Pei was educated at St John's Middle School in Shanghai, from where he could directly witness the international influence on the city and the prominence of modern architecture in urban construction, with the Park Hotel giving him the strongest impression of "modern" architecture.[112] During some summer vacations Pei would travel with his family to Suzhou and spend most of the time in *Shizilin*, one of the most representative Chinese gardens there, where he studied traditional practices in the family's private school (*Sishu*) while playing with his cousins in the garden. After finishing his middle school education, Pei went to America to study architecture at the

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[112] The great influence of Pei's memory in China has been recorded in Pei's biography by Carter Wiseman and has also been discussed frequently in Pei's interviews. Wiseman, *I. M. Pei*, 29–45.

age of seventeen, marking the suspension of his seven-year experience of mainland China.[113]

Pei's direct experience of *Shizilin* and Suzhou would only start after he moved to Shanghai, but the concept that Suzhou was the root of the family would have emerged long before Pei's first encounter with it. In an interview in Pei's late seventies, he was asked to recollect his childhood. He stated:

> When I was in Hong Kong as a child, I was never aware of that. My family consisted only of my father and mother and my siblings. There we were transplanted. But after I *returned* [my emphasis] to Suzhou, I realised that I came from much deeper roots. That was a revelation, and has had considerable influence on me.[114]

The deep roots of the family in Suzhou explained the personal identity reflected in the project.[115] Therefore, when Pei was looking for an architectural form to represent Chinese identity for his museum in Shanghai, he naturally turned to *Shizilin* for inspiration. In the same interview, when Pei was further asked about the conception of his graduation project for the Chinese museum, he connected his architectural concept to a habit of viewing Chinese artworks:

> It (the museum project) was a really a container for art objects that are very different from Western art objects…. The art of the Orient, by which I mean China, Korea, and Japan… was created largely for private enjoyment. Important paintings, for example, were not hung on a wall for long periods of time…These differences in life and culture must have their effects on the design of museum to conserve and exhibit art.
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> […] a scholar's study or retreat would invariably have a small garden attached to it. It is here that paintings and calligraphy are made and enjoyed. Art and gardens are inseparable.[116]

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[113] Ibid.

[114] Pei and Boehm, *Conversations with I. M. Pei*, 19.

[115] Vale discussed the relationships between personal and national identities in: Vale, *Architecture, Power, and National Identity*, 52–3.

[116] Pei and Boehm, *Conversations with I. M. Pei*, 43–4.

The symbolism of Chinese identity Pei perceived was therefore to be found in the habit of viewing art collections in a private space, which Pei suggested would usually contain a garden. The exhibiting rooms in this sense referred to one's private study, surrounded by the Chinese garden with tea pavilions (*Ting*), as introduced in *P/A*, originally used as a place for the private conversation of intellectuals. Since art and gardens cannot be separated, the garden became a part of the collection, which created an integration of the Chinese garden within the museum. The entire building was proposed as the private retreat of an educated elite, composed of small compartments of study space and an affiliated garden. The contradiction between the open exterior and enclosed interior of the building presented an interaction between private and public space, which also corresponded to the building's metaphor as study or retreat.

This extremely scholarly perception of Chinese identity originated from Pei's early experience of *Shizilin*, which far exceeded the simple alteration of the form of Chinese garden architecture. The graduation design was therefore more justified as being a true presentation of Pei's personal experience of *Shizilin,* a living style of an erudite and conventional elite that was independent from the experience of imperial architecture, than as an ordinary reflection of Chinese living style. It was Pei's conventional and elite background that created his understanding and presentation of Chinese identity. Recalling the interpretation of the Chinese garden and walls as the representations of "eternal habits of the people"—by saying "the people" Gropius was referring to "every Chinese

living"—was apparently too universal to consider this very specific architectural inspiration from *Shizilin* and Suzhou.[117]

This elite version of Chinese identity was not incompatible with the appreciation of modernism and the ambition of nationalism, considering the influence of modern architecture Pei had encountered and, meanwhile, the social tensions he could have witnessed in Shanghai. By referring to the eternal habit of viewing art in a scholar's study, Pei presented his design and himself in a more culturally-focused and thus apolitical manner, as can be discerned from his own explanations of the project in *P/A*. On the other hand, his attempt to find an architectural form to represent Chinese national architectural identity, as perceived from the project's wider political and social symbolism, suggested a connection to the research among Chinese architects into nationalism in the 1930s.[118] However, Pei's version of architectural representation was developed more from his knowledge of traditional Chinese culture than from any political background, and was therefore integrated with the conventional education of his childhood. The museum design he proposed also encompassed his experiences of the two cities: as a modern

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[117] "Museum for Chinese Art," 52.

[118] In Pei's previous practices we can perceive a very explicit concern with the "nationalism" of architecture: The title of Pei's BA thesis at MIT in 1940 was "Standardised Propaganda Units for the Chinese Government," which was seen by his teacher as a rather political theme. Pei enrolled at Harvard GSD in December 1942, but suspended his study in early January 1943 to volunteer for the National Defence Research Committee in Princeton, during which he was already undertaking architectural practices. Wiseman, *I. M. Pei*, 38–9.

Recalling Pei's design of the Post-War Shelter, his political interests, especially considered in the context of the warfare of the 1940s, can be justified, which means that the setting of the museum as a patriotic claim in the Civic Centre was still compatible with the other meaning of the museum as a utopian version of a retreat or study for art viewing. Fisher, "Prefabrication and the Postwar House: The California Manifesto."

architecture of internationalism, the project corresponded to the metropolitan environment in Shanghai and its aspiration for modernity.

1.5 Cultural and architectural identities

To conclude, Pei's graduation project presented a fundamentally multi-layered context which integrated his experience of *Shizilin*, an aspiration for Chinese modernisation and Western modernism in Shanghai, and an ambition of the modernists to promote the sense of internationalism in the West. This complex background ultimately left Pei with an unfixed identity, allowing him to develop his designs in various contexts, transforming and combining components to achieve the most proper form of architecture to meet the needs of different architectural demands. Therefore, Pei's graduation proposal can be either seen as a return to his early childhood in China, or as a departure from the old Chinese situation for a modernised (and modernist) solution. These aspects of Pei's design would seem to be paradoxical, but a closer look at the project suggests an effective sense of eclecticism that was both modern—more specifically addressed as Modernist—and Chinese.

Though a monumental design, Pei's graduation project was never executed. It was in 2002 that Pei expressed this sense of returning more explicitly in the Suzhou Museum, which also accommodated a garden of walls to create an ideal space for viewing art, and exemplified the eclecticism between history and modernity. However, the project's strong resemblance to the Museum of a Small City and the great appreciations of Gropius

and *P/A* nevertheless suggest the project's purpose was to become a tribute to Western modernism. Although this approach was acceptable to Shanghai as a metropolitan and modern city, it somehow defaced the project's merit as giving the Civic Centre a modern image, and being a reflection of Pei's own memories. However, in the American enthusiasm for modern museum construction in the 1960 and 70s, especially as a graduation project from Harvard GSD, practices and readings of modernism would have been inevitable.[119]

In his later commissions of the Fragrant Hill Hotel and the Suzhou Museum, there is a more obvious representation of Chinese identity, both in terms of the form and theme of the architecture, than in this first museum conception for China. Probably Pei himself had noticed that an intentional engagement in modernism would have made the reference to Chinese features less apparent, and some more discernible Chinese elements, such as the pierced windows on walls, the pitched roof of tea pavilions and carved Chinese patterns on the architectural façade would be able to indicate more clearly his continuous return to his family roots in Suzhou and his efforts to develop a modern—not necessarily Modernist—architectural representation of Chinese identity.

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[119] Bergdoll, "Pei, Breuer and Barnes."

Chapter 2 The Deutsches Historisches Museum: the representation of national identity in the temporality of past and present

The Museum for Chinese Art reflected a situation in which Pei engaged in an architectural representation of national identity and nationalism by employing a post-war modernist prototype in a historical context in China with which he was most familiar. His design for the extension of the *Deutsches Historisches Museum* (DHM), in comparison, reveals a situation where Pei, possessing a hybrid cultural identity external to the European context, found his place in contemporary Berlin. Commissioned by the then German Chancellor Helmut Kohl in 1998, Pei's project suggests its significance as a government-sponsored scheme which contributes to the urban image of the city. Considering the modernist background of Pei, the DHM project can also be seen as Pei's response to Berlin, the hub of modernist movement since the early twentieth century. In this context where the representation of national identity has become a priority, Pei's project and his hybrid identity invite consideration of the extent to which it has responded to the conception of national identity represented by the DHM in historical and contemporary tenses.

The existing structure of the DHM contains a complex history that concerns the changed roles of the building. The current site of the DHM is equally well known as the Zeughaus (1695–1730), initially constructed as the armoury of the Hohenzollern and developed into an official representation of Prussian militarism (Figure 21). As the oldest surviving structure on Unter den Linden, the Zeughaus experienced some major changes in its function and identity, from Prussian armoury to the former Museum für Deutsche Geschichte (MfDG), and was finally transformed into the permanent house of the DHM after German reunification. Particularly, since the 1950s, the building was connected to the competitions between East and West Germany to represent an "authentic" version of German history. In the complex architectural context of the DHM and Berlin, it necessitates the consideration of whether or not Pei has reconciled the tensions between his structure and the architectural setting as regards the changed meaning of national identity, from the temporality of the past to the present. Furthermore, the plural manifestation of Pei's hybrid identity raises the concern of how the project has reflected Pei's self-identity in architectural and cultural terms.

To address these questions, the chapter will evaluate Pei's scheme in light of the changed emphasis of nationalism and national identity within its architectural setting. Here, an examination of the historical narrative is necessary in order to fully consider this relationship between history and Pei's modern structure. Thus, the chapter will firstly identify the merit of Pei's design as a contemporary structure and consider the extent to which it corresponds to modernist themes and a sense of history, in which process Pei

also exhibits his modernist identity. This contemporary status of the scheme is, however, questioned by how the structure has responded to the past: of the extent to which Pei has responded to the history of the DHM, developed from an old armoury to a cultural institution. After examining the historical context of the DHM, the chapter returns to examine how Pei has managed to accommodate himself in a context where the representation of national identity has been so contentious.

2.1 Mies vs Pei: the trajectory of architectural modernism

Before stepping into the reading of the scheme, it is necessary to identify how Pei's architectural identity is in effect distant from a classical modernist identity for both cultural and historical reasons, especially in a setting in Berlin. This thus leads to Pei's different approach in his design for the DHM. The resemblance of Pei's Museum of Chinese Art to the Museum for a Small City discussed in the previous chapter brings to mind another project of Mies in Berlin, the architectural context of which also suggests a parallel to that of Pei's DHM project. In 1962, Mies was commissioned to design the Neue Nationalgalerie (1962–68) to house a twentieth-century modern art collection, as a response to the Nationalgalerie on Museum Island, which then housed collections representing the traditional art greatly emphasised in the GDR. The building reflected how Mies employed his previous modernist prototype to settle the confrontation between

history and classical modernism in the then context of Berlin.[1] In constructing the project, Mies also declared his inherent bond with German architectural and cultural history, which was in the end reconciled with his American profile in the modernist form of the museum structure.

This homecoming design of Mies continued his unbuilt conceptions of the Bacardí office building in Cuba in 1957 and the Schaefer Museum project in 1960.[2] Despite criticism of the design's prototype as an office building, which might not best serve the purpose of a museum, the architecture represented the ultimate practice of Mies in combining the conception of modern technology and the tectonic structure of classicism.[3] As Frampton suggests, the employment of a modernist fashioned black space-frame, which Mies developed in his American projects (the earliest case was Chicago Convention Hall, 1953–54), is combined with the steel planar roof.[4] At the same time, this modernist conception of the steel frame and the floating space was juxtaposed with the use of hinged columns that resembled the classical order of columns, supported

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[1] Lambert states that the structural tectonics of the Museum of a Small City were discontinued in Mies's later architecture; however, it nevertheless provided a primary sketch of architectural space that anticipated his many projects in America. In contrast, in Franze Schulze's reading of Mies's museum projects, he perceives the Bacardi Office project can indeed trace a visual reference back to Mies's previous ideas, originating in the Museum for a Small City as an unrealised plan. Lambert, "Mies Immersion," 428. Franz Schulze, *Mies Van Der Rohe: A Critical Biography*, ed. Archive Mies van der Rohe (Chicago: University of Chicago Press; in association with the Mies van der Rohe Archive of the Museum of Modern Art, 1985), 300–11. *Neue Nationalgalerie Berlin*, ed. Neue Nationalgalerie (Berlin), Roland März, and Angela Schneider, trans. John William Gabriel (Munich: Prestel, 1997), 5.

[2] Lambert, "Mies Immersion," 474–93.

[3] Carsten Krohn discusses the criticism the design received because its previous conception as an office building, as Julius Posener regarded the design of the hall was inappropriate for its purpose as a museum space. The spatial design also created shadows which caused inconvenience when displaying artworks. Carsten Krohn, *Mies Van Der Rohe: The Built Work* (Basel: Birkh äuser, 2014), 208–14. Julius Posener, "Absolute Architektur," *Neue Rundschau* 84, no. 1 (1973).

[4] Frampton, "Modernism and Tradition in the Work of Mies Van Der Rohe," 52–3.

by the symbolic and tectonic joint of a capital.[5] In terms of material, the ventilation shafts upon the entrance hall, clad in Greek Tinos marble and bronze grills, further indicate the classical language of architectural monumentality, in contrast to the steel frame of the structure.[6]

The classical metaphor of the structure was consistent with the architectural identity of Mies and the position of the building. Furthermore, it developed a visible reference to Schinkel as in many of his other projects; Frampton points out how Mies was after all trained in traditional architectural styles instead of the modernist manner.[7] On the other hand, since the architecture is part of the National Gallery, this classical reference is celebrated by the museum as an embodiment of the Prussian tradition that can trace its influence to Schinkel's classical order mostly represented by the Altes Museum.[8] The reference to classicism pointed to the remote tradition of German history, while his orientation of modern architectural conception rejected the recent memory of the Third Reich and the Holocaust.[9]

This modernist rendering necessarily contributed to the urban landscape of the Kulturforum. The Kulturforum was a modernist urban complex in the former West Berlin

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[5] Ibid., 53.

[6] Krohn, *Mies Van Der Rohe*, 209–19.

[7] Frampton, "Modernism and Tradition in the Work of Mies Van Der Rohe," 35. Examples of Mies's housing designs in America that embodied the reference to Schinkel, see Schulze, *Mies Van Der Rohe*, 253–7.

[8] *Neue Nationalgalerie Berlin*, 4–5.

[9] Here, it is more accurate to address the structure as a modernist conception rather than simply modern technology. For the intricate acceptance of modern technology from the Weimar Republic to the Third Reich, seeThomas Rohkrämer, "Antimodernism, Reactionary Modernism and National Socialism. Technocratic Tendencies in Germany, 1890–1945," *Contemporary European History* 8, no. 1 (1999).

developed from the 1950s as a counterpart to Museum Island by River Spree in the East. By the time of the fall of the Berlin Wall, the Kulturforum had already developed a comprehensive system of cultural institutions, equally renowned for public buildings such as Hans Scharoun's design for the Berlin Philharmonic (1960–63), the Berlin State Library (1967–76) and the Museum of Applied Arts (1978–85).[10] The area further expanded its infrastructural strength by including the current building of the Gemäldegalerie (completed in 1998), indicating an effort to reshape its cultural identity since it lost its function and identity in the Second World War.[11] Its development as a cultural zone corresponds to the museum boom in Berlin that succeeded the city's art legacy and formed its urban landscape.[12]

The architecture connected to the local identity of the city through its materials. Viewed from inside to outside, the steel skeleton frame, to borrow Phyllis Lambert's words, "frames the mural of the reborn city that has been growing around it," which was meanwhile contrasted by the mirroring effect of the exterior, that provided the "shifting and superimposed reflectivity" of the surrounding area on the glass mullion walls.[13] The

[10] For an analysis of Hans Scharoun's design for the Berlin Philharmonic in the debated status of architectural styles in the post-war Germany, see James-Chakraborty, *German Architecture for a Mass Audience*, 95–114.

[11] Laura Pavia, "The Kulturum," in *Mies Van Der Rohe's Neue Nationalgalerie in Berlin*, ed. Mario Ferrari and Laura Pavia (Bari: Ilios Books, 2013), 31.

[12] Alan Riding, "Berlin, Banking on Its Museums: Seeking a New Identity, the City Shakes up Its Art Legacy," *The New York Times*, March 12, 2002.

[13] Mies's employment of glass as a material for reflectivity over transparency was already visible in his proposal for the Glass Skyscraper model of the 1920s. As Mies stated in the design proposal: "I discovered by working with actual glass models that the important thing is the play of reflections and not the effect of light and shadow as in ordinary buildings." As Frampton perceives, Mies's employment of glass directed to a new approach to architectural structure entirely different from traditional conceptions. Lambert, "Mies Immersion," 499. Quote from Frampton, "Modernism and Tradition in the Work of Mies Van Der Rohe," 37.

building was raised on a podium, covering the sunken gallery inside the building, which first of all suggested a sense of architectural monumentality. Constructed with two flights of stairs, the podium was clad in granite from Strzegom, which Carsten Krohn identifies as the same material used for the pedestrian pavement in Berlin, thus indicating a local identity for the architecture.[14] In this way, the modern form and the classical metaphor of the Neue Nationalgalerie were reconciled with the local identity of Berlin, all of which were nevertheless intrinsic to the historical image of the city.[15]

Mies has provided a solution for incorporating classical ideals into the prototype of modern spatial structure as his approach to represent German identity. In comparison, Pei was confronted with a different and more difficult situation in the DHM to find his place in Berlin. One reason is that the departure of Pei's design strategy from his earliest museum design over the years of architectural practice necessarily resulted in a way of responding to history and modernism distinct from that of Mies. More importantly, the architectural context of the DHM incorporates a multi-layered history. This complex historical background leads to a more complicated interaction between Pei's structure and the historical context of the building. As will be discussed later, even though Schinkel remained a key reference to German identity and history in Pei's scheme, this reference is presented differently from how Mies employed the form of classical order.

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[14] Krohn, *Mies Van Der Rohe*, 209.
[15] The commission also reflected the identity of Mies as part of his origin. Krohn suggests the architectural site was also decided because it was opposite to where Mies once lived, on the bank of the Landwehr Canal. *Ibid*.

Furthermore, in the urban image of contemporary Berlin, where the discourse of modernism has become an intrinsic part of the troubled history of the city, DHM, as a reconstructing project, required a present-day perspective to tackle the relationships between modernism and history. [16] James-Chakraborty perceives the architectural reconstruction in Berlin since reunification has helped form a neo-modernist identity that functions to recollect the "modernist memory" of the city. The "modernist memory," on the one hand, indicates how neo-modernist architecture embodies the historical past of Berlin.[17] On the other, it exceeds the idea of history and refers to the modernist legacy that corresponds to the sense of international modernism.[18] One example discussed is Daniel Libeskind's extension to the Berlin city museum, now the Jewish museum, which adopted an unconventional and abstracted elongated star shape to form the building, along with the monolithic effect of concrete and zinc, to recall the Holocaust memory of the city, which therefore reversed the position of early modernists, such as Mies, of being antithetical to the recent history of the city.[19] As a project of extending the existing DHM, Pei's museum also reflects the complicated situation of architectural reconstruction in contemporary Berlin. [20] The architectural context of the DHM in the vicinity of

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[16] James-Chakraborty, "Beyond the Wall."

[17] Ibid., 102–3.

[18] James-Chakraborty suggests the use of term "memory" instead of "history," in this way eschewing the paradoxical problem of the neo-modernist inspiration from historicism.
Ibid., 100–3.

[19] Ibid., 108–9.

[20] Ibid., 103.
Examples of the reconstruction of the urban areas in Berlin, see Annegret Burg, *Berlin Mitte: Die Entstehung Einer Urbanen Architektur* (Berlin; Boston: Birkhäuser Verlag, 1995).

Museuminsel (Museum Island), partially reconstructed by David Chipperfield, identifies the keynote of Pei's project to serve as the new urban image of Unter den Linden.[21]

Lawrence Vale has described how government-sponsored constructions, especially in capitals, can reflect the position of political regimes, conveying representations of national identity and the sense of nationalism.[22] Pei's project, sponsored by the Christian Democratic Union of Germany (CDU), also serves the purpose of the government by employing a neo-modernist style to incorporate the fractured "modernist memory" conveyed by the principal building of the DHM.[23] Anders Åman uses a triangular diagram to suggest that the pursuit of national form was a persistent intention in architectural practices from classicism to modernism.[24] Likewise, the way in which Pei has settled his structure in the architectural context of the DHM is concerned with not only the relationship between modernism and history, but also the contentious quest for national identity and nationalism reflected in the history of the principal building.

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[21] Paul Stangl, "Restoring Berlin's Unter Den Linden: Ideology, World View, Place and Space," *Journal of Historical Geography* 32, no. 2 (2006).

[22] Vale, *Architecture, Power, and National Identity*.

[23] Though the reading of architecture and architectural identity is not necessarily determined by political intentions, the political intention of the project is particularly visible from the fact that it was a direct commission by Kohl. Another example is that the initial design for the Kanzleramt was modified according to Kohl's personal requests, unavoidably reflecting Kohl's vision of the governmental image. Schultes Frank Architekten and Stephan Redeker, "Projekt: Bundeskanzleramt," *ARCH+* 2014.

[24] Anders Åman, *Architecture and Ideology in Eastern Europe During the Stalin Era : An Aspect of Cold War History* (New York; Cambridge, MA: Architectural History Foundation ; The MIT Press, 1992), 96.

2.2   Present: The PeiBau as a neo-modernist production

The Zeughaus functions as the principal building of the DHM and houses the permanent collections of the museum. Pei's building was constructed for displaying special exhibitions. The project of extending the existing DHM reached Pei in 1998 through the invitation of Christoph Stölzl, the founding director of the museum, and the collaboration was shortly confirmed after a short public debate on the direct appointment of Pei.[25] Dubbed Schauhaus or PeiBau (1996–2003), the structure was completed in 2003 (Figure 22).[26] The different forms of the two structures immediately suggest a distance between a historical building and a modern extension. Situated on Unter den Linden, the old armoury presents itself in a monumental, and fortress-like manner. The order and proportion of the architecture clearly seen from its two story-structure, as divided by entablatures. The ground floor is veneered with smooth ashlar masonry blocks; and there

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[25] As the chapter will discuss, Stölzl has played an important role of establishing the image of a German historical museum, firstly developed as a Western German project. It thus underlies the chapter's consideration of the political representation of Pei's structure, not only for an image of contemporary Berlin, but also for the legacy of the former German Historical Museum. Furthermore, the thesis also considers public debates on architectural projects have contributed to the language of the project as a piece of architecture. The public debate is more manifested in Pei's Grand Louvre. Pei and Boehm, *Conversations with I. M. Pei*, 94.

[26] The name "Schauhaus" itself can be found to indicate three different meanings: The West German newspaper *Die Zeit*, in 1952, referred to the original building of the Zeughaus as "Schauhaus" because of its transformation from the Prussian arsenal to the "Museum of German History" of the GDR, which therefore implies propaganda and is an ironic use of the term. However, the "Schauhaus," or "show house," is a more common reference to the extension hall by Pei, because of its function of housing temporary exhibitions. There is nevertheless another reference, that the "Schauhaus" was a name derived from Pei and suggests a combination of Schinkel's "Schauspielhaus" and the "Bauhaus." The official name of the building is Wechselausstellungsgebäude (Exchange Exhibition Building). K.W. Berlin, "Museum Für Geschichtsfälschung," *Die Zeit*, January 31, 1952. Claudia Schwartz, "Deutsches Historisches Museum Eröffnet Schauhaus Von Pei: Am Schnellsten War Die Schnecke," *Neue Zürcher Zeitung*, May 24, 2003. "Schauspielhaus + Bauhaus = Schauhaus: Spatenstich Beim Erweiterungsbau Des Deutschen Historischen Museums in Berlin," *BauNetz*, August 27. Jodidio and Strong, *I. M. Pei*, 299.

are keystones decorated by helmets on the ground arches.[27] The upper floor of the *piano nobile* is decorated with Tuscan-ordered pilasters that divide the façade into nineteen bays, defined by windows. Above this, the frieze is decorated by triglyphs and metopes depicting weapons and war trophies that symbolise the function of the building. On top of the balustrade, the flat-roofed building is decorated with sculptures of warriors and chariots that convey the military symbolism of the architecture. The entrance is defined by the central pediment supported by two sets of Tuscan columns; the cornice is filled with lavish ornamentation, including a crowned trophy in the central niche, on top of a portrait medallion of Frederick I of Prussia (1657–1713).[28] The emphasis on the entrance thus marks the south side as the main façade of the building. Through the architectural form itself, the Zeughaus suggests its function and royal symbolism.

On the contrary, Pei's additional structure reflects an architectural vocabulary entirely opposite to the classical order of the Zeughaus (Figure 22). Provided with an area behind the Zeughaus which was not very visible from the main street, Unter den Linden, Pei employed an overall asymmetrical and irregular complex to respond to the restricted triangular site (Figure 23).[29] The main structure of the PeiBau includes an exhibiting

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[27] For the symbolism of the giant masks, see Isolde Dautel, *Andreas SchlüTer Und Das Zeughaus in Berlin* (Petersberg: M. Imhof., 2001).

[28] Hans Ottomeyer, "The Masks of Giants in the Berlin Armoury," in *I. M. Pei: Der Ausstellungsbau Für Das Deutsche Historische Museum Berlin*, ed. Ulrike Kretzschmar (Munich; Berlin; London; New York: Prestel, 2003), 72.

[29] The constructing condition was in some ways similar to that of Pei's East Wing of the National Gallery of Art, where Pei was also confronted with a triangular site for the extensional structure to the main building of the NGA. The geometric design Pei provided for the new East Wing was, however, not all well received. Robert Stern criticised Pei's scheme for its "weird geometries"; In contrast, Thomas Abbey's Conrad Sulzer Regional Library in Chicago presented a more conventional language of (as Stern termed it) "modern traditionalism" to respond "directly" to the triangular architectural site, through projecting a round façade

gallery in the form of a triangular prism, an L-shaped workshop building and, on the side facing the Zeughaus, a glass tower and curtain wall (up to the skylight) which signify this to be the main façade of the building.[30] The principal entrance, rather than being placed at the centre of the architectural façade, is situated to one side, between the glass front and the triangular prism, almost hidden from street view. The circular tower, interacting with the floor slabs, conveys an ambiguous message regarding the total floor levels. Overall, the architectural complex presents a sense of asymmetry and irregularity.

Furthermore, the PeiBau suggests an explicit employment of modernism in opposition to the language of traditional classicism, visible from both the spatial construction of the entire structure and the specific installation of the glass tower. The circular glass tower, in a form that resembles Gropius's factory model at the 1914 *Deutscher Werkbund* Exhibition in Cologne, boldly manifests its steel structure with the statement of the curtain wall. The form of the tower is further defined by the careful finish of a steel frame. [31] The combination of curtain wall and steel structure is reminiscent of early modernist works such as the Bauhaus building in Dessau. The lightweight effect of glass and the plain, smooth finish of the limestone surface present an architecture of

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to the very end of the corner, and manifested the façade design with a portico and a clock tower. Robert Stern, *Modern Classicism* (London: Thames & Hudson, 1988), 188–91.

[30] The constructing area was previously occupied by the depository and workshop buildings of the MfDG in the 1950s, also planned at the time to be used as exhibiting spaces for the museum. In the time of the Prussian state, the site was used as the casting factory of the Zeughaus to produce cannon. Ulrikein Kretzschmar, "Urban Theatre — I. M. Pei's Ausstellungsbau," in *I. M. Pei: The Exhibtions Building of the German Historical Museum Berlin*, ed. Ulrikein Kretzschmar (Munich; Berlin; London; New York: Prestel), 23–33.

[31] Reyner Banham critically considers the aesthetics of Gropius's *Werkbund* Pavilion especially in terms of its reference to classicism. Reyner Banham, *Theory and Design in the First Machine Age* (Cambridge, MA: The MIT Press, 1980), 85–7.

volume rather than mass, in comparison to the ornamental language and classical structure of the Zeughaus.

The planning of the architectural space in a way corresponds well to the sense of *architectural promenade*, as most famously demonstrated in Le Corbusier's Villa Savoye.[32] In Villa Savoye, Le Corbusier uses ramps to create a change of architectural space in the building. Similarly, Pei structured the architectural space through the changes of proceeding route that present to the audience four different physical and visual experiences of visiting the building.[33] Upon entering the PeiBau, the visitor is confronted by the stairs going up to the central mezzanine area, which leads to either the galleries on the first floor, or to the glass stair tower (Figure 24; Figure 27). Alternatively, the visitor can use the escalator at the far corner that leads to the basement which provides a way to access either the balcony on the other side of the building via escalator, or walk to the passage linking to the Schlüterhof of the Zeughaus (Figure 25; Figure 26). The changed routes in the building create different rhythms of horizontal and vertical spaces. In terms of architectural form, the glass connects the section of the exhibition building with the external foyer in a horizontal way that creates a connection between the inside and the outside. The glass also covers the spiral stairway, which spans the three floors of the exhibition building, and therefore extends the connection between the inside and the outside vertically.

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[32] For an analysis of the spatial experience of the Villa Savoye, see Flora Samuel and Peter Blundell Jones, "The Making of Architectural Promenade: Villa Savoye and Schminke House," *Architectural Research Quarterly* 16, no. 2 (2012).

[33] Reference from Pei's interview note. Jodidio and Strong, *I. M. Pei*, 300.

Unlike the standardised structure of Gropius's factory staircase, framed by a rectangular, window-like glass box, the glass frame of the PeiBau follows the spiral form of the steel structure. This spiral structure corresponds to the modernist notion of functionalism: the form of the glass form in effect follows the function of the stair, which encourages visitors to go up to the top of the building for a close view of the old Zeughaus. As with Le Corbusier's ramp, the glass spiral tower can be seen as both pure-functional and non-functional: functional in the sense that the glass form follows the movement of space defined by the steel frame, and non-functional because the structure is in effect not related to the actual paths used for the visitor to go up to the space as it is not ultimately leading to the gallery—in the end, it is a structure on the exterior of the building.[34]

The architecture in some ways resembles Pei's design for the East Wing of the National Gallery of Art, further indicating Pei's approach of transnational modernism. The side of the triangular prism away from the Zeughaus featured an opening halfway that creates a visual effect similar to the front façade of the East Wing, composed of two diamond-shaped towers, thus conveying a sense of the design's visual monumentality (Figure 28; Figure 29). The choice of materials reflects a similar sense of materiality that continues Pei's attempt to create his version of transnational modernism. The triangular prism is clad with Pei's preferred marble, the French limestone Magny le Louvre.[35] The

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[34] Jan Kenneth Birksted, "'Beyond the Clichés of the Hand-Books': Le Corbusier's Architectural Promenade," *The Journal of Architecture* 11, no. 1 (2006).

[35] Previous to the DHM, Pei applied a similar marble, Magny Doré, at the Louvre (1989–93), the Miho Museum in Japan (1991–97), the Four Seasons Hotel in New York (1989–93), and the Musée d'art Moderne Grand-Duc Jean(MUDAM) in Luxembourg (1995–2006). Jodidio and Strong, *I. M. Pei*, 249, 258, 268, 288. Kretzschmar, "Urban Theatre," 30–1.

stairs in the interior and the lintels supporting the glass are finished in concrete (cast from

Oregon pine, which presumably gives the concrete a more distinctive texture as Pei's

signature).[36] This is consistent with the East Wing design, in which Pei decided on an

architectural finish with sandstone, which provided a similar visual effect, and staircases

and lintels finished in concrete (also cast from Oregon pine).[37] The similarity is also seen

in the way that Pei's design connects to the principal building. In terms of the National

Gallery, Pei's East Wing connects to John Russell Pope's neo-classical West Building

through an underground tunnel. Likewise, Pei's extension stands as an independent

structure that opposes the principal building of the Zeughaus. Its connection to the

Zeughaus is realised through an underground pathway, leading to the courtyard of the

Zeughaus (the "Schlüterhof"), which is converted to an open plaza covered by a glass

roof.[38]

The structure's visual resemblance to the early modernist ethos of glass and steel

and the idea of transnational modernism in Pei's projects suggests a modernist layout, yet

this modernist vocabulary was connected to, rather than juxtaposed with, the idea of

history and tradition. Pei has also emphasised his architectural inspiration from Schinkel,

which necessarily conforms to the historical past of the Zeughaus and the historical

context in Berlin. As Pei states in an interview in 2008, the design has combined both

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[36] Kretzschmar, "Urban Theatre," 30–1. Jodidio and Strong, *I. M. Pei*, 300.
[37] Jodidio and Strong, *I. M. Pei*, 300.
[38] In addition, the floors of the exhibition building and inside the courtyard (or the Schlüterhof) are covered with North American Mason, a kind of smooth granite surface, so as to create a sense of consistency between the architectural spaces of Pei's extension structure and the Zeughaus. Kretzschmar, "Urban Theatre," 30–1.

historical and modern considerations, coinciding with the reconstructing purpose of contemporary neo-modernist structure, as discussed at the beginning of the chapter:

> I kept thinking Schinkel…Schinkel…Schinkel. But you know I cannot reproduce something that is Neoclassic. We live in the twenty-first century. It has to be modern. At the same time one has to be respectful of the past. By making the work transparent, there's no clash of style. In that way I pay respect to the past but at the same time as we are of twenty-first century.[39]

Pei further addresses this link with history and Schinkel in two ways. First of all, the most essential and well-claimed connection between the modernist structure and the memory accommodated in the Zeughaus is realised through the characteristically modernist material of glass. The specific location of the construction, next to the DHM on Unter den Linden, provides a geographic connection between Schinkel's Altes Museum and the Neue Wache. As Pei suggests, "The very difficult site in close proximity to Schinkel's Neue Wache, was the main feature of the project. Obviously, I made an effort to connect the two, at the circular stair"[40] Walking up the spiral tower, visitors are presented with the historical façade of the Zeughaus through the visual transparency of the glass, while also obtaining a distant view of the Neue Wache. Ulrike Kretzschmar, the head of the exhibition department and architectural consultant of the DHM, acknowledges such a strategy achieves an "architectural correspondence" between "past and present" through the transparency of the glass tower, from which "you necessarily become aware of the historic setting."[41]

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[39] Requoted from Jodidio and Strong, *I. M. Pei*, 302.
[40] Kretzschmar, "Urban Theatre," 29.
[41] Ibid.

Furthermore, Pei suggests the architectural connection to Schinkel from "the sense of proportion" and "mastery of geometry."[42] This statement also justifies how Pei's architecture has responded to both historical past and modernist legacy. In terms of historical past, Schinkel's design of the Neue Wache, especially the Altes Museum, provides an ultimate paradigm of neoclassicism.[43] In terms of modernist legacy, Schinkel himself is an antecedent of modernism, although it is necessary to recognise the variations among individual modernists, such as Le Corbusier and Gropius.[44] Pei has established an architectural connection to the historicism of the original DHM through Schinkel, and specifically from the sense of geometry: "geometry" as the connection between "Schinkel" and modern architecture, and "Schinkel" represented as the "history" reflected from the original architecture. In this way, Pei's conception of geometry has become an intermediate element connecting historical and contemporary temporality.

Pei's explanation seemed to have explained how geometry and transparency function as instruments to connect the modernist legacy and the historical past. However, the way in which the PeiBau settled the relationship between the past and the present,

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[42] Pei and Boehm, *Conversations with I. M. Pei*, 91.

[43] Two examples of reading the Altes Museum in comparison with modernist reinterpretations are Douglas Crimp's criticism of James Stirling's Neue Staatsgalerie as a postmodern example, and Klaus Herdeg's criticism of the Bauhaus legacy through a comparative reading of Philip Johnson's Sheldon Memorial Art Gallery with Schinkel's Altes Museum. Douglas Crimp, *On the Museum's Ruins* (Cambridge, MA; London: The MIT Press, 1993), 282–325. Herdeg, *The Decorated Diagram*, 36–48.

[44] For Schinkel's influence on modern architectural practices, see, for instance, Barry Bergdoll, "'…the Last Great, Comprehensive Genius That Architecture Has Produced.' Karl Friedrich Schinkel and His Pupils in the Eyes of the Modern Movement," in *Karl Friedrich Schinkel, Ludwig Persius, Friedrich August Stüler : Bauten in Berlin Und Potsdam* (Stuttgart; London Edition Axel Menges, 2013). Also see Julius Posener, *From Schinkel to the Bauhaus: Five Lectures on the Growth of Modern German Architecture* (London: Lund Humphries, 1972).

between modernism and history, as well as the building's representation of German identity, especially in historical terms, still remains problematic. In terms of Pei's reference to Schinkel, neither his claim of the reference to Schinkel through geometry nor the architectural connection between "past and present" provides a specific explanation of the project's relation to the historical identity of the DHM. Considering the urban role of Pei's neo-modernist construction in forming the contemporary image of Berlin, the troubled history of the Zeughaus thus raises the question of the extent to which the PeiBau intervenes with each conflicting identity of the building in particular. Pei's reference to Schinkel and geometry was also obscure regarding which part(s) Schinkel related to the historical and national identities of the Zeughaus.

The existing form of the DHM as a reconstructed building already contains three conflicting identities: a historical armoury, a former East German historical museum and, later, the re-organised historical museum after German reunification. "The past," while referring to these three identities of the Zeughaus, also implicates the counterpart of the DHM as a West German project. "The present" points to a reunified status of the architectural complex, containing the Zeughaus building and Pei's annex structure, which represents a contemporary version of national and architectural identity after reunification. The development of the Zeughaus into the DHM reflects the political collision and collaboration of East and West Germany, which in turn affected the formation of Pei's scheme.

The changed identities of the Zeughaus reveal the building's contentious representations of power and nationalism, consistent with their contemporary political positions.[45] It is therefore necessary to consider how the modernist identity of the PeiBau is connected to the historical identities of the DHM. This investigation also helps further understand the relationship between Schinkel and geometry, "the past" and the present, personal and national identity in the different contexts of Berlin and the DHM.

2.3   Past: The Berliner Zeughaus and a Prussian identity of militarism

The first layer of the history of the DHM concerns the original identity of the Zeughaus as the Prussian armoury, which refereed to Prussian sovereignty and comprised one version of the connection between the PeiBau and Schinkel. This is nevertheless the most obvious layer of the memory that the PeiBau acknowledges, considering this to be the fundamental identity that the classical form of the Zeughaus related to, as well as Schinkel's significant role in confirming a royal identity of the Zeughaus in the urban context of the centre of Berlin.

The original building, the Berliner Zeughaus, presents a classical architectural form that represented the status of the Hohenzollern, as well as the ambition to expand their imperial power and demonstrate it through the urban landscape. The Zeughaus (1695–1730), meaning the house for armour, was built by Elector of Brandenburg

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[45] Vale, *Architecture, Power, and National Identity*.

Frederick III. The proposal to build the Zeughaus emerged as early as 1667, under his father, the Great Elector Frederick William, so as to proclaim the political and military authority of the Hohenzollern after the Thirty Years' War. As the successor of the Great Elector, later the "King in Prussia" Frederick I from 1701, Frederick III devoted himself to architectural projects as a way to reaffirm the state of Brandenburg-Prussia, and an ambition towards the representation of Prussia.[46] He commissioned the French court and municipal architect François Blondel to make preliminary designs of the Zeughaus, but not until May 1695 did Frederick lay the foundation stone of the construction. Blondel's drawings for the Zeughaus strictly followed the classical models of Vitruvius. However, the drawings were not realised due to lack of funds.[47] The location of the building was selected in 1691, considering both the fortification function of the armoury, and its potential role in the urban-planning of Berlin, to be at the beginning of Unter den Linden and linked to the architectural complex of the Hohenzollern palace.[48]

The development of the design scheme followed the emphasis on the royal metaphor of the building. The architect initially responsible for the commission was Johann Arnold Nering, who was also responsible for the commission of Schloss

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[46] Edgar Joseph Feuchtwanger, *Prussia: Myth and Reality; the Role of Prussia in German History*, ed. provenance Goethe Institute (London: Oswald Eolef Publishers, 1970), 31–51.

[47] Although the East German publications under the authorities of the GDR unavoidably rewrote the history of the Zeughaus from a Marxist perspective, the book nevertheless provides one of the easiest and most comprehensive documentations of the constructional history of the Zeughaus. Regina Müller, *Das Berliner* Zeughaus*: Die Baugeschichte* (Berlin: Brandenburgisches Verlgshaus, 1994), 19–24.

[48] Hans-Joachim Kuke, "The Berlin Armoury in the Conpetition of European Baroque Architecture," in *The Berlin Armoury: From the Arsenal to the German Hisotrical Museum*, ed. Ulrike Kretzschmar (Munich; Berlin; London; New York: Prestel, 2006), 17–8.

Charlottenburg, the summer palace built for Sophie-Charlotte in 1695.[49] Nering's initial

drawings of the Zeughaus presented the façade to formally correspond with Schloss

Charlottenburg (Figure 30).[50] After Nering's death in 1695, Martin Grünberg and

Andreas Schlüter were responsible for the architecture from 1696 to 1698. Grünberg was

the leading architect, while Schlüter worked on the sculptures of the buildings.

Grünberg's revisions to the architectural design were mostly practical solutions to

Nering's structure.[51] From the autumn of 1699, Jean de Bodt took over the project, and

contributed mostly to the final form of the building. He finished the construction in 1730,

during the reign of Frederick Wilhelm I.[52] Jean de Bodt was largely influenced by

classical architectural forms as a way to demonstrate the esteem of the patron, as, for

instance, practised by Sir Christopher Wren.[53] Bodt designed the armoury as a four-wing

palatial structure following the court design of the Louvre and Palace of Versailles, the

architectural form thus emphasising the royal representation of the Zeughaus.[54] The main

façade of the building was constructed largely in reference to the East façade of the

Louvre. It follows a similar form of two-story construction, with a flat roof hidden behind

the balustrades. The window design of the architectural façade suggests a visible

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[49] The extension of the Berliner Stadtschloss (Berlin City Palace) was the most renowned project. Meanwhile, the development of art and cultural institutions and emphasis on religion (especially Pietism) were also prominent during the reign of Friedrich.

[50] Müller, *Das Berliner* Zeughaus, 26–38.

[51] Ibid., 40–41.

[52] Hans-Joachim Kuke noted that of the planning and construction of the Zeughaus, it was the planning stage that presented most of the potential and value of the architecture. After the completion of the building, its military function became rather implicit.
Kuke, "The Berlin Armoury," 17.

[53] Müller, *Das Berliner* Zeughaus, 53–66.

[54] Ibid.

reference to that of the Charlottenburger Palace which once again implied the royal connections of the building.[55] The entrance was defined by a central pediment, with Latin inscriptions to suggest the purpose of the Zeughaus, as an armoury that served the people and had been ordered by Frederick I, the "King of Prussia."[56] The pink finish of the exterior, already visible in Jean de Bodt's section drawing in 1699 (Figure 31), was reminiscent of the pink Languedoc marble veneer of the Grand Trianon of Versailles, a palace also constructed as a two-story structure, with the same technique of flat roof and hidden balustrades. In this way, the court structure, with the sculptural elements as decorations of the building, aesthetically emphasised the role of the building as a symbol of the military success of the Hohenzollern and a parallel to the royal status of Louis XIV.[57] The armoury, built in an obvious reference to Louis XIV's standard of palatial architecture, nevertheless indicated the ceremonial and display functions of the building. The Zeughaus was constructed both as an actual arsenal and as a museum that displayed historical weapons and trophies.[58]

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[55] Ibid., 81.

[56] Kuke, "The Berlin Armoury," 14–23. Ulrike Kretzschmar, "From an Arsenal to a Museum," in *The Berlin Armoury: From the Arsenal to the German Hisotrical Museum*, ed. Ulrike Kretzschmar (Munich; Berlin; London; New York: Prestel, 2006).

[57] Kuke, "The Berlin Armoury," 14–31.

[58] The ground floor displayed cannons, mortars and howitzers according to their origins, and the first floor was used to collect weapons and guns from infantry and cavalry. As early as the 1820s, the Zeughaus housed French trophies from the Wars of Liberation, and later, in the 1860s and 1870s, following the unification of Imperial Germany, military trophies from Austria, Denmark and France were introduced to the armoury collection. "History of the Collection," *Militaria*, Deutsches Historisches Museum, accessed August 22, 2016, http://www.dhm.de/collections-research/sammlungen00/militaria/history-of-the-collection.html.
The Zeughaus had been open to the public since 1831. Kretzschmar, "From an Arsenal to a Museum," 48.

Following a reshaping of the area surrounding the Berlin City Palace, the Zeughaus established its role as the military symbol in the urban planning of the central area of Berlin, especially in the context of Unter den Linden.[59] The construction of the royal building complex, signifying that the centre of Berlin had established its final form, took place during the reign of Friedrich Wilhelm III (1797–1840). Karl Friedrich Schinkel, with his promotion to *Geheimer Oberbaurat*, played a significant role in the restructuring of an urban landscape that reinforced the craft of the Prussian identity and authority through architecture and urban image.[60] Schinkel's contribution to the urban status of the Zeughaus would presumably have been familiar to Pei when he was considering the historical and regional context of the building. Schinkel transformed the Lustgarten, or the Royal Garden, from a private garden of the Schloss to a public space, determining it as the symbolic centre of the royal architectural complex of the Prussian state.[61] The Stadtschloss in the south represented the power of the Hohenzollerns; the Berliner Dom in the east, renovated by Schinkel, was the imperial church subject to the denomination of the Prussian Union; the Zeughaus in the west was the royal arsenal signifying military power. Schinkel also designed the Altes Museum (named the Königliches Museum until 1845) as a royal museum open to the public.[62] Furthermore,

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[59] From 1740, Friedrich II, known as Frederick the Great, further continued the building of royal palaces and institutions for the urban landscape of Berlin, among which the most renowned project was the building complex of Forum Fridericianum.

[60] Barry Bergdoll, *Karl Friedrich Schinkel : An Architecture for Prussia*, ed. Erich Lessing (New York: Rizzoli, 1994), 46–87.

[61] James J. Sheehan, *German History, 1770–1866* (Oxford: Oxford University Press, 1989), 526–530.

[62] Brian Ladd, *The Ghosts of Berlin: Confronting German History in the Urban Landscape* (Chicago; London: University of Chicago Press, 1997), 49–51.

Schinkel's renovation of the Schlossbrücke enabled an expansion of the area from the Royal Garden to Unter den Linden. The visitor, while reaching the end of Unter den Linden, at the Zeughaus, would then have a glimpse of the Berliner Dom at the far corner, the location of which was precisely calculated by Schinkel.[63] The renovation and construction of the architecture in this context suggested a further emphasis on the symbolism of the Prussian state from an urban-planning perspective: for instance, the Neue Wache is in the vicinity of the Zeughaus, the location and role of the building implied a continuation of Prussian military representation. The architecture, recognised by Schinkel as one of the two buildings in Berlin that "could stand in comparison with international standards, (the other one being the Stadtschloss)" represented an image of Prussian sovereignty, not only because of its classical form, but also its technical function of showcasing the collection of the armoury.[64]

This essential relationship between Schinkel and the urban identity of the Zeughaus provides a hint as to Pei's reference to Schinkel's Prussian identity of the old Zeughaus and its military symbolism. In Pei's explanation of the architecture, he

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James Sheehan identifies that the "public" status of cultural institutions is twofold: firstly because of the sponsorship of the state, in other words, public funds; and secondly because of the fact that the institutions are open to all members of the society. Sheehan, *German History*, 525–26.

[63] Bergdoll, *Karl Friedrich Schinkel*, 72.

[64] The Zeughaus was seriously damaged during the French occupation after 1806. In 1816–17, Schinkel was commissioned to restore the architecture and added the gazing effect for the windows on the south side of the building. Kretzschmar, "Vom Arsenal zum Museum," 43–44. Kuke, "The Berlin Armoury," 15. However, the idea conveyed through architecture concerning military power was not necessarily connected to notions of patriotism or nationalism, because Prussian was not a national concept. Alma Wittlin discussed similar problems concerning the representation of nationalism and historic museums in the history of museum constructions, see Alma S. Wittlin, *Museums: In Search of a Usable Future* (Cambridge, MA: The MIT Press, 1970).

emphasises a visual connection to the rear façade of the Zeughaus through the glass spiral tower. The top floor of the spiral tower functions as a pure ornamentation to the actual structure of the PeiBau, except its spatial connection to Schinkel's architecture, as only at the top level one can have a glimpse of the Neue Wache through the glass. The structure thus highlights attention to the military symbolism of both the Zeughaus and the Neue Wache. The geographic connection to Schinkel's Altes Museum, although much less obvious in the structure, nevertheless implies the urban context of the Unter den Linden which Schinkel realised. In this sense, the references to "the past" suggest its first layer of Prussian identity, and more importantly links with the urban significance of the Zeughaus in Unter den Linden as a symbol of Prussian militarism.

The Prussian identity of the Zeughaus was reinforced by a change of its function from an arsenal to a cultural museum. The previous representation of a Brandenburg-Prussian identity transitioned into one of Imperial Germany following the unification of Germany in 1870s. Between 1877 and 1880, Kaiser Wilhelm I commissioned Georg Friedrich Hitzig (1811-81) to reconstruct the Zeughaus, transforming the building from an armoury-museum to a military museum and a memorial building, named the "Hall of Fame of the Brandenburg-Prussian Army" (Die "Ruhmeshalle der brandenburgisch-preußischen Armee), which consisted of a construction of the domed hall in the middle of the north wing at the centre, the rulers' hall on the left and the generals' hall on the right.[65] The construction of the Ruhmeshalle was among the most expensive memorial

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[65] Müller, *Das Berliner* Zeughaus, 174–84.

building projects since 1870, a monetary investment which also indicated the significance of the Zeughaus as a representation of Prussian militarism. [66] With the display of numerous historical paintings of city landscapes and portraits of the royal family in Germany, the Ruhmeshalle strongly indicated its architectural function of representing Prussian national identity, whereas the collection of weapons and guns and military gears represented the military identity of the museum.[67] Until the end of the First World War, the Zeughaus functioned as an institution for education about the armouries of the Hohenzollern, with an emphasis on the presentation of Prussian identity. From the 1870s to the end of the Second World War, the Zeughaus developed into one of the best-established military museums in Europe. [68] Until this point, the original architecture had already occupied both the identities of a historical arsenal and the museum of an educational institution, both of which pointed to the symbolism of nationalism and militarism.

The representation of Prussian identity gradually diminished during the time of the Weimar Republic. After the First World War, the development of the institution became controversial because of its representation of Prussian militarism. After the discussion of the role of new museum constructions in 1916 (one question involved was whether the future role of the new museum should be to present the history of the Prussian or German empires), priority was given to the construction of an imperial war museum

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[66] Kretzschmar, "From an Arsenal to a Museum," 48.
[67] Staatliche Museen zu Berlin and Zeughaus, *Das KöNigliche Zeughaus: FüHrer Durch Die Ruhmeshalle Und Die Sammlungen, Etc* (Berlin: Julius Bard, 1914).
[68] Kretzschmar, "From an Arsenal to a Museum," 50.

