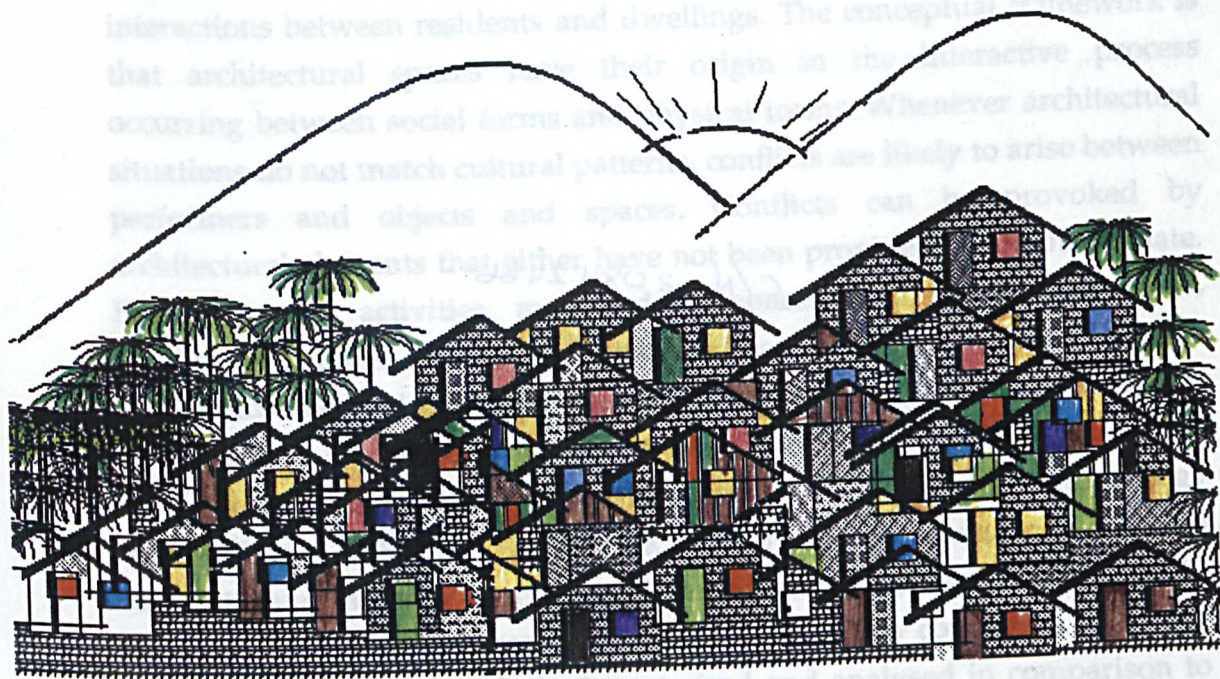


# BRAZILIAN LOW COST HOUSING: INTERACTIONS AND CONFLICTS BETWEEN RESIDENTS AND DWELLINGS

## SUMMARY

In order to improve the general quality of low-cost housing in Brazil, a research project was conducted to identify the existing conflicts in the interactions between residents and dwellings. The conceptual framework is that architectural conflicts occur in the interactive process occurring between social forms and spaces whenever architectural situations do not match cultural patterns. Conflicts are likely to arise between processes and objects and spaces.



Conflicts have been identified, characterised and analysed in comparison to the vernacular architecture and technical literature. The conclusions may constitute a theoretical guide-line for further projects of a similar context.

A thesis presented for the  
Degree of Doctor of Philosophy by

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April 1992

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# **BRAZILIAN LOW-COST HOUSING: INTERACTIONS AND CONFLICTS BETWEEN RESIDENTS AND DWELLINGS.**

**PH.D. THESIS**

**MARIA LUCIA MALARD**

**UNIVERSITY OF SHEFFIELD**

## **SUMMARY**

In order to improve the general quality of low-cost housing in Brazil, a research project was conducted to identify the existing conflicts in the interactions between residents and dwellings. The conceptual framework is that architectural spaces have their origin in the interactive process occurring between social forms and physical forms. Whenever architectural situations do not match cultural patterns, conflicts are likely to arise between performers and objects and spaces. Conflicts can be provoked by architectural elements that either have not been provided or are inadequate. Performing his activities, man endows spaces with significance. Thus, architectural spaces are always meaningful and can be approached as a text to be read, decoded and interpreted. A fieldwork study was conducted to survey about 175 low cost houses in Belo Horizonte, Brazil, by **READING SPACES** in order to identify existing conflicts. The fieldwork methodology consisted of a **SYSTEMATIC OBSERVATION** of the interactions between residents and houses, describing them by means of architectural tools: annotated sketches, pictures and reports on people's comments. Nineteen conflicts have been identified, characterised and analysed in comparison to the vernacular architecture and technical literature. The conclusions may constitute a theoretical guide-line for further projects of a similar context.

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# CHAPTER ONE

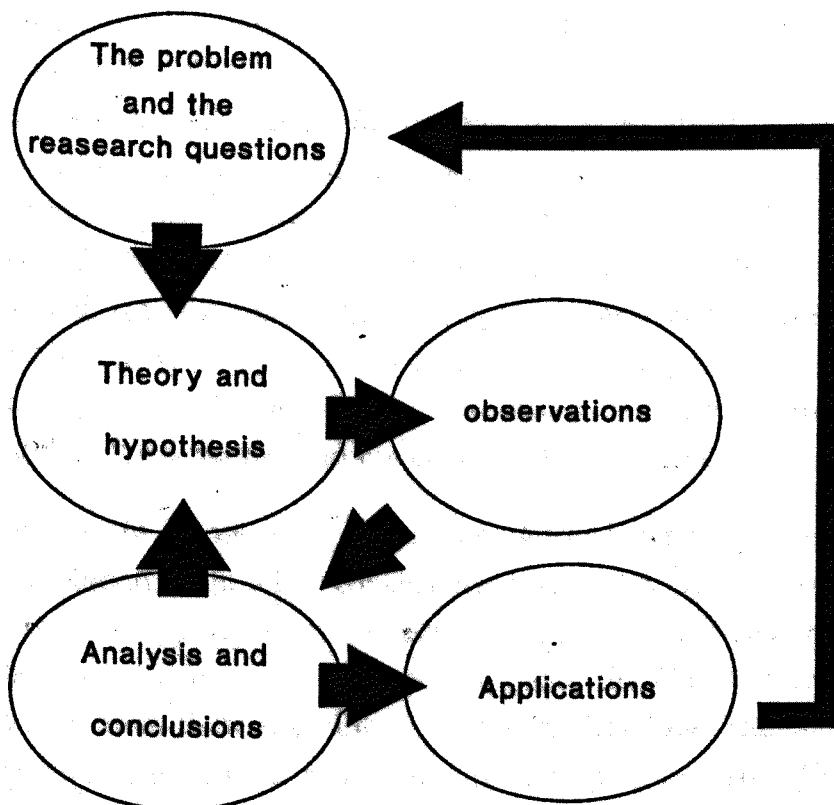
## Introduction

## INTRODUCTION

A research work is the process of asking questions, formulating a hypothesis within a theoretical construct, verifying these hypothesis, drawing conclusions and finally confirming or contesting the theory. Thus, this thesis comprises:-

- \* An existing problem, which is to improve the quality of low-cost housing in Brazil and some of the possible research questions that the problem suggests.
- \* A theoretical construct that generates a hypothesis regarding the research questions.
- \* Observations (field work) carried out to collect data for testing the hypothesis.
- \* An analytical part, in which the hypothesis is discussed and conclusions that will either feed the theory back or develop into applications.

The diagram below gives a visual representation of this idea.





## **The problem and the research questions.**

In Brazil, the planning of housing has been a critical issue for architects, urban planners and public administrators, due to the multiple variables to be considered in the approach to the subject: economic constraints, environmental aspects, cultural requirements and technological parameters. All those aspects have to be considered interactively, indeed for all buildings, but in third world countries there is a trend to give priority to economic aspects, emphasising cost reductions, since the level of deprivation is extremely high and the disposable resources scarce. Such a view may lead to distorted solutions that end up by constituting problems instead. This is the case of many of the "favela" clearance programmes in Brazil, that removed people from places close to their main sources of jobs and located them very far away, on cheap land, causing serious problems of unemployment and family disruption. This is also the case of "embryo houses", which are starter houses built for being extended over time and that shelter families up to fifteen people, as encountered in Palmital Estate. Many of these houses have become as promiscuous as the favelas' shacks they were built to replace.

Thus, a comprehensive framework for housing, apart from matching the budget, must be in accordance with users' needs, desires and culture, as well as the environmental characteristics of the region throughout which it will be spread. So, the issue is highly complex, since human habitat incorporates some concepts that go far beyond the sheer need of shelter. Conceiving a dwelling as mere protection against weather conditions is to reduce the human being to only his animal dimension and to build nothing but caves to contain him. Man's house, on the contrary, is his point of reference to the world: it is the place from which he departs to meet his daydreams and to which he always comes back. For man, being at home is much more than being sheltered; it is being in a protected environment, in a world of his own and, at the same time, in the centre of the universe.

These are issues that cannot be ignored when policies for housing are developed, even when considering low-cost houses. Meanwhile, as far as the Brazilian experience is concerned, the human dimension has systematically been neglected in housing policies. Both the Government and the technical world focus their attention in two main directions. The first of these treats the popular dwelling as a "machine for living" (Corbusier, 1923) which must be cheap and functional, although even the functional aspect is potentially

sacrificed in order to save money. It is the pseudo-rationalist point of view in which the reducing of costs is pursued by means of the "miniaturization" of rooms and a decrease in quality. The second direction considers the popular dwelling as if it were a matter of accountancy, reducing it to the relationship between income and expenditure: when the family income is "X" the cost of their house might be "Y".

Both points of view demonstrate a great lack of interest in the human being since they only take into account material needs and neglect desires. Obviously, providing people with shelter is a very important task. Since prehistory - and there are some vestiges from the time of mammoth hunters - man has been looking for a way to protect himself from bad weather conditions. But it is also a matter of fact that, beyond a shelter, man's house is a HOME, i.e., it has a symbolic meaning, an existential dimension. The commodity called "house" mediates the experiential relationship that is "home". The utilitarian aspects of the former will ensure the embodiment of the latter. When house, the thing, does not function, the experience of home, which is the phenomenon, will be negatively affected. Utilitarian aspects comprise technical facets - the objective level - and experiential relationships comprise existential dimensions - the symbolic level. They form both sides of the same coin and cannot be understood separately. Thus, the planning of housing must also be based on people's existential requirements.

Unfortunately, the current "praxis" in Brazil, as for the planning of housing, is still very far from reaching this understanding. In most cases, reducing cost has been pursued by reducing the size of rooms, eliminating elements and components presumed to be superfluous, and impoverishing the general quality of finishes and appliances. There is a general concern that such an approach has been generating settlements deprived of fundamental attributes for being real dwelling places. Most projects for popular houses are shaped by models that are inconsistent with both utilitarian and existential requirements. They do not provide either an efficient shelter or a place for home. As a result of such a view, the urban peripheries are teeming with housing settlements that have been increasingly rejected by users because they are inadequate. They are not suitable either from the "functional" point of view - because they are patterned by alien parameters - nor do they conform to technological standards, as costs have to be minimized. Residents on low income simply stop paying their mortgages because they find it is

unfair to pay for a commodity that does not meet their basic needs. They cannot afford both the costs of repairing technical mistakes and mortgage repayments. According to official figures, in 1989 63% of low income owners stopped paying off their debts. As the unemployment figures had decreased by 8% in the same period, the explanation to the debt has to be found in the dissatisfaction instead. This attitude of refusing to pay creates a dilemma: if the government close its eyes to the situation, the resources will be more scarce due to debtors; conversely, if the government takes the houses back, the dwellers will go back to "favelas", recycling the social problem. Thus, the solution seems to be to repair previous mistakes and to change the approach for the time being, by considering all prerequisites for housing, attempting to balance them to avoid unacceptable distortions.

As far as the low cost house design is concerned, there is a lot to be done regarding the provision of adequate architectural solutions, whether for the settlement or for the house. The notion of adequacy has to be broadened so that cultural constraints are considered at the same level of importance as the technical and economical ones. To achieve such a purpose, diverse studies have to be carried out in order to provide the necessary elements for changes. First of all, a conceptual framework that supports the reorientation of current approaches must be set up as the foundations for subsequent studies. Thus, the question that should precede any further consideration is "what is a house for?". As for housing, the notion of quality, the concept of adequacy, the definition of functionality, all of them must be drawn out of the answer to this prior question. After working out this preliminary consideration, other questions should also be addressed to the same issue:-

- \* What are the essential attributes any house should meet?
- \* How to identify these attributes?
- \* How to provide Brazilian low-cost houses with these attributes without increasing cost?

The above questioning constitutes the research questions of this thesis.

### **The hypothesis.**

Working out the research questions, the phenomenological approach has been explored and some hypotheses have been put forward.

**House is the place for home.**

Regarding the prior question, "what is a house for?", the hypothesis to be verified is that HOUSE is the place for HOME. It is the "object" that mediates the experience of dwelling, which is the phenomenon. HOUSE embodies HOME.

**The conflicts that take place between residents and dwellings reveal the attributes that houses should have to mediate "home".**

Regarding the question "how to identify the attributes that any house should meet?", the following hypothesis has been put forward - as "house" mediates "home", the attributes that any house should meet to achieve in being a home are displayed on the experiential process of dwelling and are related to the phenomena that inhabitability comprises. Since the phenomena may be contextually presented (cultural related), the architectural elements that mediate them are context dependent too. Whenever architectural elements that mediate phenomena are missing or inadequate, the experience of dwelling is negatively affected.

**Conflicts can be identified by direct observation of the interactions between residents and dwellings.**

Regarding the question "How to identify these attributes?", the hypothesis to be verified is that these attributes are revealed in the process of using and experiencing the house, so they can be identified by the observation, analysis and interpretation of people's everyday life in their dwellings.

**High quality at low cost can be achieved by a cultural-related approach.**

Regarding the question "How to provide Brazilian low-cost houses with these attributes without increasing cost?", the hypothesis that has been put forward is that some attributes can be met by combining minor changes in the design for the units and radical changes in the housing layout. The literature reports on interesting solutions carried out in similar contexts, which seem to be satisfactory and cost effective. Other alternatives, including policy changes, also have to be examined.

## The theoretical construct.

"We do not dwell because we have built, but we build and have built because we dwell, that is, because we are dwellers. But in what does the nature of dwelling consists?"

Martin Heidegger<sup>1</sup>

The aim of this research work is to contribute to the improvement of housing quality in Brazil. Concepts such as quality, adequacy, functionality, efficiency and so on, only have significance if assigned to some purpose: quality for, adequacy for, functionality for, efficiency for. Thus, seeking housing quality is a vague statement, unless there is an explicit assignment, a towards-which this quality should be (Heidegger, 1962). In the present case, what is sought is the house that can be the place for *home*. Hence, *being-at-home* is the assignment of house quality, which means that the expression *house quality* stands for the range of attributes that any house should possess to be the place for *being-at-home*. This understanding leaves room for another question: what does *home* mean? In order to answer this question, the distinction between house (the object) and home (the phenomenon) must be examined.

In the reflections on the human habitat, what are primarily interrogated are those meanings that are related to the subjective dimensions, that is, to the phenomena. This enquiry belongs to the philosophical field, or more precisely to phenomenology. Thus, the phenomenological approach is explored to interpret the meaning of *home*. Moreover, phenomenology is explored to interpret the object *house* that mediates the phenomenon *home*, that makes room for *being-at-home*. The primary source is the book, "*Being and Time*" by Martin Heidegger (1962). Heidegger's interpretations of man as *being-in-the-world* and of things as *present-at-hand* and *ready-to-hand* underlay the proposed conceptualizations for architectural space and its particular manifestation that is house. The concept of *home* is also rooted in Heidegger's thought and complemented by Bachelard's reflections in his book, "*The Poetic of Space*".

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<sup>1</sup> Heidegger, M. (1971). *Poetry, Language, Thought*. Translated by Albert Hofstadter. New York: Harper & Row, Publishers, p. 58

Eventually, it might be said that this thesis is focused on the attempt to explore the phenomenological approach to look at a very ordinary architectural object, which is a low-cost house. A humble house is quite simple, in terms of its architectural configuration, as it were, but highly complex in that it is inhabited by human beings. The theoretical construct is developed in Chapters 2, 3 and part of Chapter 4.

### **The field-work.**

The research strategy of this thesis is, first, to conceptualize housing as far as its universal characteristics as dwelling place are concerned, in order to determine the universal attributes that any house should possess; second, to establish a methodology to identify these universal attributes in ordinary housing settlements; third, to carry out a case-study to examine how these attributes could be identified in low-cost housing settlements and how Brazilian low-cost housing could benefit from such a universal background; finally, to discuss results and present some suggestions.

The case-study is based on field-work which was carried out in 1987, in the Palmital Estate, in Minas Gerais, Brazil. In the field work, data has been collected through the following sources of evidence:

- \* direct observation;
- \* participant observation;
- \* documentation;
- \* archival analysis.

These sources of evidence are used in the following ways:-

- \* Direct observation and participant observation, to identify the interactions between users and houses, the conflicts that emerge from them and the phenomena revealed through them.
- \* Documentation and archival analysis, to describe the phenomena observed and to show secondary data about them.

### **The analysis.**

The verification of the hypothesis comprises three steps:

- 1) the field- work methodology, which is presented in Chapter 4;
- 2) the field-work itself (the direct observations), which is described in Chapter 5;



- 3) the analysis of the conflicts identified in the observations, which are presented in Chapters 6, 7, 8, 9, 10 and 11.

## The organization of the thesis.

Each Chapter is organized as follows:-

### Chapter 2:-

Discusses the concept of *architectural space*; it starts from the understanding of man as *being-in-the-world* and proceeds towards the discussion of the spatial character of man and the existential character of space.

### Chapter 3:-

Chapter 3 is dedicated to the conceptualization of housing. It first examines the difference between *house* and *home* - the object and the phenomenon - and then discusses how the object mediates the phenomenon. The Chapter proceeds towards the discussion of the attributes that any house should meet. It examines Heidegger's understanding of the being (the essence) of things (the *present-at-hand* and the *ready-to-hand*) in order to find out the being (the essence) of housing and consequently, its essential attributes, which are defined as its inhabitability. Inhabitability comprises certain phenomena that are universal and derive from the phenomenological dimensions of *being-at-home*. Inhabitability - and the phenomena related to it - is affected whenever some architectural element is not working properly or is missing. The conflicts that emerge from the interaction between users and those missing or faulty elements reveal the phenomena which are being affected.

### Chapter 4:-

Chapter 4 completes the theoretical construct. It examines the body of the literature on the relationships between man and the built environment, to find out how the phenomenological dimension of *being-at-home* is embodied in the architectural space. It introduces the notion of *Space Readings* (which is the way to identify the conflicts that take place in the interactions between residents and dwellings), and describes the field-work methodology.

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### **Chapter 5:-**

Chapter 5 is about the field-work itself. It first describes the object of investigation, in order to situate the reader in the field-work context. It gives a general view of the country and how housing issues have been treated since the colonial period; it describes the Palmital Housing Estate in Minas Gerais, the sampling procedures and the survey. Examples of Space Readings (the survey) have been translated into English and are presented here.

### **Chapter 6:-**

Chapter 6 is an introduction to the analysis of the conflicts. It first explains why one should identify the conflicts and then presents the conflicts that have been identified in the interactions between residents and dwellings in Palmital. It also introduces a general view of the relationship between the conflicts and the phenomena that they reveal.

### **Chapter 7:-**

Chapter 7 reports on the analysis of conflicts related to territoriality. First the conflict is described and characterized; second, some selected residents' comments on the issue are presented; third, a quantitative analysis of the data about the conflict is carried out, to assess the proportions of the problem; fourth, the phenomenon of territoriality is discussed; and finally some conclusions are presented.

### **Chapter 8:-**

Chapter 8 reports on the analysis of conflicts related to privacy. Apart from the section which discusses some modifications that residents introduced in their houses to overcome privacy conflicts, the structure of Chapter 8 is as much the same as Chapter 7.

### **Chapters 9, 10 and 11:-**

Chapters 9, 10 and 11 are organized in the same way as Chapter 8. They report on the analysis of conflicts related to doors, territoriality and privacy, conflicts related to identity and conflicts related to ambience, respectively.

## **Chapter 12:-**

Chapter 12 is about the discussion of the results achieved, the final conclusions that can be drawn from this thesis and the suggestions for further research.

## **Appendix I:-**

The Appendix I is about phenomenology and the phenomenological method. As phenomenology is a very controversial subject, this section aims at providing the reader with a brief account of phenomenology and the phenomenological approach.

## **Appendix II:-**

The Appendix II comprises five Space Readings translated into English, respectively to the five housing models which have been analysed.

# CHAPTER TWO

Towards an Understanding of the  
Architectural Space

# CONCEPTUAL FRAMEWORK: TOWARDS AN UNDERSTANDING OF THE ARCHITECTURAL SPACE.

## 1. Introduction.

Human existence has a spatial dimension which is part of man's own experience in the world: all human actions take place in space. Meanwhile, space is not only a setting in which human events occur but rather an essential component of events. This inseparable relationship between man and space has been largely discussed in sociology, anthropology and geography, as well as in the philosophical field, particularly by phenomenologists as the early Heidegger (1962) and Merleau-Ponty (1962).

Attempting to establish the conceptual framework for the subsequent essay, this Chapter will first examine the phenomenological approach to the interactions between man and space, in order to explore the basic concepts that underlay the theme. Secondly, it will be seen how architectural spaces incorporate these concepts, and eventually it will set out the interpretation of architecture to be considered in this essay. The next section discusses the fundamental notion of man, which is Heidegger's interpretation (1962) of Being (*Dasein*, in German).

## 2. Man as being-in-the-world.

In his book *Being and Time*, Heidegger (1962) discusses the essence of Being and describes it as *Being-in-the-world*. According to his understanding, world and man are not side by side entities but rather a single unit, since man has *Being-in-the-world* as his essential state. The word *in* suggests a spatial relation although it cannot be understood that the world is a container in which man *is* as well as man cannot be *in-the-world* (in space) as an extended thing apart from him. Conversely, spatiality belongs to the very essence of man, therefore space is constitutive for man's existence. Heidegger says:

*"Space is not to be found in the subject, nor does the subject observe the world 'as if' that world were in a space; but the 'subject' (Dasein), if well understood ontologically, is spatial." (Heidegger, 1962, p. 146)*

This paragraph from *Being and Time* clearly shows Heidegger's idea that man's existence is spatial, which leads to the conceptualization of space as existential, in that it belongs to the essence of Being. It is not just functional, rational, symbolic or whatever. It is existential and being so, it is simultaneously functional, rational and symbolic since it incorporates all human needs, expectations and desires. This concept underlies all the reasoning that has been carried out to analyse the architectural space in the present essay.

### **3. The body as the subject of space.**

The existential characteristic of space put forward by Heidegger is also discussed by Merleau-Ponty (1962) in the book *Phenomenology of Perception*. A whole Chapter is dedicated to space, in which he discusses the spatial perception from a phenomenological point of view. Characterizing space, he emphasises the idea that space is not a category apart from things but rather mediates their existence. He says :

*"Space is not the setting (real or logical) in which things are arranged, but the means whereby the positing of things becomes possible. This means that instead of imagining it as a sort of ether in which all things float, or conceiving it abstractly as a characteristic that they have in common, we must think of it as the universal power enabling them to be connected." (Merleau-Ponty, 1962, p. 243)*

It is important to observe Merleau-Ponty's notion that space, instead of being the place to dispose of things - as it is commonly believed to be - is rather a prerequisite to enable things to be disposed and connected, i.e., to enable things to make sense. As can be observed, Merleau-Ponty's understanding of

the spatiality of things is entirely shaped in Heidegger's ideas<sup>1</sup>. However, Merleau-Ponty has developed this concept in a more concrete sense, as it were, at least as far as its architectural application is concerned. This is because he takes the human body as the standing point for all perceptions as well as for all actions towards things, in the space. According to his interpretation, one's body is the "*anchoring point*" (Merleau-Ponty, 1962, p. 249) that permits the spatial level to be established and therefore events to be oriented. This means that the human body is what establishes the connections among things, by arranging them accordingly. Merleau-Ponty considers the body not "*as a thing in objective space, but a system of possible actions, a virtual body with its phenomenal 'place' defined by its task and situation.*" (Merleau-Ponty, 1962, p. 250) He concludes:

*"My body is wherever is something to be done." (Merleau-Ponty, 1962, p. 250)*

The emphasis given to one's body is remarkable in Merleau-Ponty's thought. According to his view, the possession of a body implies the ability of understanding space because the body is *geared to the world*. Thus, the body is the subject of space. That organic relation between subject and space, that *gearing* of the subject to the world is the origin of space. This idea seems to be fundamental to carrying out any analysis of the architectural space since it introduces the notion that human activities (the gearing of the subject to the world) make room for events, therefore originate space.

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<sup>1</sup> See Heidegger, M. (1962) *Being and Time*. Transl. by John Macquarrie & Edward Robinson. London: SCM Press pp. 135-138., in the Chapter entitled "The Spatiality of the Ready-to-hand Within-the-world". He writes: "*The 'environment' does not arrange itself in a space which has been given in advance; but its specific worldhood, in its significance, articulates the context of involvements which belongs to some current totality of circumspectively allotted places. The world at such a time always reveals the spatiality of the space which belongs to it. To encounter the ready-to-hand in its environmental space remains ontically possible only because Dasein itself is 'spatial' with regard to its Being-in-the-world.*" (p. 138)



The assertion that the body is the subject of space is the departure point of Merleau-Ponty's interpretation of perception<sup>2</sup>, particularly the spatial perception, and provides cues for the understanding of the architectural space as the lived-space of everyday life. The next section deals with this issue.

#### 4. Lived-space.

In order to establish the spatial relationships between objects and their geometrical characteristics (in order to perceive the surrounding world), the subject of space, which is the body, has to be in a setting and to be aware of the experience of this world. Every perception, beside being able to establish spatial relationships between forms, presupposes a certain past, a corpus of previous knowledge (the awareness of the world) which gives it significance. For instance, what takes place in the process of experiencing (or perceiving) the architectural space is governed by that past, or culture, as it were. Illustrating this concept, Merleau-Ponty writes:

*"Paris for me is not an object of many facets, a collection of perceptions, nor is it the law governing all those perceptions. Just as a person gives evidence of the same emotional essence in his gestures with his hands, in his way of walking and in the sound of his voice, each expressed perception occurring in my journey through Paris - the cafes, people's faces, the poplars along the quays, the bends of the Seine - stands out against the city's whole being, and merely confirms that there is a certain style or a certain significance which Paris possesses." (Merleau-Ponty, 1962, p. 281)*

The concept of *experienced* or *lived-space* constitutes in a coherent explanation of feelings that are generally called *sensations*, whenever architectural places

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<sup>2</sup> Merleau-Ponty interprets the spatial perception as a phenomenon that is only comprehensible within a perceptual field which motivates the spatial perception by suggesting to the subject (the body) a possible anchorage. Thus, the existence of a body positioned in a perceptual field are prerequisites for spatial perceptions to take place. Eventually, he defines perception of space as "the knowledge that a disinterested subject might acquire of spatial relationships between objects and their geometrical characteristics" (Merleau-Ponty, 1962, p. 280). This process of acquiring knowledge of geometrical characteristics is continual and generates the notions of lived-space and lived-distance.



are described<sup>3</sup>. To better clarify this issue it is worth examining Otto F. Bollnow's essay *Lived-Space* (1967) which provides a description of the spatial constitution of human life, and brings an expressive contribution to the understanding of the lived dimension of the architectural space.

Bollnow starts by distinguishing the difference between the concrete living space of man from the space of mathematicians. According to his view, the outstanding property of mathematical space is its heterogeneity, in that no point and no direction is preferred to another; one can make every point the co-ordinating zero and every direction the co-ordinating axis. Conversely, in lived-space there is both a distinct coordinating zero point which depends upon the living place of the living man in space, and a distinct axis system which is connected with the human body.

In this way, lived-space only must be applied to man who perceives and moves in it and should be considered by the direction scheme founded in the human body: above and below, fore and aft, right and left. He understands that the vertical axis is always peculiar because it is determined by the direction of gravitation. Above and below are also peculiar as they remain the same whether one stands or lies down. These two directions are defined by the horizontal plane, as well as the vertical axis, which is perpendicular to it. Among the other directions none is peculiar: left and right, and fore and aft change whenever the body's position is turned around. Thus, Bollnow concludes that the vertical axis and the horizontal plane are the two unchangeable directions that form the system of reference for the human lived-space.

Bollnow also explores the concept of lived-distance, which is strongly correlated to lived-space. From his view, this distance is not to be identified with the abstract geometrical distance in centimetres, but is conditioned by many circumstances, favourable and unfavourable. Illustrating this idea, he poses the following question:

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<sup>3</sup> Heidegger introduces the notion of lived space when he discusses the spatiality of things in *Being and Time* (1962). He writes: "The "above" is what is "on the ceiling"; the "below" is what is "on the floor"; the "behind" is what is "at the door"; all "wheres" are discovered and circumspectively interpreted as we go our ways in everyday dealings; they are not ascertained and catalogued by the observational measurement of space." It is important to observe Heidegger's remark that all "wheres" are discovered in our everyday dealings, that is, they are experienced. (Heidegger, 1962, pp. 136-137)

*"How great is the concrete living distance between a point on a wall of my home, to the point straight through on the other side of the wall in my neighbour's home?" (Bollnow, 1967, p. 76)*

From the mathematical point of view it would be the measure of the straight line between the two points. Concretely it would be much farther. Bollnow explains:

*"For to reach it I have to leave my room, my house, and go out on the street to my neighbour's house. Then if I am not acquainted with this neighbour he may make such a wry face at my question that I may prefer not to ask it at all. In other words, a point which is mathematically near may be practically very far away, perhaps inaccessible. More generally, the structure of space I experience and live through follows the 'lines of force' of my concrete life situation." (Bollnow, 1967, p. 77)*

Merleau-Ponty (1962) has the same view as Bollnow on this subject. He understands that there are two categories of distance:

- \* A geometrical distance which is a human construct to express the physical gap existing among things, and between man and things. This distance is objective in that it stems from the relationship between objects themselves (man here is considered in his objectual dimension only).
- \* A lived distance which expresses the engagement that exists between man and the things that have significance for him. The lived distance is subjective, since it is related to man as the subject of perception. Merleau-Ponty says:

*"Beside the physical and geometrical distance which stands between myself and all things, a 'lived' distance binds me to things which count for me, and links them to each other. This distance measures the scope of my life at every moment." (Merleau-Ponty, 1962, p. 286)*

In the architectural field, Norbergh-Schulz (1971) is probably the writer who has contributed most to a clarification of the relationship between man and

space in a phenomenological approach. In *Existence, Space & Architecture*<sup>4</sup>, starting from Heidegger's interpretation of *Being-in-the-world*, and from Bollnow's findings about the vertical axe and horizontal plan, he establishes the basis of a theory of "Existential Space" and hence develops, "*the idea that architectural space may be understood as a concretization of environmental schemata or images, which form a necessary part of man's general orientation.*" (Norberg-Schulz, 1971, p. 9)

He discusses the concept of space in architectural theory and criticizes the attitude of most scholars who have studied this subject, in that they either do not take into account man, by discussing abstract geometry, or reduces man's participation to *impressions and sensations*.

Norberg-Schulz also understands that man's interest in space has existential roots. He writes:

*"Most man's actions comprise a spatial aspect, in the sense that objects of orientation are distributed according to such relations as inside and outside; far away and close by; separate and united; and continuous and discontinuous."* (Norberg-Schulz, 1971, p. 9)

As this quotation well illustrates, Norbergh-Schulz adopts Bollnow's standpoint (1967) that spatial concepts only have significance if taken from the body's position in space. Spatial relations are thus the basis of man's very existence. Man could not act towards things if he had no sense of direction, if he were not *in a position* in the world. Norbergh-Schulz sums up his reasoning with these words:

*"Space, therefore, is not a particular category of orientation but an aspect of total orientation."* (Norbergh-Schulz, 1971, p. 9)

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<sup>4</sup> See Norberg-Schulz, C. *Existence, Space & Architecture* (London: Studio Visa, 1971). Although Norberg-Schulz considers himself as adopting Heidegger's understanding of man as *Being-in-the-world*, which addresses to the very spatiality of existence, he does not completely clarify his position related to man's spatiality since he states that "*most man's actions comprise a spatial aspect*" (See Norberg-Schulz *op. cit.*, p. 9) Such statement implies that he believes some man's actions would not comprise spatial aspects at all. This apparent contradiction between his understanding and what Heidegger and Merleau-Ponty have really said about the essence of man, leaves room, in Norberg-Schulz's work, to architectural analysis that dismiss human presence, as if the architectural space were something apart from man. Despite of this contradictory thought, Norberg-Schulz's attempt to found the base of a Phenomenology of architecture is unique and constitutes an obligatory departure point for any study on this subject.

In addition, it can be said that man's position in the world - man's total orientation - is related to his own body, leading to the conclusion that man's existence is spatial, as stated by Merleau-Ponty:

*"We have said that space is existential: we might just as well have said that existence is spatial." (Merleau-Ponty, 1962, p. 193)*

From what has been discussed so far, it may be concluded that there are many characteristics that spaces possess which go far beyond geometrical relations and physical properties. These characteristics cannot be grasped by the explanatory sciences, since they do not belong to the object only but to the interaction between the object and the subject<sup>5</sup>. To fully understand the architectural space, one has to analyse the interactions that take place in it.

## 5. Spatializations.

The preceding sections of this chapter have developed some concepts which are fundamental to the understanding of the interactions between man and space. Summarizing what has been discussed so far, it has been seen that:

- \* man is *Being-in-the-world*, therefore man and space are a single and indivisible unity;
- \* all human events occur in space: the architectural space;
- \* *lived-space* and geometrical space are different categories. The former is experienced and therefore related to the architectural space in which human events occur; the latter is an abstract construct of science. Lived-distance and geometrical distance are different notions as well, for the same reason.

Given these fundamental concepts, the next step is to conceptualize the architectural space as the place for the existential interactions between man and space. Before beginning this conceptualization, it is worthwhile to briefly define the concepts that will be adopted for the terms events, architectural spaces and built environment. Events are man's activities that imply in interacting with things or other persons. Thus, intellectual activities, which include just thinking, are not considered events for this essay.

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<sup>5</sup> See the Appendix I, section 1.

The human built environment, or just the built environment, is any kind of environment that has suffered any human intervention, in contrast to the natural environment. Architectural spaces are the places of the built environment in which human events occur. The other components of the built environment could be classified as infrastructure. Given these general parameters, the task remains to define spatialization.

The *gearing* of the subject to the world, as Merleau-Ponty (1962, p. 250) puts forward, may be described in this way: when man acts, towards things in space, he is being stimulated by intentions which stem from desires<sup>6</sup>. Thus, performing activities, man spatializes his intentions. In this process he disposes objects, markers and signs, giving intentions physical forms and then creating meaningful places: the architectural places. To some extent, it could be said that the architectural space is the spatialization of desire.

The diagram in the Fig. 1.1 illustrates this idea.

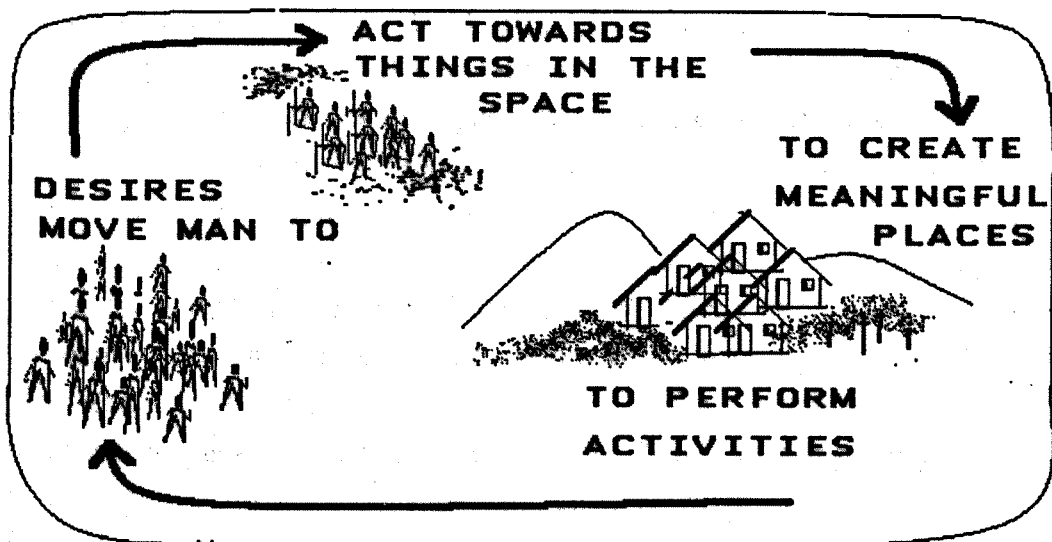


FIG. 1.1 Diagram of the genesis of the architectural space.

<sup>6</sup> Needs are related to biological survival, to the "animal" dimension: the need for food, protection against the weather, defense against predators and the like. Needs then belong to the objective universe. Desires, on the other hand, are related to the intellectual dimension (how to survive) and belong to the subjective world. However, these boundaries are not completely clear within the cultural process: desires become needs and vice versa, depending on the social context. The most striking example of such ambiguity is concerned with food. Eating is a fundamental need but what, when, where, and how to prepare food are social constraints and belong to the realm of desire.

Spatializations are the expression, in space, of the interaction between events (social forms) and things (physical forms). Thus, spatializations are the ordering of objects, markers and signs carried out intentionally, i.e., carried out in order to make room for intentions to take place. A certain built environment constitutes the universe of spatializations that are prescribed by the cultural background of the community which inhabits it. All of the architectural spaces that compound the built environment constitute a certain range of possible spatializations, since they make room for a certain range of events. On the other hand, all of the events of social life are related to spatializations. From the reasoning that has been developed so far a question arises: how can a limited range of architectural spaces accommodate all range of everyday life possible spatializations? This question is to be examined in the next section.

### 5.1. Spatializations and cultural patterns.

Within equal social strata, day-to-day life activities occur in a similar way, although performed by different individuals. They are quasi-rituals and can be grouped into *patterns* or *typologies* (eating, cooking, sleeping, watching TV., reading, typing, etc.). Each pattern has its corresponding architectural form (dining room, kitchen, bedroom, sitting room, library, office, etc.), which means that environments are culture specific and congruent with a particular social organization. Thus, spatializations and places are strongly correlated: events that occur in a certain place are only those likely to take place there. Places, in turn, affect the social relationship in that they suggest, facilitate, impede or even condition events. This is a reciprocal process: man creates places for his activities and endows them with meanings. Places created by man to shelter his activities end up by influencing back the social form. This mutual influence between man and the architectural space is pointed out by Csikszentmihaly & Rochberg-Halton (1981, pp. 107-142). They write:

*"Like some strange race of cultural gastropods, people build home out of their own essence, shells to shelter their personality. But, then, these symbolic projections react on their creators, in turn shaping the selves they are." (Csikszentmihaly & Rochberg, 1981, p. 138)*

Nevertheless the reciprocal influence between man's behaviour and environmental conditions is still far from reaching a general agreement among scholars who study the relationships between man and his environment.

Two main streams of thought polarize the discussion on this subject: the determinism and the interactionism. The determinists consider that man's behaviour is shaped by environmental constraints while the interactivists adopt the same position which is taken in the present essay, i.e., the mutual and dialectic influence. There is no point in considering this controversy here, since Heidegger's interpretation (1962) of being as Being-in-the-world is the basic concept of this work. Thus, as far as the conceptual framework adopted here, the understanding that there is an existential interaction between man and his environment seems to be obvious.

It has been shown how human events and architectural spaces go together: spatializing his activities, man creates places (architectural places) by ordering things and thereafter shaping forms. The ordering of things is the process that brings meaning to spaces, since it is intentional, i.e., it is orientated to some purpose<sup>7</sup>. The next section examines the role that time plays in the architectural space.

## 5.2. Time and spatialization.

In order to take place, events need, apart from space, disposable time: time to work, time to rest, time for lunch, time for tea, time to play and so on. Starting from the principle that time is a component of events, this section will examine what kind of component it is, whether essential or not.

The expressions above are related to time, although they do not refer to linear time, quantifiable and divided up into its succession of days, hours and minutes, but to the experienced time within everyday life. This notion of *experienced* or *lived* time is fundamental to an understanding of the role that time plays in spatializations. The first task must be then to clarify what is meant by *lived* or *experienced* time.

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<sup>7</sup> See Heidegger op. cit. pp. 107-114, Reference and Signs and pp. 114-122, Involvement and Significance; the Worldhood of the world.

In *Sociology of Everyday Life*, Weigert (1981) discusses the notion of *experienced* or *lived* time as the time applied to everyday life. He starts by classifying everyday life time in two general categories: physical time and social time. The physical time refers to sequences and durations of events which are independent of human constructions. For example, there are natural sequences of days and nights, phases of the moon, successions of the seasons and the like. The social time, in turn, refers to sequences and durations of events which are humanly constructed as hours of the day, days of the week, stages in a career, years in school and so on.

Social structures define the organization of social time, i.e., they establish what must be done and when it should be done, whereas the physical time is already given, since it is part of the natural world. Weigert interprets the experience of time in everyday life as an "*inextricable intermingling of physical and social time within the inner life of each individual*" (Weigert, 1981, p. 197). This experience of time is what is called *lived-time*, as *lived-space* and *lived-distance* are the experience of space and distance, respectively. Since everyday life time - or *lived-time* - is the physical time organized according to social constraints and priorities, it is context dependent and may vary among different cultural environments. Given the concept of lived time, the role it plays in the SPATIALIZATIONS is to be analysed.

It has already been shown that spatializations are the spatial expression of events, that is, the interactions between social forms and physical forms. It has just been said that the everyday life time, or *lived-time*, is determined by social forms. The everyday time, in turn, also affects the social relationships taking place in the built environment, since temporality (everydayness) is an essential characteristic of man as *Being-in-the-world* (Heidegger, 1962)<sup>8</sup>. Rapoport (1982), analysing the tempos and rhythms of human activities in their interaction with space and demonstrates how the organization of time can affect social relationships and vice versa. He writes:

*"Tempos and rhythms distinguish among groups and individuals who may have different temporal 'signatures' and they may also be congruent or incongruent with each other. Thus, people may be separated in time as well as, or instead of, space and groups with different rhythms occupying the same space may never meet, groups in different tempos may never*

<sup>8</sup> See Heidegger *Temporality and Everydayness* in *Being and Time*, pp. 383-449.



*communicate. Groups with different rhythms may also conflict, as when one group regards a particular time as quiet and for sleep, another for noise and boisterous activity. Cultural conflicts are problems that may often be more severe at the temporal level than at the spatial, although clearly spatial and temporal aspects interact and influence one another: people live in space-time." (Rapoport, 1982, p. 178)*

Hyphenating space-time Rapoport makes clear that, in his understanding, these two elements are inseparable and play equal roles in social relationships.

In addition, it could be said that time is an essential component of spatializations since without it human events cannot be conceived. To support this assertion, the following situation can be imagined: architectural planning for a secondary school provides a football ground but neither the syllabus includes sport activities nor is there any free time in the students' timetable. In this case, the chances for football games to take place are nil, although the potential players want to play and the space is available. There are numerous situations in which the same phenomenon occurs: the lack of disposable time impeding the possibility of events taking place. The conclusion seems to be obvious: the organization of time not only affects but even controls the spatializations, permitting or impeding them to take place.

This section has been addressed to the discussion of the insertion of time, experienced or lived-time, in the architectural space. It has been said elsewhere, in the preceding sections, that man spatializes his desires (or intentions) by performing activities in spaces and that the results of this process are called SPATIALIZATIONS. It also has been said that the spaces in which spatializations take place are *lived-spaces* instead of mere geometrical entities and that activities take place if and only time is provided. Thus, time/space/events are strongly correlated and should not be considered separately when the built environment is designed. Whenever the users' disposable time is not taken into account, the spaces are not appropriated accordingly.

Rapoport (1982), has put forward that when environments are being designed, four elements are being organized: space, meaning, communication and time. It has already been demonstrated that, spatializing

his activities, man endows spaces with meanings, since he disposes objects, marker, and physical areas (rooms) accordingly. Thus, space (architectural space) is meaningful by nature. To speak of organising meanings is already to speak of communication, since communication is only possible in a coherent context. Considering these arguments, it could be said that when environments are being designed two elements are being organized: space and time.

## 6. The architectural space.

Given the basic concepts that underlie this essay (the spatial character of man and spatializations as expressions, in space, of human events), the task remains to define the architectural space vis-a-vis to these concepts. The process of creating and modifying places for social purposes is dynamic and dialectic. Architectural forms are shaped in man's lived experience. Hence the architectural space is the concretization of the *existential space* (Norberg-Schulz, 1971) and can be considered in three levels. Firstly, the symbolic level, which is related to the universe of human perceptions, emotions and beliefs, i.e., the universe of desires. These feelings produce the impulse for man to act and create places for his actions by giving spaces significance. The question that arises in the analysis of this level can be summed up in "*What is it for?*". Secondly, the functional level, which refers to ordering things in the space for the performance of activities in everyday life. The question which belongs to this level is "*How does it work?*". Finally, the technological level (pragmatic level), which embraces all technical knowledge and skills that man develops in order to create meaningful and functional places. The question addressed to this level is "*How to do this?*".

Sometimes a level is neglected, or even ignored, and the other two emphasized. When this occurs, certain architectural elements are either dismissed as superfluous, or too simplified, affecting the experience of space (the dwelling experience in the broadest sense). Thus they become conspicuous (Heidegger, 1962, pp. 102-107) and conflicts may arise between these architectural objects and their users. The next diagram in the Fig. 1.1 illustrates three possible situations:

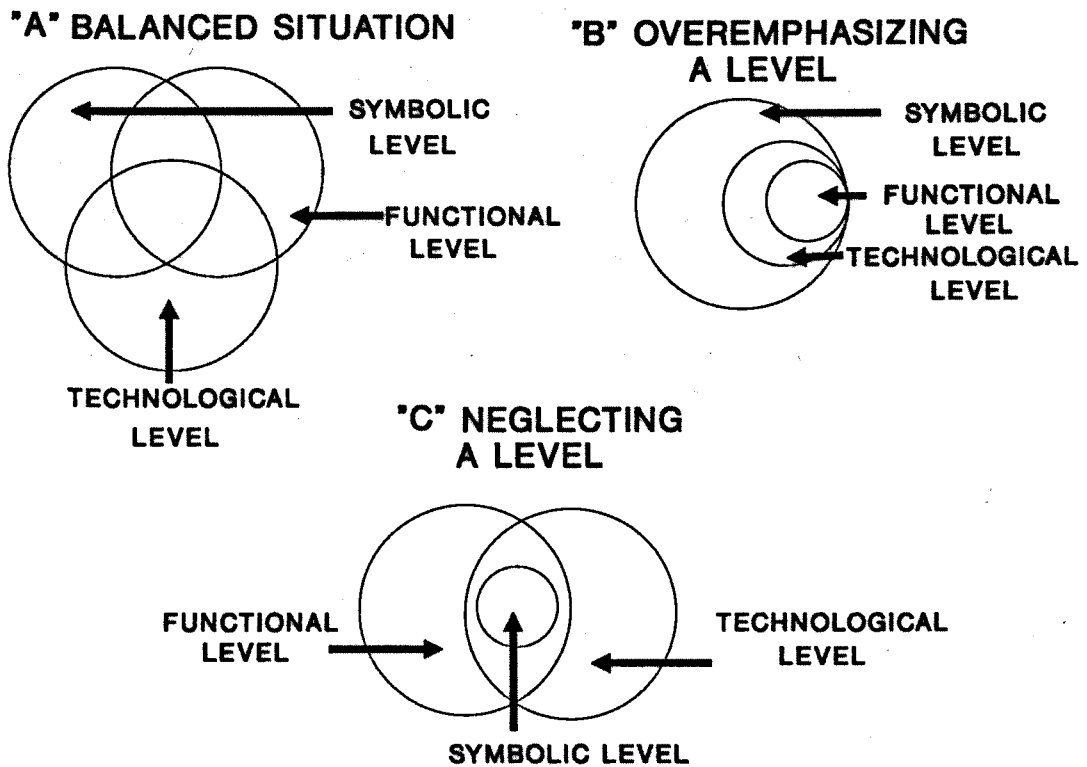


FIG. 1.2 Diagram of the three approaches to the integration of the functional, the technological and the symbolic dimensions of architecture.