(Reichskriegsmuseums).[69] During the Third Reich, the Zeughaus was preserved by the National Socialists as a site for war propaganda due to its Prussian and military identity, although there was also an initiative to completely destroy the building.[70] During the years between 1933 and 1945, the Zeughaus was transformed into a museum to display temporary exhibitions depicting war images and collections of weapons.[71] The military and royal symbolism of the Hohenzollern was thus deployed for different purposes despite the continuing form of the building.

2.4   Past: The Museum für Deutsche Geschichte (MfDG) and a national identity for East Germany

The later development of the Zeughaus witnessed a change in its function to being a museum of East German ideologies, and consequently transferred the identity of Prussian military and urban symbolism to a representation of East German nationalism. It was also at this stage that the interaction between the PeiBau and the history of the DHM becomes uncertain and concealed. In 1944–45, the building was severely damaged. At the beginning of the war, the essential collections had been transported and scattered elsewhere. The sculptures on the façades of the building were destroyed to different

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[69] Müller, *Das Berliner* Zeughaus, 216–20.

[70] Kretzschmar, "From an Arsenal to a Museum," 52.

[71] Müller, *Das Berliner* Zeughaus, 227–38.
In a broader sense, the museum ideologies during the Nazi period emphasised the notion of patriotism, as mostly represented by the Heimatmuseum. As Germain Bazin noted, patriotism became an idea of "personal morality equally inspired by the land and its people," and a "national" museum functioned "to foster a deeper understanding of the country, its people, and its economy." Germain Bazin, *The Museum Age*, trans. Jane van Nuis Cahill (Brussels: Desoer S.A. Publishers, 1967), 269.

extents; the upper floor was more seriously ruined, the structure of which hardly remained (Figure 32).[72] Immediately after the war, discussions started within the GDR concerning its future function and the possibility of restoration. The discussion lasted from 1945 to 1947, and the building itself was secured from being demolished due to the capacity of its architectural space.[73] In general, the decisions and processes around restoring the Zeughaus, and the transformation of the building from a Prussian military museum to the Museum of German History from a Marxist-Leninist perspective, reflected the general interest of the Soviet Union in using architecture as a strategy of self-representation.[74]

The "peaceful reconstruction" led by the Soviets changed the original Prussian characteristic of the building to the "progressive national traditions" of East Germany.[75] Initially the Zeughaus was kept by the Soviet Military Administration (SMAD) for its spatial capacity, which led to small reconstructions of the structure. In October 1945, the Allied Control Council ordered the liquidation of the military and Prussian collections of the Zeughaus, and transformed the building into "a symbol of peaceful reconstruction," to use the space for exhibitions of Soviet interests and purposes.[76] Alongside the effort of

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[72] Müller, *Das Berliner* Zeughaus, 246–8.
Kretzschmar, "From an Arsenal to a Museum," 53.

[73] Essential personnel included the Soviet Military Administration (SMAD), the then "Deputy Mayor of Berlin Ferdinand Friedensburg" (later a founding member of CDU), "Dr.Katz of the Magistrat's Planning Department, and Professor Ludwig Justi from the Magistrat's Office of the State Museum," previously the "Director of the National Gallery of Berlin." Quote from Stangl, "Restoring Berlin's Unter Den Linden," 363–4.

[74] H. Glenn Penny, "The Museum for Deutsche Geschichte and German National Identity," *Central European History* 28, no. 3 (1995): 352–376.

[75] Ibid., 365.

[76] Ibid., 364.
For the role of the artworks in East Germany from 1947 to 1952 as a way to represent the Socialist realism that against the Western capitalist ideologies, see Babara McCloskey, "Dialectic at a Standstill: East

the Berlin planning and historic preservation staff to emphasise the significance of restoring the museum, funds for restoration were gradually collected during 1946 and 1947. Meanwhile, the decision-making process on the transfer and restoration of the Zeughaus nevertheless revealed the political tensions between East and West Germany.[77]

The ongoing use of the building as an exhibition space generated the possibility to restore the building. Restoration was carried out from 1948 to 1965 and, although the function and restructuring plan of the building changed many times, the idea to restore the building following the established form of the Zeughaus remained a convention.[78] In this way, the reconstruction of the Zeughaus resulted in the change of the architectural representation of the building. The armoury was firstly transformed into a city art museum, as ordered by the Soviet Military Administration.[79] The initial plan in 1948 was to transform the Zeughaus into a "House for German Culture" (Haus der deutschen Kultur) as ordered by the Auftrag der Deutschen Verwaltung für Volksbildung (German Central Administration for Public Education). The architect responsible, Werner Harting (1904–87), provided a renovation plan that focused on the structure of the interior, while maintaining the exterior in its historical form. The supporting structure for the interior was changed to a steel skeleton due to the ageing of the original stones, yet the outside was conserved. [80]

German Socialist Realism in the Stalin Era," in *Art of Two Germanys: Cold War Cultures*, ed. Stephanie Barron and Sabine Eckmann (New York: Abrams, 2009).

[77] Stangl, "Restoring Berlin's Unter Den Linden," 364–5. Müller, *Das Berliner* Zeughaus, 259–84.

[78] Stangl, "Restoring Berlin's Unter Den Linden," 365.

[79] Kretzschmar, "From an Arsenal to a Museum," 52–3.

[80] Müller, *Das Berliner* Zeughaus, 262–7.

Following this, the Ministry of Public Education of the GDR planned to open a "Museum of Cultural History" (Kulturhistorisches Museum) in the Zeughaus, which led to a revision of the project by the Sozialistische Einheitspartei Deutschlands (SED). The SED decided to develop a "Museum of German History (Museums für deutsche Geschichte)," which was founded in September 1950.[81] The commission to design a "Museum of German History" serving "the battle for the national unity of Germany" appointed Otto Haesler (1880–1962) and Karl Völker (1889–1962), both of whom were connected to the modern movement, especially Haseler, who had contributed mostly to the *Neues Bauen* housing development.[82] In the reconstructing work, Haesler and Völker proposed using a 1920s style for the interior. However, because of the architectural debate in the GDR on modernist styles such as the Bauhaus, the plan was turned down in favour of one that could represent a stronger sense of "national tradition," assimilating the architectural features of classicism, as opposed to modernism, which was then often connected to the concept of Americanisation.[83] The reconstructing process required the use of modern materials and structures for the maintenance of the historical façade, which, however, conformed to the political representation of the GDR rather than the

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[81] Ibid., 272.

[82] Ibid., 276. Kretzschmar, "From an Arsenal to a Museum," 54.

[83] As Wolfgang Thöner discusses, the Bauhaus was an "alien, hostile phenomenon" in the early stage of the GDR, between 1951 and 1955. While the Bauhaus was welcomed in West Germany as a democratic architecture, it was alien in East Germany because it was connected to the idea of "The International Style" of American origin, and thus seen as a political and architectural vocabulary of capitalism. In the urban landscape of the GDR, the SED returned to the classical style, with an emphasis on traditional and local architectural features, so as to develop a new architectural language of "national tradition" of the GDR. Thöner, "On the Bauhaus Reception in East Germany."

For the reception and continuation of the Bauhaus in the GDR, also see Christian Schädlich, "The Bauhaus and the Continuation of Its Tradition in the Gdr," *Journal of Popular Culture* 18, no. 3 (1984).

original military and Prussian image: the restoration indicated some ideas of military strength, but not in terms of military representation.[84]

The main part of the reconstruction was completed in May 1952. The architectural façade was restored as accurately as possible to the appearance of the Zeughaus in the eighteenth century; the interior was constructed following the "national tradition" of the GDR, which was influenced by Soviet Realism, resulting in an amalgamated form of neo-classical architecture.[85] The rest of the reconstruction (the north hall of the ground floor) and the installation of the public facilities of a cinema and a library, as well as the north hall of the ground floor, were finished in 1967.[86] Florian Urban points out that the "national" elements were inspired by the German architecture of the eighteenth and nineteenth centuries, typically represented by the classical works of Schinkel and Carl von Gontard.[87] In this way, the reconstructed structure forms a visual correspondence to

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[84] As Virag Molnar points out, in the context of the post-war construction of Soviet Union (soon followed by its development of the Soviet Realism), the concept of building "became a compelling metaphor for reconstructing not only for cities, but identities, communities, and social institutions;" and in the context of the Cold War, the different development of architectural styles consequently symbolised the competition of political systems between the US and the Soviet Union. The architectural reconstruction in Berlin followed this concept of Soviet Realism against the International Style, functioning as a representation of the GDR's new sense of national identity. Virag Molnar, *Building the State: Architecture, Politics, and State Formation in Postwar Central Europe* (New York: Routledge, 2013), 31.

[85] Åman provides a brief documentation of the new architectural development in the GDR, from the campaign against formalism in 1950.The first two buildings that marked the new national form, realised on the Stalinallee (now the Karl-Marx-Allee), were the Deutsche Sporthallee, designed by Richard Paulick, and the Hochhaus Weberwiese, designed by Hermann Henselmann.Åman, *Architecture and Ideology in Eastern Europe During the Stalin Era*, 119–24. See also Francesca Rogier, "The Monumentality of Rhetoric: The Will to Rebuild in Postwar Berlin," in *Anxious Modernism* ed. Sarah Goldhagen and Réjean Legault (Cambridge, MA; Montréal: The MIT Press and Centre Canadien d'Architecture, 2000).

[86] Kretzschmar, "From an Arsenal to a Museum," 55–6.

[87] Florian Urban, *Neo-Historical East Berlin: Architecture and Urban Design in the German Democratic Republic, 1970–1990* (Farnham, England, and Burlington, Vt:: Ashgate, 2009).

the Prussian image of the original Zeughaus and an architectural connection back to Schinkel.[88]

Following the reconstruction and transformation of the Zeughaus, the government of the GDR opened the Museum of German History, or Museum für Deutsche Geschichte (MfDG) in the Zeughaus in 1952.[89] In the political context of the GDR, the MfDG became a project to actively promote a new German history from a Marxist perspective as a counterpoint to the museum institutions in West Germany, seen as led by American ideologies. The MfDG, especially in the 1970s, represented a GDR-oriented national identity.[90]

Moreover, the renovation of the architecture also suggests the assertion of the military authority of East Germany. The Neue Wache was used by the GDR as a memorial site, with two soldiers in front of the building. The remains of the Zeughaus followed this emphasis on the military symbolism of the GDR.[91] From that time, the Zeughaus became an old structure that housed a new identity of Germany fashioned by

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[88] In his discussion, Urban used the term "Neo-historical architecture" to describe architectural conservation and development in East Germany between 1970 and 1990, which was composed of architectural renovation, reconstruction and new constructions. The manifestation of neo-historical forms, Urban argues, did not necessarily create a material authenticity, but most importantly recalled the historical and traditional features from the "staging" of historical architectural forms, which therefore contributed to the establishment of a national authority. Florian Urban, "Designing the Past in East Berlin before and after the German Reunification," *Progress in Planning* 68, no. 1 (2007).

[89] For a GDR version of the documentation of the history of the Zeughaus, see Winfried Löschburg and Horst Büttner, *Das Museum Für Deutsche Geschichte* (Berlin: Berlin-Werburg Berolina, 1960). Müller, *Das Berliner* Zeughaus, 287–92.

[90] Penny, "The Museum for Deutsche Geschichte," 343–72. For a discussion of the national identity of the GDR, also see Joanna Mckay, *The Official Concept of the Nation in the Former Gdr: Theory, Pragmatism and the Search for Legitimacy* (Aldershot: Ashgate, 1998).

[91] For the memorial function of the Neue Wache in the GDR context see Henry W. Pickford, "Conflict and Commemoration: Two Berlin Memorials," *Modernism/ modernity* 12, no. 1 (2005).

East German history, and functioned as a central example of museum institutions in the GDR.[92] As Penny further explained, the history of the Zeughaus already represented the achievement of "progressive forces," seen both in the transformation of the institution from a Prussian armoury of conquest that collected war trophies to a military museum in the eighteenth century, to its final occupation by the people from the 1950s.[93] The transformation of the Zeughaus into the MfDG thus witnessed the recasting of the nationalist identity and military profile of the architecture. In the context of the GDR, the historic façade of the Zeughaus, although representing a new national tradition of East Germany, nevertheless functioned to recall the historical symbolism of the Prussian armoury. In the reading of the history of the Zeughaus, the East German identity contributed to another layer of the building's "past."

The question to consider now is the extent to which the East German history of the building is acknowledged in Pei's scheme as part of the national identity revealed by the form of the Zeughaus. From the perspective of structure and form, the PeiBau in many ways displays a modernist concept of spatial construction, which in the end challenges the notions of the "national traditions" of the GDR in the 1950s. This means that the

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[92] Penny, "The Museum for Deutsche Geschichte," 350–1.

[93] Penny used the example of the presentation of the history between 1815 and 1847 that emphasised the 1844 Silesian weavers' uprising against the Prussian military state. The historical narrative on the Prussian states was necessarily employed by the GDR as accounts of feudalist and military forces.

As Otto Kurz discussed in his review of the status of Berlin museums, by the year 1956, the architectural complex in the museum island had been restored step by step under the leadership of the authorities of East Germany. The restoration of the Nationalgalerie, the Pergamon-Museum and the Kaiser-Friederich-Museum (now the Bode Museum) had been completed; the Neues Museum was irreparable; restoration of the Altes Museum was planned in the near future. In this case, it is reasonable that the Zeughaus followed the restoration process by the SED. Ibid., 350–6; Otto Kurz, "The Present State of the Berlin Museums," *The Burlington Magazine* 98, no. 640 (1956).

PeiBau implies a distance from the East German ideology of the MfDG. Monika Wagner considers this architectural representation of national identity from the planning of the Stalinallee, the first and most representative urban experiment of the "national tradition" of the GDR.[94] Wagner perceives the significance of employing classical architectural forms, which, while being a direct and most obvious influence from the Soviet Union, also accommodated the context of East Germany to emphasise craft and labour, as an antithesis of the modern techniques and materials developed since the Weimar Republic.[95] The application of classical ornamentation or materials of stonemasonry, realised by uniting the efforts of the community, represented the survival of the traditional ideal of artisanship and labour that could be developed in the new societal system of the GDR, in contrast to the machine aesthetics that had been in vogue since the 1920s.[96] The statement of the glass tower in Pei's design suggests the embracement of the machine aesthetics of glass and steel that clearly counterparts this traditional materiality of craft and labour. The plain and smooth finish of the marble surface of the PeiBau further indicates the distance from the classical artisanship promoted in GDR culture.

This debate on the architectural styles returns the discussion to Pei's reference to Schinkel. The form and structure of the PeiBau in effect suggest an emphasis on the constructing technique through his use of geometry which corresponds more to

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[94] Monika Wagner, "Berlin Urban Spaces as Social Surfaces: Machine Aesthetics and Surface Texture," *Representations* 102, no. 1 (2008).

[95] For a reading of the glass culture of modern architecture or the role of the glass surface in the Weimar Republic, see Janet Ward, *Weimar Surfaces: Urban Visual Culture in 1920s Germany* (Berkeley: University of California Press, 2001), 62–74, 191–240.

[96] Wagner, "Berlin Urban Spaces as Social Surfaces," 62–73.

Schinkel's idea of architectural techniques than to a formal similarity of classicism.[97]

Pei's modernist scheme, with such an emphasis on Schinkel, is not dissimilar to how

Peter Behrens and later, Mies van der Rohe, practised modernist designs with inspiration

from Schinkel.[98] Pei's reference to Schinkel can perhaps be explained by what Stanford

Anderson describes in the examination of Peter Behrens's architecture concerning

Schinkel's influence. [99] Anderson considers the references of geometry from the

perspectives of proportion, order and characterisation.[100] Pei's design most apparently

reveals the order of architecture through the repetition of geometric forms. Pei uses the

form of a triangle as the most essential element in the architectural plan (Figure 26; Figure

27). In terms of architectural forms, the design of the architectural space at different floor

levels is unfolded by the arrangement of the triangles at various possible locations within

the building, making it the form of the architecture itself, but also the forms within the

architecture, as well as the form that drives the spatial sequence of the design. In other

words, Pei's design reveals the triangle as the very element of the proportion, order and

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[97] Posener considers that during Schinkel's visit to England in 1826, Schinkel regarded building techniques as the shared elements of architecture and construction, which were more essential than specific architectural forms, materials and compositions. Posener, *From Schinkel to the Bauhaus*, 11.

[98] For instance, a discussion of modernist and traditional elements of Mies's pavilion housing styles that reflected such an inspiration of classicism and Schinkel, see Frampton, "Modernism and Tradition in the Work of Mies Van Der Rohe."

[99] Stanford Anderson, *Peter Behrens and a New Architecture for the Twentieth Century* (Cambridge, MA; London: The MIT Press, 2000), 170.
Two of Peter Behren's works, the Berolinahaus and the Alexanderhaus, are relevant to the discussion of the chapter. The two buildings were constructed as an iconic twin structure of reinforced concrete at Alexanderplatz in 1929–1932, when the area was already a developed urban area, before its new position in Berlin as the new capital of the GDR. The discussion on the development of the urban status of Alexanderplatz, see Gisa Weszkalnys, *Berlin, Alexanderplatz: Transforming Place in a United Germany* (New York; Oxford: Berghahn Books, 2010).

[100] Anderson, *Peter Behrens*, 170.

characterisation of the architecture. However, a triangle is at the same time a form that rarely exists in modernist architectural practices, which means that the triangular-ordered architecture is fundamentally a (positive) rebellion against modern architecture, which is based on a cubic structure originated from planetary squares. Nevertheless, the ordered form of triangles does not necessarily mean it is symmetrical, which is therefore against the language of classicism. Pei's decision to use triangles suggests a watershed between his neo-modernist design and Mies's reference to the classical origin of Schinkel, an antecedent to modern architecture.

Therefore, Pei's design indicates a distance from the memory of the debates on architectural styles, partially represented by the identity the MfDG. Through the use of the modern material of glass and an emphasis on its pure transparency, Pei's scheme establishes a visual connection to the old façade of the Zeughaus, by which he suggested an acknowledgement of the Prussian identity of the building as the Zeughaus.[101] However, the use of glass itself was contradictory to the emphasis on the past ideology of labour and craft of the GDR in the 1950s.[102] The significance of modern materials in Pei's structure, as well as the choice of industrial techniques over labour and architectural ornaments, declares a distance from the building as the MfDG of an East German identity. The construction style of the PeiBau also indicates a distinction between the double identities of the Zeughaus from the Prussian armoury to the MfDG.

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[101] This idea of transparency will be further discussed in the next chapter on the Louvre. Here, Ward considers the effect of reflectivity and transparency of glass in the architectural commission of the 1920s. Ward, *Weimar Surfaces*, 62–9.

[102] Wagner, "Berlin Urban Spaces as Social Surfaces."

2.5 Past: The Deutsches Historisches Museum as a West German museum

Apart from the historical identity of the building as the Zeughaus, another layer of memory in the building concerns the identity of the DHM as a cultural institution, which originated from Aldo Rossi's project in 1989, and settled into its final form at the Zeughaus. This history of the DHM reveals another version of national identity involved in the "past" of the existing Zeughaus. [103] To confront the cultural legacy of East Germany, the then Federal Republic of Germany under Chancellor Helmut Kohl initiated the establishment of a German historical museum as a West German response to the East German-based history established through the MfDG.[104] As Beatrice Heuser suggests, the proposal for the museum reflected both an aspiration to respond to the museum development in East Germany, and also an ambition to present a comprehensive knowledge of the history of Germany, centred on the divided status of Berlin. [105] In terms of regional planning, the museum was also initiated to complement the construction of

[103] For a brief discussion of the history of the DHM, see Rosmarie Beier-de Haan, "Deutsches Historisches Museum: Rethinking German History against the Background of a Burdened Past and New Challenges for the 21st Century," *EuNAMus Report No. 9*, Linköping University Electronic Press, Brussels, 2012.
[104] Penny, "The Museum for Deutsche Geschichte," 367–68.
[105] Requoted from Heuser's article of the commission's statement for the proposal of the DHM:
"The museum thus stands between the magnetic poles of consciousness as a state and a culture [which presupposes a [national-state] on the one hand…, and a particular national history on the other. Without a conscious coming-to-terms with the idea and the history of the German nation-state, a history of the Federal Republic of Germany will remain unreal." Heuser's discussion presented the debated and uncertain definition of the identity of the DHM which already existed during the time of the proposal of the architecture. Beatrice Heuser, "Museums, Identity and Warring Historians – Observations on History in Germany," *The Historical Journal* 33, no. 2 (1990). *Deutsches Historisches Museum : Ideen, Kontroversen, Perspektiven* (Berlin: Propyläen; Frankfurt am Main: Ullstein, 1988).

the Haus der Geschichte in Bonn.[106] The construction of the DHM was decided at the thirty-fifth German Historical Congress Berlin in October 1984.[107] In October 1987, the museum was inaugurated in the Reichstag on the occasion of the 750th anniversary of the founding of Berlin.

The initial site proposed for the DHM was the undeveloped area opposite the Reichstag, at the bend of the River Spree.[108] Following an international competition for design proposals, Aldo Rossi was awarded the commission in May 1989. Rossi's winning design presented a postmodern style, with a historical look to the façade, corresponding to the function and meaning of the museum; meanwhile, it intended to present German history and culture, and reflect "the democratic-liberal spirit of Enlightenment about a common history" in a German and even European context.[109] During the planning stage for Rossi's building, Christoph Stölzl spoke highly of the potential construction, regarding it as a piece that could recall the history of Berlin while also presenting a European architectural vocabulary, which was clearly consistent with the purpose of the

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[106] Kretzschmar, "Urban Theatre," 21.

[107] Although Western historians would counterpart the museum activities of the GDR, they had acknowledged the East German national history since 1950s.
Penny, "The Museum for Deutsche Geschichte," 367–68.
See also Andreas Dorpalen, *German History in Marxist Perspective* (London: I.B. Taurus & Co Ltd Publishers, 1985).

[108] The current site is occupied by the Bundeskanzleramt. The architecture of the German Federal Chancellery suggests a strong emphasis on the political significance of the building area. The architectural site was then unoccupied for three possible reasons. The first was the proximity of the Berlin wall, in the vicinity of the Reichstag building, that made large-scale constructions difficult. The second was its closeness to the bomb damaged area of the Reichstag, which needed to be reconstructed. The third reason was that the area had largely been emptied in the preparations for Albert Spree's planned Volkshalle.

[109] Christoph Stölzl, "Funktionalität Und Schönheit: I. M. Pei Schauhaus for Deutsche Historische Museum," *Museumsjournal* 6, no. 1 (1999): 23.

museum.[110] Although there were nevertheless criticisms of the foreign identity of the architect, the building scheme itself conformed to the intention of the committee to put German history in an international context concerned with the globalisation in everyday life and economic and political trends.[111]

Rossi's postmodern structure was concerned with the symbolism of German nationalism as he explained. Interestingly, similar to Pei, Rossi was nevertheless given a restricted triangular area to plan his structure, but he responded to the construction site with a more conventional way of utilising the architectural space (Figure 33). The design was composed, as in Rossi's theory, to be a collection of "fragments" (as opposed to a synthesis). Furthermore, the "German spirit" was to be represented by the materials used for the structure. These included "the brick of old Berlin with blue and yellow majolica stripes," probably referring to the nineteenth-century identity of the city; "the white stone of the colonnades by Schinkel which symbolises the entire classical era of German culture," indicating the symbolism of German imperialism—especially as represented by the image of a "Schinkel's Berlin," and, last of all, "the use of glass as a dividing element, arising from Mies van der Rohe's intuition and his contemplations on the tradition of

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[110] Christoph Stölzl, "Forward," in *Aldo Rossi, Deutsches Historisches Museum, 1989* (Berlin: Aedes, 1989), 5.

[111] Dietmar Osses and Katarzyna Nogueira, "Representations of Immigration and Emigration in Germany's Historic Museums," in *Migration, Memory, and Diversity: Germany from 1945 to the Present*, ed. Cornelia Wilhelm (Oxford: Berghahn Books, 2016).

Werner Oechslin, "(Originally Untitled)," in *Aldo Rossi, Deutsches Historisches Museum, 1989* (Berlin: Aedes, 1989), 9.

German classicism," which was both a modernist inspiration of the architectural form, and a reflection of modern Berlin's identity.[112]

Constructed with these main materials, the entire building complex was composed of three parts. First of all, there was a rotunda at the centre, located at the axis of the great transversal avenue, as the entrance of the museum. The structure, ultimately linked with the Pantheon, corresponded to Schinkel's rotunda structure at the Altes Museum.[113] Entering the rotunda, one was envisaged to enter the gable-roofed Great Exhibition Room in glass that connected to the concept of represented modernism, on the left of which was the collection of historical materials that evoked a historical dialect of the museum. The intersection of the glass-covered gallery and the structure of the historic sections is reminiscent of the gothic structure of a basilica, which, as Werner Oechslin suggests, resembles a "'temple' and 'cathedral,' of 'Greek' and 'Gothic,'" the "twin concepts…certainly familiar in German culture."[114] The symmetrical structure of the three galleries is also reminiscent of the classical language of Schinkel.[115]

The scheme itself was strongly associated with Rossi's theory of focusing on the representation of the historical tradition of a city, especially through classical and

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[112] Aldo Rossi, "The Design for the German History Museum," in *Aldo Rossi, Deutsches Historisches Museum, 1989* (Berlin: Aedes, 1989), 15.
Due to the obvious reference to Schinkel, Rossi's architecture would fit even better than Pei's later realisation in the current site of the DHM at Unter den Linden regarding the representation of the cultural and national identity of the museum. In a way, Pei's design, which he claims counterparts the historical language of Schinkel, also challenges the postmodernist rendering of Rossi.
[113] Oechslin, "(Originally Untitled)," 9.
[114] Ibid.
[115] Aldo Rossi, "Das Wettbewerbsprojekt," in *Deutshes Historishes Museum Berlin: Aldo Rossi Entwurf Im Gefüge Der Kulturforen*, ed. Alberto Ferlenga (Stuttgart: Deutsche Verlagsanstalt, 1990).

medieval forms.[116] Rossi's works in general echo with the architectural interest in the 1960s in postmodern forms instead of modernist styles, to reflect history and an emphasis on historicism.[117] Alan Colquhoun views Rossi's approach as a model of architectural typology and, more specifically, Rossi employs classical and medieval forms as the essential and juxtaposing collections of typological and urban traditions to represent the memory of a city.[118] Inspired by Rossi's work, Stirling used a central dome and symmetrical structure to present an idea of ultimate geometry in his Neue Staatsgalerie.[119] Placed next to the old Staatsgalerie, the building provides a similar reference to Schinkel, reminiscent of Rossi's strategies of using forms to symbolise the urban elements as a way to represent German identity. Furthermore, the design intention seemed to comply with what James-Chakraborty described as the construction philosophy which responded to Venturi and Scott-Brown's preference for "form-and-function composed architecture" in the late 1960s, generally defined by them as "the decorated shed."[120] Especially considering the connection of modernism with the political and social intentions behind the commissions, Rossi's approach emphasised the aesthetic elements and architectural

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[116] Aldo Rossi, ed. *The Architecture of the City*, sixth ed., Opposition Books (Cambridge, MA: The MIT Press, 1991).

[117] Peter Eisenman, "The Houses of Memory: The Texts of Analogy," in *The Architecture of the City*, ed. Aldo Rossi, Opposition Books (Cambridge, MA: The MIT Press, 1991).

[118] Alan Colquhoun perceives the approach of Rossi as corresponding to the normative and synchronic reading of architecture and history (in contrast to the "diachronic" and "trans-historical" interpretation of history), in which architecture presents invariable and stable forms as the essential elements; limited as they are, these forms function as authentic symbols serving the continuation of history and tradition. Alan Colquhoun, *Essays in Architectural Criticism: Modern Architecture and Historical Change* (Cambridge, MA: The MIT Press, 1985). Anthony Vidler, "The Third Typology," in *Architecture Theory since 1968*, ed. Michael Hays (Cambridge, MA: The MIT Press, 1998). Seungkoo Jo, "Aldo Rossi: Architecture and Memory," *Journal of Asian Architecture and Building Engineering* 2, no. 1 (2003).

[119] James-Chakraborty, *German Architecture for a Mass Audience*, 112–14.

[120] Ibid., 110–11.

forms of buildings that provide meanings and represent symbolic functions beyond practical functions.[121] In this concern, while Rossi's postmodern strategy of using forms to correspond to the sense of the historicism of the city was highly supported by Kohl's government as a response to the East German interpretation of a historical museum, his architectural scheme was nevertheless contradictory to the political and social context of a potential historical museum of West Germany.

The use of materials is further perceived from the spatial arrangement of the structure (Figure 34). As Rossi further suggested, on the side facing the city which visitors can get access to, the low housing structures (of the main gallery) with pitched roofs and built in red bricks resembled the architecture of the medieval period, presumably referring to the residential buildings in the Nicolai quarter, which was reconstructed by the GDR as a neo-historic area, reflecting the historical awareness of the East German leadership.[122] The building blocks were paralleled by the colonnades, which, as Rossi pointed out, adopted white stone to refer to Schinkel's classical language in the Altes Museum. The material used for the frame of the colonnade seemed to be another kind of red brick which, however, differed from the red bricks of the "medieval" structures. This

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[121] Interestingly, James-Chakraborty further points out that Rossi's architectural strategy declared his political compliance with the Communist Party. As consistently argued by Manfredo Tafuri, the modernist movements in the end failed to achieve their proletarian utopias due to the dominating constraints of capitalism in society. Rossi's approaches nevertheless reflected the impossibility of applying his aesthetically-based approach to the urban image of a city with a capitalist background. Ibid.
The case study of the Nikolaiviertel as a neo-historic project of the GDR during 1970–1990s, see Urban, *Neo-Historical East Berlin*.
Fredric Jameson views that the capitalist society has formed the development of postmodern architecture. Fredric Jameson, *Postmodernism or the Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991).
[122] James-Chakraborty, *German Architecture for a Mass Audience*, 111.

red brick is identical with the main body of the rotunda, connecting to the neighbouring building blocks (functioning as the historical gallery of the museum) that suggested the integrity of the architecture while emphasising the image of classical architecture—which, in the architectural context of Berlin in the early nineteenth century, would be equivalent to Schinkel's image of Berlin, most possibly represented by the Rotes Rathaus (1861–69). The "Gothic" appearance of the architectural complex as Oechslin commented, can be most particularly seen from the tower structure, as well as the intersected structure of the glass gallery and the pitch-roofed blocks, which used the materials of "Old Berlin" bricks, glass and steel, that mixed the vocabulary of modernist and medieval Berlin. The Gothic reference and involvement with the modernist element of glass can nevertheless be seen as a correspondence to Schinkel's Friedrichswerdersche Church and Bauakademie, which suggested a tendency towards designing a modernist façade, especially in terms of the similar kind of red brick used in Schinkel's buildings.

The materials used in Rossi's design function as the agency to reflect the discourse of the architectural development of Berlin (especially through the thread of Schinkel, which was, however, a more direct reference to Schinkel than the use of materials). Rather than relying on architectural forms, Rossi more obviously used materials to refer to different architectural features located in Berlin: white stone to Schinkel; old bricks to medieval Berlin; glass to Mies. Also, Rossi envisioned raising the flag of the then West Germany from the tower, the structure to be entered before the foyer and administrative parts of the museum, which clearly declared an ambition to represent the "national"

identity, in contrary to the authority of the East Germany (Figure 35). The design of the tower is to some extent reminiscent of Bruno Taut and Franz Hoffmann's Monument des Eisens, which James-Chakraborty views as mass architecture, provoking an aspiration for a shared community.[123] The DHM proposed by Rossi therefore presented a version of the national identity gathered from the typological traditions of Berlin, which resulted in forms and materials of architecture corresponding to the urban identity of the city. It stood against the neo-historic depiction of East Germany by including the architectural materials of Berlin as an integrated urban concept, in contrast to the emphasis on architectural form in the GDR to represent their new "national traditions."

Pei and Rossi's schemes were both formed as antitheses to the identity that MfDG represented. Rossi's design was distanced from how the GDR reconstructed the national identity of the MfDG through the restoration of the building. In Pei's case, corresponding to what Rossi referred to Mies via the use of glass, the distinctive features of the glass foyer and the glass staircase of the PeiBau nevertheless indicate the modern identity of the building. As discussed before, by emphasising the materiality of glass—not only regarding the glass as a material, but also its functionality in the architecture—Pei's scheme seems to have reverted to the architectural notions of the 1920s that opposed the constructing notions of the GDR. The French limestone Magny le Louvre used in the main body of the exhibition building intentionally provides the visual effect of bricks, seen from the fact that the stone is cut into relatively thin slates (Figure 36). Carefully cut

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[123] Ibid., 46–50.

and layered, the slates fundamentally demonstrated the precise calculation of machine construction, in contrary to the language of craft and labour represented by the MfDG. However, compared to Rossi's scheme, which suggests straightforward and specific references to the memory in Berlin, from the classical Schinkel to the modern Mies, Pei's design becomes more a reinterpretation of modernist elements, combined with his contemporary invention of materials to reflect the memory of the city.

Furthermore, unlike how Rossi used materials to explicitly link with history and the urban identity of a city, Pei uses materials more to contribute to the creation of architectural space. While the triangular formed marble structure is the main exhibiting area for galleries, the glass foyer with the staircase covers the space of the entrance hall, and provides an additional pathway for visitors to go up the building. The use of glass allows a transformation of the architectural space from the outside to the inside, or the integration of the inside with the outside as an architectural unity. This strategy of merging the boundaries between the inside and outside of the building can also be seen from Schinkel's plan for the Altes Museum, as the rotunda was set right behind the open colonnade at the entrance, creating a connection between the inside and the outside. In other words, glass is reinterpreted by Pei to facilitate the sense of space, helping bring forth the experience of the historical past as part of the building's memory. Therefore, Rossi's scheme itself evokes the historical identities of the city through its form and materials, while Pei's structure connects to the sense of memory only through the transparency of the glass. However, both Rossi and Pei's references to Mies and use of

glass convey an idea of community and mass architecture. Regarding the architectural design, the use of a glass façade stands for the democratic sense of political transparency advocated in the context of the Kohl government.[124]

Although Pei emphasises the urban context of the building at Unter den Linden and makes a visual connection specifically with Schinkel's buildings, the design is ultimately a demonstration of modernist characteristics that makes the historical references less obvious. If the architecture is distanced from the Zeughaus, this sense of historical awareness was immediately dismissed. In contrast, Rossi's scheme was a more explicit way to claim an architectural identity connecting to history and urban features. Perhaps this explains the design purpose of the PeiBau, that the understanding of the architectural representing is indispensable from the setting of the DHM, both in terms of the physical location of the building and the historical references of the institution.[125] Given that the Zeughaus has already presented memories that incorporate the classical and GDR identities of the city, a modernist scheme is necessary to recall the modern identity of Berlin, thus contributing to a representation of the history of Germany in terms of its status as a nation and a culture, especially after reunification.

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[124] There are cases studies of the Kohl projects that necessarily reflects a political intention behind the virtual transparency of glass.
See, for instance, Georg Vrachliotis, "Transparency as a Political Psychopharmaceutical," *ARCH*+2014.
[125] Stölzl and Beier, *Deutsches Historisches Museum : Ideen, Kontroversen, Perspektiven*.

2.6   **Present: The PeiBau in the reunified context of Berlin**

In the end, the neo-modernist version the PeiBau functions to reconcile the two conflicting representations of national identities and the layered memories of the building in the reunified context of Germany, by implying and drawing on the classical and modernist references of the city. Interestingly, while the proposal from Haesler and Völker—the two figures who to some extent represented the trend of the modern movement—to reconstruct the interior of the Zeughaus in the manner of the 1920s was seen as inappropriate in the context of the MfDG, following which Rossi's postmodern scheme was selected to represent an idea of the national identity of West Germany, Pei's eclectic design was now embraced as a correspondence between "past and present." As a student of Walter Gropius, Pei's effort also to some extent corresponds to how the Bauhaus was embraced in both East and West Germany in the 1960s.[126]

Pei's preference for a triangular form also indicates a distance from classical Modernism. While the architecture emphasises the form of a triangle which formed the order of the entire structure, it is an implicit formal and spatial experience unfolded to the visitor only when one visits the building (because one experiences the limited corners of triangles differently from cubical spaces). However, from the outside of the building, the view of it is dominated by the glass tower and the unornamented marble surface. In other

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[126] Thöner, "On the Bauhaus Reception in East Germany," 120–30.

words, the triangular form, despite being persistently emphasised, is disguised by the seemingly explicit modernist feature on the outside.

This implicit triangular order presumably justifies how this design can be seen as a solution after the complicated transitions of the Zeughaus that rejects a single category of architectural styles and its corresponding memories. The conventional modernist language is, on the one hand, advertised through the statement of the glass tower and the erasure of ornamentation on the architectural façade. The steel-framed glass tower itself emphasises how the modernist legacy is continued in the present urban image.[127] The transparency of the glass reasonably suggests a sense of political openness and democracy that serve for the political and national identity of the present Berlin.[128] Its visual connection to the historic façade of the Zeughaus also recalls the history of the building as a memory incorporated in the entire building complex. On the other hand, Pei's special invention of the triangular form seems to indicate that the classical Modernist features have indeed become memories themselves. In contemporary context of Berlin, Pei's scheme becomes an architectural response to the new identity of the city. A reading of the multi-layered implications of the neo-modernist form of the PeiBau helps further understand Pei's own statement about his architectural proposal of searching for a style connected to Schinkel in contemporary urban environment.[129]

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[127] James-Chakraborty, "Beyond the Wall," 100–3.

[128] Another comparable case is the rebuilt Reichstag. Norman Foster reconstructed the dome that intentionally created a sense of political democracy: the dome is designed for the public to look down upon the parliament, from the outside to the inside of the building. James-Chakraborty, *German Architecture for a Mass Audience*, 120–26.

[129] Jodidio and Strong, *I. M. Pei*, 302.

In addition, Pei's foreign identity contributes to the current version of the national identity of the city. As James-Chakraborty recognises, in the air of neo-modernism in Berlin, "outsiders" contributed increasingly to the building of the national identity of the city to an extraordinary degree in modern Europe, among which is Daniel Libeskind's Jewish Museum.[130] The PeiBau presents an idea of internationalisation in terms of both the architecture itself and Pei's self-identity. Another example to recall here is the bourgeoning reconstruction of the Potsdamer Platz since German unification, where new buildings from Helmut Jahn's Sony Centre to Renzo Piano's Daimler complex present how foreign architects have contributed to a new image of the centre of Berlin.[131]

2.7 Pei's personal identity: another temporality of past and present

The reading of the international identity of the PeiBau and Pei himself leads to the possible consideration of the architecture in another temporality of past and present, more relevant to Pei's personal memory. As Pei explains, the intentional design of the circle form between the two floor levels of the PeiBau, reminiscent of the circular opening on the wall of the Grand Louvre, was ultimately an inspiration from the Moon gate in his family garden in Suzhou, where he spent his childhood, and which Pei also used in the

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[130] James-Chakraborty, "Beyond the Wall," 105.

[131] Rolf J. Goebel, "Berlin's Architectural Citations: Reconstruction, Simulation, and the Problem of Historical Authenticity," *PMLA* 118, no. 5 (2003).

design of the Miho Museum in Japan.[132] Pei recognised the circle as "the most perfect geometric form."[133] The circle, which should nevertheless be specified as the circle of the Moon gate in Suzhou, reveals his memories of the past.[134] However, this past is only partially presented, since the circle in the PeiBau is divided between the floor levels and thus one cannot walk through it as through a real Moon gate. In other words, the form of the circle also becomes a conception of legacy that is reinvented in the temporality of the present, rather than directly copied from the past. This is in parallel with how the modernist elements are reinvented into a circular glass tower and triangular orders in the PeiBau. The visual connection to the Zeughaus through the glass front of the PeiBau recalls the past and historical identities of the old armoury, while the circle in the PeiBau mirrors the past experiences of Pei: Pei left China to study architecture in America in the 1930s and settled in the US, partially because of the effects of the Second World War and the Civil War in China. The wars and shifting powers in China were nevertheless similar to the changes of national identity in the history of Germany. The neo-Modernist presence of the PeiBau thus also includes the international present and Pei's memories of the past.

Returning to the chapter's question of how Pei has reconciled the tensions between himself and the architectural context in Berlin, between his new structure and the historical context of the DHM, the answer seems to lie in contemporary building

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[132] Jodidio and Strong, *I. M. Pei*, 302.
[133] Requoted from ibid.
[134] This practice, however, to some extent corresponds to Le Corbusier's approach of applying a historical form so as to provide a new symbolic meaning to the form in a modern context. Colquhoun, *Essays in Architectural Criticism*.

environment of the city. It embraces a different way to interpret Schinkel and modernist ethos, rather than the search for classical vocabulary or the manifestation of national identity. The circle can thus be seen as Pei's approach to respond to the new spirit of the city. Rather than being a symbol of the Moon gate, it also allows a different interpretation as a geometric form (or even, one composed of two semi-circles), that bridges the boundaries between Pei's hybrid identity and contemporary building context of Berlin.

Part Two: architecture and language

Chapter 3 The Grand Louvre: the language of architectural criticism

Pei's engagement in the architectural reconstruction of the DHM was greatly indebted to his previous commission for the Grand Louvre. Begun in 1983, the Grand Louvre was a direct commission to Pei from President Mitterrand in early 1982 without a national or international competition (Figure 37).[1] The commission belonged to the governmental scheme of *Grands Projets* that included the construction of a series of modern monuments that shifted the urban landscape of Paris at the end of the twentieth century. The main purpose of the project was to modernise the Louvre Palace to correspond to the urban image of the city.[2] The Grand Louvre also reflects Pei's approach of interacting with a political concept of national identity, realised through the placement of the modernist scheme in connection to history. Developed from the king's palace to a national museum, the Louvre stands for the royal authority and historical identity of the country. [3] Jean-Pierre Babelon considers the "grand royal style" of the Louvre Museum

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[1] Prior to this, Pei had announced his refusal to enter any architectural competition. This was purportedly because of his loss of La Défense, which was won by the Danish architect Johann Otto von Spreckelsen at the last minute. La Défense was also a key monument in *les Grands Projets*. As Annette Fierro suggests, the special attribute of La Défense is that it is not a monument to be "looked upon," but "seen through."
Annette Fierro, *The Glass State: The Technology of the Spectacle, Paris, 1981–1998* (Cambridge, MA: The MIT Press, 2003).

[2] Phase I of the Grand Louvre (Planning: 1983 September; Completion: 1989 March) involves the construction of the Glass Pyramid and Napoleon Hall. Leading designers include I. M. Pei, Leonard Jacobson, Yann Weymouth and C. C. Pei. "Grand Louvre–Phase I," *Projects*, Pei Cobb Freed & Partners, accessed July 26, 2015, http://www.pcf-p.com/a/p/8315/s.html.

[3] Fierro, *The Glass State*, 159–61.

to be representative of Napoleon III's architectural vision, which became an ahistorical

symbol to the public, until the point of Pei's transformation of the site and the installation

of the Glass Pyramid.[4] The Glass Pyramid, similar to the glass tower of the DHM,

functions to create a visual connection to the façade of the Louvre which visitors see

through, so as to acknowledge its historical identity.[5] Alongside the approach of

connecting to history through the visual transparency of the glass, it can also be seen how

Pei asserted his architectural signature by employing similar geometric forms to those he

used for the DHM, such as the insertion of a circular opening between different floor

levels to resemble the form of a gate in a Chinese garden.

The Museum for Chinese Art and the DHM project display how the perception of

the architectural representation of national identity can be affected by the plural

manifestations of Pei's cultural and architectural identity. Furthermore, while the DHM

project displayed how Pei's structure functions as a museum building that contributes to

a government-sponsored urban image of the city, the Grand Louvre reflects from a

different perspective how the museum functions as a building type, which has

incorporated language, the realised building scheme, as well as architectural image.[6] To

evaluate the role and effect of Pei's international identity in his museum projects, I will

focus on the Pei's Louvre project in the second part of the thesis, and particularly consider

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[4] Jean-Pierre Babelon, "The Louvre: Royal Residence and Temple of the Arts," in *Realms of Memory: The Construction of the French Past*, ed. Pierre. Nora and Lawrence D. Kritzman (New York: Columbia University Press, 1996), 291–2.
[5] Rustow, "The Expansion of the Louvre."
[6] Forty, *Words and Buildings*, 13–4.

the role of the language system in the understanding of the meaning of the museum architecture. Chapter 3 and 4 examine how both aspects of the language have affected the meaning of the Grand Louvre as a museum project.

3.1 **Architecture and language**

As discussed in Introduction, Forty considers the system of architecture is more completed than the fashion system of material product, image and critical language.[7] As for architectural image, there are the images of architectural drawing and architectural photography, the former of which constitutes independent division of architectural language.[8] Forty then considers how critical language within the architectural system is composed by both the language from the architect through their drawing or talking, and comments from architectural critics.[9] Furthermore, language, as Forty has presented in in Words and Buildings, develops more as a phenomenon especially along with the development of modernism: while it refers to comprises to the language of architecture as of the language in the fashion system, it also refers to the vocabulary used in architecture and, more importantly, language metaphor that extends to a system of architecture-language analogy that opens up a linguistic approach of reading the meaning of architecture. [10] Returning to the discussion of museum architecture and the

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[7] Ibid., 13.
[8] Ibid., 14.
[9] Ibid.
[10] Ibid., 63–85.

representation of identities, a query into the role of language helps reveal the role of the museum and its architectural representations. Particularly in the Grand Louvre, language has become a primary factor in interpreting the project and evaluating its architectural representations.

The association between architecture and language involves a complex and developing process of how the language metaphor or even the whole linguistic system can affect the approach to understanding architecture.[11] To address this language metaphor, Forty firstly distinguishes several different references in this linguistic analogy, which include "architecture is *like* a language" and "architecture *is* a language," or the general references to either "language" or "literature"; among which the structural conformity to a language also varies on different occasions. Forty also considers the distinction between individual divisions of analogies, in terms of the "semantic" and "syntactic" attributes of a language.[12] Then Forty identifies six different categories of the analogy of architecture to language in six different categories, which include the semantic and syntactic analogy of architecture to language, as well as a general comparison of

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[11] When talking about language, the linguistic studies are always focused on language as a *system*. See, for instance, Derrida's discussion of Saussure's analysis of signs, which Derrida referred to as "the *system* of language." Jacques Derrida, "Différance," in *Speech and Phenomena, and Other Essays on Husserl's Theory of Signs* (Evanston: Northwestern University Press, 1973), 140–41.

[12] Forty, *Words and Buildings*, 64.

architecture to language as a general phenomenon.[13] The diversity of the linguistic analogy suggests how language functions to expand the meaning of architecture.[14]

Altogether, these categories denote a trend for a semantic analysis of architecture, which significantly developed following the discourse from Structuralism to Poststructuralism. One example is Umberto Eco's view of architecture as a direct system of communication, which conveys its meaning and function through denotative and connotative signs on the basis of technical, syntactic and semantic architectural codes.[15] As Eco put it, the "architectural language" is "an authentic linguistic system obeying the same rules that govern the articulation of natural languages."[16] One important aspect that Eco pointed out to distinguish architecture's function as language is its ability to communicate as signs, besides the simple uses of architectural functions. As Eco stated, "One of the first questions for semiotics to face, then, if it aims to provide keys to the cultural phenomena in this field, is whether it is possible to interpret functions as having something to do with communication."[17] The semiotic and structuralist analysis further stimulated a syntactic application to architecture, particularly represented by Eisenman's

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[13] Moreover, Forty also discusses the "language" of modernism which refers to the structural comparison as a more general phenomenon of literature, that consider fundamental terms, definitions and debates as the "keywords" of modern architecture. Ibid., 18–28, 63–85.

[14] Regardless of the specific category, the linguistic analogy nevertheless has a certain sense of limitation. As French historian Jacques Guillerme considers, the manifestations of language-metaphor all belong to individual "architecture-language syntagm," which thus reveals their ineffectiveness to some extent. Jacques Guillerme, "The Idea of Architectural Language: A Critical Inquiry," *Oppositions* 10, no. Fall (1977): 25. Forty, *Words and Buildings*, 25.

[15] Umberto Eco, "Function and Sign: The Semiotics of Architecture," in *Rethinking Architecture: A Reader in Cultural Theory*, ed. Neil Leach (New York: Routledge, 1997).

[16] Umberto Eco, "Linguaggio Architettonico," in *Dizionario Enciclopedico Di Architettura E Urbanistica*, ed. Paolo Portoghesi (Istituto Editoriale Romano, 1969).

[17] Eco, "Function and Sign," 182.

reading of the syntactic aspect of architectural forms, as Forty pinpoints in the sixth category of the language metaphor. [18] This is the aspect in which the reading of architectural drawings—a form of architectural language—is conforming to the semantic approach to interpret the meaning of architecture, which I will further address in Chapter 4.

I consider the Grand Louvre is a project that has included the key factors of the reading of the language metaphor, which thus in return inspires me to look into the representation of identities from a perceptive of architectural language, or architecture and language. Once again, returning to Forty's analysis of the architectural system, it consists of four parts – the material building product, architectural photography as an architectural image, architectural drawing which is not only image, but more importantly, a form of language, and architectural language, composed by both external languages by architectural critics and architects' own talking or writing.[19] The Grand Louvre has well corresponded to this examination of the system of architecture, since it consists of the actual building, architectural image of drawing and photography, as well as architectural language. As I will discuss in Chapter 4, architectural drawings, as a significant form of architectural language, can denote alternative interpretations of the project that help enrich the meaning of the Grand Louvre as an important example of museum architecture. Furthermore, I consider the architectural language of the project has been a main feature for the Grand Louvre, which are particularly important for revealing the complexity of

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[18] Forty, *Words and Buildings*, 80–5.
[19] Ibid., 13–4.

identities represented and developed throughout the scheme. My reading of the Grand Louvre in relation to language attempts to consider how the various readings of the scheme contribute to the meaning of the architecture as a developing entity.

The architectural languages involved in the Grand Louvre included the talking from Pei and his collaborator, as a representation of the architect's own language. The external language to be discussed in the Grand Louvre mainly comprises criticism from architectural historians and the public. One occasion that manifested the influence of the public and professional criticism was "la Bataille de la pyramide," a term used by the French media to refer to the architectural, political and social criticism of the scheme, which began at an early stage of Pei's appointment, around early 1983, and lasted until the construction began in 1985, by which time the public had finally accepted the mock-up of the Glass Pyramid.[20] The criticism covered the entire project, from reconstructing the Louvre at all, to the proposal to install a glass pyramid in the centre of the Cour Napoléon.[21] Amongst the criticism, there was fierce discussion of Pei's cultural identity as a Chinese-American architect.[22] The Bataille demonstrated not only the extent to which architectural and public criticism can collide, but also how "the public" and media have played a significant role in forming the language of museum architecture. An analysis of the Bataille will demonstrate that Pei's scheme, especially as regards the installation of the Louvre Pyramid, produced readings of the architecture that exceeded

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[20] Michael T Cannell, *I. M. Pei: Mandarin of Modernism* (New York: Carol Southern Books, 1995), 1–31.
[21] Jean-Paul Morel, "Michel Guy: Il Ne Faut Pas Traiter Le Louvre Comme Un Aeroport," *Le Martin de Paris*, 1985.
[22] Fierro, *The Glass State*, 1–41.

its functionality, but were more importantly readings of the form and materials of the architecture in terms of what messages the design communicates to its audience.

One of the most representative cases of the architectural critic in the Bataille was Charles Jencks's criticism towards Pei and his design. The critique was also a practice of the semiotic reading of the Grand Louvre which further implies the importance of the linguistic analogy in affecting the interpretation of the project. Jencks developed his reading of the meanings in architecture following the tradition of semiology, stating that "how architecture communicates meaning proceeds in accordance with past traditions and language."[23] By employing a semiotic analysis of architecture, Jencks evaluated the design of the Glass Pyramid from an anti-Modernist view (as a leading postmodernist), and thus provided his analysis of the architectural representation of identity and power in relation to the stylistic debate. He also considered the criticism the project received from the public as a direct consequence of Pei's modernist practice.[24] Jencks's critique presented one version of the language of the Grand Louvre as an architecture which developed its meaning in architectural, social and political terms. However, it is also necessary to note the limitation of one specific application of the linguistic metaphor to reading architecture. As Guillerme perceived, this "grammatical analysis," although

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[23] Jencks also proposes a "serological triangle" to suggest the interrelations between "thought (the signified)," "symbol (the signifier)" and "Referent."
Another important example of the semiotic analysis of architecture is made by Christian Norberg-Schulz, as he calls for a "symbol-milieu" along with the existing "physical milieu" and the construction of buildings in meaningful forms. Charles Jencks, "Semiology & Architecture," in *Meaning in Architecture*, ed. Charles Jencks and George Baird (London: Barrie & Jenkins, 1969), 15–17. Christian Norberg-Schulz, *Intentions in Architecture* (London: Universitetsforlaget; Allen & Unwin, 1963).
[24] Charles Jencks, "Symbolism and Blasphemesis," *Art & Design* 1, no. 8 (1985).

developed by architects into "a universal, critical instrument of architecture," was in itself

a "one-way communication" promoted by architects, rather than linguistics; it was thus a

way for architectural critics to impose extra meaning and value on architecture which is

however realised through materialistic effects or social receptions.[25] Even in terms of

Jencks's erudite use of the semiotic analogy problems are present. George Baird criticises

the parallel between linguistic and architectural languages that Jencks proposed as

"hopelessly overworked, and intellectually exhausted."[26] Thus, my reading of the system

of the Grand Louvre aims to present an overall picture of the architectural languages from

both architectural critics, the pubic and from Pei.

The word "language" may be more specifically defined by using Wittgenstein's

term of a language-game. Wittgenstein's "language-game" theory, with an emphasis on

the attribute of "game," derives from his game analogy to language of 1932. The

language-game suggests a similarity between language and game, and argues for the

formation of language according to specific "rules" that govern the system of its use.[27]

Wittgenstein expands the concept of language-game as "the whole, consisting of

language and the actions into it is woven," that covers the systems of forming languages,

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[25] Guillerme also critically perceives the theoretical value of this analogy to language in two aspects. On the one hand, the analogy does not necessarily bring in the enrichment of the theoretical development of linguistics. On the other hand, the linguistic theory does not necessarily provide a more legitimate ground for the study of architecture, which thus suggests a lack of theoretical model for the linguistic analogy. Guillerme quotes from G. Morpurgo-Tagliabue to further emphasise "what this pretended architectural language lacks in order for it to be a language is precisely the primary factor of semiosis: the heterogeneity between the signifier and the signified." Guillerme, "The Idea of Architectural Language."
[26] Jencks, "Semiology & Architecture," 17.
[27] Hans-Johann Glock, *A Wittgenstein Dictionary* (MA; Oxford: Blackwell Reference, 1996), 193–98.

to the everyday *use* of languages, to "a primitive language" itself.[28] The definition of language and language-game becomes an unfixed, developing phenomenon. The multiple possibilities of forming orders and language therefore suggests the unfixity of the definition of language and language-game, linking language-game with the everyday practice of speaking a language, and finally with "a form of life."[29] Because of the unfixed way of framing "words" and "symbols," the structure and form of "sentences" become undetermined, which allows the production of "new types of language" and "new language-games"; and therefore suggests the "multiplicity" of language and the games.[30]

Following the autonomy and multiplicity of language-games, with the specificity of rules for each language and language-game, it is possible to employ Wittgenstein's theory to consider the specific readings of architecture as language-games. This language-game of architecture therefore goes beyond the general category of architecture and/as language, because it includes both "architecture as language," such as employed by the semiotic reading of architecture, and the examination of architectural elements with their specific "rules" to read and interpret architecture, and also "architecture and language" describing not only architectonic vocabularies from the design and construction-stages,

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[28] Ludwig Wittgenstein, *Philosophical Investigations: The German Text, with a Revised English Translation*, trans. G.E.M. Anscombe, Third ed. (Malden, MA; Oxford: Blackwell Publishing, 2001), Part I, Para. 1,2,7,11,12.

[29] Ibid., Para.19, 23. Nana Last, *Wittgenstein's House: Language, Space and Architecture* (New York: Fordham University Press, 2008), 18–9.
For the multiplicity of language-game and definitions of mini-languages, see Anthony Kenny, *Wittgenstein* (London The Penguin Press, 1973), 159–77.

[30] Wittgenstein, *Philosophical Investigations*, Para. 23, 24. Susan Brill, *Wittgenstein and Critical Theory: Beyond Postmodern Criticism and toward Descriptive Investigations* (Athens: Ohio University Press, 1995), 1–32.

but also the architectural criticism that emerges when architectural construction is completed. Moreover, it contains the discussion and practices of architecture before "architectural language" and the effects of examining "architecture as language." The whole process, consisting of the architecture itself and all the architectural-associated activities, forms the concept of "architecture-game." The architecture-game is ultimately an analogy of architecture to language, and then to game. This is to say, "the whole process" ultimately forms "architecture," presenting architecture (with its related practices) as "a form of life." Pei's Louvre project reasonably presents the intricacy of architecture as a developing language-game.

This multifaceted reading of architecture through the lens of language metaphor inspires the following two chapters to look into Pei's Grand Louvre from two aspects, in order to consider how architecture can function as a language that allows communications to the audience. To approach the languages of the scheme, my reading follows the sequence from identifying the external languages produced by architectural critics as regards its reception, to exploring the more internal and implicit language suggested by architectural drawings before the invention of the design.

Chapter 3 considers particularly how the scheme functions as part of and a paradoxical text, in which the public and architectural criticism revealed multiple meanings of the architecture concerning its social representations and stylistic debates. In this way, the chapter considers how the public and professional architectural criticism, produced during and after the commission of the project, has enriched the meaning of the

building as architecture. In Chapter 4, my analysis focuses on how the architectural drawings present the project as a system of communication, which conveys its internal meaning as an autonomous language through two-dimensional compositions on the tracing paper. The two chapters aim to explore the possible meanings which Pei's Grand Louvre has conveyed, and consider the possible relationships between the architecture and its building context.

3.2   The architectural criticism and the production of identities

In her discussion of the use of glass as the major architectural material of the *Grands Projets*, Annette Fierro reads the effect of the glass, identifying how its reflection, but more importantly, its transparency has contributed significantly to the new urbanism of Paris, what she terms to be "a paradoxical subnarrative, a conflicted 'text'."[31] This is manifested, on the one hand, through the modern image of the city, following the steps of Haussmann's reconfiguration of Paris. On the other hand, Mitterrand's "transparent" monuments presented a new version of national identity, filled with the ideas of surveillance, rationalisation and politics.[32] Besides the representation of political and urban modernity, Fierro nevertheless points out the significance of transparency as a sign in the modern architectural movement, celebrated by Colin Rowe and Robert Slutzky's

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[31] Fierro, *The Glass State*, 10.
[32] Ibid., 25–38.

reading of literal and phenomenal transparency.[33] Transparency reveals the complexities

of the architectural and social implications of the *Grands Projets.*

Fierro's reference to the functioning of these "transparent" monuments as a

"subnarrative" of the "conflicted 'text'" of Paris, namely, language, is a reflection of the

blurred boundaries of the linguistic analogy of architecture. Her reading of the multiple

meanings of transparency as a cultural, political and architectural phenomenon addresses

one aspect of how architecture communicates its meanings to the audience. This

comparison resembles how Henri Lefebvre viewed a city as a language and a book, as he

stated:

> The city was and remains *object* … Its objectivity, or "objectality," might rather be closer to that of the language which individuals and groups receive before modifying it, or of language (a particular language, the work of a particular society, spoken by particular groups). One could also compare this "objectality" to that of a cultural reality, such as the *written book*…Moreover, at best, the city constitutes a sub-system, a sub-whole…Now, analysis can achieve this context from the text, but it is not given…The whole is not immediately present in this written text, the city. There are other levels of reality which do not become *transparent* by definition. The city writes and assigns, that is, it signifies, orders, stipulates. What? That is to be discovered by reflection. This text has passed through ideologies, as it also "reflects" them…[34]

The reading of the city as text, while revealing the complexity of the reading of

its meanings, reflects the non-transparency of the messages the city really intends to

convey. The Louvre, as a "subnarrative" of Paris as a "text," also reveals the sense of

non-transparency in terms of the meanings of the scheme and its relationships with the

city. In this chapter, I will address the reading of the project as a text firstly through the

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[33] Ibid., 38–41.

[34] Henri Lefebvre, *Writings on Cities*, trans. Eleonore Kofman and Elizabeth Lebas (Oxford: Blackwell Publishers, 1996), 102.

architectural context of the Grand Louvre and its relation to the urban planning in the city, which provides the most essential narrative of the project as a text in Paris. Then, I will look into the architecture and its symbolism, so as to consider the complex representations of the scheme as an architectural, political and cultural project that conveys different subnarratives relating to the urban context of Paris. More specifically, to address these subnarratives, I will look into these aspects following the discussion of the statement from Pei that proclaims a modernist identity of the scheme and Stephen Rustow's insistence on the "neutrality" of the scheme in terms of its architectural style and urban role; the critique of Charles Jencks that identifies the problematics of the modernist scheme in terms of its political representation; and lastly, the public criticism from the Bataille that indicates the far greater complexities of considering the identity of the scheme and Pei.[35] All these aspects constitute the reading of the architecture as a complex text, which communicates various versions of identity of Pei and the Grand Louvre to its audience. In the architectural system, these subnarratives are different versions of architectural languages. Together, they suggest a contradiction between Pei's constructed version of his identity and that of the architectural critic or the public. This process also reveals how the image of the architect has become a product of the architectural system, of how the Grand Louvre can affect the interpretation of the Pei's identity.

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[35] Stephen Rustow has participated in the design process of the Grand Louvre for Pei's team as a "lead planner, programmer and senior designer." Stephen Rustow, "Grand Louvre (1983–1995)," *Projects*, museoplan, accessed August 08, 2017, http://www.museoplan.com/project/grand-louvre/.

The cultural and historical significance of the Louvre itself has, first of all, indicated the difficulty and importance of the Grand Louvre. The Louvre was originally built as the fortified château of Philippe Augustus in 1190, and gradually developed into the royal residence of the king since the fourteenth century.[36] The Louvre Palace stands for the royal authority and historical identity of France.[37] The later history of the building witnessed the expansion of the structure, along with a refinement of style and ornamentation, from the grand royal style of the Louvre of the Valois to the ambitious connection of the Louvre and Tuileries Palace.[38] Meanwhile, since 1793 the Louvre has been open to the public as a public museum, whose collection emphasised the symbolism of the Louvre as the palace of Napoleon III.[39] Jean-Pierre Babelon perceives that the history of the Louvre, before Pei's intervention, contained the changed history from privilege and monarchy to equality and freedom of Paris; the architecture of the Louvre establishes a position as the eternal palace in the collective memory of the country.[40]

The Grand Louvre, begun in 1983, was a part of the *Grands Projets* to modernise the Louvre Palace.[41] The first phase of the scheme involved the construction of the Glass

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[36] The history of the Louvre Museum and the Grand Louvre, see for instance, Catherine Chaine and Verdet Jean-Pierre, *Le Grand Louvre: Du Donjon À La Pyramide* (Paris: Hatier, 1989).
Jean Jacques Lévêque, *The Louvre: A Palace, a Museum* (Paris: Poche Couleur, 1999).
[37] Fierro, *The Glass State*, 179.
[38] Babelon, "The Louvre," 253–73.
[39] Nikolaus Pevsner, *A History of Building Types* (Princeton, N.J.: Princeton University Press, 1976), 120–21.
[40] Babelon, "The Louvre," 273–88. Conseil des musées nationaux (France), *La Revue Du Louvre Et Des MuséEs De France* (Paris: Conseil des musées nationaux, 1961).
[41] Phase I of the Grand Louvre: Planning: 1983 September; Completion: 1989 March. Leading designers include I. M. Pei, Leonard Jacobson, Yann Weymouth and C. C. Pei. "Grand Louvre–Phase I."
"Grand Louvre–Phase II," *Reports*, Pei Cobb Freed & Partners, accessed July 26, 2015, http://www.pcf-p.com/a/p/8401/s.html.
Wiseman, *I. M. Pei*, 229–62.

Pyramid in the Cour Napoléon, the creation of Napoleon Hall, accessed through the pyramid from above to beneath the ground, and the transformation of the Richelieu Wing, previously occupied by the Ministry of Finance.[42] As a *Grand Projet*, one essential purpose of the Grand Louvre was to intervene in the modern urban planning of Paris.[43] The modernised Louvre responds to the destroyed site of the Tuileries Palace and the *axe historique*, and extends the city's modern east-west axis from the Louvre to La Défense. The presence of the modern axis also involves the "*desaxement*" from the Arc de Triomphe to the Louvre. However, Fierro suggests the termination of the *axe historique* at the Arc de Triomphe was an intentional action on the part of André Le Nôtre, and in any case a demonstration of the ultimate significance of the Louvre Palace in the urban axis of Paris.[44] Within the areas of the Louvre-Tuileries, the scheme also helps open up five cross-axes that expand the urban connection to Place des Victories and Musée d'Orsay and convert the ground of the Cour Napoléon into a pedestrian area.[45]

The pyramid is the central element of the Cour Napoléon that stands as a modern monument of the Louvre. 21.6 metres in height, the pyramid is constructed of glass and supported by a steel-grid framework. The structure is composed of 675 diamond-shaped and 118 triangular glass panes. The glass, specifically ordered by Pei from the glass

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[42] The move of the Ministry of Finance to the Louvre was initially also a decision of Mitterrand, made in 1981. Despite the reluctance of the Ministry of Finance and Economy to move out the Richelieu Wing, and the general oppositions from the public throughout the whole process, the commission progressed to its completion with persistent support from President Mitterrand. Shiro Matsushima, "The Grand Louvre," Harvard Design School, 2003.

[43] Rustow, "The Expansion of the Louvre."

[44] Ibid.

Fierro, *The Glass State*, 161.

[45] Rustow, "The Expansion of the Louvre."

manufacturer Saint Gobain, contains a small portion of iron oxide and therefore presents a thin tint of green. The steel girders supporting the glass were produced by the American manufacturer Navtec due to the lack of any European source.[46] As Pei and his team suggest, not only the pyramidal form, but also the 51-degree slope of the pyramid façade are derived from the Egyptian pyramid. However, as Pei further suggests, although the pyramid presents a formal resemblance to the Egyptian pyramid, it does not share any functional purpose with the latter, nor imply any reference to Napoleon's Egyptian campaign. [47] However, one paradoxical fact about the pyramid is the condition of transparency: using the glass technique of the RFR, Pei's scheme suggests an ambition to build an all-transparent pyramid for visitors to see through, an "invisible monument" as described by Vidler.[48] The actual pyramid is yet to be all-transparent, and has been entirely visible as a crystal statement challenging the historical context of the Louvre Palace.[49]

The significance of the Louvre in terms of the architecture as royal and national symbolism, as well as its urban centrality, inevitably led to the debates about Pei's scheme, represented by the Bataille of the Louvre. The Bataille of the Louvre concentrated not only on the design itself, but also on Pei's foreign identity, criticising the cultural and political representations with which the design was concerned. The Bataille to some extent recalls Foucault's comparison of the presentation of various forms

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[46] Matsushima, "The Grand Louvre," 13. "Grand Louvre–Phase I."
[47] Frédéric Compain, "La Bataille De La Pyramide," (Paris: Musée du Louvre, 1999).
[48] Vidler, *The Architectural Uncanny*, 219.
[49] Fierro, *The Glass State*, 192.

of polemics to a theatre.[50] Among the three types of polemics Foucault recognised, the political polemic was the most powerful manifestation, in which the problems of alliances, partisans, interests and concerns of a party were represented. While perceiving the role of polemics, Foucault viewed the presentation as simply different ways of speaking, which, however, forestalled the advancement to the truth or new ideas. Thus, rather than presenting mere representations of problems, it is necessary to critically consider how different solutions to specific forms of problematisation are formed, so as to finally produce "a work of thought."[51]

In the case of the Grand Louvre, the several versions of interpreting the scheme presented a developing tendency towards the problematisation of the architecture. One of the most representative cases of criticism in the Bataille was Jencks's reading of Pei's Louvre project, published in September 1985, at a time when the debates surrounding the project were at their height.[52] Jencks dwelled specifically on the symbolic interpretation of the pyramid. He based his criticism on the debate between modernism and postmodernism, and pointed out Pei's political representation, especially in the context of the Louvre commission. In the Bataille, the public also expressed views on the project and various facets of the identity of "I. M. Pei," generally rejecting the proposal and casting aspersions on Pei's qualifications for the commission. In parallel to these are Pei's response of the modernist identity of the design, and Rustow's statement of how the

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[50] Michel Foucault and Paul Rabinow, "Polemics, Politics and Problematizations," interview conducted in May 1984, Lydia Davis trans. in "Ethics" of "Essential Works of Foucault" vol.1, The New Press, 1997.
[51] Ibid.
[52] Jencks, "Symbolism and Blasphemesis," 42–44.

architecture itself "speaks" of its "neutrality" as a direct communication to the audience. These derivations of reading the architecture, although suggesting a contradiction between Pei's constructed "I. M. Pei" and the perception of the public, help further reveal the meaning of the Grand Louvre as a significant museum architecture in cultural and social terms, and the image of Pei concerning his architectural identity.[53]

3.3 Pei's narrative: a language of the modern and functional design

The reading of the scheme started with Pei. In one of his interviews in 2000, later published as his biography *Conversations with I. M. Pei*, Pei narrated his design intentions and the entire construction process of the project.[54] Pei began by describing his acceptance of the commission after three private visits to the Louvre, and expressed the difficulty of carrying out his project because of the public criticism. He then recalled the process of transforming the Richelieu Wing, and presented his reasonable analysis of opening up the underground of the Cour Carrée and the Cour Napoléon, to enhance the infrastructure and provide for technical necessities. While discussing his thoughts on the Louvre Pyramid, Pei claimed his motivation was to simply establish a prominent symbol as the main entrance to the Louvre, which could function as "the central point of arrival

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[53] Their interpretation of the architecture and the identities of "I. M. Pei" are also distant from either the "narrated" Pei (as read from Pei's biography), or Pei's interpretation of the architecture (as read from Pei's other interviews).
[54] Pei and Boehm, *Conversations with I. M. Pei*, 77–95.

of the general public."[55] While considering the reason for choosing the very specific form of a pyramid, Pei simply answered that the pyramid is "the most structurally stable form" among the experiments with all different forms; it not only corresponds with the transparent materiality of the glass, but also serves for the architectural context of the Louvre and its contemporary audience of the public in "the most compatible" way.[56] The construction of the glass-and-steel structure "signifies a break with the architectural traditions of the past," making it "a work of our time."[57]

Pei's reading of the architecture focused more on the architectonic issues of the construction and the functional reading of the form of the pyramid. In this way, Pei presented his image more as an independent architect commissioned by Mitterrand and distant from the political representation and urban function of the Grand Louvre. In this sense, the role of Pei and his scheme became more "neutral" in his commission for the Louvre, especially considering the symbolism of the Glass Pyramid as the new national monument. Furthermore, Pei's statement also avoided any stylistic or historical reference in the form of the pyramid. By emphasising the materials used to construct the pyramid, Pei indicated his modernist identity distinguished from the notions of the past. The pyramid suggests a contemporary vocabulary of architectural monumentality, emphasising the ahistorical form of the design, disconnected from tradition and history.

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[55] Ibid., 82.
[56] Ibid., 84–85.
[57] Ibid.

This modernist position on architectural monumentality returns to Hitchcock and Gropius's definitions of post-war modern monument and monumentality, as discussed in the first chapter of the thesis. Hitchcock considered several basic concepts of monuments, including durability, "largeness in scale," the visual effect of solidity and immovability, the rhythm of the design and "concentrated unity." [58] As mentioned in Chapter 1, Goldhagen points out how this modernist perspective on the monument eludes references to history and tradition which would contradict Hitchcock's definition of modern architecture. [59] Gropius's consideration of modern monumentality, on the other hand, relates to "a higher form of civic life" and "a new form of collective effort" that serves for "the community and the administration." [60]

Pei's pyramid design evidently responds to these definitions of modern monumentality. The glass and steel construction of the pyramid conforms to this modernist concept that has first and foremost avoided the use of precious materials in the structure. The geometrical form of the pyramid reasonably enhances the solidity of appearance, while the steel and glass construction also makes the structure visually lightweight. The form of the pyramid clearly embodies largeness in terms of scale, while the three small pyramids surrounding the central pyramid create a sense of rhythm in the design. The symbolism of the Louvre for the public community at present, as Pei suggests, and more importantly, its role as the new national monument of the Mitterrand

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[58] Paulsson et al., "In Search of a New Monumentality," 123–25.
[59] Goldhagen, "Monumentality in the Pictorial Still," 89.
[60] Paulsson et al., "In Search of a New Monumentality," 127.

government, also correspond with Gropius's conception of how a modern monument serves the purposes of community and the administration.

3.4 Rustow's narrative: neutrality between modernism and postmodernism

Unlike Pei's straightforward claim of the modernist identity of the design, Rustow brings in a consideration of postmodernism as his response to the criticism of the project:

> The Grand Louvre questions the role of the historical fragment in architectural composition; in terms of the architectural debates of the 1980s, Pei's project can be read as a reaction to the entire discourse of postmodernism and its underlying assumption that the figures or garments of past stylistic movement can be appropriated wholesale or imitated directly in the design of contemporary buildings. Read in this way, the Grand Louvre constitutes a polemical response in the solutions it proposes, even as Pei's presentation of them strives to empty the debate of polemic with the use of a "neutral" geometric logic and a landscape-based formalism.[61]

Rustow's use of architectural terms reveals a paradoxical reading of Pei and the architecture's identity. While the design rejects the label of postmodernism as widely debated in the 1980s, Rustow nevertheless considers this work to have indicated references to the historical style of the Louvre Palace. Nor does Rustow provide a direct claim of Pei's modernist identity, but rather considers the design to present a "neutral" language of geometry and formalism, a conclusion which also distanced the design from Pei's other architectural projects. Fierro considers the neutrality of the design to lie in the

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[61] Rustow, "The Expansion of the Louvre."

sense of universal geometry that a basic form of a pyramid represents, which conforms to Sigfried Giedion's campaign for the nine points on architectural monumentality in 1944, in which he suggests the symbols of architectural monuments only exist in the context of "a unifying consciousness and unifying culture."[62] After all, although Rustow interprets Pei's strategy as one that works to "empty" the stylistic debate, the plan had contradictorily triggered nationalist and political polemics in 1983–1985. In a way, Rustow suggests the role of Pei's design was distanced from the realms of modernism and postmodernism. The pyramid's role as a representation of Pei′s architectural identity, therefore becomes a paradoxical read from Rustow's response.

3.5   Jencks's narrative: the postmodern language of architecture

In terms of the stylistic debates on architecture, Pei's scheme coincides with the prominence of postmodern architecture and the subsequent stylistic debate between modernism and postmodernism since the late 1970s.[63] Jencks particularly identified Postmodernism as a as an architectural style that began to thrive around 1976 and, which forms a clear anti-modernist position, particularly against the box-like designs of the

[62] Fierro, *The Glass State*, 176.

J.L Sert, F. Léger, and Sigfried Giedion, "Nine Points on Monumentality, 1944," in *Architecture You and Me: The Diary of a Development*, ed. Sigfried Giedion (Cambridge, Mass.: Harvard University Press, 1958).

[63] Tafuri, *Theories and History of Architecture*, 11–77.

International Style.[64] "Post-Modern architecture," as Jencks defines it, is characterised by its "dual coding" meanings and specifically acts "as a *language*."[65] Besides its connection to "historical memory and local context," post-modern architecture also "takes a positive approach towards metaphorical buildings, the vernacular, and a new, ambiguous kind of space."[66] Jencks develops his reading of architecture through an analogy to language, identifying architecture as heavily coded and conveying its symbolic and functional meanings through "architectural 'words' ,'phrases', 'syntax', and 'semantics',," which modernism has failed to deal with. [67] Jencks's linguistic analogy and reading of architectural semiotics produce the basic ideas for his criticism of Pei's scheme.

Jencks's examination of the design in 1985 poses a reading of the architecture and Pei's identity as being fundamentally against the "neutrality" of the Grand Louvre.[68] This reading unfolds the identity of Pei and the Grand Louvre that conveys more complicated representations of political and national symbolism, conflicting with Rustow's reading of the neutrality of the architecture in three aspects. Jencks's argument of Pei's intention of self-assertion relating to the Egyptian symbolism, nevertheless corresponds to David Summers's perception of the artist's intention and his emphasis on the historical context

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[64] Charles Jencks, *The Language of Post-Modern Architecture* (London: Academy Editions, 1978), 6.

[65] Jencks also considers the difference between "postmodern" and "post-modern" in Charles Jencks, *What Is Post-Modernism?*, 4th ed. (Chichester: Academy Editions, 1996), 48.
Jencks, *The Language of Post-Modern Architecture*, 6.

[66] Jencks, *The Language of Post-Modern Architecture*, 6.

[67] Ibid., 39.

[68] Von Boehm's book as a collective interview of Pei was published in 2000, therefore the interviews would have been conducted earlier before then.

for the artist's fabricated subject.[69] Jencks addressed the intention of Pei from the historical context of the Egyptian pyramid to be a symbolism of power; however, to compare this assumption with that of Pei's, it is still necessary to discuss Pei's claimed intention and its historical context.

The main aspect that Jencks was concerned with was the vocabulary of modernism, which evidently related to the stylistic debates of the 1980s. Following his semiotic reading of the architecture, Jencks first and foremost considered the necessary meaning of Pei's scheme as a modernist invention. Consistent with examples including Hannes Meyer's socialist construction of the League of Nations and the capitalist implication of Norman Foster's HSBC building in Hong Kong, Pei's modernist scheme inevitably connected to political symbolism.[70] In Jencks's reading, architecture was a language intentionally used by the architect to communicate their ideas to its audience. This also suggested his opposition to Pei's architectonic language from the very beginning.

The typical sense of modernism conveyed by the scheme and the consequent conflict with postmodernism are seen from Jencks's reading of the project by the use of his neologisms for three "architectural neuroses," all caused by the "symbolic unconscious" of the architect: "malaproptosis," "archiamenesia" and "blasphemesis."[71] The word "malaproptosis" is reminiscent of "malapropism" and suggests the use of a

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[69] David Summers, ""Form," Nineteenth-Century Metaphysics, and the Problem of Art Historical Description," *Critical Inquiry* 15, no. 2 (1989).
[70] Jencks, "Symbolism and Blasphemesis," 42.
[71] Ibid.

wrong word instead of the right word of a similar sound, leading to illogical expressions and amusing effects.[72] "Archiamenesia," literally expressing amnesia in architecture, indicates the modernists' rejection of history. "Blasphemesis," as Jencks explained, is the inappropriate use of a symbol "stolen" from the past.[73] To consider it semantically, the word is a combination of "blasphemy" and "mimesis," and therefore indicates an insult—whether deliberate or unconscious—to the religiousness of persons or things.

These modernist "neuroses," as Jencks suggested, were all reflected in Pei's role as a modern architect and in his design of the Glass Pyramid, which resembles an Egyptian pyramid. Jencks claims that Pei's megalomania was seen in his proposal to add a new entrance for the Louvre.[74] Conflicting with Pei's statement on the functional purpose of the design, Jencks considered the inappropriateness of the pyramid-form entrance, because the entrance would first disturb the architectural entity of the Louvre. A somewhat hasty decision by "I. AM"—a name intentionally used by Jencks to emphasise Pei's "megalomania"—to resemble the form of the pyramid also ignored the

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[72] In the text, Jencks also referred to several of Pei's commissions prior to the Louvre as examples of "malapropos" with the one exception of the Fragrant Hill Hotel, which Jencks regarded as "symbolis[ing] a new Chinese architecture." This different treatment of Pei's works suggests once again Jencks's preoccupation with being anti-modernism and pro-postmodernism. More generally speaking of Pei's designs, Jencks also recognised a strong influence of Le Corbusier, such as in Pei's Christian Science Church Centre. This can nevertheless be linked with the concept of the "machine" of the modernists, the "symbolic unconscious" as well as the following problem of ego in Jencks's text. Ibid. Charles Jencks, *The New Paradigm in Architecture: The Language of Post-Modern Architecture* (New Haven: Yale University Press, 2002), 16.

[73] Charles Jencks, *The Architecture of the Jumping Universe: A Polemic : How Complexity Science Is Changing Architecture and Culture* (Academy Editions, 1997), 33.

[74] Jencks was concerned with this "megalomania" in relation with political domination, as he referred to Hitler and Speer, and then Mitterrand and Pei's cooperation on the Louvre. Jencks, "Symbolism and Blasphemesis," 42.

pyramidion of a pyramid, which was yet a failed attempt to refer to historical forms.[75]

Meanwhile, this use of "I. AM" can also be seen as an expression from a foreign speaker, who would use the phrase to introduce themselves to a stranger. Reading from Jencks's criticism, this sense of foreignness alluded to not only the literal French language, but also the architectural language of the Louvre and Paris (architecture *and* language).[76] Pei's foreignness, accompanied by his "malaproptosis," resulted in his "inappropriate" decision to add a new entrance, especially one in pyramid form. In Jencks's view, Pei's ignorance of the historical symbolism also indicated his "foreignness" to architectural language at large as a typical modernist mistake ("archiamenesia" and "blasphemesis").

The second aspect discussed is Pei's foreign identity that aroused polemics, which Jencks suggested to be a consequence of the modernist design. The megalomania of Pei led to another "architectural symptom," which was "blasphemesis horribilitis." This referred to the Bataille, especially debates from political statesmen surrounding the design and Pei's foreign architectural, national and cultural identity: "Rigid, dumb platitudes are bound to flow from the mouth or drawing pen, followed by such puffery

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[75] Ibid., 43.
However, though Jencks speculated the Glass Pyramid's implications as an Egyptian pyramid, the fact that Pei's pyramid did not have a Pyramidion (as Jencks himself noticed) was, in the end, a denial of this connection to Egyptian symbolism. What Jencks did not include in the article was Pei's competition entry for the Tête de la Défense in 1971, which can be considered the first scheme in Mitterrand's *Grands Projets*. Cannell spoke of the project winner, Danish architect Johann Otto von Spreckelsen, as "a French architect," which also indicated Cannell's doubt around cultural identity regarding the entries. This suggests that after the Louvre debate, Pei's cultural identity had become a factor in the evaluation of his other proposals, which would lead to different perceptions of the role his cultural and national identity played in them.
[76] Ibid., 42.

from the jaw as Pei was heard to emit: 'No foreign architect has ever left his mark on the Louvre'."[77]

Another perception that concurrently existed was the strong political representation of the Mitterrand government. Jencks related to the Western classicism of Chairman Mao's mausoleum on the axis of the Forbidden City, another example of "one tak[ing] a potent historical form… and misus[ing] it in another potent context."[78] He argued that Pei's pyramid indicates similar "misconduct" as that of the Mao mausoleum, and that both the projects function as personal monuments of political intentions.[79] The symbolism of the Glass Pyramid, along with the three small pyramids that Jencks symbolically interprets as "Cheops, Chefron and Mycerinus," nevertheless contradicted the "sacred" environment of the Louvre. [80] This comparison to Chairman Mao nevertheless alluded to the problematics of Pei's Chinese identity. The reading of the architecture and its representations was thus inevitably connected to the perception of Pei's own identity, which became not simply the consequence of the architectural criticism, but also partially a cause for the debate over the scheme. However, as will be

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[77] Ibid.

[78] Ibid. In his criticism, Jencks uses the historical form of the Christian cross to parallel the Egyptian pyramid, while the airport control tower implies the high-tech, modern form of the structure is like that of the reception hall area. Besides this criticism by Jencks, the reception hall was criticised as "an airport lounge or a drugstore" due to its extremely functional look. Cannell, *I. M. Pei*, 16.

[79] The interruption of the axis structure, mentioned in Jencks's text, has been one of the key criticisms of the Louvre project. Stephen Rustow justifies Pei's plan as an extension of the axis: " ... if the essence of Le Nôtre's axis system is an uninterrupted extension to infinity and the order that such a view imposes on nature, the pyramid subverts Le Nôtre's scheme by making itself the focus and terminus of all axes." Stephen Rustow, "'Transparent Contradictions': Pei's Pyramide at the Louvre," in *The Annual Meeting of the Society of Architectural Historians* (Boston1990).

[80] Jencks, "Symbolism and Blasphemesis," 44.

discussed later, the reading of Pei's foreign identity was one of the main triggers in the Bataille.

The next aspect Jencks considers is the condition of transparency. While Fierro considers glass was used as an essential material in the *Grands Projets* to represent a sense of open access to democracy, representing a new relationship between the public and Mitterrand's leftist government, Jencks saw the opposite representation of opaqueness and authority.[81] In terms of the materials used in the pyramid, its modern, "high-tech," "glass" structure contradicts the "sacred" context of the Louvre that signified "meaning and history."[82] The glass structure of the pyramid, in Jencks's view, was not at all transparent, but rather opaque—as it would block the view of the original Louvre structure.[83] Jencks further defined this opaqueness as "whiteness," a typical feature of modern architecture reminiscent of the white architecture from the Dessau-Törten Housing Estate in Dessau (1925–1928) to Le Corbusier's Villa Savoye (1928–1931).[84] The opposition to the design of the pyramid returns to the postmodernist refusal of white architecture.

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[81] One representative case of the condition of transparency is the Bibliothèque Nationale. Although the vast amount of glass used for the façade of the library has been criticised because the books should not be in direct sunlight, Mitterrand considers the use of glass provides a cultural symbolism of the public access to knowledge. Vidler, *The Architectural Uncanny*, 220.
Fierro, *The Glass State*, 2–7.

[82] Jencks, "Symbolism and Blasphemesis," 44.

[83] Ibid.

[84] This rejection of the "whiteness" of the architecture is reminiscent of Gropius's acknowledgment of the "bareness" of the Chinese Garden wall as an ahistorical element to represent the 'eternal habits of people'. This nevertheless suggested Jencks strong antagonism to modernism.
"Museum for Chinese Art," 52.

In the end, Jencks readdressed the inconsistency between the form and function of the pyramid as the new entrance to the museum. As the real entrance to the Louvre was "a truncated pyramidal void twelve feet high," Jencks considered "the remaining twenty-eight feet are all symbolic" of "Pei and Mitterrand."[85] This seemed to be another contradiction between the modernist design and the presumed credentials of functionalism. In this way, Jencks regarded the structure as ornamentation instead of a structure of functionality. Combining his reference to architectural semantics, Jencks transformed the meaning of the design from simply a modern structure to one that also contains a "wrong" postmodern symbolism. This emphasis on the symbolic interpretation of the architecture, nevertheless served for Jencks's conclusion of the article, that architectural criticism should consider both historical and contemporary contexts.[86]

Jencks's postmodern reading to some extent corresponded to the structuralist studies on the semiotics of architecture developing since the 1960s. One example is Eco's discussion of how the basic, primary function of architecture was fixed, while the more complex secondary function of architecture as communication and denotation led to different interpretations of architectural meaning and its roles in history.[87] Jencks's reading suggested his interpretation of the secondary architectural function, leading to the Egyptian symbolism. Just as Roland Barthes stated, the signified "is only to be a kind of witness to a specific state of the distribution of signification … elements are understood

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[85] Jencks, "Symbolism and Blasphemesis," 43.
[86] Ibid., 44.
[87] Eco, "Function and Sign."

as signifying rather by their own correlative position than by their contents," Jencks's reading of the modernist scheme offered another perspective to consider political and cultural representations beyond simply the stylistic debates between modernism and postmodernism.[88]

Jencks's semiotic reading of architectural signs and symbolism, to some extent effectively provided a direction to understand architecture as a system of communication, allowing us to recognise meaningful symbols in relation to the project. Anthony Alofsin suggests the reading of semiology and symbolism forms a conventional and effective way to understand architectural language. For instance, the reading of symbols has specific conventions "determined by the community" using them.[89] Jencks provided a reading of the historical symbolism reflected in the architecture, followed by a discussion of the *effect* of the pyramid, specifically, the criticism of the design and Pei's identity in the Bataille. His interpretation presents a reading of architectural meaning and function in its form and effects, rather than from Pei's statement regarding the priority of architectonic function and structure.

There are, however, some limitations on Jencks's interpretation, which would also fix the reading of Pei and the Louvre. In terms of the reading of architectural signs, Jencks reads the meaning of the architecture primarily through its form. However, while Jencks

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[88] Roland Barthes, "Semiology and the Urban," in *Rethinking Architecture: A Reader in Cultural Theory*, ed. Neil Leach (New York: Routledge, 1997), 169.

[89] Anthony Alofsin, *When Buildings Speak: Architecture as Language in the Habsburg Empire and Its Aftermath, 1867–1933* (Chicago; London: The University of Chicago Press, 2006), 268.
However, it is necessary to consider the exception when artists invent new meanings for their symbols. Pei's pyramid can be seen as a case of this exception.

was so carefully addressing the symbolism of the architectural forms, he also denied a complete view of the architectural form itself, separating the Pyramid above ground from the structure of the underground Napoleon Hall. This approach nevertheless limited the interpretation of architectural functions. If viewed from architectural forms, the Louvre Pyramid was linked with the underground square structure that would be fundamentally different from the above ground structure of the Egyptian pyramids. In Jencks's reading, he denied the function of the pyramid itself, and argued for a contradiction between its modernist representation and the seemingly ornamental upper part of the structure. Besides a brief mention of the airport-lounge appearance of the Napoleon Hall, Jencks chose not to address the structure, function and design of the underground reception hall, or the architectural relation between the pyramid (its role as the entrance to the reception hall) and the transformed underground area of Cour Carrée and Cour Napoléon. In comparison, these connections were discussed in Rustow's "neutral" and Pei's "modernist" statements. [90]

Jencks's reading of the Egyptian symbolism nevertheless focused on the semiotics existing in the Louvre Pyramid itself. However, it dismissed a connection between Pei's commissions at large. The sense of personal monument can be linked to Pei's previous works as an invention of his architectural signature. For instance, the East Building of the National Gallery of Art (1979) and John Fitzgerald Kennedy Library (1979) demonstrate

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[90] Rustow, "The Expansion of the Louvre."

some early attempts by Pei to invent his pyramid forms.[91] Jencks's focus on the Louvre Pyramid also precluded a broader reading of the architectural semiotics of the entire project considering its urban planning influence at large.[92]

Moreover, although Jencks's reading provided a postmodernist reading of the materiality of the pyramid (its steel structure in response to the pursuit of capitalism; the opaqueness and whiteness of glass that blocked the view of the Louvre while conveying a typical modernist ideology that emphasises this contradiction between its modernist design and the historical setting of the Louvre), his analysis to some extent denied the transparent materiality of the pyramid, therefore dwelling little on the indication of political transparency reflected in the project, which was also a key representation of Mitterrand's politics. It is necessary to consider the wider criticism, which forms another layer of the architecture as a "subnarrative" in the city, suggesting how architectural construction and urban planning become a factor of the social and political debates in France.

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[91] However, some critics recognised the universality of Pei's design, such as Paul Goldberger, who suggested Pei's neutral and geometrical abstraction in a debate on the formal indication of the Louvre, published in the *Architecture Magazine* in May/June 1984. This means that the naturalness of the pyramid was discernible during the proposal and construction of the project, yet in other deconstructionist interpretations this sense of naturalness was not considered as an inherent element.
Wolf Von Eckardt and Harriet Welty, "Pei's Pyramid Perplexes Paris," *Time*, February 27, 1984.
[92] The study of the project from an urban planning perspective is seen from Steven Rustow's essay. Rustow, "The Expansion of the Louvre."

3.6   The narrative of the public: nationalism and the reception of identity beyond architecture

In Jencks's reading, the modernist identity of Pei and his design for the glass pyramids are the reasons for public criticism, and termed "blasphemesis horribilitis." However, a closer reading of the public criticism suggests considering the two factors in reverse order. Pei's identity also constitutes one reason for the rejection of his modernist position. Furthermore, two factors together produce the consequence of the Bataille. Fierro believes this xenophobic attitude towards Pei's identity not only forestalled the reception of the design, but also made the response from the Mitterrand government more complicated in executing the project. [93]

The discussion of the polemics has two parts. The first is a rejection by the Commission Supérieur des Monuments Historiques (CSMH) that is typical of the "elder statesmen" mentioned in Jencks's essay that emphasises "no foreign architect has ever left his mark on the Louvre"; the second is public antagonism represented by newspaper publications.[94] Both these polemics pertain to the debate about his foreign identity that make the reading of architecture itself marginal. By saying "the public," I refer to the general public and other cultural authorities represented by French magazines and newspapers. Since an early stage of the proposal, Pei's "foreign" identity had been

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[93] Fierro, *The Glass State*, 162.
[94] Jencks, "Symbolism and Blasphemesis," 43.

strongly rejected by the French public and political statesmen.[95] The subnarrative is concerned with the tensions between a conception of national identity and Pei's "foreign" identity.

Pei's project presentation to CSMH on 23 January 1984 has been considered as one of the key points of the Bataille.[96] It was the first occasion for Pei to introduce his project formally to members of the CSMH and the press.[97] Before the presentation, Pei's proposal, from the construction of the Glass Pyramid to the excavation of the Cour Napoléon, had received the unofficial approval of the president (and the government), but the project nevertheless received fierce criticism. Reasonably, strong disagreement would have been more or less triggered by the fact that the nomination of Pei and the approval of his proposal was a monopolistic decision by the government, and criticism of the project would have been expected. However, more importantly, the target of the criticism, perceived from the presentation, was not only the architectural form itself. Rather, it also greatly concerned Pei's ethnic Chinese identity.

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[95] The problem of Pei's identity can be seen from Dr Shiro Matsushima's examination of the specific interests of different parties in the case study of the Grand Louvre. As Dr Matsushima pointed out, both the French public and political critics were in favour of French culture and hostile to "alien substance," while other parties were considering more technical or "neutral" issues such as the project funding or the validity of the design itself. However, a point should be made that these perceptions of the 'alienness' of Pei were, in the end, a negation/interpretation of his "foreign" identity.
Matsushima, "The Grand Louvre," 21–22.

[96] The discussion derives from *La Bataille de la Pyramide* (1999), a documentary published on the occasion of the twentieth anniversary of the reconstruction of the Louvre.
Compain, "La Bataille De La Pyramide."

[97] CSMH, now replaced by La Commission nationale des monuments historiques, was a committee constituted of French architects and architectural, cultural and historical consultants concerning historical conservation projects.

Voices from both sides of the project brought a relatively objective overview to CSMH's criticism. Jean-Pierre Weiss, the then Director of Heritage at the Ministry of Culture, provided an opening statement: "The Committee first listened to Pei present his project. They asked him what right he thought he had to dare interfere with the majesty of the site … that was actually a car-park." This was followed by the recollection of Yann Weymouth, the Chief of Design in Pei's Louvre Project: "Some spoke throughout his presentation, others laughed at inappropriate moments." Michel Macary, the then associate French architect on the project, recalled: "It was dark, as it was a slideshow and comments were anonymous…One guy said, 'This isn't Dallas, you know!'" Jean Lebrat, the then head of the Public Authority of the Grand Louvre, continued to point out: "Mr Pei wasn't prepared for such a hit-and-run attack…he was called a Chinese this-or-that."[98]

These various recollections suggest that Pei's identity had already been rejected prior to any consideration of his proposal. Pei was seen as an intruder to the site in the first place, and his proposal was consequently considered as an intrusion. On the other hand, one witnesses a separation and negation of Pei's national and architectural identities. Pei was specifically identified as "a Chinese"—which meant that his original national identity became a problem that should be criticised, while his American identity since 1954, thirty years before the debate, as well as his architectural identity as a typical

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[98] Compain, "La Bataille De La Pyramide."

modernist, which was supposed to be the main factor to consider in the polemic, were not considered as much as his Chinese identity in this debate.[99]

The opinions of the elder statesmen suggest that the identity problem became the primary issue, a more essential one than the formalist/symbolic debate on the architecture itself. This is because, in these cases being discussed, the focus has nevertheless been on Pei's foreign "national" identity, while the problematic reading of symbolism and semiotics, as defined by Jencks, rarely existed in the refusal of the project. Furthermore, Pei's foreignness has been considered in two circumstances: being either a Chinese architect practising in America (as exemplified by the criticism referring to Pei's Dallas City Hall in the CSMH presentation), or a "Chinese" architect working for the politics of Mitterrand. Following this critique of CSMH, criticism of the project and Pei began to appear widely on news publications, inevitably involving increasing political debates, and this rejection of Pei's identity continued. As seen from the frequent occurrence of words such as "Non à la Pyramide" in French newspapers from 1983 to 1985, there was

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[99] The reference to Dallas may have suggested a partial recognition of Pei's American identity. This referred to the construction of the City Hall in 1977, where Pei produced an inverted pyramid-like design in concrete. However, what has to be pointed out is the Dallas City Hall was different from the Louvre Pyramid, in terms of the structure, material and the formation of the pyramid, as well as the purpose of the constructions. The only similarity between the two was the use of geometric (and pyramid-like) forms. This suggests that the negation of the Louvre proposal with the allusion to Dallas was more because of the form of the design, while other factors relating to the architecture were not considered. Other equivalent museum commissions, such as the mostly celebrated East Wing of the National Gallery of Art at Washington, were not even mentioned in this architectural comparison of Pei's designs. This arbitrary claim by opponents suggests that, although the proposal would have been addressed from the perspective of "museum" architecture, other non-architectural facts would have led to the rejection of the project. Among these, one possible element and apparent manifestation of the criticisms concerned the foreign identity of Pei, rather than the appropriateness of the architecture.

a strong sense of repulsion that was not in effect all political or architectural, but also cultural and national.[100]

The opposition generally came from two groups. The first was professional and cultural conservatives, represented by CSMH, as a powerful, yet non-decision making, advisory body. The second was the Parisian public, the French people, the largest and in effect the most effective group in the Bataille. Unavoidably, the voice of the public was represented but also misrepresented by the French media, including major newspapers, magazines, journals and even TV reports, and meanwhile led and misled by more powerful groups such as political parties and the CSMH. The objections from the powerful group and the public, were therefore integrally reflected and represented by media reportage.

A typical example of the media's representation but also misrepresentation of the Parisian public was a survey by L'Institut Français de Recherches Économiques (I.F.R.E.S), carried out for *Le Quotidien de Paris* on 25–28 January 1985, immediately after the presentation (Figure 38).[101] The survey was conducted among 710 Parisians over 18 years old. The article included four survey questions:

> Do you go to museums?
>
> Have you been to the Louvre?
>
> Are you aware of the project of constructing a glass pyramid in the courtyard of the Louvre?
>
> A priori, are you for or against the construction of the project?

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[100] Dominique Jamet, "Les Parisiens Disent Non," *Le Quotidien de Paris*, January 31, 1985.
[101] Ibid.

Among the respondents, 75% were aware of the pyramid project at the Court of the Louvre and 23% were unaware of it; 53% were against the construction and only 21% respondents supported it. The main reason for their opposition was the inappropriateness of the pyramid form in front of the Louvre.[102] Up to this point, the antagonism to Pei's proposal had still focused on the project itself, that is, the architectural form of the pyramid for the Louvre. However, a review appeared in *Le Figaro* the next day providing another survey question that was not included in *Le Quotidien*: "Connaissez-vous la Cour Napoléon?" To this question, 63% of the respondents provided a negative answer.[103]

This additional question from *Le Figaro* suggests that the original claim by *Le Quotidien* was to a large extent implausible. Based on the first version of the survey, *Le Quotidien* gave the conclusion that the majority of Parisians, represented by the 53% respondents among 710 Parisians, were against the project. However, the second version by *Le Figaro* indicated that a larger proportion of respondents were not familiar with Cour Napoléon, the architectural background where Pei's proposed pyramid was to be located, yet nevertheless suggested objections concerning the "inappropriateness" of the pyramid. This opposition from the majority of the audience was therefore not made *only* due to an architectural consideration of the project, as the rejection did not fully concern the architectural background itself. Therefore, other reasons relating to cultural and political debates would have been involved in this sense of antagonism that were not

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[102] In addition, 48% had been to the Louvre and 40% had never been to a museum. Ibid.
[103] The question is literally translated as: Do you know the Cour Napoléon? "Les Parisiens En Majorité Contre La Pyramide," *Le Figaro*, February 1, 1985.

necessarily specified in these news reports. While it might be impossible to address all those muted debates through the lens of the survey, it can be seen that the project's architectural aspects were not carefully addressed, and Pei′s architectural identity was not yet adequately considered by his audience in reviewing his proposal.

On the other hand, newspaper reports also provide evidence of the suspicions not only of the project itself, but also around Pei's cultural identity, in a sense that is fundamentally not so different from that of the CSMH. Pei's identity as "Chinese" became a necessary point to address when discussing the project (Figure 39). For instance, an article appeared in *Le Parisien Libéré* in December 1983 which, while envisaging the light and space that Pei's transformation would provide, nevertheless labelled the project as "a work by a Chinese."[104] In an article by *Sud Ouest* in February 1985, Pei, "the father of the *pyramide*," was regarded as an "Architecte new-yorkais," who brought the Pyramid Monument to Paris like "les ingénieurs de Concorde," and established the connection to Le Nôtre's landscape in mapping out the Louvre's pedestrian site.[105] The perception of Pei's pyramid, either praising or criticising, could not exclude a discussion of the architect's identity, who was either "Chinese" or "American." This either-black-or-white labelling of Pei existed in most of the criticism of the project. The danger of this labelling is that the rejection against his architectural proposal would be more or less connected with, or because of, his "Chinese" or

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[104] Maurice Cazaux, "Le Grand Louvre: Une Œuvre De Chinois," *Le Parisien Libéré*, December 19, 1983.
[105] Louis Lanne, "Louvre: La Polemique," *Sud Ouest*, 1985.