- 1) Diagram "A" shows the balanced situation, in which the three levels are equally considered.
- 2) Diagram "B" shows that one of the levels (in the case the symbolic level) is over-emphasized. For instance, a similar situation occurs in Gothic cathedrals: the symbolic aspects come first and then the technological issues are developed to ensure that the *symbolic* takes place. The functional considerations are of less importance.
- 3) Diagram "C" shows two levels being equally considered and the third one playing an unimportant role. This is the case in some modernist proposals, particularly from the German period.

The balanced situation is obviously more suitable for most architectural projects, although there are many cases in which some levels should be

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over-emphasized or neglected. Nevertheless, in the case of housing there is no doubt that the balanced situation must be pursued. Approaches from explanatory sciences generally start from questions like, "*How does it work?*", and "*How to do it?*", which may lead to the misapprehension of the whole. The phenomenological approach starts from the question, "*What is it for?*", which seems to be more suitable for architectural purposes. The next Chapter is addressed to this issue. Starting from the phenomenological conceptualization of house, it proceeds towards the discussion of the attributes that houses should meet and to the definition of the notion of *architectural conflict*, in this thesis.

# CHAPTER THREE

## Towards an Understanding of Housing

*the chaos that is the external world. "In the life of a man, the house flourishes as the*

## CONCEPTUAL FRAMEWORK: TOWARDS AN UNDERSTANDING OF HOUSING

### 1. What is a house for?

The first part of this section deals with the phenomenological consideration of the *habitat*, in order to clarify the distinctions and interactions between the experience of dwelling and the object *house* in which this experience takes place. In the second part it will be argued that the *object* house can also be approached from the phenomenological standpoint, once it is vested with man's purposes, hopes, wishes, longings and imagining.

Heidegger's reflections on the relationships between dwelling and building, expressed in the chapter "*Building Dwelling Thinking*" of his book "*Poetry, Language, Thought*" (1971), as well as Bachelard's seminal work "*The Poetics of Space*" (1969), will be taken as the departure point to reach the concept of dwelling. The fundamental base for discussing the methodological approach to house as a *material object* will be provided by Heidegger's analysis of tools, which has been carried out in his book "*Being and Time*" (Heidegger, 1962, pp 99-114)

#### 1.1. House and home.

The words house and home are frequently used as synonymous terms; *buy a house, home owners, go home, a friend's house*, are expressions employed in day-to-day conversation indiscriminately, without people being aware whether they are referring to the same entity or not. Actually, in some cases the terms house and home are synonymous, as for *buy a house* and *home owners*. Both refer to house as a commodity that has an expressive exchange value and a concrete existence. Nevertheless the concepts of house and home certainly have different roots and refer to diverse phenomena as well.

According to Bachelard (1969, p. 6), the house is the "*felicitous*" space that man defends against adverse forces, the space man loves. Its primary function is to shelter daydreaming, to protect the dreamer, and to allow one to dream in peace. The house is "*our corner in the world*". It creates order out of the chaos that is the external world. "*In the life of a man, the house thrusts aside*



contingencies" (Bachelard, 1969, p. 7). It is a stable element and "without it, man would be a dispersed being". The house is one of the greatest powers of integration for thoughts, memories, and dreams of mankind. Being so, it gives man a foothold to face the external aggressions. "It maintains him through the storms of the heavens and through those of the life" (Bachelard, 1969, p. 7). But the chief benefit of the house is to shelter daydreaming and to protect the daydreamer. Through dreams, the various dwelling places of the past come back to us and "we comfort ourselves by reliving memories of protection" (Bachelard, 1969, p. 6); memories of our parents' house. It seems to be clear that Bachelard is talking about dwelling as an existential experience and that the object *house* embodies this experience. Here, the word *house* is taken in the meaning of *home*.

Dovey, in the essay "Home and Homelessness" (1985), offers an interesting manner of distinguishing between the two concepts. House, in his understanding, is an *object* and home is a kind of relationship between people and their environments. He says:

*"It is an emotionally based and meaningful relationship between dwellers and their dwelling places" (Dovey, 1985, p. 34)*

Thus, in Dovey's interpretation, the experiential aspects of home is what distinguishes it from house. As a departure point for *grasping* the phenomenon of *home* he proposes its analysis as order, identity and connectedness. Home as order is characterized by the mode of *being at home*, i.e., the mode of being in a secure and oriented place in space (spatial order), in time (temporal order) and in society (sociocultural order). Home as identity is strongly correlated to home as order. While order is concerned with *where* one is at home, the sense of identity embodied in the phenomenon of home is related to *who* is at home. Home as connectedness expresses the relationships that bring meanings to the experience in place: connectedness with the past; connectedness with the future; connectedness with the place; connectedness with people.

Korosec-Serfaty, in the essay "Experience and Use of the Dwelling" (1985) also adopts a phenomenological approach on how the relationship to home is experienced by the dweller. She proposes to define the fundamental characteristics of dwelling as follows:-



- 1- Setting up an inside/outside.
- 2- Visibility.
- 3- Appropriation.

Setting up an inside/outside is a question of establishing boundaries that qualify the space. Dwelling is to be *inside* (in a place) as opposed to being *outside* (in the infinite space). From this opposition (inside/outside) emerges the characteristic of *visibility*. Any dwelling can be both closed or open, visible or concealed at the same time. Doors and windows make it visible and enable views to be enjoyed from it. Walls conceal the dwelling but also impede the views from it. Appropriation is the process of fully experiencing the phenomenon of dwelling. These three characteristics proposed by Korosec-Serfaty could be encompassed by four concepts - TERRITORIALITY, PRIVACY, IDENTITY, and AMBIENCE - as will be discussed later in this thesis.

As can be seen, both Dovey (1985) and Korosec-Serfaty (1985) base their interpretation of the concept of home in Bachelard's work "*The Poetics of Space*" (1969). Dovey tries to establish WHAT home is, while Korosec-Serfaty proposes to focus the attention on HOW the relationship to home is experienced by the dweller. And the house *object* - as Dovey has mentioned - what sort of entity is it? Does it interfere in the experience of dwelling? Could it also be approached phenomenologically? The aim of the second part of this Chapter is to discuss how the HOUSE mediates HOME and brings DWELLING into being. It is an attempt to answer the questions above, particularly whether - and in what extent - Phenomenology would apply to HOUSE as an *object*. It will also examine what are the advantages of exploring a phenomenological approach to the *object* house, i.e., how phenomenology could contribute to improve the attributes of the object. The foundations for this discussion are embodied in Heidegger's understanding of "The worldhood of the World", expressed in his book "*Being and Time*" (1962, pp. 91-145).

## 1.2. House ready-to-hand.

Heidegger (1962, pp. 91-145) believes that there are two different senses of *thing*. The first one applies to what philosophers have, traditionally, called *material objects*, as for example a stone. If someone asks "*what is it for?*", the

question may be rejected as inapplicable by replying "it isn't for anything; it's just a stone". This category of things are called *present-at-hand*.

The second sense of *thing* applies to objects about which the question "what is it for?" cannot be refused. This is the case of a hammer. If someone asks "what is a hammer for?", this question cannot be answered by saying that it is not for anything; it is just a hammer, because hammers are for hammering. Hammers are tools (equipment) and all kind of *gear* are examples of the second sense of *thing* which Heidegger distinguishes by means of the expression *ready-to-hand*.

Thus, the difference between a *material object* that is *ready-to-hand* and a *material object* that is *present-at-hand* is that the former is in order to do something and the latter is just what it is. The *present-at-hand* is what the explanatory sciences usually call *substance*, i.e., the entity that is in itself and can be encountered in the natural world (the *world-stuff* as Heidegger put forward). *In-order-to* implies the idea of assignment, i.e., of reference of something to something: hammer is *in-order-to* hammering. The shaft of the hammer is also a sort of thing *in-order-to*, in that it makes it possible to handle the hammer. In turn, the wood from which the shaft has been cut is just a *present-at-hand*, at least until it is cut into pieces *in-order-to* make the shaft, or *in-order-to* make a step-ladder, if this is the case. When this occurs, the *being* of the thing wood, which is *present-at-hand* changes and becomes *ready-to-hand*. Thus, the being of a *present-at-hand* changes only when some work is incorporated to it; instead of a *present-at-hand* it becomes *ready-to-hand*. A step-ladder is, for instance, in order to reach a higher position in the space. Thus, the step-ladder could be said *in-order-to* step up. The difference of *being* between the wood and the hammer shaft, or between the wood and the step-ladder is that of assignment. The shaft is designed to give the hammer manoeuvrability; the steps are *in-order-to* give the step-ladder conduciveness. Both are made from wood, which means that some work has been incorporated into the wood which is *present-at-hand* to change its being. This work that is incorporated is what gives the shaft and the steps meaning (or assignment, using Heidegger's own words). However, this meaning can only be caught in the equipment context; the shaft makes sense as a hammer shaft only if it is attached to the head of the hammer. In turn, the hammer itself is only meaningful in hammering activities. Who has never seen a hammer and does not know what a hammer is for, by no means would recognise it as a

*ready-to-hand* (as an equipment), which in essence is hammering. The *being* of the hammer resides in hammering, i.e., in its equipmentality.

### 1.3. The being of house.

Heidegger says that, in our "*dealings*" in the world we come across equipment for writing, sewing, working, transportation, measurement and so on and so forth. Exhibiting the kind of Being that equipment possesses is a phenomenological enterprise and the clue for doing that is to uncover the "*equipmentality*" (essence) of the equipment. He says:

*"Equipment is essentially something in-order-to. A totality of equipment is constituted by various ways of the in-order-to, such as serviceability, conduciveness, usability, manipulability." (Heidegger, 1962, p. 97)*

Here, Heidegger adds a new concept to those that have been considered so far: the totality of equipment. What does it mean?

According to Heidegger, the *ready-to-hand* (the equipment) may be either an item of equipment or a totality of equipment, depending on the context which is being analysed. As for the hammer, it is a totality of equipment which the shaft and the head belong to. Consequently, the shaft and the head are items of equipment belonging to the totality of equipment called hammer. The hammer, in turn, may be itself an item of equipment in a workshop context, as well as the workshop being an item of the whole building and so on and so forth. The shaft shows itself as *in-order-to* manipulate the hammer only if it is attached to it.

This means that the equipmentality of an equipment shows itself only in terms of its belonging to other equipment (or to an equipment context). For example, inkstand, pen, ink, paper, blotting pad, table, lamp, furniture, windows, doors, room, never show themselves as they are for themselves. What we encounter is the room; "*and we encounter it not as something 'between four walls' in a geometrical spatial sense, but as equipment for residing. Out of this the 'arrangement' emerges, and it is in this that any 'individual' item of equipment shows itself.*" (Heidegger, 1962, p. 98)

Thus, in Heidegger's interpretation, each item of equipment has a being *in-order-to*; to fully appreciate being *in-order-to*, each item must be examined in

its appropriate context, because only in context the relationships between the equipment and its purpose is revealed. The room, for instance, is a totality of equipment *in-order-to* reside. As a room is a piece of a house, then to fully appreciate the room the context *house* has to be considered. One might infer that a house, phenomenologically understood, also is a totality of equipment *in-order-to* dwell. In this case the following question arises: What is the essence (the equipmentality) of a house?

If the hammer is for hammering then the house is for inhabiting. The essence of the hammer is its "*equipmentality*", which is defined in terms of its suitability for hammering, which in turn could be defined in terms of manipulability, weatherability, hardness and strength for hammering. Making a parallel with a house, it could be said that the equipmentality of a house is defined in terms of its suitability for dwelling, i.e., in terms of its *inhabitability*.

The task remains to examine how this *inhabitability* could be *uncovered* and to investigate whether phenomenology applies to this operation or not.

Trying to work out these issues, one should have a look at what Heidegger says about the phenomenological approach to entities encountered in the environment, that are *ready-to-hand in-order-to* do some activity (equipments).

Heidegger writes:

*"The Being of those entities which we encounter as closest to us can be exhibited phenomenologically if we take as our clue our everyday being-in-the-world, which we also call our 'dealings' in the world and with entities within-the world."* (Heidegger, 1962, p. 95)

The key idea of this paragraph seems to lie in what Heidegger means for "*our dealings in and with entities in-the-world*." Our *dealings* with entities in the world are our day-to-day activities. In performing activities, human beings deal with all sort of tools (or equipment) which are constitutive for the diverse routines. Heidegger understands that only when an equipment is put in use, its *equipmentality* (its essence) is uncovered. He says:

*"The hammering itself uncovers the specific "manipulability" (handlichkeit) of the hammer"* (Heidegger, 1962, p. 98)

The essence (the *equipmentality*) of any equipment, which Heidegger calls *readiness-to-hand*, cannot be grasped theoretically. In order to understand their *readiness-to-hand*, we have to deal with equipments by using them and manipulating them. Only who is hammering can "grasp" the "*manipulability*" (the *readiness-to-hand*) of the hammer. Would it be also true that only those who occupy a dwelling could grasp the *inhabitability* of the house? How does this occur?

It has already been said that the *ready-to-hand* (equipment) is encountered *within-the-world*. The state which is constitutive for the equipment is one of reference or assignment - serviceability for, detrimentality, usability, and the like. Hammering is the way in which the usability of the hammer becomes concrete. But the *hammering* of the hammer is not a property of the hammer, at least in the sense that the explanatory sciences would take the term *property*. And what are the *properties* of the hammer? According to Heidegger's understanding, hammer as *ready-to-hand* does not have properties: it has predicates instead. Conversely, stones have properties as well as wood, clay and the like. One may say that a hammer is *clumsy* if it is too heavy for the job, badly balanced or does not give one a good grip. Boulders are neither *clumsy* nor *not clumsy*, they are not *well* balanced. Some adjectives are applicable only to tools because they have to do with the tools' use. Similarly tools might be said to be *handy*, *efficient*, and so on, with respect to what they are for and these adjectives do not apply to material objects (*present-at-hand*) for the same reasons. The steel and the wood from which the hammer is made have properties, because they are *present-at-hand* (substances) and belong to the *world-stuff* (nature). As such, they can be mathematically defined, in terms of properties as well as the fact that they can be described in terms of colour, shape, tactile qualities and so on. Nevertheless, these properties do not provide any clue for answering the question "*what is a hammer for?*". What provides clues for answering this question is the predicates of the hammer.

Continuing the analogy, it could be said that a house has a *present-at-hand* dimension as well; the materials employed can be described in terms of their physical and chemical properties. But a house as *ready-to-hand*, as a totality of equipment *in-order-to* inhabit only can be understood in terms of *inhabitability*, and only its characteristics of *inhabitability* - its predicates - can

provide clues for answering the question "*what is a house for?*". House is a totality of equipment *in-order-to* inhabit.

The *in-order-to* - the assignment - is in fact an *involvement*. Hammering is the *involvement* of the hammer, the *towards-which* of its serviceability and the *for-which* of its usability. Inhabiting is the *involvement* of the house. Hammer has been released for some kind of activity (hammering). It is serviceable, usable, or applicable for that purpose. And what is the *involvement* of hammering? Is there any? Heidegger says:

*"With the 'towards-which' of serviceability there can again be an involvement: with this thing, for instance, which is ready-to-hand, and which we accordingly call a 'hammer' there is an involvement in hammering; with hammering, there is an involvement in making something fast; with making something fast, there is an involvement in protection against bad weather; and this protection 'is' for the sake of providing shelter for Dasein" (Heidegger, 1962, p. 116)*

Thus, it could be concluded that *inhabiting* is the *involvement* of house for the sake of Dasein (the *Being-in-the-world*).

When we are performing activities, or, using Heidegger's words, "*when we concern ourselves with something*", we may encounter entities that are not properly adapted for the use we have decided upon: the tool is damaged or the material is unsuitable. We discover the usability (or *un-usability*) of the tool not by looking at it and establishing its properties, "*but rather by the circumspection of the dealings in which we use it. When its unusability is thus discovered, equipment becomes conspicuous. This conspicuousness presents the ready-to-hand equipment as in a certain un-readiness-to-hand.*" (Heidegger, 1962, p. 103)

Here Heidegger introduces the concept *unready-to-hand* and stresses once more that the essence of entities can only be grasped by the *circumspection* of our dealings in the world, i.e., by *acting* towards and not by looking at.

Thus, coming back to the question "*only who is dwelling can grasp the inhabitability of the house?*" the answer should be simply *yes*. For the question "*how?*" the answer seems to be: "*By dealing with the item-equipments that belong to the totality of equipment called house.*" (Heidegger, 1962, p. 104)

Now another question arises; if the inhabitability of the house can only be *grasped* by who is dwelling it, how can architects have access to other's experiences, so that the houses they plan are provided with inhabitability? Coming back to Heidegger's support, and following his reasoning one could find at least a clue for appropriate answers.

#### 1.4. House unready-to-hand: introducing the notion of architectural conflicts.

When something is unusable for some purpose, i.e., when an equipment cannot be used *in-order-to*, the *towards-this* (the activity) in which the equipment would be take part, gets disturbed. In this way, the assignment of the *in-order-to*, to a *towards-this* becomes explicit; in other words, when an equipment is missing - or inadequate - the activity cannot be performed properly, and the fact that it cannot be performed properly discloses (reveals) the essence (the *in-order-to*) of the equipment itself. To clarify this issue, the case of a house should be examined . A house is supposed to keep the rain away from the inside but in some cases it fails to do so, as for instance when there are gaps between the window frame and the window-sill permitting rain water to get in. Whenever this occurs, the *inhabitability* as a whole is affected; the wallpaper will come off and the carpet will get damaged; in the sitting room, the sofa will have to be moved from its original position (it used to stand against the wall, by the window), and this, in turn, causes problems with the function of the room. There is a desk along the wall, just below the window-ledge, in the children's bedroom, which has been fitted in there to provide the children with an appropriate locale to do their homework. Now, this desk has to be removed and the children have to do their homework at the dining table. The mother is used to having some friends over for tea but she has to cancel the appointment as the children need to use the table for homework. As can be observed, all the people in the house are affected by the *unreadiness-to-hand* of the window. However, it could not be said that the whole window is *unready-to-hand*. This is because the window is a totality of equipment composed of items of equipment such as frame, window glass, locks and the like. In the example which is being examined, what is not working properly is the window frame, which may be warped or wrongly fitted.

It has already been said that the essence of any equipment is its equipmentality, and that equipmentality is characterized by serviceability, weatherability, usability and so on.

It can be observed that the serviceability of any window has several ways of being, i.e., any window should be serviceable in terms of:

- \* permitting the room to be either light or dark;
- \* preventing the entry of rain;
- \* permitting the air to be renewed and, at the same time, avoiding unwanted cold draughts;
- \* enabling a visual communication between the inside and outside, and at the same time providing any necessary privacy to the inside;
- \* decorating the facade;
- \* avoiding the transfer of noise from the outside, etc.

If the window accomplishes all the *in-order-to* characteristics towards which it is supposed to have been made, it will not be conspicuous, it will be just a window. Conversely, if the window fails to accomplish any of its aims, it will be conspicuous and its conspicuousness will be revealed by the conflicts that take place due to this *unreadiness-to-hand*. This idea can be generalised for all equipments that belong to a day-to-day environment; nobody will be particularly noticed if it works properly, just in the way it is supposed to work. The conspicuousness occurs only if something goes wrong.

In the present case, an item of the window has problems: the frame. However, the whole window became conspicuous and is understood to be *unready-to-hand*. This is evidence of the hypothesis that the item of equipment being *unready-to-hand* affects the totality of equipment which the item belongs to.

Several conclusions can be drawn from the present analysis:-

- 1- Any totality of equipment can be decomposed into items of equipment that, in turn, can be considered as new totalities to be decomposed again, until no decomposition is any longer possible because the way of being has changed and, instead of *ready-to-hand*, it has become *present-at-hand*.
- 2- The *readiness-to-hand* of the totality is always affected by any item that is *unready-to-hand*.



- 3- It might also be concluded that only the *unreadiness-to-hand* is conspicuous when the equipment belongs to everyday life; in the normal way, the window that has not got any problem is just a *window*.

It may be concluded that all situations of non-performance caused by the *unready-to-hand* is a conflict that reveals the very essence of the equipment, permitting it to be theoretically *grasped*.

It has been demonstrated so far that *house* is a totality of equipment *in-order-to dwell*; as totality of equipment, house bounds together items of equipments, enabling them to show themselves in their equipmentality. The equipmentality is revealed during the performances in which the diverse items of equipment take part. The conflicts that emerge when any activity cannot be performed properly, are the means by which the equipmentality of equipments is revealed. The equipmentality of an item-equipment provides clues for seeing the equipmentality of a totality of equipment. This means that the serviceability of the roof enables one to see the equipmentality of the house as a whole.

It has also been shown that the *equipmentality* of the house is its *inhabitability*, and that *inhabitability* is revealed by the *unreadiness-to-hand* (missing, damaged or unsuitable) of any item of equipment belonging to the totality house.

The task remains to analyse *inhabitability* and to explain how it is connected to the experiential aspects of *being-at-home*.

## 2. Inhabitability and the phenomenological dimensions of dwelling.

### 2.1. Inhabitability.

The concept that defines the experiential relationships between man and house is *dwelling*, i.e., the way in which one experiences *being at home*. Dwelling, which is synonymous for inhabiting, is a fundamental characteristic of human life; it is more than being housed, it is being rooted in a calm secure place and belonging to that place. Thus the buildings that man inhabits must enable the relationship of dwelling to take place and to be fully experienced. These conditions are the essential characteristics of any

building, i.e., the essence of building. This essence is called *INHABITABILITY* in this thesis.

It has already been demonstrated in the previous Chapter, why *inhabitability* is the essence of *house-equipment* (the building); and that *house-equipment* is the means by which *home* becomes possible. It has also been shown that whenever some aspect of that *inhabitability* is going wrong - is *unready-to-hand* - the whole experience of a dwelling is negatively affected. The task remains to precisely define what *inhabitability* comprises.

In his book "*Poetry, Language, Thought*" (1971) Heidegger dedicates a whole Chapter to the discussion of the relationship between *building* and *dwelling*. The title of this chapter is "*Building Dwelling Thinking*", in which the absence of commas is intended to enforce the identity of the three.

Heidegger starts his analysis by asking two questions:

- a) What is it to dwell?
- b) How does building belong to dwelling?

In his interpretation, building has dwelling as its goal. There are buildings - hangars, bridges, stadiums, power-stations and the like - that are not dwelling places but, even so they are "*in the domain of our dwelling*". A factory, for instance, is not the dwelling place of the craftsman that works there but it *houses* workers during their working journey, which means that workers take shelter in there for the purpose of working. *Taking shelter* does not have the same connotation as *dwelling*. The former refers to a temporary situation while the latter has a definitive character. Nevertheless, both are *inhabiting*, insofar as they serve man's dwelling. Thus dwelling would in any case be the end that presides over all building. It may be concluded that all buildings should be provided with the qualities that enable them to be *dwelling places* in the broadest sense, to be *inhabitable*. These qualities constitute the *inhabitability* of the building. To define these qualities constitutively for *inhabitability*, some questions have to be answered:-

How does *inhabitability* of a house mediate *home*? How does the material object affects the phenomenon *being-at-home*?

It has just been said that, being suitable for inhabiting purposes, the house has to be provided with enough room for its dweller, as well as all the

facilities that are necessary for the individual to perform day-to-day activities. In other words, the house has to function.

This idea is not a new one in the architectural field. Since Vitruvius the functional dimension of architecture has been recognized. Defining "The Departments of Architecture" Vitruvius (1960, pp. 16-17) says that all classes of buildings should be built with reference to durability, convenience, and beauty. Convenience is, he writes:

*"when the arrangement of the apartment is faultless and presents no hindrance to use, and when each class of building is assigned to its suitable and appropriate exposure". (Vitruvius, 1960, p. 17)*

In recent times, Modernists have nearly consecrated the functional dimension, in terms of rationality and efficiency. Le Corbusier's statement (1923) "*a house is a machine for living*" clearly expresses an understanding that the house has to be provided with all facilities and accessories needed to make it efficient as a dwelling place. The problem is that, over time, Modernists ended up by reducing the *functions* of the house to only those aspects that contemplate the needs, neglecting the symbolic dimension that belongs to the realm of desires. It is true that Modernists were concerned with meanings as well. But it is also true that they proposed a complete disruption with the past and, in so doing, they discarded one of the most essential characteristics of home: connectedness with the past (Dovey, 1983). Thus, their concern with meanings was distorted by their prejudices relating to what they used to call "*corrupted and old fashioned styles*" (Adolf Loos, 1927). A new and *objective* aesthetic, purged of ornaments and idiosyncrasies was apparently their only aim. In this way they rejected the whole history of mankind, introducing an aesthetic which was supposed to be completely independent of the past. This seems to have been their fundamental misapprehension; to try to invent man again, instead of trying to understand man as he really presented himself, as culturally shaped through his history. It can be concluded that the Modernist "*machine for living*" is far from being the same entity that is called *house-equipment* in this essay. The former has been reduced to just a machine for sheltering a predictable and non-contradictory Being impulsed by needs only; the latter intends to mediate the inhabiting of the *Being-in-the-world* which is man as culturally shaped and moved to act by needs and desires.

This is the main difference between the two concepts: the house-equipment, as phenomenologically defined by Heidegger, besides being efficient like a machine, has to comprehend the symbolic dimension to permit desires to be spatialised. Heidegger says:

*"Today's houses may even be well planned, easy to keep, attractively cheap, open to air, light and sun, but do the houses in themselves hold any guarantee that dwelling occurs in them?" (Heidegger, 1971, p. 57)*

To be a secure place, a house needs to be roofed and walled, otherwise it will be unsafe to live in. The boundaries of the house, that is the markers that are established to define the limits of one's piece of land, make room for the *lived-space* in which *inhabiting* will be experienced. Man, according to Simmel (1971, p. 118) could be defined by his ability of setting up and then surpassing boundaries, marks the territory conspicuously, by building fences and walls to enclose his dwelling place. By doing that, he establishes the difference between the external world and the *lived-space*. These two kinds of space have distinct characteristics; the external space is that of the profane realm, where there are always obstacles to overcome and enemies to fight against. It is the unprotected space in which the *dangers* of the adverse world are rooted (Eliade, 1959 and 1983). The dwelling place - the lived space - is the realm of peace and calm, in which man can be relaxed and protected.

In order to be *at home*, man needs to move around to perform the activities that compound his everyday life. Thus inhabiting demands a certain quantity of space as well as all the accessories that take part in the activities to be performed in the *habitat*: the furniture, the house appliances, the decorative objects. The several spaces have to contain all accessories needed to be there. In turn, accessories have to be fitted in appropriate places and have to work properly. Cleaning and tidying up the house are essential activities as well. They contribute to preserve identity, since the cultural milieu demands that everything is clean and in its appropriate place. Thus the finishes have to be adequate for these purposes in order to ease this caretaking. Keeping all facilities working are also essential activities, since the routine of being at home will be badly affected if some device is damaged. One's house also has to be recognised from out of the whole settlement to boost the dweller's identity. To enable this to happen its appearance must be attractive, providing recognizable signs.

It is all these diverse features of the house and surrounding external space that will constitute the essential quality which is called *inhabitability*, enabling the building to mediate man's inhabiting.

Summing up, it could be said that *Inhabitability* comprises three groups of qualities:-

- 2.1.1 The first group is primary related to the pragmatic dimension of housing, which is protecting against weather conditions. Thus it constitutes all attributes any house should meet to ensure an adequate performance relating to rain, humidity, wind, snow, excessive cold, excessive heat and the like.
- 2.1.2 The second group is primary related to cultural and symbolic dimensions of housing, which is being a pleasant, comfortable and secure place to live in. It comprises all attributes related to size, shape, finishes, aesthetic features (external and internal); mechanisms of separating and differentiating places such as fences, edges, walls, transitional spaces and so on; mechanisms of defence and other mechanisms that are culturally related.
- 2.1.3 The third group is associated with the functional aspects of housing. It comprises the attributes that ease the use of space in day-to-day routine, such as circulation, furniture layout, domestic facilities, maintenance facilities and the like.

This distribution of qualities in groups does not mean that a certain quality cannot belong to more than one group. Actually, it is rather a way of interpreting *inhabitability* in terms of the three major dimensions of housing that are usually considered: pragmatic, symbolic, functional (or technical). As these dimensions are intermingled, the qualities are interrelated too.

After defining *inhabitability* in terms of qualities that buildings should meet to be dwelling places, and having given a brief account of what these qualities are all about, the next step is to establish the relationship between the phenomenological dimensions of dwelling and the *inhabitability* of houses (which is the objective dimension of dwelling).

## 2.2. The phenomenological dimensions of dwelling.

As has already been mentioned in this Chapter, according to Korosec-Serfaty (1985) the phenomenological dimensions of dwelling might be defined as follows:-

2.2.1 Setting up an inside/outside. This dimension puts forward the question of interiority, from which arises that of visibility.

2.2.2 Visibility is the gaze the inhabitant is exposed to. The subject exposes herself or himself through her or his lifestyle, her or his use of space. This dimension of visibility addresses the question of appropriation.

2.2.3 Appropriation is the dimension of living-in-space, of experiencing places.

These basic dimensions are expressed by subjective phenomena that occurs in the dwelling process, that is, by behavioural issues as privacy, territoriality, identity, ambience and the like. The next section will examine each one of the phenomenological dimensions of dwelling (setting up an inside/outside, visibility, and appropriation) in connection with these phenomena.

## 2.3. The phenomenological dimensions of the dwelling process and the phenomena associated with them.

### 2.3.1. Setting up an inside/outside.

Changing space into place is examined here. Changing space into place is a process of qualification and differentiation. Differentiation is the process of choosing, defining, marking and building places. It is achieved by doing some work in the place, for instance, by implementing markers and signs, building walls, planting trees and the like. Qualification is the assignment, the *in-order-to*, the involvement of the place with man's activities. It has already been shown, in the previous Chapter, that man creates places (architectural places) by differentiating and qualifying spaces to perform his activities. Thus, all built environments are submitted to this process of setting up an inside/outside, this demarcation of territory which also is the process of distinguishing what is private from what is public. Not in the sense of establishing the private property, as a commodity, but the private

realm, the domain of privacy. Demarcating and differentiating dwelling places, man puts down roots and establishes existential connections with them. Thus it may be concluded that the phenomenological dimension of the dwelling process, which consists of setting up an inside/outside, comprises the phenomena of territoriality, identity (connectedness) and privacy. Whenever the object-house does not possess the qualities that mediate these phenomena - or whenever such qualities present themselves as *unready-to-hand* - conflicts arise in the interaction between houses and dwellers. For instance, if there are no markers to define the dwelling place, the phenomena of territoriality may be affected. Dwellers will be in conflict with this aspect of house. They certainly will try to overcome it, by introducing any kind of limiting marker, such as fence, edge or wall.

### 2.3.2. The hidden and the visible.

Setting up an inside/outside addresses the question of concealing and exhibiting. Because the dwelling is open to the outside and, at the same time, encloses the inside, it conceals and shows, it is secrecy and display. The phenomena related to this dimension are privacy and preservation of identity. Privacy for what has to be kept in secrecy and identity for what must be displayed. For example, if the windows are placed in such way that they permit passers by to overlook the intimacy of dwellers, this will be a situation of conflict. To be at home in privacy, without being overlooked, dwellers will possibly modify the conflicting situation, either by replacing the windows or by installing some protective device. The window design, in turn, has to communicate the owner's aesthetic values.

### 2.3.3. Appropriation.

One's inner self grows because of one's action in space. The *gearing* of the subject to the world constitutes an ordering of things in space *in-order-to* perform activities. *Ordering things in space* means creating caring places, meaningful places. Thus, appropriation of the dwelling is acting and taking care. It is to be connected with some place, its present, its past and its future. Appropriation also is related to the phenomenon of ambience, which is the need of being comfortable while acting and taking care. Almost all qualities of the *house-object* are, to a certain extent, related to ambience. Nevertheless, to be properly appropriated, places need to be comfortable, in terms of

layout needed, temperature, ventilation, illumination and the like. If the roof does not provide adequate thermal insulation, the places will be either too hot or too cold. Repairing (or changing) the roof will possibly be the way to overcome the conflict that inevitably will take place.

From what has been said so far, it may be concluded that:-

- a) Dwelling is a fundamental characteristic of *man-being-in-the-world*.
- b) Buildings are dwelling places.
- c) House is a building which is the place for dwelling.
- d) The phenomena that are revealed in the dwelling process are territoriality, privacy, identity, and ambience.
- e) The house is the object that mediates dwelling, i.e., the object in which man spatializes the phenomena constitutive for *being-at-home*.
- f) The architectural elements that constitute the house have to be provided with the qualities - the *readyness-to-hand* - that enable them to accomplish the mediation of dwelling, permitting dwelling spatializations to take place.
- g) When any element is missing or unsuitable (if it is *unready-to-hand*), it raises conflicts that uncover the phenomenon which is being affected.

The next Chapter provides a general description of the methodological procedures adopted in the fieldwork.



# CHAPTER FOUR

## Reading Spaces

## READING SPACES

### 1. Introduction to the notion of reading spaces.

Architectural spaces are always meaningful places, in that they are *spatializations* of a social *praxis*, and being so they are able to elicit clues of social behaviour relationships. This issue has long been studied by sociologists, anthropologists, and more recently by architects as well. Since then the focus of the polemic about the origin of architectural form has shifted from the Modernist *cause-and-effect* dependence of form on function (which means functions generating forms) towards the culturalist approach, which admits there is a multilateral influence among physical constraints, physiological needs, and symbolic elements in the generation of architecture.

In the architectural field, Amos Rapoport is one of the scholars who have contributed most to this theme. His book, "*House, Form and Culture*" (1969), started a new era in the discussion of the complex interactions between the functional aspects of the dwellings and the cultural, or symbolic, ones. Rapoport tried to prove, in this book, that cultural factors have a predominant influence in the design of vernacular houses. Such interpretation had a strong repercussion in the architectural milieu, since it contradicted several studies of how construction materials and technological constraints determine building designs. In 1982 Rapoport published the book "*The Meaning of the Built Environment*", which is entirely dedicated to the discussion of how buildings incorporate meanings, where these meanings come from, and how they are displayed. According to Rapoport's understanding (1982), when the environment is being designed, four elements are being organized: Space, Time, Communication, and Meaning. *Communication* refers to verbal or nonverbal communication among people, while *Meaning* refers to nonverbal communication from the environment to people. Although nonverbal, this communication process can be analysed and interpreted, since it is appropriately approached.

James S. Duncan (1985) also has the same understanding as Rapoport on the communicational aspects of architecture. Discussing the role played by the built environment in the social integration process, he emphasises the

communicative dimension of architectural spaces in that they are meaningful and expressive. He points out:

*"The built environment, in addition to providing shelter, serves as a medium of communication because encoded with it are elements of social structure." (Duncan, 1985, p. 148)*

Weigert, in *"Sociology of Everyday Life"* (1981), also stresses the fact that architectural structures have concrete meanings that express the user's way of life. He writes:

*"Humans do not live in empty space extending indefinitely in all directions from the self. Rather, the human capacity for symbolic transformation has made it possible for space to be captured and shaped into social meanings, which partially express the rationalities underlying each era and society. The decisive moment at which some primitive band of humans left the natural shelter of the cave, or began to fashion a lean-to against the glaring sun or the cold night winds, started the long and fascinating story of human attempts to transform space into shapes and sizes which mirror the projects and meanings of each society. The practical discipline of such systematic transformation is architecture, or the designing of buildings according to basic principles." ( Weigert, 1981, p. 259)*

Duncan (1985, p. 148) says that the built environment *"speaks the language of objects"* and suggests that it should be approached as a text, i.e., it should be read in order to be understood and interpreted.

Based on this line of thought - architecture as a communicative system - a fieldwork was conducted, the purpose of which was to investigate the SPATIALIZATIONS in housing among people on low incomes in Minas Gerais/Brazil, to find out the conflicts that appear in those interactions, why they appear, and what could be done either to eradicate or minimise them, in order to improve the general conditions of people's *habitat*.

To achieve this purpose, a SPACE READING of the dwellings was carried out including their furniture and appliances; at the same time it was observed how householders interact with places and things, how they

compare their present situation with previous schemata or spatial models they have already incorporated, and how the routines are organized. The next section covers the fieldwork methodology.

## 2. Fieldwork methodology.

There are several methods that architects employ to find out about the architectural requirements that a certain building design should meet. Such procedures are generally borrowed from other scientific fields and adapted to the architectural peculiarities. In particular, sociological surveys are coming into fashion and one of the usual ways of finding out about people's needs has been interviewing the persons that will probably live in the new project. However, interviewing people is a scientific method that involves diverse techniques of establishing rapport, questioning and evaluating answers. Questionnaire construction is even more sophisticated and precise. It implies testing, sampling respondents, coding responses, and analysing and interpreting data. These tasks are often not part of the training and technical resources of most architects, which may lead them to be excessively dependent on sociologists to carry out a field survey. In trying to overcome these difficulties, a methodology was established for a survey that adopted procedures largely employed in the architects' day-to-day activities, and that were coherent with the conceptual framework of the research.

Thus, the fieldwork methodology consisted of a systematic observation of the SPATIALIZATIONS that occur in PALMITAL ESTATE, whether at the urban level or in houses. These systematic observations were named SPACE READINGS and included several procedures commonly adopted in architectural surveys such as sketches, pictures and reports. It can be said that a fieldwork technique similar to Participant Observation was adopted, in that questionnaires were not used. On the other hand, participant observation generally implies that surveyors live within the community to be surveyed and this was not the case here. In fact, the approach to the fieldwork technique (the SPACE READINGS) is quite eclectic and could be defined as a systematic observation followed by ethnographic description. Thus, for each SPACE READING, there would be annotated sketches of the furniture layout; depictions of general characteristics of inside and outside; pictures of meaningful situations; annotated sketches showing the alterations

in the original plan (if applied); reports on the activities observed; and recording of householders' comments on the house. Particular attention should be given to householder's comments, in that they would be the main source of data to identify conflicts. Thus, a strategy was designed to get comments, which will be described in the next section.

### 3. Survey strategy.

There are two basic methods of observing a phenomenon: observation by means of instruments and direct observation. Observation by means of instruments is a customary method in science, whether natural science or social science. Instruments can be defined as the mediation between the observer and the phenomenon observed. Instruments may be devices, like scales and microscopes, or questionnaires. Devices are generally employed in the "natural sciences"<sup>1</sup> while questionnaires are mostly used in social sciences. Asking questions is one of the easiest ways of getting information about something. However, it has some shortcomings when subjective phenomena are the object of the investigation. When a question is put forward, the questioner knows perfectly well what his question is intended for, otherwise he would not be able to formulate it. Thus, all questions comprise response expectations, which leads to the conclusion that all questions end up by influencing the contents of the answer to be given. These shortcomings of questionnaires have been largely discussed in social sciences and no definitive conclusion has been drawn so far. What most scholars already agree is that any methodology using questionnaires for getting people's opinion, has to take into account the influence the question itself will have in the requested opinion. Sophisticated questioning techniques have been developed to minimise surveyors' influence, attempting to "purify" questionnaires by eliminating directional questions as much as possible. Such procedures turn out to be still more difficult for architects to conduct questionnaires-dependent surveys, since they involve highly specialised knowledge. On the other hand, once a question has to be asked, there is no way of totally preventing it from influencing the respondent, because it has already been impregnated with the questioner's intentions.

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<sup>1</sup> See Appendix 1, section 1.



This assertion has philosophical roots, since it comes from the fact that man, as being-in-the-world, interacts with the world circumspectively. All behaviours have the structure of directing-oneself-toward, of being-directed-toward (Heidegger, 1962). Phenomenology calls this structure intentionality (Spiegelberg, 1975), which is the *a priori* comportmental character of what is called behaviour. Consequently, all actions, whether intellectual or concrete ones, are intentional and embody past experiences. There is no such thing as *a neutral attitude*. Thus, whenever something is asked, the answer is intended for something else, which means that it is predictable; whenever something is directly observed, the result of the observation comes from the very experience of the observer, mediated by the instruments used to observe. Observations are then context-dependent: how a particular object manifests itself depends on the choice of instrumentation or measuring process. The knowing subject - the observer - has first to choose the limits of his embodiment, that is, the kind of observational context he wishes to use. Heisenberg (1929) has written much about the subject-object (observer-observed) cut in quantum mechanics. The most famous expression of the instrument-dependent character of investigations is his Uncertainty Principle, which relates the measure of statistical inaccuracy of a position measurement with the measure of statistical inaccuracy of the momentum measurement.

In the architectural field, Geoffrey Broadbent (1973) has examined the implications of such a principle for architects at work. According to his understanding, the Uncertainty Principle applies to architect's work, once it provides evidence that the act of observing affects what is observed. Thus, when architects are collecting a client's brief, their questions certainly will change the client's previous requirements. Broadbent writes:

*"Any experiment on human beings inevitably will add to their experience and the experiment itself will alter their perceptions. That will be true, even, of simply asking questions; the words which the questioner uses will be perceived by the subject and this will affect whatever responses he gives."* (Broadbent, 1973, p. 72)

As it can be seen, Broadbent accepts the basic philosophical idea underlying the Uncertainty Principle, that observations are context-dependent, and the observer influences the event being observed once he chooses the

instruments. Extending this interpretation to fieldworks, it may be assumed that surveyors are going to interfere with the scene anyway, whether they keep on observing or they ask questions. Then, preventing the survey from some personal influence is impossible. What should be attempted is to choose the instruments accordingly, to minimise interferences. For example, there is a subtle difference in quality, as it were, between the results that comes from both questioning and observing, when the object of investigation is spatial behaviour. If the chosen instrument to study people's behaviour in a certain architectural space is a questionnaire, the formulation of the questions to be asked, implies adopting preconceptions about how respondents should behave in the given space. Therefore, one has to reckon possible answers, which can in turn limit the range of possible questions.

In the case of direct observations, the phenomena observed can disclose unaccountable facets among which there will certainly be some that are very important for the aims of the investigation that would have been totally unpredictable at the time of formulating questionnaires. It seems to be clear that in the case of predictable phenomena, there is no problem in using questionnaires, because all possible responses can be anticipated and the questionnaires will work properly, since they are well done. If one wants to know just the quantities, or measurable entities, questionnaires work well, as for knowing how many eggs are consumed by a certain community, how many people travel by plane per year and the like.

Conversely, if the phenomena have any degree of unpredictability, the questions will be based only upon the predictable dimensions, missing the chance of grasping new aspects that have not been thought about. If one wants to evaluate aspirations, satisfaction, happiness and other subjective phenomena, questionnaires will not provide much data for a comprehensive and fair appraisal, but just some clues as to what is really taking place. In those cases, direct observation seems to be more valuable, since it may capture multifarious facets of the phenomena that would never be captured by instruments. Besides, in the specific case of architecture, the spatial perception of the observer plays a major role in the interpretation of what is observed. However, it is important to bear in mind that all observations, whether by instruments or direct ones, will alter the phenomena observed because any observation is context-dependent.

The next Chapter is an introduction to the field work itself, so it aims at giving the reader a general idea of the context investigated.

# CHAPTER FIVE

The Fieldwork



## THE FIELDWORK

### 1. The object of investigation.

Before describing the housing on which data has been collected for this research work, it may be useful to familiarize the reader with the Brazilian context.

#### 1.1. Brazil: the country.

Brazil is the 5th largest country in the world (behind USSR, Canada, China and USA), with a surface area of over 8,5 millions sq km, accounting for as much as 47,7% of the area of South America. 92% of the Brazilian surface lies in between the Equator and the Tropic of Capricorn, as can be seen from Fig. 5.1.

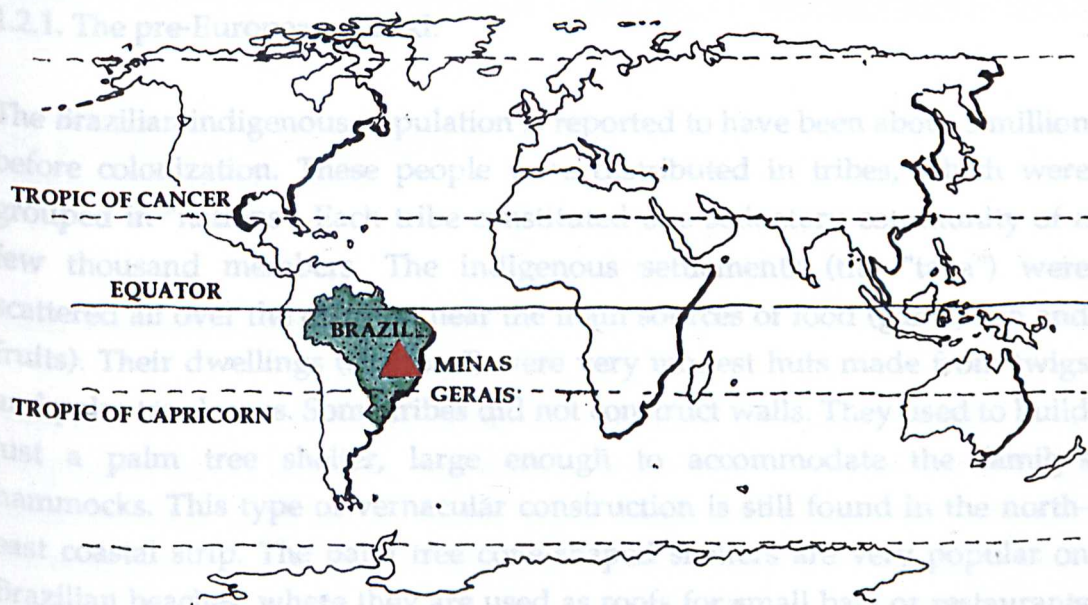


FIG. 5.1 Brazil's geographic position.

In 1990 the estimated population of Brazil was just under 150 million, increasing at a rate of 2% per year. The density of population was approximately 14,2 people per square kilometre and its spatial distribution unbalanced: 71% of the Brazilian population is concentrated in the centre-south region, in urban areas of the States of Sio Paulo, Minas Gerais and Rio de Janeiro. The urban population increased from 45% in 1960 to 76% in 1990. These stunning figures are due to the accelerated process of industrialization that took place in the south-east and south regions during this period.

The Brazilian population has got an immense variety of racial and cultural backgrounds, since more than 80% of the Brazilians are reported to be of mixed origin predominantly Brazilian Indians, black Africans and white Europeans. As this mixing has taken place since the early colonization, it can be said that Brazil has a singular culture which has been built up since then. Portuguese is the only language which is spoken.

## **1.2. Brazilian housing: a historical review.**

This section briefly discusses the Brazilian housing models before and after the arrival of European settlers. It comprises the following topics:-

### **1.2.1. The pre-European period.**

The Brazilian indigenous population is reported to have been about 5 million before colonization. These people were distributed in tribes, which were grouped in "nations". Each tribe constituted one sedentary community of a few thousand members. The indigenous settlements (the "taba") were scattered all over the country, near the main sources of food (game, fish and fruits). Their dwellings (the "oca") were very modest huts made from twigs and palm tree leaves. Some tribes did not construct walls. They used to build just a palm tree shelter, large enough to accommodate the family's hammocks. This type of vernacular construction is still found in the north-east coastal strip. The palm tree cone-shaped shelters are very popular on Brazilian beaches, where they are used as roofs for small bars or restaurants built alongside the sea. Fig. 5.2 illustrates the "taba" and the "oca".

Building a hut for the rainy season



FIG. 5.2 Indigenous dwellings in Brazil.  
From Levi-Strauss (1961, p. 47).

### 1.2.2. The colonial period.

The residential architecture from the colonial period obviously is an adaptation of Portuguese vernacular architecture. Vasconcellos (1951) identifies four basic urban house types from this period, the one floor terraced house, the "sobrado", which is a two or three floor terraced house, the two or three bedrooms detached house (middle-class house) and the "solar", which is an upper middle-class detached house. Fig. 5.3 illustrates these diverse types. All types have pitched and tiled roofs, either brick walls or thick walls made out of mud and painted in washed-out blue or green, window-frames of wood, painted in brown, red or blue.



FIG. 5.3 Types of urban houses from the colonial period in Brazil.