"American" identity, and was then inevitably involved with the acceptance or rejection of the project.

CMSH and the (political, cultural, or general) public's rejection suggests a nationalist antagonism to Pei's "foreignness." This sense of antagonism can be explained by Smith's reading of the conflicts between "perennialist" nationalism and modernist nationalism. The former suggests "a politicised ethno-cultural community" of its own population, while the latter is "a territorialised political community" that is mainly "communication-based."[106] In the case of the Grand Louvre, the French "public" represented perennialist nationalism, and Pei was representing a modernist sense of nationalism. The rejection of modernist nationalism is reflected in three aspects.

Firstly, the rejection of Pei's Chinese-American identity can be summarised as a general antagonism towards foreign architects. A comparable case is the construction of the Centre Pompidou as Georges Pompidou's transformation project of the Beaubourg district of Paris, realised by Renzo Piano, Richard Rogers and Peter Rice.[107] Despite the fact that Piano and Rogers won the project among 681 competition entries, the public fiercely opposed the building's high-tech and alien-like mechanical form being realised in Beaubourg.[108] Among the sharpest criticisms is Jean Baudrillard's essay "The Beaubourg-effect," in which Baudrillard defines the Pompidou as "a monument of

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[106] Anthony. Smith, *Nationalism and Modernism: A Critical Survey of Recent Theories of Nations and Nationalism*, ed. Inc ebrary (London; New York: Routledge, 1998), 22–3.
[107] Fierro also has a study of the political representation of the Centre Pompidou in the book. Fierro, *The Glass State*, 44–93.
[108] Ibid., 77.

cultural deterrence," and disparaged the building's violence between a modern exterior and an interior of "old values."[109] However, both Baudrillard's critique and the general public debate at the time concentrated on the architectural form and representation itself, while attacks on the foreignness of the architects hardly existed. In other words, the architectural and cultural identities of the architects were not challenged in the criticisms. Yet in the case of Pei's Louvre Pyramid, when Compain's retrospective film was documenting the controversies on the Louvre project commissioned nearly two decades before, the main problem recollected by the interviewers was nevertheless the anti-foreign attitude of the Parisian media and the CSMH, rather than the criticisms of the pyramid form *itself*. One reason for the different attacks on the two projects would have been that the former was the winning design in an international competition, decided by an international panel, while the latter was a direct commission given to Pei by President Mitterrand without an international competition. This reason, nevertheless, was not adequate to explain the significant antagonism to Pei's Chinese-American identity.

This anti-foreignness was also a consequence of a more specific phenomenon of how East Asian architects have become cultural statesmen of the French government. An equivalent case to examine is the objection towards Japanese architect Kenzo Tange's reconstruction of the Place d'Italie. As with Pei's commission for the Louvre, Tange was directly appointed by the mayor, Jacques Chirac, for the urban reconstruction of Paris, with the transformation of the Place d'Italie in November 1984.[110] The project was

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[109] Jean Baudrillard, "The Beaubourg-Effect: Implosion and Deterrence," *October* 20 (1982).
[110] Kenzo Tange, "Gran Eeran (Place D'italie), Paris, France, 1984–1991," *SD Tokyo*, no. 372 (1995): 88.

nevertheless criticised because of the appointment of an "international" architect: "a number of critics feel that Paris can no longer support the work of great international architectural talents and have called the project denatured, hobbled, cheap and stunted."[111] This summary by *Architecture d'Aujourd'hui* conveyed an essential cause-and-effect message: the cause was the foreign identity of the architect, and the effect was the rejection of the design not necessarily for architectural reasons. Michel Delaporte, the president of L'Union nationale des syndicats d'architecture (L'UNSFA) also expressed this sense of anti-foreignness, targeting commissions by foreign architects from Centre Pompidou to the Place d'Italie: "Nous ne pouvons accepter que l'architecture de France de demain soit en majeure partie construite et décidée par des étrangers."[112]

The architectural commissions were inevitably related to their political representations beyond being simply an architectural or urban project. As journalist Yves Hervaux put it in 1985: "Mitterrand has his Chinese—Mr. I. M. Pei in the Louvre, Chirac will have his Japanese," and claimed that French architects' opportunities were given

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[111] Francois Lamarre, "Une Ville, Un Architecte, Tango, Urbain, Place D'italie," *Architecture d'aujourd'hui,* 203, no. 'Special Issue: A Paris, a l'ombre du Baron Haussmann' (1987): 16–17.

[112] Literally translated as: "We cannot accept that the architecture of France of tomorrow is for the most part constructed and decided by foreigners." Jean-Paul Morel, "Deroulede Chez Le Corbusier," February 12, 1985.

This criticism on the foreign identity of (Asian) architects recall Said's criticism on the Western world's fixed image of the Orient, which thus leads to a gap when identifying "the East" from "the West." The commissions by Asian architects in the French context, have in a way challenged this fixed idea of the Orient. More interestingly, considering how Said suggests the European concept of the Middle East was largely framed following Said suggests the European concept of was largely framed following Napoleon conquered Eqypt, Pei's reference to the Egyptian form can also be seen as a response to the fixed image of Oriental symbolism. This response, however, suggests a more positive way to interpret cultural identities than Jencks's claim of architectural "blasphemesis." Edward W. Said, *Orientalism* (London: Penguin Books, 2003).

away to foreign architects (Figure 40).[113] The debates on the cultural identity of the architects became stakes in the political rivalry between Chirac and Mitterrand. The suspicion of the Chinese(-American) and Japanese architects appointed for French projects therefore indicates the second element in the rejection, that is, the rejection of Pei's political identity. As already discussed, Jencks perceives the design not only to function as a personal symbol of Pei, but also as a political symbol of Mitterrand. As part of the *Grands Projets*, the Grand Louvre was nevertheless a conspicuous symbol of the absolute political and cultural authority of Mitterrand (Figure 41). Vidler further considers that the strong desire for the glass, transparent constructions reflects Mitterrand's ambition to "construct a state identity of technological modernity" against Chirac's plan for a "city identity" for Paris achieved through historical preservation.[114] It has to be pointed out that Pei's own claim of conceptualising his proposal, as widely referred to in his interviews, nevertheless downplayed the strong political intention of the project, and the president's policy-making role was reduced to one not really different from that of a prestigious client; in the political interpretation of the project, however, Pei was inevitably changed from an independent international designer collaborating with various teams to an affiliated architect who served Mitterrand's politics as a demonstration of political "transparency".[115]

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[113] Marilyn August, "French Mayor Rivals President in Building," *The Columbus Dispatch*, February 12, 1985. Yves Hervaus has traced the urban planning of Paris during 1977–1995 that changed greatly from Haussmann's plan of the city. Yves Hervaus, *Le Paris D'un Maire 1977–1995: La Métamorphose* (Paris: Albin Michel, 1995).

[114] Vidler, *The Architectural Uncanny*, 220.

[115] Fierro, *The Glass State*, 33–38. Sue Collard, "Mission Impossible: Les Chantiers Du President," *French Cultural Studies* 3, no. 8 (1992): 97–99.

Thirdly, the complex perceptions of cultural and political identities, along with Pei's modernist identity, are thus incorporated as part of Pei's foreign identity. Through the *Grands Projets*, Mitterrand constructed a modernist nationalist identity for Paris in contrast with its "perennialist" history. The Louvre Pyramid, as one of the *Grands Projets*, therefore also represents a modernist concept of nationalism for Paris. This means that through the Glass Pyramid, Pei ultimately formed a new nationalist (and Parisian) identity, rather than an "international" identity. Therefore, the Battle of the Louvre demonstrated two kinds of rejections of Pei's identity: on the one hand, the public debate rejected the "international" identity (versus local, national) of Pei because of his foreignness; on the other hand, the public also denied the "nationalist" identity of Pei as seen from the modernist and political representation of the Glass Pyramid.

However, these multiple representations of identities were not so pronounced in Pei's own statement in 2000.[116] Once again, while Pei considered the intention of the proposal, he drew on the geometric composition and transparency of the structure. However, Pei used these modernist attributes to state his reverence for history, making them mere geometric and "neutral" elements of construction, rather than labelling them specifically as characteristics that signify the architecture's inconsistent modernity against the historical environment of the Louvre. Neither did Pei relate this modernist practice to his Chinese-American background nor indicate any political representation, because there was no evidence that Pei referred the proposal to his previous commissions,

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[116] Pei and Boehm, *Conversations with I. M. Pei*, 84–85.

or his background in China and in America. In terms of political representation, Pei's statement did not indicate a connection to other *Grands Projets* or Mitterrand's role, and therefore still suggests his identity as an independent architect. On the contrary, the complexities of Pei's cultural and architectural identities involved in the project all constitute the factors for reading the project.

3.7 The language of the present

The end of the Bataille and the reception of Pei and his Grand Louvre scheme were marked by Le Figaro's celebration of its anniversary in front of the Louvre Pyramid, the same month the museum reopened in 1989. [117] As Babelon suggests that Pei's transformation of the Louvre has reshaped the place into a collective symbol of France, the Glass Pyramid has also become a symbol of the Louvre. [118] The abstract form of a gridded pyramid has been printed, reprinted or drawn on event posters, tourism booklets and the official website of the Louvre Museum as the very symbol of the Louvre with which people could not be more familiar. The vociferous debate on the project itself, and the more in-depth criticisms of the "identity" or "identities" of Pei in the battle, have also been gradually forgotten or intentionally muted.

The second phase of the Grand Louvre provides another realm to consider the symbolism of Pei's scheme. Conducted between 1989 and 1993, the continuation of the

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[117] Fierro, *The Glass State*, 179.
[118] Babelon, "The Louvre," 288–92.

project included the transformation of the Richelieu Wing, and the construction of the Louvre-Tuileries passage and the Pyramid Inversée (Figure 42). [119] The Petite Pyramide, placed underground at the centre of Place du Carrousel, continued the language of the glass-and-steel pyramid above ground, yet in a reversed form, hung from the ceiling and projecting towards a contrasting, smaller marble pyramid. The Petite Pyramide conveys a clearer message of the lightness of glass, along with the sheer contrast between the transparency of the glass and the solidity of the marble pyramid. The reversed form of the pyramid further suggests a response to the historical form of a classical pyramid. An addition to the Glass Pyramid above the ground, the Petite Pyramide, hidden beneath the ground, has however provided a more pronounced statement of Pei's modernist conception.

Considering this structure to reflect the latest achievement of glass construction in the twentieth-century, developed from Sheerbart's glass architecture to Mies's vision for glass monuments, Fierro suggests the petite pyramid functions as an agency to gather and reflect light to the internal space, while the reflection of natural light also makes the pyramid itself glitter.[120] However, besides this, Fierro considers the structure to be more decorating, as the *placement* of the Petite Pyramide hardly relates to the structure of the museum or the urban symbolism of the city as the Glass Pyramid above ground does.[121]

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[119] Planning: 1988 January; Completion: 1993 November. "Grand Louvre–Phase II," Pei Cobb Freed & Partners, accessed July 26, 2015. http://www.pcf-p.com/a/p/8401/s.html.
[120] Fierro, *The Glass State*, 221. Paul Scheerbart, Bruno Taut, and Denise Sharp, *Glass Architecture* (New York: Praeger, 1972). Frampton, "Modernism and Tradition in the Work of Mies Van Der Rohe."
[121] Fierro, *The Glass State*, 221.

It functions more to highlight the commercial area of the Place du Carrousel, which makes the structure paradoxically symbolise an American-style shopping mall.[122] Viewing the same question, Lianne Mctavish considers the Place du Carrousel has provided a significant new narrative to the Louvre Museum, as it accurately reflects the market interests of contemporary museum institutions and merges the boundaries between the internal and external, high art and commercial culture, the museum and the city—even as a different way to enter the museum, as the area is conveniently connected to a Metro station. The commercial area thus challenges the cultural authority and the originally fixed "dilemma" of the Louvre by contributing modern meanings.[123] Mctavish's reading of the role of the Petite Pyramide might have well justified the contemporary role of the Grand Louvre in relation to the urban context:

> It answers the entrance pyramid, a stable geometrical structure which metaphorically implies that the museum is a timeless temple of cultural preservation. The inversion of the later pyramid may indicate that these values in the Grand Louvre "proper" have been turned upside down in the mall.[124]

On Sunday 7 May 2017, the newly elected French president, Emmanuel Macron, decided to make his victory speech in front of the Louvre—more specifically, Macron used Pei's Glass Pyramid as the backdrop for his debut presentation as the President of the Republic on the world stage.[125] In front of the pyramid, Macron announced, "I will

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[122] Ibid.

[123] Lianne McTavish, "Shopping in the Museum? Consumer Spaces and the Redefinition of the Louvre," *Cultural Studies* 12, no. 2 (1998).

[124] Ibid., 183.

[125] Harriet Agnew and Anne-Sylvaine Chassany, "Macron Uses Grandest of Backdrops for Entrance on World Stage," Financial Times, May 8, 2017, accessed May 12, 2017, https://www.ft.com/content/e539f196-3373-11e7-99bd-13beb0903fa3.

serve you in the name of our motto: liberté, égalité, fraternité."[126]. The Glass Pyramid witnessed the speech of the national spirit to dictate the new era of national identity in the country. Pei's pyramid will signify its continuous contribution to the image of Paris as a changing and developing subnarrative.[127]

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[126] Ibid.

[127] Patrick Wintour, "What Would Emmanuel Macron as France's Leader Mean for Europe," Guardian, 2017, accessed May 12, 2017, https://www.theguardian.com/world/2017/may/02/what-would-emmanuel-macron-france-leader-mean-europe.

Chapter 4   The abstraction of architecture: a diagram of its keywords

In his essay "Derrida and Beyond," urban design and planning professor Robert Mugerauer interprets the Glass Pyramid by employing the concepts of deconstruction.[1] Considering Pei's design to be "one of Postmodernism's most sophisticated projects for deconstruction," Mugerauer interprets the pyramid to be a synthesis of displaced meanings, and thus distances it from the Egyptian symbolism to which a pyramid form usually relates.[2] Mugerauer suggests the pyramid as a form is deeply related to the root of French art and brings in a contemporary awareness of creativity. The Glass Pyramid, as he suggests, demonstrates "the displacement for the earlier meanings of the same forms deconstructive inversions accomplishes for us what earlier buildings attempted to do in their time," and thus forms a contemporary statement of power and identity.[3]

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[1] Mugerauer first presented his article as a paper at the fourth annual symposium of the Centre for the Study of American Architecture, School of Architecture at the University of Texas, themed "Building and Reality: A Symposium on Architecture in the age of Information" in 1988. Among the presenters were Peter Eisenman, Douglas Davis and Michael Benedikt.[1] Mugerauer's essay, titled "Derrida and Beyond," opened up a discussion of the Louvre Pyramid from the perspective of deconstruction, moving the discussion away from the "classical language" previously adopted and from Pei's own, authoritative, "neutral" explanation of his design. Lawrence Speck, "Notes on the Symposium," *Center*, no. 4 (1988).
Robert Mugerauer, "Derrida and Beyond," in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory, 1965–1995*, ed. Kate Nesbitt (New York: Princeton Architectural Press, 1988).
[2] Mugerauer, "Derrida and Beyond," 193.
[3] Ibid., 195.

Mugerauer's discussion of the displaced meaning of the Louvre pyramid can be seen as a well-timed response to Jencks's insistence on the fixed symbolism of the pyramid form in its Egyptian origin. More specifically, his approach of distinguishing the meaning of the pyramid form from "the built environment and culture" challenges the established interpretation of the Louvre pyramid that connected it either to a classical architectural symbol or the historical context of Napoleon's Egyptian campaign. An example of such an interpretation based on historical contexts, as discussed in the previous chapter, was Jencks's assertion that Pei's pyramid contained the same meaning as the Egyptian pyramid and functioned as Pei and Mitterrand's personal monument. Moreover, Jencks categorised Pei's scheme into "historical practices" of using a form inconsistent with the original architectural style, and therefore put the pyramid in a "conventional" context of reading concerning religion and power. Mugerauer's argument, by contrast, provided an interpretation of the project which conveys "displaced" meanings by actually relating to the practices of pyramid as a form in the French culture. This discussion therefore revealed an intention to remove the cultural and historical context in reading Pei's design, independent from the "traditional method of interpretation," that is to say, one originally based on a "historical context, formal relation to surrounding architecture, or the creativity of the architect."[4] Moreover, it reveals the potential to evaluate the meaning of the Louvre project following the discourse of architectural criticism through a perspective of deconstruction.

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[4] Ibid., 193.

Mugerauer considers the identity and presence of the pyramid is "grounded in the past," yet also displaced from the previous uses of the form placed in the context of Egyptian symbolism and other references in French culture. As he continues, the form not only functions "as a historical quotation of the classic tradition of pyramidal forms," but more importantly, "as the active assertion of presence and identity at the expense of the modernist 'tradition of change,'" a claim which also historicises modernist practices, and has thus fixed Pei's scheme within the assumed recognition of modernism.[5] The pyramid is firstly distinguished from an Egyptian pyramid, both in terms of its material and meaning. For instance, Mugerauer asserted "Egyptian pyramids symbolically reflected the vital force which the gold capstone physically rejected in reiteration," while Pei's pyramid reflects "the surrounding human and natural environment, the city's lights and passing weather."[6] The glass construction signifies Pei's pyramid to be a structure that signifies light and life through its visual transparency, which therefore displaces the Egyptian image of the pyramid, constructed for death. In terms of the French use of the pyramid as a geometric form, Mugerauer refers to the eighteenth century French neo-classical architectural monuments, such as the ones designed by Étienne-Louis Boullée or Léon Dufourny, to consider Pei's version achieved a sense of contemporary architectural monumentality, in contrast to neo-classical designs which failed to sustain their aspirations for "sublime nature," "timeless divinity" and "triumph of almost

[5] Ibid.
[6] Ibid.

forgotten individuals over death."[7] Thus, the pyramid has displaced the French use of the pyramid as a form of geometry. Last but not least, the contemporary monumentality of the pyramid thus also distances the form's meaning relating to Egyptian symbolism or the Sphinx.[8]

Despite attempts to distinguish the reading of the pyramid from "traditional methods of interpretation" in the categories of "historical context, formal relation to surrounding architecture, or the creativity of the architect," Mugerauer's reading of the displacement of the Louvre Pyramid is largely based on these traditional references.[9] For instance, Mugerauer also perceives Pei's pyramid to correspond to Louis XIV's assertion of power and identity. The King's preference for the sun to symbolise his presence suggested a consistent claim for light and power, like the Glass Pyramid. The "historical quotation of the classic tradition of pyramidal forms" is also contradictory to the displacement of meanings, which incorporates the purpose to differ the meaning of the pyramid used in other places. The comparison between Pei's pyramid and an Egyptian pyramid also falls into the interpretation of Pei's glass pyramids as intentionally modelled against the traditionally assumed symbolism of the Egyptian pyramids. Mugerauer's reference to the neo-classical traditions of Paris, so as to identify the form as deeply-rooted in French culture, also imposes a historical connection on Pei's pyramid.[10] This connection to the "past" meanings of the pyramids to identify its contemporary value

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[7] Ibid., 194.
[8] Ibid., 195.
[9] Ibid., 193.
[10] Ibid., 193–94.

might not even have been authorised by Pei, who has in effect indicated his intention to thoroughly break with "the architectural traditions of the past."[11]

Another problem is that the displacement of the pyramid was paradoxically based on the specific idea of "presence." Mugerauer's enquiry into the binaries of "presence vs absence, being vs beings, identity vs. difference" represented in the Louvre Pyramid was inspired by Derrida's elaboration of *différance*.[12] Presence is an essential concept which Derrida has discussed in his criticism of metaphysical accounts. Derrida invents the word *différance*, with the letter *a*, to incorporate the meaning of to *defer* and also relate to the concept of to differ.[13] Thus, *différance* suggest a significance of sameness that is not identical. However, Mugerauer's claim for the Louvre Pyramid's "struggle for presence and immortality" and "contentions over presence and identity" suggests more an absolute quest for "presence" as different to "absence," instead of a query into the in-between status between presence and absence.[14] These problematics reflected in Mugerauer's account inspire the chapter to conduct further reading of the meaning of the pyramid by deconstructing the Grand Louvre.

Unlike Mugerauer's perspective, which considers the pyramid as an object loaded with meanings in relation to history, the chapter proposes an examination of the pyramid specifically within the architectural scheme of the Grand Louvre. This approach first of all avoids the traditional ways of interpreting pyramid forms according to historical

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[11] Pei and Boehm, *Conversations with I. M. Pei*, 84–85.
[12] Mugerauer, "Derrida and Beyond," 185.
[13] Derrida, "Différance."
[14] Mugerauer, "Derrida and Beyond," 193.

references, and thus distances itself from metaphysical accounts of presence. It also differs from interpreting the meanings of pyramid forms external to the architectural scheme. Following Derrida's theory of *différance* and Eisenman's reading of architectural diagrams, the chapter looks into the architectural drawings of the Grand Louvre as a way to identify the project as a synthesis of traces, developed as an active system of architecture. This examination progresses from reading the architectural drawings to an understanding of the architecture as an active diagram that produces autonomous meanings. The Louvre Pyramid, being a part of the scheme, suggests different interpretations of textuality and contributes to the dynamic development of the interiority of the architecture.

4.1 *Différance*, architecture and architectural drawings

According to Derrida, *différance* contains the meanings of both sameness and differences.[15] *Différance* represents an active and dynamic movement of producing differences as its effects. It incorporates the meaning of temporalising—to temporalise, to detour, to delay, etc.—and spacing—of "spacing's becoming-temporal and time's becoming spatial."[16] *Différance* is an irreducible and indefinite movement in progress; it is situated in-between the past and the present, and in the middle of presence and absence.

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[15] Derrida, "Différance," 129.
[16] Ibid., 138.

Derrida further explains the dynamic conditions of the differed-differing or differing-differed matter that:

> [*Différance*] is what makes the movement of signification possible only if each element that is said to be "present," appearing on the stage of presence, is related to something other than itself but retains the mark of past element and already lets itself be hollowed out by the mark of its relation to a future element. This trace relates no less to what is called the future than to what is called the past, and it constitutes what is called the present by this very relation to what it is not… [*Différance*] is this constitution of the present as a "primordial" and irreducible nonsimple, and therefore, in the strict sense nonprimordial, synthesis of traces.[17]

Derrida's discussion of *différance* emphasises the active productions of differences in the present epoch. *Différance* neutralises the tensions of different forces and presents their forms in presence, but always leads to the new development of differences. Thus, "presence is a termination and effect within a system which is no longer that of presence but that of *différance*."[18] The developing mechanism of *différance* as traces thus "holds us in a relation with what exceeds … the alternative of presence or absence."[19]

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[17] Ibid., 142.

[18] Ibid., 151.

[19] Derrida particularly discusses the concept of *trace* from the perspective of Heideggerian theory of Being and beings. While Heidegger is concerned that "the difference between Being and beings, forgotten by metaphysics, has disappeared without leaving a trace," Derrida considers *différance* itself as a movement to identify the presence of the trace, which thus refers to the "trace" of trace. In other words, Derrida interprets the "trace" as a part of presence that is being absent. As Derrida continues, "the trace is not a presence but is rather the simulacrum of a presence that dislocates, displaces, and refers beyond itself…. The trace as simultaneously traced and effaced, simultaneously alive and dead." Derrida perceives *différance* develops beyond the ontological concept of difference and Being: it is "the historical and epochal deployment of Being or of or of the ontological difference. The *a* of *différance* marks the movement of this deployment." Ibid., 151–6.

Derrida's elaboration on *différance* to some extent corresponds to Wittgenstein's language-game." *Différance*, as Derrida points out, remains a phenomenon beyond the metaphysical description by language, which thus makes it "unnameable":

> What is unnameable is the play that brings about the nominal effects, the relatively unitary or atomic structures we call names, or chains of substitutions for names. In these, for example, the nominal effect of "différance" is itself involved, carried off, and reinscribed, just as the false beginning or end of a game is still part of the game, a function of the system.[20]

Derrida's discussion suggests the possibility of comparing difference to a game, and the traces revealed from the *différance* remain to be part of the system as part of the game. To place the idea in language and speech, *différance* presents the system of language developed as a game, and incorporates different traces as its origin and effect. [21] Wittgenstein's theory of the language-game provides a similar reading of how language consists of a derivative and interwoven entity, one which includes the system of language, the use of language and language itself.[22] The language-game suggests the multiple and developing attributes of language—that is, the *différance* of the system of language—as an indefinite process and movement, as "a form of life."[23]

Following the general analogy of architecture to language, architecture also presents a process of movement and its forms of *différance*. In the case of an architectural project, here the Grand Louvre, the architectural drawings reflect the *différance* of the

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[20] Ibid., 159.
[21] In respect to the analysis of language and speech, Derrida perceives "within the system of language, there are only differences. These differences, on the one hand, produce the exchanges in different language; on the other hand, they are the effects being produced among the exchanges in different languages. Ibid., 140.
[22] Wittgenstein, *Philosophical Investigations*, Part I, Para. 1,2,7,11,12.
[23] Ibid., Para.19, 23.

architecture. Rather than presenting a definite opposition between absence and presence, architectural drawings reflect a process of revising and developing the design intentions. Each architectural drawing revises the form (and structure) of the architecture at its latest (present) stage, based on previous sketches of the plan, and thus presents traces of the progress of the scheme—that is, the *différance*. Because the architectural drawings are formulated in two-dimensional forms to envisage the architecture's three-dimensional relationships, they reveal the temporal (different design stage of the project) and spatial (the revision of the design for a three-dimensional effect) development of the scheme. The architectural drawings reflect the reconciliation between absence and presence: on the one hand, an architectural form absent from a (latest) drawing was the early inspiration for the architecture in its present form. On the other hand, one architectural form, although present at the moment, still faces the possibility of being revised into another form. In terms of the purpose of the architectural drawings, the present forms of the drawings serve to represent the absent three-dimensional structure of the scheme.[24] In

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[24] Robin Evans points out the development drawing of architecture indicates a process of displacement of the drawings, which is more a disadvantage to the architect than to a sculptor or artist. Architectural drawing, as Evans perceives to be almost the only medium that involves the direct interaction of the architect's hand. However, when looking at a building, what is absent becomes the architectural drawing. Drawings become marginal in the reading of architecture. However, drawings, as done prior to the construction of the architecture, provide the first instances of the architecture. Evans suggests that "[drawing] is not so much produced by reflection on the reality outside the drawing, as productive of a reality that will end up outside the drawing." Reflecting on the discussion in this chapter, architecture and architectural drawing thus established an opposing relationship between absence and presence. The architecture can be also seen as a deferred presence of ideas from the architectural drawings. The drawings function as the origin of the architecture, yet this origin is product of inspirations from other buildings. The evolvement of architectural drawings thus further develops the *différance* of architecture. Robin Evans, *Translations from Drawing to Building and Other Essays* (London: Architectural Association, 1997), 165–75.

this process, the development of the architectural drawing reflects the differing-deferred, or deferring-differed relations between the absent and present forms.

4.2 Architectural drawings as text of the architecture

The *différance* of the architectural drawings opens up the possibility of discussing Pei's Louvre project from the perspective of deconstruction. As Andrew Benjamin perceives: "The dominant architectural plan becomes the object of a deconstruction."[25] This reading of architectural drawings from the point of view of deconstruction develops beyond the mere recognition of forms from drawings; it reveals the potential to interpret the new spatial relations of the architecture, the "potential of a material" and thus the potential of the materiality of the architecture. In other words, deconstruction helps reveal the potential of the materiality of the architectural drawings which incorporates a discussion of form and matter, form and structure, form and materials etc., and thus allows one to further the meaning of the architecture. [26]

Bernard Tschumi considers "architecture does not exist without drawing, in the same way that architecture does not exist without texts."[27] The architectural drawings

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[25] Andrew Benjamin, "Plans to Matter: Towards a History of Material Possibility," in *Material Matters: Architecture and Material Practice*, ed. Katie Lloyd Thomas (Abingdon and New York: Routledge, 2007).
[26] Ibid., 14–28.
[27] Tschumi provides a similar way to interpret architecture as the synthesis of traces. He considers architecture to be composed of fragments (walls, rooms, streets, ideas, etc) which permeate the imagination and reality, and exist in-between presence and absence. Tschumi's reference of drawing to text recalls Roland Barthes's reading of text as embodying plural meanings and open-ended interpretations. Bernard Tschumi, *Architecture and Disjunction* (Cambridge, MA: The MIT Press, 1994), 102. Roland Barthes, *Image, Music, Text*, trans. Stephen Heath (London: Fontana Press, 1977), 155–64.

nevertheless function as the language of architecture; they become the instrument for the architect to communicate the design ideas.[28] The analogy of drawing to text also corresponds to the tendency to emphasise the concept of "diagram."[29] In terms of architectural criticism, architectural diagrams have become a concept that has been "actualised" by architects, to borrow R.E.Somol's words, "the *matter* of architecture," in which the reading of architectural form can be integrated with matter such as the material and structure and spatial relations, and the discussion of form is not independent and separate from its material and structural attributes.[30]

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[28] Despite this closeness of drawing and language, Forty points out some differences between them. One aspect relating to the discussion of the chapter is that while language, as Saussure perceives to be filled with differences, drawings, although composed by different of forms and lines, present an overall effect of the architecture as an entity and thus concern less with the differences between different segments in a drawing. Forty, *Words and Buildings*, 29–42.

[29] Anthony Vidler critically perceives the discourse of the study of diagram, a term which emerged not only because of the production of new forms and techniques of architectural designs since postmodernism, but more importantly because of the discourse of architectural criticism. As Vidler elaborates: "This tendency is exhibited on every level of meaning associated with the term diagrammatic, and runs the gamut of a wide range of approaches and styles that at first glance seem entirely disparate—from diagrammatic caricature to theoretical discourse, modernist revival to digital experiment." Vidler provides some examples of diagrammatic architecture, for instance, Perrault's Bibliothèque de France and Tschumi's Parc de la Villette. Anthony Vidler, "Diagrams of Diagrams: Architectural Abstraction and Modern Representation," *Representations* 72, no. Autumn (2000): 2–3.

[30] Somol specifically considers the concept of diagram in Colin Rowe's works. He suggests the earliest version of diagram was what Rowe later identified to be a "paradigm" of classical architectures and "program," which Somol terms to be "the empirical solicitation of facts" especially in modern architecture. One example of this is Rowe's comparison of Le Corbusier's Villa Savoye to Palladio's Rotunda to elaborate on the rules of the ideal villa reflected in the forms of the architecture. Rowe's student Eisenman, an architect of the New York's Five, develops this formalist study of architecture combined with a structuralist approach derived from Noam Chomsky. Thus Vidler considers Eisenman's study as "more neostructuralist" but "less transcendental."

Andrew Benjamin suggests the relationship between form and matter reflected in Rowe's discussion of the ideal villa is that "there is an ineliminable divergence within formulations of architectural history that are determined by the plan." Rowe's study belongs to Benjamin's category of how architectural elements of one material and temporality can open up the possibilities of reading architecture in other materials and another temporality, thus overcoming the historical gaps between architectural objects. Benjamin, "Plans to Matter," 21–22. Robert E. Somol, "Dummy Text, or the Diagrammatic Basis of Contemporary Architecture," chap. Introduction in *Diagram Diaries* (New York: Universe Publishing, 1999). Colin Rowe, *The Mathematics of the Ideal Villa and Other Essays* (Cambridge, MA; London: The MIT Press, 1987). Vidler, "Diagrams of Diagrams," 3.

Peter Eisenman further develops the reading of the syntactics of modernist architecture, initially based on a grammatical model of linguistic analysis largely inflected by Noam Chomsky and later strongly involving Derrida's themes.[31] Eisenman also expands this reading of diagrams to his own diagrammatic drawings and architecture.[32] As Vidler perceives, Eisenman's reading of architectural diagrams represents one direction of late-modern architectural criticism towards the modernist legacy since 1980s.[33] Eisenman considers this approach to reading diagrams through a "linguistic paradigm as a possible alternative model for an architectural interiority" helps reveal the "possibilities for an interiority of architecture," which was covered by some common attributes in architecture, i.e. "geometricity, stability and normalcy."[34] These architectural

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[31] Eisenman's later writing is greatly influenced by Derrida's archi-writing, and they later developed a collaborative relationship. One of their collaborative works is Choral Works. Eisenman provides a specific definition for the concept of "presentness" against the metaphysics of presence, and argues for the separation of form from its function (original meaning). This presentness follows Derrida's ideas of "being-only-once" and "writing of a space," which "distinguishes the space of the event from the time of the event." Eisenman considers presentness with a sense of "spacing" to be the basis, that allows "architectural object from its thought-to-be natural condition of instrumentality [aesthetics and meaning (which can be seen as equivalent to function), against iconicity (form)]." What Eisenman defined as *presentness* "combines both the idea of time in presence, of the experience of space in the present, while at the same time its suffix-ness causes a distance between the object as presence, which is a given in architecture, and the quality of that presence as time, which may be something other than mere presence. This creates the idea of a spacing between presence and the quality of presentness." Peter Eisenman, *Written into the Void : Selected Writings, 1990–2004* (New Haven; London: Yale University Press, 2007), 42–49.

[32] Vidler considers the term diagram has been "reframed" in Eisenman's study and works as "a term whose revival offers a means of inventing a pedigree for his digital experiment in morphological projection." However, Thomas Patin points out the contradictory development in Eisenman's architectural criticism. Even Eisenman himself acknowledges some contradictions, as he suggests the definitions of *formalist* study and *formalism* in his earlier studies were in effect a lexicon of limitations. Eisenman, *Inside Out*, vii–xv, 227–33. Thomas Patin, "From Deep Structure to an Architecture in Suspense: Peter Eisenman, Structuralism, and Deconstruction," *Journal of Architectural Education*, no. 47 (1993). Vidler, "Diagrams of Diagrams," 3–4.

[33] Vidler, "Diagrams of Diagrams," 5.

[34] Eisenman considers the interiority of the architecture in contrast to the traditional, hierarchical, Virtruvian preconditions of form, structure, function, and beauty. Eisenman, *Inside Out*, xiii.

attributes are "structural" elements which embody a sense of "textuality" as they help reveal the implicit semantic and structural values of the design.[35] The generated "text" of architecture becomes the image of architecture itself, which is determined in "between": "between as both outside the author's intentions and outside the authoriality of architecture," "dislocating" itself from the previous contexts and symbolism.[36] In this way, it is possible to identify the implicit meanings in the architecture through the formalist reading of the drawings, and recognise the "interiority" (as opposed to anteriority) which "demonstrate that the structural values (the textuality) of the design are more implicit than the formal relations."[37]

Furthermore, Eisenman regards architecture as a "second language," a "text between": "it is not a 'stable object' but a process, a 'transgressive activity which disperses the author as the centre, limit and guarantor of truth'." Ibid., 229, 233.

[35] Eisenman considers "textuality" to suggest the architecture's "textual" aspects, which suggests the reading of architecture as *text* which dislocates itself from its former (structural) contexts and meanings. Although Eisenman's very specific conception of "text" seems to suggest an acknowledgement of Roland Barthes's idea of Text, being a new object of movement and plurality, its more direct influence is Derrida's archi-writings, especially those concerning the ideas of "text," which links further with the notions of the "metaphysics of presence."

Patin divides Eisenman's reading of architectural form in three semiotic categories: "pragmatics, semantics and syntactics." As Patin observes, pragmatics concerns architectural forms in terms of function; semantics relates to the reading of iconography, and syntactics "distinguishes between the relations of the physical forms of a space or building and the conceptual spaces of a structure." Patin, "From Deep Structure to an Architecture in Suspense," 91. Jeffrey Kipnis, "Introduction: Act Two," in *Written into the Void: Selected Writings 1990–2004*, ed. Peter Eisenman (New Heaven; London: Yale University Press, 2007), xii. Eisenman, *Inside Out*, 229.

[36] Thomas Patin summarises three key terms among Eisenman's reading of architecture as "textual," in relation to "an otherness, trace, or absence." Among these, the term "trace" suggests for "rethinking architecture is to conceive of it as existing between, that is, as he[Eisenman] put it, 'almost this, or almost that, but not quite either.'" These three terms are then linked to the displacement of architecture, embodied through its "interiority." As Patin continue: "This deals with the textual condition of displaced architecture in which signs refer not outward, but inward. In such an architecture these four aspects provoke uncertainty in the object by removing the architect from any control of the object. The architect is no longer the hand and mind of the design." Patin, "From Deep Structure to an Architecture in Suspense," 97. Eisenman, *Inside Out*, 233.

[37] Eisenman considers the difference between a "formal" and a "formalist" reading. A formal analysis "can only investigate object as object" and therefore "cannot reveal the textual structure." As Eisenman recognises, the formal analysis reveals aesthetic values of such as sequences, proportions or orders of form,

In the case of reading the architectural drawings of the Louvre, reading architectural diagrams, especially Rowe and Slutzky's elaboration on transparency and Eisenman's of the textuality of the architecture derived from his study of architectural diagrams, sheds light on the interpreting of the meaning of the architecture which integrates the analysis of form and matter (i.e. form and material, form and structure, form and function…).[38] To use Eisenman's words, a deconstructive perspective can help to "enrich the architectural discourses and its possibilities, which would otherwise have been smothered in the claustrophobic rhetoric of a so-called natural or classical language of architecture."[39] In his discussion, Eisenman also perceives diagrams as a possible demonstration of what Derrida referred as a "double system": "A diagram in architecture can also be seen as a double system that operates as a writing both from the anteriority and the interiority of architecture as well as from the requirements of a specific project."[40] Similarly, Pei's sketches indicate the textuality and interiority of the architecture (and therefore can be seen as "diagrams"), but also suggest a general consideration of technical specifications of the constructional environment.

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while the textual analysis investigates the structural meaning of architecture, in which "there is a differentiation not a representation." Eisenman, *Inside Out*, 190. Eisenman, *Written into the Void*, 92.

[38] As Eisenman suggests, the drawings to some extent can be seen as even "more original" than the built work in terms of its authenticity. This means that the reading of Pei's diagrams provides a more "authentic" reading of the Louvre project. Eisenman, *Written into the Void*, 45.

[39] Eisenman, *Inside Out*, vii–xv.

[40] Eisenman, *Written into the Void*, 92.

4.3   The diagrammatic trace of architecture: form and textuality of the design

The chapter focuses on ten sketches produced by Pei for Phase I of the Grand Louvre (1983–1989) from 1983 to 1985 (Figure 43).[41] In my discussion, I will use the terms "sketch," "drawing" and "diagram" to refer to these drawings. While the three words generally refer to the two-dimensional representations of the scheme on tracing papers, the word "diagram" particularly denote the diagrammatic attribute of the architecture as a developing entity which contains the potentials to be deconstructed. It is thus not defined by any specific single architectural drawing. The discussion of the geometric attributes of the architecture will address not only plans for the Louvre Pyramid, but also the variation as well as interaction of forms at the Cour Napoléon as an entirety of the sketches. A way to read the identity of Pei from the diagrams is that they first of all establish a connection between geometric interactions represented in the drawing and the meaning of architecture suggested by Pei (and therefore further suggest the modernist notions of transparency that counter Jencks's anti-modernist argument). Moreover, they suggest a representation of Pei's identity that either pertains to the

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[41] The drawings were all made by I. M. Pei from 1983 to 1985, recognised by Pei and collected by the Library of Congress in 2014. Some were sketched altogether on one tracing paper, but most were produced on various papers in different years indicating a transition of Pei's design proposal. The problem with the drawings is that some were very cursory and it is difficult to see an entire regional plan of the Grand Louvre, but the design of the centred area at Cour Napoléon can still be recognised for comparison. To look into the drawings, I collated them in Figure 43 to show how these drawings altogether serve for the reading of the meaning of the architecture as an active and developing system. In my process of examining the drawings, I focused on each drawing by locating them according to the order of the design process, so as to consider how the drawings reflected the development of a sense of architectural language.

"architectural" identity on the geometric connection of the design, or the "international" identity that allows him to work across national boundaries through the use of a geometric ("neutral") language. In both terms, the architectural drawings suggest a different way to construct and interpret the entire design that is not so constricted by cultural, symbolic accusations and his (non-) nationalist identity.

More importantly, the diagrams provide a way to approach the architecture, rather than from the external environment of the historical context or the cultural debates surrounding Pei's identity.[42] The progress of my reading follows a simple intention, which is to identify how the drawings function as diagram and thus—to borrow Eisenman's words—reveal "more than mere geometry."[43] The reading progresses from a basic understanding of the relations of forms in the drawing, to a syntactic reading of the textuality of the architecture. In this process of development, the diagrams unveil a possible way to interpret, in Eisenman's words, the "anteriority" and "interiority" of the architecture.[44]

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[42] The reading of architectural diagrams is also of importance to the examination of architecture in the architectural criticism prominent since the late 1980s. Therefore, the diagrams allow readers to approach the representation of presence and identity from the architecture itself. Rustow has addressed the project as an urban planning transformation of the Louvre site in detail. Rustow, "The Expansion of the Louvre."
[43] Eisenman, *Written into the Void*, 89–90.
[44] Ibid., 92.

4.3.1 The formal(ist) analysis: geometry and formal sequence of architecture

My reading of architectural diagrams starts from identifying the relationships between the forms (segments of lines and shapes) presented on the drawings. The drawings reflect a process of developing and revising the (two-dimensional representation of the) form of the architecture (and therefore, the three-dimensional vision of the scheme). The basic framework of the architectural scheme was in place by 1983, and the following drawings reveal the change of the structures interacting with the exterior pavilions above the ground, as well as the plan of the underground Napoleon Hall.[45] For example, in the earliest sketch produced in 1983, the form of the Glass Pyramid is already identifiable (Figure 44; Figure 45). The central pyramid is projected on the sketches as a square, which is surrounded by many converted forms of squares and triangles that indicate the structural and formal (geometrical) relations of the design. The square base of the pyramid, extending outwards, is joined by three small pyramids located at the midpoint of the square. The gridded section on the left, stretching to the pathway to the right, indicates the scale of the site to be excavated. The intersecting points of the main pyramid and the extended squares signify the column and wall structures of the Napoleon Hall, and the square base refers to the beams defining the area of the Glass Pyramid.[46] Reading the sketches as architectural plans, Pei's provides an aerial view of

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[45] Ibid.
[46] Ibid.

the Louvre Pyramid from above the plane, on which the pyramid is integrated as part of

the entire scheme of the Grand Louvre. The disguising of columns within the form of the

pyramid and the repeated employment of triangles and squares nevertheless demonstrates

the extreme emphasis on geometry and abstraction in Pei's sketches.[47]

A formal reading of proportion within the sketches reveals the geometric basis of

the scheme that serves for the textual function of the diagram. The geometric relations of

the diagrams can be seen from the aesthetic aspects of proportion and geometry. The 1983

drawing presents a basic layout of the plan at an earlier stage of the design (Figure 45;

Figure 46). The central three-dimensional pyramid, projected on the architectural

drawings, becomes a square base (to name it Square A for discussion) composed of four

triangles. Each triangle represents one façade of the pyramid correspondingly, and takes

an equal proportion of 1/4 of the square. The triangles are then flipped horizontally and

vertically to extend to the outside, the apexes of which determine the middle points of the

larger square (Square B). They also extend outwards to form three petite squares. In this

way, the area of the larger square is confirmed. Reflected onto the architectural plan

above the ground, they become the basis of the central pyramid and the surrounding area

of the reflecting pools.

The area of the two squares is interlocked by the triangles. The gap between the

two squares accommodates nine petite triangles: three triangles of equal size (one quarter

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[47] The emphasis on geometry with minimal use of elements of columns and decorations, as Anthony Vidler suggests, are typical features for the abstraction of modern architectural drawings.
Vidler, "Diagrams of Diagrams," 7.

of Square A) on each side of the three sides of Square B, leaving one side open. This open side, presumably to represent a large glass façade reminiscent of the giant glass structure of the Rock and Roll Hall of Fame, forms a big triangle (Triangle B). The two sides of Triangle B are extended from the diagonals of Square A. The height of Triangle B equals to the side length of Square B (which is twice the length of that of Square A), and also is equal to half of the longer side of Square B. The size of Triangle B equals the size of Square B, which is four times that of Square A. This means that the form of Triangle B is also determined by Square B—and, ultimately, by Square A.

The side length of Square A also determines the length of the area of the small square (Square C) on the right side of the drawing. This small square, which presumably represents a smaller pyramid above the ground, follows the same square-triangle composition as Square A, encompassed by a larger square (Square D). The size of Square D equals to one quarter of Square B. It follows the formal rhythm of the central square.

The central Square A is thus set up as the keynote of the architecture. Following the geometric extension, the entire design suggests a sense of movement. This central area is then further revised on the architectural drawing of 1984 (Figure 47; Figure 48). The giant triangular opening is replaced by the small triangle (Triangle a) on the left of Square A, as marked in crossed lines, possibly to represent the glass façade; it conveys an impression of being reversed from one corner of Square B, and therefore reflects a more systematic geometric relationship than the previous drawing. The two squares now suggest a closer interaction than the 1983 drawing; their juxtapositions are fixed by four

squares, representing the four supporting columns underground. The three small squares, extended from the three apexes of Square B, coincide with the paths leading to other ends to further emphasise the geometric interactions of the plan.

This expansion and transformation of the geometric relationships from the central triangle-square composition is further suggested in Pei's drawings in 1985 (Figure 49; Figure 50). They suggest a focus on the general geometric interactions of the design; the details of the petite squares and extended paths are not emphasised. Triangle a, which forms the opening-shape of the represented Glass Pyramid, continues to extend outward to serve for the two diagonals of a larger square (Square B), and finally connects to the endpoints of Square B. The central Square A is now geometrically coincided with Square B through the connection of small triangles, and then interlocked within Square E. The edges of Square E and the diagonals of Square B then form two triangles (Triangles b and c), which are then flipped vertically to continue this extension outwards, generating two more triangles (Triangles d and e). Triangles d and e are then mirrored and rotated to complete the extension surrounding Square B. Their apexes continue to connect to the formal extension of the design, and fit into the entire plan of the Louvre (Figure 51; Figure 52).

Furthermore, the drawings also indicate Pei's effort to integrate the structures above and below the ground. The reflecting pool surrounding the central pyramid base (Square A) is filled in with black ink to distinct the spatial difference between the underground and the above ground (Figure 53). However, the development of the

drawings (Figure 54, from a to c) evinces this consideration of the design as an integrated structure; the highlighted part of the reflecting pool area in the later drawing (Figure 54, c) further emphasis this conception to integrate the internal and external space. The extension of square-triangle forms follows the tendency of the previous drawings to demonstrate an ordered and geometric scheme (Figure 55). Another drawing made by Pei in 1985, showing the inverted pyramid, while suggesting a consistency of the design from the central pyramid above ground to the inverted pyramid underground, also exposes how the pyramid form can be unfolded for a possible spatial representation, for which it is difficult to identify a focusing point (Figure 56). It dictates an image of the design as if it is moving in the spatial conception. The employment of the pyramid therefore suggests a sense of movement.

The drawings reveal the basic formal connections of the drawing concerning proportion and geometry, which belong to Eisenman's category of the "structural" elements ("geometricity, stability and normalcy") that display the textual possibilities of the architectural diagram.[48] Reading from the formal relations of proportion, symmetry and geometry, the entire design scheme can be seen as developed from the central pyramid form. When the pyramid is projected onto the two-dimensional planes as the central square, its four sides become the four triangular segments of the square. Following the transformation and interaction of triangles, the entire plan is unfolded to the audience; it presents an ongoing sequence of spatial and geometric developments. In this

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[48] Eisenman, *Inside Out*, xiii.

consideration, the pyramid, as projected on the two-dimensional sketches, becomes the formal basis for the expansion of the entire design. This is also a reflection of its symbolic function: the pyramid is the entrance to the Louvre Museum; projected on the two-dimensional drawings, it also becomes a symbolic "entrance" to reading the entire architectural scheme. In other words, the pyramid becomes the centre of iconicity (of form) and instrumentality (of symbolism) for the architecture. Envisaging its relationship to the formal and spatial structure of the Louvre, the projected pyramid functions as a sign to denote the textual aspect of the diagram and thus reveal the interiority of the architecture.

4.3.2 The textual analysis: the instability and destruction of the Pyramid

There are three main aspects that indicate the textual potentiality of the diagram. The first aspect is the disappearance and destruction of the pyramid on the sketches. In contradiction to the permanence of the pyramidal form (especially considered with the Egyptian symbolism), it is simply not visible. The presumed image of the pyramid of stability and centrality is contradicted by the two-dimensional representation on the drawings, as there is not really any "pyramid" to be existing. Jencks's criticism and the "public" debate focused on the Glass Pyramid as the most important structure of the project, and made it equivalent to an Egyptian pyramid, due to a prolonged emphasis of the presence of the pyramidal form from a frontal view. However, in the top view-represented architectural drawings, the Pyramid simply disappears from the sketches as

it is transformed into squares and triangles. The geometric scheme, expanding from the central pyramidal form, can therefore be also seen as the continuous destruction of the central pyramid. Likewise, the surrounding petite pyramids, are represented as squares and triangles interacting with the central "square" to emphasise this relation of geometry. The "disappearance" already implies the instability of the pyramid form in the diagram.[49]

Secondly, the drawings depict a tendency to contend with the notions of the geometry and centrality of the pyramid. From the sketches of 1983 and 1984, one can perceive the attempt to abstract the Glass Pyramid from a detailed depiction to triangles and squares (Figure 45; Figure 47).[50] The square base of the pyramid is flanked by a larger, rotated square, which is further connected by an extended square frame. Above the ground, this suggests the design of the surrounding pools; under the ground it reveals the area of the reception hall.[51] Following this reading, each segment of the design can be connected on the drawing, which, as suggested before, demonstrates the integrity of the architecture. However, these geometric elements are "derived" from the central base of the architecture, which, on the contrary, implies the instability of the central pyramid, as

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[49] Another point to note is that Pei's renderings of his design ideas are mostly represented through a two-dimensional architectural plan which overlooks the ground. In comparison, the front elevation and section drawings are very limited. This suggests the way in which Pei considers the architecture is different from the traditional architectural drawings for the purpose of presentation. Rather, Pei's drawings serve more for the evolution of the design intention, which thus makes them more "diagrammatic" than simply being architectural drawings. The drawings reveal a spatial relationship between the above ground and the underground. The Pyramid is no more an elevated symbol on the ground, but a hollowed square for the unfolding of spatial relations especially beneath the ground. In this concern, the architectural diagram also presents a reading that challenges the traditional readings of architectural drawings.

[50] Rustow also noted that "the surface of the Grand Louvre was paradoxically the first element to be design the last to be completed," which once again confirmed the role of the Glass Pyramid as part of the integrated regional urban and architectural plan. Rustow, "The Expansion of the Louvre."