### 1.2.3. The post-colony period.

Brazil became independent from Portugal in 1822. For a brief time it was an Empire, from 1822 to 1889, and since then it has been a Republic. From the early colonial period to the Second World War, the Brazilian economy was mostly based on the exploitation of its natural resources and agriculture, so the majority of the population was rural. Massive industrialization started in the fifties, which brought about a huge influx of people moving from the rural areas to the cities, looking for industrial jobs. Available jobs did not mean available accommodations and slums emerged everywhere, in the fringes of the newly industrialized cities. As in most developing countries, in Brazil the private market has always been seen as inadequate to tackle the task of providing housing, particularly low-cost houses, so the government had to deal with the problem. Thus the first large scale house-building programme attempted in Brazil was in 1946, when the government created the "Fundação da Casa Popular" (Popular Housing Foundation), an institution to provide low-cost houses for the emerging working class. This initiative appears to have encountered difficulties due to public finance limitations and was not successful. In 1960 a second attempt was made, this time for ideological reasons. The government believed that, by becoming homeowners, workers would stop contesting the social order. In 1964, five months after taking over, the military dictatorship released the law that created the "Plano Nacional de Habitação" (The National Housing Planning), the "Banco Nacional da Habitação - BNH" (The National Housing Bank) and the "Serviço Federal de Habitação e Urbanismo" (Federal Service for Housing and Urban Planning). The ideological principles behind this law were the same as in the previous initiatives and, by that time the BNH financed the first mass-housing project, the housing deficit in Brazil had already reached seven millions dwelling units.

BNH was intended to provide subsidized credit for families on low incomes and priority was given to projects aiming at eradicating "favelas" (Brazilian slums). Local authority housing was created - the COHABs (Housing Cooperatives) - all over the country, to be BNH's local agents. The earlier housing estates built by CHOABs with the BNH financial support were mostly composed of flats in high-rise buildings and became unpopular very soon. These estates were built at the lowest possible cost, with no concern for cultural requirements or environmental quality. There were so many

complaints about those estates that the BNH decided to stop financing high-rise type buildings. It must be said that they were dismissed as unsuitable for families on low incomes without having been properly evaluated. The single or two family house model was then elected as the only one capable of providing adequate living conditions for the poor. In such housing, the criteria for admission was income rather than housing need. As from the early 80s, all new low-cost housing estates built by COHABs would be composed of family houses, but those which had already been planned with flats would have been completed. This is the reason why Palmital's first phase comprised of some high-rise flats as well.

The RMBH (Metropolitan Region of Belo Horizonte), in which the Palmital Estate is situated, was one of the first areas of the country to benefit from BNH resources, since the COHAB-MG was created soon after the BNH started operating.

The concept of space saving and cost cutting was prevalent in all COHAB projects and many research works were carried out to achieve this goal. Researches on space saving proliferated at the Universities and Research Centres. Despite the growing criticism on the quality of the dwellings, as long as the system appeared to work, the BNH and its agents would not be interested in evaluating results. In 1988, due to financial reasons the SFH (Financial Housing System) collapsed, the BNH was closed down and all massive housing programmes were called off. The present government, which took office in March 1990, has promised to make a way out of the economic crisis and then to re-approach the housing problem but, by the time this thesis was completed, nothing had been done in this field and an estimated population of 20 millions "favelados" (slums dwellers) were still living in appalling conditions.

## 2. The Palmital Housing Estate.

PALMITAL ESTATE was built in 1982, by COHAB-MG, with financial support from the BNH (National Housing Bank). It was planned to have 4 376 residential units, which accommodates a population of nearly 25,000 inhabitants.

The Estate is situated near Santa Luzia, one of the nine municipalities in the Metropolitan Area of Belo Horizonte, the Capital of the State of Minas Gerais and the third most populous Brazilian city (Fig. 5.4).

The population of Palmital is mainly composed of families on low incomes who have migrated from rural areas (67%), due to widespread unemployment in the Brazilian countryside. Most of these people are unskilled workers who used to live in "favelas" on the fringe of Belo Horizonte's city centre and 45% are children under 16 years old<sup>1</sup>.

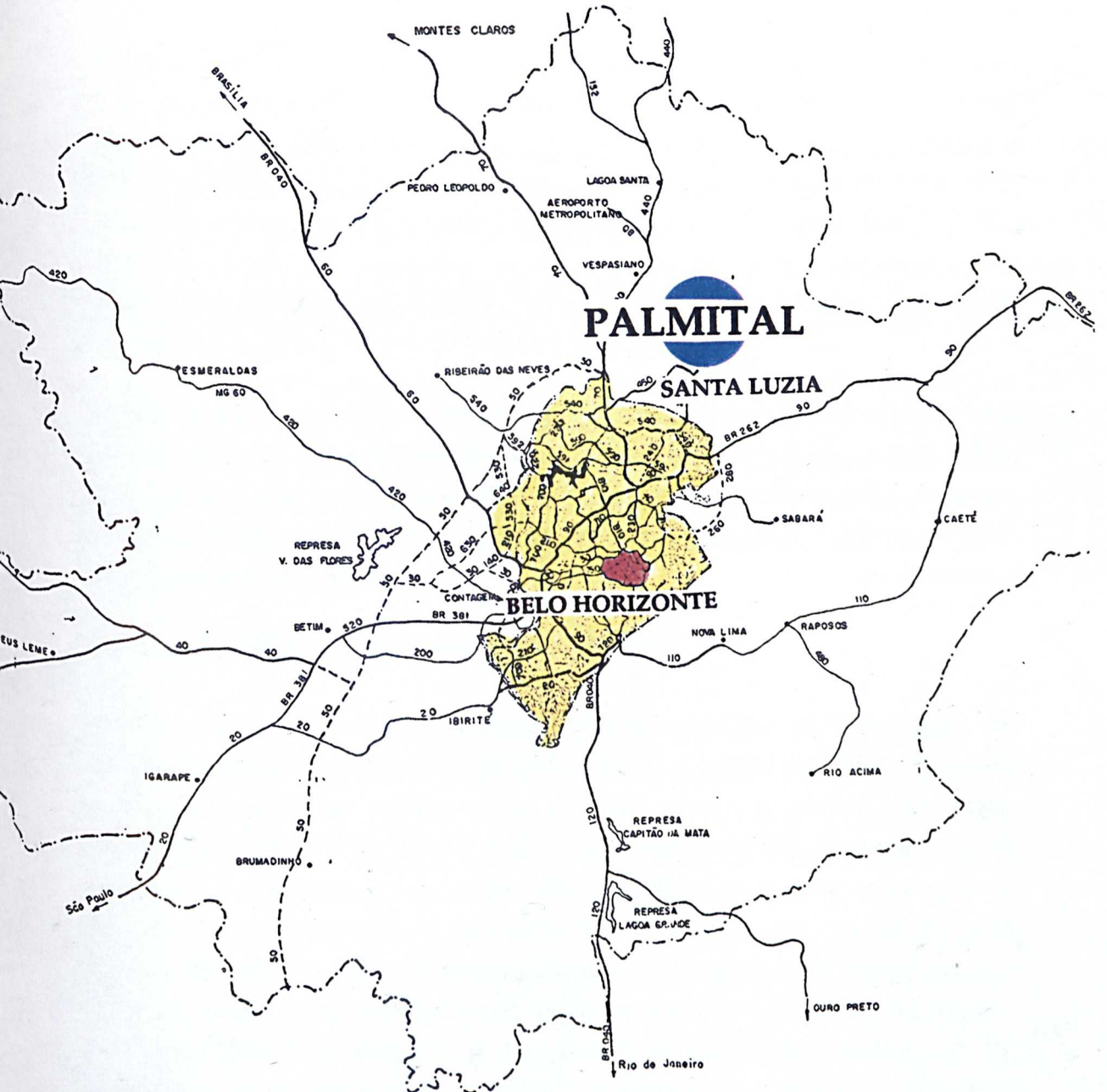
As occurs in nearly all Latin American cities, the borders of Brazilian city centres are the best location for people who make their living by picking up odd jobs. As they cannot afford to either buy or rent houses, they build "favelas". Gosling and Maitland (1984) have pointed out:

*The favela is an urban squatters' community established on land of different ownership where sanitation, services and education are non-existent. In Brazil, favelas tended to be established in the centre of metropolitan areas, close to sources of work and employment. (Gosling and Maitland, 1984, p. 16)*

Despite this reality, the Brazilian mass housing projects which aim to eradicate "favelas" are usually located at considerable distances from existing sources of work. This means that one problem is only solved by another, in that such projects end up increasing unemployment and more poverty. Cities do not have a legislation to assure displaced slum dwellers that a house will be provided close to the cleared "favela" site. Conversely, the tendency is to move them to cheap sites, which are obviously far away from the city centre. As a consequence of this policy, whole communities have been cut off from their place of work and sent to Palmital to live a miserable level of subsistence, without any prospect of further development. They are forced to leave their homes because of floods, landslides, or even as a result of urban renewal projects which aim to remove the "favelas" from the city centre to the peripheries.

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<sup>1</sup> See "Relatorio Socio-econômico do Palmital" (Socio economical report on Palmital), 1981, COHAB-MG.



ESC. 1:800 000

FIG. 5.4 Location of Palmital Housing Estate in the Metropolitan Region of Belo Horizonte.



The decision to concentrate the research upon Palmital was due to the diversity of dwelling types that could be encountered there: starter houses, one, two or three bedroomed semi-detached houses, villas and flats. Given such variety it becomes possible to analyse the whole spectrum of house models constructed with financial support from the Financial Housing System (SFH) since its creation in 1964.

Another point that contributed to the choice of Palmital, was the fact that it did not yet have any communal identity because people who were living there had been taken from different places and the only thing that bound them together was poverty. The community was still unstructured, thus collective actions were the most unlikely events to take place. Being so, the settlement could be interpreted as the territory for individual expression, with residents focusing their complaints and comments on their own difficulties only.

Finally, another aspect that was relevant in the choice of Palmital Estate was that it is entirely disconnected from Santa Luzia's urban fabric - which is also usual in low cost housing settlements in Brazil - and suffers from problems common to this type of housing solution: unemployment, high crime rates and juvenile delinquency.

### **2.1. The definition of the sample to be surveyed.**

Due to the peculiarities of the methodology explored in this thesis, the Spatial Readings should be carried out on a sub-group of dwellings that were representative of the settlement as a whole. Thus, to define how many observations should be taken and which subset of dwellings should be selected for observation was a task that deserved special attention. As the aim of the survey was to identify which architectural elements were negatively affecting the phenomenological dimensions of dwellings, the sample should be representative of the best dwelling conditions that exist in Palmital. This reasoning led to the choice of Judgment-Sampling as the procedure to be adopted in Palmital's sampling. The Judgment-Sampling procedure is, to a certain extent, opposed to the probability-sampling procedure since it is not based on random sampling. It is based on previous knowledge that one has of the universe of possible relevant observations. A judgment sample is preferable to a probability sample when it is possible to define a subset of a few units which is representative of the universe, despite

being small. According to Deming (1950), in such small samples, the errors of judgment are usually less than the random errors of a probability sample. As Palmital is composed by patterned units, the observations could be confined to a certain quantity of units for each pattern, which is the situation recommended for Judgment-Sampling. Hence, instead of adopting a random determination of the units to be read, the definition of the fieldwork sample took various factors into account. The factors considered stemmed from three main sources:

- \* An appraisal of Palmital's urban design.
- \* An appraisal of Palmital house models.
- \* Data and conclusions from previous research works on Palmital and other similar housing estates.

Thus, the first step was to carry out an analysis of Palmital's planning, in order to identify its theoretical basis, and hence to distinguish the elements that contributed to the organisation of the territory. It was expected that such knowledge would provide some indicators to define the sample. The analysis of the planning of Palmital was based on documents such as plans, technical specifications, memoranda and the like. Data was complemented by site observations and by photographs. The report on this analysis is presented in the next section.

## 2.2. Analysis of Palmital's planning.

A great difficulty was found in carrying out the analysis of the planning of Palmital because it was not possible to find out and interview the author of the original planning layout. The documents that accompany the drawings do not elucidate the conceptual framework from which the design stemmed. They only show quantitative data from the site, the population and the buildings. As qualitative information was not available, there was no way of establishing critical parameters for the analysis, so that common-sense would apply in many cases. In spite of these obstacles the task was accomplished in order to point out at least the most evident features that might be revealed by the drawings of Palmital.

Given these introductory explanations, it becomes clear that the analysis of Palmital's planning was not intended to offer a definitive appraisal of the project but only to provide clues for sampling the residential units to be surveyed. Thus, two major questions were put forward:-

# PALMITAL

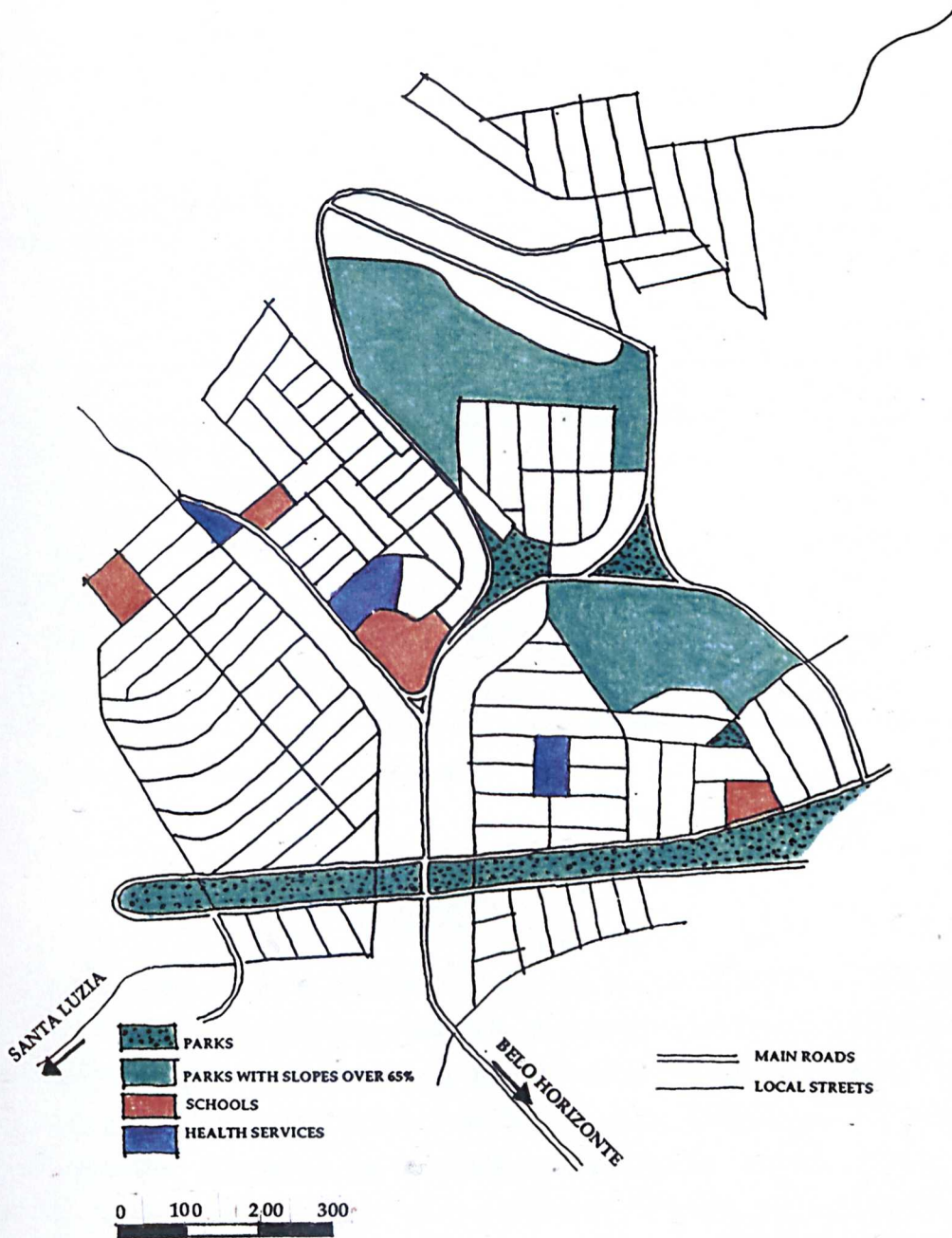


FIG. 5.5 Sketch plan of Palmital Housing Estate

- A. What is Palmital's performance from the rationalist standpoint?  
 B. What is Palmital's potential for environmental responsiveness?

Answering the first question, the following aspects ought to be examined:

- \* Proportional distribution of the area.
- \* Circulation and public transport.
- \* Spatial distribution of urban equipments and amenities.

The distribution of the land area is shown in the following table:

TABLE 5.1

DISTRIBUTION OF THE PALMITAL AREA ACCORDING TO THE  
 DIVERSE ACTIVITIES

ACTIVITY	AREA (Ha)	%
Housing plots	63,94	37,7
Roads and footpaths	37,85	22,3
Shopping	2,26	1,3
Community facilities	5,7	3,4
Schools	2,9	1,7
Health services	2,3	1,3
Parks (green areas)	54,83	32,3
<b>TOTAL</b>	<b>169,78</b>	<b>100,00</b>

Source: Relatório Técnico da COHAB/1985

As can be seen, the area intended for schools is about 29,000 m<sup>2</sup>. Considering that 11,250 of Palmital's population is composed of children under 16 years old, the average area per pupil is 2.58 m<sup>2</sup>, which is below the minimum of the 4.2 m<sup>2</sup> that is recommended by the Brazilian Educational Council. The area intended for urban equipments and amenities, (health service, post-office, church, shops and the like) amount to 10.6 Ha, which represents an average of 4.25 m<sup>2</sup> per person. The PLAMBEL, a government institution, which is in charge of Belo Horizonte Metropolitan Urban Planning, has

established that the minimum to be left for these activities is 8.00 m<sup>2</sup> per person.

The area for parks and "plazas" (32.3% of the total area) is considerably above the average recommended by the PLAMBEL, which is 17%. Nevertheless, the park has been planned on a site which has a totally inappropriate topography, with slopes of 65 degrees on average. This means that 90% of the area cannot be used for any purpose but "green lungs", which is a nonsense since the countryside is so near, just bordering the estate. To sum up, Palmital's residents are deprived of sports facilities, including football, which is the most popular recreation in the country and can be played on any flat land.

The amount of land area spent on vehicle circulation is 37.85% of the total. The PLAMBEL recommends about 28% for public streets and footpaths. The explanation for Palmital's high rate may be found in the layout plan which shows that the streets are laid out very close to each other (see Fig. 5.5).

As far as the existential relationships between man and space are concerned (Norbergh-Schulz, 1971, p. 11), Palmital's urban design apparently fails to give form for the communal spatializations. As it can be seen from Fig. 5.4 footpaths neither clearly define domains nor lead to interesting places, nodes are mere crossroads, places for meeting are not provided and leisure areas are non-existent. The orientation system seems to be restricted to a hierarchical network which divides the land into several quarters that are then subdivided into plots about two hundred square meters. Some larger plots are left undeveloped, being intended for schools and health services.

### **2.3. A brief appraisal of Palmital house models.**

Five low-rise house types have been built in Palmital Estate:

Semi-detached starter houses: 788 units.

Semi-detached one-bedroomed houses: 682 units.

Semi-detached two-bedroomed houses: 824 units.

Semi-detached three-bedroomed houses: 140 units.

One-bedroomed terraced houses: 976 unit.

Two-bedroomed high rise flats: 48 blocks (960 units).

Each type corresponds to a certain range of family incomes, in order to assure mortgage repayments. Thus, families that have monthly income below three "Minimum Salaries"(MS)<sup>2</sup> can afford a starter house only; those having incomes between three and five MS would be entitled to either a one-bedroomed semi-detached house or a two-bedroomed terraced house; those families earning between five and eight MS could afford the two-bedroomed semi-detached houses; for earnings above eight MS, families could apply for a three-bedroomed semi-detached house. In this way, the distribution of houses among the people who applied for a COHAB house does not take into consideration any other aspect but the family's income.

The first model (Fig. 5.6) is the most basic and economical one, and has been conceived as a sort of embryo that could be extended over time, if and when the family could afford the improvement. As can be seen in the illustration, the model provides only the essential minimum: cooking and washing facilities (including bathroom), and one bedroom. This type generally shelters the poorest families, whether numerous or small ones. The survey has identified starter houses that were packed with up to fourteen persons living in conditions that were as bad as in the "favelas" where they lived before.

The second house type (Fig. 5.7) is an extension of the first. It provides another room, which is the sitting-room. The third and fourth models (Fig. 5.8 and 5.9) are generated by the addition of one and two rooms respectively to the previous model.

The fifth model (Fig. 5.10) is similar to the others, regarding the plan, but it is completely diverse in terms of layout, materials and lot size.

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<sup>2</sup> The "minimum salary" (MS) is an economical indicator created by the government to be a reference for taxes, social benefits, legal arbitrations and the like. It is also the lowest salary permitted to be paid for any full-time job in the country. At the time of the survey the MS was about \$60,00 per month.

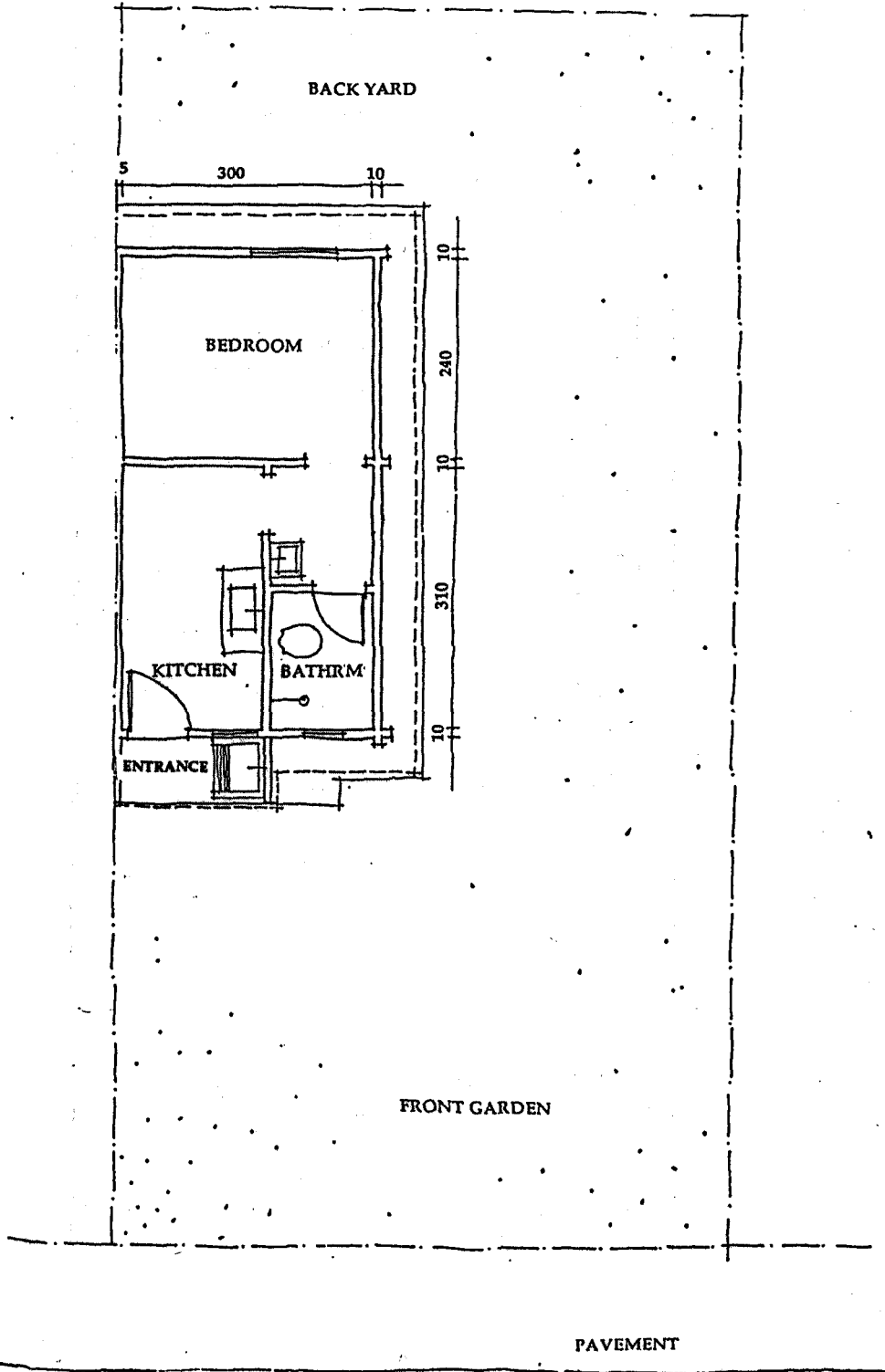


FIG. 5.6 Plan of the Semi-detached Starter house model in Palmital



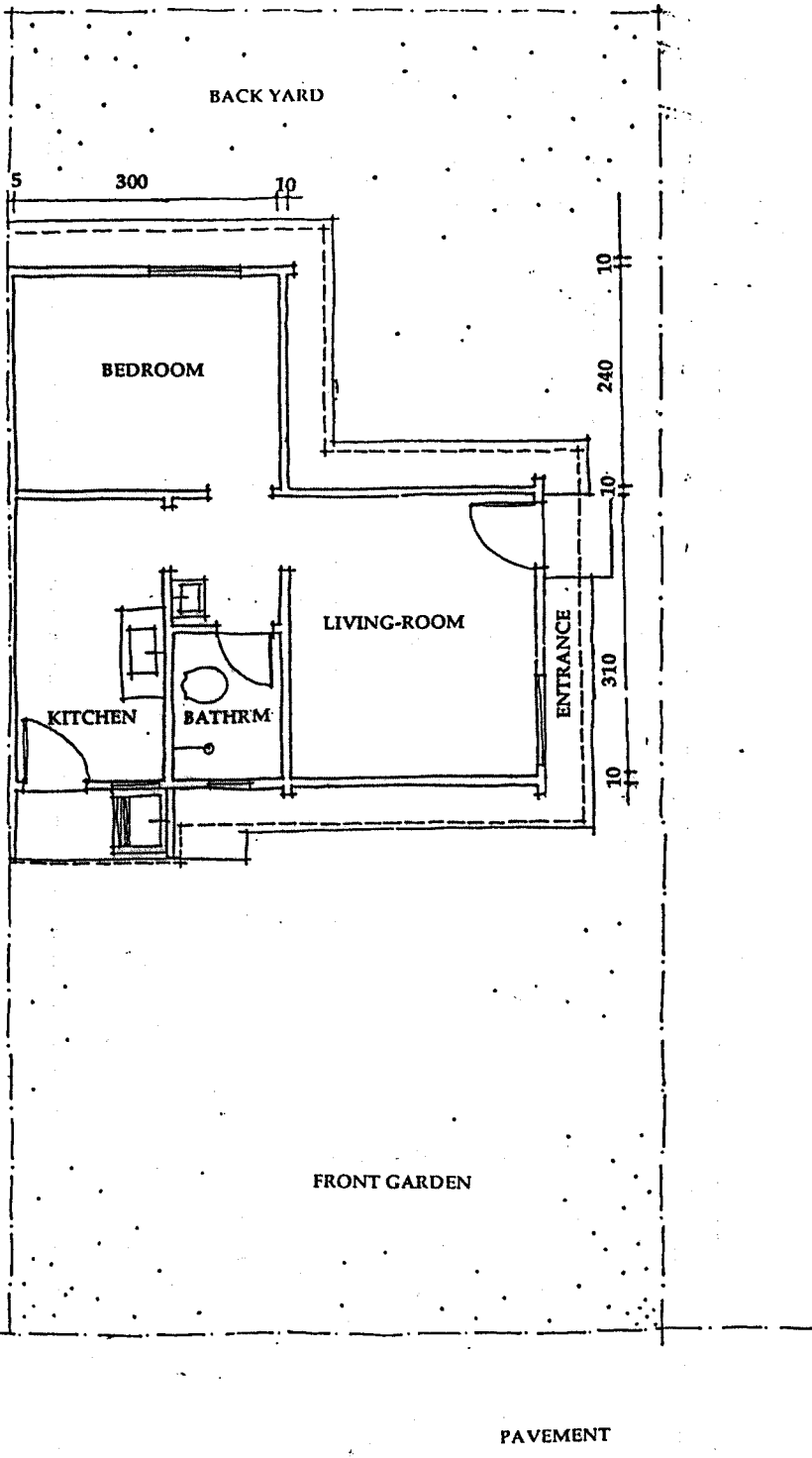


FIG. 5.7 Plan of the One bedroomed semi-detached house in Palmital.

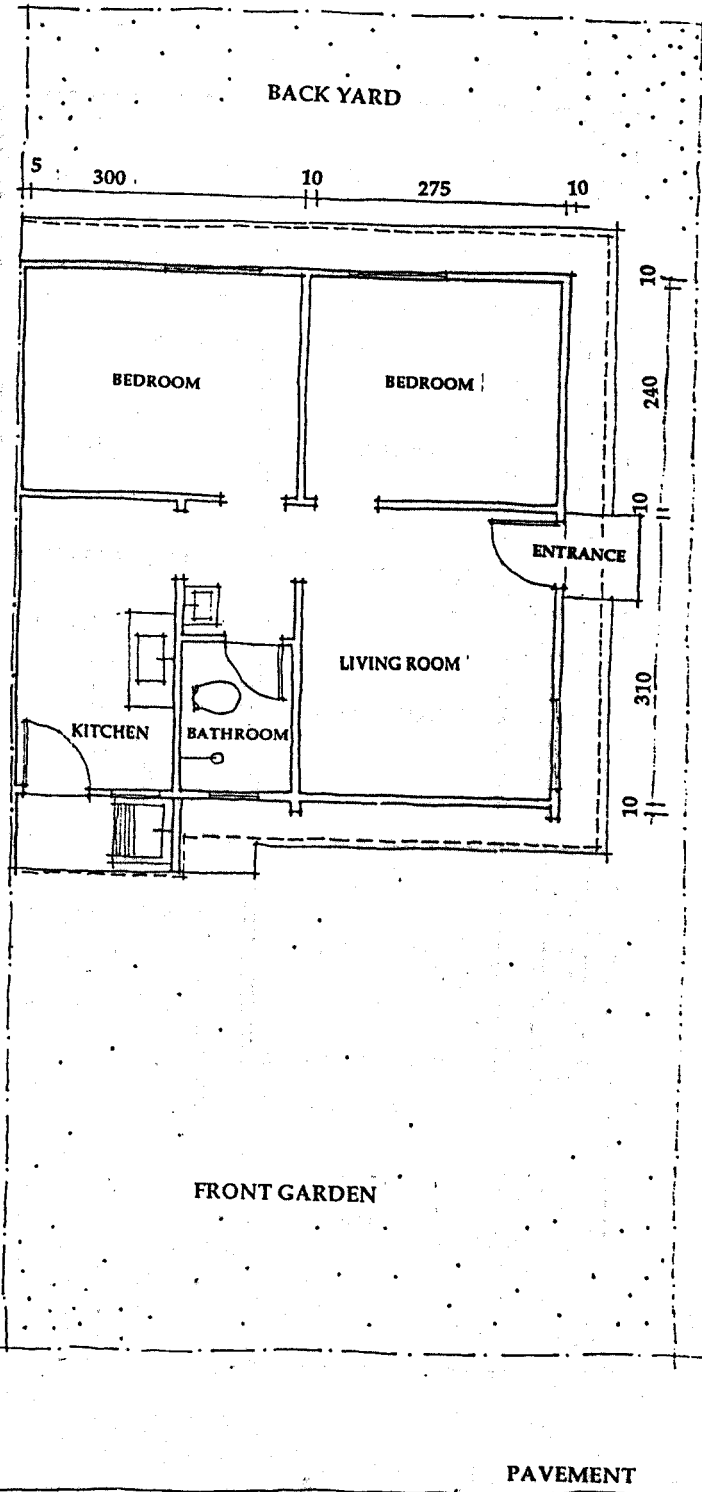


FIG. 5.8 Plan of a two bedroomed semi-detached house in Palmital.

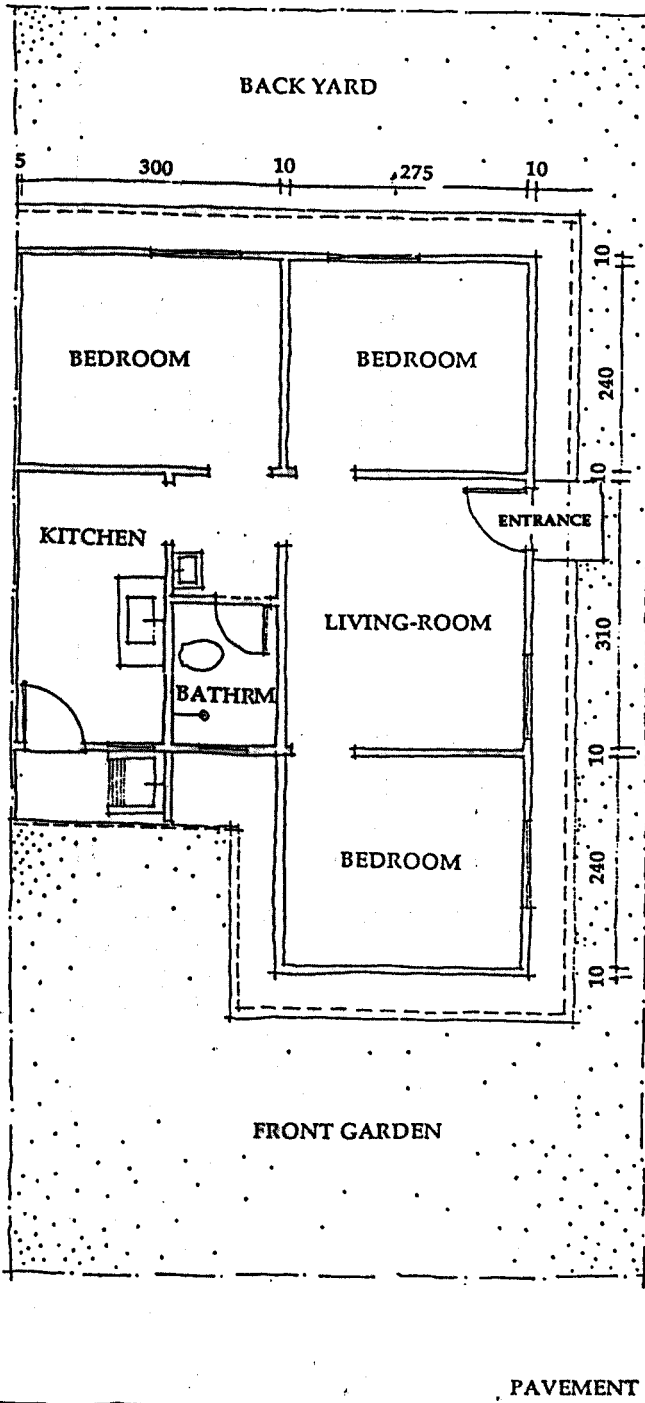


FIG. 5.9 Plan of a three bedroomed semi-detached house in Palmital.

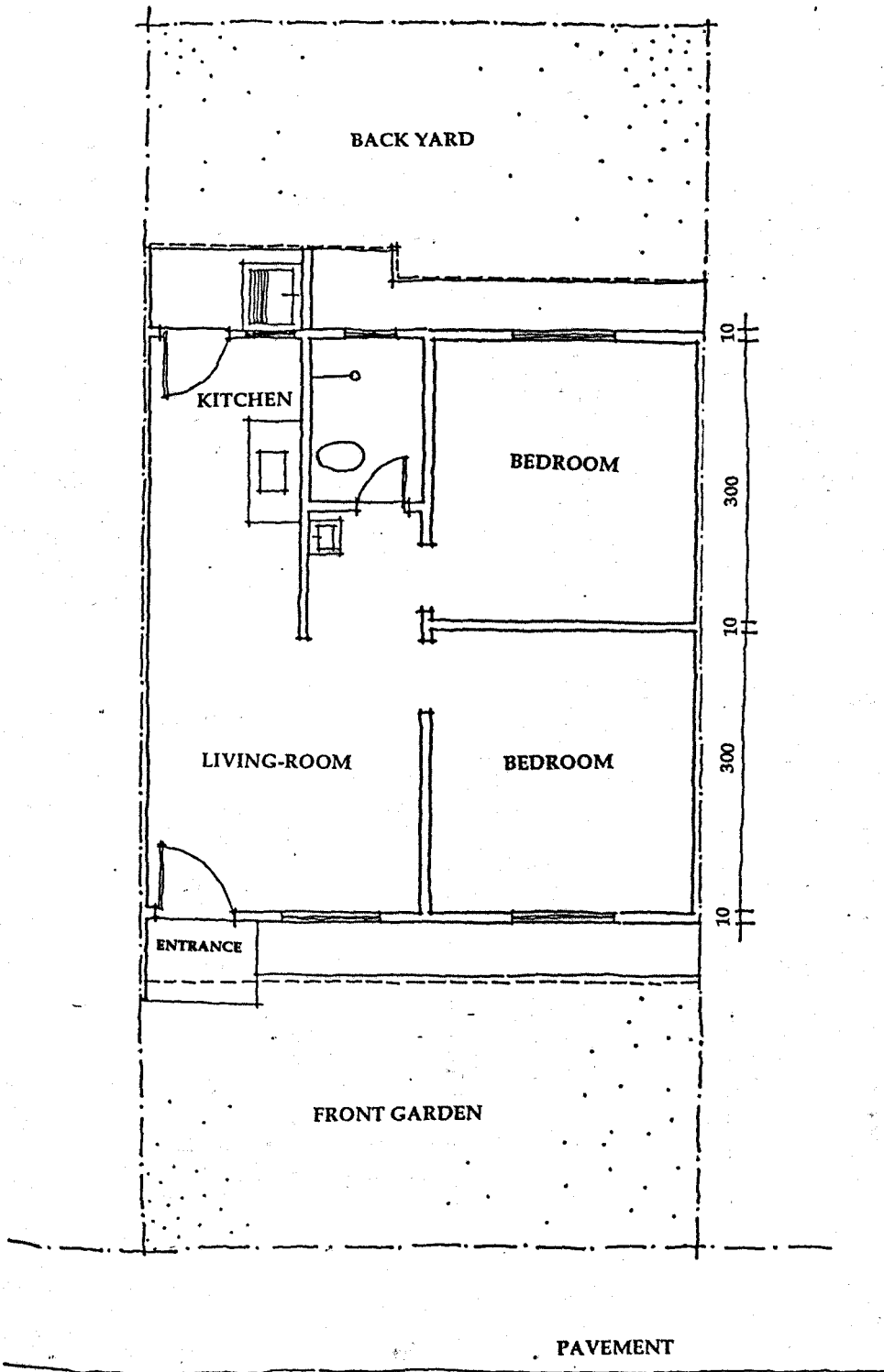


FIG. 5.10 Plan of a terraced house in Palmital.

Summing up, it could be said that there are two basic types of house in Palmital: one is the semi-detached embryo house, which is developed into four models by the addition of extra rooms; the other is a one-bedroomed terraced house, which is the fifth model. The Fig. 5.11 shows this sequence.

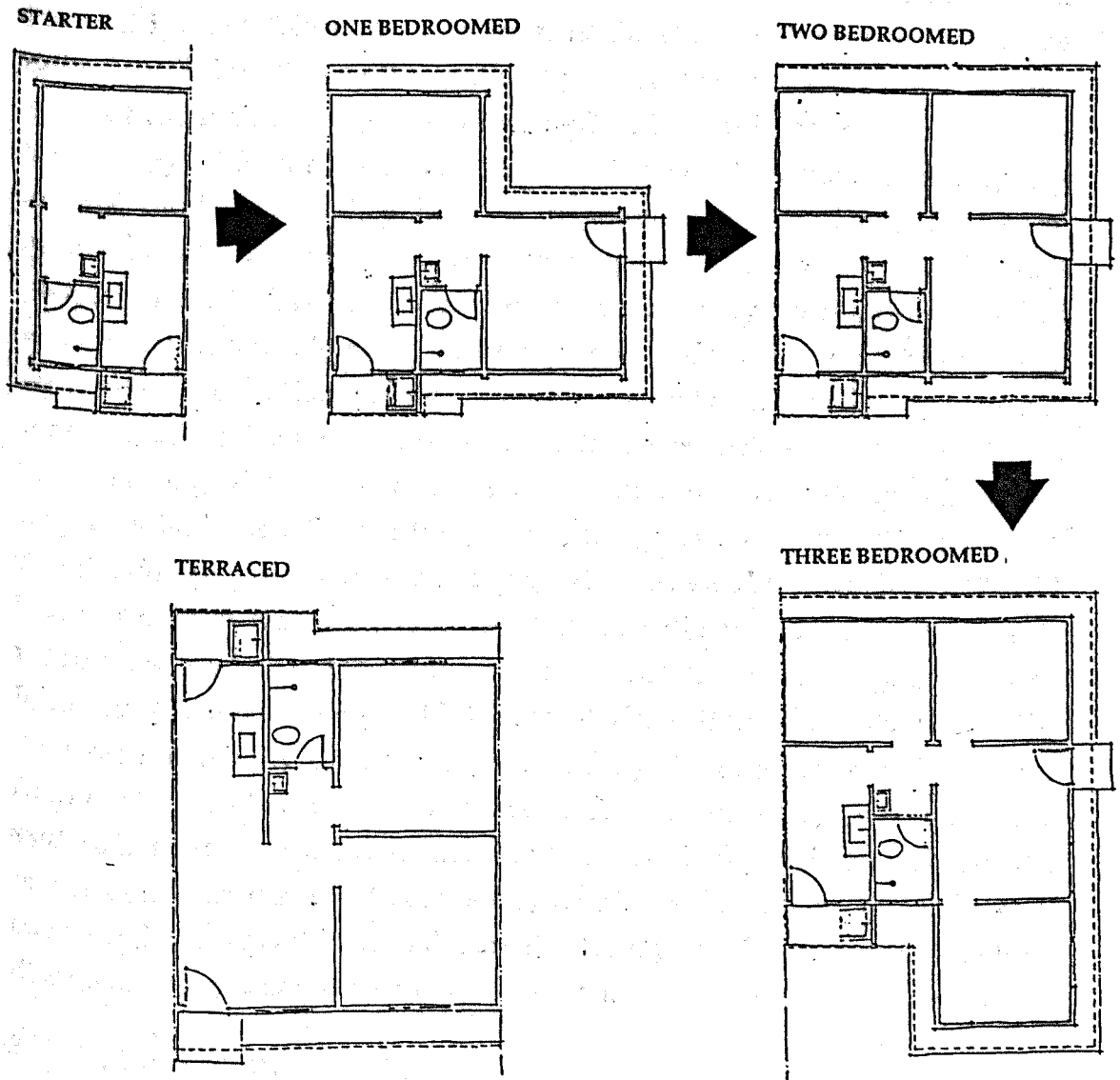


FIG. 5.11 The development of the five housing models in Palmital.

## 2.5. General comments on the models

As can be seen from the illustrations, the design of all models anticipates not only the additions that can be built in the future, but the pattern to be followed in terms of dimensions and features. However, there are many instances in which the owners need to extend a house or to replace a component which does not follow the predicted pattern. Studies have been carried out on the modifications that users have introduced in the houses at Palmital Estate (Malard and Praxedes, 1987). These indicate that 96% of the extensions did not follow the assumed pattern for future extensions and that 100% of the maintenance works had replaced the original components and finishes by different ones. The reasons for which residents modify the original model when they have to do maintenance works, technological improvements and extensions were investigated and it was concluded that people do not follow the given pattern because they do not believe it will work whatsoever. Whenever they replaced a damaged component, they went for a specification different from the original one, even if they were not sure about the advantages of the change. In the extension works, they always tried to change the appearance of the original house. When they were asked why they had not followed the pattern, the great majority (68%) answered that the design pattern was not very good and should be changed. 23% said that the pattern was too expensive and they did not want to waste their money. 9% said that they did not know that there was a pattern to be followed. The interesting point is that most of the "improvements" seem to be far worse in quality than those predicted by the original model, whether from the technical or functional point of view. Nevertheless, residents always said that their own architectural solutions worked much better than the original ones. In the users' comments, which are listed later, the amount of criticism that users address to the architectural plan of their houses and how dissatisfied they seem to be, can be observed.

### 2.5. Choice of units.

Considering the conclusions of the analysis of the planning of Palmital (see the item 2.2), the survey strategy was designed as follows:-

2.5.1 The streets to be visited should be chosen amongst those which were closer to local amenities. This criterion was due to the assumption that

people living in the best areas were more likely to be happy with their houses. Thus, their comments would be less affected by dissatisfaction with the immediate surroundings and would be mostly addressed to the house.

2.5.2. The choice of the houses to be visited was not random as well. They were selected according to the typology, to ensure that all models would be surveyed.

2.5.3. The size of the sample was calculated as follows. It was assumed that at least 3% of the most numerous model should be surveyed and that the sample size should be the same for all models. This assumption was based on suggestions from previous research works that had been carried out in Palmital<sup>3</sup>. Thus, 3% of the terraced houses were surveyed, which amounts to 30 units. Five spare units of each type were selected to complement the sample, in case it was not possible to carry out the survey. 35 houses were then selected from each model. Summing up, the sample was composed of 175 residential units. The annexed map shows their distribution.

### 3. Survey of spatial standards in houses in Palmital.

The research method used for collecting data was the direct observation of the way the space in houses was used, which is called here **Space Reading**. This method includes diverse procedures of registering information such as:

Sketches registering the general layout of the plot, including garden and back yard. The surveyors were asked to annotate everything they found: flowers beds, lawns, shrubs, fences, hedges, washing hangers, dustbins, pavements, paths, furniture and the like.

Sketches registering the interior, including furniture, house appliances and equipment. The surveyors also were asked to annotate any modifications to the original design as well as any replacement of finishes.

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<sup>3</sup> See Cardoso, A.V., Malard, M.L., Delalibera, L. (1988) Relatório Técnico de Defeitos Sistemáticos das Edificações Habitacionais Típicas (Technical Report on Systematic Failures of Dwellings). CETEC/MG, and Praxedes, V., Malard, M.L., *Levantamento e análise das reformas no Palmital*, 1987. Relatório técnico de pesquisa (Survey and Analysis of modifications in Palmital Houses, 1987. Technical Report). CETEC/MG and EAUFMG-BIC.



Photographs of architectural elements, objects and places that would possibly be of interest for the survey which could not be properly sketched.

Photographs and sketches of events, provided that this action would not interfere in the event itself.

Tape-recordings of residents' comments on the house and on the neighbourhood.

All sketches were made on measured drawings that had previously been prepared, to obtain an adequate level of accuracy and standardisation.

The organisational procedures of the fieldwork were carried out in the following sequence:-

All material to be used in the survey was previously prepared. First, available drawings and written pieces of information, relating to both the urban and architectural designs of Palmital, were collected from COHAB (Housing Cooperative of the State of Minas Gerais). Second, the drawings of the several house types were remade to fit the A4 format on which the surveyors would sketch information. In the Appendix II there are some examples of the forms employed in the survey. The second step was to decide on the units to be visited and to schedule the visits. Finally, the surveyors were recruited and selected from second and third year students of architecture who underwent intensive training.

### 3.1. Surveyors training.

As the aim of the fieldwork was to identify the interactions and conflicts between residents and houses and to find out what it was that made the houses inhabitable, i.e., *unready-to-hand* as Heidegger puts for it (see Chapter 3, item 1.3), the surveyors were made aware of the methodological principles that directed their work. Thus, they were first instructed in the general purpose of the research and then asked to study and discuss some selected texts on the main theoretical issues to be considered. Second, they were asked to complete one trial, under supervision, before entering the field. After carrying this trial they were asked to write a report on everything that was heard, said and done at the house visited. All reports were then presented in seminars, to be discussed and criticised. The objective of those seminars was to establish uniformed procedures to conduct the survey.

When everyone was in complete agreement about how to carry on the SPATIAL READINGS, the conclusions that had been reached were written down and became a set of guidelines to be followed in the field. These guidelines are described in the next section.

### **3.2. Fieldwork guidelines.**

The guidelines comprised four items as follows:-

- 3.2.1. The general purposes of the research must be briefly explained to the residents at the beginning of the visit.
- 3.2.2. If they are not receptive, the visit must be cancelled and a supplementary unit of the same type must be chosen.
- 3.2.3. If the residents are interested in participating but are very busy at the time, the visit may be postponed and another time arranged.
- 3.2.4. Residents cannot be asked questions, unless they are about general subjects like weather conditions, cost of living, football, carnival and the like. Since the user's comments on aspects of the house must come out spontaneously, a friendly conversation is one of the most efficient means to extract them and a mighty source of information. Thus, striking up a conversation with residents is the preferred way to obtain useful data. Whenever people are not talkative enough, the surveyor might comment on some aspect of the house that has attracted his attention to provoke some reaction from the residents.

Some of the reports on the Spatial Readings have been translated into English and are presented in the Appendix II

The next Chapter discusses the methodological standpoints adopted to identify conflicts and proceeds towards a brief account of all architectural conflicts identified in Palmital and their relationship with the phenomenological dimensions of dwelling.