[51] Following the scheme of the rotating squares, the Napoleon hall covers twice the area of the Pyramid base. Ibid.

the formal tendency of the architecture is centrifugal rather than centripetal. Moreover, while the drawing itself integrates the design of the above ground and the underground, it nevertheless indicates a tendency for the reader to separate the segments of triangles and squares on the plan, as they are ultimately structures of different floor levels. In this sense, the architecture is being destabilised and disseminated. This is also where the textuality of the architecture is first seen: the drawings represent the form and structure that seem to follow the classical traditions of stability and geometry, but these ideas are themselves being contradicted by the implicit structural differences of the segments. The central pyramid, to borrow Eisenman's deconstructive concept, becomes a signifying device that supports but also subverts the classical language of stability and centrality.

Thirdly, the entire architectural drawings further imply the notions of instability and movement, rather than the permanence and centrality that the Glass Pyramid conveys from the surface of the structure above the ground. Pei's sketches can be read from two perspectives. One is as a chronological revision of the Grand Louvre plan from 1983 to 1985, as discussed in the previous section. The other approach is to take the drawings as Pei's experiments with geometric representation, which connect to the structural (and textual) reading of the pyramid and demonstrate the presence and identity (of the architecture).[52]

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[52] Relating to the discussion of architecture as/and language in the previous chapter, the two views on looking at Pei's diagrams correspond to Eve Blau and Nancy Troy's summary of Giedion's spatial study, one of which "represents" architecture, while the other "imagines" architecture. Eve Blau and Nancy Troy, "Introduction," in *Architecture and Cubism*, ed. Eve Blau, et al. (Montréal; Cambridge, MA: Centre canadien d'architecture/Canadian Centre for Architecture; The MIT Press, 1997), 8. Robin Evans, *The Project Cast: Architecture and Its Three Geometries* (London: The MIT Press, 1995), 57–8.

To further illustrate the issue, it is necessary to return to the earliest drawing in 1983 (Figure 45). There are four aspects that denote the textuality of the architectural diagram:

1) The sketch depicts the rendering of the architectural ground of the Grand Louvre. Taking it as the plan of the ground level of the central pyramid, the edges of the pyramid, and the larger square defining the entire area within Cour Napoléon can be recognised from the plan (Figure 57). Following this view, it is possible to perceive the Pyramid from above the ground, and thus the focal point lies in front of the plane of the drawing. The three smaller pyramids, projected on the sketches as squares, also correspond to this emphasis on the projection of the pyramid with a frontal focusing point.

Here, what is worth noticing is the marking of the arrows, which, rather than denoting any actual functions of the triangular segments (of the glass panels), seem to be indicating a tendency to counter the centralised form of the pyramid. The arrows marked on the surface of the central pyramid (of which the entrance and a side of the pyramid are covered by grids) lead our view from the central square to the larger square, expanding the central form to the outside. The four sides of the pyramid are projected on the plan as four triangles, which expand outwards from the central pyramid and are echoed by the edges of the larger square.[53] In other words, the arrows denote the textuality of the

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[53] The triangles in the middle between the central pyramid base and the larger square are realised on the ground plan as shallow pools to create the effect of mirroring and transparency. Rustow suggests the water pools emphasise the Glass Pyramid's architectural ambiguities between vagueness and transparency. Rustow, "The Expansion of the Louvre."

diagram. The scheme conveys a sense of consistency, but at the same time in movement, instead of being stabilised on the two-dimensional plans.

2) The destabilisation of the scheme is further seen from the unfixed perspectives in reading the forms. When the sketch is viewed as an architectural rendering of the underground Napoleon Hall, it suggests another different perspectival and spatial relation (Figure 58). The lines depicting the triangles can also be viewed as the edges of the reception hall. Combined with the edges of the base of the central pyramid, they constitute three small triangles surrounding the central square. The size of each triangle equals one quarter of the central square, which means that they can be folded up to form three sides of the pyramid, and is symmetrical with the quarter of the square. Viewed from the planimetric space, it is as if the central square base is fragmented into four pieces, and three of them are unfolded on the plan as the triangles, leaving the entrance side open. In this way, the three triangles mirror the three quarters of the central square.[54]

3) Furthermore, considering the three triangles as a three-dimensional rendering, the lines can also be seen to compose forms that mirror the three sides of the pyramid, projected on the base as three quarters of the square. In this way, the pyramid itself becomes the component to be deconstructed and mirrored as three triangles. The triangles, projected on the sketch, then suggest a polyhedron net for the form of the pyramid. Projected on the plan, they also form the edges of the reception

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[54] One of Pei's drawing in 1984 also indicates the mirroring of the entrance side, which compensates for the missing fourth quarter triangle (Figure 47).

hall underground and indicate the lower ground floor of the plan. This process of reading the drawing reveals the deconstruction of the pyramid and the interaction between planimetric, two dimensional spaces (the above ground and underground levels) and between two-dimensional and three-dimensional spaces (the mirroring and deconstruction of the central square vs. the mirroring of the façades of the pyramid). The triangular areas, realised as water pools above the ground, become the transitional geometric components for reading a polyhedral space that connects the above ground and underground. This means they also function as textual elements that subvert the authorial perspective in reading the stabilised and centralised architectural scheme.

4) This polyhedral form is repeated by the rotated squares on the right, which once again creates a polyhedral net for the pyramid. While the smaller pyramids are designed above the ground, they also produce spatial connections between the above ground and the underground by the transparency of the glass structure. Seen from the viewpoint of the sketch, they also work to emphasise the form of the polyhedron and are therefore transitional components between the two levels. In the sketch Pei produced in January 1985, the inverted pyramid Pei rendered on the left is completely converted to a polyhedron on the right, for which it is even difficult to suggest a fixed vanishing point (Figure 56). This drawing provides a floating image of the Pyramid, which is being folded and at the same time unfolded on the plane. The pyramid therefore becomes a floating and transferrable

object. The three-dimensional spaces perceived from the sketches, therefore suggest a sense of movement and transformation: the space itself is flowing and interacting with its various transformations, which thus becomes a-materialised.

The sketches, on the one hand, are presented as architectural drawings of the project. On the other hand, they invoke an integrated, three-dimensional, rotating and repetitive representation of a geometric pyramid. The specific image of the Glass Pyramid has disappeared, but is re-represented from the drawings, that create an a-material image of the pyramid. In this sense, both the materiality of the pyramid and its presumed notion of stability become paradoxical in themselves. The material and form of the pyramid are both functioning as textual elements that challenge the presumed, "authentic" language of classical (or even modernist) architecture. The reading of the geometric connections is thus independent from its presumed context of stability and geometry of the design. The textuality of the architecture is once again perceived: the reading of the drawing reveals an off-centred interpretation of the original structure, making the pyramid itself an object to denote implicit and plural meanings. The contradiction of stability and movement, centrality and destruction becomes one aspect of the plurality of the architecture. These various paradoxes reveal the interiority of the architecture: rather than simply function to follow the presumed sense of geometry, centrality and stability, the drawings present the meaning of the pyramid form in an indefinite, irreducible and developing relationship within the diagram of the Grand Louvre.

4.3.3 Formal syntax of the architecture

In his reading of the textuality of architecture, Eisenman used Mies van der Rohe's projects in 1923–35 as case studies (specially focusing on the Brick and Concrete Houses, the Barcelona Pavilion and the Tugendhat House, and the Hubbe House and Ulrich Lange House).[55] What he recognises as the textual elements of Mies's architecture are the notational devices signifying the presence of two contradictory concepts, specifically, the classical and the modern, symmetry and asymmetry, as well as absence and presence.[56] For instance, in Mies's later work on the Hubbe House, Eisenman identifies that the columns "signify both the introduction and denial of a classical ordination," presenting a condition of "being and non-being, of imbedding and contamination" and "the textuality of the house."[57] In the Grand Louvre, similarly, we can perceive an operation of the textuality of the architecture following a paralleled system of symmetry and asymmetry, absence and presence. The architectural scheme of Pei's Grand Louvre also reveals a similar sense of textuality, in the sense that the "normalcy" of architecture, i.e., symmetry stability and centralisation, function as structural elements to indicate the implicit meanings of the scheme.

The first and foremost reflection of this contradictory representation of asymmetry is the so-called "*desaxement*" or "formal *parti*" of Pei's renovated scheme against the entire site plan of the Louvre, acknowledged since the beginning of the

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[55] Eisenman, *Inside Out*, 189–201.
[56] Ibid., 198.
[57] Ibid., 199.

project.[58] As Rustow points out, the Louvre itself does not conform to the *axe historique*

of Paris, originating at theTuileries Palace (now the restored garden of the Tuileries) to

connect to Place de la Concorde and Arc de Triomphe, and extended today to La

Défense.[59] On the other hand, although Pei's sketches present a developing process of an

architectural diagram being horizontally symmetrical, this sense of horizontal symmetry

is only guaranteed in Pei's new design itself, as the design was not necessarily placed in

the strict centre in the context of the Louvre Palace (Figure 59). In other words, Pei's

design is ultimately asymmetrical in the architectural context of the original Louvre.

However, Pei effectively worked within this context of asymmetry by creating a

resemblance of symmetry of the architecture, so that he created an *effect* to correspond

the Louvre to the wider axial context of Paris. This effect of symmetry responds to

Eisenman's discussion of the "instrumentality" of architecture which symbolises

"meaning of objecthood." (For instance, Vitruvius's notion of firmness indicates that

architecture should present an image *as if* it stands up).[60] Thus the diagram of the Grand

Louvre functions to signify an *effect* of symmetry.

This "normalcy" of symmetry is at the same time indicating the implicit messages

of asymmetry and instability. Pei's diagrams from 1983 to 1985 and the architectural plan

of the Grand Louvre also present the development of such a scheme being horizontally

symmetrical. However, in terms of the structure, this depicted *effect* of symmetry does

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[58] Rustow, "The Expansion of the Louvre."

[59] Ibid.

[60] Eisenman, *Written into the Void*, 199.

not necessarily guarantee the symmetrical effect will remain identical in the three-dimensional scheme. This is because, although the drawings present a horizontally symmetrical scheme integrating the above ground and underground area, the actual architecture ultimately separates the scheme into three layers (the above ground, the mezzanine and the underground floor). In other words, the revealing effect of the folding and unfolding of the central pyramid, read from Pei's two-dimensional representations, is no longer perceivable when it comes to the three-dimensional reality. Therefore, the "pyramidal" structure breaks the architectural system of geometry and stability. In terms of the form, the stability and symmetry of the pyramid is first of all deconstructed by the actual entrance of the pyramid, which breaks the all-symmetrical language of a classical pyramid.[61]

The formal importance of the pyramid, projected on the drawings as a square base of geometric transformations and interactions, is then diminished following the actual architectural scheme from the above ground to the underground. The glass structure, seen from above the ground, presents a pyramidal form, but contradicts the classical language of a pyramid in that it does not have a base for the pyramid. Therefore, the structure should be more appropriately designed as the roof for the underground reception hall which presents the *effect* of a pyramid, rather than being a true pyramid. In this sense,

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[61] Rustow suggests that although the design of the opening was almost the last resort among the possible ideas, to use a pyramid form as the entrance to the museum breaks the historical notion of a pyramid which should not be entered. Rustow, "The Expansion of the Louvre."

Pei's glass "pyramid" contradicts the classical language of a pyramid in terms of both its form (as it does not have the base) and function (as it can be entered).

The repetition and transformation of the triangular forms cease to be visible, because the projection of the pyramid form simply disappears from the underground; and even the square base of the pyramid projected on Pei's sketches is no longer present. The square projection of the central pyramid is now replaced by the four supporting columns of the structure. The ground of the reception hall is now defined by a larger diamond-shape, which in effect signifies the "unfolding" of the four sides of the pyramid as discussed in the previous section. However, this does not guarantee the iconicity of the pyramidal symbol anymore. In other words, the actual architecture also indicates the disintegration of the pyramid and thus distances itself even further from the classical language of a pyramid. This disconnection with the pyramid once again suggests that the interpretation of Pei's glass "pyramid" does not necessarily require association with any Egyptian symbolism. In this sense, the central pyramid, being almost invisible in the actual architectural structure underground, but meanwhile an essential element in the architectural diagrams, functions as a textual element. Viewed from above the ground, one would reasonably expect four enclosing wall structures derived from the square "base" of the pyramid as a possible continuation of the classical architectural language. However, the edges of the pyramid base only signify an *effect* of the enclosure of the architecture above the ground, rather than actually enclose the structure underground.

Beneath the ground, one witnesses the dissipation of all classical language of a pyramid: the square base of the pyramid disappears.

In Eisenman's examination of the textual elements in Mies's architecture, he focuses on the autonomy of one of Mies's columns in the Hubbe House, which is textual "because it is neither supporting, aesthetic, nor indicative," and therefore distanced "from the history of the symbolism of 'the column'."[62] A similar effect can be perceived in Pei's use of the four supporting columns, which are the signifying structure within the architecture. In terms of the Glass Pyramid above ground, they signify the "base" of the pyramid; in terms of the underground reception hall, the columns function not to enclose the space, but rather to expand the space.[63] Here, it is possible to employ one description of Mies's use of walls to make space being "active as a ground," as Pei also uses walls and columns to create an active space beneath the ground.[64] To borrow Eisenman's terms in his analysis of the textuality of architecture, the walls underground suggest the disappearance of the corners in the inside, which therefore indicate the absence of a space defined originally by the pyramid above the ground.[65] In Pei's Louvre scheme, the wall

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[62] Eisenman, *Inside Out*, 198–199.

[63] This is similar to what Eisenman's analysis that Mies uses columns in the Barcelona Pavilion as signs rather than symbols, which "signify the absence of corners." Ibid., 196–197.

[64] In his discussion of how Mies turned walls into textual elements that signify an absence of space, Eisenman points out the inconsistency of Mies's architectural language with the classical notions of "symbolism, hierarchy and mimesis" that can link to the symmetrical axis of the human body. Adrian Forty has provided a discussion of how Mies obtained this reading of space from the book of the Bauhaus teacher Siegfried Ebeling, *Der Raum all Membrane*; and how this reading of space as "extension of human body" was later developed as one of the key notions of "space" in 1920s, which in effect corresponds to Eisenman's analysis. Ibid., 189–201. Forty, *Words and Buildings*, 256–75. Fritz Neumeyer, *The Artless Word: Mies Van Der Rohe on the Building Art* (Cambridge, Mass: MIT Press, 1991).

[65] Eisenman, *Inside Out*, 198–99.

functions as notational device to emphasise the detachment from the formal, structural and symbolic definition of the pyramid. From this consideration, Pei uses the pyramid in a way that signifies its "absence," but at the same time as a state of "presence." This sense of presence is however different from the classical presence of a pyramidal form, since it no longer resembles the historical symbolism of "the pyramid."

As one descends from above the ground to under the ground, the textuality of the architecture is revealed from the disconnection of symbol (of the pyramid) and signs (of new presence). Although the underground structure still functions to indicate some conception of geometry and structure, its architectural language is entirely independent from either the pre-existing symbolism of a pyramid, or the geometric system of Pei's Glass Pyramid above the ground. Following this route from the entry to the reception hall, one also discerns the co-existence of asymmetry/symmetry and presence/absence via the textuality of facilities, which are nevertheless part of the architecture. Indeed, the pyramidal form nevertheless conveys a classical language of stability and symmetry through the central supporting column, stretching from the centre of the underground hall to the apex of the Glass Pyramid. However, because of the asymmetrical positions of the elevator and escalator within the architecture, as soon as the visitors go down to the reception hall, they are neither at the specific centre of the pyramid structure nor the centre of the reception hall. In other words, the visitors themselves (who initially enter the form which should not be entered and therefore already break this classical language of the pyramid) interrupt the symmetrical effect of the architecture. The passages in the

reception hall lead to either the mezzanine level or other directions, which further disrupts the stability, centrality and symmetry of the architecture.

In this way, Pei's Grand Louvre conveys its own version of presence, as opposed to absence and history. The autonomy of the architecture is seen from the derivative and unfixed spatial relations of the pyramid within the architectural scheme. The reading of the diagram of the Louvre thus reveals the interiority of the architecture, which dislocates the meaning of the architectural form and structure between the two-dimensional and three-dimensional representations. The diagram helps identify the autonomy of the architecture.

4.3.4 Glass as an intermediate element between diagram and architecture

Besides the dislocation in terms of form and structure, my discussion of the textuality of architecture now intends to investigate the displacement of meaning in respect to the form and material, focused on the Glass Pyramid. The two attributes of the Glass Pyramid, the use of glass as its material and the transparent effect of the glass, allow the reading of the textuality of glass used in the Louvre project, which helps further reveal the interiority of the architecture.

The reading of glass as a material particularly relates to Derrida's question of glass as an object (a term, a word and a material) of deconstruction.[66] Walter Benjamin

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[66] Jacques Derrida and Hilary Hanel, "A Letter to Peter Eisenman," *Assemblage*, no. 12 (1990).

criticises that glass is a material that has "no 'aura'"; it is "the enemy of secrecy"… "and possession."[67] However, Eisenman disagrees with the condition of non-secrecy, as he elaborates that, "While glass is a literal presence in architecture, it also indexes an absence, a void in a solid wall. Thus glass in architecture is traditionally said to be both absence and presence."[68] Eisenman continues to view architecture as "dominated by presence, by real existence of the signified"; and the status of glass is, though, absent, also signifies the presence of architectural elements, e.g. the presence of a window in the structure that allows the access of light. [69] The examination of glass as a material is linked to the reading of its effect of transparency, where the displacement of architecture is seen from the physical and visual transparency.

The discussion of architectural space and transparency begins with Colin Rowe and Robert Slutzky's discussions of Transparency.[70] As Thomas Patin noted, Rowe and Slutzky's reading of literal and phenomenal transparency contributes to a discourse between transparency as a physical fact made through glass and as a visualised phenomenon which is read through the building's "layered implication, figuration, ambiguity, interpretation and inference." [71] In particular, it is phenomenonal

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[67] Ibid., 9.

[68] Peter Eisenman, "Post/El Cards: A Reply to Jacques Derrida," *Assemblage*, no. 12 (1990): 15.

[69] Eisenman perceives the glass as the signifier of presence in architecture, which thus suggests a different sense of textuality compared to *glas* as a single word. Ibid.

[70] Rowe and Slutzky's reading of literal and phenomenal transparency are two of the approaches to read transparency categorised by Forty. The third way is "Transparency of meanings," for which Forty specifically refers to Vildler's discussion based on psychoanalysis. Vidler's reading of transparency has been discussed further in Chapter 3, in relation to the urban role of the Grand Louvre in forming a modern identity of the city. Forty, *Words and Buildings*, 286–88.

[71] Patin, "From Deep Structure to an Architecture in Suspense," 89.

transparency—"the object that is a function of the viewer's capacity to organise and reflect is quite another, and it is to the actual object that our attention should be given."[72] In Transparency Part I, Rowe and Slutzky examine three-dimensional spatial attributes from Cubist paintings and from architecture. [73] They start from Gyorgy Kepes's definition that transparency is not only a materialistic and optical attribute, but also "a broader spatial order": it means "a simultaneous perception of different spatial locations." [74] The existence of overlapped transparent planes, as Rowe and Slutzky discussed, demonstrates that transparency is "clearly ambiguous," rather than simply being "perfectly clear."[75] The ambiguousness of transparency contains two meanings. The first one is literal transparency, that is, "an inherent quality of substance," as being typically represented by the glass structure of a curtain wall: "it was stipulated, could be experienced in the presence of a glazed opening or a wire mesh." The second one is the non-literal "phenomenal transparency," which "might be perceived when one plane is

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[72] Ibid.

Rowe's study on diagrams brought some of the earliest inspirations for Eisenman's reading of architecture, although Eisenman's later interception of *form* and diagrams witnessed a "perverse extension" of Rowe's established diagrammatical notions. As Somol introduced, one witnessed in this process of architectural criticism (started from "the separation of space and structure on the nine square diagrams" and developed to the detachment of signs and symbols as marked by Venturi's postmodern duck-shed theory) a constant challenge to the traditions of interpreting architectural diagrams (as represented by Rowe's studies). This led later to "Rowe and company attempt[ing] to replace the neutral, homogenous conception of modernist space with the positive figuration of form, the new-avant-garde began to question the stability of form through understanding it as a fictional construct, a sign." This critical response introduced the influence of "linguistic and institutional relations."

Eisenman also to some extent recognises Rowe and Slutzky's analysis of transparency in contribution to investigating the textual conception of architecture, although this concept of architecture as text is more obvious in Giedion's discussion of architecture, space and time. Eisenman, *Inside Out*, 239. Somol, "Dummy Text," 7–14.

[73] Colin Rowe and Robert Slutzky, "Transparency: Literal and Phenomenal," *Perspecta* 8 (1963).

[74] Ibid., 45.

[75] Ibid.

seen at no great distance behind another and lying in the same visual direction as the first," and suggests a simultaneous presentation of several layers that are distanced concerning spatial relations.[76] Phenomenal transparency can be usually found in a "shallow space…, as opposed to the real space" and also from two-dimensional planes which provide new interpretations of space. To elaborate, Rowe and Slutzky use the classical modernist examples of Gropius's Bauhaus Dessau building and Le Corbusier's Villa Stein to illustrate literal and phenomenal transparency.[77] In their observations, they conclude the ambiguity of transparency from the pictorial depictions of architecture and the diagrams: the glass structure does not necessarily guarantee phenomenal transparency, while a multi-layered spatiality can imply the phenomenal transparency through the interaction of space.

The Louvre Pyramid (extending to the Grand Louvre) also provides a case study for an examination of literal and phenomenal transparency. Firstly, the literal transparency is convyed firstly by the glass pyramid as a physical object. Secondly, the

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[76] Ibid., 46. Colin Rowe and Robert Slutzky, "Transparency: Literal and Phenomenal...Part II," *Perspecta* 13/14 (1971): 288.

[77] While the Dessau Bauhaus building has been regarded by Sigfried Giedion as the classical modern architecture typical of the international style, literal transparency, its all-around curtain wall structure denotes only the sense of literal transparency. On the other hand, the Villa Stein reveals phenomenal transparency through three architectural layers from the facade and five architectural layers from the internal spatial structure. Rowe and Slutzky specifically refer to Giedion's praise of the Dessau Bauhaus building.

Rowe and Slutzky's criticisms of the "modernist box" form of the Dessau Bauhaus building and its following representation of literal transparency can also be applied in the examination of Pei's Museum for Chinese Art, Shanghai (1946). Although Pei's Museum is without the curtain wall glass structure, its form as a modernist box also indicates the literal transparency of the design. Furthermore, the architectural façade allows people to view the internal space integrated with the architectural façade, which therefore also suggests a sense of phenomenal transparency. Rowe and Slutzky, "Transparency." Rowe and Slutzky, "Transparency Part II," 288. Sigfried Giedion, *Space, Time and Architecture: The Growth of a New Tradition* (Cambridge: Harvard University Press, 1944), 490–91.

spatial interactions perceived from the architectural diagram of the project (rather than from the actual building) reflects the phenomenal transparency which relates to the interiority of the architecture. In terms of the glass pyramid as a realised object, it first and foremost demonstrates literal transparency. Pei emphasised in his interviews how the literal "transparency" of the pyramid would emphasise the original nineteenth century façade of the Louvre.[78] This sense of literal transparency that the pyramid indicates, along with its steel-gridded structure, corresponds to the modernist notion of glass construction and mechanisation that Henry-Russell Hitchcock and Philip Johnson analysed in *The International Style*, in which Gropius's Dessau Bauhaus building has also been included as a case study.[79] Furthermore, the literal transparency of the Pyramid also connects to its role as a national monument for Mitterrand's politics, as discussed by Vidler and Fierro.[80]

Concerning the achievement of a complete transparency, Vidler nevertheless points out the difficulty, as Pei himself has admitted literal transparency—referring to pure transparency of glass as an actual material—is difficult to realise and thus poses problems to architectural construction.[81] This transparency, under Vidler's pen, produces

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Pei and Boehm, *Conversations with I. M. Pei*, 84–5.

[79] This consistency with the International Style can be further linked to the representation of Pei's architectural and cultural identity, since that Pei has used glass as part of his architectural vocabulary in many of his commissions in the US and Europe, and the transparency of glass (being invisible, visually light, 'meaningless') suggests the transportability of Pei's cultural and architectural identity.

[80] Vidler perceives that the suspicions of transparency originated from Pei's Louvre Pyramid. Though the Pyramid, being a transparent structure, is a practical solution to make the new monument invisible, to emphasise the background of Lefuel's nineteenth century façade, its sense of transparency also indicates, as Vidler suggests, a "status of the principle" of modernism—a "progressive modernity" that is against the "recessive" historicism of postmodernism. Fierro, *The Glass State*, 33–41. Vidler, *The Architectural Uncanny*, 217–25.

[81] Vidler, *The Architectural Uncanny*, 220.

obscurity (the opposition) and reflectivity (the reversal). In this sense, literal transparency itself becomes ambiguous. Rustow also points out the ambiguousness of the pyramid's literal transparency, since "the material qualities of glass are truly transparent only in an abstract or conceptual sense."[82] The pyramid is most of the time reflective and opaque; only when viewed from the inside does it become a transparent structure to look through.[83]

This inconsistency between Pei's statement on the transparency of the pyramid—"the major objective" which emphasises the original Louvre façade, and the ambiguous effect that the pyramid actually produces, nevertheless reminds us of Jencks's criticism of it, that it blocks the view of the Louvre and becomes a personal monument to Pei.[84] Although it is still possible to see through the glass pyramid to the original Louvre façade above ground, its sense of "transparency" is at best translucency. Therefore, the ambiguousness of the transparency is not only the technical restriction to achieving a pure transparency, but also an intention of Pei to build a non(semi?)-transparent structure. The steel-gridded structure beneath the glass, while providing support, nevertheless further emphasises the non-transparent form of the pyramid.

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[82] Rustow, "The Expansion of the Louvre."

[83] The comparison comes from Roland Barthes's discussion of the Eiffel Tower. Rustow considers the Louvre Pyramid has played a similar role as a symbol for Paris as the Eiffel Tower. Ibid. Barthes, "The Eiffel Tower."

[84] Cannell, *I. M. Pei*, 7.

Although the literal transparency remains ambiguous, Rustow further suggests the pyramid's demonstration of phenomenal transparency considering its architectural relation against the façade of the Louvre Palace:

> In Pei's project there is a deliberate confrontation of historical moments and consequently of our thinking about them and of what they represent ideologically. The transparency of the pyramid comes to stand for a kind of guilelessness or honesty, its bright reflections scowling judgmentally at Lefuel's shadowy, opaque façades, implicitly closed, dishonest, hiding something. Standing on the "belvedere," looking out on the 19th century palace, we have then the shining promise of latter-day heroic modernism becoming additionally the looking glass through which history is seen.[85]

There are two constraints to consider in Rustow's analysis. Firstly, the phenomenal transparency Rustow suggests only happens inside the pyramid, when one looks from the inside to the outside. Secondly, in Rustow's statement, the pyramid produces two layers of architectural spaces. The first layer is the realised modern pyramid and the reception hall. The second layer is the façade of the Louvre built in the nineteenth century. However, the phenomenal transparency is nevertheless perceived from a historical relation with the Louvre, rather than from a mathematical and geometric representation of space. The creation of a historical space is more accurately addressed as a space-time production, while in this sense of "phenomenal transparency" between the two façades, neither a geometric, mathematical three-dimensional space is perceived from a shallow space or a planimetric plane; nor can one experience "a contradiction of spatial dimensions" as Rowe and Slutzky have analysed (although it can be referred to as at most a "vertical" reading of the spatial relations between the external and the

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[85] Rustow, "The Expansion of the Louvre."

internal).[86] Therefore, in the realised Glass Pyramid, this transparency does not yet provide a "true" sense of phenomenal transparency.

On the other hand, phenomenal transparency is much more evidently conveyed through the architectural sketches than in the Glass Pyramid as an actual building. This follows Rowe and Slutzky's study of Transparency Part II, which investigates the manifestation of three-dimensional attributes and "layered surface patterns" from the architectural façade itself.[87] In the case of Pei's project, the manifestation of multiple spaces is already visible from the previous discussion of each drawing, which has provided multiple spatial interpretations via the creation of polyhedrons. These sketches, from 1983 to 1985, suggest a constant transition and exploration of the spatial representation that allows our eye to observe imaginary spaces beyond the two-dimensional plans, while all these spatial relations work for the unity of the regional plan. This also corresponds to Rowe and Slutzky's notion that the stratification of space is achieved through the imaginary projections of the real plane.[88] Furthermore, our investigation of the imaginary and perspectival spaces of the sketches has suggested

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[86] In the first essay, Rowe and Slutzky define the phenomenal transparency as a contradiction between an explicit space and implicit spaces, as exemplified by Le Corbusier's Villa Stein. The spatial construction is perceived through reading the "vertical" planes between the architectural façade and the internal volume, as well as through reading the "horizontal" planes between floor levels within the internal space. In the second essay, Rowe and Slutzky use Michelangelo's façade for San Lorenzo to investigate the various possible geometric interactions perceivable from the two-dimensional plane of the design. This analysis of San Lorenzo is apparently based on geometry and optical symmetry, while this kind of geometric investigation is much less evident in Rustow's analysis. Rowe and Slutzky, "Transparency," 50–52. Rowe and Slutzky, "Transparency Part II," 293–95.

[87] Rowe and Slutzky, "Transparency Part II." Blau and Troy, "Introduction," 3.

[88] Rowe and Slutzky, "Transparency," 52.

spatial contradictions of several layers that once again demonstrate the phenomenal transparency of the design.

Following Rowe's examination of the pictorial attributes of architectural façades for the phenomenal transparency, Pei's operation of transparency can also be analysed from his architectural diagrams. This analysis is, however, more "textual" in the sense that it reveals the unstable facility of the diagrams that challenges the notions of proportion (as further indicated by Rowe) and stability (as the classical language of the pyramid form and architectural drawings). Once again, the chapter takes Pei's sketch in 1983 compared with the realised Louvre plan as a point of departure (Figure 44; Figure 45). Considered as a two-dimensional plane, the sketch indicates a reading of "horizontal" relations of the structures composed of several floor levels, extending from the left to the right (Figure 60). However, since the plane is representing architectural layers both above and beneath the ground, the actual spatial relation that the drawing represents is a vertical reading from the ground floor to the underground levels (Figure 61). As discussed on the textuality of the architecture, the larger square defines the area above the ground; one may then expect it to also define the area underground (marked as the red areas). However, the actual main space of the reception hall is defined by the form of the rotated square (marked as the blue area). Moreover, although the form of the rotated square is clearly perceived in Pei's sketch, it is in effect represented by four sides of the triangle (of the water pools). In other words, the floor plan underground is not actually revealed

above the ground. The wall structure that defines the underground area is hidden between the triangles, with the left corner not being shown above the ground at all.

The disguise of the underground plan and the stratification of spatial relations is increasingly visible in Pei's subsequent sketches. For instance, in the sketches made in 1985, at least four different spatial relations can be perceived on the two-dimensional plane (Figure 62; Figure 63; Figure 64; Figure 65; Figure 66; Figure 68). These geometric variations become imaginary spatial projections because they are in effect various elements on multiple floor plans integrated on the same planimetric space. The stratification of space in Pei's sketches suggests the interaction between explicit space (actual architectural plan of the above ground) and the implicit spaces produced from imagined geometric relations. However, the actual form of the underground floor plan, that is, the form of the rotated square, is not necessarily perceived from this stratification of space. This is because the form of the rotated square does not follow the other triangular and rectangle movements on the plane. Pei seems to have been intentionally hiding the formation of the rotated square from the reader's perception through the disappearance of the left corner of this rotated square that is "buried" among the complicated multiple geometric interactions. There is also a lack of a "larger rotated square form" around the base of the central pyramid to correspond with the internal rotated square. Therefore, the actual geometric relations of the underground are disguised by other spatial stratifications (Figure 67). In other words, although the sketches integrate and represent elements of several architectural layers as explicit, the "actual"

underground plan is implicit and even "invisible'. In this sense, this phenomenal transparency that the Louvre project conveys has three implicit-explicit spatial relations. The first one is the spatial stratification, represented by the actual (explicit) architectural planes to create imaginary (implicit) geometric interactions. The second one is the contradiction between the visible (explicit) geometric interactions of several architectural layers and the invisible (implicit) architectural plane of the underground floor, as presented by the form of the rotated square.

The perception of the third contradiction necessitates a return to Pei's first sketch in 1983 to compare it with the floor plans of the Louvre (Figure 69; Figure 70). In Pei's sketch, the intersection of forms invites readers to presume the location of the columns either at the four ends of the larger square, or at the intersections of the rotated square (Figure 69 e, f, g). However, the actual locations of the columns supporting the entire structure are at the four corners of the base of the central pyramid (Figure 69, a, b, c, d, a', b', c', d'). Once again, viewed from the sketch, one might further expect the locations of wall structure (Figure 69, abcd) to follow the projection of the central pyramid that is encompassed in the larger square area underground. However, the actual wall structure is the area of the rotated square (Figure 69, efgh), which permits the open plan of the underground area. To view the diagram as the scheme of the above ground, the central square is separated from the triangular pools, which are then intersected with the larger square defining the area at Cour Napoléon. This distance between the two areas is nevertheless filled by the four columns (a, b, c, d) supporting the entire structure; thus the

pyramid structure is connected with the surrounding water pools, and the architectural layers above and under the ground are interconnected with each other.

The phenomenal transparency perceived from Pei's sketches and the architectural plans of the Louvre direct the discussion back to the pyramid. On the one hand, the pyramid functions as an independent architectural monument of ambiguous (non-)transparency above the ground. On the other hand, it functions as the roof top of the underground reception hall that indicates both the literal transparency in two aspects: one perceived from a "vertical" reading of the architectural layers between the Louvre Pyramid as the internal and the Cour Napoléon as the external; the other from a "horizontal" reading of the spatial contradictions beneath the central pyramid. The complexity of the pyramid's transparency is interconnected with the articulation of the Grand Louvre proposal. Moreover, the transparency of the Louvre Pyramid, read from both the architecture and the architectural diagrams, indicates a "negative" co-existence of three systems of transparency, opacity and reflectiveness. This multiple meaning of "transparency" demonstrates the textuality of the glass material.

The analysis of the design's formalist transparency finally leads us back to the formalist and stylistic debate of the Grand Louvre. Jencks claims the pyramid indicates inconsistency between its form and function: the only functional space is the entrance, while the entire upper part of the pyramid is decorative and non-functional. Indeed, while Pei claims his intention was to build a transparent and invisible structure, the

reflectiveness and vagueness of the Glass Pyramid turns its role into that of a decorative

landmark. Rustow also points out the contradiction of the Pyramid's entry design:

> …It is tempting to imagine the pyramid hermetically sealed, surrounded on all four sides by reflecting pools, enclosing a great void without belvedere, entry, escalators, stairs and lifts, without a central column awaiting a sculpture—tempting to imagine it, in other words, useless, unencumbered by all that makes it a building…. For paradoxically, if there is one part of the design which most thoroughly subverts its formal and symbolic intentions, it is the entry itself. [89]

The actual function of the entry, although inviting visitors to walk into the

structure, is nevertheless inconsistent with this claimed sense of voidness of the Glass

Pyramid.[90] Pei claims the Pyramid is "transparent" and "neutral," and should be an

"unornamented" structure. Now, in turn, it has become an ornamentation contradictory

to his statement. In this way, the structure of the pyramid is as contradictory and unfixed

as that of Pei′s architectural identity. This presence of the Glass Pyramid, ultimately

serves for an autonomous sense of presentness of Pei's scheme.

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[89] Rustow further explains the problem of the entry, with a reference to Pei that the form of the entry is decided from "the least bad of several bad alternatives." Regardless of the design of the entry, its opening on the façade of the Pyramid has interfered with the formal integrity of the Pyramid itself. Rustow, "The Expansion of the Louvre."

[90] This nevertheless recalls Eisenman's reading of the glass as a material of absence and represent the sense of the void. As one enters the Glass Pyramid, the in-between status of absence/presence of the glass structure has also been interrupted. Eisenman, "A Reply to Jacques Derrida," 15.

Part Three: Pei's museum architecture: time, place and purpose

Chapter 5　The Museum of Islamic Art: constructing an Islamic identity through a language of hybridity

The three of Pei's museum projects discussed so far have revealed the manifestation of the plural identities of Pei and a dynamic relationship between Pei's modern structures and the representation of national identity. On the one hand, the perception and reception of Pei's architectural identity is closely related to the role of architecture in representing national identity in the state. In this process, the representation of a national identity is shown as an engagement with history and the past traditions or local characteristics through the instrument of modern structure and materials, in which the transparency of the glass particularly played a significant role in narrowing the distance between Pei's modern design and the historical architectural setting. On the other hand, the museum, functioning as a system of architecture, also develops its meanings in the changing contexts of the language of architecture. The architectural language, as a constituting part of the system of architecture, comprises both the commentary from the public critics and architectural historians that considers the cultural and political meanings of the museum in society, and the talking by Pei as the dominant form of materials in the present available sources on the interpretation of his

projects. The architectural drawings, meanwhile, also function as an essential form of architectural language which helps develop the meanings of architecture. Reflecting on the plural manifestation of Pei's identity, discussions also concern issues such as his hybrid cultural identity, the representation of Chinese characteristics and the vocabulary of architectural modernity and monumentality. These question help deepen the reading of the social and cultural role of the museum as a building type.

To conclude on the different aspects addressed in the previous case studies of Pei's project, Part III will conduct a brief analysis of Pei's most recent project, the Museum of Islamic Art (MIA) in Doha (2000–8) (Figure 73). Located in Qatar, the MIA reflects an expansion of Pei's museum activities to the Middle East, both in a geographical and cultural sense. Meanwhile, it also marks a return of Pei's architectural practice from Europe to Asia, yet this image of the Orient seems to be in parallel to Pei's conception of East Asian culture, as discussed in Chapter 1. In the context of the Muslim world where the development of self-identity and regional characteristics of Islamic architecture remained essential issues in the late twentieth century, Pei's project raises questions regarding how the project has responded to the cultural environment in Doha and helped contribute to the representation of Islamic identity.[1] An overview of the project helps summarise the different aspects discussed by the thesis. In doing so, my

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[1] The development of regional characteristics and the position of Islamic architecture were among the topics of discussion in the 1995 Aga Khan Award for Architecture. Previously, in 1980, one question raised on Islamic architecture was the representation of cultural symbols in Islamic architecture. The calls for the search for a regional language in the Islamic world can be seen from Jonathan G Katz, *Architecture as Symbol and Self-Identity* (Philadelphia: Smith-Edwards-Dunlap; The Aga Khan Awards, 1980).

discussion will also consider the impact of Pei's practice on the understanding of museum architecture.

The examination of the MIA also follows the themes of national identity and language. In the first part, the chapter examines the architecture in its determined architectural context, relating to the way in which Pei constructs a version of Islamic identity. However, unlike projects discussed in the previous chapters, which point to specific architectural representations of nationalism accompanied by government sponsorship, the MIA conveys a version of identity which can be more specifically considered a mixed conception of Islamic characteristics. Moreover, the building from which Pei developed his inspiration for the scheme also reveals how his project might contribute to the image of Qatar as a unifying state of cultural supremacy in terms of political positions, incorporating the cultural images of Arab states and Iran. Since Pei's version of the representation of Islamic identity in Doha to some extent corresponds to the image of Qatar as an international city sponsored by the government, it reflects the urban and cultural purposes of constructing museum. From a cultural perspective, Pei's employment of his geometric strategy also articulates a blurred boundary between the East and the West.

In the second part, the chapter evaluates the potential to read the language of the architecture through a formalist language of the building. As will be discussed, the chapter considers a language of hybrid cultural identities, particularly linking the project with Pei's design of the Suzhou Museum in China, conceived at the same time but

completed two years previous to the MIA. The perceived connection between the two projects opens up the possibility of reading the architecture not necessarily confined to its given architectural setting—as a way to further explore the meaning of the architecture as an autonomous system which the thesis demonstrated through the Grand Louvre. The MIA, presented both as a specific scheme in the Islamic context and an architecture of autonomy that contains its own meanings, suggests its complexity in terms of its cultural representation and structural analysis. These aspects affect the perception of Pei's international identity as a developing entity, containing the problematics relating to the characteristics of museum architecture, which are resolvable to some extent, yet cannot be neutralised.

5.1 The Museum of Islamic Art

As with the DHM and the Louvre, the MIA was a direct commission to Pei by the government of Qatar. It functions to correspond to a concept of Islamic museum both in political and cultural terms.[2] The plan to construct a museum of Islamic art was sponsored by the State of Qatar, the initiative being to establish a new museum and research centre to promote education and research on Islamic art.[3] The construction site was determined as Al Corniche Street in Doha, facing the Persian Gulf, an area already relatively developed in terms of cultural and touristic projects and also considered to be Doha's

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[2] Mariam Ibrahim Al-Mulla, "Museum in Qatar: Creating Narratives of History, Economics and Cultural Co-Operation" (The University of Leeds, 2013), 199.

[3] "International Competition for the Museum of Islamic Arts Doha, Qatar," *Medina*1998.

cultural centre.[4] Following an international competition for the MIA, the design by the Jordanian architect Rasem Badran was selected as the winner.[5] However, Badran's winning design was not executed.[6] The project reached Pei via Luis Monreal, the general manager of the Aga Khan Trust for Culture, which was followed by the permission of His Highness the Emir of Qatar for the construction. The decision to give the commission to Pei might have reflected the government's aspiration to brand the city's image through designs by a "starchitect."[7] Pei, rather than agreeing with Al Corniche Street as the architectural site, proposed his museum be constructed on an individual island, 60 metres away from and facing the main island of Corniche (Figure 74; Figure 75).[8]

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[4] The urban status of Doha can be seen from the city's surging development of its cultural area, the Corniche where the MIA was initially planned to be built. The area is next to the Persian Gulf, where museum projects have been developed new urban brands. Among these there are Frank Gehry's Guggenheim Museum and Norman Foster's National Museum in Abu Dhabi, as well as Jean Nouvel's National Museum in Doha. Nicolai Ouroussoff, "Building Museums, and a Fresh Arab Identity," *Blueprints for the Mideast: A New Silk Road*, The New York Times, November 26, 2010, accessed August 10, 2017, http://www.nytimes.com/2010/11/27/arts/design/27museums.html?mcubz=0.

[5] Badran's design focuses on the architectural representations of "traces of the traditional city of Doha" by using the patterns of *tawaf,* an Islamic ritual during Hajj and Umrah, to proceed around the Kaaba in a counter-clockwise direction seven times, and other geometric patterns of Islamic characteristics. Badran develops the layout of the plan in the transformation of a matrix, following his conception of a "metaphysical" order of the architecture. James Steele and Rasem Badran, *The Architecture of Rasem Badran: Narratives on People and Place* (London: Thames & Hudson, 2005), 123–48.

[6] Paul Goldberger considers one possible reason that Badran's design was not permitted was that Badran, "despite his distinguished reputation within the region, did not have the degree of international stature the nation sought." Paul Goldberger, "Islamic Architecture, Modernism, and I. M. Pei: The Challenge of the Museum of Islamic Art," in *Hamad bin Khalifa Symposium on Islamic Art* (The Museum of Islamic Art, Doha, Qatar: Hamad bin Khalifa Symposium on Islamic Art, 2011).

[7] Al-Mulla observes that Pei was almost used as a brand by the Qatar government to promote their image of the museum. By the time of the opening of the MIA, Pei's name has been repeatedly advertised. It is reasonable that Pei, already a well-renowned Pritzker Prize-winning architect, then embodied a strong Western identity for the commission. Al-Mulla, "Museum in Qatar," 196–8.

[8] Pei considered an independent construction site guaranteed the museum would not be blocked by the skyscrapers and other new buildings developed on Al Corniche, which were also a reflection of the international image of Doha. While in the DHM, Pei's design of the extension structure is hidden behind the main street of Unter den Linden, the MIA suggests an increasing autonomy for Pei to depict his personal identity in the architecture. The project nevertheless helps form the art collection of the Gulf Emirates, as in the similar cases of the MUDAM and Miho Museum. Jodidio and Strong, *I. M. Pei*, 328–9.

In the MIA, Pei provides an interpretation of Islamic features different from that of Badran's design. While Badran develops a system of matrices through transforming patterns of *tawaf*, Pei takes the mosque of Ibn Tulun as the prototype to construct his conception of Islamic essence. A further reading of the MIA will firstly reveal one problem concerning the representation of identity: whereas Pei's Chinese-American identity and modernist background already suggest a distance from a specific Islamic identity, his "modernist" design presented a global and mixed interpretation of Qatari characteristics featuring modernity and cultural hybridity. Al-Mulla considers that Pei's version of a collective concept of Islamic identity better serves the political intention of the government to establish Qatar's international image through integrating different Islamic elements, rather than emphasising a historical vocabulary of Qatari culture and traditions.[9]

At first glance, the sculptural form with evidence of ornaments on the architecture suggests a strong postmodern vocabulary which seems to be different from Pei's previous pro-modernist designs (the most distinctive project discussed in the thesis is the Museum for Chinese Art). However, the MIA nevertheless displays some pro-Islamic characteristics (Figure 76). The pedestrian access to the museum from the side of Al Corniche is realised through the path of a stair water feature, on both sides of which the cascade is accompanied by a line of palm trees. The end of the path is met by a water fountain. This employment of water elements assimilates the effect of the front of a

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[9] Al-Mulla, "Museum in Qatar," 199–200. Ouroussoff, "Building Museums."

Persian garden, as for instance represented by Taj Mahal and the Chahar Bagh.[10] In a political sense, this reference to the Persian garden might have incorporated the Islamic identity of the Persian world. The front view is dominated by the principal building, which is the museum part of the MIA. The educational centre, placed in a box-shaped building, is situated right of the main building of MIA. Corresponding to the education centre is a pair of tall lanterns on the west of the complex, marking the entrance for visitors by boat, the forms of which also suggest a resemblance to minarets in Islamic architecture.

The central structure presents a sculptural form that changes its movement from the ground level to the top, crowned by a high tower shaped as a rotated cube, yet the monolithic presence of the exterior also makes the internal structure mysterious to the viewer. The unfolding of geometrical forms from octagon to cube helps create a language of symmetry on the front and back façades of the structure. The entrance is marked by a portico, in the frame of a round arch reminiscent of a *mihrab* (a shallow niche in the wall of a mosque which points to the direction of Mecca, the *qibla*).[11] The dynamics of the structure are balanced by the less-ornamented, cream-coloured surface in limestone.[12]

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[10] For the use of water as an essential element in a Persian garden is a sacred symbolism of the source of life for the plants of the garden and the architecture, see Abdul Rehman and Shama Anbrine, "Unity and Diversity of Mughal Garden Experiences," in *Middle East Garden Traditions: Unity and Diversity*, ed. Michael Conan and Dumbarton Oaks (Washington D.C.: Dumbarton Oaks Research Library and Collection and Spacemaker Press, 2007). Mehdi Khansari, M. Reza Moghtader, and Minouch Yavari, *The Persian Garden: Echoes of Paradise* (Washingotn D.C: Mage Publishers, 1998).

[11] Robert Hillenbrand, *Islamic Architecture: Form, Function and Meaning* (Edinburgh: Edinburgh University Press, 1988), 599. Andrew Petersen, *Dictionary of Islamic Architecture* (London and New York: Routledge, 1996), 186–87.

[12] "An Iconic Building on the Doha Waterfront," The Museum of Islamic Art, accessed July 24 2017, http://www.mia.org.qa/en/about/the-museum-building.

The most conspicuous ornament on the architecture is the use of semi-circular arches as the form of windows and openings on the ground level of the exterior, and particularly on the bridge structure connecting the educational centre with the main museum.

Pei has explained how his design for the MIA was inspired by the mosque of Ibn Tulun (876–79) in Cairo, instead of other sources such as the Mosque-Cathedral of Córdoba and the fortress of the Monastir Ribat.[13] More specifically, the final form of the architecture demonstrates an inspiration from the ablution fountain (*sabil*) of Ibn Tulun (Figure 78). As Pei explained, the main reason for using Ibn Tulun as the source to create his conception of the essence of Islamic architecture was its potential to link to his approach to geometry, as distinguished from the ornamented characteristics of the Córdoba:

> The small ablutions fountain surrounded by double arcades on three sides, a slightly later addition to the architecture, is an almost Cubist expression of geometric progression from the octagon to the square and the square to the circle. … This severe architecture comes to life in the sun, with its shadows and shades of colour. I had at last found what I came to consider to be the very essence of Islamic architecture in the middle of the mosque of Ibn Tulun.[14]

Although Pei has effectively established a connection between his building and the "essence of Islamic architecture," this reading has nevertheless imposed a modernist understanding on the historical identity of Islamic architecture, particularly Ibn Tulun. This privileged position as a modernist is to some extent reminiscent of Gropius's definition of the essential elements of Chinese architecture—the wall and the small

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[13] Jodidio and Strong, *I. M. Pei*, 328–30.
[14] Ibid., 330.

garden patios—in Pei's graduate design of the Museum for Chinese Art in Shanghai.[15]

Although Pei showed his reverence for history and the local identity of the mosque, he nevertheless avoided the depiction of ornaments and use of decorative (and non-geometric) forms, in a manner similar to Hitchcock and Gropius's readings of the characteristics of historical monuments that kept a distance from the emphasis on traditional elements and use of precious materials.[16]

5.2   Architecture and identity in the context of Islamic architecture

Whereas Pei suggests this formal inspiration from Ibn Tulun, the mosque contains an architectural context that Pei's design has been in effect distanced from.[17] Built by Ahmad ibn Tulun in the late ninth century, the mosque is known for its significance as a cultural heritage, and the building aesthetics are of a simple architectural plan.[18] Richard Yeomans considers Ibn Tulun to be "the largest, oldest, and in terms of grandeur, dignity and monumental simplicity, the finest in Egypt."[19] The mosque remains a legacy of

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[15] "Museum for Chinese Art," 52.

[16] Paulsson et al., "In Search of a New Monumentality."

[17] Among the secondary sources on Ibn Tulun, K.A.C Creswell has provided the most comprehensive documentaries on the mosque. For a brief introduction of the mosque see Keppel Archibald Cameron Creswell, *A Short Account of Early Muslim Architecture* (Harmondsworth: Penguin Books, 1958), 301–17. Tarek Swelim, *Ibn Tulun: His Lost City and Great Mosque* (Cairo and New York: The American University in Cairo Press, 2015).

[18] Creswell, *A Short Account of Early Muslim Architecture*, 305.

[19] Richard Yeomans, *The Art and Architecture of Islamic Cairo* (Lebanon: Garnet Publishing, 2006), 32. For an introduction to the mosque of Ibn Tulun, also see Doris Behrens-Abouseif, *Islamic Architecture in Cairo: An Introduction* (Cairo: The American University in Cairo Press, 1989), 51–7.