# CHAPTER SIX

## Analysis of Conflicts

## ANALYSIS OF CONFLICTS

"It is true that we arrive at contradictions when we describe the perceived world. And it is also true that if there were such a thing as a noncontradictory thought, it would exclude the world of perception as a simple appearance."

Maurice Merleau-Ponty

### 1. Introductory issues.

As has already been seen in Chapter 3, item 1.3, whenever a piece of equipment is *unready-to-hand* it becomes conspicuous, since it affects the totality of the equipment and ends up by impeding the equipment being used properly. It has also been demonstrated how this notion applies to *house-as-equipment*, in the item 1.4 of the same Chapter 3. The present section will discuss the relevance of identifying architectural conflicts in order to improve architectural design.

Architectural conflicts emerge from the process of using spaces. Thus, the only way of finding out about them is to investigate the everyday life use of architectural spaces. Post Occupancy Evaluation is the branch of human sciences that comprises the studies concerned with appraisals of the built environment, while Performance Evaluation is the branch of building science which deals with the technological aspects of building. The former is concerned with human factors and the latter is more related to the edifice. Systematic enquires on building materials, construction and structure date from the beginning of this century, but researches on the interaction between man and the built environment are more recent<sup>1</sup>. For the last thirty years many research works have been conducted on this field, most of them to find out whether and why users are satisfied or not with their places. The aim of such surveys branches out in two basic concerns:-

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<sup>1</sup> For details see Broadbent, G. (1973) *Design in Architecture*. London: John Wiley & Sons Limited, Chapter 9, Social Needs, pp. 156-174.

- a) Identifying problems that cause dissatisfaction and thereby establishing the improvements that must be made, whether in extant buildings or in future ones.
- b) Identifying positive aspects to be considered and preserved in future projects.

The present research work belongs to the first branch. It is intended to narrow some methodological gaps in current approaches to the appraisals of residential environments, rather than to propose any radical change to what has been done so far in this field. Thus, its aims could be summarised as an attempt at introducing the distinction between what is essential and what is circumstantial in terms of housing attributes, with regard to the existential dimensions of the architectural space. Such an objective is expected to be achieved by exploring the phenomenological approach. In the next two pages the summary of the conceptual framework is presented, to provide a visual picture of the connections between the phenomenological dimensions of dwelling and the architectural elements that compose the Palmital houses.

## 2. Why identify conflicts.

Traditional approaches to the appraisal of residential satisfaction are generally based on questionnaires and interviews, followed by statistical analysis of data. If the survey is well conceived, planned and conducted, i.e., if it is technically good, the resulting data can turn out to be fairly reliable. Thus, carrying out an appropriate interpretation is just a matter of methodological accuracy. Despite succeeding, traditional approaches have some shortcomings that cannot possibly be overcome within the limits of the methods they are based upon. One of these shortcomings is related to the generalization of conclusions. To clarify this idea, imagine the following scenario; in a post occupancy evaluation survey, one hundred questionnaires are applied to a Brazilian housing settlement and 85 respondents say they dislike the yellow colour of the kitchen. The only conclusion that could be drawn from this data is that 85% dislike the yellow colour of the kitchen, therefore the kitchens of that settlement should be painted in another colour. It should not be concluded from this data that Brazilians do not like yellow for kitchens, even knowing that Brazilians share the same cultural environment, in the a broad sense. But, why should we not draw such a



conclusion? The disposable data, although reliable, is not quantitatively significant regarding the whole universe of Brazilian kitchens, and is qualitatively tendentious because the respondents had in mind that kind of kitchen, with those appliances, size, and finishes. Besides, there is no further evidence that the dissatisfaction with the yellow is due to the colour itself or rather to other elements like brightness, luminescence, glossy finishing and so on. Thus, although the disposable data appears to necessitate changing colours of the kitchen, further interviews are required to find which colour should replace the rejected yellow.

As can be observed in this hypothetical example, when human factors are involved, quantitative data has to be complemented by another kind of reflection that should be qualitative. It is very important to know that 85% of respondents are dissatisfied with the kitchen colour, since priorities have to be established and there is no doubt that the amount of rejections must be one of the criteria to be adopted. But the problem persists on which colour should be selected, whether any one else or not, and on which characteristics the finishing should have.

Now, suppose the mentioned survey was complemented by the approach explored in this essay. It would have identified a conflict between the colour of the kitchen and some phenomena that belong to "dwelling". The conflict would have been identified during the observation of the interactions between the residents and the house. Its identification would have been based on user's actions and comments, that is, on behavioural factors. Moreover, the information about the conflict would have emerged from the kitchen context and would be more likely to contain the data that questionnaires failed to reveal.

From the foregoing discussion, it might be concluded that traditional methodologies and techniques of gathering data on the interactions between man and the built environment, despite being very useful and reliable for some purposes, do not provide enough information to tackle the issue properly. These limitations are independent of the excellent procedures adopted, since they are an intrinsic part of explanatory sciences. The systematic observation of spaces, followed by the identification of the conflicts that take place in the interactions of man and space seems to be the way that phenomenology points to in overcoming the problem.

### **3. Conflicts identified and phenomena to which they are related.**

#### **3.1. The conflicts.**

In the "Space Readings" that have been carried out in Palmital Estate, the following conflicts were identified:

##### **3.1.1. Unwalled plot versus territoriality.**

The residential plots of Palmital are unwalled, which is in opposition to man's territorial behaviour.

##### **3.1.2. Service area and sink at the front of the house versus aesthetic sense (identity) and privacy.**

The service area - that is, an outside space containing a sink for washing clothes - is placed at the front of the house. As a consequence of this two major problems occur: the first is that the facade gets some features of a back yard; the second is that several houseworks have to be performed in public. Both cases seem to be unacceptable by most residents.

##### **3.1.3. Missing internal doors versus territoriality and privacy.**

Some internal doorways have not been provided with doors, causing lack of privacy for the rooms and permitting the individual territory to be both trespassed and overlooked.

##### **3.1.4. Wash-basin outside of bathroom versus privacy and cleaning requirements.**

The wash-basin, instead of being located within the bathroom is placed outside and affects residents' privacy. In addition, this causes many problems in the area in which it has been placed.

##### **3.1.5. Separating wall without acoustic insulation versus privacy.**

The party walls that separates the two houses in semi-detached houses are too thin, approximately 10cm, and have not been covered with acoustic



material. This solution affects residents' privacy in that everything that is said in one house is heard next door.

### **3.1.6. Service area in the open versus comfort for doing the washing and privacy.**

The service area, beside being placed at the front of the house, is in the open, unprotected against weather conditions. As it is straight near the public realm, the housewife does not feel at ease to do the washing wearing appropriate clothes, such as shorts or a bathing suit, for working under the hot sun.

### **3.1.7. Missing ceiling versus environmental comfort and identity.**

Palmital's houses are not provided with a ceiling. Over the years insects and dust have come in through the gaps between the roof and the walls. The lack of the ceiling also affects the resident's feeling of identity, because the house appears to be unfinished.

### **3.1.8. Gaps between the walls and the roof versus environmental comfort.**

When it is raining and windy the water passes through the gaps that exist between the roof and the walls. When it is cold, the inside temperature becomes uncomfortable as well.

### **3.1.9. Thin walls versus environmental comfort.**

The external walls are thin and do not provide enough insulation from the sun's heat.

### **3.1.10. Inadequate finishes versus cleaning requirements.**

The walls are rendered with a very rough plaster which accumulates dust. There are no floor finishes with the result that the floors are rough and difficult to clean.

### **3.1.11. Height of walls versus cleaning requirements.**

Because there is no ceiling to the kitchens, the walls extend up to 3.5 metres in height which makes the upper part of the walls impossible to clean.

**3.1.12. Missing finishes versus aesthetic sense (identity).**

Some missing plastering and floor coverings are unacceptable from the users' point of view, in that the house looks unfinished.

**3.1.13. Missing dining place versus customary way of eating.**

Palmital houses are not provided with a dining room, although the eating place is of major importance in Brazilian culture.

**3.1.14. Window design versus ventilation requirements.**

The window design does not permit efficient natural ventilation of the house in the hot season.

**3.1.15. Water tank size versus amount of water required and efficiency of water supply.**

The water supply in Palmital is intermittent and there are times when residents have no water. The houses should have been provided with a larger tank to store water for at least a whole day.

**3.1.16. Sloping back yard versus need for flat land to plant vegetables.**

People in Palmital are used to having a vegetable garden to provide supplementary food. The sloping back yard is unsuitable for that purpose.

**3.1.17. Substandard materials and appliances versus cleaning requirements and environmental comfort.**

Finishes of bad quality affect the environmental comfort of the house and the identity of dwellers.

**3.1.18. Quantity and dimensions of rooms versus quantity of space required.**

Floor space standards are very low and the rooms are not big enough to fit in all the residents' furniture. As a consequence the distribution of space in the layout is unbalanced.

### 3.1.19. Position of rooms and apertures versus privacy and identity.

The plan layout and the position of doors and windows affects users privacy and identity.

### 3.1.20. Unprotected slope versus safety and cleaning requirements.

The sloping land adjacent to some of the houses have been left unprotected and without land drainage, with the result that rainwater and mud flood into the houses. These landslips have made the houses unsafe.

## 3.2. The phenomena.

The phenomena revealed by the conflicts above could divided into three categories: one, **Territoriality** (which comprises connectedness and the need for protection against adverse weather conditions); two, **Privacy** and preservation of **Identity** and; three, the need for an adequate **Ambience**, which is associated with several manifestations of territoriality, privacy and identity and encompasses all dimensions of dwelling and its respective phenomena.

**Territoriality** and its diverse manifestations are revealed through the following conflicts:-

- \* Unwalled plot.
- \* Missing internal doors.

**Privacy** sometimes comes together with **Territoriality**. However there are conflicts that are primarily related to **Privacy**, although constitute other phenomena too; they are:-

- \* Service area and sink at the front of the house.
- \* Wash-basin outside the bathroom.
- \* Separating or party wall without acoustic insulation.
- \* Missing internal doors.
- \* Service area in the open.
- \* Position of rooms and openings.

**Identity** (or preservation of identity) is revealed by the following conflicts:-

- \* Substandard materials and appliances.
- \* Height of internal walls.
- \* Inadequate finishes.

- \* No planned space for dining.
- \* Service area and sink at the front of the house.
- \* Inadequate size of water tank.
- \* Sloping back yard.
- \* Quantity and dimension of rooms.
- \* Missing ceiling.
- \* Position of rooms and openings.

**Ambience** is inscribed in all conflicts, but is particularly revealed by:-

- \* Service area in the open.
- \* Missing ceiling.
- \* Missing finishes.
- \* Gap between walls and roof.
- \* Thin walls.
- \* Window design.
- \* Quantity and dimension of rooms.
- \* Unprotected slope.
- \* Position of rooms and openings.
- \* Substandard materials and appliances.

The summary that is presented at the end of this Chapter shows the connections between the phenomenological dimensions of dwelling, the phenomena that are related to them, the conflicts that reveal the phenomena and the architectural elements that provoke the conflicts.

In the next Chapters each group of conflicts will be described, analysed and interpreted, as well as the phenomena to which they are related.

#### 4. The analysis

The analysis of the architectural conflicts develops as follows: first, the conflict is described, i.e., the architectural element which is *unready-to-hand*, therefore provoking conflicts, is depicted. Second, it is given a general idea on how the vernacular residential architecture has solved the problem so far. Third, in order to provide a precise characterisation of the conflict, the residents' comments that helped to identify it are listed. Fourth, the phenomenon to which the conflict is thought to be related is examined. Finally, some quantitative data is presented and discussed.

#### 4.1. Quantitative analysis

As the Spatial Readings have not intended to provide survey data for statistical purpose but rather to know, understand and interpret the interactions that take place between residents and their homes, the emphasis of the analysis is on interpretative issues. However, the reports on the Spatial Readings can also provide an estimation of the magnitude of each conflict in terms of the proportion of their incidence. Such figures have been obtained as follows:-

- \* First, the reports that came out of the Spatial Readings of each housing model were enumerated from 1 to 35, since the total of readings per model was 35.
- \* Second, the incidence of a certain conflict was looked for by scanning all reports, per model, and assigning a "yes" to those in which the sought conflict appeared.
- \* Third, a table was mounted and the total number of incidents of the conflict was worked out.
- \* Fourth, a chart presenting the percentage of the conflict according to the diverse models was obtained.

The Table 6.1 is an example of this procedure. It shows the incidence of the conflict with the unwallied plot in the diverse models. The first column is related to the numbers given to the reports. The remaining columns are related to the incidence of the conflict per report and per model, respectively. The bottom row shows the total incidence of the unwallied plot conflict in each model. The chart showing the percentage of this conflict in the diverse models is presented in Chapter 7, in which territoriality is analysed. All of the figures illustrating the twenty conflicts listed in the previous section have been obtained through the same process.

**TABLE 6.1**  
**UNWALLED PLOT VERSUS TERRITORIALITY**

Incidence of the conflict in each Spatial Reading, according to the diverse models

SPATIAL READING	HOUSING MODELS				
	STARTER	ONEBED.	TWOBED.	THREEBED	TERRACED
No.1	yes	yes	yes	yes	-
No.2	yes	yes	yes	yes	yes
No.3	-	-	yes	yes	yes
No.4	yes	-	-	yes	-
No.5	yes	yes	yes	-	-
No.6	-	-	yes	yes	yes
No.7	yes	yes	yes	yes	yes
No.8	yes	-	yes	-	yes
No.9	yes	yes	-	yes	-
No.10	-	yes	yes	yes	-
No.11	yes	yes	yes	-	yes
No.12	yes	yes	yes	yes	yes
No.13	-	yes	-	yes	-
No.14	-	yes	yes	yes	-
No.15	yes	-	yes	yes	-
No.16	-	yes	yes	yes	yes
No.17	yes	yes	-	yes	yes
No.18	yes	-	-	-	-
No.19	-	-	yes	yes	yes
No.20	-	yes	yes	yes	-
No.21	yes	-	yes	yes	-
No.22	yes	yes	yes	-	yes
No.23	yes	-	-	yes	yes
No.24	-	-	yes	yes	-
No.25	yes	yes	yes	yes	-
No.26	-	-	-	yes	yes
No.27	-	yes	yes	-	-
No.28	yes	yes	yes	yes	-
No.29	-	-	-	yes	yes
No.30	yes	-	yes	yes	yes
No.31	yes	yes	-	yes	-
No.32	-	-	-	yes	-
No.33	yes	yes	yes	yes	yes
No.34	-	-	yes	yes	-
No.35	yes	-	-	yes	yes
<b>TOTAL YES</b>	19	18	22	25	15

SOURCE: SPATIAL READINGS.

## THEORETICAL CONSTRUCT

**MAN AND SPACE ARE  
EXISTENTIALLY CONNECTED**

Why?

Man is Being-in-the-world

**MAN'S EXISTENCE IS SPATIAL.**

All human actions take place in space: architectural space.  
Architectural spaces are endowed with all meanings that man's existence  
possesses.

Which are the meanings that apply to housing?

**AS BEING-IN-THE-WORLD MAN  
DWELLS THE WORLD.**

Dwelling is a phenomenon which comprises three dimensions:-

Setting up an inside\outside  
Visibility  
Appropriation

Each dimension is unfolded in several phenomena which could be grouped  
in:-

Need for protection  
Territoriality  
Privacy  
Identity

**HOUSE IS THE PLACE FOR  
DWELLING**

House mediates Home

**HOUSE IS AN EQUIPMENT TO DWELL.**

Equipments have attributes.  
What is the essential attribute of a house?

It is **inhabitability**, which is the ability to provide means for dwelling.

**Inhabitability**  
branches out in  
four groups of  
qualities

1. Qualities to ensure protection
2. Qualities to ensure territoriality
3. Qualities to ensure identity
4. Qualities to ensure privacy

Each quality,  
in turn, is  
provided by  
architectural  
elements.

Roof  
Ceiling  
Walls  
Fences  
Edges  
Thresholds  
Doors  
Windows  
Elements and  
materials for  
acoustic insulation  
Room dimensions  
Appliance  
positioning  
Finishes  
Decoration  
Ornamentation  
Facilities  
Furniture layout  
Architectural  
features  
etc.

**IDENTIFYING CONFLICTS**

When some element is inadequate or missing, conflicts (architectural conflicts) arise between residents and dwellings. Analysing conflicts seems to be a very efficient and appropriate instrument to appraise housing quality.



# INTERACTIONS BETWEEN THE SUBJECTIVE LEVEL AND THE ARCHITECTURAL OBJECT

## PHENOMENOLOGICAL DIMENSIONS OF DWELLING

### SETTING UP AN INSIDE/OUTSIDE

Man needs to distinguish:  
\*inside his room/outside  
\*inside his house/outside  
\*inside his piece of land/outside  
\*inside his town/outside  
\*inside his country/outside  
\*indoors/outdoors

## PHENOMENA RELATED TO IT

### TERRITORIALITY and need for PROTECTION against weather conditions

## ARCHITECTURAL ELEMENT THAT INTERFERE

surrounding walls  
fences  
edges  
markers (in general)  
thresholds  
doors  
boundary  
frontiers  
etc.

## VISIBILITY

People need to give -and not to give- themselves to be seen through their practices in space.

## PRIVACY and preservation of IDENTITY

general layout of the house (spatial zoning)  
windows  
doors  
acoustics  
quantity of space  
room dimensions  
adequate position for appliances  
etc.

## APPROPRIATION

People need to care for their places. Ornamentation, maintenance and housework are evidence of pride that people have of their homes.

## IDENTITY and AMBIENCE

finishes  
decoration  
facilities  
furniture layout  
architectural features  
external aspects  
etc.

# CHAPTER SEVEN

**Analysis of the Conflicts  
Related to Territoriality**

# ANALYSIS OF THE CONFLICTS RELATED TO TERRITORIALITY

## 1. Introduction.

The phenomenon of territoriality in Palmital has been revealed by two conflicts: the unwallled plot versus the need to demarcate the family's piece of land, and the lack of doors in the doorways inside the house versus the need to demarcate the individual's place. The former is related to the distinction between the private and the public realms while the latter is about the boundaries of personal space (Sommer, 1969). Both have striking connections with *privacy*, in that *to set up an inside/outside* involves the question of *visibility* as well<sup>1</sup>. Actually, the lack of doors inside the house appears to reveal only the phenomenon of privacy. However, an accurate examination of the users' comments clearly show that, in this case, territorial feelings are intermingled with the need for privacy. Then, the question of where to place the analysis of this conflict, whether in *TERRITORIALITY* or in *PRIVACY* arises. It has been chosen to analyse it separately, as an interface between privacy and territoriality, since the body of literature on the subject suggested this way. Thus, *missing doors inside the house versus territoriality and privacy* will be considered further. This Chapter deals with the unwallled plot only.

## 2. Unwallled plot versus territoriality

### 2.1. Description of the conflict.

In Palmital, all the houses were built in unwallled plots as can be seen in the Figs. 5.6, 5.7, 5.8, 5.9 and 5.10 in Chapter 5. This architectural solution does not follow the Brazilian urban housing tradition, which suggests three basic models for the spatial positioning of the house on the plot, all bordered with a wall or fence:-

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<sup>1</sup> See the summary which is presented at the end of the Chapter 6, pp. 84-86.

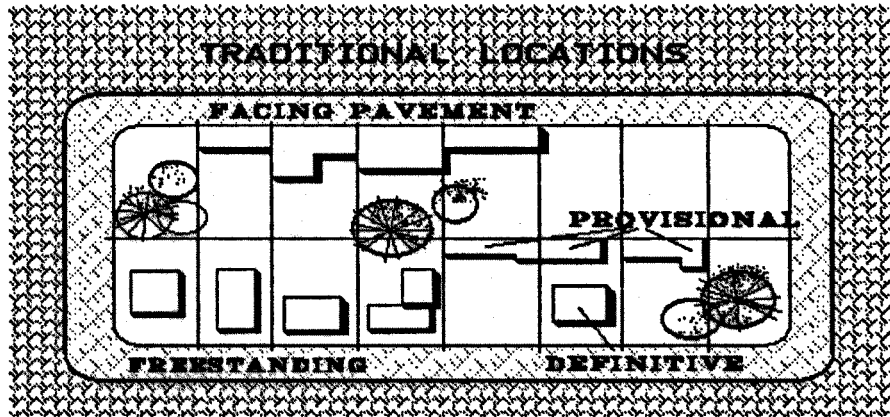


FIG. 7.1 Traditional location of houses on plots in Brazil.

- a) The freestanding house with space around which is delineated by brick walls on both sides and at the rear, while the front of the plot has a decorative fence with a gate.
- b) The house fronting onto the pavement and leaving a free space at the rear which is walled. This model is similar to the British terraced-house and used to be very popular during the colonial period of architecture, as shown in the illustrations of Diamantina and Ouro Preto, two cities from the Eighteenth century, both situated in Minas Gerais, the State where Palmital stands (Fig. 7.2 and Fig. 7.3).
- c) The house at the back edge of the plot, leaving a free space at the front which is walled on both sides and has a fence or a dwarf wall at the front with a decorative gate. This solution is largely adopted in the peripheries of the cities, either by the lower middle class or working class. The reason for this option is that people build a temporary dwelling at the rear and move there to stop paying rents until the new house, freestanding in the plot, is ready.



FIG. 7.2 Housing settlement in Ouro Preto in the Eighteenth century.

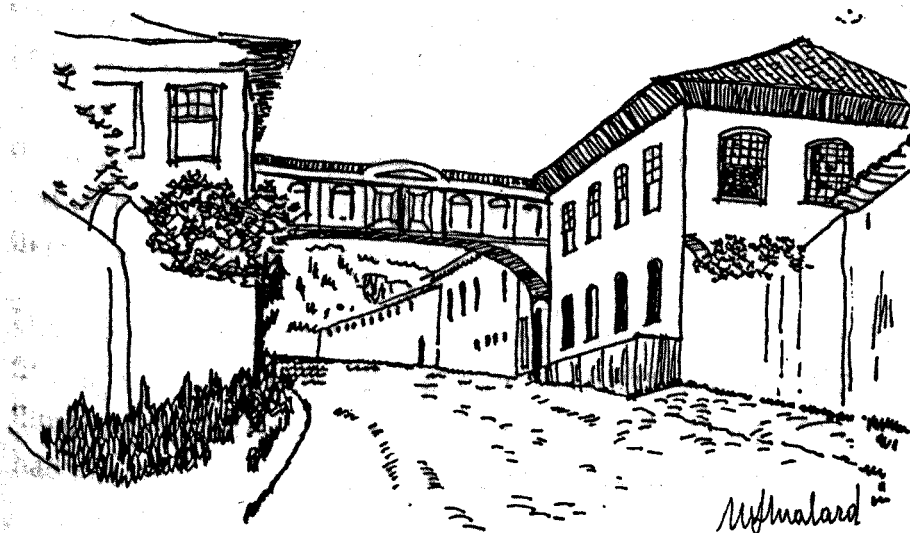


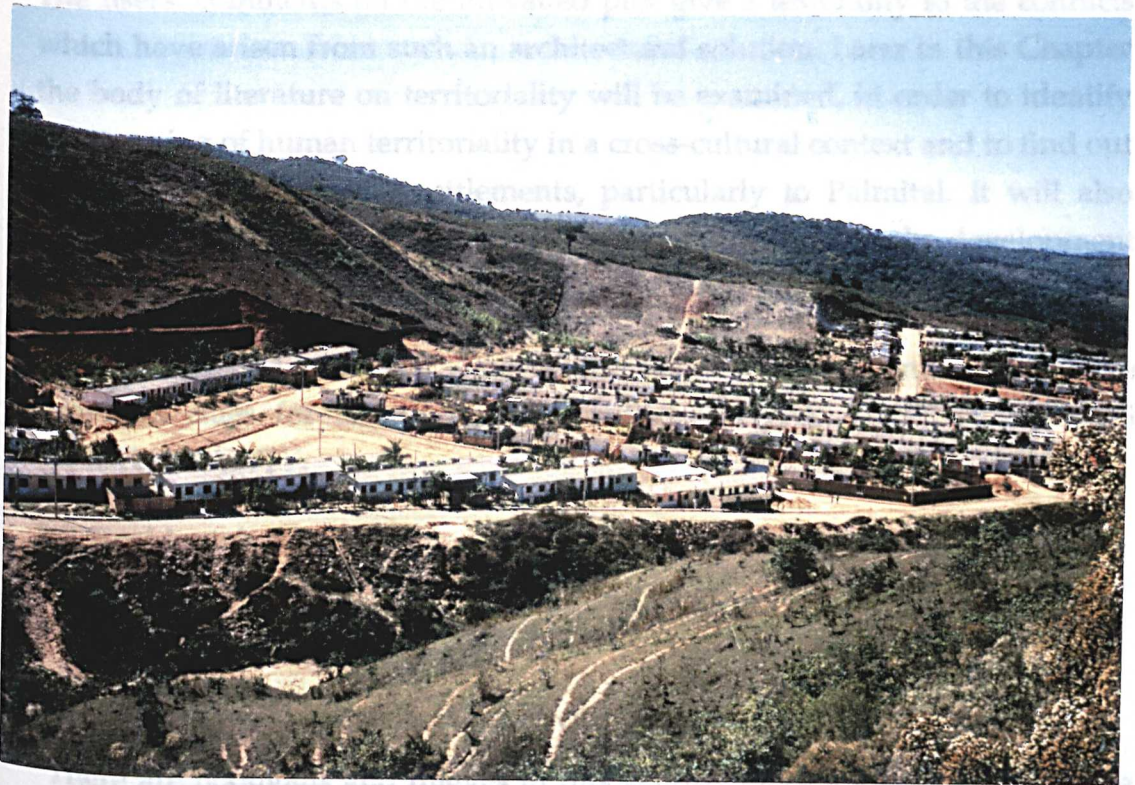
FIG. 7.3 Housing settlement in Diamantina in the Eighteenth century.

In many cases they can never build the "dream" house and the temporary occupation of the plot becomes permanent. At other times, they succeed in building the main house but keep the old one either to let to increase the family income or as a service area (including accommodation for domestic employees). There are a few cases in which the old house, called "barracio", is demolished soon after the main house is finished. In the last 15 years, due to security problems in the big cities, one finds that the front of the plot has also been walled and the decorative gate replaced by a strong thief-proof door.

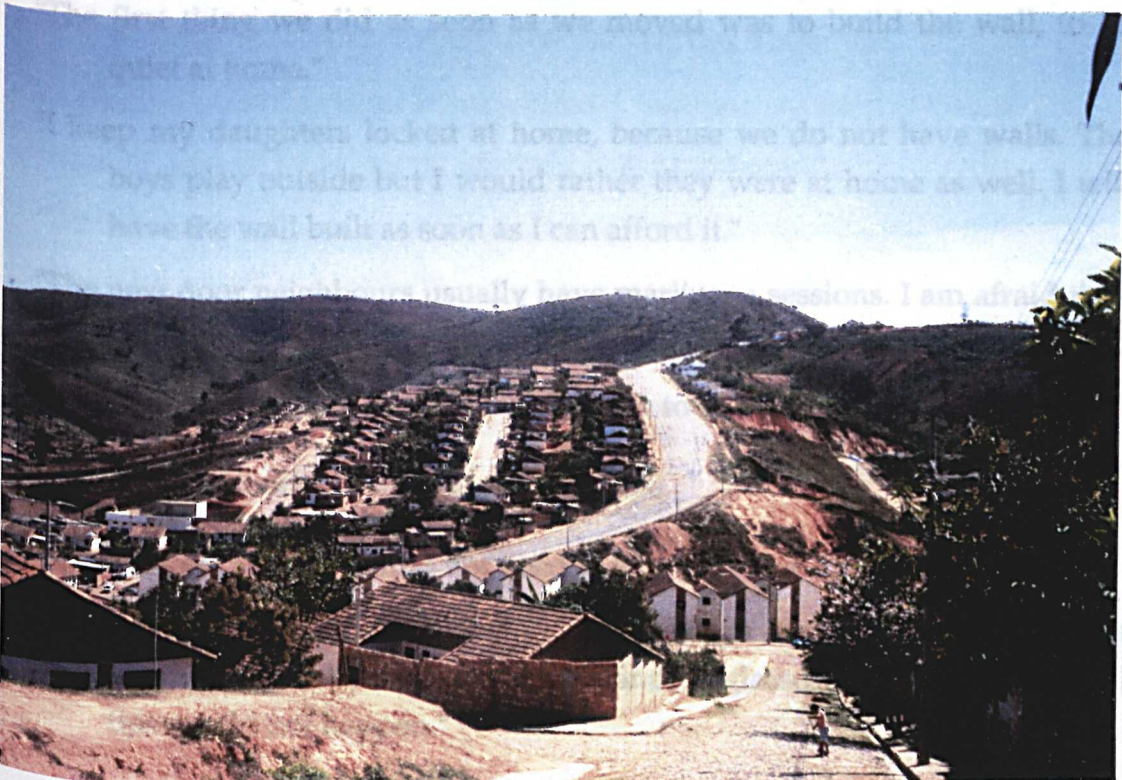
As can be seen, all traditional models present a physical barrier at the limits of the territory. Apart from its role as a barrier against crime, if there is any, the wall (or fence) stands as an important symbol of "private territory" in which certain activities can be performed in private, away from the public view. In the Brazilian culture, the concept of privacy has always been connected to the concept of being in an enclosed space (Freire, 1964, p. 247). The indigenous "Taba" (village) the "oca" (huts) are distributed in a circle, creating an interior space in which some secret ceremonies take place (Levi-Strauss, 1961, p. 235). The huts form a sort of border to delineate the tribal living space. In the "Favelas", for example, people fence their pieces of land with flattened tins, waste boards, twigs, bamboo, and anything else which can be found nearby. Such fences are so fragile that they do not give any real protection to the dwelling. Their only function seems to be to stand as a marker, an indication of the private realm. This is a symbolic rather than a protective role. Dwellers feel that once the fence is built the demarcation of the territory is set. It does not matter whether the material employed to erect the border is brick, bamboo or loose cardboard. The priority is to delineate, one way or another, the piece of land which is going to be the family's place, the home. Safety will come next, if there is enough money to spend on it.

Despite such cultural constraints, the Palmital houses have been designed to fit into unwalled plots. The photographs that follows (Fig. 7.4 and Fig. 7.5) illustrate the general layout. As can be seen from the photos, some residents had already built walls or fences by the time the pictures were taken.





**FIG. 7.4** View of Palmital - August 1986.



**FIG. 7.5** View of Palmital - August 1986.

The users' comments on the unwalled plot give a testimony to the conflicts which have arisen from such an architectural solution. Later in this Chapter the body of literature on territoriality will be examined, in order to identify the meaning of human territoriality in a cross-cultural context and to find out what applies to housing settlements, particularly to Palmital. It will also discuss to what extent the Palmital's findings contribute to the development of the subject.

The next section presents some of the resident's comments which have provided clues for identifying the conflict UNWALLED PLOT VERSUS TERRITORIALITY.

## **2.2. Residents' comments.**

### **2.2.1. Starter houses.**

"We had the wall built to hide the kitchen and the external sink."

"There are hooligans and thieves in this suburb. Once a gang came into the plot to escape from the police who were chasing them. The wall would solve these problems."

"The first thing we did as soon as we moved was to build the wall, to be quiet at home."

"I keep my daughters locked at home, because we do not have walls. The boys play outside but I would rather they were at home as well. I will have the wall built as soon as I can afford it."

"The next door neighbours usually have marijuana sessions. I am afraid they end up by coming into our plot as well."

"I want the wall because I want my children to know what home is."

### **2.2.2. One bedroomed semi-detached houses.**

"If there were a wall I would not need to look after the children all the time."

"Children from the neighbourhood are always throwing stones at the windows and therefore breaking window glasses. If there were a wall this would not happen."



"I cannot afford to build the wall. I have planted a hedge and some trees along it. When they grow they will be both visual barrier and fence to avoid people crossing through the plot to shorten the way."

"Along the plot there is a natural footpath between the front and the back street. Lots of "maconheiros" (marijuana addicts) go up and down this way. I wish I could afford at least a fence to stop them."

### 2.2.3. Two bedroomed semi-detached houses.

"We are going to build the wall because we cannot live with this situation any longer. We are very exposed to the street, the children are in danger and the washing has been stolen frequently."

"Dogs and children are always coming into the plot to make noise and spoil the plants."

"If you do not have the wall, how can you know that the property is yours?"

"We are building the wall. It is the only way to keep the children at home, safe from the streets. We have pets and they also need to be safe from being stolen."

"We have lots of robberies and hooliganism in this estate. We need a wall for protection. Besides, I want to be relaxed when at home."

"We built the wall as soon as we moved. I want my children at home!"

"Having no wall I feel like if I was anywhere but home."

"This street is very dangerous for children to play in. We have to build the wall as soon as possible."

"With the wall we built, we feel safe and free."

"We had to delimit the land to know what we could occupy, hadn't we?"

"The wall is the most important thing to assure the safety of the family."

"If I were they (COHAB) I would build the wall first. Then I would do the house."

"We are building the wall and our friends come to help us at weekends. We give them "cachaça" and "farofa"<sup>2</sup>."

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<sup>2</sup> "Cachaça" is an alcoholic drink made from sugar cane. "Farofa" is a very popular food made from tapioca flower.

"Before building the wall, it was as if my life was on a tray to be served to everybody."

"The wall is a very important thing in a house. In the case of Palmital, the wall is still more important to conceal the sink which stands at the front of the house."

"The wall is necessary to enable privacy even if you get on with your neighbours."

"We are building the wall because there are lots of thieves in this estate. We are going to put an iron fence at the front as I need to see the outside otherwise I feel suffocated."

"In this suburb nobody respects your property. The wall would solve this problem."

#### 2.2.4. Three bedroomed semi-detached houses.

"We had the plot walled to get privacy."

"I have built high walls to protect my family and my property."

"We have a wall built to hide the service area and to protect the house. At the front we put an iron fence. It suits better, doesn't it?"

"Neighbours are always gossiping and I wanted to be myself as much as I like. Then I had the wall built."

"We usually spend most time outside, at the front of the house, doing the washing and looking after the children. We had to built the wall to get privacy, hadn't we? Besides, the street is very dangerous, with lots of strangers..."

"Before we had the wall built, people used to come this way, which is shorter. You can still see the trail on the grass. Now, nobody can come into our garden."

"Now we can keep the children protected against the street."

"I need to work away from home but I cannot leave the children alone in an unwalled house."

"We built the wall because of the children. We have sold our wedding ring to do so."

"I did not feel that I was in my corner, you know? Whenever I was here I thought it could be anywhere. Then I had the fence built. It is weak but now I know what is mine, what is me!"

"The fence is weak but it would be worse without it. The house was overlooked. Now it is ok."

#### 2.2.5. Terraced houses.

"An unwallled house is a demoralized house. I want to build a wall to protect my family."

"I am afraid the children are going to be run over, in that there is no wall to keep them in."

"The house is overlooked from everywhere. If there was a wall we could stay outside as much as we like."

"Do you believe in safe places without walls?"

"There is no limit between the street and the house so we do not feel safe."

"If there were a wall the children would not fight in the street."

"I had to give up working away from home to look after the house. When I could have the wall built things became better."

#### 2.3. Figures for the territorial conflicts.

In order to provide quantitative information about the conflict which is being analysed, some figures are presented next. The chart in Fig. 7.6 shows the proportion of territorial conflicts, independently of their nature, in the diverse housing models.

As can be seen from the chart, a larger percentage of Starter House residents commented on territorial issues. In fact Starter Houses accounted for as much as 91,4% of the territorial conflicts. Terraced houses are less affected by territorial conflicts (74%). This can be explained by the fact that in this layout the front and the back of the plot are clearly defined, which may contribute to delineate the territory.

### TERRITORIALITY TERRITORIAL CONFLICTS ACCORDING TO THE DIVERSE HOUSING MODELS IN PALMITAL

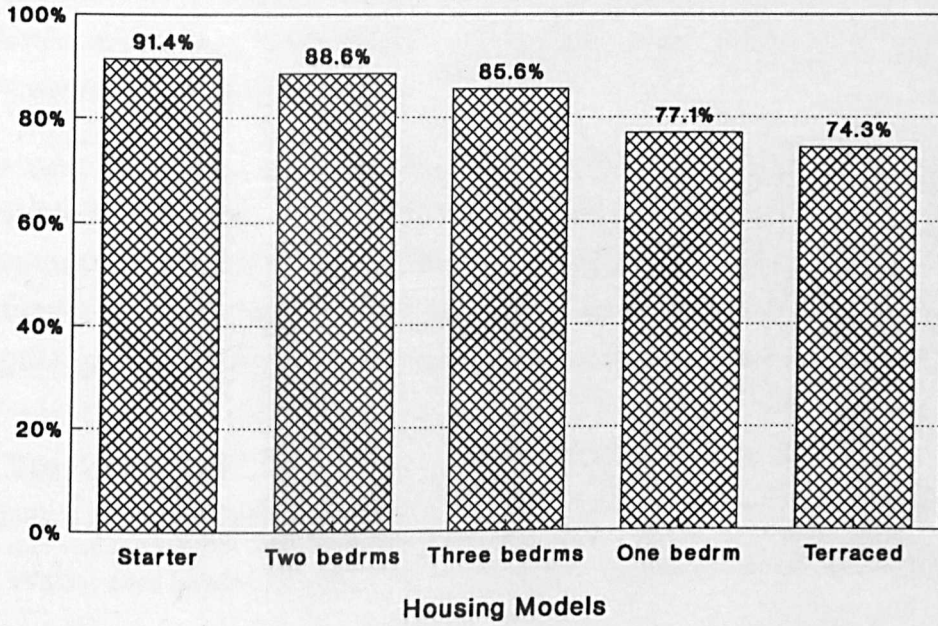


FIG. 7.6 Proportion of territorial conflicts in the diverse housing models.

### UNWALLED PLOT CONFLICTS RELATED TO TERRITORIALITY

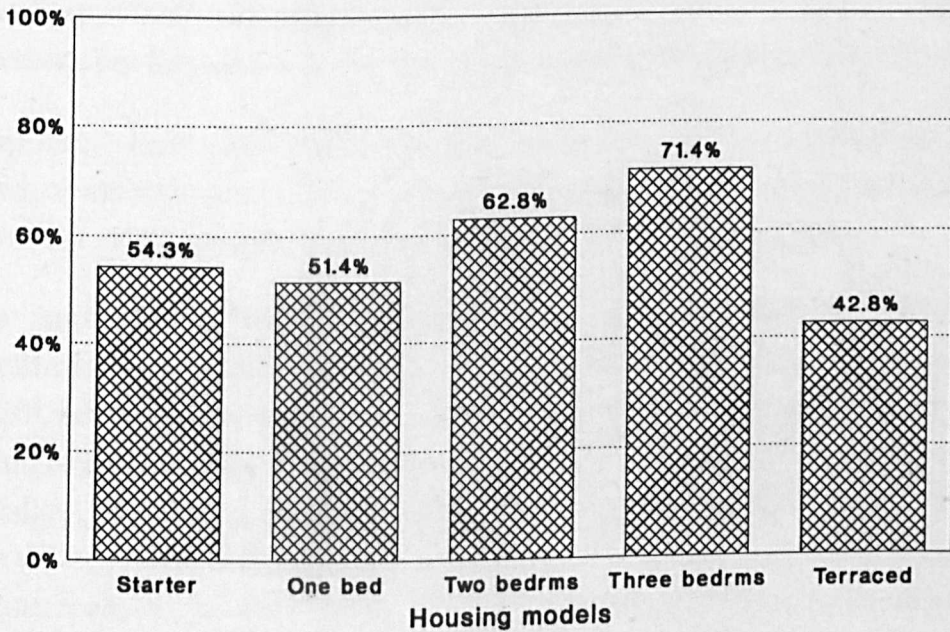


FIG. 7.7 Proportion of the conflicts with the unwalling plot in the diverse housing models.

The chart in Fig. 7.7 illustrates the proportion of conflicts with the unwalled plot in the diverse housing models. It can be observed from the chart that the three bedroomed houses dwellers are more likely to have conflicts with the lack of surrounding walls (71,4%) while terraced house dwellers account for only about 42,8% of this conflict.

The next section of this Chapter will examine the body of literature on territoriality in order to identify the meaning of human territoriality in a cross-cultural context and then find out what applies to housing settlements, particularly to Palmital. Also discussed will be the contribution that Palmital's findings bring to the development of the subject.

### 3. Territoriality.

#### 3.1. Walls, fences and edges.

The architectural conflict which is being analysed in this Chapter is related to the concept of territoriality and its interaction with privacy. As has been shown, territoriality in Palmital is revealed either by the absence of surrounding walls or the lack of doors in the doorways inside the houses. In the case of the missing walls, what is affected is the limit between the private dwelling place and public spaces. The missing doors, in turn, affect the relationship between the individual space and other spaces in the house.

Important to the understanding of this subject and its applications to the field of architecture is the contribution of scholars who have dealt with the complex relationship between man and the built environment.

The concept of **TERRITORIALITY** was first described by the English ornithologist H.E.Howard in the book "Territory in Bird Life", written in 1920<sup>3</sup>. Since then, territory has been defined as an "*area of space, whether water, earth, or air which an animal or group of animals defends as an exclusive preserve*" (Ardrey, R., 1967, p. 68). Thus, all animals which defend a particular space are called "*territorial*" and the actions that take place to defend the area are recognized as "*territorial behaviour*". This phenomenon has been studied by

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<sup>3</sup> For a full account of Territoriality see Malmberg, T., Human Territoriality (The Hague: Mouton Publishers, 1980).

many scientists who have been trying to explain the mechanisms by which territorial behaviour operates, whether in animals or in humans. However, the application of the concept of behavioural territoriality to man is rather controversial. The controversy resides in the defence issue: is human territoriality based on defence mechanisms or are there other dimensions to be considered?

Research works on human territoriality started soon after Howard's description of the phenomenon in animals, in the early sociological analyses of urban life. According to Malmberg (1980, p. 34) the pioneers in this matter seem to have been Park, R. E., Burgess, E. W., & McKenzie, R. D., with their book *"The City of Chicago"* (1925). Carrying out a sociological analysis of Chicago's urban fabric, they observed territories defined by streets or by places on a street, such that certain groups would rarely trespass into other's territory.

Irwin Altman, in his book *"The Environment and Social Behavior"* (1975, pp. 102-118), has produced a wide ranging review of the body of literature on human territorial behaviour. He dedicates two Chapters of his book to territorial issues, in which he examines the thinking of several scholars in order to establish a conceptual framework for further researches on the subject. Carrying out a definitional analysis of human territoriality, Altman goes over various definitions by sociologists, anthropologists, psychologists and architects, and groups their common points as follows:

- \* consistent references to places or geographical areas;
- \* assumption that territorial behaviour serves human needs and motives;
- \* the idea of ownership of a place and the personalization of a place by some marking device;
- \* the quality that territories have of being the domain of individuals or groups.

Eventually, Altman points out his own definition for territorial behaviour:

*"Territorial Behavior is a self/other boundary-regulation mechanism that involves personalization of or marking of a place or object and communication that it is "owned" by a person or group. Personalization and ownership are designed to regulate social interaction and to help satisfy various social and physical motives. Defence responses may*

*sometimes occur when territorial boundaries are violated." (Altman, 1975, p. 107)*

In this definition two territorial mechanisms are stressed: *PERSONALIZATION* and *DEFENCE*. However, it is important to observe that Altman recognizes *PERSONALIZATION* as a constant while taking *DEFENCE* as a variable depending on possible violation of boundaries.

Personalization seems to be highly necessary for the individual's self identity as well as strongly related to the idea of ownership. It has, to some extent, a feeling of possessiveness about objects, spaces and even ideas. The mechanisms that define personalization can be activated through diverse elements, depending on which is to be personalized. These elements act as markers - or symbols - to display appropriate clues so as to disclose not only ownership but the owner's life-style as well. For example, in the built environment, ownership markers - i.e., the symbols employed to show that a certain space is one's territory - may also indicate the position the owner occupies in the social hierarchy. The iron gates of Brazilian Nineteenth century mansion houses (Vasconcellos, 1965), used to have an inscription stating not only who was the owner of the place but the owner's title as well: "Esta casa pertence a Joao da Silva, Coronel da Guarda Nacional."<sup>4</sup> When the owner is both poor and unimportant, he does not have anything to show but his subjective qualities, so he may hang a piece of wood somewhere on the fence, which states something like: "Casa da Felicidade" (House of happiness), "Vila generosa" (Villa of generosity), "Recanto do amor" (Lovers' corner), etc.

The defence mechanism in man works in a different way to what it does in animals, since man uses symbolic dimensions that obviously do not appear with animals. The maintenance of territorial integrity is only fundamental to assure ownership and individual identity and these are social constraints. Thus, peripheral markings such as fences, gates, surrounding walls and so on - apart from being protective - play an important communicational role.

The defence mechanism in man is addressed to some subjective aspects as well, in that territories can be defended against both physical or visual

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<sup>4</sup> This house belongs to Joao da Silva, Colonel of the National Guard.



intrusion. Physical intrusions occur when one crosses the territorial limits in order to get into another's place. Visual intrusions do not imply in the intruder's physical presence: it is just the act of overlooking other's place. Thus, defence mechanisms may have a double characteristic: they may function whether as actual barriers to prevent intruders to come in (as walls and fences), or as simple visual obstacles to assure privacy (as curtains). Peripheral markings, apart from standing as defence mechanisms, can display "personalization", depending on the features they possess. In diverse cultural milieu, the front of the property, for example, generally receives an aesthetic treatment which is extremely meaningful, independent of the owner's social or economical status. However, it is not only private properties that are endowed with territorial markers. All territories of everyday life have markers. According to Altman they comprise three types:-

- \* Primary territories, which are owned and used exclusively by individuals or groups and are controlled on a relatively permanent basis, and are central to the day-to-day lives of the occupants. Kitchens, bedrooms, and homes are typical primary territories: kitchens are primary for housewives; bedrooms for their permanent occupants; homes for their dwellers.
- \* Secondaries territories, which are less central and exclusive. They function has a bridge between the primary and public ones. This semi-public quality leads to unclear rules regarding their use and to the consequent predisposing to social conflict. For instance, a building entrance hall or a non-fenced private garden.
- \* Public territories which are open to all, at least officially. In urban terms, they constitute the public realm.

Each type of territory is defined by markers that help both to define the boundaries of individual or groups thus preventing physical and visual violation, and regulating social interaction in order to assure privacy. The most common markers are walls, fences, shrubs, curtains, pieces of furniture, colours, notice boards and the like.

Amongst architects it is Oscar Newman (1973) who has produced the most interesting and controversial work incorporating the concept of territoriality as a defence mechanisms in his book entitled "Defensible Space". In essence his study documents the fact that certain configurations of housing have a higher incidence of crime than other configurations. This evidence induced

Newman to interpret the idea of territorial defence as just a counterpart of crime. In fact it seems questionable whether one should reduce the whole issue to a single dimension. Besides, such a view leads to the belief that design can and must be used to achieve social order and control, which is extremely controversial (Hillier, W., 1973). However, Newman's work has outstanding points that deserve to be taken into consideration. One is the recognition that the single-family house is the traditional statement of territorial claim. Newman says

*"By its very nature, the single-family house is its own statement of territorial claim. It has defined ownership by the very act of its positioning on an integral piece of land buffered from neighbour and public street by intervening grounds. At times the buffer is reinforced by symbolic shrubs or fences, and in other cultures by high walls and gates." (Newman, 1973, p. 61)*

Another point made by Newman is that crime is also spatially related, i.e., the general spatial configuration - whether of the urban settlement or the edifice - may influence criminal events. Finally, his fieldwork proves that people on low incomes are just as concerned about territoriality as middle and upper-middle classes. Starting from this standpoint, he tries to establish the basic principles for preventing crime through design, by creating mechanisms which could be employed to break down high-density residential agglomerations into territorial and identifiable sub-units.

Many other scholars have explicitly or implicitly discussed human territoriality in their works. Rapoport, A. (1969, p. 85), Porteous, D. J. (1977, p. 23), and Michelson, W. (1970, p. 47) are among those who have considered this concept in their works and contributed to the understanding of the theme. Malmberg, T. (1980) has treated this subject as well, and dedicated a whole book to an extensive discussion of territorial behaviour whether in men or animals. The reason for the emphasis here on Altman's (1975) concepts lies in the fact that his approach is fairly comprehensive, as far as the conceptual framework of this thesis is concerned.