Ahmad ibn Tulun's urban plan to build a new city, *al-Qata'i* ("the Wards"), in Eqypt in 870.[20] Appointed the governor of Egypt under the dynasty of Tulunids (868–905) in 868, Ibn Tulun was trained in Samarra, north of Baghdad, the capital of the Abbasid Caliphate and famous for the substantial construction of luxury palaces.[21] Largely following the Samarran style, his architectural initiatives included a palace complex with an affiliated hippodrome (The Palace of al-Maydan), a mosque, a garrison, a hospital, along with markets and bathhouses connected by the Great Aqueduct of Basatin.[22] As one of the essential projects, the mosque of Ibn Tulun, built at the centre of al-Qatta'i (and on the hill of Jabal Yaskur), also followed the Samarran style in terms of structure, form and decoration (with the influence of Mesopotamian elements), and was thus distinct from the local features in Cairo mosques.[23]

The present form of the mosque has incorporated two historical identities relevant here. The overall structure, form and decoration survives from Ibn Tulun period, while the existing fountain (*Fisqiya*), which Pei's design of the MIA was inspired by, was a restored work by Sultan al-Ashraf Kahlil in 1297, replacing the original *Fawwara*

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[20] Creswell, *A Short Account of Early Muslim Architecture*, 301.

[21] Richard Yeomans points out that Ibn Tulun's Samarran background is essential to the understanding of the architectural context of the mosque. Yeomans, *The Art and Architecture of Islamic Cairo*, 28–31.

[22] Yeomans notes, although only the mosque and the aqueduct survived until today, descriptions on Ibn Tulun's son, Khumarawayh's layout of the palace suggest the architectural complex was largely built in the Samarran style. Ibid., 29. Petersen, *Dictionary of Islamic Architecture*, 113. Andre Raymond, *Cairo*, trans. Willard Wood (Cambridge, MA: Harvard University Press), 26–7.

[23] André Raymond suggests the mosque signifies the east boundary of Ibn Tulun's new city. Raymond, *Cairo*, 26–7. Behrens-Abouseif, *Islamic Architecture in Cairo*, 52.

(fountain) built in 376.[24] Located at the centre of the *sahn*, the *Fisqiya* (ablution fountain) immediately attracts the audience's attention. It is built on a (Wijdan Ali suggests "nearly") square base (12.75 x 14.1m), which supports an octagonal transitional structure and is covered by a high drum dome.[25] As Swelim noted, the internal structure of the *Fisqiya* reveals that the octagonal transitions function to accommodate the basin of the fountain, and that the dome is supported by a multiple-layered complex of squinches (Figure 79; Figure 80).[26] The structure features pointed arches across its three levels, from the exterior to the interior. An examination of the connection of the *Fisqiya* with the overall structure of the mosque will affect the reading of Pei's design of the MIA.

The mosque is built in red brick applied with carved stucco, except for its spiral minaret which is built in stone.[27] It consists of a *sahn* (square courtyard) at its centre, surrounded by arcades on its four sides (*riwaq*) (Figure 81). The architectural structure is particularly known for the using of brick piers instead of columns to form arcades, also a characteristic of Samarran architecture, with two pairs of pilasters being carved on the corner of each rectangular pier as formative columns.[28] On the three sides of *riwaq*, there are two rows of piers, and on the south side where the *qibla riwaq* is (the direction of

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[24] Swelim, *Ibn Tulun*, 67–88. Behrens-Abouseif, *Islamic Architecture in Cairo*, 53. Richard Yeomans, *The Story of Islamic Architecture*, ed. Provenance Institute of Advanced Architectural Studies, 1st ed. (Reading: Garnet Publishing, 1999), 65. Swelim, *Ibn Tulun*, 169–73.

[25] Wijdan Ali, *The Arab Contribution to Islamic Art: From the Seventh to the Fifteenth Centuries* (Cairo: American University in Cairo Press, 1999), 62.

[26] Swelim, *Ibn Tulun*, 68–9, 78.

[27] The spiral form of the minaret is also a reflection of the Samarran style of Ibn Tulun. Oleg Grabar, *The Formation of Islamic Art* (New Haven and London: Yale University Press, 1973), 119.

[28] Yeomans, *The Story of Islamic Architecture*, 65.

prayers facing Mecca), there are five rows.[29] On the other three minor sides, the walls

enclose the structure to create the space of a *ziyada*, which functions as a transitional area

in-between the sacred space of the mosque and the everyday world outside.[30] The mosque

also provided the earliest example of adopting pointed horseshoe arches throughout the

building, from the *sabil* to the *sahn*, employed both as functional access and decorating

windows.[31] On the north side of *ziyada* stands the minaret of spiral stairs, connecting to

the roof of the mosque through a bridge with a horseshoe-arch opening.[32] It remains

questionable whether the architectural form of the minaret has gone through any

alterations, but that is not the concern of the chapter.[33]

What was not mentioned in Pei's reference to Ibn Tulun is that the mosque is a

remarkable example of early Islamic ornament, elaborately developed not only in the

interior of the mosque, but also on the structure of the architecture, as Owen Jones

discusses in the section on Arabian ornaments.[34] Creswell noted the detailed decoration

throughout the architecture, from the surface of *sahn* to the walls surrounding the mosque

(Figure 82). For instance, looking at the *riwaq*, the spandrels between the arches are

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[29] The *qibla* wall was originally linked to the sanctuary of the palace (dar al-imara), where Ibn Tulun can enter to reach the prayer's niche. It is also the place that contains the two pairs of Byzantine-style marble columns distinguished from the brick construction of the rest of the mosque. Behrens-Abouseif, *Islamic Architecture in Cairo*, 52–3.

[30] Keith Payne, "The Mosqeue of Ibn Tulun, Em Hotep," June 25, 2009, accessed July 28, 2017, http://emhotep.net/2009/06/25/locations/lower-egypt/the-mosque-of-ibn-tulun/.

[31] The arched windows function not only to provide natural light, but also help reduce the weight of the building supported by the arches on the ground of the structure. Behrens-Abouseif, *Islamic Architecture in Cairo*, 54.

[32] Swelim, *Ibn Tulun*, 70.

[33] Creswell, *A Short Account of Early Muslim Architecture*, 314–5.

[34] Owen Jones, *The Grammar of Ornament* (London: Day and Son Limited, 1856), 55–61.

decorated with miniatures of pointed arches with colonnettes, which are surrounded by a variety of rosette-patterned blind windows. The windows throughout the mosque are framed in the form of an arch with wired patterns. Among these, as Creswell identifies, four window grills resemble the marbled grill patterns at Damascus.[35] The theme of rosette patterns is continued on top of the *sahn*, which is framed by hexagon frames decorated with floral patterns. The patterns alternate on the wall, weaving into a frieze. As Doris Behrens points out, the open-brickwork crenellation on top of the *ziyada* and outer walls are recognised as specific Samarra stucco motifs used as decorations on the walls of the mosque.[36] The crenellation is crowned by a frieze of circles embedded in recessed squares (Figure 78).

The *Fisqiya*, as a restored work, is not consistent with the decorating system of the rest of the mosque.[37] The arches on the structure present a transition of style that develops from four horseshoe arches on the ground to four tripartite arches at the middle of the building, intersected with triangular arches. The pointed arches on the ground floor are framed by red-and-white striped decoration. The upper round arch present bands are inscribed with Koranic texts to indicate the purpose of ablution.[38] From a visual perspective, the simplified form of *Fisqiya*, with pointed arches as both functioning and decorating elements, has corresponded well to the architecture of the mosque.[39] However,

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[35] Creswell, *A Short Account of Early Muslim Architecture*, 313.
[36] Behrens-Abouseif, *Islamic Architecture in Cairo*, 53.
[37] Although Yeomans points out that the fountain has successfully contributed to the architectural language of Ibn Tulun. Yeomans, *The Story of Islamic Architecture*, 67.
[38] Behrens-Abouseif, *Islamic Architecture in Cairo*, 53.
[39] Swelim, *Ibn Tulun*, 173.

the fact that it is a restored work makes the structure less significant than studies of the rest of the mosque in terms of the construction and ornament.[40]

Compared to Ibn Tulun, it can be seen that Pei's design might have drawn inspirations from certain architectural elements from Lajin's fountain and the Tulunid *Sahn*. For instance, the middle part of the principal building is decorated with triangular-headed openings which correspond to the triangular arches on the fountain of Ibn Tulun, while the recessed square openings around the round arched windows on the external wall of the education centre are reminiscent of the decorating frieze around the outer walls of Ibn Tulun (Figure 76; Figure 78). Not only do the windows form the effect of arcades on the wall of the inner courtyard, and the exterior of the education centre remind the audience of the arcaded *riwaq* of Ibn Tulun, they also help to create a visual effect as if there is a *sahn* enclosed by the arcades. A closer view at the façade of the building also reveals how the exterior is clad with different forms of bricks (Figure 77). The square bricks running beneath the top margin of the structure form a frieze, which nevertheless resembles the line of recessed squares on the outer wall of Ibn Tulun. However, one big difference is Pei's employment of semi-circular arches to form windows throughout the structure, these being fundamentally different from the distinctive characteristic of horseshoe arches used in Ibn Tulun. Furthermore, even though Pei suggests his response to the Islamic essence is realised through the link with Ibn Tulun's fountain, the fountain itself was a restored work which makes Pei's reference to historical elements even less

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[40] Creswell directly leaves the *Fisqiya* out of the discussion in his examination of the mosque. Creswell, *A Short Account of Early Muslim Architecture*, 314.

directly to any specific Qatari identity. Oleg Grabar has warned of the risk in contemporary Islamic architectural practice of seeking to extract any definite Islamic cultural essence merely on the basis of personal experience, as it necessarily leads to a partial understanding of symbolism in Islamic architecture and, thus, an incomplete representation of Islamic identity. [41] In this concern, taking the almost historically marginalised (though visually consistent) *Fisqiya* as the main source for his design, Pei might have also distanced himself from recognising the symbolism of the architectural forms in the specific context of Ibn Tulun.

Despite Pei's stated historical reference of his design, the extent to which the MIA can be considered to have represented Islamic identity derived from the symbolism of Ibn Tulun is also problematic for the audience. Dr M. Salim Ferwati observed, after a survey of 83 visitors (of whom 30% were Qatari) to see their impressions of the design, that although almost all were attracted by the geometric form of the building, two thirds suggested that their first impression was merely of a museum which could hardly be linked to Ibn Tulun.[42] In *Orientalism*, Said criticised how Napoleon's invasion of Egypt in 1798 formed a prototype of the Western world's understanding of the Orient, especially the image of Egypt, which therefore largely reflects the authorial power of the Europeans.[43] This "misalignment" between Pei's conception of the Islamic essence and

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[41] Oleg Grabar, "Symbols and Signs in Islamic Architecture," in *Architecture and Community: Building in the Islamic World Today*, ed. Renata Holod and Darl Rastorfer (New York: Aperture, 1983).

[42] M. Salim Ferwati, "The Museum of Islamic Art: Form, Perception and Environment," *The Internatinal Journal of the Inclusive Museum* 6, no. 1 (2013).

[43] Said, *Orientalism*.

the visitors' response is nevertheless a reflection of the Western modernists' perspective, more specifically seen from Pei's employment of geometry as the orientation of architectural forms and decoration.

However, Ferwati considers Pei's design to have demonstrated an architectural representation of Islamic identity through his constructing strategy as well as the employment of certain architectural elements. [44] This presence of Islamic identity, although not as specific references to Ibn Tulun, is realised through articulating elements which correspond to shared characteristics in Islamic architecture. [45] For instance, in terms of the architectural plan, Ferwati compares Pei's octagon-based structure to the octagonal form of the Dome of Rock (albeit the MIA does not really present a strict octagonal base, which more resembles a square that has four missing squares on its corners, seen from an aerial view of the architecture; Figure 75). [46] Ferwati further points out six references in the design elements of the MIA: the water canal and fountain, the dome and the coffered dome on the ceiling, the colossal glass skylight in the form of a *mihrab*, the semi-circular arches used to decorate the window openings throughout the architecture, the pattern decorating the atrium of the museum, and the pattern of *ablaq*

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[44] Ferwati, "The Museum of Islamic Art."

[45] Ferwati considers that Islamic communities share a system of culture, belief and traditional characters; reflecting on art and architecture, they are represented by shared architectural features which reflect a common Islamic Arab identity. Ibid.

[46] Theresa Grupico considers the adoption of an octagonal plan has an origin in the early Christian context. The form mostly appears in sacred structures and mausoleums in Islamic architecture, corresponding to the Islamic "concept of paradise … expressed as eight gardens with eight doors." Theresa Grupico, "The Dome in Christian and Islamic Sacred Architecture," *Forum on Public Policy Online* 2011, no. 3 (2011): 9. Samer Akkach, *Cosmology and Architecture in Premodern Islam: An Architectural Reading of Mystical Ideas* (New York: State University of New York Press, 2005), 131.

decorating the architectural façade of the MIA.[47] Overall, Ferwati considers that Pei has considered the aspects of "movement, symmetry, rhythm, centralisation and transformation" which effectively represent Islamic traditions in a contemporary building. [48] However, these elements nevertheless oscillate in their roles between modernist forms and ornaments that resemble Islamic characteristics. For instance, the giant *mihrab* which Ferwati points out is reminiscent of Pei's employment of the glass tower in the DHM that presents itself as a modernist statement (Figure 83). The "centralisation" and "transformation" of the architectural forms also assimilates the unfolding of triangular forms in Pei's Grand Louvre. Other elements not discussed by Ferwati include how the inner courtyard of the MIA—which can also relate to the design of the Persian garden and the water element in Islamic architecture—in effect makes the form of the architecture similar in style to the courtyard of the Louvre. In this regard, the reading of the architectural forms of the MIA also alternates the interpretations between modernism and postmodernism as the "solutions."[49]

The most essential ornament Pei employed in the MIA further indicates the oscillating role of the elements between Islamic identity and that of Pei's self-identity. As Pei suggests, the internal structure of the dome is his response to the decorative nature of Islamic architecture (Figure 84).[50] The "geometric matrix" unfolds "from circle, to

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[47] Ferwati, "The Museum of Islamic Art."

[48] Ibid.

[49] Charles Jencks, "The Third Way: Between Fundamentalism and Westernisation," in *Architecture Beyond Architecture*, ed. Cynthia Davidson and Ismaïl Serageldin (London: Academy Editions).

[50] Jodidio and Strong, *I. M. Pei*, 332.

octagon, to square, and finally to four triangular flaps that angle back at different heights to become the atrium's column supports."[51] In this way, the ornament becomes integrated into the structure of the design. The triangular flaps also recall the squinches supporting the dome at Ibn Tulun. Yahya Abdullah and Mohamed Embi further point out that Ibn Tulun marks the introduction of geometrical patterns to Islamic architecture, which can be distinguished from the depiction of floral patterns since the Umayyad dynasty (660–750).[52] In this regard, the use of geometric abstraction can to some extent correspond to the context of Ibn Tulun, although it remains questionable to what extent geometry is used as an effective instrument to bring out the Islamic identity of the museum. However, the unfolding of geometric forms in the scheme also suggests interrelations between the representation of Islamic identity and the active involvement of architectural forms. It thus opens up the possibility of evaluating the meaning of geometrical forms more than their signified use as ornament. In other words, the building also suggests an alternative interpretation considering how the architecture functions as a language.

5.3   Architecture and language: the mathematics of Pei's "ideal" museum

In the examination of the Grand Louvre, the thesis has considered how the architectural diagrams suggest a destabilised but active language of spatial relations. The

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[51] Ibid.

[52] Yahya Abdullah and Mohamed Rashid Bin Embi, "Evolution of Islamic Geometric Patterns," *Frontiers of Architectural Research* 2, no. 2 (2013).

architectural drawings present a development of the architecture as a process of *différance*, indicating the role of architectural drawings as an active architectural system that unfolds the binaries of absence/presence and asymmetry/symmetry in terms of architectural form and structure. On the other hand, the use of glass as the main material for the pyramid indicates the dislocation of glass between transparency and opacity, both in terms of spatial relations and its material effect. The presence of the form of the Louvre Pyramid thus suggests more a status of "presentness" in Pei's design intentions. In terms of the MIA, it is the form of the external structure that displays an alternative interpretation of identity beyond the context of Islamic culture.[53] The building thus conveys the presence of Pei's architectural concepts oscillating between different projects.

The main building of the MIA denotes how the architectural forms develop from the lower to the upper part of the structure. The structure presents a hexagon base that is gradually transformed into a cross. The cross is then recessed to a square, crowned by a rotated cube. This process of transforming the geometric forms also allowed Pei to add the element of triangles into the building, a form which can be more related to Pei's architectural signature presented in previous works, most distinctively displayed the Grand Louvre (Figure 85).

The external form invites a reading of new spatial relations from the architectural façade which correspond to the idea of phenomenal transparency, as discussed in Chapter

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[53] Another reason to focus on the architectural forms is the thesis's limited resources as concerns the architectural drawings of the MIA.

5. This layer of formal composition provides a visual connection to the form of the Suzhou Museum (2000–6) (Figure 87). Seen from the top of the structure, the MIA presents an approach of developing combining and rotating the geometric forms which Pei employed in the design of the upper part of the Suzhou Museum (Figure 86).[54] Two architects, Wahyu Pratomo and Kris Provoost, have also pointed out how the architectural plans of the two schemes denote a similar visual language of unfolding forms from a central rotated square (Figure 88). In their comparison of architectural forms between the MIA and the Suzhou Museum, they consider that although the MIA is much larger in scale, it demonstrates many similarities with the Suzhou Museum in terms of the architectural plan.[55] Developing from this central form, the MIA presents a more compact layout of architectural design, while the Suzhou Museum provides a scattered plan of the structure surrounded by the ponds. The two different plans in some way demonstrate how the ultimate form of the MIA, conceived to be a representation of Islamic cultural identity, is thus a product of the "presentness" of Pei's design concepts, which might develop into other forms of architectural identity such as the Suzhou Museum.

Another occasion that demonstrated the "transferability" of Pei's design conceptions is the insertion of the pavilion in the courtyard of the MIA, used to mark the transition between the main museum gallery and the section of the education centre

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[54] Pei has also acknowledged the similarity of the architectural forms between the Suzhou Museum and the MIA. Jodidio and Strong, *I. M. Pei*, 317.

[55] Wahyu Pratomo and Kris Provoost, "Why I. M. Pei's Museum of Islamic Art Is the Perfect Building to Suit Doha's Style," ArchDaily, 2017, accessed July 22, 2017, http://www.archdaily.com/867307/why-im-peis-museum-of-islamic-art-is-the-perfect-building-to-suit-dohas-style.

(Figure 89). [56] The pavilion resembles the presence of the tea house in the Suzhou Museum (Figure 87). Recalling how Pei also inserted elements of the Chinese garden in the Grand Louvre and the DHM, this repetitive use of architectural forms can be seen as an assertion of Pei's architectural signature. Pei suggests how the pitched form and the volumetric structure of the Suzhou Museum functions to echo the sloped roof of the tea house, the meaning of which has been discussed in Chapter 2, that incorporates Chinese tea culture.[57] Thus, the form in effect embodies a stronger reference to its Chinese origin, rather than being an entirely neutral element to be employed in Pei's projects at different locations.

The Suzhou Museum, neighbouring the *Shizilin*, is specifically articulated according to Pei's conception of Chinese traditions.[58] The architecture brings back the impression of Pei's first museum project in Shanghai: not only does the layout of the Suzhou Museum suggests a visual resemblance to the plan of the Museum for Chinese Art in 1946, but also the design logic—as Pei acknowledges—is not too distant from that of his graduation project at Harvard. In effect, a visit to the Suzhou Museum will also reveal how the structure develops a vision of "the garden of walls" through the high-pitched walls surrounding the building. The visual language of the architecture thus demonstrates a kind of self-identity which originated from his first museum design.

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[56] Jodidio and Strong, *I. M. Pei*, 333.
[57] Ibid., 317.
[58] Ibid., 311.

The visual connections between the MIA and the Suzhou Museum thus lead the representation of Pei's self-identity to his earliest aspiration for a modern Chinese museum, deeply rooted in his childhood experience of the cultural essence in Suzhou. Returning to the question at the beginning of the chapter, of the extent to which the MIA has contributed to the representation of Islamic identity, Pei's version of Islamic identity seems to have suggested a more inclusive concept of the Orient. Moreover, the specific visual references to Islamic traditions point to an international image that embraces the Islamic characteristics across the Muslim world.

While examining the architectural representation of historical traditions and local characteristics, the MIA leads the discussion of Pei's plural cultural identities and the role of museum architecture to the context of the Islamic world. On the one hand, the employment of geometric forms in this scheme has help produced an effective representation of Islamic identity. Pei's reference to Ibn Tulun suggests a visible correspondence to rendering regional characteristics, even more so than the DHM or the Louvre. On the other, the reading of the visual language of the MIA also brings the discussion back to the Chinese context, as it presents an image that also corresponds to the characteristics of the Orient exhibited by the Suzhou Museum. The two different themes of Oriental characters are presented through a similar approach of employing a modern structural or formal vocabulary, which thus point to an integrated image of constructing style as one of Pei's architectural signatures. As James Steele has noticed, the museum, being a building type and institution of Western origin, plays a particularly

significant cultural and urban role in the Middle East, where the idea of Orientalism and definitions of the East and the West have been greatly reconsidered.[59] This connection between but also independence of Eastern and Western architectural identities perhaps represents one of the most essential ideas in Pei's museum architecture.

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[59] Although James Steele's discussion is more specifically about Rasem Badran's winning design for the MIA, his emphasis on reconsidering the concept of Orientalism was of significance in understanding the role of museum architecture, especially in the Islamic Arab world, also corresponds to the thesis's discussion of Pei's design of the MIA.

Conclusion: Pei's museum architecture: time, place and purpose

The representation of regional characteristics, in parallel to an inclusive conception of the image of the Orient, leads my discussion back to the question of identity and language reflected from Pei's museum projects. The point I would like to make overall is that it is important to identify how Pei's has presented a developing conception of identity, following the expansion of his transnational practices. It is thus interesting to see how the development of his identity and the sense of modernity corresponded to the changing architectural settings for his different project. The four case studies reflect how, in Pei's practices, the conception of identity, modernism and architectural language have developed into plural meanings, all of which function as part of the system of the architecture.

Although the four case studies related to the representation of national identity, in parallel to a vocabulary of architectural modernism and modernity, it is necessary to note how the conception of national identity, nationalism and the representation of political standpoint differed from each case. In this process, the perception of Pei's identity also indicated different emphases. In the Museum for Chinese Art, this response to the architectural symbolism of national identity and regional politics was most direct and

effective, as it was in line with the Pei's Chinese identity while also closely related to his experience in Suzhou. The modernist structure also echoed with the other part of Pei's identity, formed through his architectural training in the US. Following the expansion of Pei's activity, as I consider how the transnational practices help him develop his version of the "international style", this conformity to the representation of a specific cultural and regional identity has become more complicated, due to the fact that Pei's architectural and cultural identity has also been developing in this process. In the case of the DHM, it is possible to identify how the modernist vocabulary of the structure can help negotiate with the complicated history of the architectural setting. However, it has to be noted that at this moment Pei's self-identity has also developed into one more emphasising on the international reputation for conducting government-sponsored projects. In other words, the modernist identity reflected in the Museum for Chinese Art has developed into one that acknowledged the Modernist legacy as a sense of memory. Thus, Pei's modernist background becomes a response to the purpose of contemporary Berlin to reconfigure the past Modernist memory of the city, formulated by international architects. In this process, Pei's Chinese identity, mildly acknowledged through a figurative reference to the Moon gate in the structure, has also become a part of memory in Pei's international identity.

In the Grand Louvre, the international identity of Pei has become more problematic. The Modernist legacy Pei obtained from his American training and the Chinese identity suggested a confrontation with the sense of national identity attached to the former image of the Louvre. The perception of Pei's architectural identity was also

associated to the symbolism of political transparency. In this process, it was also visible how Pei's identity has become a product of the developing meaning of the architecture—as the interpretation of identity influenced by the multiple architectural languages in the system of architecture. The architectural languages, transferred from architectural drawings, helped further extend the meaning of architecture.

It is then necessary to consider how the changing displays of identity and language are reflected in Pei's architectural strategy. Already mentioned in the Introduction, Pei identifies "time, place and purpose" to be the most essential elements to consider, which are themselves "variable" in each architectural setting.[1] As for "purpose," Pei's museums function to correspond to the urban image in their architectural settings and to acknowledge historical traditions through the instrument of architecture. The strong political implications reflected from these projects, along with the museum's role as the architectural monument in the state, ultimately connect to the representation of national identity through structure, form and materials. The representation of national identity then links to the staging of regional characteristics, and thus, the consideration of "place," as well as the presentation of "time" in a historical dimension.

The variation of the architectural vocabulary returns to the question of developing universal architectural features against the representation of regional characteristics. In 1948, when Pei was still closely involved with the search for modernist language in American architecture, this question was already necessary to consider in the MoMA

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[1] Pei and Boehm, *Conversations with I. M. Pei*, 113.

symposium on the debate between the International Style vs American Bay Region Style. Gropius, while criticising over the Bay Regional Style, attempted to justify the International Style as something regional instead of universal: "Do we really want a truly universal style to be a meeting of the Oriental and Occidental?...The idea of the so-called International Style was regional in character, developing out of the surrounding conditions."[2] While Gropius made this argument in justification of the International Style, in Pei's practices this blurred boundaries between the Oriental and Occidental architectural features became more visible as a result of the changed interpretation of the identities of the architecture.

These three aspects can be further considered in the context of museum architecture. The museum, as a building type, particularly engages with the (re)presentation of time and history.[3] It functions to manipulate time and displays historical objects in the illusion of the perpetual presence.[4] Karsten Harries considers the discourse of modern architecture has further developed the building's power to tackle "the terror of time."[5] Modern architecture, writes Juhani Pallasmaa, becomes an instrument to reflect the ideal "of a perpetual present."[6] The Modernist surfaces, as he continues, "tend to remain mute, as shape and volume are given priority; form is vocal, whereas matter remains mute. The aspiration for geometric purity and reductive

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[2] Barr et al., "What Is Happening to Modern Architecture?," 12.
[3] Giebelhausen, "In the Museum's Ruins," 234–35.
[4] Macleod, *Museum Architecture*, 29–30.
[5] Karsten Harries, "Building and the Terror of Time," *Perspecta* 19 (1982).
[6] Juhani Pallasmaa, "Hapticity and Time: Notes on Fragile Architecture," *Architectural Review* 207, no. 1239 (2000): 78–84, 79.

aesthetics further weakens the presence of matter."[7] Macleod warns about the tendency of lacking the "sense of belonging in times of change" among modern and contemporary museum projects and encourages a closer engagement with history in museum architecture's representation of local identity.[8] Reflecting on Pei's international projects, it is still necessary to identify in each specific case whether or not the historical identity has been settled with contemporary vocabulary of urban identity, as well as with the architectural representation of Pei's self-identity. Are non-Western cultures excluded from the modernist conception of time in Pei's museums? The examination of historical and cultural identities through the lens of the four case studies suggests the answer is situated between the binaries of yes and no. Whereas Pei's earliest rendering of the Museum for Chinese Art presented the theme of the Chinese garden wrapped in a modernist box, the contention of the representation of national identity of the DHM remotely corresponded to the memory of searching for an architectural representing of Chinese characteristics in the 1940s. The MIA, extending its formal vocabulary to the Suzhou Museum, also demonstrated how the language of visual structure is result from the interpretation of the architectural drawings—as a form of architectural language—of the Louvre. Looking through the surface of the glass of the Louvre Pyramid and the PeiBau, or the façades of the MIA or Suzhou Museum, it seems that Pei's strategy emphasises more on presenting history in parallel to the contemporary dimension. The history is present to viewers, but almost as ahistorical and perpetual as a museum object.

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[7] Ibid., 79.

[8] Macleod, *Museum Architecture*, 30.

Appendix: Walter Gropius, Review of the Museum for Chinese Art, Shanghai, China

Text from "Museum for Chinese Art," 52.

The project for a museum in Shanghai, China, was designed by Mr. Ieoh Ming Pei in the Master class of Harvard's Department of Architecture under my general direction. It clearly illustrates that an able designer can very well hold on to basic traditional features—which he has found are still alive—without sacrificing a progressive conception of design. We have today sufficiently clarified our minds to know that respect for tradition does not mean complacent toleration of elements which have been a matter of fortuitous chance or a simple imitation of bygone esthetic forms. We have become aware that tradition in design has always meant the preservation of essential characteristics which have resulted from eternal habits of the people.

When Mr. Pei and I discussed the problems of Chinese architecture, he told me that he was anxious to avoid having Chinese motifs of former periods added to public buildings in a rather superficial way as was done for many public buildings in Shanghai. In our discussions we tried then to find out how the character of Chinese architecture

could be expressed without imitating such form motifs of former periods We decided that the bare Chinese wall, so evident in various periods of Chinese architecture, and the small individual garden patio were two eternal features which are well understood by every Chinese living. Mr. Pei built up his scheme entirely on a variation of these two themes.

The design was highly prized by the Harvard Design faculty because we thought that here a modern architectural expression on a monumental level was reached.

Walter Gropius, Chairman

Graduate School of Design

 Harvard University

Abbreviations

CSMH	Commission Supérieur des Monuments Historiques
DHM	Deutsches Historisches Museum
I.F.R.E.S	L'Institut Français de Recherches Économiques
KMT	The Kuomintang of China
MfDG	Museum für Deutsche Geschichte
MIA	Museum of Islamic Art
P/A	*Progressive Architecture*
TAC	The Architects Collaborative

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Illustrations

Figure 1, "Museum for Chinese Art, Shanghai, China," *Progressive Architecture*, 28 February (1948), 50–1.

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Figure 2, I. M. Pei, Bird's eye view of the Museum for Chinese Art, 1946. From: *Progressive Architecture*, 28 February (1948), 50.

Figure 3, "I. M. Pei, Architectural drawings for A Realistic House for Georgia," *Progressive Architecture ·Pencil Points* 27, no.4 (1946), 88.

Figure 4, Ludwig Mies van der Rohe, Plan for Court House Project, 1945–46. Ink and dot pattern on illustration board. 76.2 x 101.6 cm. 2017 Artists Rights Society (ARS). From: https://www.moma.org/collection/works/767 (accessed September 30 August, 2017)

Figure 5, I. M. Pei, Lower Floor Plan of the Museum for Chinese Art, 1946. From: *Progressive Architecture*, 28 February (1948), 50

Figure 6, I. M. Pei, Upper Floor Plan of the Museum for Chinese Art, 1946. From: *Progressive Architecture*, 28 February (1948), 51.
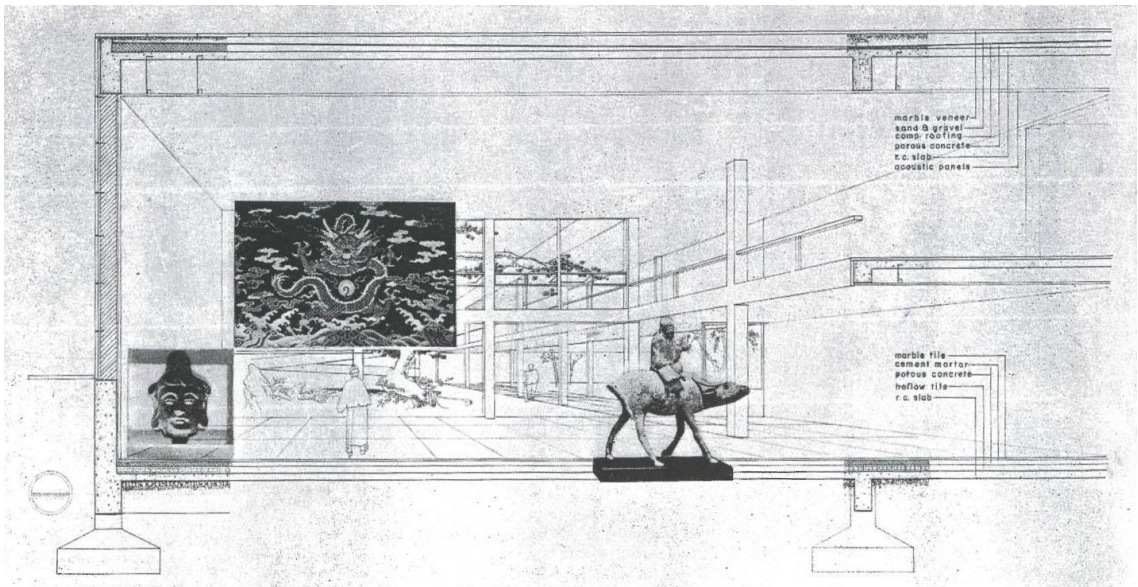
Figure 7, I. M. Pei, Section of the Large Gallery, Museum for Chinese Art, 1946. From: *Progressive Architecture*, 28 February (1948), 52.
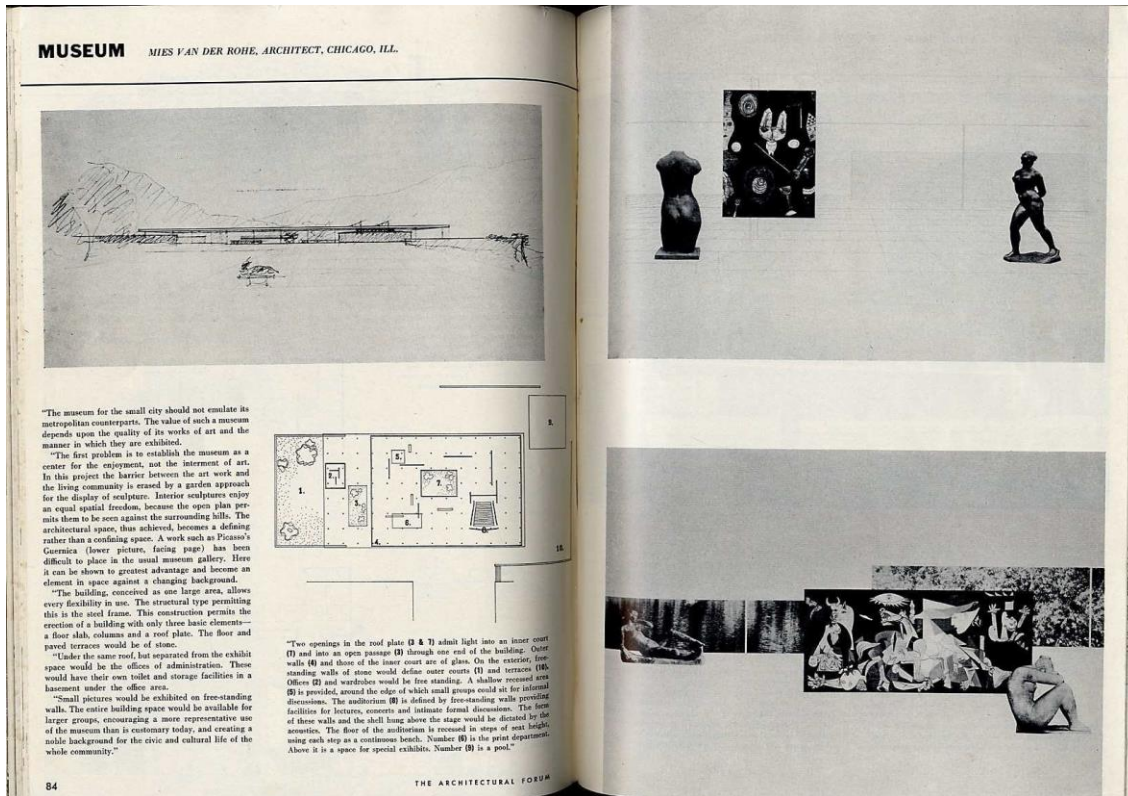
Figure 8, Museum for the Small City, Mies van der Rohe," *The Architecture Forum*, May (1943): 84–85.
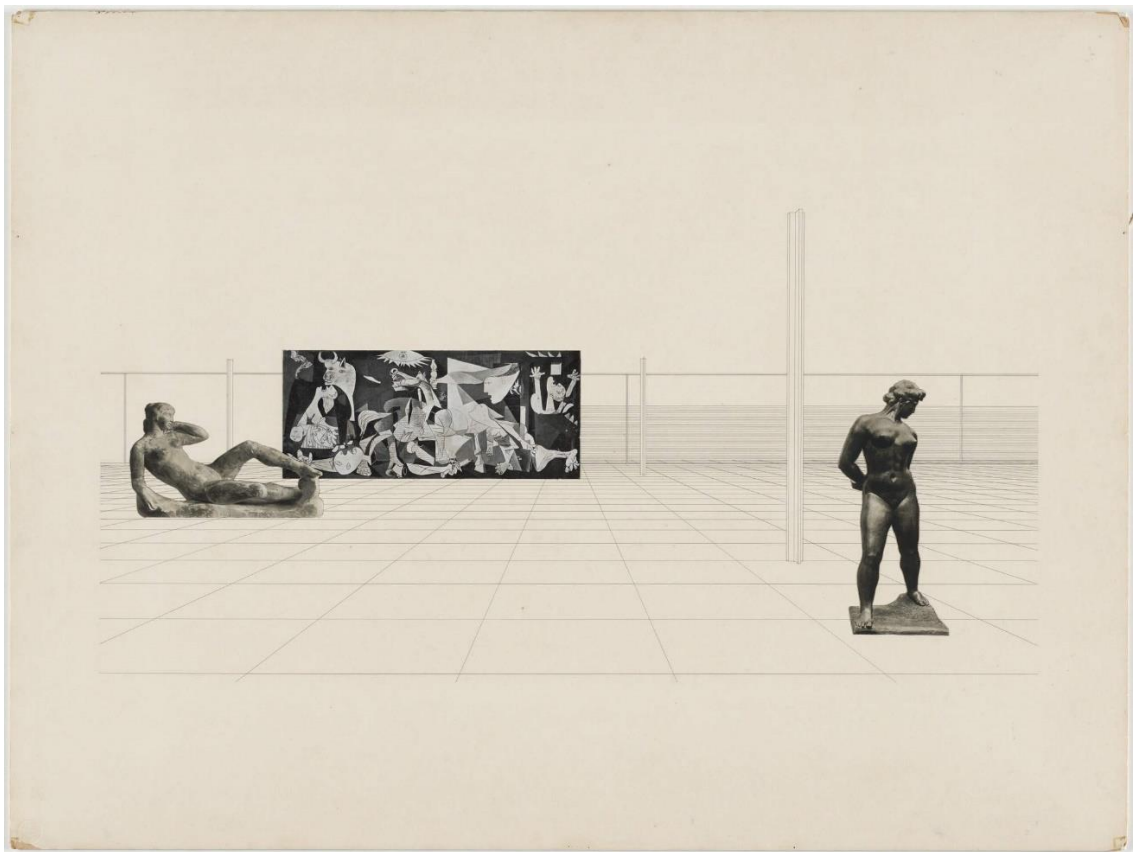
Figure 9, Mies van der Rohe, Section Plan for Museum for the Small City, 1941–43 (Delineator: George Danforth). Graphite and cut-and-pasted reproductions on illustration board, 76.1 x 101.5 cm. 2017 Artists Rights Society (ARS). From: https://www.moma.org/collection/works/777?locale=en (accessed September 30 August, 2017)

Figure 10, Mies van der Rohe, Section Plan for Museum for the Small City, 1941–43 (Delineator: George Danforth). Graphite and cut-and-pasted reproductions on illustration board, 76.1 x 101.5 cm. 2017 Artists Rights Society (ARS)
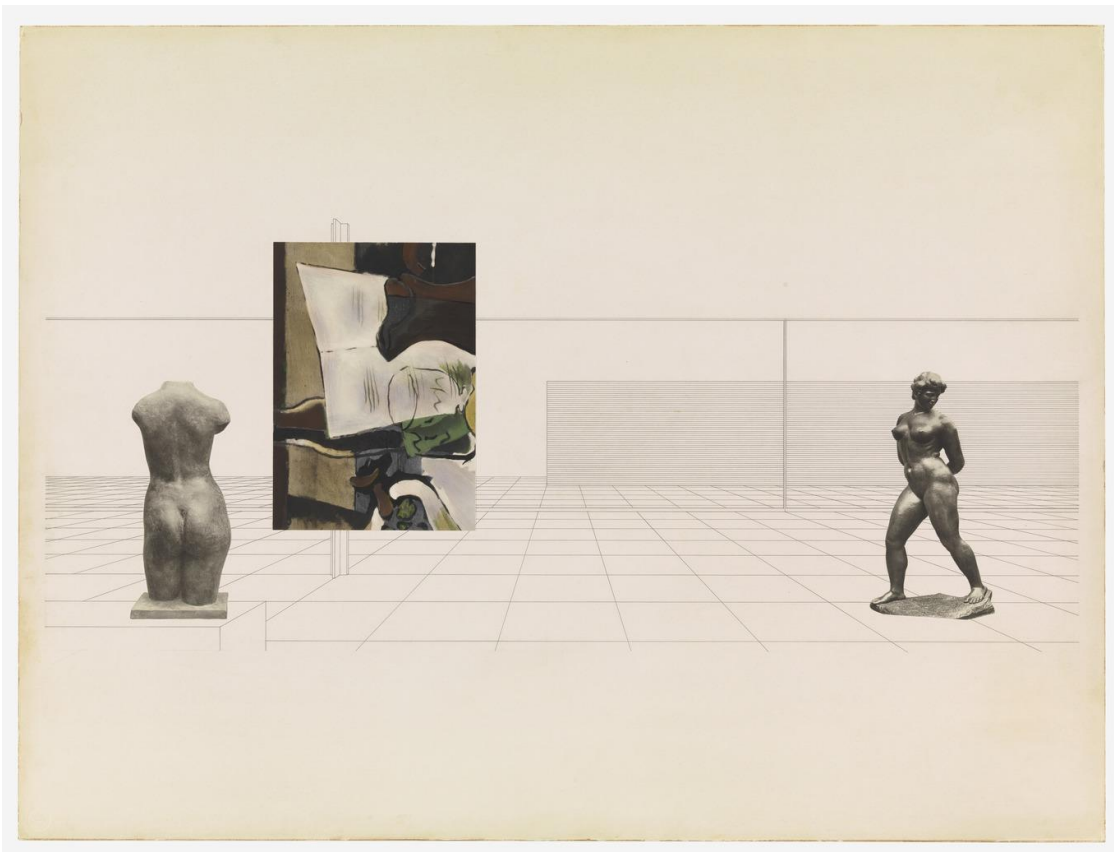
From: https://www.moma.org/collection/works/756?locale=en (accessed September 30 August, 2017)
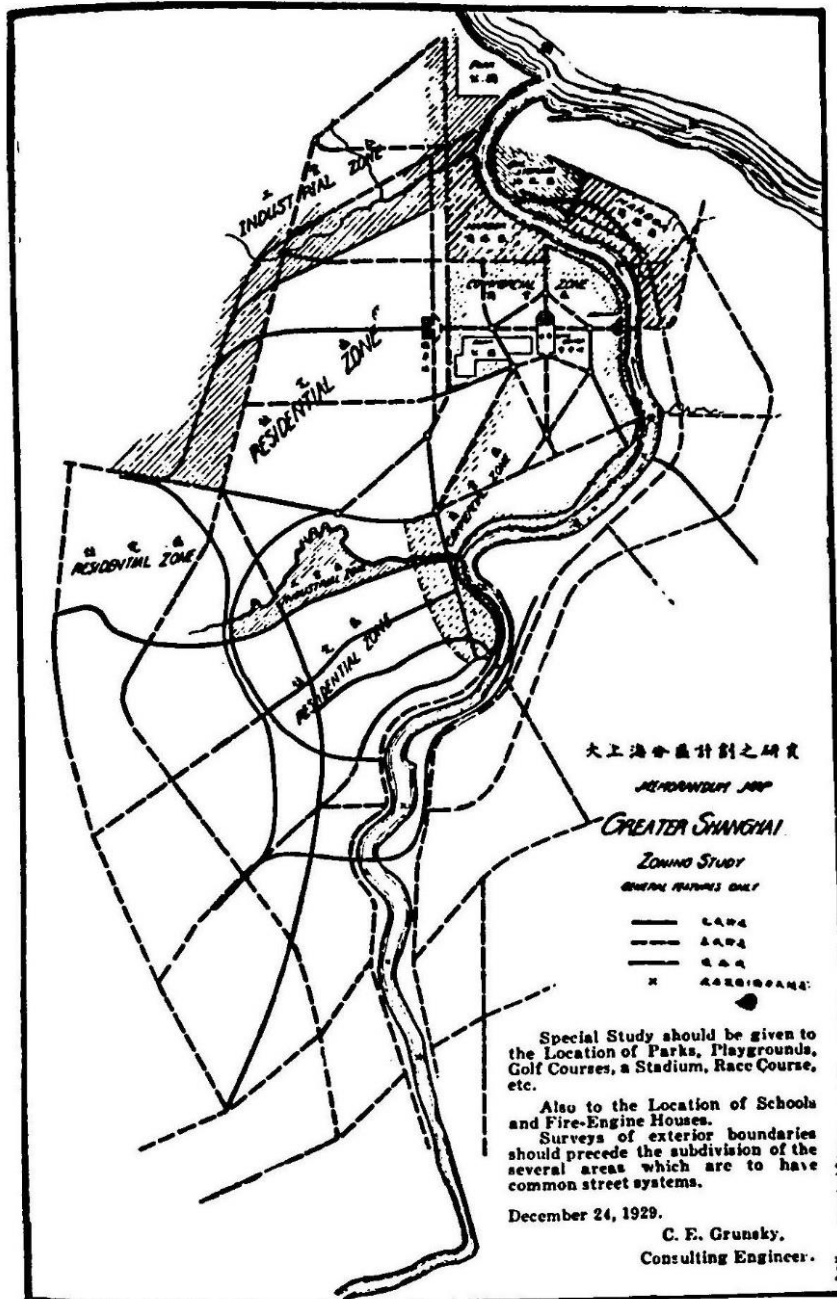
Figure 11, The Greater Shanghai Plan with changes by Dr C. E. Grunsky, 1929. From: Macpherson, "Designing China's urban future," 53.

Figure 12, The Civic Centre of the Greater Shanghai Plan, Preliminary Design, 1930. Wei, *Dasahanghai Jihua*, 72.
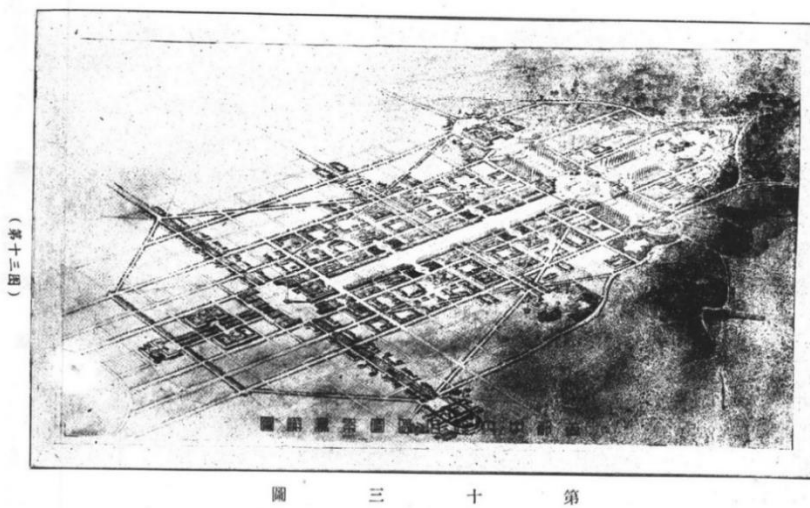
Figure 13, The Administrative Centre of the Capital Plan, Nanjing, 1929. From: Li and Jin (eds), *Capital Plan*, 47.

Figure 14, Inauguration ceremony of the Mayor's Building in the Civic Centre, Shanghai on October 10,1933.Campanella, *The Concrete Dragon*, 69.
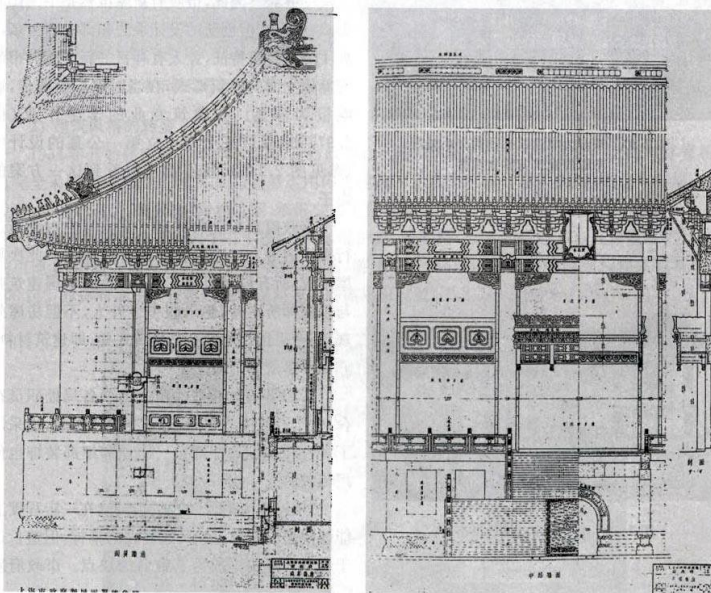
Figure 15, Dayou Dong, Section of the Mayor's Building, Shanghai,1933. From: Wei, *Dasahanghai Jihua*, 99.
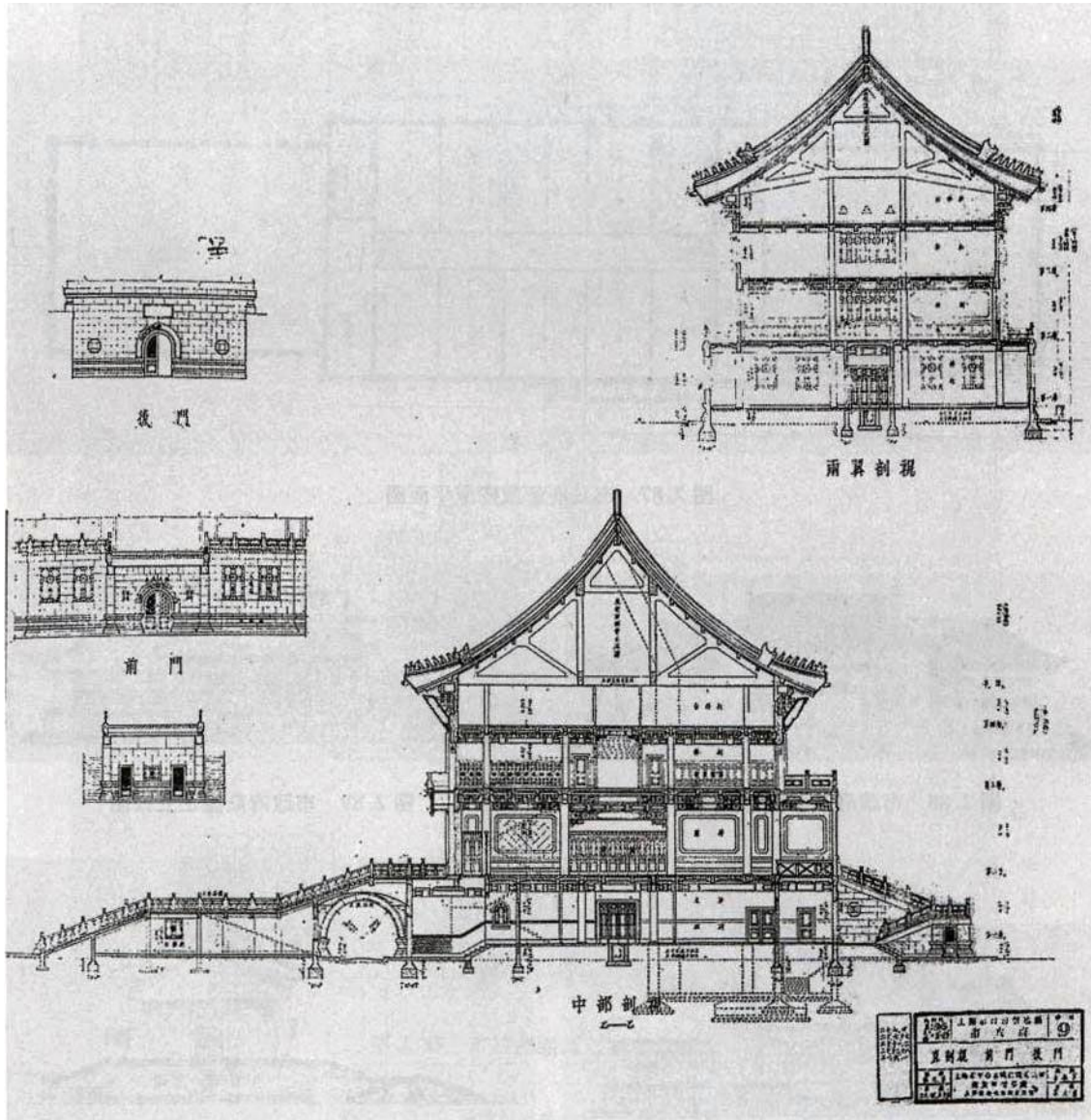
Figure 16, Dayou Dong, Section of the Mayor's Building, Shanghai, 1933. From: Wei, *Dasahanghai Jihua*, 100.
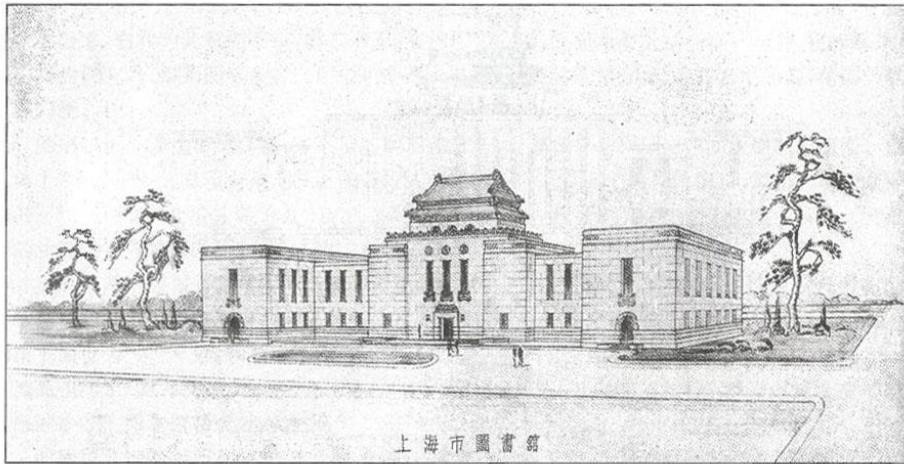
Figure 17, Dayou Dong and Wang Huabin, The former Shanghai Library in the Civic Centre, 1934–35. From: Wei, *Dasahanghai Jihua*, 109.