#### 4. Conclusions on territoriality.

The absence of surrounding walls and internal doors has revealed many manifestations of territorial behaviour among Palmital residents. Some of them are related to very objective factors such as mechanisms of defence, but others are associated with subjective factors such as personalization and intimacy. In the case of the missing walls, it can also be noticed that, behind the comments on problems of safety against crime and privacy, there can be found a deep feeling of being unprotected against the dangers of the profane world, in contrast with the security and peace of the sacred home (Eliade, 1961). Perhaps this is the most interesting point revealed by the analysis of territoriality in Palmital. Having no fences and walls means having no delineation between the two realms and no difference between safe and unsafe places, whether from the objective point of view or from the psychological one. The absence of physical barriers between the sacred and the profane have brought confusion to people's mind; they are afraid of not knowing how to behave properly and, what is even worse, they fear that anybody else will know as well. Thus they start thinking they will be robbed, attacked and raped by the devils of the profane realm, as it were. They are concerned that their children will not learn to distinguish between the protective and peaceful place - the home - and the threatening and dangerous place - the street. "No wall, no moral", "Unfenced house is the same as an indefensible house", "House without walls are demoralized houses"; these statements are users' comments on missing walls. They show that, in the users' mind, the absence of territorial clues to elicit appropriate responses makes the territory indefensible, because it is vulnerable to intruders, and demoralized as it is deprived of symbols. The unprotected territory has not got privacy since it is exposed instead of enclosed. It is like a tray on which people think they are being offered for consumption.

*"I did not feel that I was in my corner, you know? Whenever I was here I thought it could be anywhere. Then I had the fence built. It is weak but now I know what is mine, what is me!" (Residents' comments, Chapter 7, items 2.2.3)*

Note that this dramatic comment reveals the need for markers and symbolic references rather than a real demand for protection: living without

surrounding walls seems to be the same as being unsheltered and "lost in the world". The fence has enabled the property to be defined and the identity recovered. What is striking in almost all comments on safety and security is that they are frequently based on presumptions. Only a few residents admitted, or produced evidence, that they had already been robbed or threatened by hooligans, drug addicts and the like. During the survey there was never any sign of urban violence and drug use in the suburb (at least in terms of Brazilian parameters). The allegation that it is dangerous for children to go out because of the traffic is unconvincing as well, since the traffic levels in the area seem to be insignificant; residents are too poor to have a car and there is no highway in the estate, since Palmital is in the middle of nowhere<sup>5</sup>.

Summing up, the dissatisfaction with the absence of surrounding walls is evident and is not necessarily connected to real motives. Most people had already built a wall by the time the survey was carried out. Those who had not built some sort of border yet, stressed that it would be the first thing they would do when they had the money. Thus, it can be concluded that demarcating the territory in order to personalize, protect and defend it, is a fundamental requirement to be accomplished in housing plans for people on low incomes in Brazil. The type and dimensions of the barrier will depend on the local constraints. The next photographs illustrate the diverse types of borders that Palmital's residents have built so far. Fig. 7.8 shows a fragile fence built from twigs and wire.

Fig. 7.9 is a photo of terraced houses showing two types of borders that have been built side by side: a low wall on the edge of the extended veranda, with no defensible role and a 2.10m high brick wall with a strong iron gate, clearly displaying defensible purposes. Fig. 7.10 shows an example of modifications to terraced houses. It can be observed that the owner has modified the facade but has maintained the fence, made from twigs and wire. In the same photo, the neighbouring house shows a surrounding wall made from concrete blocks. The photo in the Fig. 7.11 also illustrates two types of border. The first from the left is rather precarious while the second one has been designed to expose the facade, which in turn has been modified (note the window shape). The third house is still unwalled.

<sup>5</sup> In the fieldwork, surveyors noticed that only their cars were running in the estate during the research time.





FIG. 7.8 Fence built from twigs and wire in a starter house in Palmital. Photo: March 1991



FIG. 7.9 Example of defensible and non defensible borders that residents have built in terraced houses in Palmital. Photo: March 1991



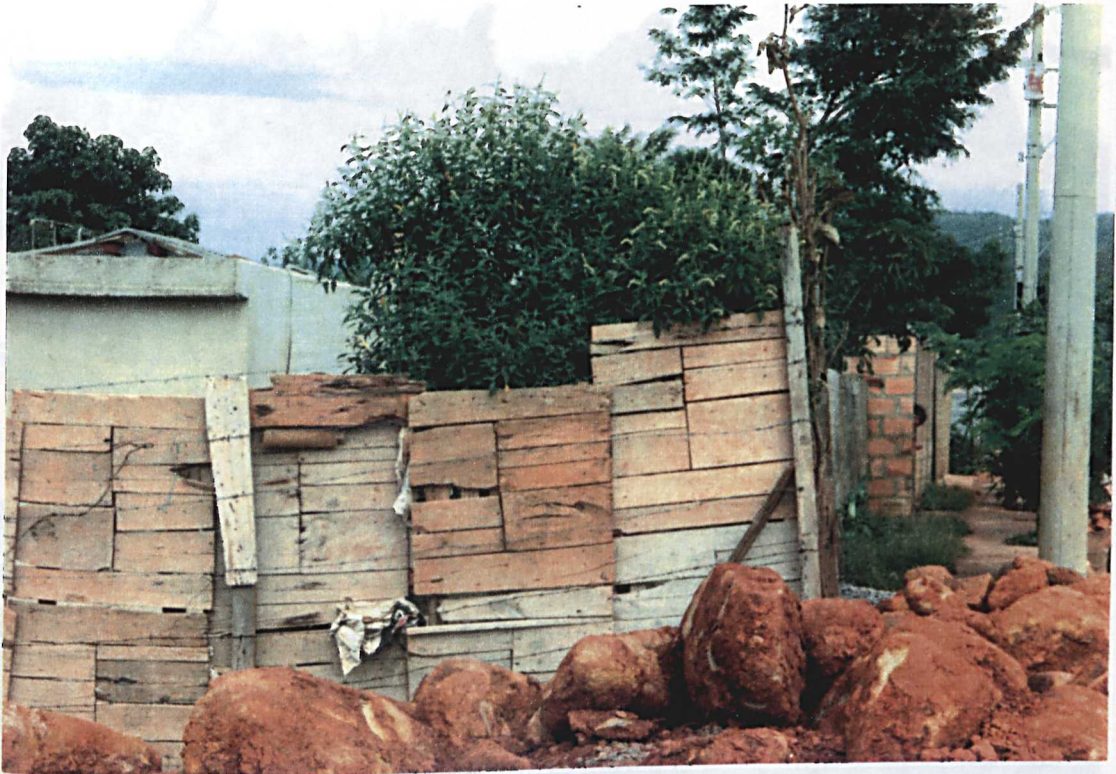


FIG. 7.11 Example of borders that residents have built in semi-detached houses in  
FIG. 7.10 Temporary borders and wall of concrete block built in terraced houses in  
Palmital. Photo: March 1991





**FIG. 7.11** Example of borders that residents have built in semi-detached houses in Palmital. Photo: March 1991



# CHAPTER EIGHT

*Analysis of the Conflicts  
Related to Privacy*

# ANALYSIS OF THE CONFLICTS RELATED TO PRIVACY

## 1. Introduction.

The SPACE READINGS of Palmital's residential units have identified four architectural situations that provoke conflicts which are directly related to the need for privacy:-

- \* The service area in the open and at the front of the plot.
- \* The wash-basin placed outside the bathroom.
- \* Semi-detached houses without adequate acoustic insulation from each other.

The analysis of this group of conflicts is carried out in the following way: first, each conflict is described and the comments that contributed to its identification are listed; second, the figures about the conflict are discussed; third, some illustrations of the modifications that users introduced to their houses to overcome the conflict are presented and discussed; fourth, the concept of privacy is examined in a cross-cultural approach; and finally, the conclusions are presented.

The next section deals with the first conflict to be analysed in this Chapter, which is:

## 2. Service area and sink in the open and at the front of the house versus aesthetic sense and privacy.

### 2.1. Description of the conflict.

As can be seen from the illustrations in the Chapter 5, section 2.3, in all typologies, except the terraced houses, the kitchen and the washing area are placed at the front of the lot, which is entirely out of character with the traditional Brazilian way of distributing the several domestic functions in space. In addition, the service area is in the open, totally unprotected against weather conditions. The photographs in Fig. 8.1 and Fig. 8.2 show an example of this layout.





**FIG. 8.1** One-bedroom semi-detached house in Palmital with the service area and the sink at the front of the house.



**FIG. 8.2** Housewife doing the washing in the sun.

In Brazil, the spatial organization of dwellings follows some of the principles that were introduced from Europe by the Portuguese (Freire, 1964; 1968) and have been incorporated in vernacular architecture since then. The social area (sitting room, living room, lounge, etc.) is placed at the front of the house. The bedrooms come next, with the windows opening out into the sides of the plot. If the house is built on two floors, the bedrooms are located upstairs and the windows open onto either the front garden or the pavement. The kitchen and the laundering area are placed at the rear and are accessed through the back yard. The next diagram (Fig. 8.3) shows these alternatives of organization:

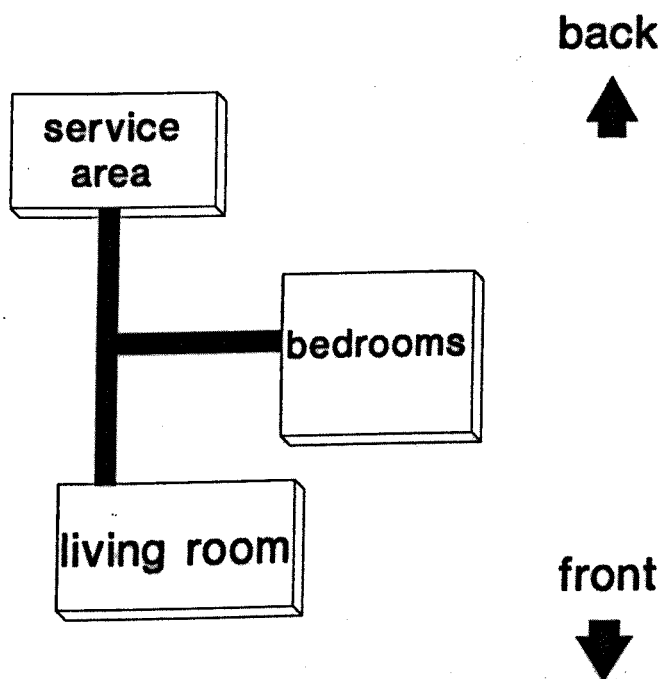


FIG. 8.3 Diagram of the spatial organization of the traditional Brazilian dwelling.

This diagram is employed in all regions throughout the country, independent of the size of house or the social status of the dweller. Even in the "favelas", in the poorest shack, this type of spatial organization can be identified, although in a simplified form, as shown in the next diagram.

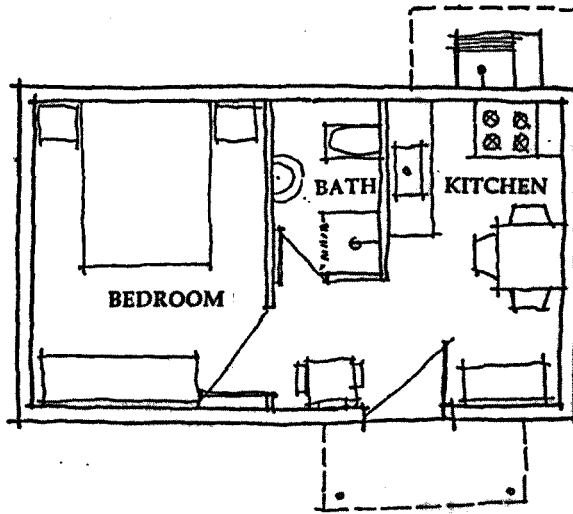


FIG. 8.4 Diagram of the spatial organization of a "favela" dwelling.

The next illustrations show some plans and photos of urban houses in Belo Horizonte dating from the beginning of this century. These illustrations were taken from MOURA, M.P. (1951) *Documentário Arquitetônico 5 - Primeiras Casas de Belo Horizonte* (Architectural Report 5 - The First Belo Horizonte Houses). Belo Horizonte: Escola de Arquitetura.

Fig. 8.5 presents a typical middle-class detached house. In this example the social area is placed at the front and the veranda is the transition between the private and the public realms. The bedrooms open on both sides and the kitchen and bathroom are located at the back.



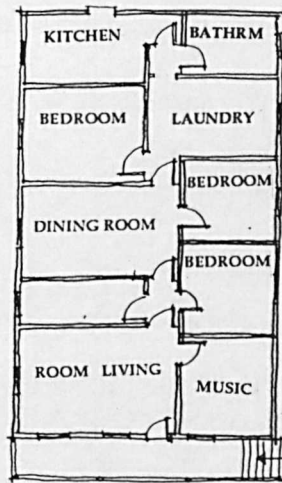


FIG. 8.5 Photo and plan of a middle-class detached house in Belo Horizonte dating from the beginning of the century.



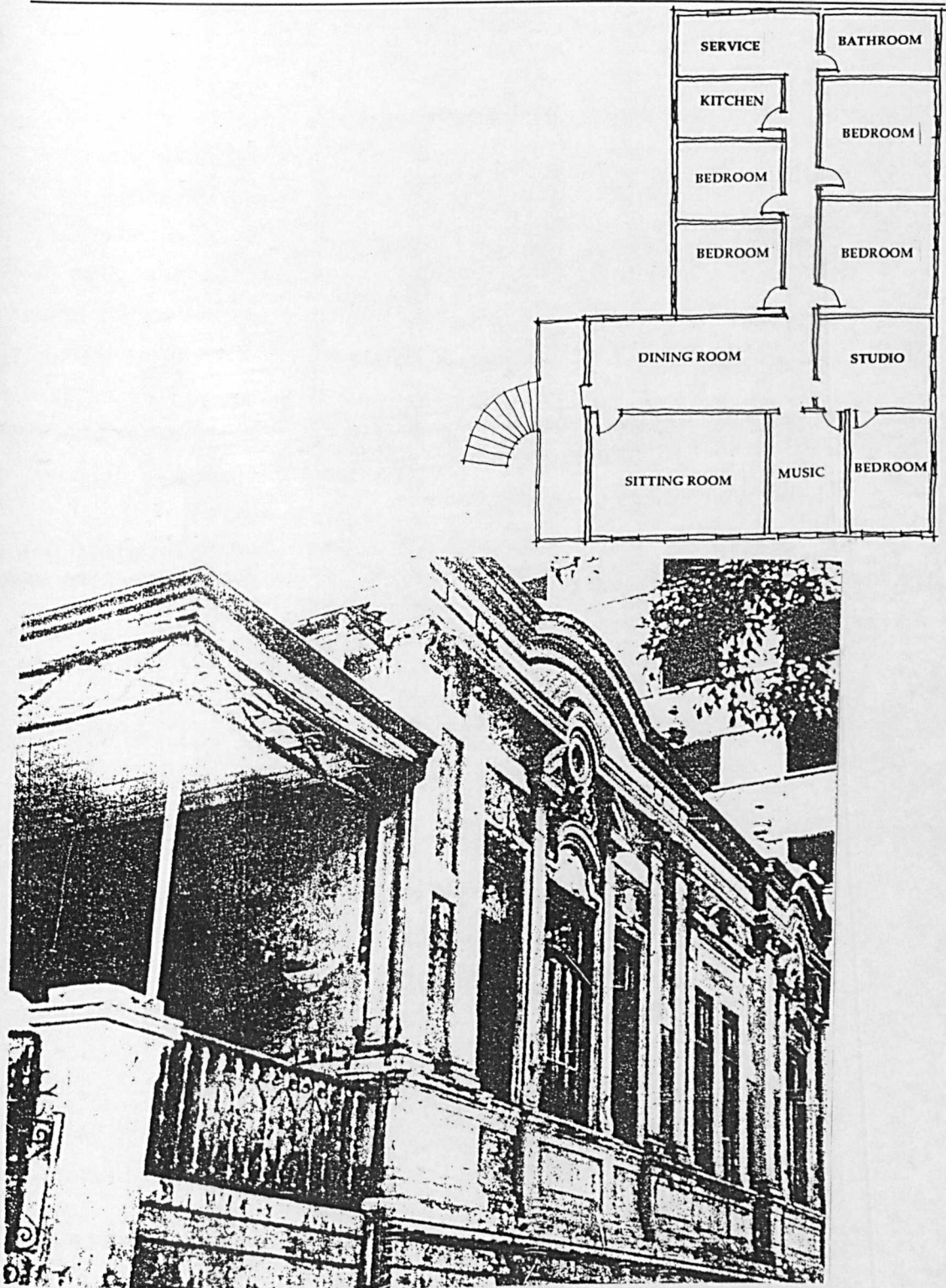


FIG. 8.6 Photo and plan of a middle-class detached house in Belo Horizonte dating from 1897.

In this house, the distribution of spaces also follows the diagram which has been mentioned before. Now the veranda is on the side and the house fronts onto the pavement.

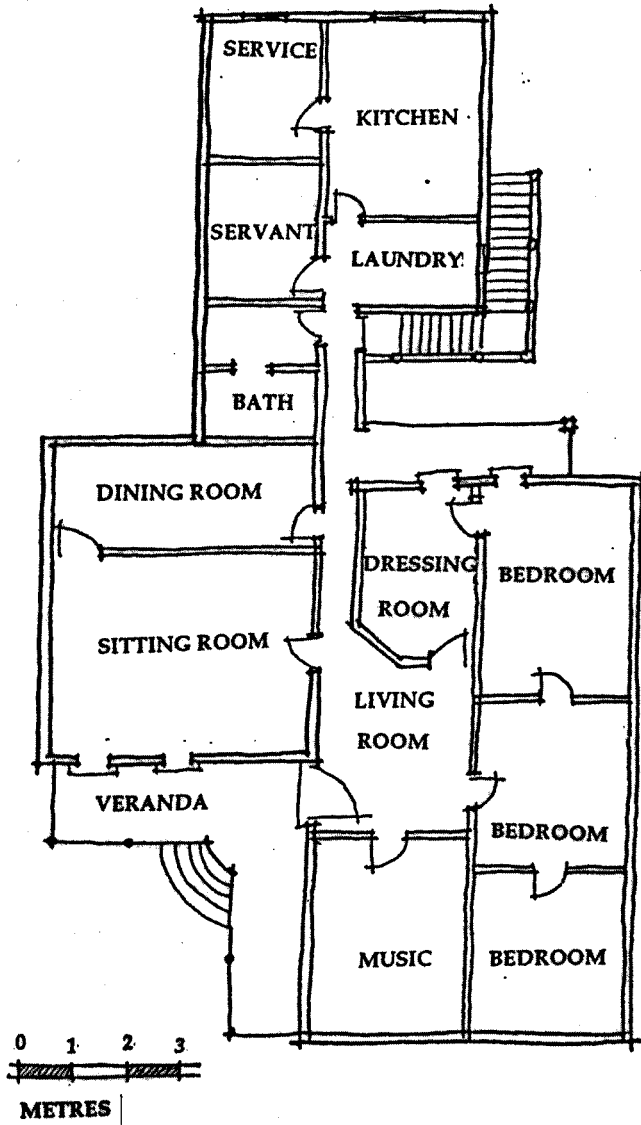


FIG. 8.7 Plan of an upper middle-class detached house in Belo Horizonte, dating from 1926.

As this house is for upper middle-class people, the service area, besides being at the back, is almost detached from the rest of the house.

As can be seen from these examples, regardless the social status, the location of the service area defines the back yard of any residence in Brazil, whether in "favelas" or in urban houses. This is because the service area is not to be exposed, since it is the place for doing the washing. "*Dirty linen should be washed at home*" means that private matters should not be discussed in front of other people, is a popular saying that clearly expresses the feeling that one needs privacy to do the washing. When one analyses the plans of Palmital's houses at first sight, it becomes clear that such an architectural solution for the location of the service area was based only on the supposition that it would save money on the sewage system, ignoring any other constraint - whether cultural or technical - that could be related to the matter.

There is another aspect to be considered in this conflict in the houses at Palmital. Despite the service area being at the front of the house next to the street, it is also open to the elements and totally unprotected from adverse weather conditions.

In traditional Brazilian residential architecture the service area, besides being placed at the back of the house, is always sheltered, as can be observed in figures 8.4, 8.5, 8.6 and 8.7. It is called a "service area" because it is the place where household chores such as washing and ironing are performed. It is also the place where brushes, brooms, mops, buckets and cleaning products are kept. Among families on low income, the service area is one of the busiest places in the house. This is because of two main reasons. The first one is that most of housewives are washers, i.e., they complement the family income by doing the washing for middle class families<sup>1</sup>. To be a washer does not demand special skills and the job can be done at home while looking after the children. The second one is that children are always playing outdoors, so that clothes get dirty very easily either because of the dust in the dry season, or because of the mud in the wet season. As they have few clothes to wear, the mother has to wash their clothes on a daily basis.

As families on low incomes cannot afford washing machines and use the sink to do the washing, Palmital's residents have to do the washing and working either in the rain or under the hot sun. As the hot summer is the

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<sup>1</sup>Data collected in the sample surveyed reveal that 68% of the housewives used to be washers before they moved to Palmital. Although most of them lost their clients because of the distance between Palmital and Belo Horizonte, some of them managed to keep their customers (about 17%).

longest season, doing the washing wearing ordinary clothes is almost unbearable and housewives generally wear bathing costumes instead. In Palmital, the service area is not only in the open but is also placed at the front of the house. As a consequence, housewives cannot do their job in shorts without being "on show", as it were. On the other hand, as has already been mentioned the cultural pattern determines that washing is something to be concealed, to be performed in secrecy. Thus, the whole situation is a major source of conflict, whether between the need for privacy to perform some household chores versus the compulsory public exposure of the service area, or between adequate working conditions versus the open service area.

The next section gives an account of the comments that emerged from the "Space Readings" of Palmital's residential units, which led to the identification of the conflict between the position of the service area at the front of the house and the user's aesthetic sense and need for privacy to do housework.

## 2.2. Residents' comments.

### 2.2.1. Starter houses.

Twenty five out of thirty five Readings of Starter Houses have registered comments on this issue, which represents 74% of the sample surveyed. Some of these comments are listed below.

"I wish I could move the sink to the rear and do the laundering without being in view of people outside the house."

"It is not so badly placed but it is so odd like that..."

"Apart from being odd, it is very uncomfortable to do the laundering while people are passing by and looking at you doing that, isn't it? If I am on show I can't be as comfortable as I like."

"Kitchen and sink have to be placed at the rear. At the front of the house they are very odd. They should not do that!"

"I have never seen this before, sink at the front of the house. This facade looks like if it were the rear, isn't it? I can't get used to it. When I can afford to move it, I'll do it."

"Have you ever seen such a thing? Kitchen and washing area should be placed at the rear. What do they think we are? Nobody likes showing themselves doing the washing. I'll do up this house as soon as I can afford it."

"I don't like to be on show. I would prefer to do these things on my own."

"We had to make a small shelter above the sink, to be able to do the washing when it rained. We've put these cardboards in the fence to cut off the view."

"We've built a shelter with flat tins, pieces of tiles and everything else we were able to gather up. You know, we've got to do our job dressed up, because of the sink is straight near the street!"

"I wish I had money to build a shelter to protect this sink and a wall to enclose it."

"Have you noticed the shelter we've made from twigs and plastic bags? We've planted these banana trees alongside the fence, to cut off the view."

### 2.2.2. One bedroomed semi-detached houses.

80% of the residents in this model (28 residents in the sample) addressed comments on the unsheltered service area at the front of the house. Here there are some expressive comments:

"I would prefer the sink at the back."

"The sink and kitchen at the front are very ugly. I wish the sitting room were opened out to the front instead."

"The sink should be at the back. People passing by can see you at work."

"We haven't built a shelter here because we are thinking about moving the service area to the back, as it should have been from the beginning."

"There should be a veranda at the front and the laundering area should be at the rear."

"We've built this provisional shelter for the sink. I hope it lasts by the time we will have built an extension to the kitchen and a new service area at the back of the house."

"We haven't built a shelter here because we are thinking about moving the service area to the back, as it should have been from the beginning."

"This provisional shelter is working... at least I got some relief in this sweaty job. (Talking while washing.) When those bushes grow up I'll be able to do the wash in bathing suit."

### 2.2.3 Two bedroomed houses.

Twenty one people living in this model, which represents 60% of the model readings, commented on the service area placed at the front, as follows:

"The sink placed at the front of the house is nonsense, is ridiculous."

"I can't get used to this situation. Moreover, the fitted sink was of such a bad quality that it broke and we had to have it replaced, then we chose another brand."

"I wish I could do the laundering wearing slight clothes, you know, I would like to be at ease."

"How can I stay by my own doing the wash if all people passing by will look at me?"

"The correct place for the sink is at the back. I hate to be overlooked when I am doing the laundering."

"I do the laundering here and hang the washing out to dry in the back yard. You see, it is a lot of trouble to take away the washing in a bucket, but it would be worse if I hanged it in front of the house, wouldn't it?"

"We've modified the house and moved the sink to the back. We spent a lot of money on doing it up but it was worth it: now I can do the washing without being overlooked."

"I can't understand why did they put the sink at the front. It looks as if the house were the wrong way round, isn't it? There is another problem: how can I water the vegetable garden at the back, if there is only one tap which is fitted in the sink, far away?"

"I don't feel comfortable doing the laundering in front of people's view. When I have money I'll move the sink to the back yard. This is the first thing I'll do."

"I don't feel as much as I like doing the laundering on show."



"I wonder if they made a mistake and put the house the wrong way round?"

"First I thought they had made a mistake and built the house the wrong way round. Then I was told that they put it in this way to save money. Was it worth it? How much do you think they saved? I would like to know about that."

"There are two problems with this sink: it is ugly and we don't have privacy doing the laundering."

"We had the service area covered. It looks like a veranda now."

"They've done this unsheltered sink because they know that is the woman who does the wash. If men had to do the wash under the hot sun it would be different. My husband has spent a lot of money repairing this house. Is it worth it?"

"We had to make a shelter to protect the service area. As a consequence both the bathroom and kitchen got dark. You know, it is very hard to get right what has been wrong from the beginning."

"This shelter we've built in fiber-cement is not very comfortable, actually, but it is better than to work under the hot sun..."

"We don't have any shadow outside. I'll build a shelter for the service area as soon as possible. I've already bought the material."

"I've built this shelter to get rid of the sun. It is a provisional one."

"I can no longer do the wash in the open, under the sun. I have a headache because of that. I have taken a barrel to the back yard and I've done the wash there. The problem is the mud, since there is no sewer in there."

#### 2.2.4 Three bedroomed semi-detached houses.

Twenty nine out of 35 houses surveyed have addressed comments on the service area at the front, which represents 83% of the sample model. Some of the comments are listed below:

"The kitchen and the service area should be at the back of the house. I've built an extension at the rear, to use as a kitchen, and a shelter for the sink."

"As the house is on the corner we've changed the whole arrangement: the entrance has been moved to the other street, to the veranda we'd built there. The old entrance has been walled and used as a service area."

"Of course I've moved the service area to the back, to a sheltered place! I think that the facade should be for the entrance only, I'll build a veranda where it used to be the sink."

"I can't understand why those people put the house the other way round. The service area should be sheltered and at the back, in its traditional place. How can I be relaxed doing the wash on show?"

"I've extended the roof and moved the service area to the back because my wife had neither privacy no comfort to do her job."

"I've built a provisional service area at the back, to get more privacy.(He built a small shelter under which he put two barrels and buckets for the wash.)"

"This sink at the front of the house is appalling. I'm going to build another service area, a sort of "private" veranda at the back. After doing that, I'll install the kitchen in the larger room, which is stuck together with the neighbours' bedroom. Then I'll open the kitchen (the new one) to the veranda. What do you think about all that?"

"Have you noticed some works at the back? We are building an extension to use as a service area, because we're going to move the kitchen to the back room. We don't like to be looked at when we are doing the houseworks! "

"My husband doesn't want to help me in the kitchen. He said that is because who is passing by will laugh at him. At least this is his excuse..."

"We've moved the sink to the back to get more privacy as well as to watch the children, as they play in the back yard. We've built a small shelter there."

"I've never lived in a house which had the service area at the front of the plot, right near the street, completely on show!"

"I've built an extension at the rear, to use as kitchen, and a shelter for the sink."

"The old entrance has been walled and used as a service area."

"Of course I've moved the service area to the back, to a sheltered place!"

"I've extended the roof and moved the service area to the back because my wife had neither privacy nor comfort to do her job."

"I'm going to build another service area, a sort of "private" veranda at the back."

"We've walled the front of the plot to hide the sink. My wife stopped complaining now..."

"The service area should be sheltered and at the back, in its traditional place."

### 2.2.5. Terraced houses.

No comments. In this model, the service area has been placed at the back of the plot.

### 2.3. Figures for the conflict.

A quantitative assessment of the conflicts that Palmital residents have with the service area at the front part of the house can be seen in Fig. 8.8

## SERVICE AREA AT THE FRONT OF THE HOUSE

### CONFLICTS RELATED TO PRIVACY

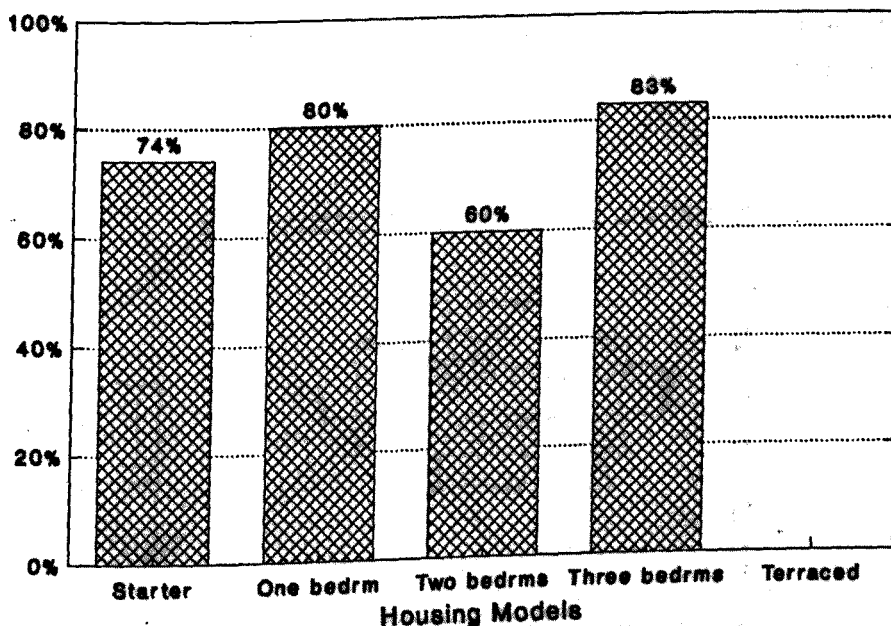


FIG. 8.8 Proportions of conflicts related to the service area located at the front of the house, according to the diverse housing models.

As can be seen from the chart, the two bedroomed model is less affected by these conflicts, despite it accounting for as much as 60% of the two bedroomed houses surveyed. The reason seems to reside in the fact that this model has been located in a very quiet area, with little traffic. Thus, privacy for doing the washing straight near the street is not as affected as in the other areas of the settlement. The three bedroomed houses are the most sensitive to the conflict, since they accounted for 83%. The terraced houses do not have the service area at the front so that the conflict does not appear in this model.

The next section deals with the conflict that residents have with the wash-basin placed outside the bathroom, their need for privacy and for keeping the house clean.

### 3. Wash-basin outside the bathroom versus privacy and cleaning requirements.

#### 3.1. Description of the conflict.

As can be observed in the drawings of Palmital housing models in Chapter 5, section 2.3, the wash-basin is placed outside the bathroom. This solution is unusual in Brazilian residential architecture. What used to be very common, until thirty years ago, was to provide the dining room with a supplementary wash-basin, due to the custom (particularly amongst the Brazilian middle classes) of washing ones hands before eating. This solution is illustrated in the next figure.

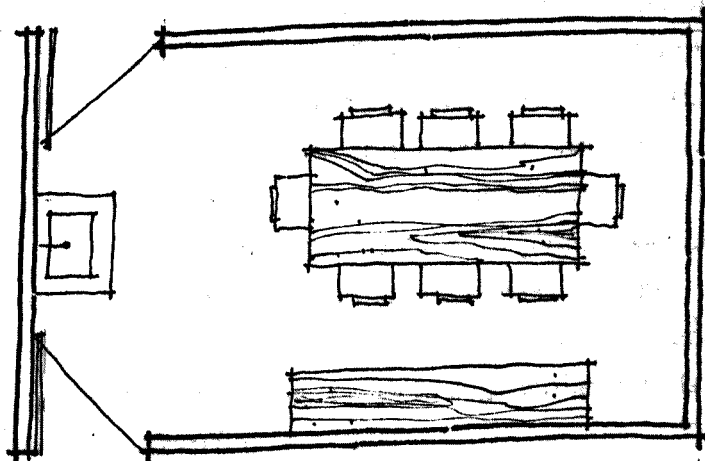


FIG. 8.9 Lay-out of a traditional Brazilian middle class dining room.

Nowadays the wash-basin has been replaced by the toilet for visitors, which is generally placed in the social area in the upper middle-class flats and houses, as shown in the next illustration:

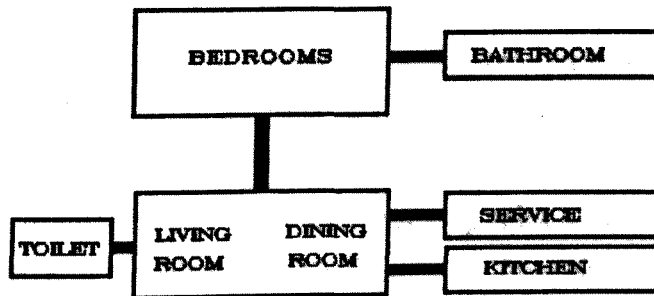


FIG. 8.10 Diagram of the plan for a Brazilian modern flat.

The wash-basin placed outside the bathroom of Palmital houses has not the same function as those found either in the middle class or upper middle-class residential architecture, since it is for all purposes the only wash-basin that is provided. It stands just outside the bathroom door in such a way that it can easily be overlooked from everywhere else in the house, particularly from the living room. Thus it provides no privacy at all for personal washing. Besides, as it is too small for personal hygiene, water splashes on the floor below, which causes a mess. The wooden floor is not waterproof and is rotting away in this area. The water also splashes on the wall, which is not properly designed to be wet and becomes affected with mould growth. Summing up, to place the wash-basin outside the bathroom has caused two conflicts: the first is related to the cultural pattern of undertaking personal hygiene in privacy; the second is provoked by the trouble that such a solution brings to houseworks like cleaning and maintenance. The former is related to the phenomenon of *privacy* while the latter is due to the phenomenon of *identity*.

The next section presents some of the comments related to the location of the wash-basin which contribute to the identification of the conflict.

### 3.2. User's comments.

#### 3.2.1. Starter houses.

In this model, residents of twelve houses out of 35 surveyed, which represents 34% of the total, addressed comments to the wash-basin outside the bathroom, as listed below:-

"The wash-basin outside the bathroom takes up a lot of space in the corridor. Besides, it is impossible to keep the floor clean and dry."

"The wash-basin inside the bathroom is more practical ... more... you know?"

"What I'd like is to get into the bathroom and to come out ready to go to work. When I am getting ready I don't like people watching me."

"I had the wash-basin moved to the bathroom. The floor used to get wet and slippery. It was dirty and dangerous."

"We had the wash-basin moved to inside the bathroom. Nobody needs to see you wash, do they?"

#### 3.2.2. One bedroomed semi-detached house.

Four residents, i.e., 11% of the sample surveyed in this model, made a comment on this issue. Two examples have been selected:-

"We've fitted the wash-basin where it should be from the beginning, in the bathroom."

"I can't cope with the wash-basin being outside the bathroom. I'll move it in, as soon as possible."

#### 3.2.3. Two bedroomed semi-detached houses.

Thirteen people (35%) out of 35 in this model commented on the location of the wash-basin, as follows:

"Have you ever seen such an odd wash-basin?"

"The wash-basin outside the bathroom is neither practical nor aesthetic. Nobody likes being looked at while they're washing."



"The floor is always wet and slippery. Besides, we can't wash when there are visitors in the sitting-room because this wash-basin is right near it."

"The wash-basin in the bathroom is much more practical. I wonder why they put it in the corridor?"

"Why did they decide to put the wash-basin in the corridor? This must have been a misunderstanding!"

"I wonder if they think that people on a low income are less intelligent than other people. Why is the wash-basin in the corridor?"

"Why have they put this thing (wash-basin) in the corridor. It should be in the bathroom, shouldn't it?"

"The wash-basin leaks and soaks the floor. It should be in the bathroom."

"I've never seen this before: the bathroom in the middle of the house!"

"The bathroom should be away from the sitting room, with the wash-basin inside it."

"It is very odd to have a wash-basin outside the bathroom. I've never seen this before!"

"It is awful to have the wash-basin outside the bathroom and it is hard to keep the floor underneath it dry and clean."

"Children splash water on the floor when they wash their hands. Is this their fault? I don't think so. The wash-basin is in the wrong place."

#### 3.2.4. Three bedroomed semi-detached houses.

Among the people who live in this house model, there are seven comments on the wash-basin outside the bathroom, which means 20% of the sample. Here are some examples of the comments made.

"I removed the wash-basin to inside the bathroom. I fitted it just below the shower to use the same pipe line. I'd like to have a bidet as well but it wouldn't fit in the bathroom, which is too small."

"We've moved the wash-basin to inside the bathroom. Now it is right."

"The wash-basin has been removed to its place, in the bathroom."

"We've moved the wash-basin to inside the bathroom to get rid of the mess. Besides, the wash-basin is to be in the bathroom, isn't it?"

"We have to be on show to wash. The first thing I want to do is to remove this wash-basin from here and to take it to the right place (in the bathroom)."

### 3.2.5. Terraced houses.

Twenty families out of 35 living in terraced houses (63%) commented on the wash-basin, as follows:-

"The wash-basin should be inside the bathroom, as it usually is. I've put this curtain to cut out the view of the wash-basin."

"Children are often playing at the wash-basin and making a mess over there. If it was inside the bathroom we wouldn't have such a problem."

"We've extended both the kitchen and the bathroom, so that we could have a dining table and the wash-basin fitted in its usual place."

"I've moved the wash-basin to inside the bathroom. It is all right now. It is true that it is taking space in the shower box but even though it is far better than before. At least we have privacy now."

"I'll move the wash-basin to inside the bathroom because my daughter has visitors very often and I've got to brush my teeth on show."

"I think they put the wash basin outside (the bathroom) because they forgot to design it inside."

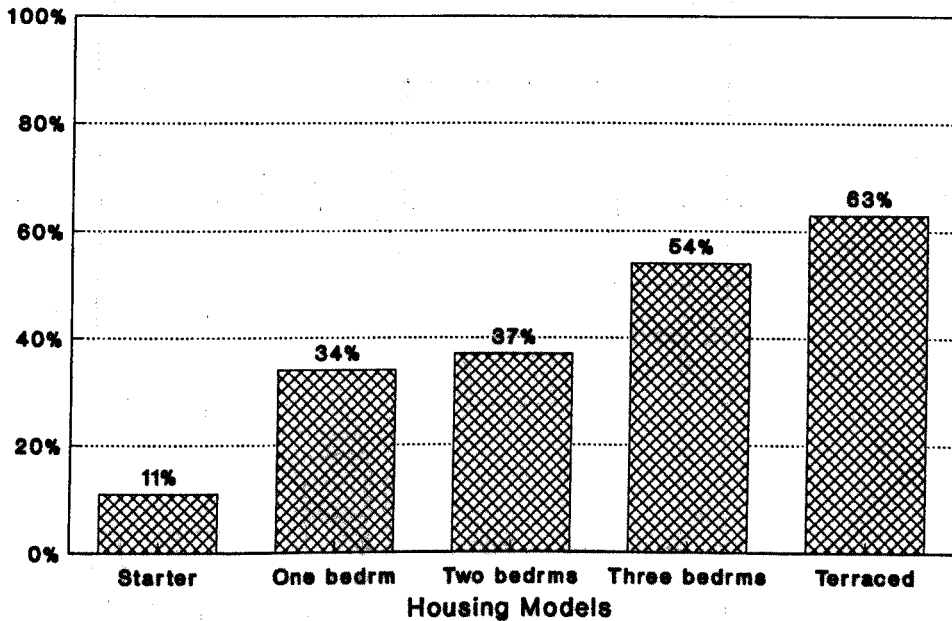
"The bathroom is much too small. There is no way to fit the wash-basin in it."

### 3.3. Figures for the conflict.

The assessment of this conflict is indicated by the chart in Fig. 8.11. As can be seen from the chart, the proportion of this conflict increases sharply between the starter and the one bedroomed house, and then goes slightly up to the two bedroomed. Another sharp increase is observed from the two bedroomed to the three bedroomed model. The terraced houses are the most affected, accounting for 63%. The explanation for these figures seems to be in the house plan design, as the Fig. 8.12 illustrates.

## WASH-BASIN OUTSIDE THE BATHROOM

### CONFLICTS RELATED TO PRIVACY



**FIG. 8.11** Proportions of conflicts related to the wash-basin outside the bathroom versus the diverse housing models.

As can be seen from the floor plans in Chapter 5, the wash-basin in the starter house is almost hidden from view by comparison with its location in the other house types. Conversely, the entrance for the one bedroomed model is straight opposite to the wash-basin, so that people who come in can easily see it. On the other hand, the living-room furniture can be arranged in such way that will prevent the straight view of the wash-basin. In the three bedroomed model there is no way of arranging the furniture so that one cannot see the wash-basin from the living room. In the terraced house the situation is even worse, since the wash-basin is virtually "in" the living room, as shown in Fig. 8.12.

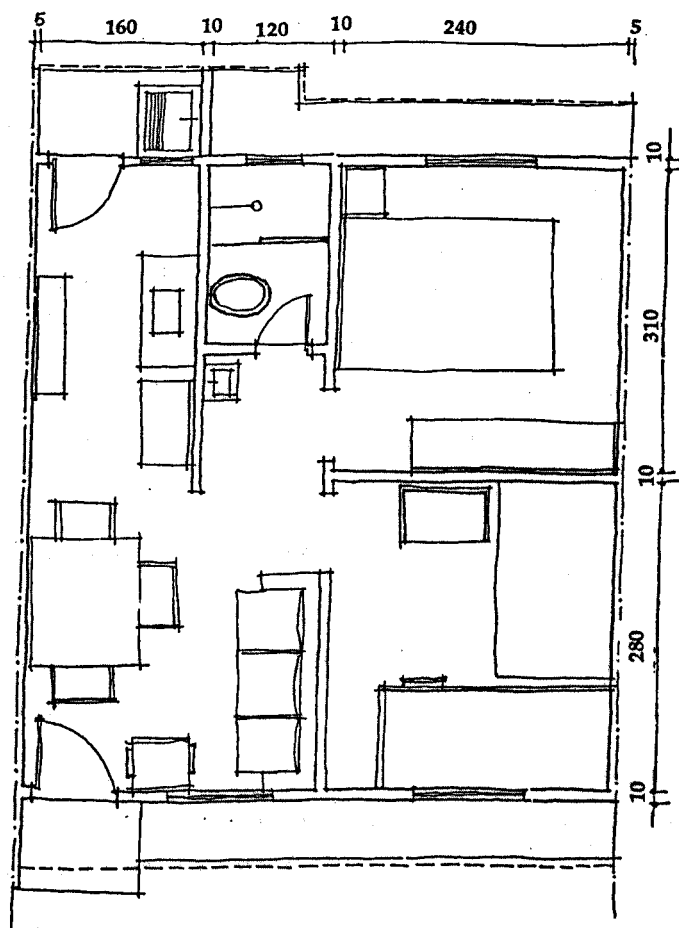


FIG. 8.12 Palmital Terraced Houses: plan and furniture layout.

#### 4. Separating wall without acoustic insulation versus privacy.

##### 4.1. Description of the conflict.

In Palmital the semi-detached houses are separated by an ordinary partition wall, i.e., a wall 12cm wide made of concrete blocks, which is acoustically inadequate. As can be seen in the plans, this wall separates the double bedrooms, which are supposed to be the married couples' bedroom, since they are the largest in the houses. However, the acoustic performance of the wall is so bad that any normal conversation can be clearly heard on the other side. The consequence of this is that most couples have moved their bedrooms to another room in order to preserve their privacy.

The next section refers to the comments that the surveyed residents made regarding the lack of privacy in semi-detached houses.

## 4.2. Residents' comments.

### 4.2.1. Starter houses.

Twenty one out of thirty five families (60% of the sample) living in starter houses commented on the negative aspects of semi-detached houses, as far as privacy is concerned:-

"We don't like semi-detached houses. Some neighbours are too noisy and don't worry about disturbing other people."

"I wish these houses were not stuck together (semi-detached), because the neighbours are too noisy."

"I don't like semi-detached houses because of the neighbours' noise. I have built an extension and I have moved to the new room, which is at the other side of the house."

"We can't relax in our own home, because it is semi-detached. We can neither turn up the volume of the radio nor speak loudly or the neighbours would start complaining."

"They (the next-door neighbours) are always arguing and swearing at each other. I can't cope with all this noise..."

"The next-door neighbours can hear everything we say and vice-versa. We don't have any privacy."

"They shouldn't do that, I mean... build houses stuck together... neighbours hear what they don't want to ...you know what I mean?"

"There are rows next door and we can't sleep with the noise."

"Houses should be detached even if they are very small. Semi-detached houses don't provide any privacy for what you say at home."

### 4.2.2. One bedroomed semi-detached houses.

Twenty one out of thirty five dwellers surveyed (60%) manifested dissatisfaction with the lack of acoustic insulation in this housing model:-

"If this house was detached I would reform it. It is not worth changing anything once you can't change what bother you more."

"People should have a training course to be taught how to live in semi-detached houses."

"Semi-detached houses don't work whatsoever. For example, my next-door neighbour has built a slab that made cracks in my house. Now he is refusing to pay for the damage. He says that is not his fault and blah, blah, blah."

"Semi-detached houses are worse in the fact they don't provide enough space."

"The smaller the house the worse the problem of being semi-detached, because you by no means can stop neighbours' noise."

"If we had good neighbours we wouldn't mind the houses stuck together."

#### 4.2.3. Two bedroomed semi-detached houses.

Twenty two people, which represents 63% of the sample surveyed, commented on the lack of privacy due to both the housing model adopted and the bad acoustic insulation of the separating wall:-

"Whose idea was it to build these houses stuck together?"

"The neighbours can hear everything you say. At weekends and on bank holidays they turn up the volume of the stereo so that we're forced to listen to the music they like. We can never switch on our own radio and listen to what we want to! We've changed everything in the house (the furniture layout) so that the bedrooms are away from the noise."

"I can't listen to music when the next-door neighbours are in. My children can't watch TV when the neighbours' children are doing their homework. They are always complaining about our noise. It is disgraceful but it is not their fault."

"The bathroom door is just in front of the sitting room. The wash-basin is outside. The houses are stuck together. Do these people think we are different from everybody else?"

"I think that after the failure of semi-detached houses in Palmital nobody will design this layout again."

"I am a widow, so I don't mind that this room has got no privacy. But the couple next door have moved to the other room, which is on the other side of the house."



"These houses stuck together don't provide any privacy. We can't speak loudly unless we want to let everybody know what we are talking about."

"Semi-detached houses are the worse thing in the world. Sorry, but there is something even worse: flats."

"The next door neighbours don't make any noise but my children do and this disturbs them. I have moved to the smaller room to have more privacy and have put the children in the main room. I feel sorry for the neighbours, but it is not my fault that the houses are stuck together..."

"It is not good either to hear what the neighbours are talking about or to know that the neighbours can hear what you are saying. These walls should be thicker..."

"I've put my daughters in the main room and have moved to the smaller one. It is much smaller but at least I've got some privacy."

"I don't feel relaxed when I realise that the next door neighbours can hear everything you say. I've been living here for two years and I'm not used to this situation yet. I'm afraid I never will be."

"This walls don't insulate the noise and this is a problem we can't solve. To make improvements to these houses is a waste of money because it is impossible to separate them. I want to move away from here."

"We don't get on with our next door neighbours. This is a problem because there is no insulation between the houses and they are always insulting us through the wall. This is not good for the children, you know? The semi-detached house is to blame for this situation."

"This wall is too thin to divide the two houses. We can hear everything that the neighbours say."

"Semi-detached house" is a dirty word among the residents of Palmital. It is a nightmare!"

"We moved our bedroom to the other side of the house, to get more privacy."

#### 4.2.4. Three bedroomed semi-detached houses.

13 out of 35 people (37%) addressed comments on the lack of privacy due to the characteristics of the model:-

"We've put the kids far away from the noisiest place (the street) and ourselves in the front room. The semi-detached room is our dining room now."

"We don't have privacy in this semi-detached house. I'm lucky because I get on with the next doors neighbours so that we've agreed to move our rooms (the couple's room) to the other side, at the front of the house."

"I don't like semi-detached houses because they don't provide any privacy and, what is still worse, one can't make any extension in the side which is stuck together with the neighbour."

"We can't turn up the volume of the stereo as we used to do in the "favela". You know, "favelas" houses are very close to each other but nobody complains about noise. These people here are very unfriendly."

"The next-door children are too noisy. I've been thinking about duplicating the wall. Do you think it is possible?"

"As soon as I can afford it, I'll build another wall, side by side with this one, to get more privacy. Everything we say here they hear over there."

"We've moved our room to the other side of the house and it is all right now."

"This wall doesn't protect us from neighbours noise."

"We don't live in the main room. We've moved to the other side of the house, to get more privacy."

#### 4.2.5. Terraced houses.

In this model, 19 residents (54% of the sample) pointed out the negative aspects of this architectural solution.

"It is true that "favelas" are very messy, but I've never seen shacks stuck together in the "favelas" I lived. We've got no privacy in these terraced houses!"

"If it weren't for these terraced houses I would be very happy here. The only thing that bothers me is the neighbours noise."

"These kind of houses (terraced) are not good for people who want to make extensions, because you only can extend to the back of the plot. Besides, terraced houses don't provide any privacy."

"Terraced houses are an appalling solution. Nobody (the residents) can be relaxed in their own places!"

"I really don't know where this idea comes from. I've never seen houses stuck together before. Is it fashionable here?"

"All houses are stuck together, which provokes frequent arguments among neighbours. From this point of view it is not much different from the favela."

#### 4.3. Figures for the conflict.

### PARTY WALLS WITHOUT ACOUSTIC INSULATION

#### CONFLICTS RELATED TO PRIVACY

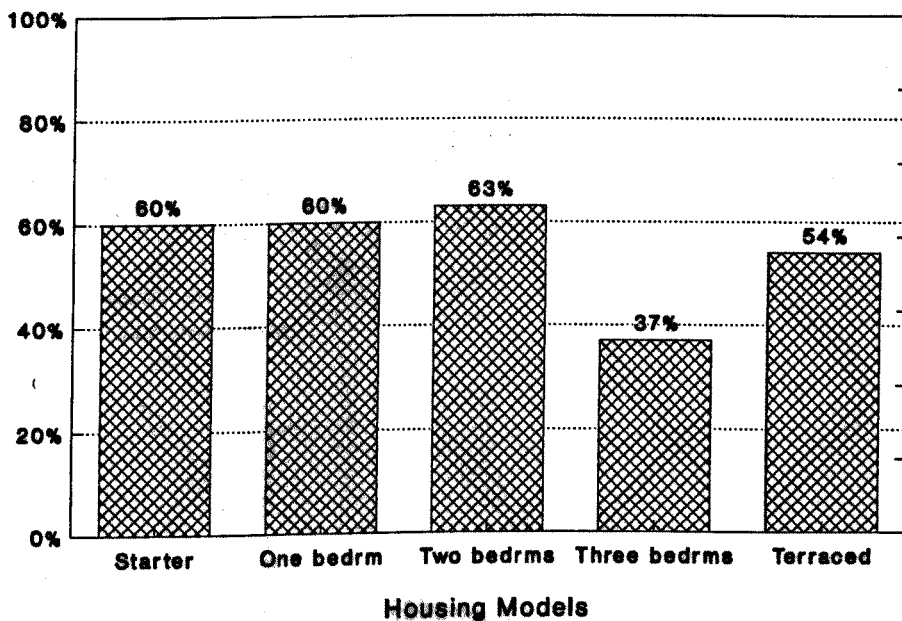
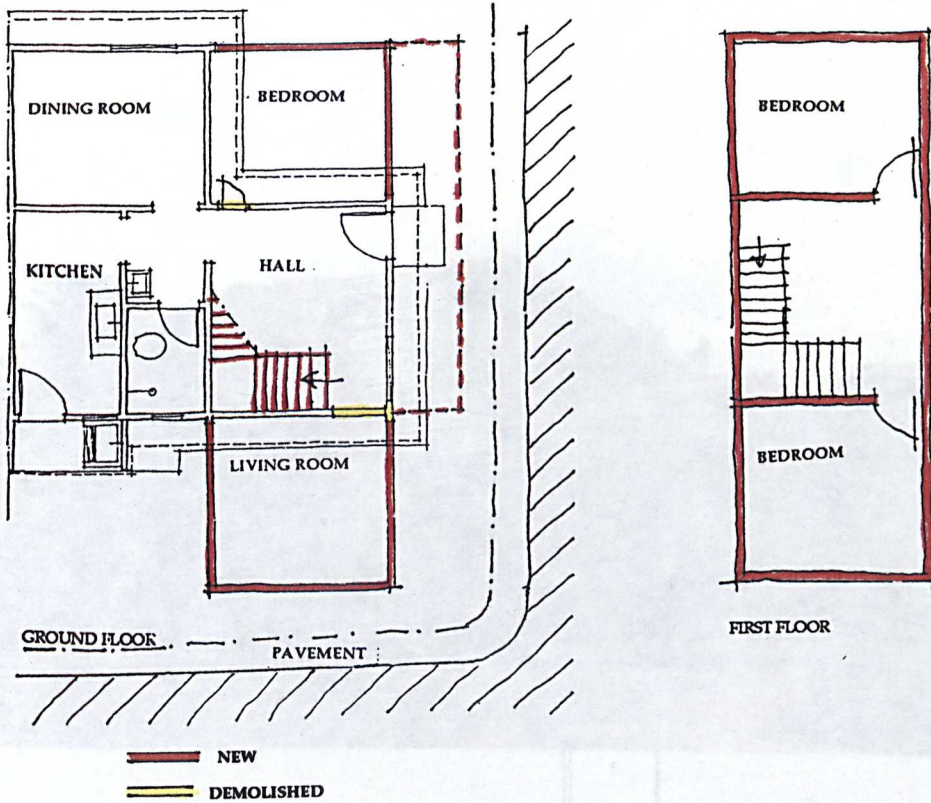


FIG. 8.13 Proportions of conflicts related to the party walls in the diverse models.

As the chart shows, the three bedroomed houses are less affected by this conflict, in spite of accounting 37%. This maybe due to the fact that in this model most residents use the other two rooms (at the opposite side of the house) as bedrooms and the noisy room as living room. It can be noticed from the figures that the rejection of semi-detached houses is very high on average, since it ranged from between 37% and 63%.

The next section of this Chapter presents and discusses a series of drawings illustrating the modifications that some users have introduced to their houses which help to overcome many conflicts, including those related to privacy.

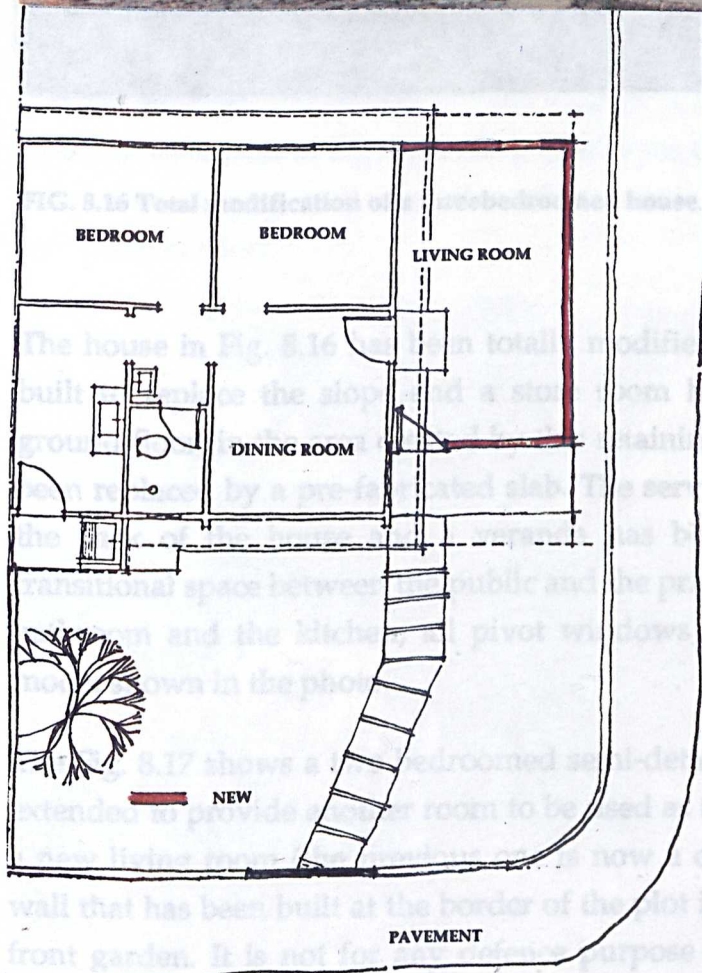
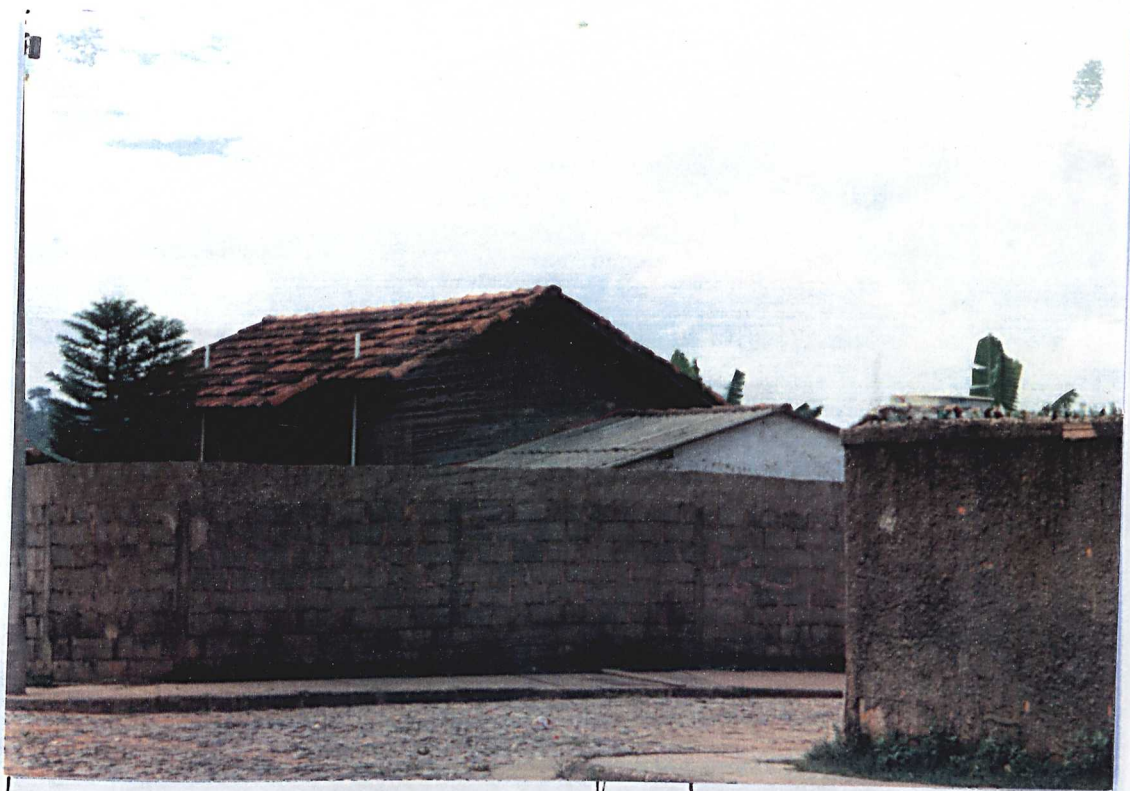
### 5. Modifications introduced by the residents.



**FIG. 8.14** One bedroomed house. Extension with two bedrooms on the first floor and living room on the ground floor.

**FIG. 8.15** Two bedroomed 2000s finished house. Extension with a larger living room and a new entrance.





**FIG. 8.15** Two bedroomed semi-detached house. Extension with a larger living room and a new entrance.



**FIG. 8.16** Total modification of a threebedroomed house.

The house in Fig. 8.16 has been totally modified. A retaining wall has been built to replace the slope and a store room has been built on the lower ground floor, in the area created by this retaining wall. The pitched roof has been replaced by a pre-fabricated slab. The service area is now concealed at the back of the house and a veranda has been built at the front, as a transitional space between the public and the private domain. Apart from the bathroom and the kitchen, all pivot windows have been replaced by the model shown in the photo.

The Fig. 8.17 shows a two bedroomed semi-detached house which has been extended to provide another room to be used as the couple's room as well as a new living room (the previous one is now a dining room). Note that the wall that has been built at the border of the plot is to provide privacy for the front garden. It is not for any defence purpose since it is linked to a very precarious fence, on the right hand side of the plot.





FIG. 8.17 Extension to a two bedroomed semi-detached house.

The starter houses in Fig. 8.18 show two types of mechanisms to conceal the sink. One uses a wall and the other some vegetation. Both now have territorial borders.



FIG. 8.18 Starter house displaying two kinds of mechanism for providing privacy and territoriality.

The next section of this Chapter will examine how the body of the literature on privacy considers the problem, in order to understand the phenomenon related to architectural spaces.

## 6. Privacy.

The conflicts which are being analysed link together three phenomena that may appear separately as well: privacy, preservation of identity (expressed here as *aesthetic sense*), and ambience (expressed here as *comfort* when washing). They are linked here because, in the specific case of Palmital, the element that affects both residents' aesthetic sense and comfort conditions is the same that forces dwellers to perform in public tasks they would rather perform in private, as has been demonstrated in the residents' comments. This section will examine the relationship that the phenomenon of privacy seems to have with the position of the service area (at the front of the house), the wash-basin outside the bathroom and lack of acoustic insulation between the semi-detached houses. The aspects related to the preservation of identity, which are also associated with privacy in the conflicts described, will be analysed in the next Chapter, when *identity* is treated separately.

The notion of privacy has been largely discussed in several fields of knowledge, including the architectural one. Despite such attention, the main question on the issue is still valid: what do users mean when they make a claim for privacy, or if they complain about lack of privacy?

Architects usually talk about privacy as one of the multiple constraints to be taken into account by designers, but they rarely explain in detail how to deal with this variable and how to interpret it in architectural terms. In most cases, privacy is understood as just the opposite of sociability, i.e., the state of being alone, without interacting with anyone.

It is not possible here to explore the concept of privacy far enough to give answers to the great abundance of questions which arise when the issue is being considered. Nevertheless it is worth verifying how the theme has been approached in several branches of human sciences, how these understandings interact with the architectural theory and what are the contributions that the Palmital study can bring to the clarification of the subject in a cross-cultural context.

Irwin Altman has defined Privacy as "*selective control of access to the self or one's group*" (Altman, 1975, p. 18). According to several scholars, Altman's definition captures the essence of privacy; the twin themes of management of information about oneself and the management of social interaction. Moreover, Altman's definition also contemplates the collective dimension of privacy, i.e., group privacy (a family, for instance). The key words are *selective control*, bringing the notion of open and closed channels which implies that access may be granted or denied; privacy is not merely shutting out others. It often includes enjoying social interaction on condition that it is *selectively controlled*.

In the sociological field there are many other scholars who have been dealing with privacy, its concept and meanings, as part of the general problem of human behaviour in relation to physical space. One of them is Margaret Willis (1963 a,b,c). The magazine *Architects' Journal* asked her to carry out a survey of what people really meant by privacy and what sort of privacy they expect to be provided within their homes. The survey took place in London, in the suburbs of the Greater London area. First, Willis asked all interviewed to define privacy. The replies obtained were then classified into three categories as follows:

- \* privacy within the home;
- \* privacy in regard to the relationships with other people;
- \* physical privacy of not being overlooked.

Privacy within the home was mentioned by few people and it is only a main concern for those well-off families with growing children and a number of different interests to cater for. Privacy in regard to the relationship with other people was understood as the attainment of certain standards of behaviour among neighbours. Physical privacy of not being overlooked was mentioned as the right that people have to conceal certain activities, objects and spaces from public sight. Willis listed some expressive replies she obtained, and all of them include the notion of controlling unwanted interactions, as Altman put forward in his definition of privacy. One of the most interesting conclusions she has drawn from her empirical findings is that the requirement for privacy seems to be related to psychological needs which stems from social status. Willis says:



*"Privacy appears to be more important in times or areas of social change. It is not regarded as so important where people feel completely at ease in their relationships with others and where standards are the same as their own. Therefore, it is suggested that privacy as a means of avoiding interference from others is more important at present in working class areas because standards, both material and behavioural, are changing."*  
(Willis, 1963a)

Still in the sociological field there is another expressive work that should be taken into consideration, due to the noticeable contribution it brings to the discussion of the theme. It is by Laufer, Proshansky and Wolfe (1977) and was first presented at the Second International Architectural Psychology Conference in Lund, Sweden, in 1973. They suggest a series of analytical dimensions along which the problem of privacy can be considered to be properly analysed and understood; they are:-

\* **Self-ego dimension.** Privacy is both the expression and the embodiment of the self and ego, since the development of the self is the process of separation of the individual from the social and physical environment, i.e., it is the process of learning to function independently.

\* **Interaction dimension.** While privacy is often referred to as the individual's choice of aloneness, it is an interactional concept. In this sense, privacy is a form of non-interaction with others. *"The individual simply withdraws from the interactions to go off and be alone, to relax, to collect himself, to think things through."* (Laufer and Wolfe, 1977, p. 4) Privacy as withdrawal provides release from the tensions that appear in the social interactions.

\* **Life cycle dimension.** Privacy as a phenomenon is by no means stable. The concept of privacy as well as the need for privacy change over time, according to the different roles that the individual plays in his diverse life cycle.

\* **Biography-History Dimension.** This element is embedded in all three of the previous dimensions mentioned. Everyone cares about other people's views of his or her behaviour because of the future consequences that such behaviour may have in the future. Thus, controlling the revelation of information about past behaviours is crucial for everybody's privacy.

- \* **Control dimension.** Also implicit in all previous dimensions of privacy is that of the control the individual has over self, objects, information, and behaviour. *"The need and ability to exert control over those things and activities is a critical element in any conception of privacy."* (Laufer, Proshansky and Wolfe, 1977, p. 4) The older the individual is, the more skilled in controlling behaviour they become. On the other hand, the need for controlling behaviour seems to decrease over time, while childhood is the time for learning how to control self and other behaviour. *"At each stage of the life cycle, then, the degree of control and the need for control will always be a function of the specific role the individual plays (child, student, husband, laborer, executive) and the goals he is seeking to achieve within these roles."* (Laufer, Proshansky and Wolfe, 1977, p. 5)
- \* **Ecological-cultural dimension.** *"Privacy as behavior and experience is rooted in spaces and places."* (Laufer, Proshansky and Wolfe, 1977, p. 5) What Laufer, Proshansky and Wolfe are suggesting is that physical settings elicit clues for privacy, in that they sustain human experiences and spaces for specific purposes. This is a quite logical conclusion, since privacy also has a phenomenological dimension, as can be seen further.
- \* **Task orientation dimension.** Under certain circumstances privacy has an explicit functional component. For example, when one is studying the presence of others this may simply be distracting. Thus, it is pertinent to analyse the privacy behaviour in neutral and descriptive terms, as a requirement of circumstances.
- \* **Ritual privacy dimension.** The ritual dimension of privacy is somewhat similar to the task orientation aspect. *"There are certain rituals which societies try to get the public to do in non-public places. Ritual activities such as sex, elimination, expressions of grief, visions etc., are to be done in privacy. There are norms in all societies governing these activities."* (Laufer, Proshansky and Wolfe, p. 6) Thus, when one speaks of privacy one also speaks of the rituals and situations prescribed within each culture.
- \* **Phenomenological dimension.** Laufer, Proshansky and Wolfe say that, insofar as privacy is used to designate both behaviour or experience, it has a phenomenological dimension. They point out:  
  
*"To refer to it as phenomenological is simply to highlight the fact that, regardless of all other dimensions, there are a combination of effective and*

*cognitive components that will forever elude the attempts at systematization of the behavioral scientist. We are not ashamed to say that the descriptions of the poet, the dramatist and the novelist about the yearnings to be alone undoubtedly get at the core of that human experience we call privacy" (Laufer, Proshansky and Wolfe, 1977, p. 8)<sup>2</sup>*

From what has been discussed so far, the most interesting contribution that these scholars give to the subject, seems to be their argument that the phenomenon of privacy is a function of age and is an age related experience. This concept really broadens Altman's definition in that it poses a dependent variable in the context to be examined. As far as the architectural field is concerned, the consideration of the user's age when choosing the physical mechanisms to be adopted, may bring radical changes to the design approach. For example, the absence of surrounding walls may not bother the elderly - because they might like to be involved with the external events. Conversely, it may be crucial for mothers bringing up small children and having to keep an eye on them all the time they are playing outdoors.

In the architectural domain, Serge Chermayeff and Christopher Alexander are the pioneers for studying the architectural implications of privacy in housing in a systematic way. In their book, *Community and Privacy* (1963), they suggest a methodological approach to the issue based on the analysis of the requirements for privacy that people have. Their understanding of privacy is closely related to concepts of "*being protected against intruders*", "*being in quiet places*" and "*being protected against the traffic*". (Chermayeff and Alexander, 1963, p. 75) Perhaps because they start from an American perspective, they distinguish two intruders as being the main phenomena responsible for the lack of privacy in modern cities: traffic and noise. They say:

*"Privacy is most urgently needed and most critical in the place where people live, be it house, apartment, or any other dwelling. The dwelling is the little environment into which all the stresses and strains of the large world are today intruding, in one way or another, ever more deeply. To*

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<sup>2</sup> Here they make clear their understanding that phenomenology is just to describe psychological or experiential phenomena and is circumscribed to poetry and fiction. In some extent, this view uncovers a certain prejudice, which is totally rejected by Spiegelberg (1979), as it can be seen in Appendix I "What is Phenomenology?"



serve the best interests of privacy two of these stresses in particular, traffic and noise, must be treated as invaders." (Chermayeff and Alexander, 1963, p. 37)

It could be said that the Chapter, *Anatomy of Privacy*, embodies the essence of the book, which is to provide guidelines to design boundaries between public and private realms in order to ensure an adequate appropriation of the diverse domains. They propose a *functional zoning* for housing based on an appropriate separation of the socially defined realms (spaces for children, adults, families and the community). These separations could be achieved by means of barriers and transitions. The wall is highlighted as the ideal barrier while the lock is considered as the better solution for transitions between two zones with different privacy requirements.

They end their essay by analysing some representative examples of *well-designed* houses, discussing whether the plan provides the proper separation of realms or appropriate transitions and barriers between them. To simplify the critical appraisal, they adopt some questions that are asked in each instance:-

- 1 - Is there an entry *lock* to give the house as a whole an adequate buffer zone against intrusion? Question of protection.
- 2 - Is the children's domain directly accessible from outside so as not to interfere with the adult's private and family domains. Question of noise, interruption, and *dirt*.
- 3 - Is there a buffer zone between the children's private domain and the parents' private domain? Question of noise.
- 4 - Is there a *lock* to the parents domain? Question of noise, interruption, and modesty.
- 5 - Can a *living room* be isolated acoustically, as either a quiet or a noisy zone, from the rest of the house? Question of separating sounds of conversation, *listening* and *looking*, from silent occupations such as reading.
- 6 - Are the outdoor spaces private and differentiated? Questions of interference between children's and adults', and between individual and family, domains.

It can be seen from these questions that there is a major concern with noise, mainly the noise from children. The intimacy of all members of the family is

deeply considered as well. The result of the analysis is that all models failed to provide the ideal privacy required.

Although this methodology is directed at the North American culture and constraints, it can be considered in a cross-cultural context, in that it shows how designers can accomplish people's requirements for privacy, once they are taken into account. A criticism that could be addressed to the work is that it is not based on a behavioural analysis of a given context, but just on the authors' assumptions and models. It is also clearly directed towards American middle class houses.

Another scholar who treats this subject in the architectural realm is Amos Rapoport. He defines PRIVACY as "*the control of unwanted interaction*" (Rapoport, 1980, p. 8) which is nearly the same as Altman's definition. However Rapoport's classification of the several mechanisms that are employed to get privacy is a step forward as far as the architectural issue is concerned. According to his view, mechanisms of interaction control could be broadly classified as follows:-

- \* Rules (manners, avoidance, hierarchies, etc.)
- \* Psychological means (internal withdrawal, dreaming, drugs, depersonalization, etc.),
- \* Behavioural clues, through structuring activities in time, so that particular individuals or groups do not meet,
- \* Spatial separation, through physical devices like walls, courts, doors, curtains, locks and all sorts of architectural mechanisms which selectively control or filter information.

In most cases multiple mechanisms are used to reach the desired level of privacy, although particular ones are stressed. They are combined in different ways as well, depending on the cultural context in which they act. As can be observed, the mechanisms called "*partial separation*" belong to the architectural territory so that they can be activated, or not, by architectural design.

Privacy is also spatially orientated. Rapoport reports on housing studies in diverse countries that have confirmed the front regions as for display and the back ones for privacy. The display areas show a formal face to the world and communicate a public image; the private areas are for service and "*messy*" behaviour with corresponding control of penetration.

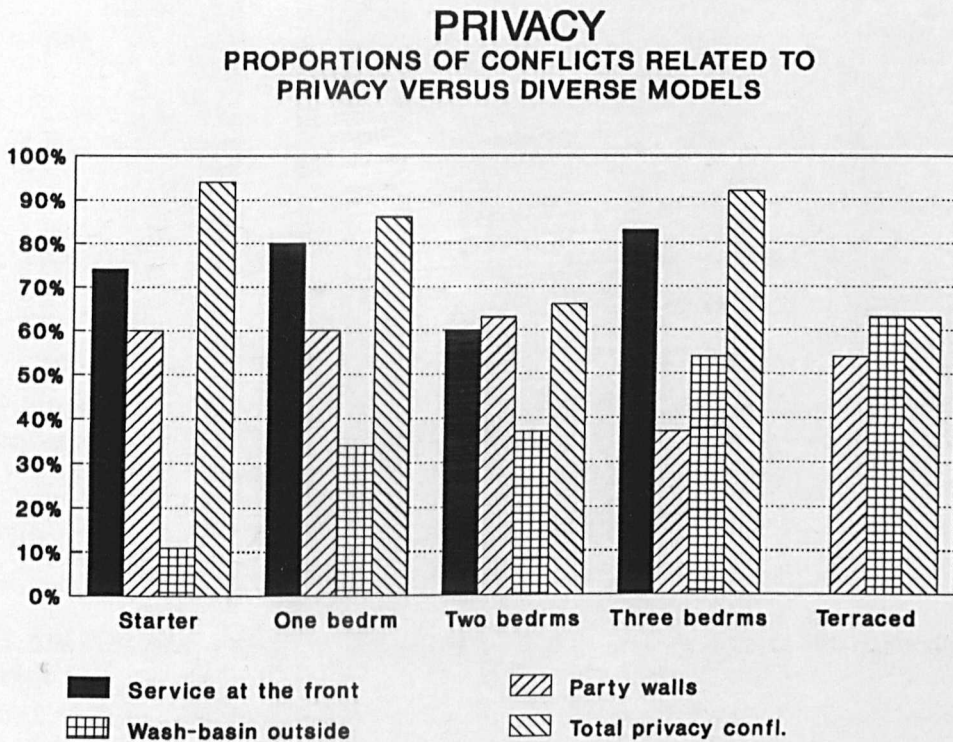
The next section of this Chapter will present the conclusions that can be drawn from what has been found about the interaction between the phenomenon "privacy" and the architectural design of Palmital houses.

## 7. Conclusions on privacy.

The phenomenon of privacy in the case study on Palmital has been revealed by several conflicts, as follows:-

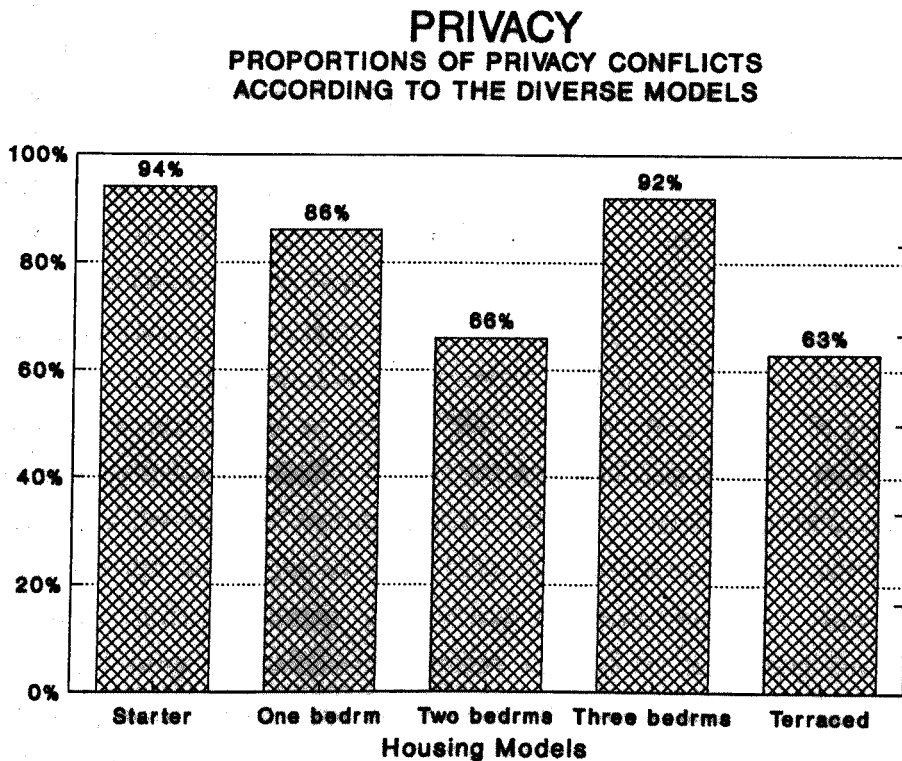
- a) The service area at the front of the house that constrains people to perform in public some household chores that should be carried out in private, as for example washing clothes.
- b) In addition, the service area is unsheltered so that people have to do the washing under the hot sun. This affects privacy because, to feel comfortable under the sun, people should wear comfortable clothes such as bathing suits, which in turn are culturally unacceptable in the public domain.
- c) The wash-basin outside the bathroom, which exposes residents to others. Besides, the floor and the walls in the vicinity do not have waterproof finishes, so that spots of mould gather on the walls, while the floor is often wet, slippery and dirty. Thus, the position of the wash-basin affects not only the residents' privacy but also their identity, which is discussed later.
- d) The separating wall between the semi-detached houses, which is too thin and does not provide adequate acoustic insulation. The gaps between the roof and the wall also contribute to the lack of acoustic separation.
- e) The lack of doors in the doorways to the bedrooms, which exposes the individual's private territory. This conflict, due to its interface with territoriality, is analysed separately.

The chart in Fig. 8.19 shows the incidence of several types of privacy conflict among the diverse housing models.



**FIG. 8.19** Proportion of the several conflicts related to privacy according to the diverse housing models.

The chart in Fig. 8.20 summarizes the privacy figures. As can be seen from the chart, the conflict declines markedly from the starter houses to the two bedroomed ones (94% to 66%), then increases sharply towards 92% in the three bedroomed houses and declines again to 63% in the terraced model. If it were not for the three bedroomed houses, the incidence of the conflict would have shown a steady decline in relation to the size of the houses.



**FIG. 8.20** Proportions of the total of privacy conflicts according to the diverse housing models

The fact that the three bedroomed houses present a high rate of conflict with the position of the service area may explain why they break the trend. On the other hand, the reason why this house type has such a high level of conflict with the position of the service area may be due to the fact that these houses are located on busier streets in Palmital, which means that they are more exposed.

Some of the privacy conflicts are due to design decisions that have apparently been taken to save money, as for example the sink being located at the front of the house<sup>3</sup> and the service area in the open<sup>4</sup>. Others are due to

<sup>3</sup> This solution was supposed to be cheaper because it apparently shortened the sewerage system, i.e., if the service area were at the back it would have needed many more pipes to carry away the sewage. However, this assumption was not embedded in empirical data or comparative studies. According to the technical report "Análise dos projetos arquitetônicos e urbanísticos do Palmital", Malard, M.L., CETEC, 1987, the estimate of a random sample of Palmital sewerage system was compared with the estimate of a hypothetical design in which the service area was at the back and the results were identical.

the architects' assumptions that a "new idea" would be more "functional" than conventional ones, as for example the wash-basin outside the bathroom (according to the architects, the wash-basin outside the bathroom would rationalize the use of sanitary facilities since it could be used when the toilet was engaged). Despite the good intentions that brought about these innovations (whether to save money or to make the house more functional), the fact is that they ended up by provoking user's rejection rather than proving their effectiveness. Moreover, some residents have taken the innovative solutions as an insult. *"The bathroom door is just in front the sitting room. The wash-basin outside. The houses are stuck together. Do these people think that we are different from everybody else?"* or *"I wonder if they think that people on low incomes are less clever as well. Why the wash-basin in the corridor?"* Other times they thought there was some mistake, because they could not understand why a traditional pattern should be modified for the worse. *"Why did they design the wash-basin in the corridor? This must be a misunderstanding!"*

As can be noticed, what underlies those angry comments is the fact that despite the low socio/economic status, the need for controlling unwanted interactions (the need for privacy) is very strong and as important as any other spatial requirement.

Sometimes the word privacy is explicitly mentioned, as for example in the case of being overlooked while doing private things: *"There are two problems with this sink: it is ugly and we don't have privacy doing the laundering"*. At other times the feeling of lack of privacy is expressed in comments like this: *"I don't like to be on show. I would prefer to do these things on my own"*. In both cases the residents are talking about the lack of privacy they are suffering due to the architectural decision of placing the service area at the front of the house, against the cultural pattern which is to locate the service area at the rear. It is interesting to observe that in the terraced houses there are no comments on the service area, about its location or the fact that it is unsheltered. In this house type, the service area is at the back of the house, so there would be no reason for complaining about its location. However it is in the open as well and nobody manifested dissatisfaction with doing the

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<sup>4</sup> As far as the uncovered service area is concerned, it is a matter of fact that an extended roof would mean an additional expenditure. But it is also true that users have built some sort of roof to protect the area in spite of having to spend money on it.



washing, in the sun. This clearly demonstrate that what in fact matters is the lack of privacy to do the housework rather than the bad comfort conditions to do the washing.

Another interesting fact that deserves attention in the Palmital's findings is related to privacy within the home. As has been mentioned before, Willis (1963 a) found that in London, privacy within the home was only a main concern for those who where well-off or for families with growing children. To a certain extent this has been confirmed by Alexander and Chermayeff (1963). In Palmital, privacy does not seem to be related either to the family's income or the number of children but to the size of the dwelling; the smaller the house the greater the conflict. Starter houses are most affected by privacy conflicts, independent of the their dwellers' status. Terraced houses are less problematic, maybe because they have two distinct realms; the public realm, which is the front of the house and the private realm, which is the back yard. As Proshansky, Ittelson and Rivlin(1970) state, there are certain activities which society tries to get people to do in non public places and there are norms in all societies governing these activities. What Palmital indicates is that the public places in which social interactions occur should be on show, while private places in which interactions are restricted should be concealed.

Rapoport (1982) also has confirmed that the front regions are for display and the back ones for privacy. In Palmital this impression is once more verified: the display areas communicate a public image; the private areas are for service and "messy" behaviour with corresponding control of penetration.

# **CHAPTER NINE**

**Analysis of the Conflicts  
Related to Doors, Territoriality  
and Privacy**



The missing doors inside the Palmital houses present a huge source of conflict. Most of them have been revealed by the complaints about the "lack of privacy" in the bedrooms. This could lead to the understanding that the conflict caused by the missing doors is related to privacy only. Nevertheless, under scrutiny, these complaints also disclose a great feeling of territoriality. The next section shows some of the comments that led to the identification of the double conflict which is *"missing doors inside the house versus territoriality and privacy"*.

## 1.2. Residents' comments.

Among the residents' comments that pointed out the conflict between the lack of doors inside the house, the territorial behaviour and the need for privacy, some are very expressive, as follows:-

### 1.2.1. Starter houses.

"There should be a door in between the bedroom and the living room. After all the parents need some privacy from the children."

"We've fitted a door in the bedroom to separate it from the rest of the house..."

"I've said to my husband that we have to install a door in the bedroom, to divide the space, you know? "

### 1.2.2. One bedroomed semi-detached houses.

"I've put the wardrobe in front of the door, leaving just a gap to get in. This is a temporary solution, just to last by the time I'll put a door."

"We've fitted all missing doors in the doorways, to divide all spaces. I think they were in a hurry to get the houses ready for the Mayor's inauguration, then they hadn't enough time to fit the doors. They should refund us, shouldn't they?"

"We've already bought a door to fit in the bedroom doorway, but we have to extend the room first, otherwise the door will take much space in the room."

"The first thing I'd like to do was to fit doors in the bedrooms."

"Without doors in the doorways inside the house we don't feel relaxed, not even to get changed."

### 1.2.3. Two bedroomed semi-detached houses.

"I wish I could get changed in my room and wake up late on Sundays. How can I do that without a door?"

"Why didn't they fit doors inside the house? Do they think that poor people are shameless?"

"Visitors could see from the sitting room through the bedroom. We couldn't get changed in the bedroom if the children were around. These bamboo doors are temporary until we can afford wooden doors."

"We had doors fitted inside the house. It was the first thing we did when we moved in."

"First we fitted a door for our room, because of the children. Next we'll move the wash-basin inside the bathroom."

"I've put curtains in the doorways to give the rooms more privacy, but this is a temporary solution. If I could afford it I would fit doors instead."

"I tried to fit a door for my bedroom but it didn't work: if the door was opened it would take up a lot of space in the room. Then I changed my mind and put a curtain up instead. It doesn't provide the same privacy as the door would but it is the only way to get some privacy and at the same time, to keep all the pieces of furniture I need."

"The curtains are the only way to minimize the problem of the lack of doors inside the house, because if we had doors the furniture wouldn't fit in..."

"We have made bamboo curtains and had them installed in the bedrooms, where there are no doors. They provide privacy and are very nice, aren't they?"

### 1.2.4. Three bedroomed semi-detached houses.

"We've already fitted doors in our bedroom and put curtains up in the other rooms."

"We've fitted doors in the two rooms that open into the living room."

"First we fitted doors in all doorways inside the house, to have more privacy."

"Why didn't they fit doors in the doorways? We've put bamboo curtains but they will not last long. When the children grow up we'll have to fit wooden doors instead."

"We've fitted a door in our bedroom and installed curtains everywhere else. Even though we've got problems. For example, the children can't sleep if the TV is on. I've been missing most of my favourite soap-operas."

"We've fitted the main doors inside the house as soon as we moved in (main doors: the two bedrooms that open to the living room). It is wrong to open bedrooms into the living-room. It is even worse not to fit doors in these doorways."

#### 1.2.5. Terraced houses.

"Why do you think they have left the doorways without doors? It was the first thing we changed here: we fitted the doors inside the house."

"We've already bought two doors to fit in the bedroom doorways. We can't get changed in our bedroom because curtains don't prevent the children from getting in."

"At least the entrance of the main bedroom (the couple's one) should have a door."

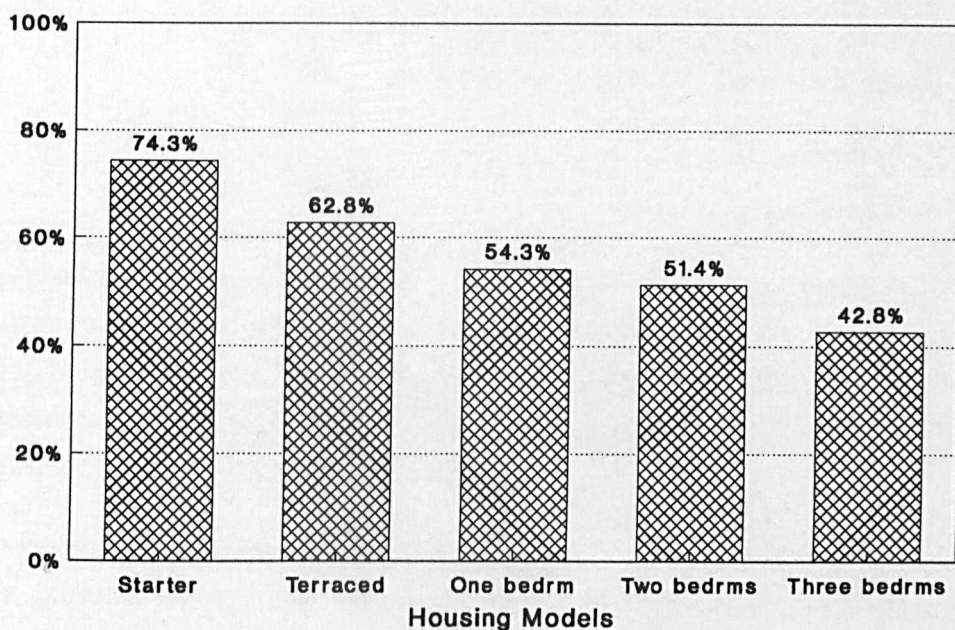
"Who is in the living room can see through both bedrooms. We're going to fit doors in the empty doorways as soon as we can afford it. After all, we need to separate the different areas."

#### 1.3. Figures for the conflict.

The next chart illustrate the proportions of the missing doors conflict according to the size of the diverse house types.



### MISSING DOORS PROPORTIONS OF THE CONFLICT ACCORDING TO THE MODELS SIZE



**FIG. 9.2** Proportion of conflicts related to missing internal doors, according to the size of the housing models.

As can be seen from the chart, the Starter House residents are more likely to have conflicts with the lack of doors inside the house, since they accounted for as much as 74,3% of the sample surveyed. Conversely, the Three Bedroomed House residents accounted for only 42,8% of this conflict. This variance seems to be related to the size of the house; the conflicts on missing doors decrease steadily, from the smaller house model to the larger one.

The next section of this Chapter discusses the phenomenological dimensions of doors.

## 2. Doors.

"How concrete everything becomes in the world of the spirit when an object, a mere door, can give images of hesitation, temptation, desire, security, welcome and respect. If one were to give an account of all doors one has closed and opened, of all doors one would like to re-open, one would have to tell the story of one's entire life."

Gaston Bachelard.

As Heidegger says, whenever an object which is ready-to-hand becomes unready-to-hand, whether it is broken or missing, it becomes conspicuous. This is the case with the internal doors that are missing in Palmital's houses. To properly understand this conflict, the fundamental question by Heidegger should be asked: What are doors for?

To be one's castle instead of one's prison, a house needs to communicate with the outside world. This necessity stems from the fact that setting up an inside/outside is one of the fundamental characteristics of a dwelling, as defined by Korosec-Serfaty (1985, p. 72). A house is a place in that it has an *inside* as opposed to an *outside*. The walls enclose the *inside* while the elements that permit the dialectic relationship between *inside/outside* to take place are doors and windows. The attention of this section is focused on doors.

Doors are elements that indicate the crossing point between two realms. Being so, they incorporate meanings that go far beyond their functional role as apertures. Doors, if external, prompt the house to establish a controlled interaction with the outside world, without giving way to unwanted visitors and without displaying what must be hidden. When they are internal, they function as territorial mechanisms to open and close self/other's boundaries.

Those who pass through the entrance door into another's place will be crossing beyond a simple limit between two territories; they will be entering another's intimate surroundings. Those who belong to that place can enjoy the freedom of going in and out, whether the place is a country, a city, a house or just a room. There are spaces in the house that are open to all the residents all the time. Conversely, there are rooms that can only be accessed

by those who inhabit them or by those who are given permission to enter. Doors are the limits to the freedom of circulating which can be activated or cancelled, depending on the circumstances. Opening the door to go away and be free from the day-to-day routine, closing doors to withdraw into oneself and be free from unwanted interactions; these are the metaphors that refer to the same phenomenon - the dialectic of the *inside/outside*<sup>1</sup>. Outside and inside are both intimate and carry out the idea of freedom. However it is an asymmetrical dialectic, since to be outside does not imply a freedom not to be and vice-versa. Prisoners cannot be outside prison; exiled people cannot be inside their countries; rejected husbands and wives cannot be inside home again; in certain cultures, women cannot go out whenever they want, and so on. Bachelard (1969, pp. 211-230) says that inside and outside are always ready to be reversed, to exchange their hostility, and if there existed a borderline between them, it would be painful on both sides.

For Dovey (1985) the dialectic of inside and outside explains the several meanings the word HOME acquires, depending on the considered context. He writes:-

*"It is through the understanding of this dialectic that we can understand the ambiguities in our use of the word home when we use it to refer to a room, a house, a town, a city, and a nation. Home can be a room inside a house, a house within a neighborhood, a neighborhood within a city, and a city within a nation. At each level the meaning of home gains in intensity and depth from the dialectical interaction between the two poles of experience - the place and its context at a larger scale." (Dovey, 1985, p. 46)*

Doors, as the *object* that mediates the transition between the inside and the outside, embody all meanings that such a dialectic may incorporate. Richard Lang (1985), discussing the role of doors in the phenomenon of transition, writes:-

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<sup>1</sup> See Bachelard, G., *Poetics of Space*, (Boston, Mass.: Beacon Press, 1969), the chapter entitled *The dialectic of Outside and Inside*, pp. 211-230. This Bachelard chapter is the primary source for Korosec-Serfaty, Dovey k., Lang R., and many others authors who have explored the phenomenological approach to dwelling. The concluding chapter of *Poetics of Space* on "phenomenology of roundness" is, according to Spiegelberg (see *The Phenomenological movement*, p. 18), the best example of what Bachelard himself understood positively by his phenomenology.

*"The door is the incarnation of my experience of transition, animating in a visible manner the dialectic of inside and outside, fundamentally presenting either a welcome or rejecting face." (Lang, 1985, p. 204)*

*Outdoors/indoors* are expressions commonly used to designate places situated outside and inside buildings, respectively. Doors are frontiers to be kept, transposed, defended or violated. They are bridges of arrivals and departures, as Lang (1985, p. 206) put forward. They also have a magic dimension in that they have the property of connecting and isolating worlds by the simple state of being open or closed. Having the power of opening and closing door, is a social status that is desired by everyone. There is a widespread custom to give important foreigners visitors the keys to the city, which is the same as saying: *"You are welcome; make yourself at home"*. Doors are symbols that stand for many situations, as the use of language can demonstrate: to shut the door in someone's face, to open the door to a new situation, to get a job by the back door, these are expressions commonly used in several languages as metaphors. *"To get something by the back door"*, besides the primary meaning, shows that there is a difference between the back and front door. The back door is something to be hidden and to be used by those who belong to the place. It is essentially private and only gives access to private activities and places. The front door is the legitimate entrance, the right way to get in. It is the symbol for the public face of the dwelling.

Doors also define places. Not places to stay in, like rooms, but to cross over, transitional places, doorways. However, doorways are qualitatively different, depending on whether the door is open or closed. Open doors encourage the movement of going in or out, the crossing of the doorway. Standing by an open door is an ambiguous therefore untenable attitude. Closed doors actually define two places, one which belongs to the inside, to the place in which one is. The other is automatically associated with the outside, to other people's realm. The doorway as a transitional place only shows itself when the door is open.

### 3. Conclusions.

Amongst the lessons that can be learned from Palmital's conflicts regarding the missing doors in the doorways inside the house, the most important one



# CHAPTER TEN

*Analysis of the Conflicts  
Related to Identity*

## ANALYSIS OF THE CONFLICTS RELATED TO IDENTITY

### 1. Introduction.

The SPACE READINGS of Palmital's residential units have identified the following conflicts related to the phenomenon of *identity* (or *preservation of identity*):-

- \* Substandard materials and appliances.
- \* Height of walls.
- \* Inadequate finishes.
- \* Missing dining area.
- \* Service area and sink at the front of the house.
- \* Size of water tank.
- \* Sloping back yard.
- \* Quantity and dimensions of rooms.
- \* Missing ceiling.
- \* Position of rooms and openings.

The service area at the front of the house will not be discussed in this Chapter since it has already been analysed in Chapter 8.

The conflicts related to identity can be sorted out into two groups. The first one comprises the conflicts with architectural elements that are inherent in the very conception of the models: height of walls, quantity and dimensions of rooms, missing dining area, window design, positions of rooms and apertures and sloping back yard. These conflicts are design related. The second one constitutes the conflicts with elements that are not an intrinsic part of the design but either have been attached to it or are missing: substandard materials, inadequate finishes, missing ceiling and size of water tank. These conflicts are finishings related. The analysis that follows deals with the two groups separately. The next section covers the conflicts that are design related.