Figure 18, Dayou Dong and Wang Huabin, The former Shanghai Museum in the Civic Centre, 1935. From: Wei, *Dasahanghai Jihua*, 113.
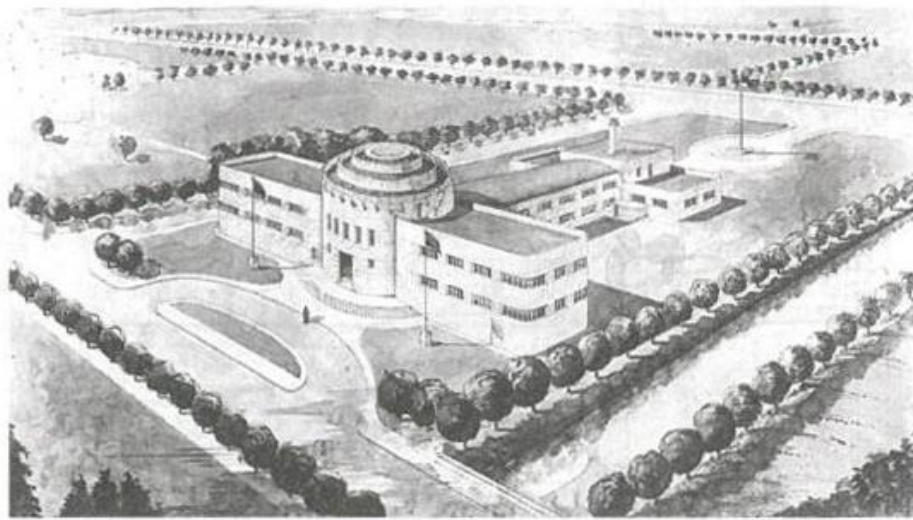
Figure 19, Dayou Dong, The former Aviation Association Building in the Civic Centre, 1935. From: Wei, *Dasahanghai Jihua*, 115.

Figure 20, Liang Sicheng (consultant), Front view of the National Central Museum (now the Nanjing Museum), 1936–48. From: Delin Lai, *Studies in Modern Chinese Architectural History*, 333.

Figure 21, Schwarz, Ulrich. Photography of the Berliner Zeughaus/ German Historical Museum, Berlin. 2005, 92.5 x 118 cm, Lebendiges Museum Online, Deutsches Historisches Museum.

Source: https://www.dhm.de/lemo/bestand/objekt/deutsches-historisches-museum-zeughaus-2005.html (accessed 30 March, 2018)

Figure 22, Brunes, Thomas. Photograph of I. M. Pei's new wing design for the DHM, Berlin. 2015, Lebendiges Museum Online, Deutsches Historisches Museum.

Source: https://www.dhm.de/lemo/bestand/objekt/deutsches-historisches-museum-ausstellungshalle-und-zeughaus-2015.html (accessed 30 March, 2018)
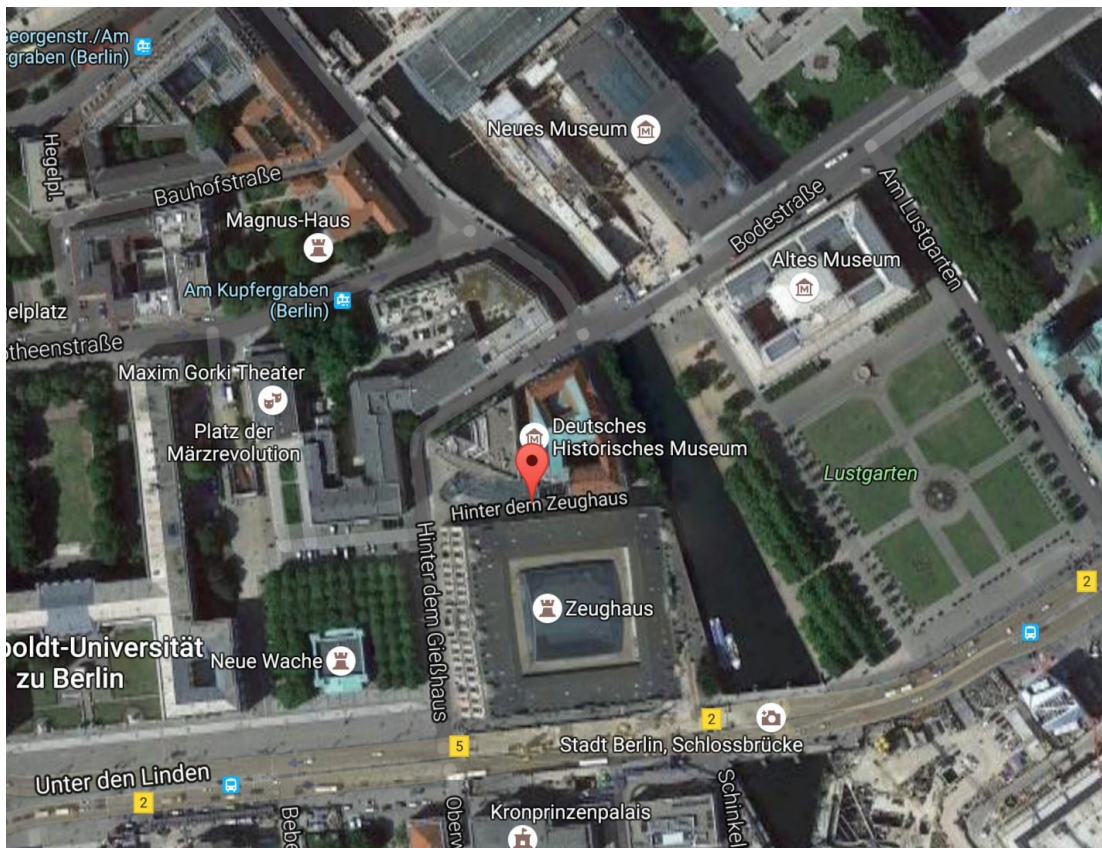
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From: Google Map. (accessed 30 March, 2018)

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Figure 25, View of the walkway connecting the basement to the ground floor area at the PeiBau. Photo: Kretzschmar ed., *I. M. Pei*, 58.
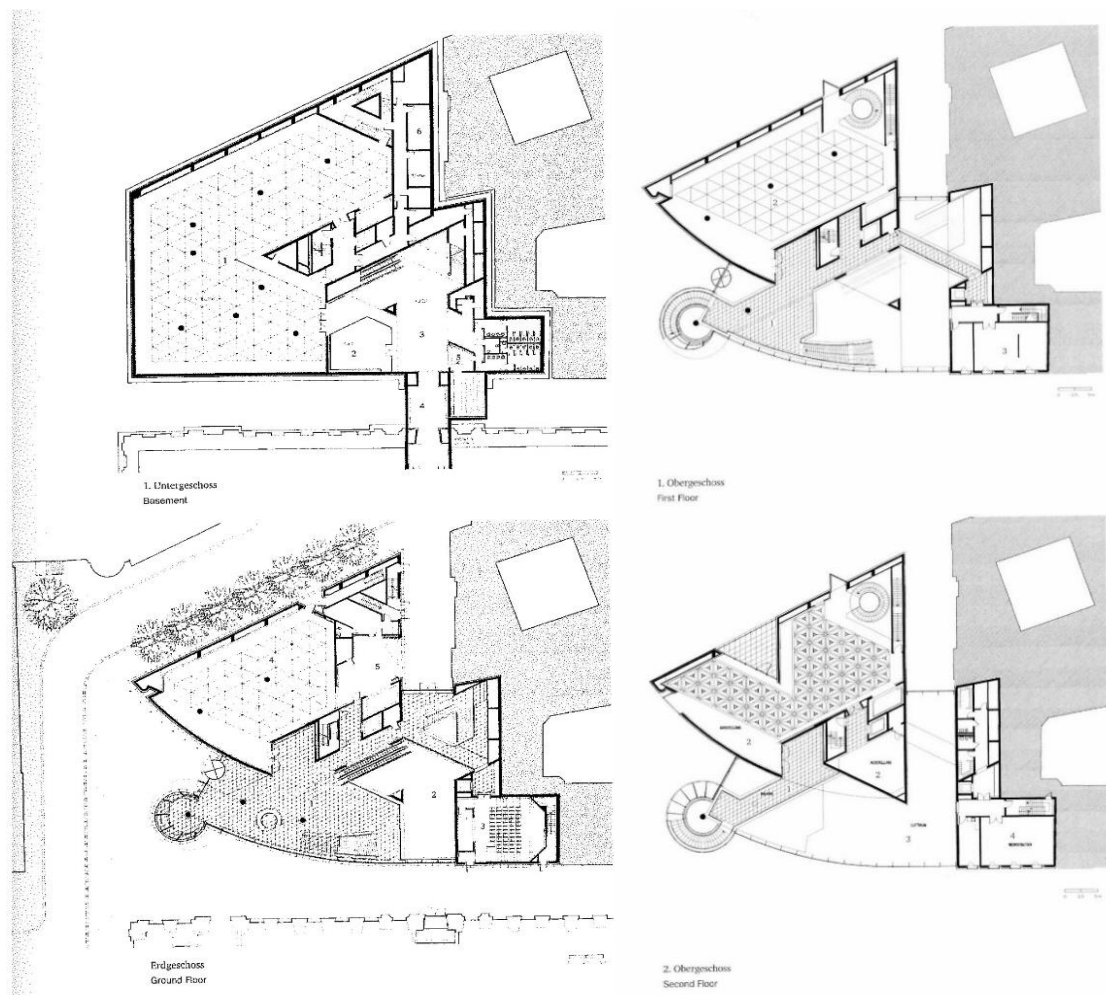
Figure 26, *Left*, Architectural Plan of the PeiBau, digital drawing. Ground Floor and Basement.

Figure 27, *Right*, Architectural Plan of the PeiBau, digital drawing. First Floor and Second Floor.

From: Kretzschmar, ed., *I. M. Pei*, 42–43.

Figure 28, View of the PeiBau from Hinter dem Giesshaus street, Berlin. 1998–2003.

Photo：Kretzschmar ed., *I. M. Pei*, 8–9.

Figure 29, View of I. M. Pei's East Wing of the National Gallery of Art, Washington D.C. 1968–78. Photo: Pei Cobb & Partners https://www.pcf-p.com/projects/national-gallery-of-art-east-building/ (accessed 25 April, 2018)

Figure 30, Johann Arnold Nering, Andreas Schlüter and Jean de Bodt. Plan of the Zeughaus, 1695. Source: Das Zeughaus, Deutsches Historisches Museum, https://www.dhm.de/ueber-uns/die-gebaeude/zeughaus.html (accessed 26 April 2018)
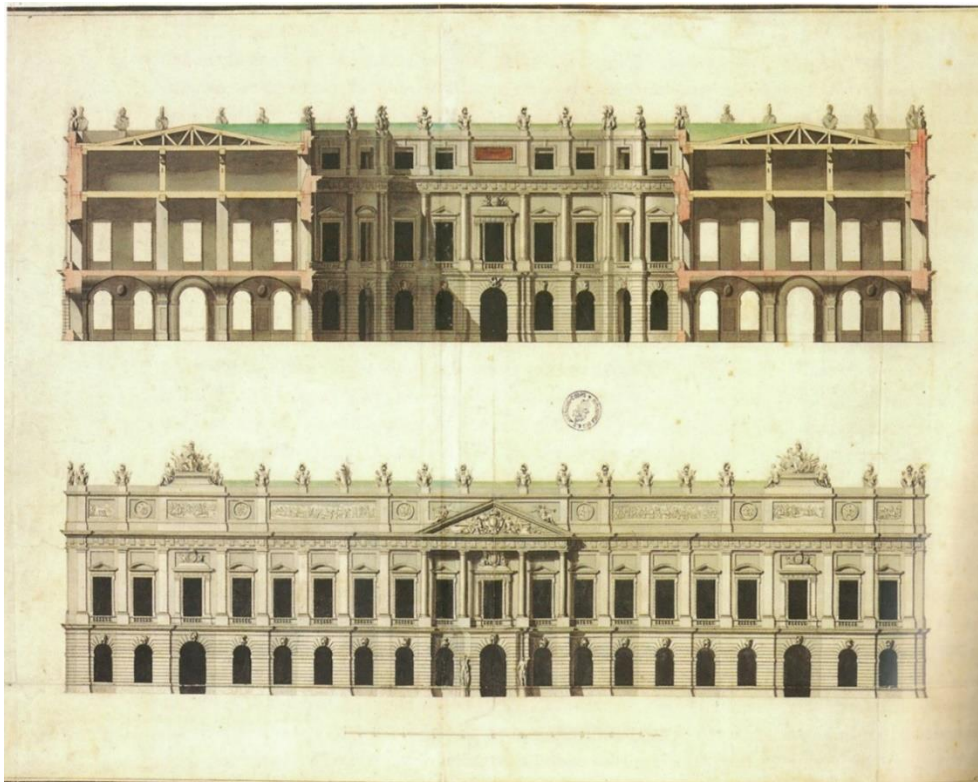
Figure 31, Jean de Bodt, section and elevation drawings of the Zeughaus, 1699. From: Kretzschmar ed., *The Berlin Armoury*, 21.

Figure 32, East façade of the Zeughaus after 1945. Photo: Müller, *Das Berliner* Zeughaus, 252.
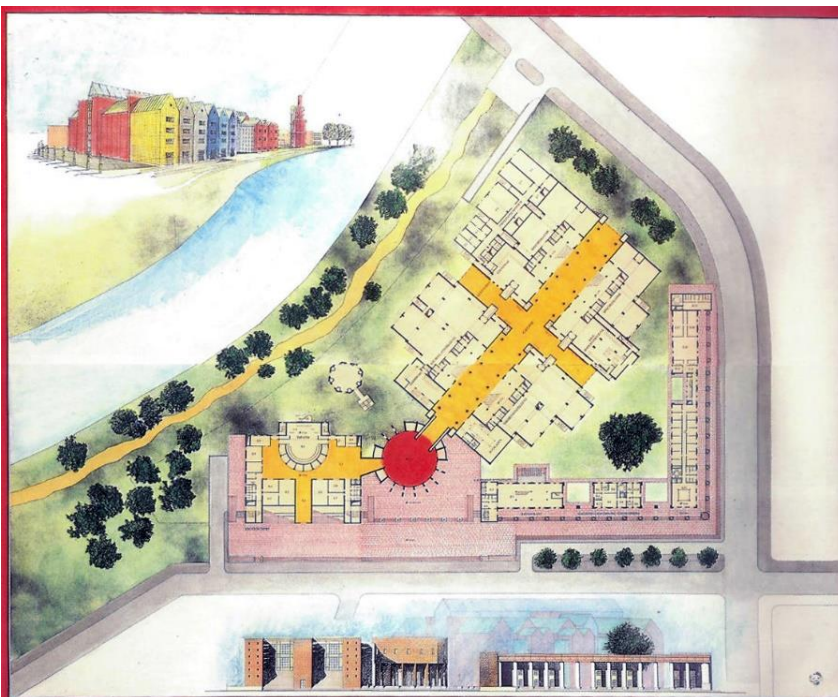
Figure 33, Aldo Rossi, Plan for the former German Historical Museum, May 1989.
Drawing: Ferlenga ed., *Deutshes Historishes Museum Berlin*, 70.

Figure 34, Aldo Rossi, Architectural model of the former German Historical Museum, May 1989. From: Ferlenga ed., *Deutshes Historishes Museum Berlin*, 112–3.
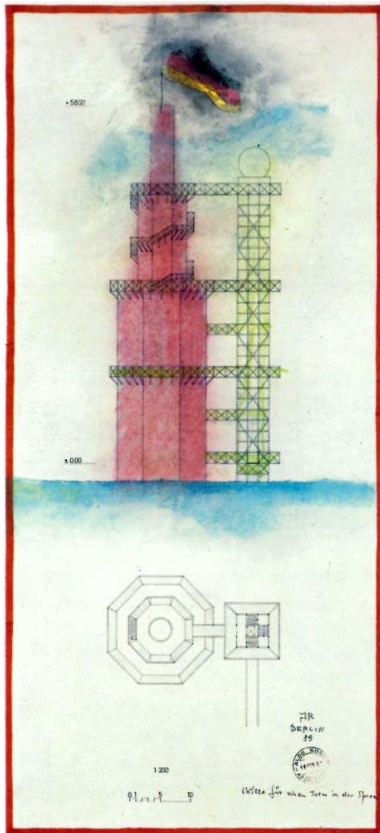
Figure 35, Aldo Rossi, sketch of the tower of the former German Historical Museum,

May 1989. Drawing: Ferlenga ed., *Deutshes Historishes Museum Berlin*, 100.
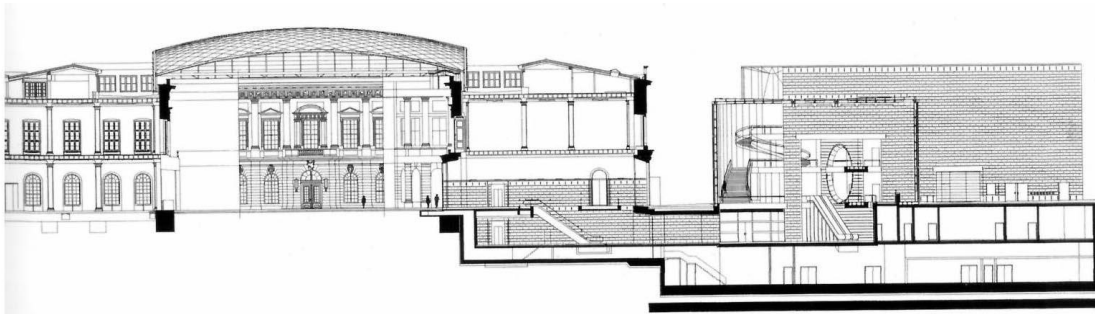
Figure 36, Section of the PeiBau, Digital Drawing. From: Kretzschmar ed., *I. M. Pei*, 41.
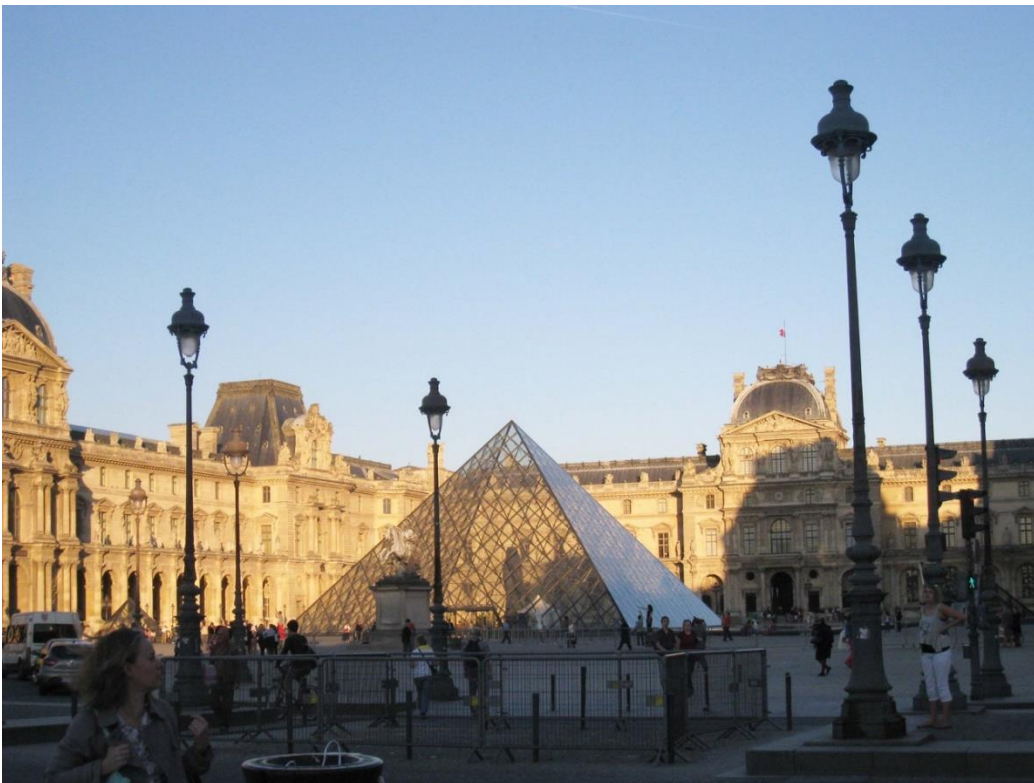
Figure 37, I. M. Pei, Louvre Pyramid, Paris, 1984–1989. Photo taken in 2013.

Figure 38, "NON A LA PYRAMIDE DU LOUVRE," *Le Quotidien de Paris*, January 31, 1985.

Figure 39, Cover page of *La Vie*, No.2061, February 26–March 6, 1985. The title of the issues presents one example of the architectural criticism towards Pei's Chinese identity in the discussion of the Grand Louvre project.

French mayor rivals president in building

By Marilyn August
Associated Press

PARIS — As the French newspapers see it, Paris' rightist mayor is in a race with the country's Socialist president to see who will go down in history as the city's chief architectural benefactor.

No matter who it is, Paris will see more than the usual amount of public renovation and building over the next few years.

Newspapers noted that as President Francois Mitterrand recently inaugurated the Villette Park's Grande Hall, a multipurpose exhibition and concert center in what was once Paris' main slaughterhouse, Mayor Jacques Chirac announced three major, city-financed projects to be completed by 1992.

They include renovation and construction of a park, office buildings, tennis courts, shops around the Montparnasse and Reuilly train stations, and plans for a concert hall and apartments at the Place d'Italie.

"JACQUES CHIRAC rivals Francois Mitterrand," wrote Marc Ambroise Rendu in the leftist newspaper *Le Monde*. He noted "Chirac's sudden interest in architecture," although he did not mention that the mayor personally took architectural control of the vast Les Halles development several years ago.

"Has Mr. Chirac's ego been piqued by the impact of the president's architectural projects?" Rendu asked.

Le Quotidien de Paris, a right-of-center daily, ran a front-page headline: "Mitterrand-Chirac: A Monumental Duel."

But the paper, which generally supports Chirac's Rally for the Republic Party, criticized the mayor's choice of Japanese architect Kenzo Tange over a Frenchman to design the complex at the Place d'Italie.

"MITTERRAND HAS his Chinese — Mr. I.M. Pei in the Louvre, Chirac will have his Japanese," wrote Yves Hervaux, complaining that French architects are not being given a chance.

Chirac defended his choice of an architect saying he was "not building a stage set but rather a work which would endure and be handed down through the generations." He also said his decision would stimulate French architects.

Mitterrand faced similar criticism last year when he picked Pei, a Chinese-born American, for a major renovation of the Louvre Museum. But that controversy was quickly overshadowed by disagreement over the design itself, featuring a 90-foot glass pyramid over the museum's new sunken entrance.

OTHER MITTERRAND projects include a new opera house at the Bastille, transformation of the Seine-side Orsay train station into a museum of 19th-century French art, and the vast Villette Park cultural complex of the Grande Hall and a science and technology museum.

While the president's announced intention is to bring culture into districts where there has been little or none, the mayor says he is more concerned with "improving the quality of life of city-dwellers."

Chirac's most ambitious project is to fill a gaping hole behind the Montparnasse station in one of Paris's fastest-changing neighborhoods.

An 8.6-acre concrete roof is to cover the busy railroad tracks, providing the base for a park, tennis courts and car parking. It will be bordered by boutiques, offices and a separate station for new High Speed Trains that will link Paris to the Atlantic coast. The two stations will handle as many as 200,000 passengers daily.

OFFICIALS IN the mayor's office said that neither an architect nor a design had been selected for the Reuilly train station site.

Covering 24 acres, it is a desolate, wind-blown area where rusty tracks lead to run-down warehouses and has been called "a wart in the middle of the city."

The renovations, which *Le Monde* said would add "charm to a neighborhood where it is sorely lacking," include public gardens, bicycle and pedestrian paths, a gym and concert and exhibition halls.

Property values nearby have soared in recent years with the opening of a sports arena, and plans for the opera house and the future home of the Finance Ministry.

At the Place d'Italie, where a 300-foot tower decorated by French artist Jean Dubuffet once had been planned, the city will build a 1,500-seat concert hall, apartments and offices.

Figure 40, Marilyn August "French mayor rivals president in building," *Columbus Dispatch*, February 24, 1985.
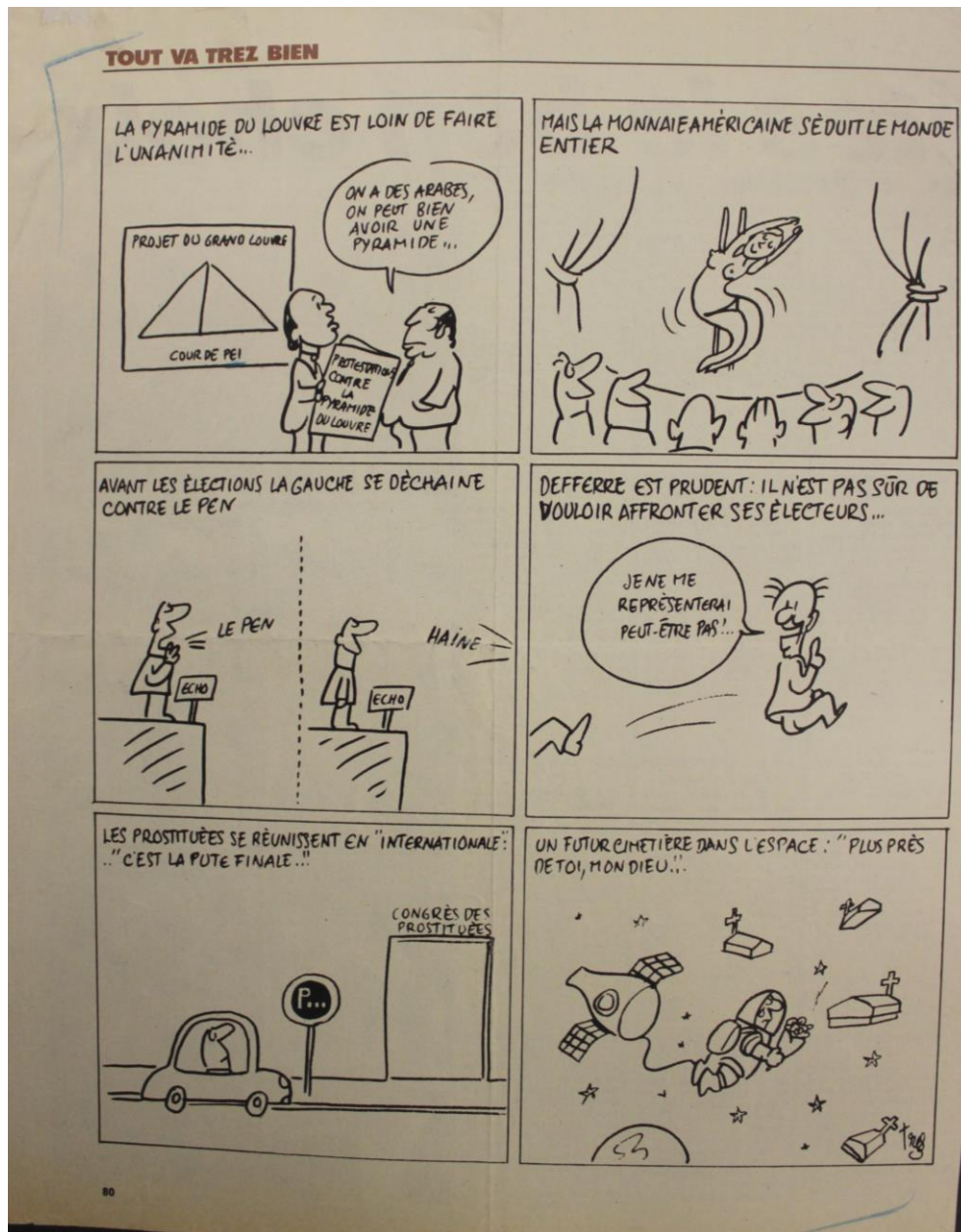
Figure 41, Comic "Tout va trez bien," *France Soir*, February 24, 1985.
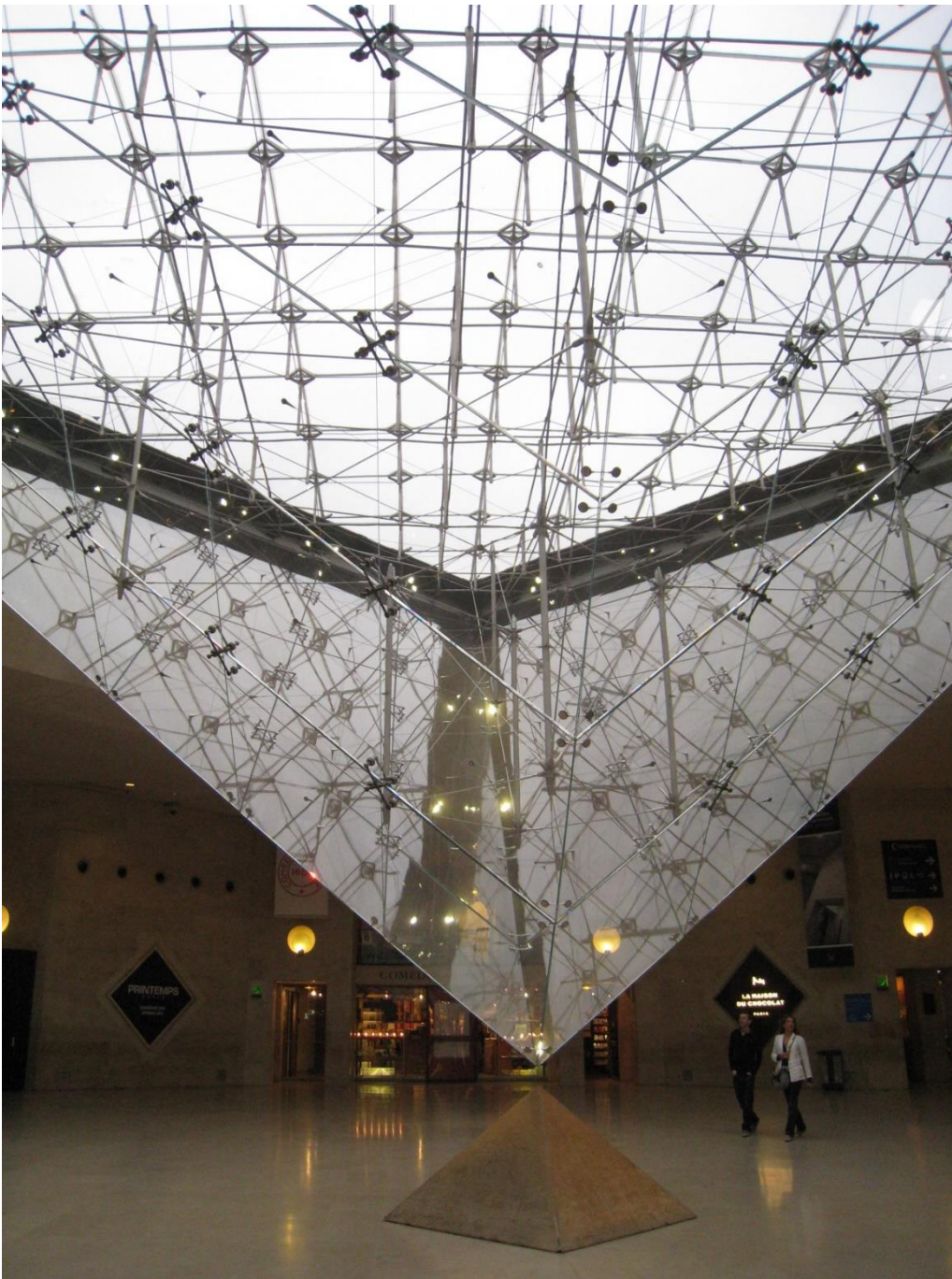
Figure 42, I. M. Pei, *La Pyramide Inversée*, Grand Louvre, Paris, 1989–93. Photo taken in 2015.
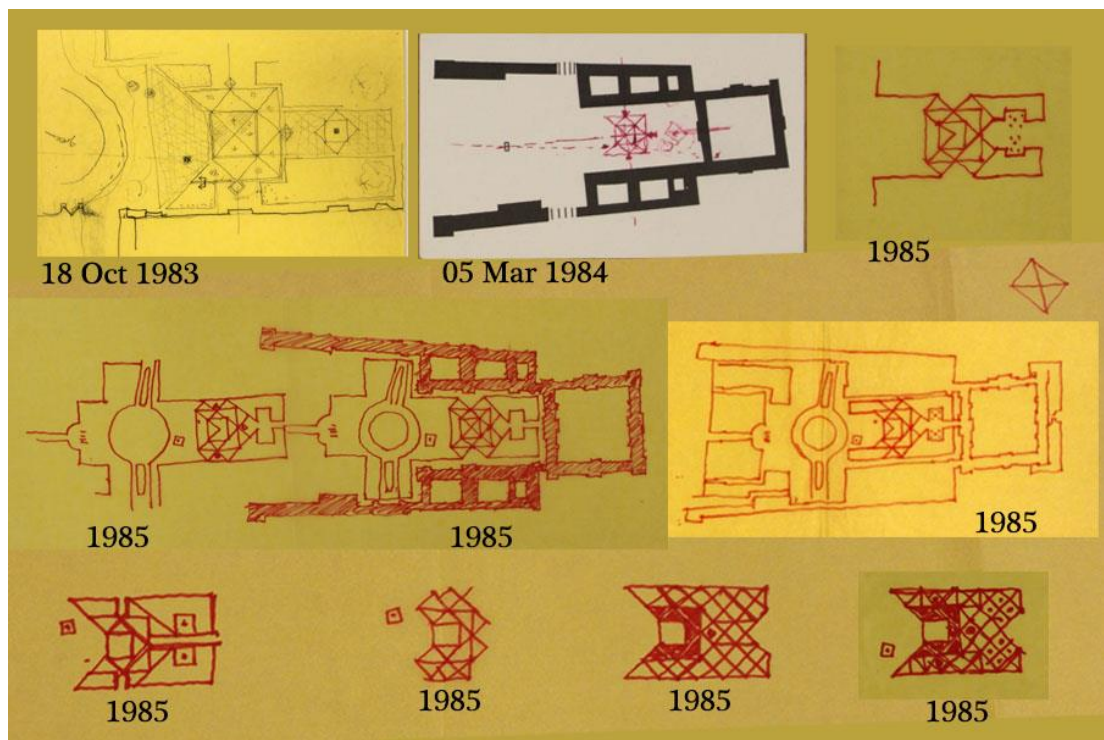
Figure 43, I. M. Pei, Sketch of the Grand Louvre, 1983–1985. Drawings from the collection of the Library of Congress.
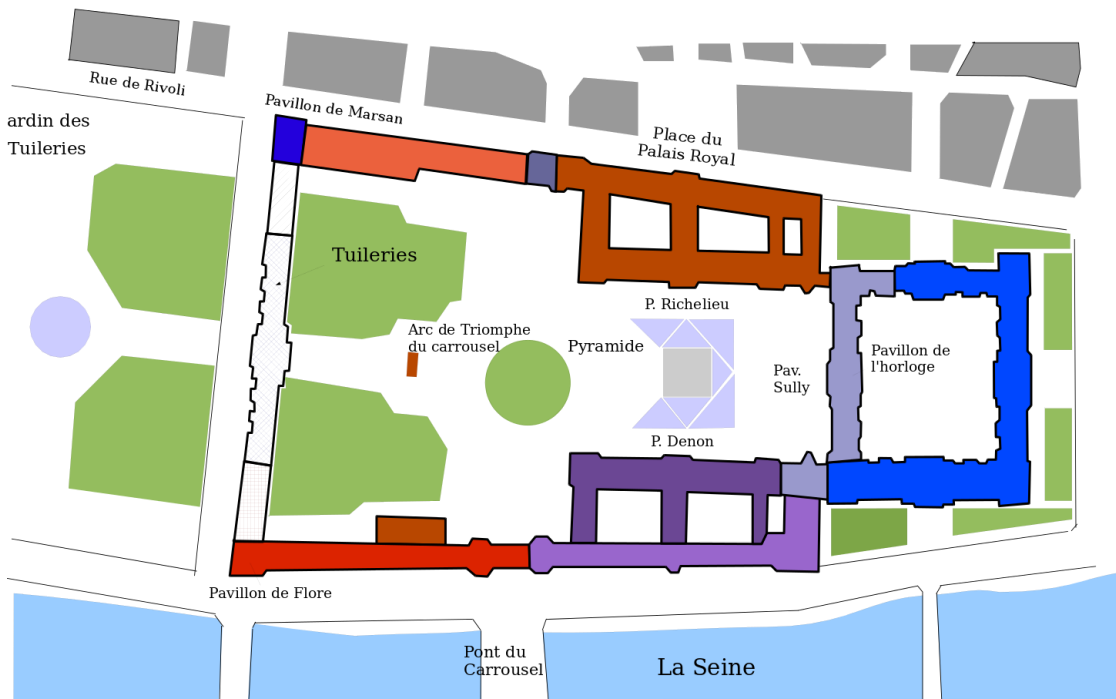
Figure 44, Site map of the Louvre.

From: https://commons.wikimedia.org/wiki/Louvre#/media/File:Plan_louvre1.svg (accessed 25 May 2015)
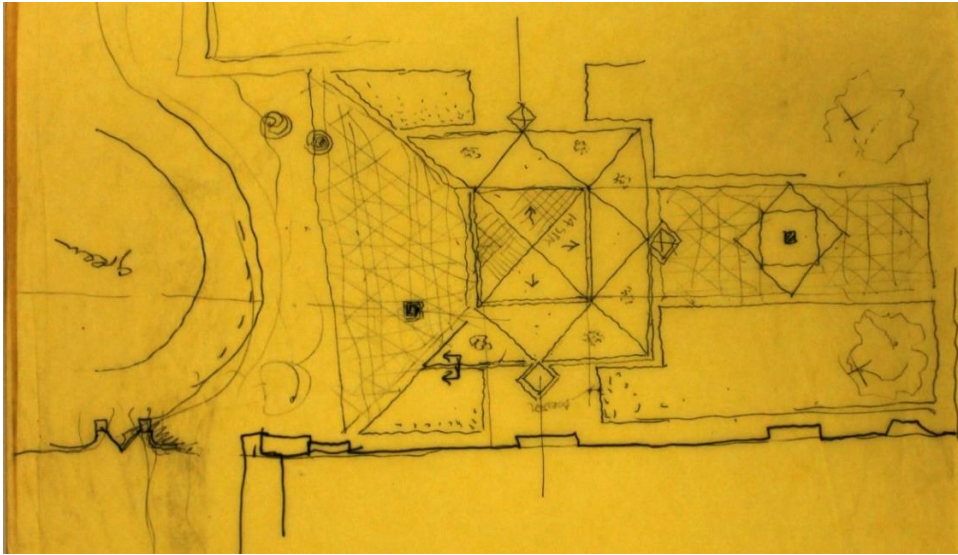
Figure 45, I. M. Pei, Sketch of the Grand Louvre, 18 October 1983. Drawing: Library of Congress/ Prints & Photos, Louvre Concourse Court 10/18 sketch in mat PR 13 CN 2006:074.02 (2006:074-1 B size)
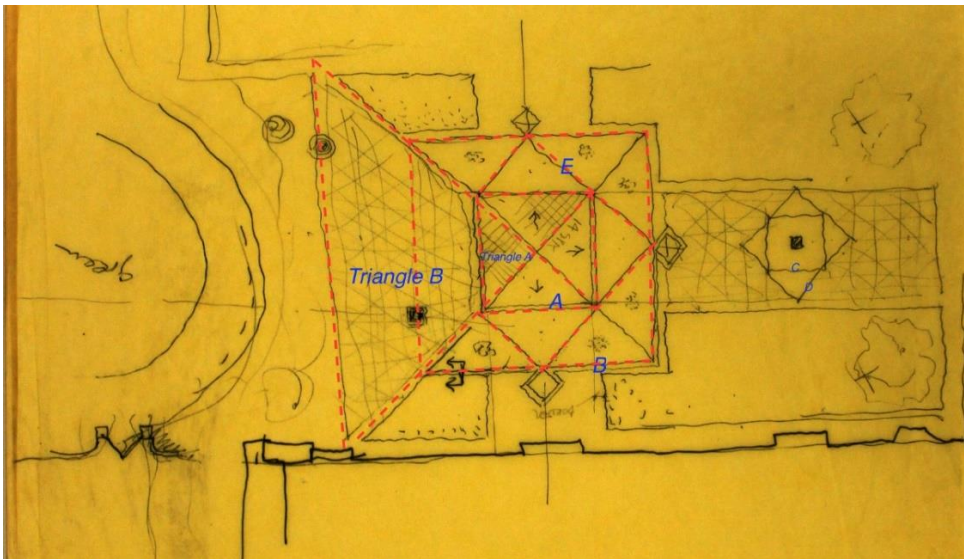
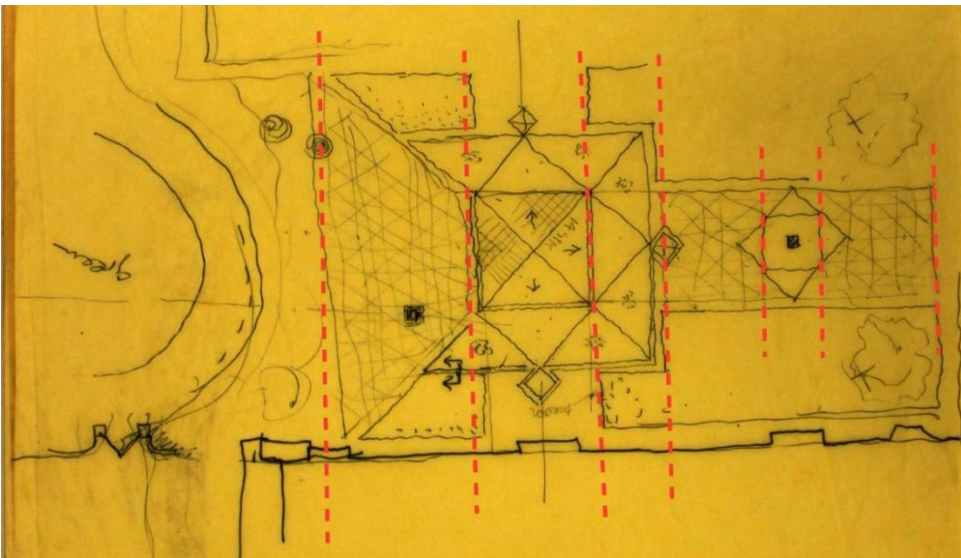Figure 46, I. M. Pei, Sketch of the Grand Louvre, 18 October 1983. Drawing: Based on Figure 45.
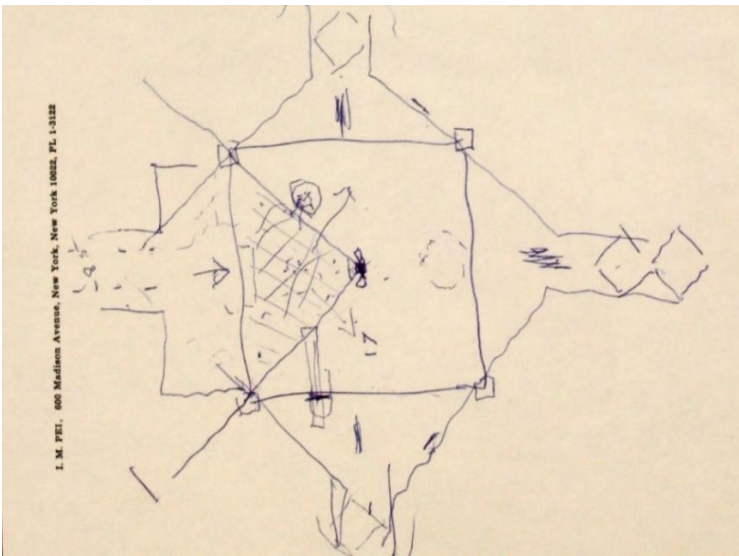
Figure 47, I. M. Pei. Sketch of the Grand Louvre, March 1984. Drawing: Library of Congress/ Prints & Photos, Louvre plan; red marker on lined paper; "given by Ian Bader 05/03/84." PR 13 CN 2006:074.12b (2006:074-2, cont.3, C size).
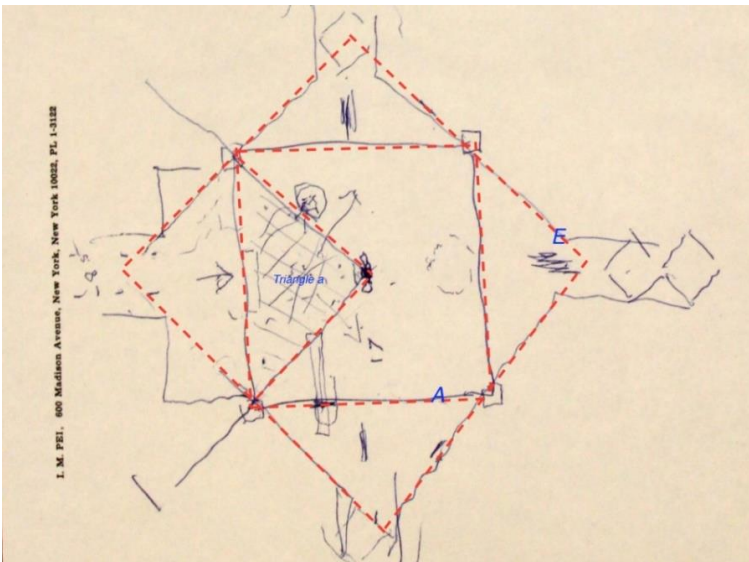
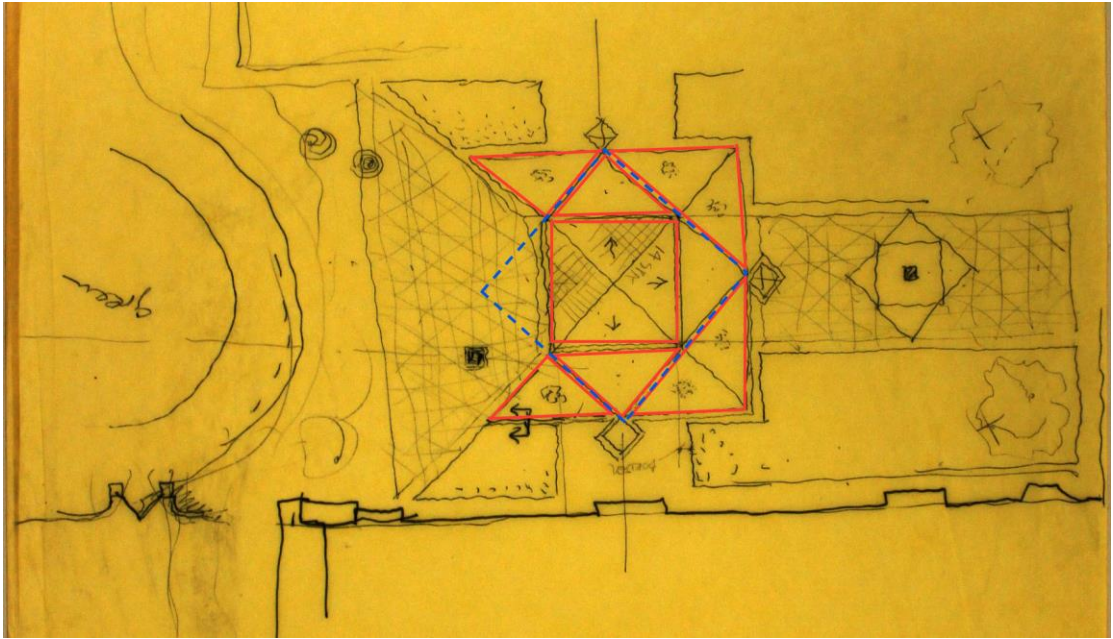Figure 48, I. M. Pei. Sketch of the Grand Louvre, March 1984. Drawing: Based on Figure 47.
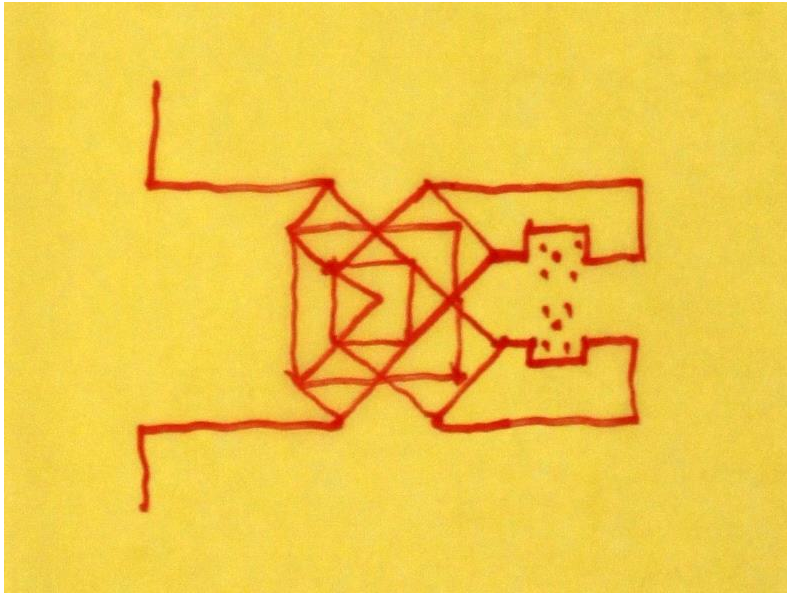
Figure 49, I. M. Pei. Sketch of the Grand Louvre, 1985. Library of Congress/ Prints & Photos, Louvre; identified by Pei; PR 13 CN 2006:074.11 (2006:074-1, B size).
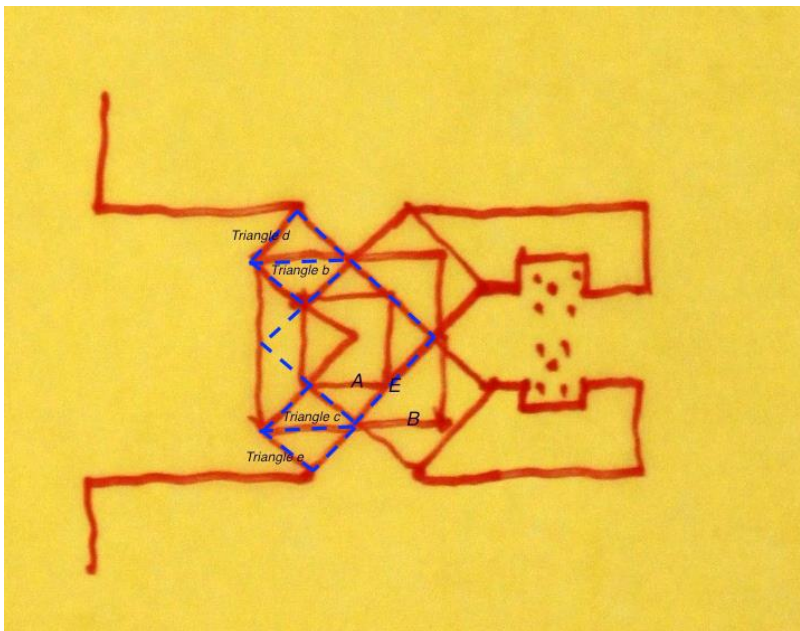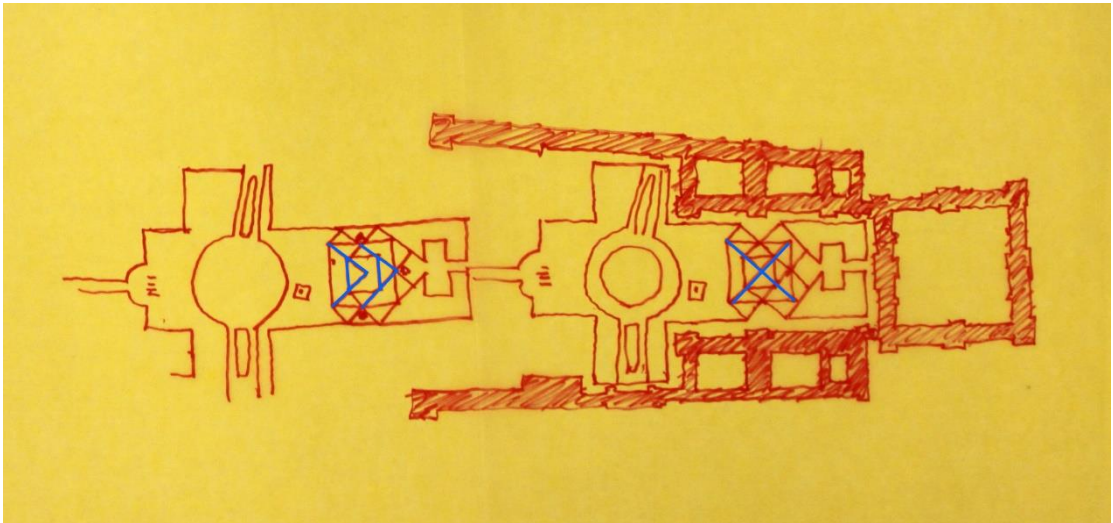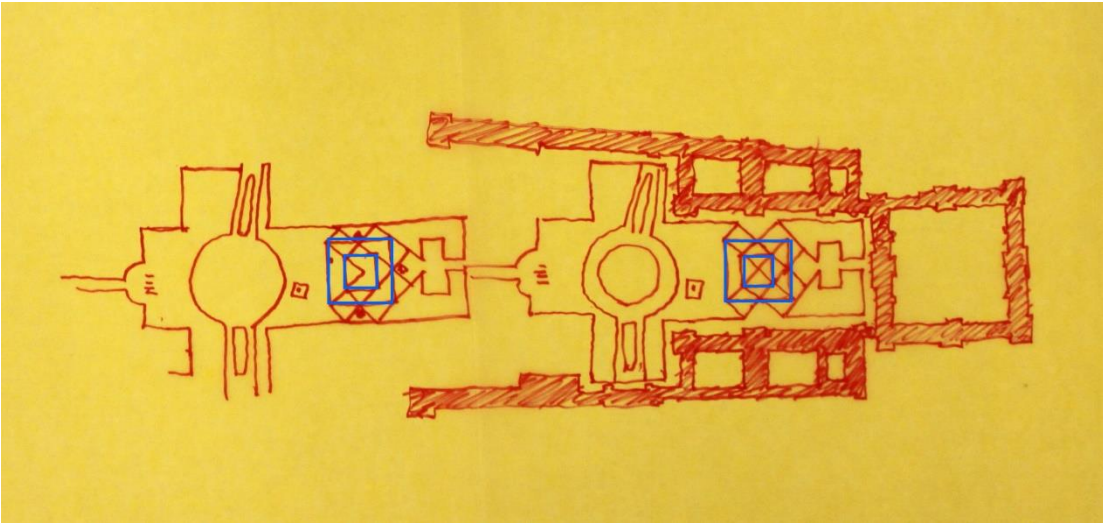