## **2. Quantity and dimension of rooms versus quantity of space required.**

### **2.1. Description of the conflict.**

In Palmital the size of house is related to people's ability to pay rather than to the dwellers' requirements. Thus, the houses should be as cheap as possible in order to match the families' income. There were no subsidies from the government and, as the average income of the working class was and still is very low in Brazil (US\$80,00 per month, for skilled workers in the Metropolitan Region of Belo Horizonte, in 1985, according to PLAMBEL), the affordable space would be too small for most families anyway.

Among the Brazilian working class, the size of the house is a matter of great concern, since the size of the average family is 6,7 persons. When they build their own houses they give priority to the size; they build the largest house they can afford, leaving the rooms unfinished. They believe that, once they have built the right sized house, putting the finishings and fittings is only a matter of time. The pretendedly finished Palmital's houses are a huge source of conflict for these people. They think that they have wasted their money because the house neither provides the space required nor has adequate features.

In the Palmital housing models, one of the features that most contradicts popular customs is the kitchen. This is the room that the popular classes in Brazil most appreciate because of their rural roots, since in the remote areas of the country people are used to having their meals in the kitchen. This tradition stems from the colonial period, when the "casa grande" (the manor house) used to have a large kitchen provided with a table for the servants' meals (Vasconcellos, 1956). As the majority of the people on low incomes in Brazil descend from those servants, this custom is still preserved. Actually the kitchen is the gathering place in the home. The Palmital housing models break with this image in that the kitchen design is very basic and does not provide enough room for a dining table or even for a bench on which the food can be prepared.

As far as the bedrooms are concerned, there is not enough space in the Palmital models for the appropriate furniture, which usually comprises at

least beds (single or double), bedside tables, a dressing table and a chair. As can be seen from the drawings in Chapter 5, section 2.3, the room which is intended to be the main bedroom has not enough space for this furniture. This turns into a big source of conflict.

The next section presents some of the comments that contributed to the identification of the conflicts between the size and the quantity of rooms and the amount of space that people require.

## **2.2. Residents' comments.**

### **2.2.1. Starter houses.**

"Seven of us live in this house, so we had to build another room."

"My son sleeps in the kitchen because we've only got one bedroom..."

"If there has to be just one room, at least it should be larger, so everything fits in it."

"The kitchen is much too narrow. There is hardly enough room for the cooker..."

"The house is a mess because there is not enough room to put our stuff..."

"There is not enough room for everyone to sleep... what can we do? We will have another room built as soon as we can afford it."

### **2.2.2. One bedroomed semi-detached houses.**

"We don't have either a dining place or a sitting room, since we've been using all rooms as bedrooms. Have you seen the works outside? We are building another room, to use as a living room. Some friends are helping us, at weekends."

"I'm used to big kitchens, in which we can have a dining table and everything else. When I have enough money I'll extend this kitchen. It is my first priority."

"We had to build another bedroom to separate the children, boys and girls."

"The bedroom was too small before we extended it. Soon as we've got money we will build another one, to separate the children."

image We are building an extension at the back of the house, to use as a dining room."

"We've built another room because there used to be five of us sleeping in one bedroom..."

### 2.2.3. Two bedroomed semi-detached houses.

"We are going to build another room, a very big one, so there is enough space for our family and our stuff. We have already bought the bricks."

"The bathroom and the kitchen are too small. I'll extend them as soon as I have money to do so."

"The kitchen is ridiculously small."

"The bedrooms are too small and there is not enough room for the furniture."

"The rooms aren't big enough for what is needed in them. We have to cram in all the furniture."

"The rooms are too small. Everybody gets in each others' way."

"They should have built larger rooms, at least big enough for the furniture. How can we keep this house tidy if there is not enough room for our stuff?"

"The kitchen is ridiculously small. I wonder if they think that people on a low income are on a low calorie diet as well..."

"There is only one bathroom at the moment so we are building another one off the main bedroom. We'll no longer have problems at busy times."

"My son has to sleep in the same room as my daughters and this is not right. I'll build a room for him as soon as I can afford it."

"The bedrooms are too small. They are not big enough for ours things. We have to pile things up."

"There are seven of us in this house and we've only got two bedrooms. So there are beds everywhere."

"I'm used to large kitchens, with a cooker, a dining table and everything else. I can't cope with this tiny kitchen. It is ridiculously small. My husband built another room but he doesn't care about the kitchen. He doesn't cook, does he?"

"Two of my sons sleep in our room. We need to build another room as soon as possible because they're growing up quickly..."

"The kitchen is ridiculously small. I can't even have a table to prepare the food on!"

"We are poor but we don't like living in a mess. How can we keep this house tidy if we haven't got enough space to put our stuff?"

"I had to get rid of a lot of furniture. Some of it was very nice but where could I put it?"

"The rooms are too small. They are very uncomfortable in the summer since they get the afternoon sun. How could I repair this mistake?"

#### 2.2.4. Three bedroomed semi-detached houses.

"I've built that garage but it is only big enough for a "Fiat Pulga" (the smallest Brazilian car, like a "Mini")."

"This kitchen is ridiculously small. I could hardly make room for the water filter!"

"The rooms are too small for our furniture. Maybe they thought we could afford to buy some new furniture..."

"We've tried to extend the house as much as we can afford to but the plot is too small. I think we'll have to build another floor instead."

"We had to sell our nice old furniture to make enough money to buy some new furniture that would fit in this house."

"The bathroom is too small. There is no room left in which to put the baby's stuff. I've said to my husband that we have to extend the bathroom into the kitchen and to build another kitchen at the back, where it should have been from the beginning."

"We had the bedrooms extended to fit the appropriate furniture."

"It is true that the rooms are too small, but I would be happy if the kitchen was a bit larger so that we had a dining table in there."

"Our bedroom is so small that it doesn't fit our furniture."

"The rooms are going to be extended, because they are too small. I've already bought the materials."

"It is not possible to extend the kitchen because there is no space left. It is not possible to detach the houses either. Is there any point in changing the finishes and the like?"

"I've built another kitchen, at the back. It is smaller but much better laid out."

"The kitchen is too small. Have you notice that it doesn't fit our fridge? "

"I wish I could build another floor but the basement won't support it."

"We've extended the kitchen and the bathroom because they were too small for our family."

"We've built a garage on the corner (the house is on a plot on the corner)."

"We've bought both houses to get more space. We've knocked down the wall between so now we've got one large detached house."

#### 2.2.5. Terraced houses.

"I wonder if is it possible to build another room at the back? The children should sleep in separate rooms (boys and girls), don't you think?"

"We've built a veranda and another room at the back. We don't mind we've lost the window, because we've put an aperture in the roof."

"We don't have enough room for our family, nor can we make any extension. Have you thought about that?"

"The kitchen is as narrow as a corridor."

"The children are growing up and we need to separate boys and girls. We have been thinking about building another room at the back, alongside the fence, and put the boys there."

### 2.3. Figures for the conflict.

The chart in Fig. 10.1 gives a general idea of the proportions of the Palmital's residents dissatisfaction about their dwellings size. It can be noticed from the chart that the starter houses are very much affected by the small amount of space available, accounting for 94% of this conflict. This is not surprising since this model has only got a floor area of 16.50 m<sup>2</sup>. The conflict shows a decreasing trend towards the largest model, which is the three bedroomed

house. Even so, this model accounts for as much as 54% of the conflicts with the size of the house.

## QUANTITY AND DIMENSIONS OF ROOMS CONFLICTS RELATED TO IDENTITY INHERENT IN THE MODELS DESIGN

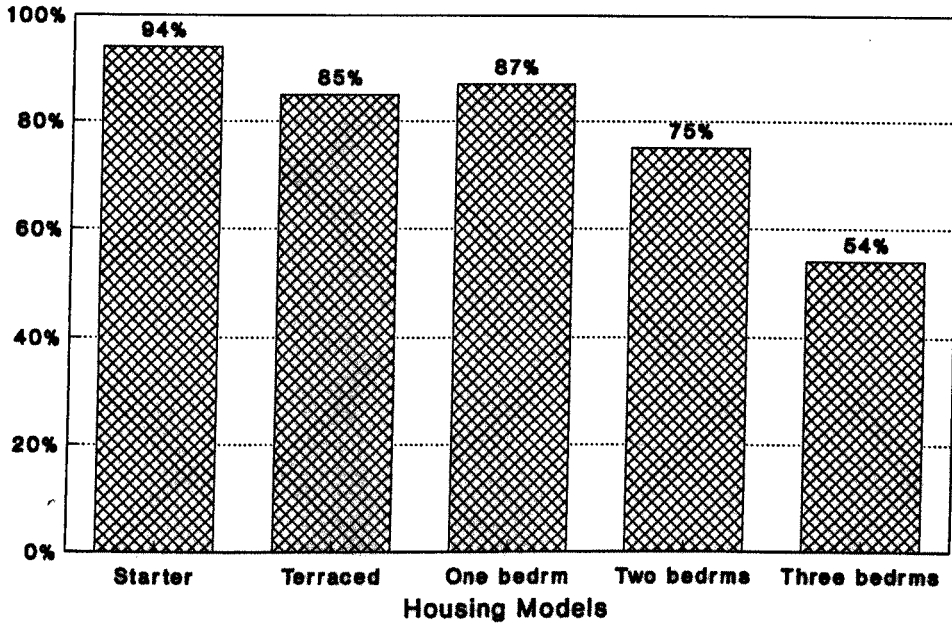


FIG. 10.1 Proportion of conflicts related to the quantity and dimensions of rooms versus the size of the housing models.

### 3. Position of rooms and openings versus privacy and identity.

#### 3.1. Description of the conflict.

As can be seen from the drawings in Chapter 5, section 2.3, in Palmital the diverse house models seem to have been randomly laid out on an unrelated street layout. As a consequence the natural elements (sun, wind, vegetation and topography) are not playing a positive role, i.e., they are not contributing to create a responsive environment.

Another aspect to be mentioned is related to the spatial distribution of the several activities that take place in a house. It has already been shown in



Chapter 7 that in Brazilian vernacular architecture the different zones of activity not only affects the house/plot layout but also the arrangement of rooms. For example, the living room is supposed to be placed at the front of the house because the main entrance must pass through it, consequently the entrance door is inserted in the front facade. In Palmital, except in the Terraced Houses, the entrance door is at the side of the house, which affects the residents' identity. In the Terraced Houses it is at the front but the indoors can easily be overlooked from the opposite door, as the terrace rows are laid out face to face. This affects privacy.

The circulation within the house, which is determined by the position of the doors is immediately connected to the external spaces (public realm) and this is a potential source of conflict. Once more the proposed house plan drawn by a "favelado", which is quoted by Gosling and Maitland (1984)<sup>1</sup> is testimony to the gap between the vernacular solutions and the supposedly "planned" houses at Palmital.

The next section presents some comments that users addressed to the position of rooms and apertures in the Palmital house models.

### **3.2. Residents' comments.**

#### **3.2.1. Starter houses.**

"Everything is wrong in this house: what should be at the back is at the front and vice versa."

#### **3.2.2. One bedroomed semi-detached houses.**

"The sitting room door should be at front of the house, as it is anywhere."

"When one gets into the house he will first see the bathroom. Is it all right?"

#### **3.2.3. Two bedroomed semi-detached houses.**

"There was a dwarf-wall in the original design, that would break the sight of the bathroom from the sitting room. I don't know why they haven't built it, do you?"

"Now we've got it right: we've moved the service area to its place (the back of the house), we've put the sitting-room door at the front, we've built the

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<sup>1</sup> See Chapter 7, Analysis of the Conflicts Related to Territoriality.

external walls, put the internal doors and replaced the finishes. The next step is to build another room."

"The kitchen door is at the front, straight near the street while the living room door is totally hidden, on the side. Who can understand these architects?"

3.2.4. Three bedrooms semi-detached houses.

"The sitting room should open into the front garden!"

"I don't think the bedrooms should open into the sitting room. There should be some room between them, for example a corridor."

3.2.5. Terraced houses.

"We've built this small wall to block out the view of the kitchen. "

"We've moved the entrance door to the left hand side to get more privacy (to not be overlooked by the front neighbours)."

"We've built this small wall between the kitchen and the living room to organize the space properly."

3.3. Figures for the conflict.

**POSITION OF ROOMS AND OPENINGS**  
CONFLICTS RELATED TO IDENTITY  
INHERENT IN THE MODELS DESIGN

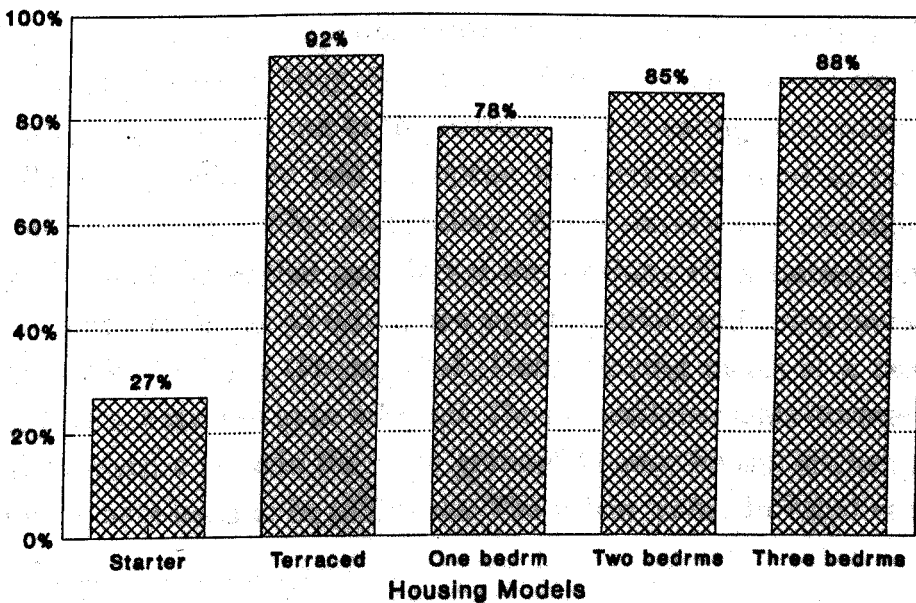


FIG. 10.2 Proportion of conflicts related to the position of rooms and openings according to the size of the house.

As can be seen from the chart in Fig. 10.2, the proportion of this conflict jumps from 27% in the Starter Houses to 92% in the Terraced ones and thereafter decreases steady up to 78% in the Three Bedroomed model.

There is no apparent reason for such a surprising low rate of this type of conflict among Starter House dwellers. The hypothesis that could be made is that these houses are so small that their residents are overwhelmed by the issues related to their size, so they do not speculate about the zoning.

The next section discusses the conflict between the residents' customary way of having their meals and the fact that there is no dining space available in the Palmital house models.

#### **4. Missing dining place versus customary way of eating.**

##### **4.1. Description of the conflict.**

In the Palmital house models, dining areas have not been provided, which is the total antithesis of the traditional way of eating a meal at a table.

In the Brazilian home the ritual to have a meal displays the social class to which one belongs. During the period when slavery was practiced slaves used to have their meals squatting down in the "senzala" (the slaves' room)<sup>2</sup> or outside under trees. They did not use forks and knives and ate the food with their fingers according to the African way of eating. The white settlers from Portugal obviously had European manners and used to have their meals at a table, with china and cutlery. When slavery was abandoned, the newly liberated slaves that constituted the working class started emulating white people's customs; so eating in a squat position and using one's fingers became a social stigma (Freire, 1964; 1968). Having meals at a table was, among others, a custom to be adopted. The domestic servants (former slaves) were then given a table in the "casa grande" (manor house) kitchen to have their meals, as it used to be in Europe. The urban "sobrado"<sup>3</sup> that came next

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<sup>2</sup> When slavery was practiced, there used to be a room attached to the farmhouses called "senzala", in which the slaves lived.

<sup>3</sup> Brazilian "sobrados" are urban houses with two floors from the colonial period. These houses are laid out like English terraced houses, i.e., fronting onto the pavement.

also followed this pattern, that is, to provide room for a dining table for servants in the kitchen. Since then the popular classes have preserved the dining place in the kitchen, which is called "copa" (there is no English translation for this word), while the upper classes have preferred the European-style dining room.

The next section presents some of the comments that lead to the identification of the dining place conflict in Palmital.

#### **4.2. Residents' comments.**

##### **4.2.1. Starter houses.**

"We had this dining room built. The dining room is very important, don't you think?"

"This house is too small. Have you noticed that we can't have a dining table? There is no room left..."

"They should have done a larger kitchen, with enough space for a dining table."

##### **4.2.2. One bedroomed semi-detached houses.**

"I'm used to big kitchens, in which we can have a dining table and everything else. When I have enough money I'll extend this kitchen. This is my first priority."

"We don't have either a dining place or a living room, since we've been using all rooms as bedrooms. Have you seen the works outside? We are building another room, to use as a dining room. Some friends are helping us, at weekends."

##### **4.2.3. Two bedroomed semi-detached houses.**

"I've built another bedroom to use this one as a "copa" (dining place). The house is complete now."

"We are going to extend the house so we can have a "copa" (dining place)."

"I'm used to large kitchens, with a cooker, a dining table and everything else. I can't cope with this tiny kitchen. It is ridiculously small. My husband

built another room but he doesn't care about the kitchen. He doesn't cook, does he?"

#### 4.2.4. Three bedroomed semi-detached houses.

"It is true that the rooms are too small, but I would be happy if the kitchen was a bit larger so that we had a dining table in there."

"We've extended the kitchen to make room for a dining table."

"I've got a nice dining table with 6 chairs but it doesn't fit in my living room. My sister-in-law is using it because she's got a dining room. I wish I had a dining room as well, so I could have meals at a table, like a human being."

#### 4.2.5. Terraced houses.

"There could be enough space for a nice dining table, don't you think?"

### 4.3. Figures for the conflict.

The next chart in the Fig. 10.3 presents some figures for the conflict that Palmital's residents have with the *unready-to-hand* dining place.

As the chart shows, there seems to be an inverse relationship between the house sizes and the proportion of this conflict: the larger the house the lesser the complaints about the dining place are. The only exception is the Terraced House, maybe due to its plan design, which is going to be commented on later. Examining the sketches of the furniture layout for the diverse models, it can be observed that in the models with two and three bedrooms many residents are using one of the bedrooms as a dining room. This may explain why the incidence of the conflict decreases in these models.

Terraced houses account for only 3% of this conflict and this seems to be due to the distribution of space inside the house, which is different from the other models, as can be seen in Fig. 7.11 (Chapter 7, section 3.3). In this pattern, the kitchen is integrated with the living room, similar to the traditional working class dwelling already described.

### MISSING DINING ROOMM CONFLICTS RELATED TO IDENTITY INHERENT IN THE MODELS DESIGN

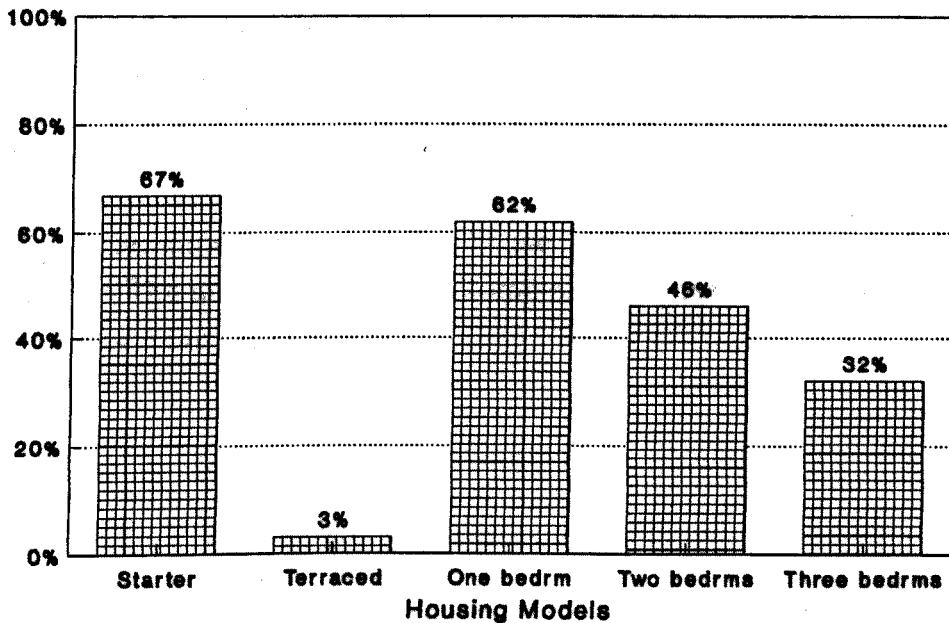


FIG. 10.3 Proportion of conflicts related to the missing dining place according to the diverse models.

The next conflict to be analysed is related to the slopes that have been left unprotected on the plot.

## 5. Sloping yards versus safety requirements and need for flat land to plant.

### 5.1. Description of the conflict.

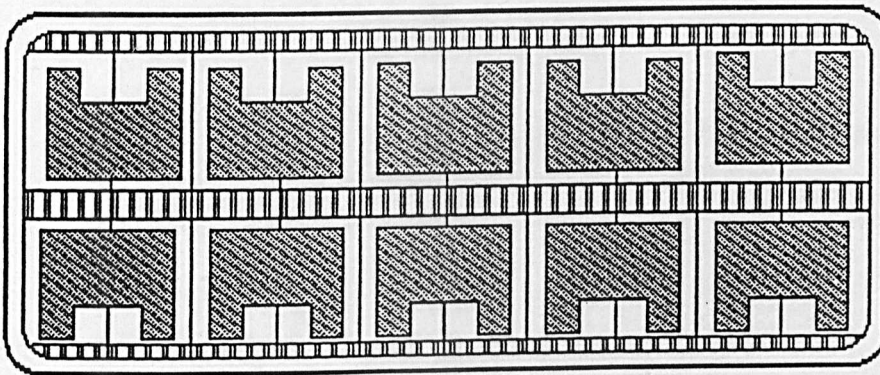
The site of the Palmital settlement is very hilly, so it is nearly impossible to provide flat plots on it without building retaining walls. Even if the settlement had been better laid out, retaining walls would still have been needed in many places. However, a low-cost housing development could not have afforded such expensive construction. Although the soil is subject to erosion, the chosen solution was to leave the slopes in the open, totally unprotected. The consequence of this is that rainwater carries the soil away,



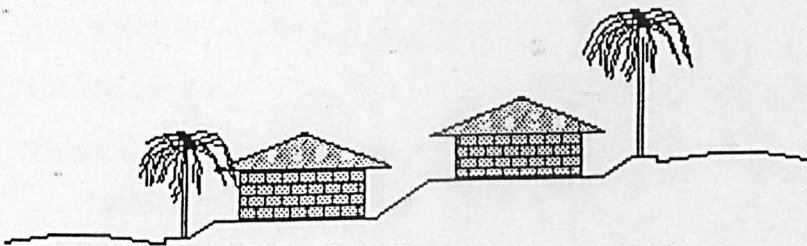
sometimes down into the house and at other times into the back yard, depending on the position of the slope.

In addition to erosion problems, the slope in the back yard forms an obstacle to the growth of vegetables. This is because it either takes a lot of space in the plot or drains away the rainwater, carrying away everything that has been planted.

Finally, if the slope is very high the house will be unsafe because of the threat of landslip. The next section brings some of the comments that the residents have addressed to the sloping land.



▨ SLOPES



SECTION

FIG. 10.4 Diagram of the sloping land in Palmital.

## 5.2. Residents' comments.

### 5.2.1. Starter houses.

"I wish we had a vegetable garden so we could grow more food, but we can't because the back yard is on a slope."

### 5.2.2. One bedroomed semi-detached houses.

"There was a huge slope between the plot and the pavement. It used to be very dangerous to get down in the wet season. Then we had the stairs built and the front area paved over."

### 5.2.3. Two bedroomed semi-detached houses.

"When it rains, the water flows down slope. As there are no drains, it flows straight into the house."

"The rain flows into the house down the slope, carrying in all sorts of rubbish. There aren't any drains."

"The water and mud that drain into the house are appalling and this is because of the slope. We can't plant anything outside or the rain washes it away."

"This slope drains water into the house. Besides, I can't grow any vegetables on it."

"It is impossible to grow any vegetables on the slope in the back yard... we used to grow a lot in our home town."

"There is a huge slope in the back yard, so we can't plant anything on it as the rain washes everything away."

"I'd like to have a barbecue in the back yard, but that slope."

"This slope drains water into the house. Besides, I can't grow my vegetable garden on it."

"We can't plant anything outside or the rain water will carry it away, because of the slope."

### 5.2.4. Three bedroomed semi-detached houses.

"The rain flows into the house when there are heavy showers. It's because of the sloping back yard."

"If it weren't for this slope I would have built a barbecue here. My wife, in turn, dreams about a vegetable garden."

"There is a huge slope in the back yard. We can't plant on it because the rain water carries everything away."

"We can't plant anything in the sloping back yard. I wish I had a vegetable garden and some herbs, medicinal herbs you know?"

#### 5.2.5. Terraced houses.

"We want to remove the slope from the back of the house, to be able to grow vegetables there. The next-door neighbours have done a flat back yard which is very nice!"

#### 5.3. Figures for the conflict.

The figures for this conflict are presented in Fig. 10.5.

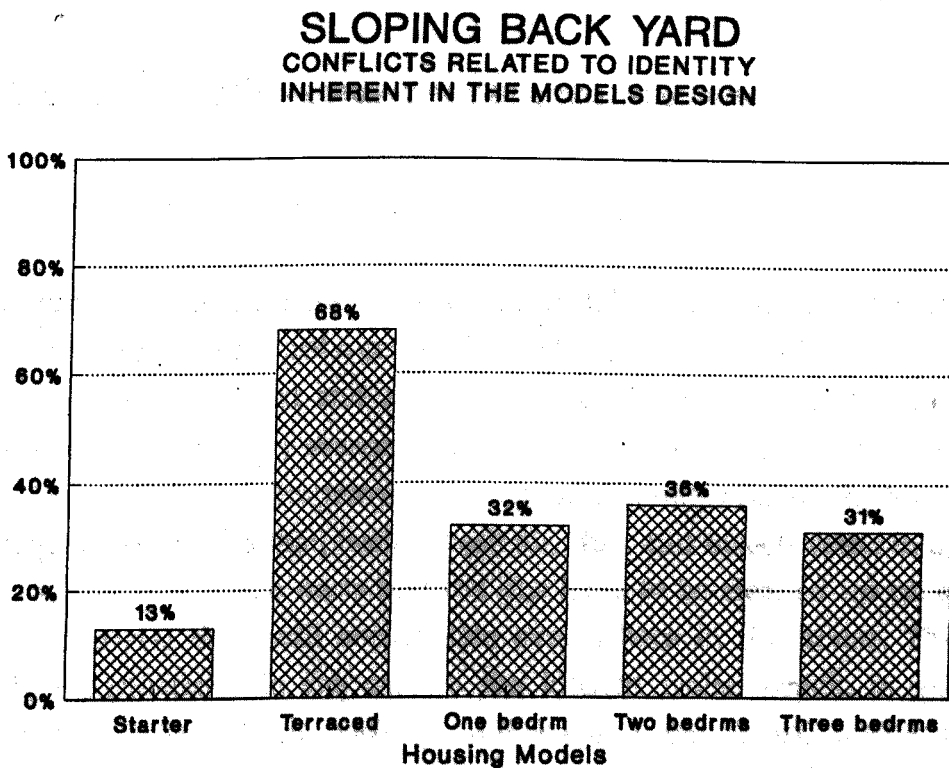


FIG. 10.5 Proportion of conflicts related to the sloping back yard according to the diverse housing models.

The figures rise sharply from 13% in the Starter Houses to as much as 68% in the Terraced Houses, and drop again to become stable (32%, 36%, and 31%) in the other models. The explanation of the low proportion of conflicts in the Starter Houses may be due to the fact that this model is not much affected by the slope on the side of the house. This is because the model is laid out at a considerable distance from the side limit of the plot, to permit future extensions. The slopes that cause problems are those left either at the back or on the side of the plot (they drain mud into the house and take space in the garden). As the house lies at a certain distance from the slope, there is not much concern about the problem. Conversely, the Terraced Houses are the most affected by the conflict, accounting for as much as 68%. This appears to be because this model is in fact the most vulnerable to the problems of sloping land. The houses being attached to each other end up by constituting a barrier that does not let the rainwater get away. Thus, the mud from the unprotected slopes drains into the houses, since there is no alternative way.

The next section deals with the conflict that is provoked by the high walls.

## **6. Height of walls versus cleaning requirements.**

### **6.1. Description of the conflict.**

As it can be seen from the illustrations in Chapter 5, section 2.3, Palmital house models have not got a ceiling (except in the bathroom), so the walls are much higher than usual and are therefore difficult to clean. As Brazil is a tropical country, the dry season is quite warm, so the windows must be kept open day and night, to improve environmental comfort inside the house. The consequence of this is that, beside fresh air, dust and insects come in as well. Dust, spider nets, wasp nests and the like have to be cleaned up on a daily basis, otherwise they will accumulate everywhere in the house. This is a problem particularly in the case of the kitchen walls, which, in addition accumulate grease from cooking and have a paintwork which is not washable. The top of the walls cannot be reached without using a step ladder, which makes the cleaning work more difficult still.

Some residents' comments that identified this conflict are presented in the next section.

## **6.2. Residents' comments.**

### **6.2.1. Starter houses.**

"It is very difficult to keep this house clean, since the walls are too high and one can't reach the top."

### **6.2.2. One bedroomed semi-detached houses.**

"The walls are much too high. They are not proportional, you know? Besides, they're very difficult to clean. I'll put a ceiling in the future."

### **6.2.3. Two bedroomed semi-detached houses.**

"How can I get to the top of these walls to clean them? Even if I use a step ladder I won't be able to reach the top."

"The walls are too high so I can't clean them."

### **6.2.4. Three bedroomed semi-detached houses.**

"I'll build a concrete ceiling as soon as I can afford it. The walls are too high for the size of the rooms."

### **6.2.5. Terraced houses.**

No comments.

### 6.3. Figures for the conflict.

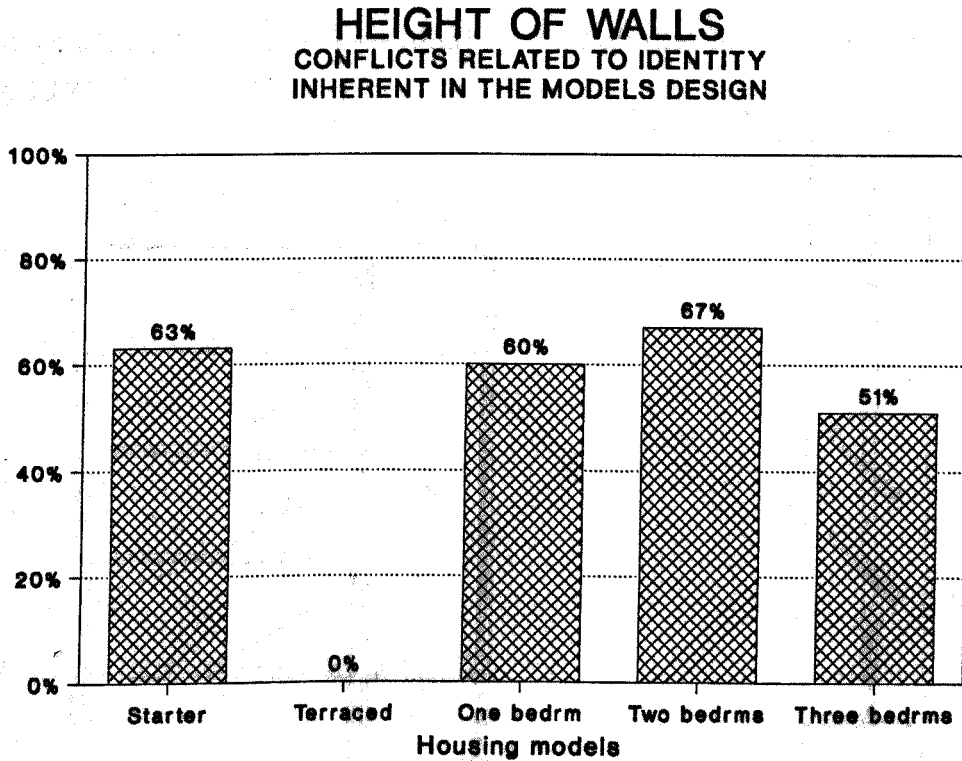


FIG. 10.6 Proportion of conflicts related to the height of the walls according to the diverse housing models.

As can be seen from the figures, the proportion of this conflict does not present much variation among the smaller models (63%, 60% and 67%) but decreases considerably in the three bedroomed houses (51%). This might be because in the completed model, which is the three bedroomed one, the walls do not look as disproportionate as they do in the others. The terraced houses do not present this conflict because they have a in-situ concrete ceiling, as can be observed in the drawings in Chapter 5, section 2.3.



## 7. Window design versus ventilation requirements.

### 7.1. Description of the conflict.

The windows that have been fitted in the Palmital houses are illustrated in Fig. 10.7

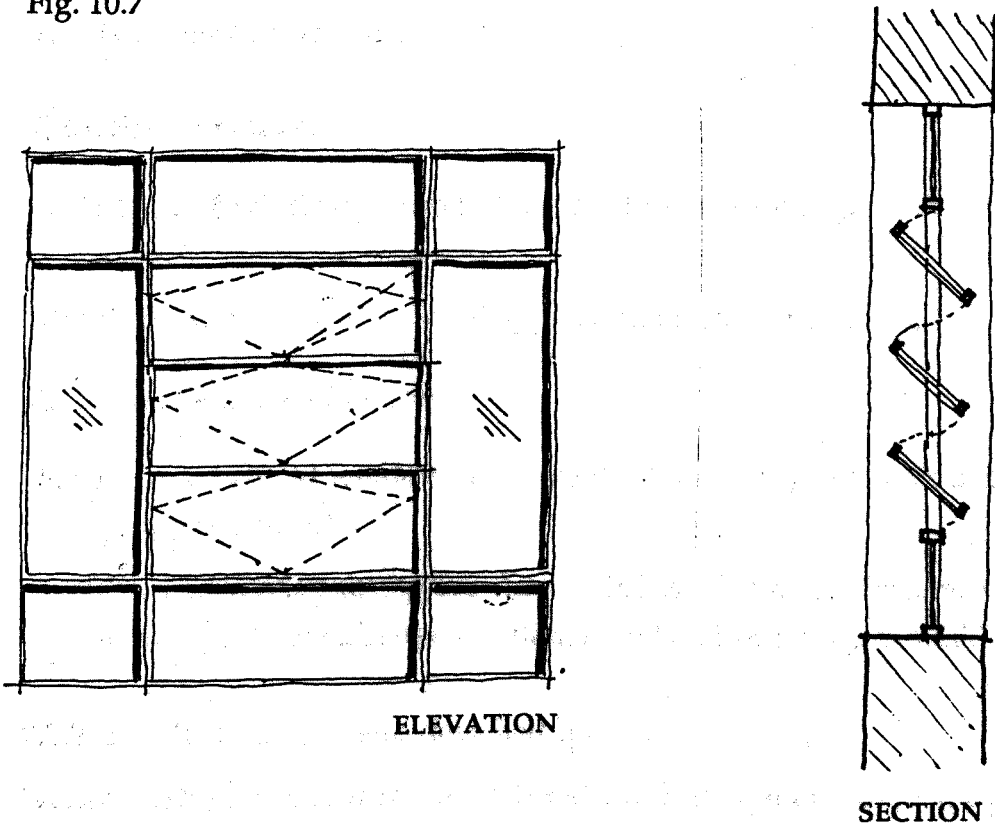


FIG. 10.7 Window of Palmital housing models.

This window type is very popular in Brazil and is usually employed in bathrooms, kitchens and service areas. On the other hand, it is hardly seen in facades, i.e., in living rooms or bedrooms. This is because it neither provides a complete aperture nor is suitable for one to bend over the sill. As Brazil enjoys very pleasant weather for the most part of the year, leaving the windows open and letting the fresh air come through is a widespread requirement. Besides, people also like to lean out of the window to appreciate what is going on outdoors or to have a chat with the next door neighbour. This is to everybody's amusement, particularly in working class suburbs, where it is very common to see neighbours having a chat through

the windows. The window model which is fitted in Palmital frustrates this widespread custom and ends up by constituting a source of identity conflict.

The next section lists some examples of comments that have been addressed to the windows.

## **7.2. Residents' comments.**

### **7.2.1. Starter houses.**

"This type of window doesn't allow air to come through. It is very hot in here."

"Beside being too small, these windows don't freshen the house."

### **7.2.2. One bedroomed houses.**

"We removed all old windows because they were very ugly and didn't work properly either."

"I wish I had money to replace these windows by more efficient ones. My home would get a better ventilation and a nicer facade as well."

### **7.2.3. Two bedroomed semi-detached houses.**

"When we built the new room we fitted another type of window, that could provide more ventilation. In addition, the new window is very nice, don't you think?"

### **7.2.4. Three bedroomed semi-detached houses.**

"We've replaced the old windows. They weren't working properly and let the rain in. Do you like these windows? I find them very nice. They cost a lot of money!"

### 7.3. Figures for the conflict.

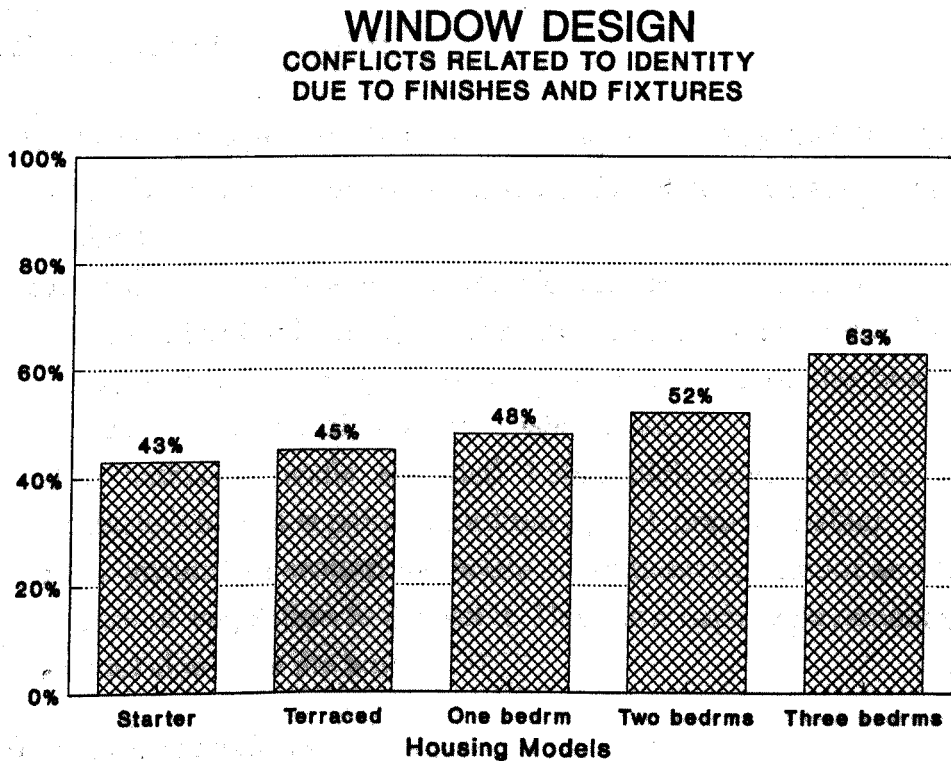


FIG. 10.8 Proportion of conflicts related to the window design according to the diverse housing models.

The figures for the window design show a steady increase in the conflict as the quantity of rooms increases. There are two hypotheses to explain this behaviour. The first is that the larger the number of windows there are in a house, the more complaints there are. The second hypothesis is that the conflict about the window design has connections with status. As the Palmital houses are allocated according to the family income, those well off, as it were, reject the windows more.

## **8. Inadequate finishes versus cleaning requirements and substandard materials and fixtures versus identity.**

### **8.1. Description of the conflict.**

The finishes employed in the Palmital housing models are the following:-

- a) The floor is made of concrete, which is not covered and has a rough finish.
- b) The walls are made of concrete blocks. The exterior is plastered and painted but the interior, apart from the bathroom and the kitchen, is only painted, so it has got the rough texture of the blocks. The paintwork is an ordinary non-washable one.
- c) The bathroom walls are tiled 1.50m high alongside the shower cubicle. The rest is painted (ordinary paint, non-washable).
- b) The ground all around the house is left natural, without any kind of finish or vegetation to protect it. There is a narrow pavement (0.70m wide) alongside the houses.

The fixtures are as follows:

- d) No light fittings are provided.
- e) The sink is in pre-cast concrete, "in natura", so it is too rough for washing. The sink is also too low to do the washing.

As has already been mentioned, people on low incomes in Brazil usually take a lifetime building their houses. They first construct the basic rooms (living room, bedroom, kitchen and bathroom) and then make the improvements (finishings and fittings) over time. The works are planned according to the family's budget and priorities. There is always something to be done, so that the building never comes to an end. In Palmital the houses appear to be ready, although they are not complete. Thus, the owners feel they are wasting their money, since they have to pay for something that leaves a lot to be desired. Moreover, they have to spend extra money on repairing, completing and replacing things. In the case of the finishes and fixtures, they feel they have been cheated, since they have to replace many items which are not working properly.

The next section presents some examples of comments that Palmital residents addressed to the finishes and fixtures.

## 8.2. Residents' comments.

### 8.2.1. Starter houses.

"The floor used to be too rough. We have covered it with this lino, which is easier to clean."

"The floor is much too rough. I will re-decorate the whole house as soon as I can afford it."

"I've covered the floor with red cement to make it smooth and easier to clean. Besides, it looks nicer, doesn't it?"

"I have covered the floor with these tiles. They are easier to clean and look nicer, don't they?"

### 8.2.2. One bedroomed semi-detached houses.

"I've plastered the walls as well as covered the floor with a combination of cement and red dye powder. It looks nice, doesn't it?"

"I've put slates in the living room, tiles in the bathroom and in the kitchen, and a wooden floor in the bedrooms."

"We've built the pavement in front of the house because when it rained the mud would be very slippery. Once I had a fall and got badly hurt. Since then I decided to have the front paved over. Here it is!"

"We've covered the floor to make it smooth and easy to clean."

### 8.2.3. Two bedroomed semi-detached houses.

"We've replaced the sink for another one much better... you know, much easier to deal with."

"All the pipes are narrower than they should be. I've replaced some pipes that had collapsed. It was very expensive. "

"The pipes are always blocked. They all need to be replaced. In fact, all the finishes are appalling."

"I had the walls replastered to make them smooth. Now it is easier to clean them."

"The floor is too rough and it is not flat either. It is impossible to keep it clean."

"I'd rather beat the ground flat than have this rough covering. The children are always hurting themselves on it."

"I had the floor covered with red cement. Now it is nice and easy to clean."

"The plaster is very rough and gets very dirty. I had the floor covered and I'll replace the plaster when I can afford it."

"We've paved the area in front of the house to get rid of the mud that used to accumulate during the rainy season."

"I had the floor covered throughout the house. Now I can keep the lino nice and clean."

"All the finishings are substandard. We need to replace everything. We've already covered the kitchen floor."

"The floor was too rough and we couldn't keep it clean. Then I covered it with...." (*the resident then listed the ingredients of the covering*).

"The entrance didn't have a pavement in front of it. First we planted grass but, gradually the grass dried out and we had to pave over it."

"We had the floor covered. As you can see, we've got a wooden floor in the sitting room and carpets in the bedrooms. We have put tiles in both the kitchen and the bathroom, to make them easier to clean. Now the house is always nice and clean."

"The finishes are appalling and we need to spend a lot of money to have them replaced. You see? The plaster is flaking off..."

"The walls have not been plastered properly; the floor covering is too rough. We have covered the bedroom floors and when we have enough money we will replace all the finishes."

"I've planted some grass outside. I couldn't cope with the dust."

"I want to have this floor covered with slate. This surface is too rough, don't you think?"

"The rough surfaces accumulate dust and there is mould in the bathroom."

"The sink placed at the front of the house is nonsense, is ridiculous. I can't get used to it. Moreover, the fitted sink was of such a bad quality that it has been broken and we had to have it replaced, then we changed the model." (This comment has already been listed in the Chapter VI, section 1.2.)



"We replaced the sink for another much better... you know, much easier to deal with."

#### 8.2.4. Three bedroomed semi-detached houses.

"The pipes often get blocked. I'm thinking about replacing them."

"The sink is too small and it is much too low. I get back ache when I use it, but who cares? Men don't do the wash, do they?"

"I can't cope with these finishes. They look so bad!

"The materials are of very bad quality. We've already replaced some of them."

"I had to make the sink a bit higher because I get back ache if I bend over too much. I took this chance to replace it with a larger one."

"This floor is too rough for the children. The youngest often gets hurt. I've put a temporary carpet in the living room, where the children spend most of their time watching TV."

"The sink is too low and I get a bad back when I do the washing. I'll put it right as soon as possible."

"I've had to replace the kitchen sink with a new stainless steel one."

"I've had the sink replaced with a new one, much more practical."

"The floor and the walls cannot be cleaned properly. We've covered the kitchen floor but there is a lot to do yet."

"I've had the front of the house paved over to get rid of the dirtiness. Now our children can go and play outside safely."

"They should have fitted the sink a bit higher, to prevent us from having backache."

"We've replaced the rough finishes and the paintwork. We prefer bright colours to white and gray."

"We've covered the rough floor in every room. We've put things right: now the bedrooms are wooden and the bathroom and kitchen are tiled."

#### 8.2.5. Terraced houses.

"The paintwork is of bad quality. It is getting deteriorated and releases a thin dust all over the house."

"In the wet season there are drips coming from the roof. Our next-door neighbour, who is a bricklayer, said that the tiles are of bad quality so that they soak up the rain water and drop it into the house. He replaced his roof and we're thinking of doing the same, as soon as we can afford it."

"We've first covered the rough floor with cement combined with green dye powder. Now we're planning to have the bedrooms plastered and the kitchen tiled. We've already bought the material."

"We've covered the rough floor with cement but this is a temporary solution. What I want to do is to put tiles all over the house, including the living room."

"It was very difficult to clean up this floor. The more we washed it the dirtier it looked. Then we had it covered with cement and it worked!"

"I've covered the floor with cement combined with paraffin, wax and plastic. My father, who is bricklayer, gave me this formula. Now the floor is smooth and shiny."

"The floor was too ugly, then we've covered it with cement."

"We've had the front of the plot paved over to get rid of the mud, in the wet season. First we tried grass, but the water bill went up<sup>4</sup> and we had to change our minds and give up the frontal garden."

"My husband won a second-hand carpet from his boss and we fitted it in the rooms. We covered the kitchen floor with pieces of broken tiles that we got free, we only had to collect them."

"We've covered the floor and plastered the walls. Now the house is looking nice."

"We've had the front paved over so that dust and mud are no longer carried into the house. I wish I had a lawn instead, but it would be very expensive (because it would have to be watered regularly in the dry season)."

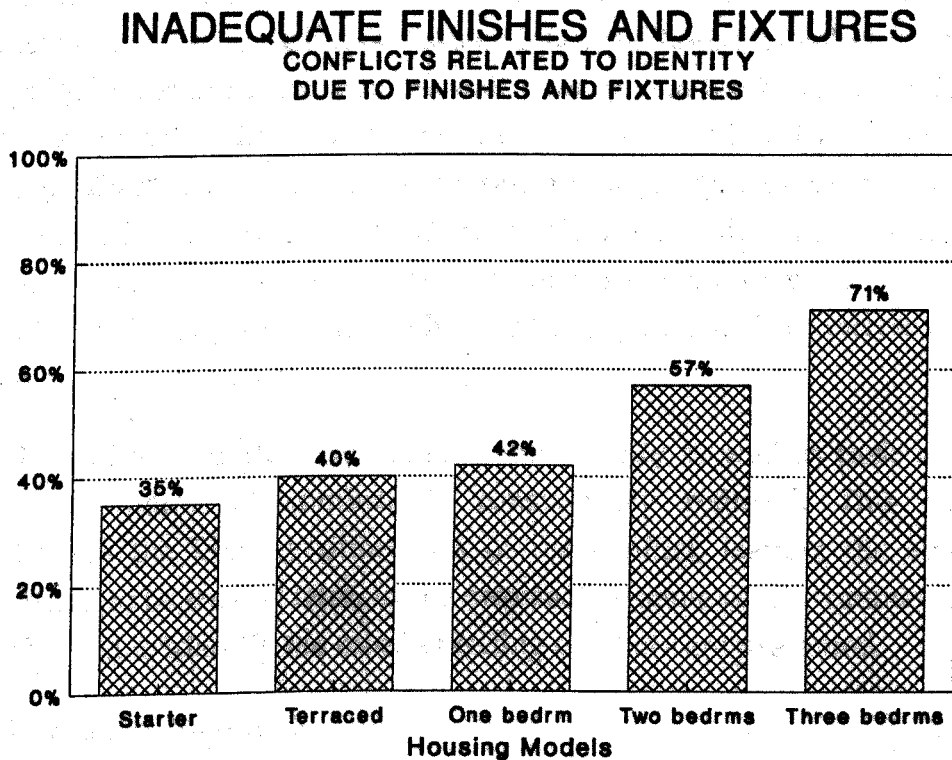
"I had this area paved (at the front of the house) because it used to carry dust and mud into the house."