Figure 50, I. M. Pei. Sketch of the Grand Louvre, 1985. Drawing: Based on Figure 49.
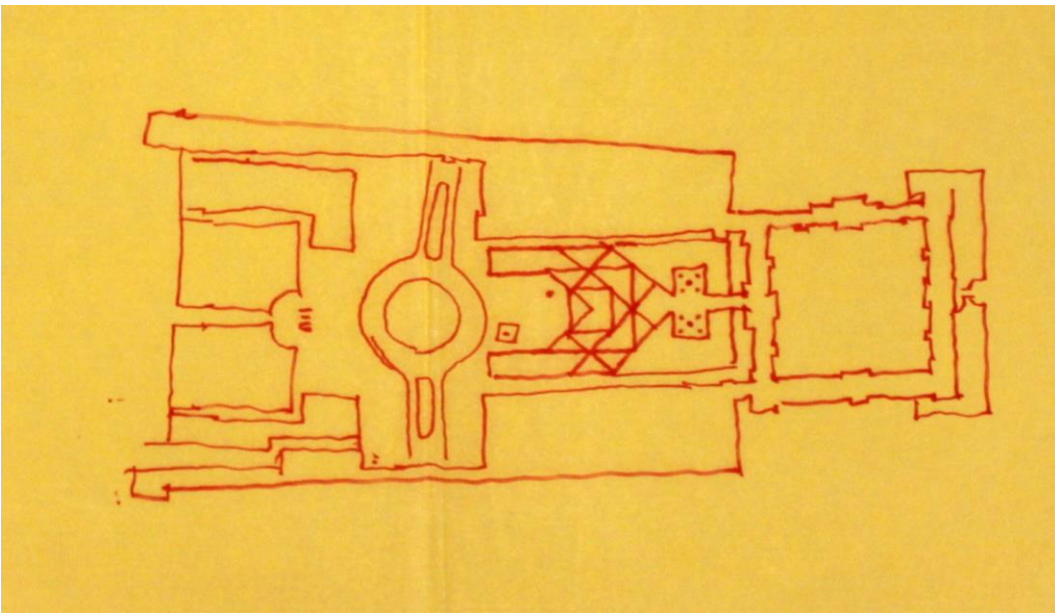
Figure 51, I. M. Pei. Sketch of the Grand Louvre, 1985. Drawing: Library of Congress/ Prints & Photos, Louvre; "from, cabinet behind his desk" 1985; identified by Pei; PR 13 CN 2006:074.07 (2006:074-2, MCE size).
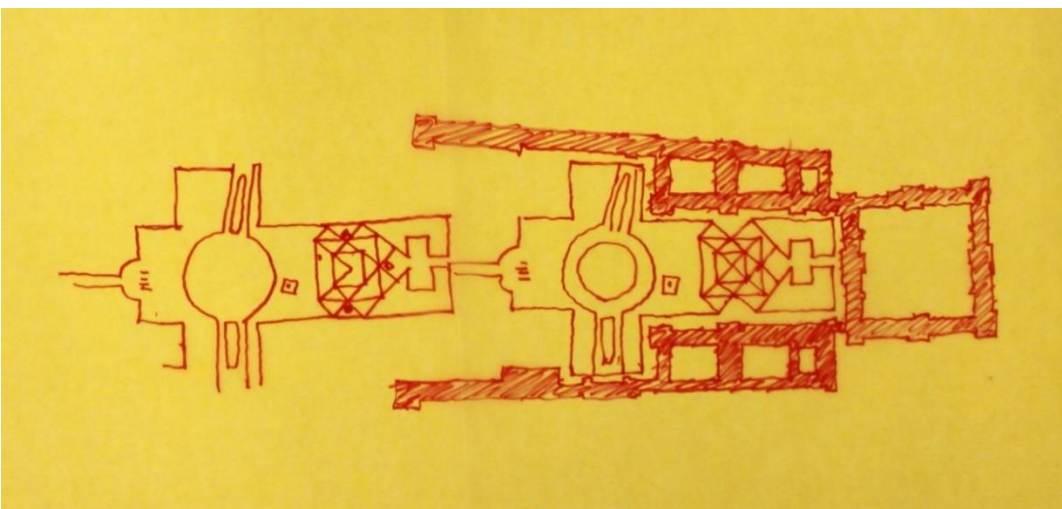
Figure 52, I. M. Pei. Sketch of the Grand Louvre, 1985. Library of Congress/ Prints & Photos, Louvre; identified by Pei; PR 13 CN 2006:074.12 (2006:074-1, B size).
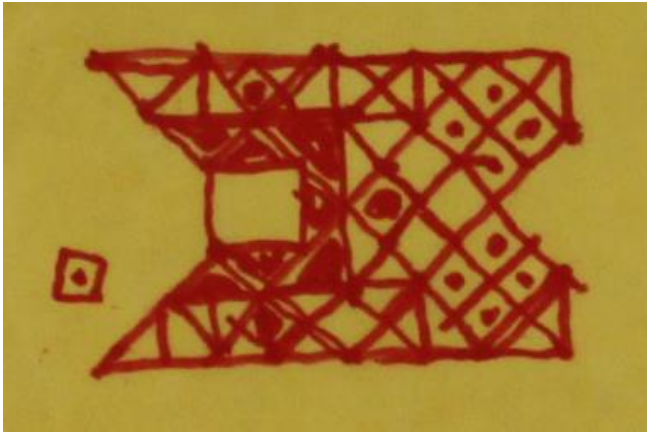
Figure 53, I. M. Pei. Sketch of the Grand Louvre, 1985. Drawing: Library of Congress/ Prints & Photos, Louvre; identified by Pei; PR 13 CN 2006:074.10 (2006:074-1, B size).
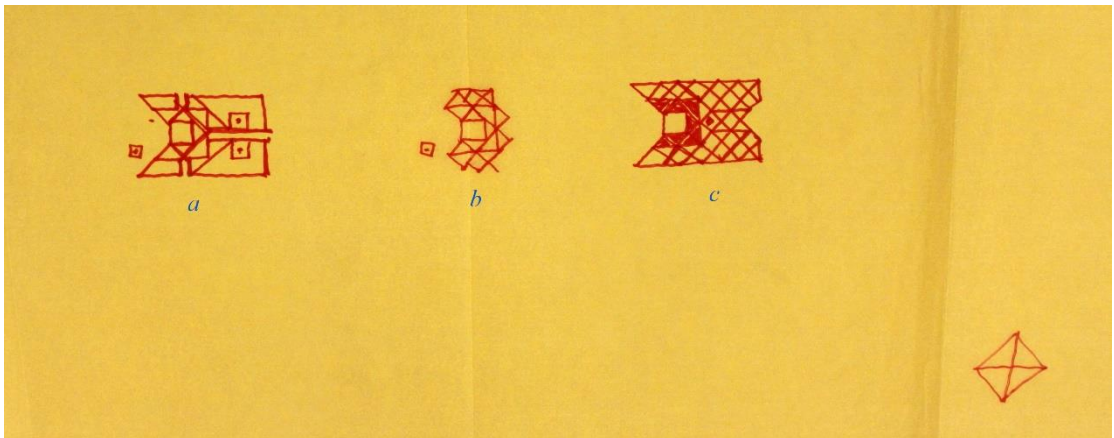
Figure 54, I. M. Pei. Sketch of the Grand Louvre, 1985. Drawing: Library of Congress/ Prints & Photos, PR 13 CN 2006:074.08 (2006:074-2, MCE size).
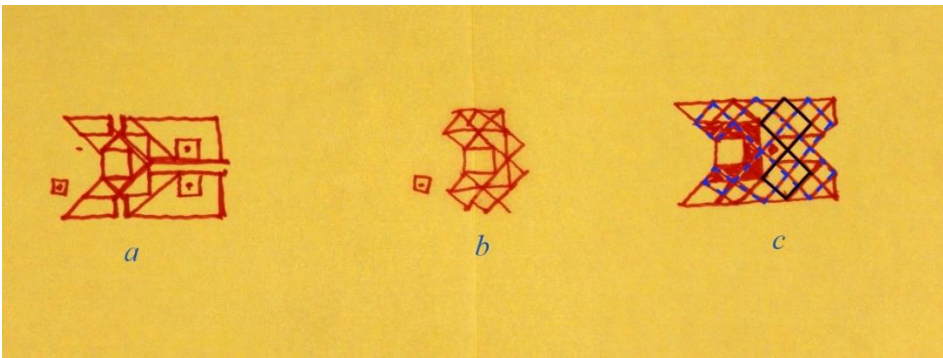
Figure 55, I. M. Pei. Sketch of the Grand Louvre, 1985. Drawing: Based on Figure 54.
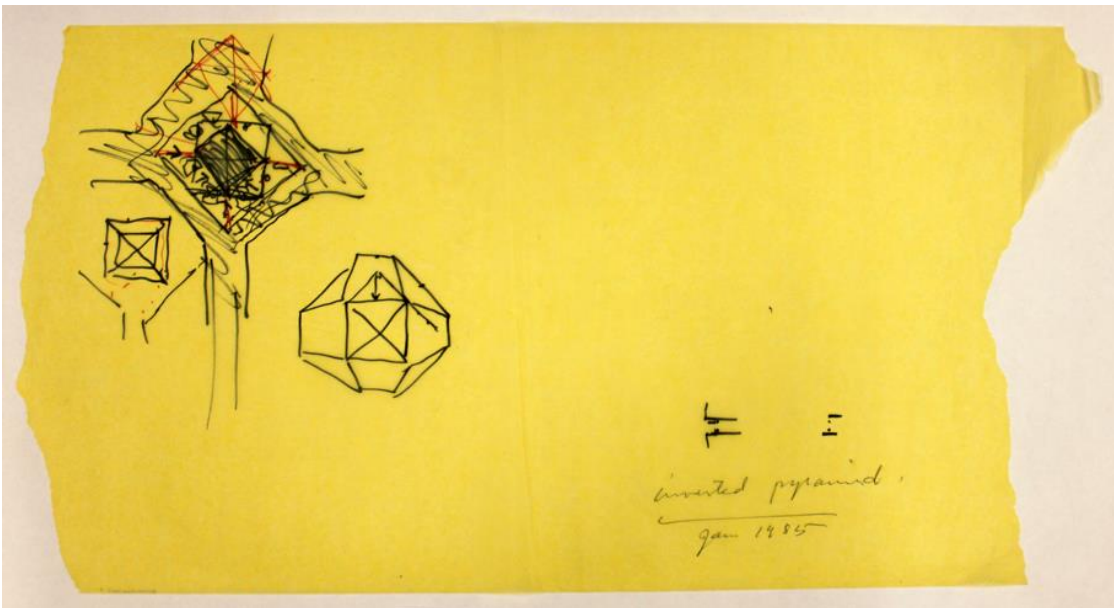
Figure 56, I. M. Pei, Sketch of the inverted pyramid, January 1985. Library of Congress/ Prints & Photos, Louvre; identified by Pei; PR 13 CN 2006:074.09 (2006:074-1, B size).
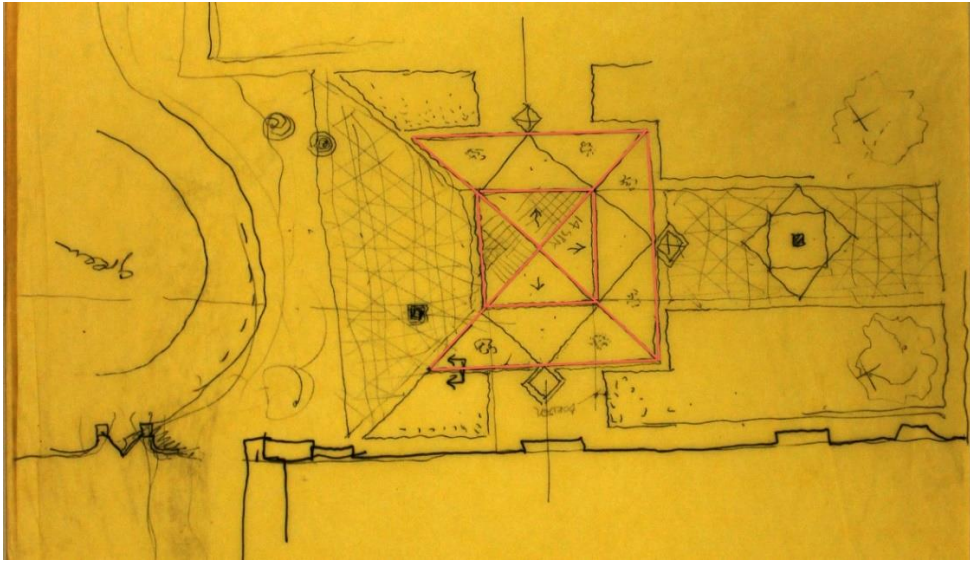
Figure 57, I. M. Pei, Sketch of the Grand Louvre, 18 October 1983. The arrow marked on each side of the pyramid leads our view from the central square to the larger square, as if a view of the pyramid via a concave-lens. Drawing: based on Figure 45.
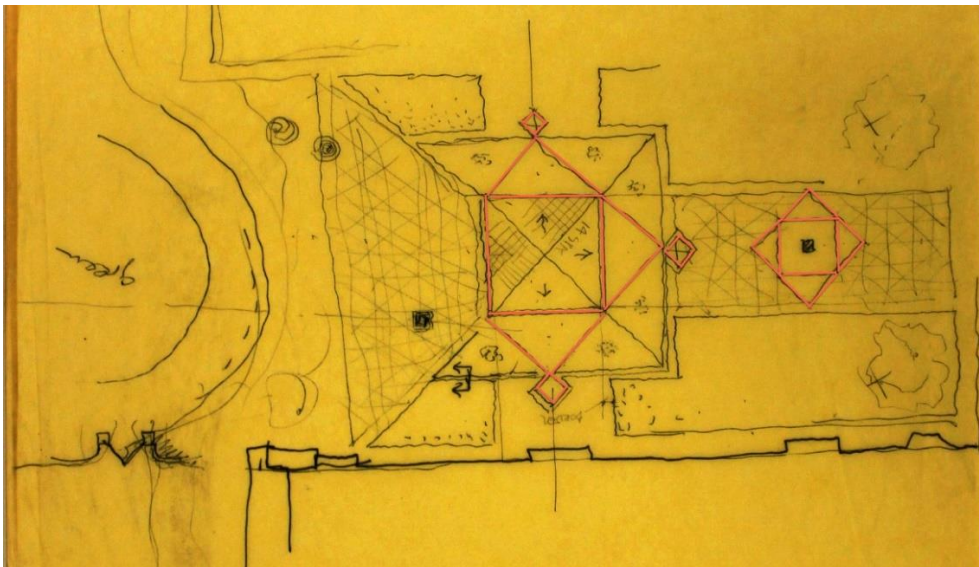
Figure 58, I. M. Pei, Sketch of the Grand Louvre, 18 October 1983. The pyramid is projected as a polyhedral net that can be fold up to shape the form of three-sides of the pyramid (leaving the entrance side open), and the theme is repeated by the rotated square on the right. Drawing: Based on Figure 45.
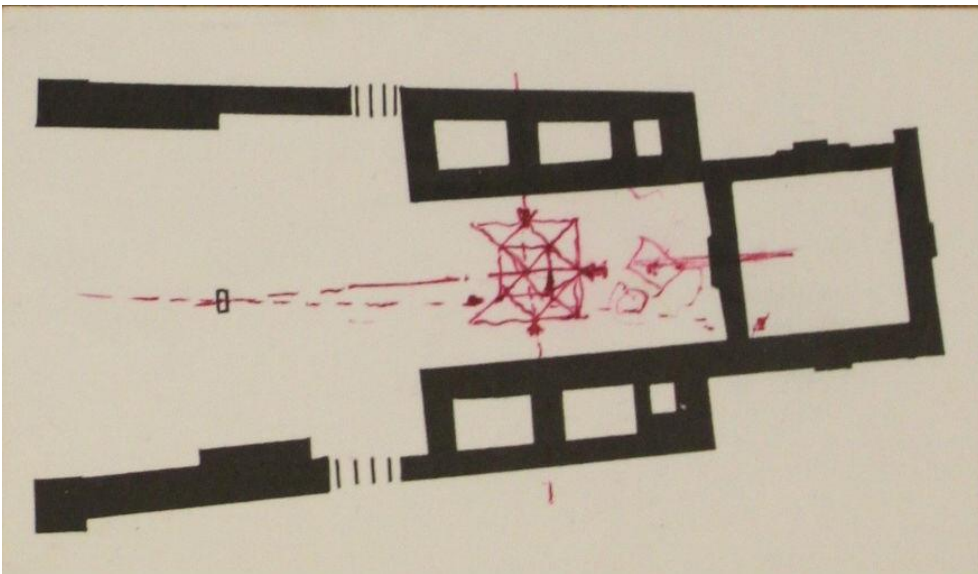
Figure 59, I. M. Pei, Sketch of the Grand Louvre with the misaligned symmetrical structure, 05 March 1984. Drawing: Library of Congress/ Prints & Photos, Louvre plan; red ink on card; blue ink on note paper. PR 13 CN 2006:074.12a (2006:074-2, cont.3, C size).
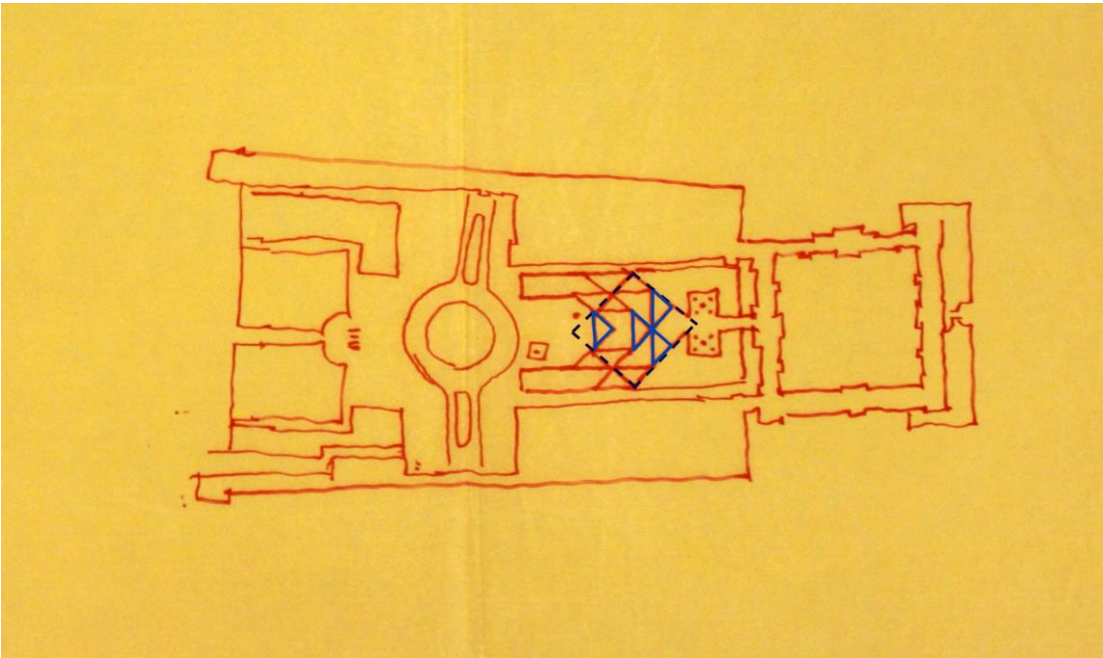

Figure 60, I. M. Pei, Sketch of the Grand Louvre, January 1983. Drawing: Based on Figure 45.

Figure 61, I. M. Pei, Sketch of the Grand Louvre, January 1983. The deconstructed floor plans of the above ground and the underground areas. Drawing: Based on Figure 45.

Figure 62, I. M. Pei, Sketch of the Louvre, 1985. Drawing: Based on Figure 52.

Figure 63, I. M. Pei, Sketch of the Louvre, 1985. Drawing: Based on Figure 52.
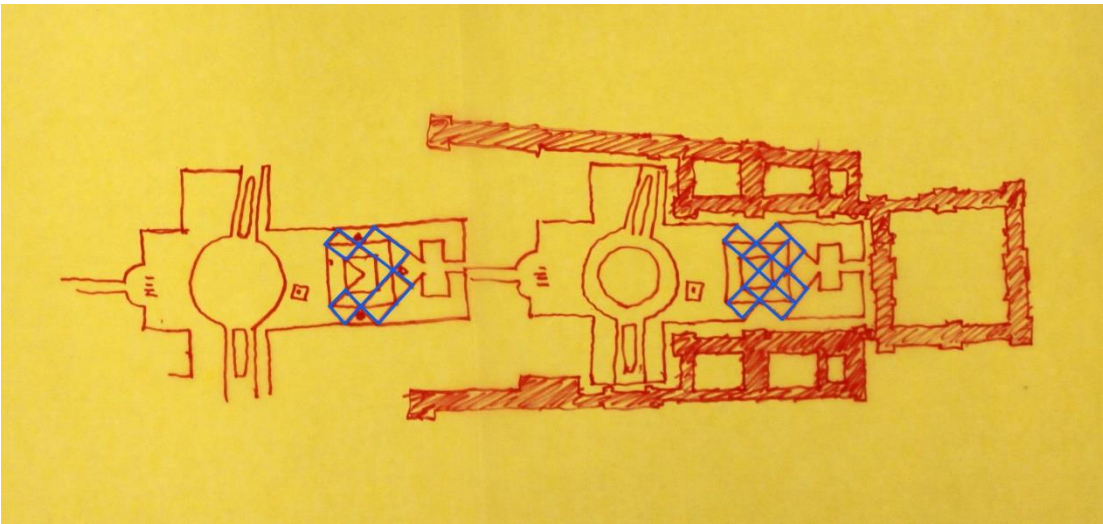
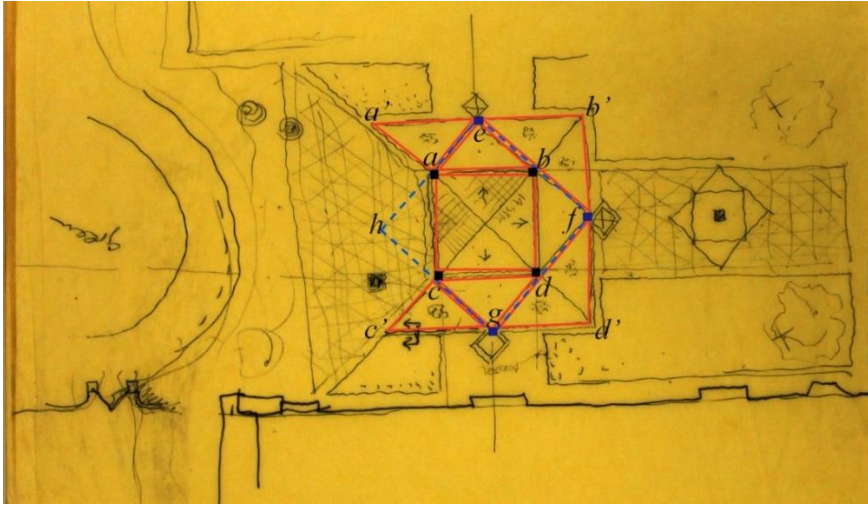Figure 64, I. M. Pei, Sketch of the Louvre, 1985. Drawing: Based on Figure 52.
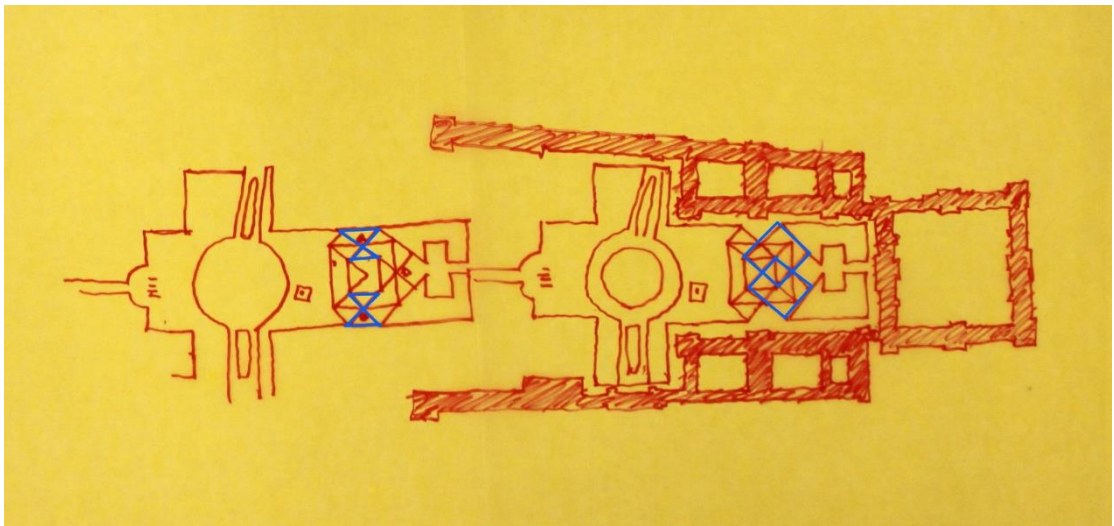
Figure 65, I. M. Pei, Sketch of the Louvre, 1985. Drawing: Based on Figure 52.
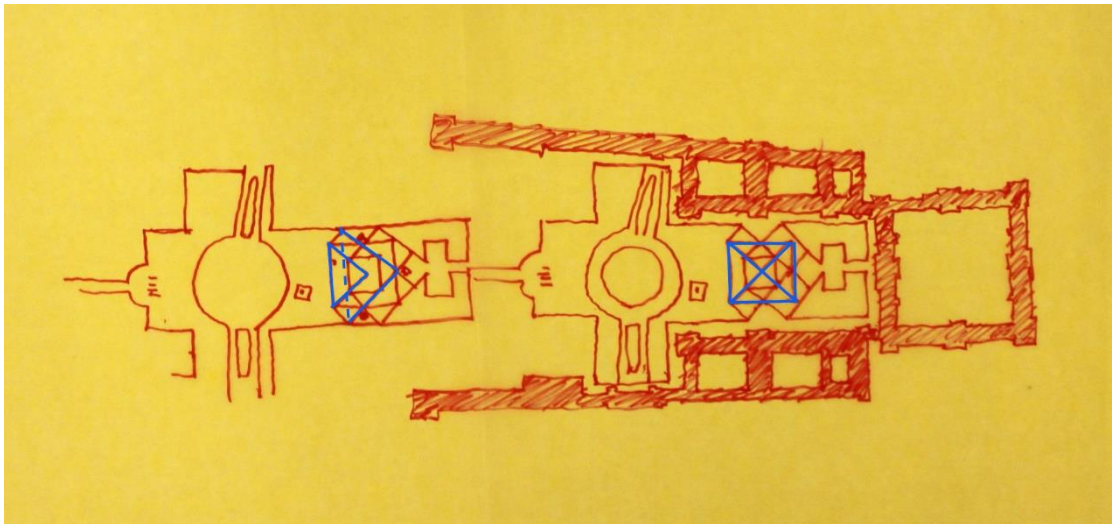
Figure 66, I. M. Pei, Sketch of the Louvre, 1985. Drawing: Based on Figure 52.
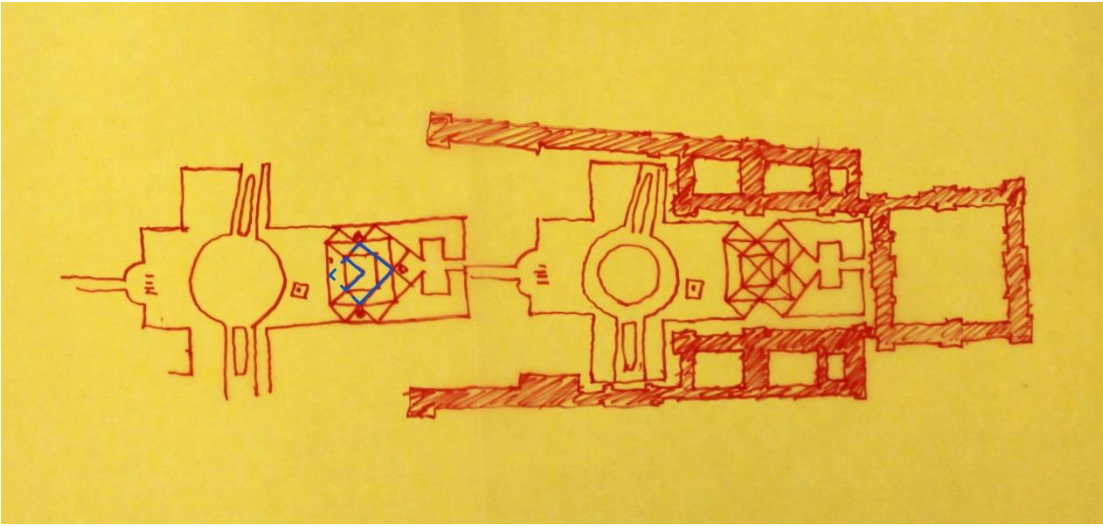
Figure 67, I. M. Pei, Sketch of the Louvre, 1985. Drawing: Based on Figure 52.

Figure 68, I. M. Pei, Sketch of the Grand Louvre, 1985. Drawing: Based on Figure 51.

Figure 69, I. M. Pei, Sketch of the Grand Louvre, January 1983. Drawing: Based on Figure 45.
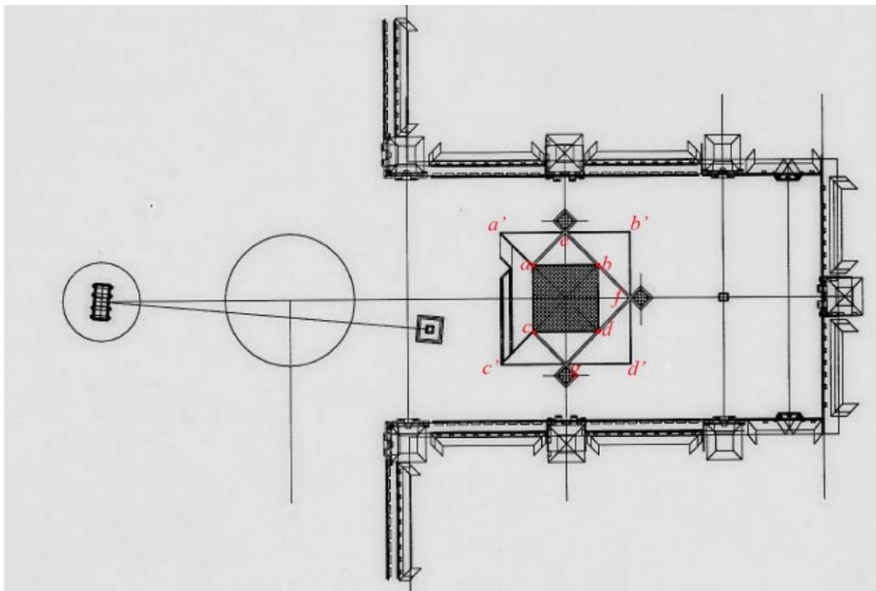
Figure 70, Plan of the Grand Louvre. From: Stephen Rustow, Museoplan. "The Expansion of the Louvre."

Figure 71, Opening on the wall of the bookstore at the Napoleon Hall. Photo taken in 2013.

Figure 72, Opening on the wall of Wing Denon, Lower Ground Floor, Grand Louvre. Photo taken in 2013.

Figure 73, I. M. Pei Museum of Islamic Art, Doha, 2000–8. Photo: Cracknell Landscape Design, Museum of Islamic Art project. http://www.cracknell.com/project/museum-of-islamic-art (accessed 25 Sep 2017).
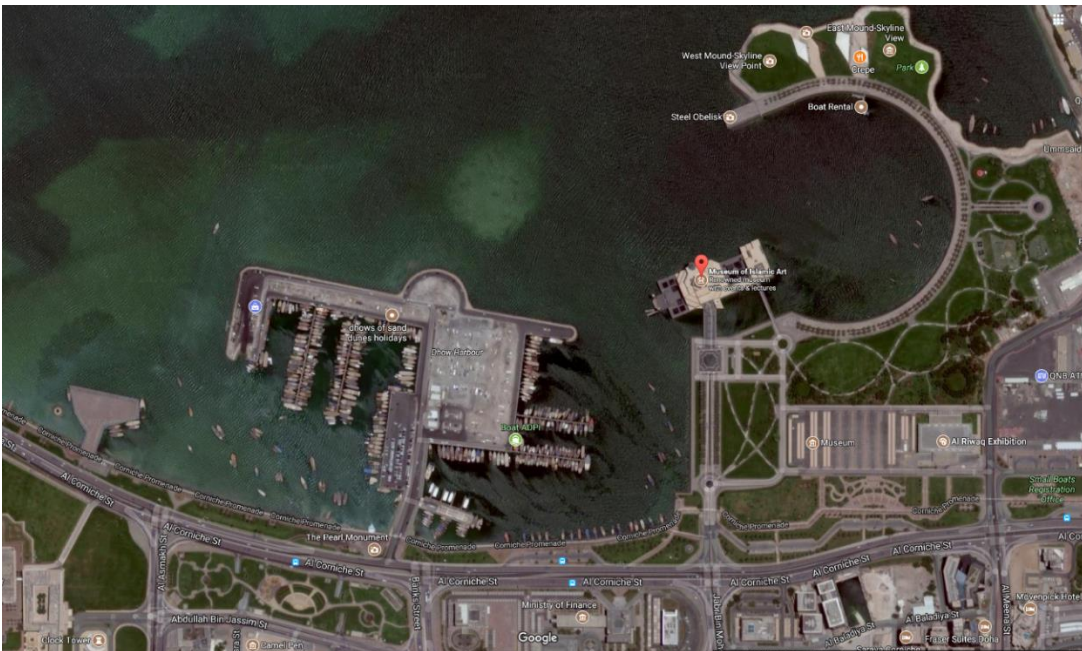
Figure 74, Aerial view of the Museum of Islamic Art opposite Al Corniche, Doha. From: Google map (accessed 25 Sep 2017).
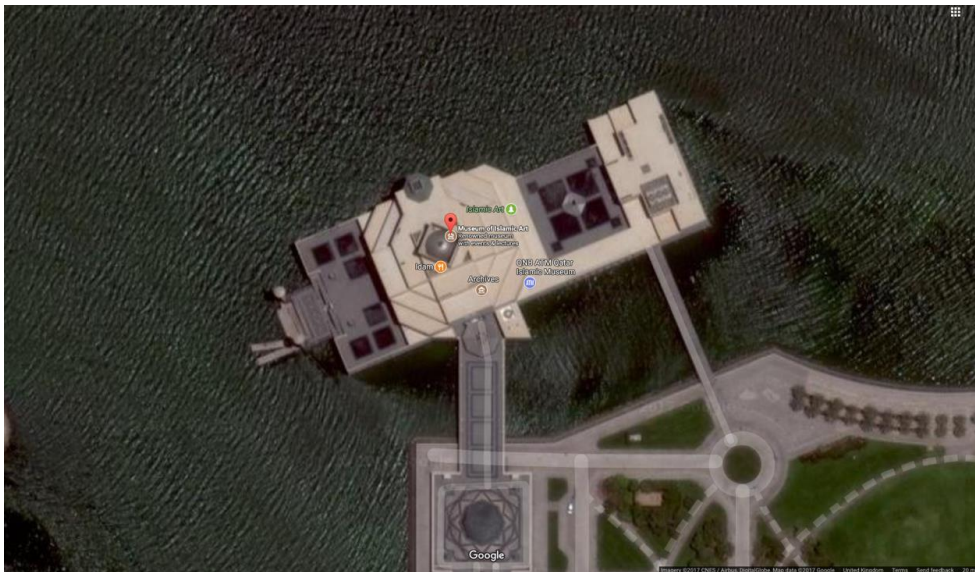
Figure 75, A closer up view of the Museum of Islamic Art. From: Google map (accessed 25 Sep 2017).

Figure 76, Front view of the Museum of Islamic Art.

Photo: Jazzy Li, Dezeen. From: https://www.dezeen.com/2017/03/12/photography-yueqi-jazzy-li-im-pei-museum-islamic-art-doha-architecture/ (accessed 25 Sep 2017).

Figure 77, Detail of architectural façade of the MIA.

Figure 78, Ahmad ibn Tulun, Mosque of Ibn Tulun, Cairo, 876–79. Photo: Swelim, *Ibn Tulun*, 20.

Figure 79, Interior of the *Fisqiya* showing the fountain inside the octagonal transition, Mosque of Ibn Tulun, Cairo. From: Swelim, *Ibn Tulun*, 78

Figure 80, Interior of the *Fisqiya* showing the system of squinches that supports the dome, Mosque of Ibn Tulun, Cairo. From: Swelim, *Ibn Tulun*, 78.
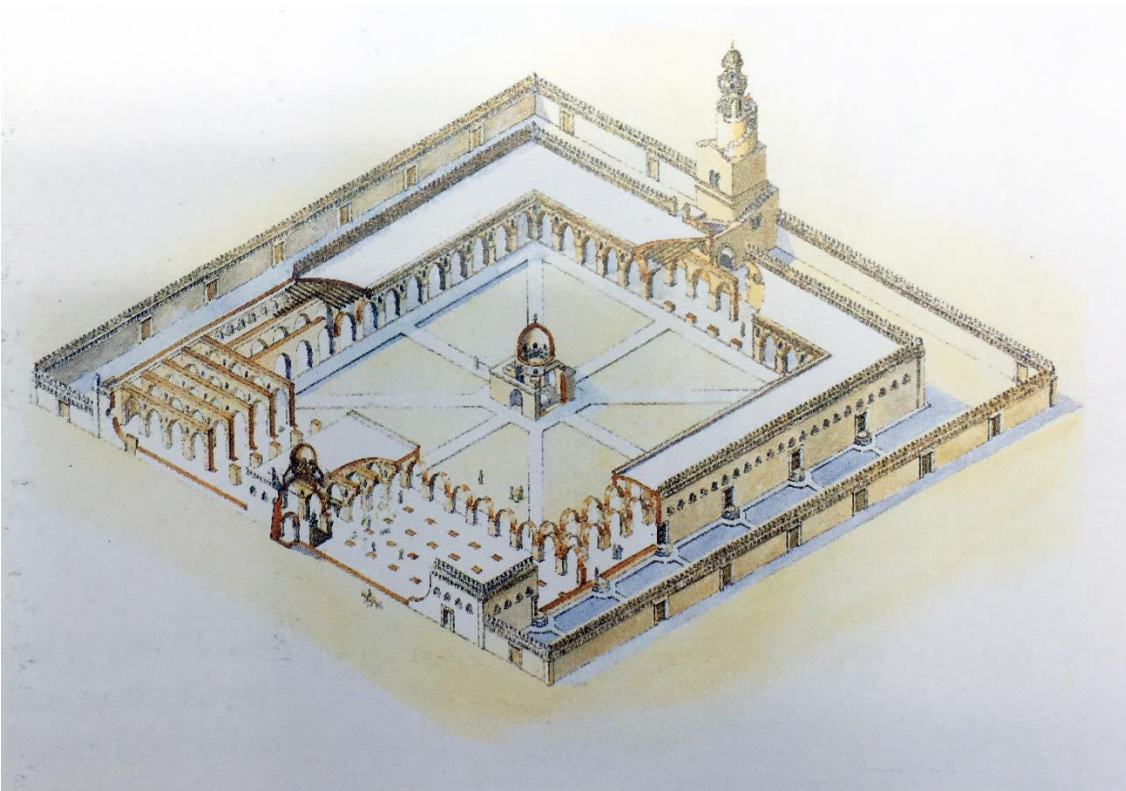
Figure 81, Plan with section view of Ibn Tulun..From: Macdonald, Fiona, *Ibn Tulun: the story of a mosque* (Joan Ullathorne, ill.). Cambridge: Hood Hood Books, 1995,18.

Figure 82, Details of ornaments arch on the *riwaq* and in the internal structure of Ibn Tulun. From: Swelim, *Ibn Tulun*, 88.

Figure 83, Glass skylight in the MIA. Photo: Jodidio and Strong, *I. M. Pei*, 336.

Figure 84, The internal dome of the MIA. Photo: Jodidio and Strong, *I. M. Pei*, 326.

Figure 85, The possible presence of triangles on the exterior of the MIA. Photo source: Elisabetta Pietrostefani,

https://commons.wikimedia.org/wiki/File:View_of_Museum_of_Islamic_Art_Qatar_from_above.JPG (accessed 20 Sep 2017)

Figure 86, Possible presence of spatial relations from the exterior of the MIA. Photo source see Figure 76.

Figure 87, I. M. Pei, Suzhou Museum, Suzhou, 2000–6. Architectural front showing the spatial relations of the framework. Photo taken in 2014.
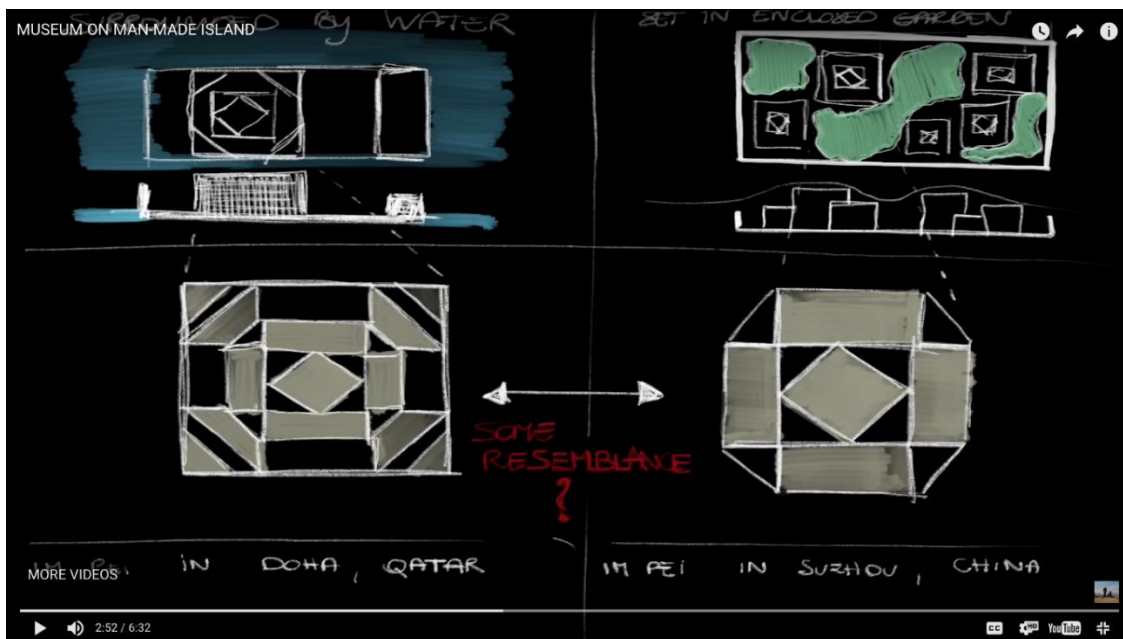
Figure 88, Wahyu Pratomo and Kris Provoost's comparison of architectural plans of the

MIA and Suzhou Museum. From: Wahyu Pratomo and Kris Provoost, "Why IM Pei's Musuem of Islamic Art is the Perfect Building to Suit Doha's Style," 16 March 2017. *ArchDaily*. http://www.archdaily.com/867307/why-im-peis-museum-of-islamic-art-is-the-perfect-building-to-suit-dohas-style (accessed 22 July 2017).

Figure 89, The pavilion at the courtyard of the MIA leading to the education centre of the museum complex. Photo: Jodidio and Strong, *I. M. Pei*, 333.