---

<sup>4</sup> In Brazil water is metered.

### 8.3. Figures for the conflict.

The next chart shows some figures for this conflict.



**FIG. 10.9** Proportion of identity conflicts related to inadequate finishes and fixtures, according to the diverse housing models.

Once again the three bedroomed house dwellers are the most affected by an identity conflict, since they account for as much as 71% of the complaints about inadequate finishes and fixtures. Also it can be observed that the increase in the conflict is paralleled by the increase in the size of the house.

## 9. Missing ceiling versus identity and environmental comfort.

### 9.1. Description of the conflict.

In Palmital, only the bathroom is provided with a ceiling, as can be seen from the drawings in Chapter 5, section 2.3. The ceiling in Brazil is an indicator of

life-style in that it is one of the main features that distinguish the rural dwelling from the urban one. The rural working class in Brazil live in very substandard conditions, in houses that have not got basic sanitation, electricity and water supply. The walls are made out of mud and the roof is made with palm tree leaves. The ceiling is non-existent and "barbeiros" (insects that cause the Chagas disease) infest the house, whether in-between the palm leaves or in cracks in the wall. This type of hut has got two features that are typical of it: walls made out of beaten mud and roofs without a ceiling. These two elements turn out to be a symbol of poverty and substandard living conditions. When people move to the cities to start a new life they generally reject everything that reminds them of harsh past conditions. As most of the urban houses have got an in-situ concrete ceiling<sup>5</sup>, this is what people want.

The lack of a ceiling affects the residents *identity* as well as their *ambience*, since environmental comfort is considerably reduced. This Chapter emphasises the identity dimension of the conflict, leaving the ambience dimension to be treated later. In the next section some user's comments - that have helped to identify the missing ceiling conflict - are presented.

## 9.2. Residents' comments.

### 9.2.1. Starter houses.

"There are holes in the roof and they let in water. If we had a concrete ceiling (*in-situ concrete ceiling*) it wouldn't leak. Without a ceiling we have got the same problems we used to have back home. We didn't come to the city to live as we used to..."

### 9.2.2. One bedroomed semi-detached houses.

"We've built the ceiling in in-situ concrete to improve the aspect inside the house and to solve some problems such as the dust coming in. In the dry season we couldn't cope with the dust. We always had trouble, you know?"

"I've covered the gaps with plastic and it seems to be working. At least I get rid of the dust until I built a ceiling."

---

<sup>5</sup> In Brazil, the in-situ concrete ceiling is very popular, since it is one of the cheapest ceilings that can be built.

"We've filled the gaps with cardboards until we can afford to build an in-situ concrete ceiling."

#### 9.2.3. Two bedroomed semi-detached houses.

"I don't like houses without an in-situ concrete ceiling. They look like farm houses and I came to the city to get away from farming..."

"There is no in-situ concrete ceiling, no covering on the floor, no space. I'm building another house outside instead of improving this rubbish!"

"Do you think I could put an in-situ concrete ceiling on top of these walls?"

"We have built this in-situ concrete ceiling to improve the internal finishing."

"We had this temporary ceiling fitted because we couldn't cope with the wind and the dust. The house is at the top of a hill and it is very windy here."

#### 9.2.4. Three bedroomed semi-detached houses.

"We've built this in-situ concrete ceiling to make the house more attractive inside."

"The next step is to build an in-situ concrete ceiling to modernise the house."

"There is no in-situ concrete ceiling and this is bad. I'll build an in-situ concrete ceiling for all rooms but the living room, in which I'd like to fit a decorative wooden ceiling."

"Apart from the ceiling, I've already changed everything that bothered me: paintworks, wash-basin, cemented sink and the like. After building an in-situ concrete ceiling I'll feel that this house is my place, not as before."

"Any house without a ceiling is unpleasant and ugly."

#### 9.2.5. Terraced houses.

No comments.

### 9.3. Figures for the conflict.

The terraced houses obviously do not display the conflict, since they have got an in-situ concrete ceiling. The trend seems to be a steady increase from

the starter houses to the two bedroomed ones (from 27% to 33%), and then there is a jump in the proportion of the conflict to as much as 54% in the three bedroomed models. This may be because people living in this model are somewhat better off, so they are more likely to have an identity conflict with features that remind them of their rural origins.

### MISSING DINING ROOMM CONFLICTS RELATED TO IDENTITY INHERENT IN THE MODELS DESIGN

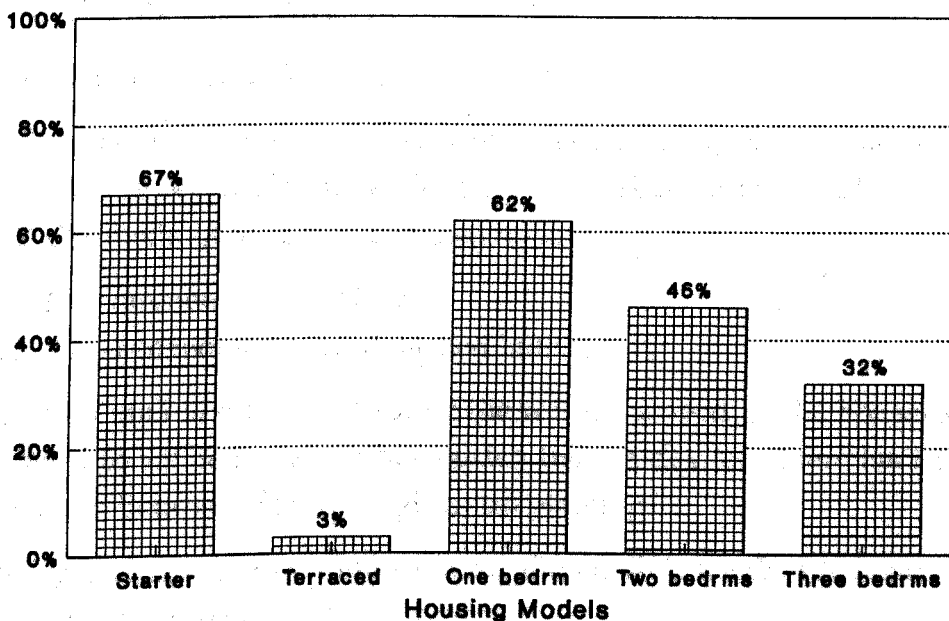


FIG. 10.10 Proportion of identity conflicts related to the missing ceiling according the diverse housing models.

## 10. Water tank size versus amount of water required.

### 10.1. Description of the conflict.

In Palmital, the water tank stores only 1000 litres. The average daily consumption of water in this region is 250 litres per person per day. The average family in Palmital is of 5,7 members, so the average daily consumption should be approximately 1425 litres. The water supply in Palmital is intermittent (once a day), which means that domestic water



storage has to be sufficient for at least one day's consumption. As the water tank capacity is about 30% less than the potential consumption, residents have to store water in barrels to meet their demands. In doing so, they get the feeling that they are still living in substandard conditions, as in the "favelas". This situation affects the residents' need for preservation of *identity*, since they have moved to Palmital looking for a better life.

The comments that follows illustrate how dissatisfied the Palmital residents are with the water tank size.

## 10.2. Residents' comments.

### 10.2.1. Starter houses.

"The water tank is too small and when the water supply fails... you know, there are seven of us here. We've got some barrels outside."

### 10.2.2. One bedroomed semi-detached houses.

No comments on this issue.

### 10.2.3. Two bedroomed semi-detached houses.

"The water tank is too small to store the water we need. In the hot season we need to water the vegetable garden twice a day and there isn't enough water. Because of this I've given up planting."

"The water tank is too small to cater for the family's needs. We have to store extra water in barrels."

"We've installed another water tank so we can have a bath whenever we want. For example, when it is very hot in the summer..."

"The water tank has been fitted wrongly. It is tilted so when it gets full it pours water into the house. I'll replace it with a bigger one."

"The water tank is too small. Also the water supply is periodic. Sometimes there is water at night and we have to get up to fill the barrels."

"We've put another water tank up there because of the water shortage. Water supply is the major problem here, in Palmital."

### 10.2.4. Three bedroomed semi-detached houses.

"We've installed another water tank. I'm afraid it is too heavy for the walls... Can you see the cracks over there? Do you think they've been caused by the tank?"

"The water tank is too small. There is only water between 6:00 and 8:00 in the morning. During this time we have to do everything that requires water."

"The water tank is too small and the water supply is not continuous. We have to store water in barrels and this is a problem. Have you seen the campaign to prevent "dengue"<sup>6</sup>? They say that you shouldn't keep water like this. Why COHAB didn't thought about that? Now we are at risk..."

10.2.5. Terraced houses.

"If we had a larger water tank we could grow vegetables in the back yard."

10.3. Figures for the conflict.

In the next chart some figures for the conflict with the water tank size are displayed.

**WATER TANK SIZE**  
CONFLICTS RELATED TO IDENTITY  
DUE TO FINISHES AND FIXTURES

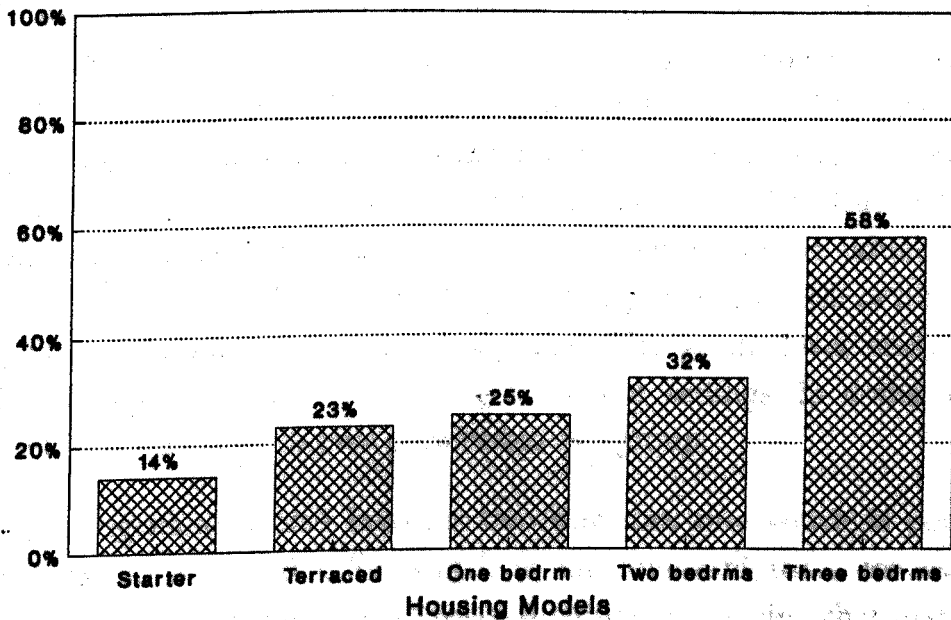


FIG. 10.11 Proportion of identity conflicts related to the water tank according to the diverse housing models.

<sup>6</sup> Dengue is a disease contracted from dirty water in which mosquitos lay their eggs.

The figures are below one third for all models but the three bedroomed house, in which the conflict accounts for 58%. This seems to be logical, since the larger houses will have a bigger consumption.

The next section of this Chapter discusses the phenomenon of identity and preservation of identity.

## 11. Identity.

It has already been mentioned in Chapter 3 that *identity* is related to the phenomenological dimension of the *Hidden* and the *Visible*, which comes out of *setting up an inside/outside*. At the same time that the dwelling is open to the outside it encloses the inside, so it conceals and shows, it is secrecy and display. The phenomena that are associated to this dual characteristic of hiding and displaying are the need for privacy and the preservation of identity. Privacy has been discussed earlier in this thesis. Identity is to be described in this section.

In order to fully understand the identity conflicts that take place in Palmital it is necessary to examine the nature of the concept and its spatial implications. In discussing *identity* a preliminary question arises: what is identity? From the body of literature consulted, identity could be defined as *all qualities, beliefs and ideas which make one feels that he or she belongs to a particular group, although being different from everyone else*. This definition implies that identity can be experienced at two levels: the individual and the group. The individual level enables a person to perceive herself or himself as singular and distinct from everybody else. The group level anchors the individual by giving her or him the behaviour settings. In doing so, the group level establishes its own parameters as a group.

Experiencing identity also involves two domains: one which is personal, turned to the self; and other which is for communication, for external consumption, as it were. In the personal (private) domain what matters is relatedness. In the external (public) domain what is essential is that *"the particular distinctiveness (identity) be communicated, particularly to others, i.e. that there be a system of messages which clearly communicates the essentials (the core) of identity."* (Rapoport, 1981, p. 12)

The dual process of preserving and communicating identity involves environmental and non-environmental elements. The environmental elements may be landmarks, settlement patterns and buildings. The non-environmental ones are ritual, clothing, language, rules of hospitality, certain ranges of occupations and so on. When the process involves environmental elements, architecture plays an important role in reducing or strengthening one's sense of identity. Dwelling places, being the places in which people spend most of their time, are more likely to convey personal identity messages, while public buildings such as palaces, theatres and the like act as mirrors for group identity.

When dwellings convey identity signs, some of their characteristics seem to be more active than others. Rapoport considers that fixtures (semi-fixed elements) are more likely to display identity signs. He says:

*"In those cases where environments are involved, it appears that the elements which are used to communicate identity tend to be less in the domain of fixed elements, and more often in the domain of semi-fixed elements such as mailboxes, shutters, awnings, colours, levels of maintenance and many others, including lawns, planting and gardens. Size, elaboration, location in space or whole cultural landscape complexes may also be used." (Rapoport, 1981, p. 9)*

It is also true that fixed elements, such as the settlement layout, the buildings and other architectural settings sometimes play a major role in the preservation of identity. In Brazil there is an expressive example which corroborates this assertion. This took place amongst the indigenous people that had been studied by the French anthropologist Claude Levi-Strauss. Studying the Bororo tribe, Levi-Strauss discovered that they could be made to lose their identity by destroying the layout of their settlement. So, what Christian missionaries did was to make these Indians give up their pagan religion in order to take up Christianity by modifying the plan of the villages (Levi-Strauss, 1961).

In this example two aspects are striking: the first one is related to the strong interaction between the physical form of the village and the cosmology of the tribe. Modifying the form confused the Indians' understanding of the world, prompting them to accept the Christian interpretation. Accepting the

Christian world they would renounce their own identity as tribe and be Portuguese' slaves. The second one is that the physical form managed to communicate such a strong interaction between the cosmology and the architectural space. This might lead to the conclusion that, as far as identity is concerned, responsive environments are those which can bear the stamp of people's assessment of the world, which is translated into tastes and values. These tastes and values are represented by objects that will become symbols of what they intended to represent. For example, the bare electric bulb may be interpreted as a slovenly life-style, since the bare bulb communicates "minimal service" and somehow poverty. Poverty, in turn, means untidyness. According to Heimsath (1977, p. 93), maintenance is a symbol, one of the most pervasive. Uncollected rubbish, broken windows, derelict cars are visual indices of poverty and neglect, suggesting hopelessness. Clean lawns, painted homes and new construction are indices of affluence and health.

Among the scholars that have written about the meanings attached to the house and the relationship between housing and social identity are Howell and Epp who have produced one of the most interesting works; they studied how furniture and personal possessions are arranged and displayed in apartments of older people. One finding from the Howell and Epp work was that important pieces of furniture are put on "display", even when they result in cramped conditions in small apartments (HOWELL, S. C. and EPP, G., 1978). A similar situation has been found in Palmital, as this comment reveals: *"The bedrooms are too small. They are not big enough for ours things. We have to pile things up."*

Meiss (1990) also discusses identity in his book, "Elements of Architecture: from form to place". In addition to what Rapoport has put forward he proposes three strategies to produce a building, for example a family home, reflecting the identity of the group that will live in it. The first strategy he calls *interpretative*. It presupposes the systematic observation and understanding of the values and behaviour of the people concerned. This includes the analysis of the architectural places that are crucial to their identity. The architect should carry out his observational task with sufficient humility to grasp the meanings that really matter.

The second strategy consists in making the future users participate in the design process. In this case, architects should not renounce their creative role

to be at the service of their clients. Conversely, they should encourage users to think about working together with architects without imposing their idiosyncrasies.

The third strategy proposes the search for an architecture which bears the possible symbols of identity that will be created by the occupants themselves after moving in. This "supportive" architecture would seek to reconcile mass production and people's need for identity.

As can be observed, the three strategies that Meiss proposes are complementary to each other. For example, to be able to design responsive buildings, architects would need either to observe people using space or to seek their participation in the design process. Obviously, when designing mass housing, individual participation is almost impossible to achieve. Observing people's spatial behaviour is then the only way that remains.

Another scholar who has studied the issues related to social identity and dwellings is Clare Cooper. She starts from Jung's theory that there is a universal unconscious linking man to his primitive past, in which are deposited certain basic patterns of psychic energy named *archetypes*. Symbols are manifestations of those archetypes and the self is the most basic one. Thereafter Cooper argues that the house is the symbol of this basic archetype which is the self. She writes:

*"It is through the medium of collective unconscious that people are in touch with an archaic and basically similar archetype (the self) and with the symbol for that archetype that has changed little through space and time (the house)." (Cooper, 1964, p. 137)*

If Cooper's speculation is right, the house would be the main connection between man and his identity as human being.

From what has been discussed so far about Territoriality, Privacy and Identity, it can be concluded that these phenomena are always related to each other. One could say that "territoriality" demarcates the domain for "privacy" and "identity" refers to the values inscribed in this domain. Proshansky (1974) explains what takes place in this process:



*"Freedom of choice implies that the individual can exert some control over his physical setting, and in this regard we are confronted with the growing concern over human territoriality. Individuals not only lay claim to "privacy" for themselves as corporeal objects, but for the things they own, the spaces they occupy, and their so called "personal effects". The personal pronoun "my" in the sense of "my room", "my desk", "my chair at the table", "my neighborhood", "my sheet", "my file", "my papers", and so on, implies more than legal or normative ownership. These objects, spaces, and places are extensions of the individual's self - they may be elements of his self-identity - and in this sense he and only he can determine who besides himself - if anyone at all - will use them, change them, or even view them." (Proshansky, 1974, p. 87)*

The next section of this Chapter brings the conclusions on *identity and preservation of identity* that can be drawn from Palmital's findings.

## 12. Conclusions.

As has been demonstrated, the phenomena of identity was manifested in Palmital through diverse conflicts. Some of them refer to very symbolic issues such as the appearance of the finishes or the service area at the front of the house. Others have practical reasons, such as the size of the water tank, the sloping back yard and the size of the rooms.

As has been mentioned before, in a cross-cultural perspective the elements which are used to communicate identity tend to be less in the domain of fixed elements, and more often in the domain of semi-fixed elements such as mailboxes, shutters, awnings, colours, levels of maintenance and many others, including lawns, planting and gardens (Rapoport, 1981). From a quantitative point of view, Palmital's findings confirm this assumption to the extent that most of the identity conflicts are related to characteristics that are not inherent in the housing design itself, such as the window design, the size of the water tank, the missing ceiling, the rough finishes and the quality of the materials employed. However, if the qualitative aspects are analysed, it will be noticed that the fixed elements play a major role in Palmital. For example, the conflicts related to the position of rooms and apertures and the quantity and dimension of rooms, which are inherent in the diverse models,

seem to be the most disturbing features of the Palmital houses, followed by the unwalled plot (territoriality). The case of the man that built another house at the front of the lot (Fig. 10.12) and was using the starter house as an external store is an expressive example of dissatisfaction with the fixed features of the model.

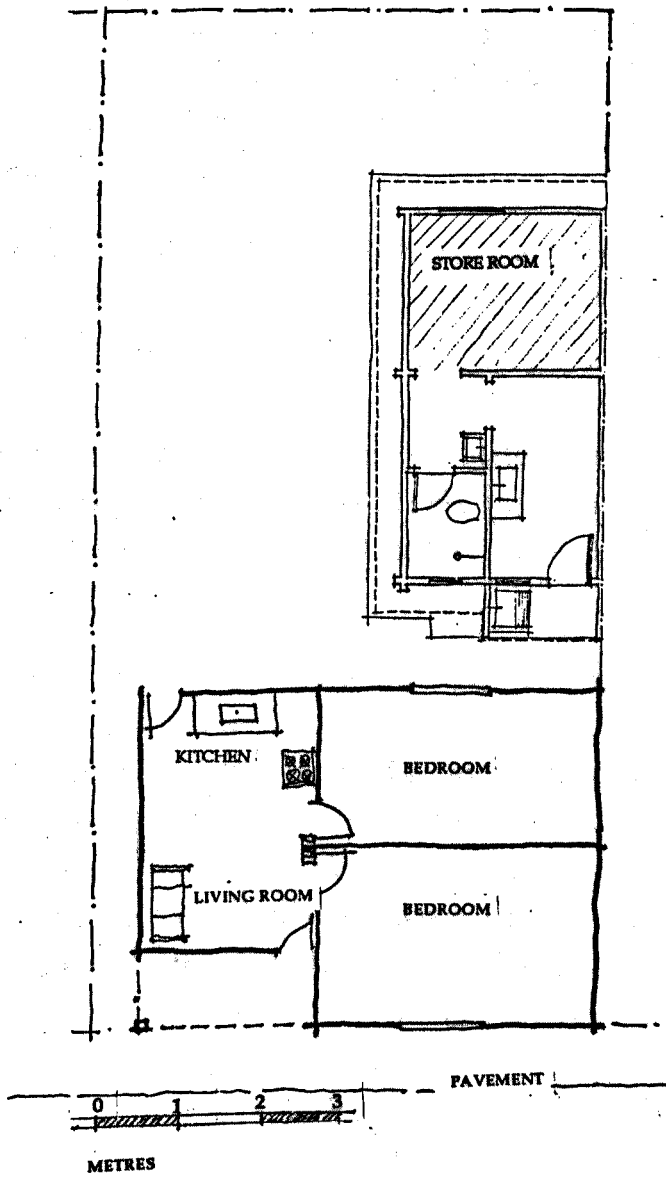


FIG. 10.12 New house that has been built at the front of the plot of a starter house in Palmital.

Note that the plan of the house, built by the user, is in accordance with the layout of traditional Brazilian rural dwellings mentioned before; this also applies to the materials and techniques employed in the construction of the dwelling: the walls are made from beaten mud and the floor is beaten earth.

*"We are poor but we don't like living in a mess. How can we keep this house tidy if we haven't got enough space to put our stuff?"*

This is a comment that links together the size of the house and the need to display objects that disclose values (identity). Here a fixed feature is impeding semi-fixed ones (furniture and appliances) to be displayed. As a consequence the preservation of identity is affected since the communication of values cannot take place properly.

*"It is not possible to extend the kitchen because there is no space left. It is not possible to detach the houses either. Is there any point in changing the finishes and the like?"*

This comment also presents evidence that the features inherent in the design - fixed features, as Rapoport put forward (1981, p. 9) - are an impediment for improvements, so they are the source of further conflicts related to the semi-fixed features.

Table 10.1 in the next page summarizes the figures for the identity conflicts. The columns show the percentage of units, per house type, which are affected by each conflict. It can be noticed from the data that the dwellers of the three bedroomed models are more likely to have identity conflicts related to the semi-fixed elements. This may be because of the fact that these houses are larger so they provide more room for the essential activities enabling the residents to think about other priorities. When the space is not big enough for the basic requirements the tendency will be to focus the dissatisfaction on the fixed elements.

**TABLE 10.1****CONFLICTS RELATED TO IDENTITY ACCORDING TO THE DIVERSE HOUSING MODELS**

Conflict \ Model	STARTER	1 BEDRM.	2 BEDRMS.	3 BEDRMS.	TERRACED.
Quantity and dimension of rooms	94%	87%	75%	54%	85%
Position of rooms and openings	27%	78%	85%	88%	92%
Missing dining room	67%	62%	46%	32%	3%
Sloping back yard	13%	32%	36%	31%	68%
Height of walls	63%	60%	67%	51%	—
Window design	43%	48%	52%	63%	45%
Inadequate finishes and materials	35%	42%	57%	71%	40%
Missing ceiling	27%	31%	33%	54%	—
Water tank size	14%	25%	32%	58%	23%

# CHAPTER ELEVEN

**Analysis of the Conflicts  
Related to Ambience**

# ANALYSIS OF THE CONFLICTS RELATED TO AMBIENCE

## 1. Introduction.

The need for a pleasant ambience is a phenomenon that can be revealed by any architectural element or component. After all, man modifies the natural environment to create places to perform the diverse activities of social life. He endows these places with the atmosphere that he finds adequate for dwelling purposes. Thus, places have to be:

- a) functional, that is, to fit all characteristics of the activities that are supposed to take place in them;
- b) meaningful, which means that they need to communicate values and tastes, beside providing clues for social behaviour;
- c) enduring and sound construction, which means that they should be lasting and display firmness and protectiveness.

As has already been demonstrated, these qualities constitute the three dimensions of the architectural space: the symbolic, the functional and the technological dimension. Providing an adequate ambience is a feature that resides in these three dimensions, therefore the conflicts related to it comprise elements that play symbolic, functional or technological roles in housing design.

The conflicts related to the need for a pleasant ambience that are due to symbolic factors are:-

- \* Substandard materials and appliances versus aesthetic sense.
- \* Missing ceiling versus environmental comfort inside the house and aesthetic sense.
- \* Missing finishes versus aesthetic sense.

The conflicts that are due to functional aspects are:-

- \* Service area in the open versus comfort for doing the washing.
- \* Window design versus ventilation requirements.
- \* Position of rooms and apertures versus environmental comfort.

The aspects of the construction (firmness and protectiveness) that generate conflicts related to the need for a pleasant ambience are:-

- \* Gaps between the walls and the roof versus environmental comfort inside the house.
- \* Thin walls versus environmental comfort inside the house.
- \* Unprotected slopes versus safety requirements.

One could say that ambience embraces all the phenomena revealed by the dwelling (territoriality, privacy, and identity), so it should not be treated separately. This is in part true since all conflicts that have been interpreted as due to the need for a pleasant ambience could also be understood as an indication of the need for preservation of identity, need for privacy or territoriality. For example, the conflicts related to the missing ceiling may be due either to the need for a better insulated environment or to the need for displaying urban status (see Chapter 10, item 9.1). The conflict related to the service area at the front of the plot can also be interpreted as a request for privacy (see Chapter 8, item 2). On the other hand, as the primary function of any house is to provide protection against weather conditions, all conflicts with architectural elements that directly interfere with this objective could be interpreted as being related to the need for improving the internal ambience. To solve this conceptual problem, it has been decided to define ambience in this thesis as the quality that comprises the environmental characteristics inside the house such as temperature, humidity, ventilation and the like. Thus the conflicts that are going to be analysed in this Chapter are those inscribed in this definition, that is:-

- \* Gaps between the walls and the roof versus environmental comfort inside the house.
- \* Window design versus ventilation requirements.
- \* Position of rooms and apertures versus environmental comfort.
- \* Thin walls versus environmental comfort inside the house.

Given these introductory explanations, the task remains to analyse the mentioned conflicts.



## 2. Gaps between the walls and the roof versus environmental comfort inside the house.

### 2.1. Description of the conflict.

The Fig. 11.1 illustrates the architectural solution that causes this problem:

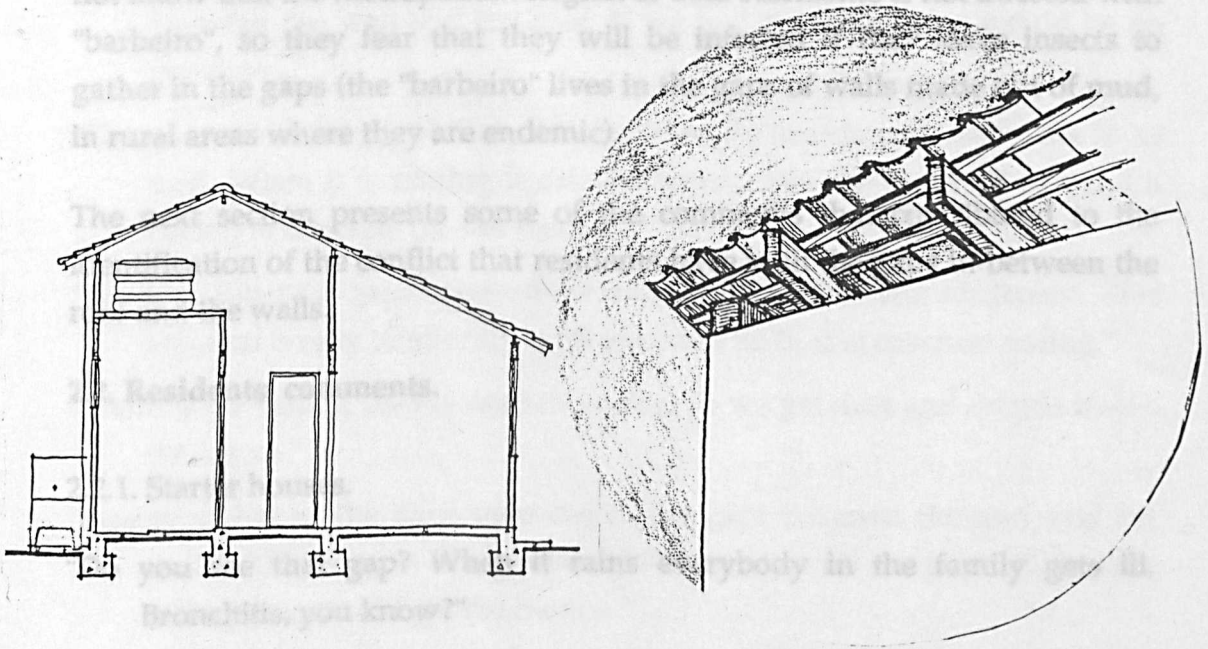


FIG. 11.1 Sketched section of the roof of the Palmital housing models.

As can be seen from the sketches the gaps that have been left in-between the walls and the roof are big enough to permit rain, wind, and dust to get through. Although climatic conditions in the Palmital region are very favourable (the average temperatures range from 15 to 25°C in the winter and from 25 to 33°C in the summer), when it is windy the temperatures inside the house go down to the same level as outside because of the cold wind that comes in through the gaps between the walls and the roof. If it is dry, a lot of dust comes in with the wind. When it is raining the wind sprays rain through the gaps and there is a sort of drizzle inside the house. Residents think that if they build a concrete ceiling the problem will be solved. However this is a mistake because if the in-situ concrete ceiling gets wet the water will drip down into the house. Besides, if it rains for a couple of weeks, without any sunny intervals, the ceiling will be spotted with mould.

Another problem is the insects that either come into the house through the gaps (mainly at night) or live in the cardboard which people use to fill the gaps. As has already been mentioned in this thesis, most of Palmital residents come from rural areas and some families come from "Vale do Jequitinhonha", a region in Minas Gerais that is highly infested with "barbeiro", the insect that transmits the "Chagas" disease. These people do not know that the Metropolitan Region of Belo Horizonte is not infested with "barbeiro", so they fear that they will be infected if they leave insects to gather in the gaps (the "barbeiro" lives in the gaps of walls made out of mud, in rural areas where they are endemic).

The next section presents some of the comments that contributed to the identification of the conflict that residents have with the gaps in-between the roof and the walls.

## 2.2. Residents' comments.

### 2.2.1. Starter houses.

"Do you see that gap? When it rains everybody in the family gets ill. Bronchitis, you know?"

"Look at the gaps... when it is cold we get frozen ...when it is raining it drizzles inside..."

"The gaps between the roof and the walls used to let the wind go through. Sometimes tiles were blown away... then I had the gaps filled."

### 2.2.2. One bedroomed semi-detached houses.

"I've covered the gaps with plastic and it seems to be working. At least I'll get rid of the dust until I built an in-situ concrete ceiling."

"We've filled the gaps with cardboards until we can afford to build a ceiling."

"We've covered the gaps with cardboard to protect the house against wind and dust."

### 2.2.3. Two bedroomed semi-detached houses.

"We had the gaps filled. We could no longer stand the dust coming in. When it was not the dust it was the rain, or the cold wind. If there was a ceiling in concrete (*in-situ concrete*) there wouldn't be any problem."

"We had this temporary ceiling fitted because we couldn't cope with the wind and the dust. The house is at the top of a hill and it is very windy here."

"Cold air comes in through the gaps in the roof. Dust comes in as well. Why haven't these houses got a ceiling?"

"The noise doesn't come from the wall but from the roof, or rather, the gaps between the wall and the roof. If we had a ceiling there would be no problem..."

"Can you see these gaps? They let the wind in; insects and rats come in as well. When it is raining it drizzles inside. We are planning to build a ceiling in concrete (*in-situ concrete*)."

"We have filled the gaps between the roof and the walls with cardboard. This solution is only temporary until we build an in-situ concrete ceiling."

"There is no ceiling (*in-situ concrete ceiling*) so we get dust and drizzle inside the house."

"Insects gather in the gaps over there (the gaps between the roof and the walls). They live in the cardboard I've used to fill the gaps. I'll build a ceiling as soon as I get the money."

"My grand-daughter has got bronchitis because of the gaps over there. The cold comes in you know? I've asked my son-in-law to get them filled."

"Look at those gaps. This house might as well be in the open!"

"The dust and the wind that come in through the gaps are the worst thing about this house. We've all got bronchitis."

"It is impossible to keep the house clean with all the dust that comes in through those gaps."

#### 2.2.4. Three bedroomed semi-detached houses.

"We've had the gaps filled with bricks. We'll build an in-situ concrete ceiling as soon as possible."

"Dust and wind are the worst thing in this house. I've told my husband that we need to build a ceiling (*in-situ concrete ceiling*). It would make the house much more comfortable."

"We had the gaps filled, to prevent us from dirtiness and disease."

2.2.5. Terraced houses.

No comments. This model has got an in-situ concrete ceiling.

2.3. Figures for the conflict.

The chart in the Fig. 11.2 shows the proportion of this conflict according to the diverse housing models in Palmital.

**GAPS BETWEEN THE ROOF AND THE WALLS**

**CONFLICTS RELATED TO AMBIENCE**

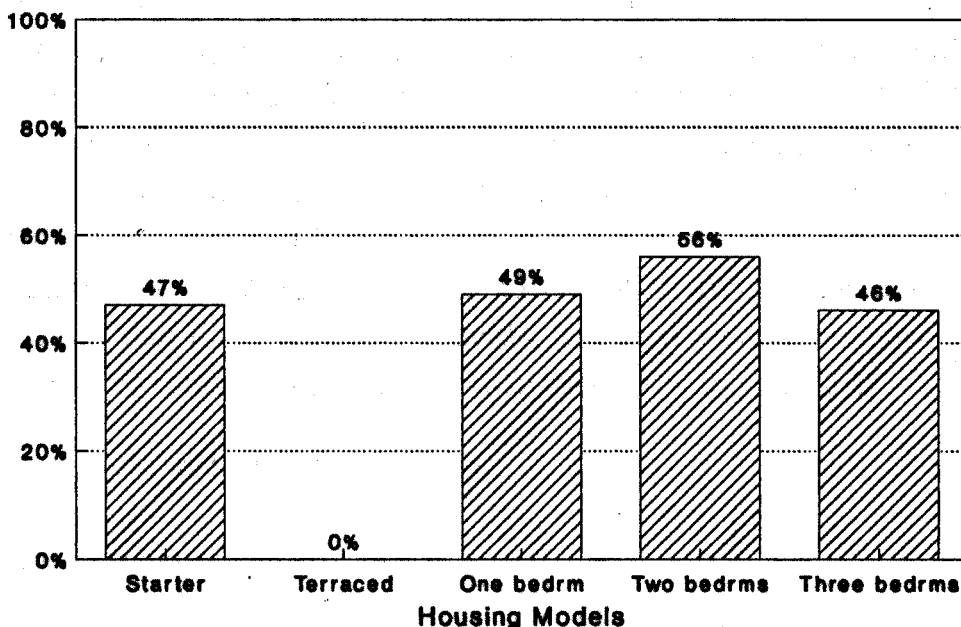


FIG. 11.2 Proportions of conflicts related to the gaps between the roof and the walls, according to the diverse housing models.

As can be seen from the chart, apart from the two bedroomed semi-detached houses, the figures for this conflict are kept below 50%. In the two bedroomed houses the proportion of the conflict jumps to as much as 56% of the houses surveyed in this model. This can be in part explained by the fact that there are many two bedroomed houses laid out on the top of the hill, where it is too windy so the gaps between the roof and the walls become more upsetting.

### **3. Window design versus ventilation requirements.**

#### **3.1. Description of the conflict.**

In Palmital the window types used are known as "basculantes" (pivot windows), as Fig.10.7 in the Chapter 10 shows.

It has already been mentioned in Chapter 10 that this window type is very popular in Brazil and largely employed in housing. It is generally used in kitchens, bathrooms and service areas. It can be noticed from Fig. 10.7 in Chapter 10 that in this type of window the area for ventilation is too small, since it amounts to approximately one third of the window area. In Belo Horizonte, local legislation requires that apertures for bedrooms and living rooms should measure at least 1/6 of the room area. This means that, to meet the legal requirements, the window area for a 9,00m<sup>2</sup> room should measure at least 1,50m<sup>2</sup>, which is far above the meagre 0.90m<sup>2</sup> per window that is found in bedrooms and living-rooms in Palmital. Thus, it is not surprising that Palmital's residents have a lot to complain about with the deficient ventilation that these windows provide. The next section presents some of the resident's comments that contributed to identify this conflict.

#### **3.2. Residents' comments.**

##### **3.2.1. Starter houses.**

"The bedroom is too hot because of the window, which is too small. This type of window is not suitable for bedrooms, don't you think?"

##### **3.2.2. One bedroomed semi-detached houses.**

"We've removed all old windows because they were very ugly and didn't work properly either."

"I wish I had money to replace these windows. The house would get a better ventilation as well as a nice facade."

##### **3.2.3. Two bedroomed semi-detached houses.**

"These windows are appalling! The bedrooms get too hot because the windows don't ventilate properly."

### 3.2.4. Three bedroomed semi-detached houses.

"We've replaced the windows. They weren't working properly, letting the rain water in. Do you like those windows? They've cost a lot of money!"

### 3.2.5. Terraced houses.

"These windows are ridiculously small to provide a good ventilation. Besides they are not appropriate for living rooms."

### 3.3. Figures for the conflict.

As can be seen from the chart the terraced houses residents are the most affected by this conflict, since 37% have complained about the poor ventilation that the windows provide. The explanation for the high incidence of this conflict in terraced houses may be found in the fact that this model has got a ceiling only 2,70m high, so the hot air accumulates inside the house. In the other models where there is no ceiling and when there are gaps between the roof and the walls, there is more natural ventilation; so there are less complaints about the window type. This is rather contradictory since the lack of a ceiling and the gaps in turn are also a huge source of conflict, as has just been discussed.

## WINDOW DESIGN & VENTILATION

### CONFLICTS RELATED TO AMBIENCE

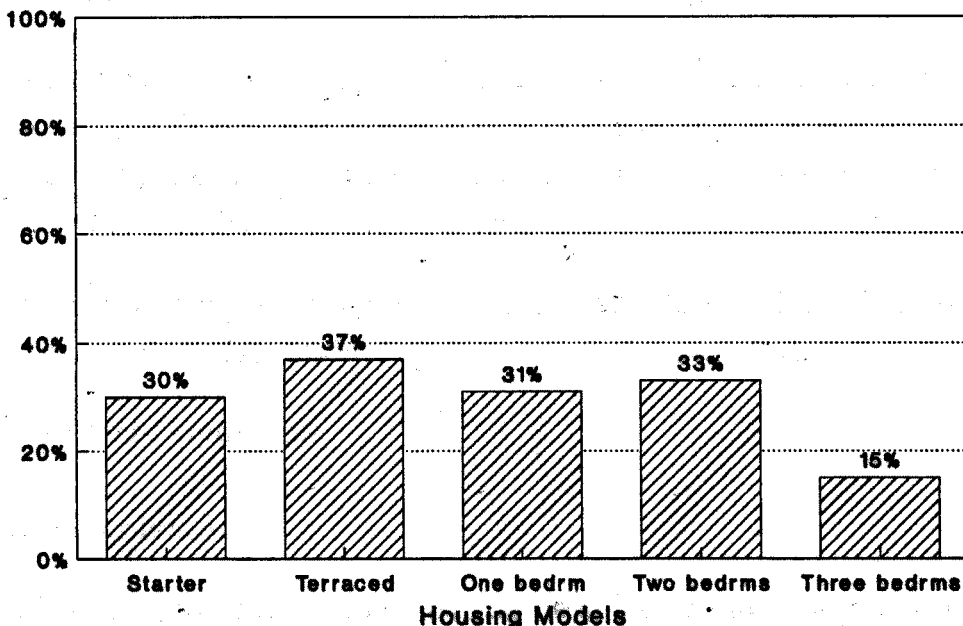


FIG. 11.3 Proportions of conflicts related to the window efficiency in the diverse housing models.

The conflict drops to 15% in the three bedroomed houses. Apparently this is because this model has the highest rate of window replacement (67% of this house type had already got new windows for bedrooms and living-room by the time the sample was surveyed).

The next conflict to be treated is related to the adequacy of the plan, particularly to the position of rooms and apertures regarding environmental comfort in the house.

#### **4. Position of rooms and openings versus environmental comfort.**

##### **4.1. Description of the conflict.**

In Chapter 10, item 3.1, it was mentioned that the Palmital houses seem to have been randomly laid out on an unrelated street layout. In addition, there is no cognizance of the natural elements like the wind and sun. As for orientation to the sun, the consequence is that some units are too exposed to the sunshine in the afternoon so they get very hot inside. The prevailing winds have not been taken into consideration either, so that many units do not catch the easterly breeze, which could greatly contribute to the improvement of the environmental comfort in the house.

Other aspects related to the position of rooms and apertures (the service area at the front, the living room opening into the side of the house and the like) have already been discussed in the Chapter 10, since they are more connected to identity factors than to ambience.

The next section presents some comments that helped to identify the conflict with the location of rooms and apertures regarding comfort.

##### **4.2. Residents' comments.**

###### **4.2.1. Starter houses.**

"Besides being too small this house has been located in a very bad position, since the bedroom catches the afternoon sun and gets too hot all over the year."



#### 4.2.2. One bedroomed semi-detached houses.

"We are building a veranda at the front, to get a bit of shadow and to embellish the facade."

#### 4.2.3. Two bedroomed semi-detached houses.

"The rooms catch the afternoon sun and get too hot in the summer. They should face the east to catch the morning sun."

#### 4.2.4. Three bedroomed semi-detached houses.

"The children can't play in the back yard in the afternoon because of the heat (it catches a lot of sun)."

"I've grown these trees to provide some shadow and to conceal this ugly view of the service area as well."

#### 4.2.5. Terraced houses.

"Do you like this shelter? It provides little shadow but this is better than nothing."

### 4.3. Figures for the conflict.

As can be seen from the chart, apart from the terraced houses, all models are evenly affected by this conflict. The low incidence in the terraced houses may be due to the fact that this model has got apertures to the front and to the back only. This particular feature of terraced houses make them less vulnerable to unwanted afternoon sun on at least two sides.

## POSITION OF ROOMS & OPENINGS

### CONFLICTS RELATED TO AMBIENCE

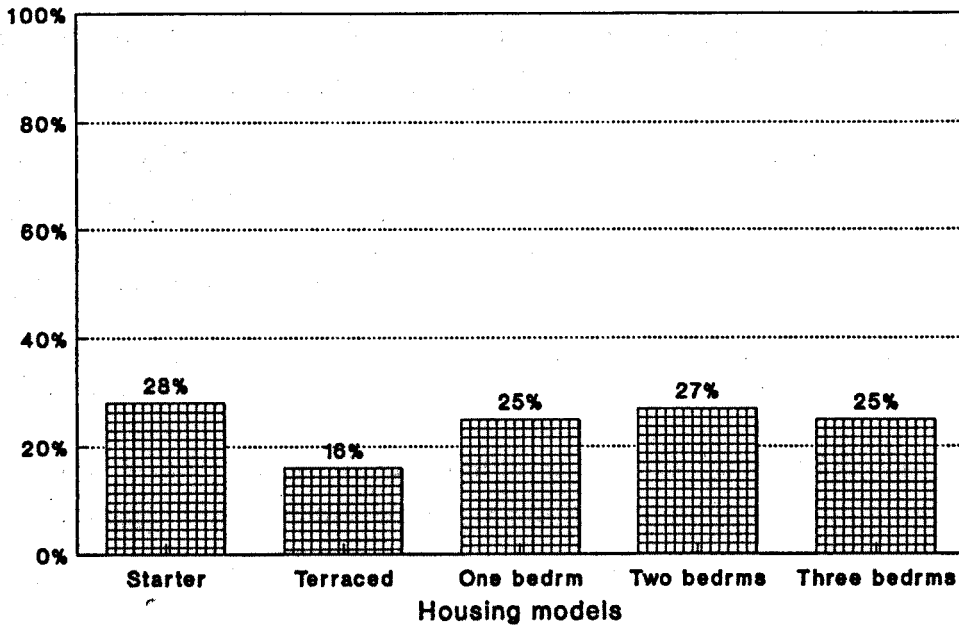


FIG. 11.4 Proportions of conflict related to the orientation of the houses according to the diverse housing models.

## 5. Thin walls versus environmental comfort inside the house.

### 5.1. Description of the conflict.

The walls of the Palmital housing models are made from concrete blocks measuring 10cm wide, as can be seen in the Fig. 11.5.

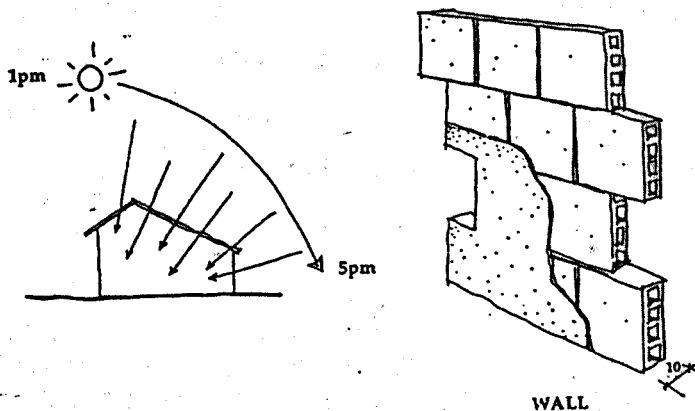


FIG. 11.5 Wall of Palmital housing models.

This type of wall does not provide adequate acoustic or thermal insulation. According to some measurements carried out in 1985 by CETEC (Technological Centre of Minas Gerais), in Palmital, the internal surface of the walls fronting the west side and exposed to the afternoon sun between 1 pm and 6 pm used to reach up to 55°C in the summer. After sunset the walls kept on irradiating heat to the interior for another six hours<sup>1</sup>.

The next section presents some comments that the Palmital residents addressed to this issues.

## **5.2. Residents' comments.**

### **5.2.1. Starter houses.**

"The wall which is shared with the next door neighbour lets the noise get through. The external walls get too hot in the afternoon. Well, to cut a long story short: these walls are rubbish."

### **5.2.2. One bedroomed semi-detached houses.**

"Put your hand on this wall and you will see as hot it is now. It irradiates heat inside the house!"

### **5.2.3. Two bedroomed semi-detached houses.**

"These walls are too thin and let the heat in. In summertime it is unbearable indoors."

"The walls are too thin. They don't protect the house against the sun heat. There is no ceiling and the house gets cold in the winter. The rain water comes in as well. Who cares? We're paying for this house and paying for repairing it. We are paying twice as much as we should pay."

### **5.2.4. Three bedroomed semi-detached houses.**

"We've moved the window to the other side, to get rid of the sun. Even though the room is very uncomfortable because the walls are very thin so that the sun heat comes through."

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<sup>1</sup> See Relatório Técnico: Conforto Térmico de Edificações Habitacionais Típicas (Technical Report: Housing Buildings Thermal Comfort). CETEC/MG/1985

### 5.2.5. Terraced houses.

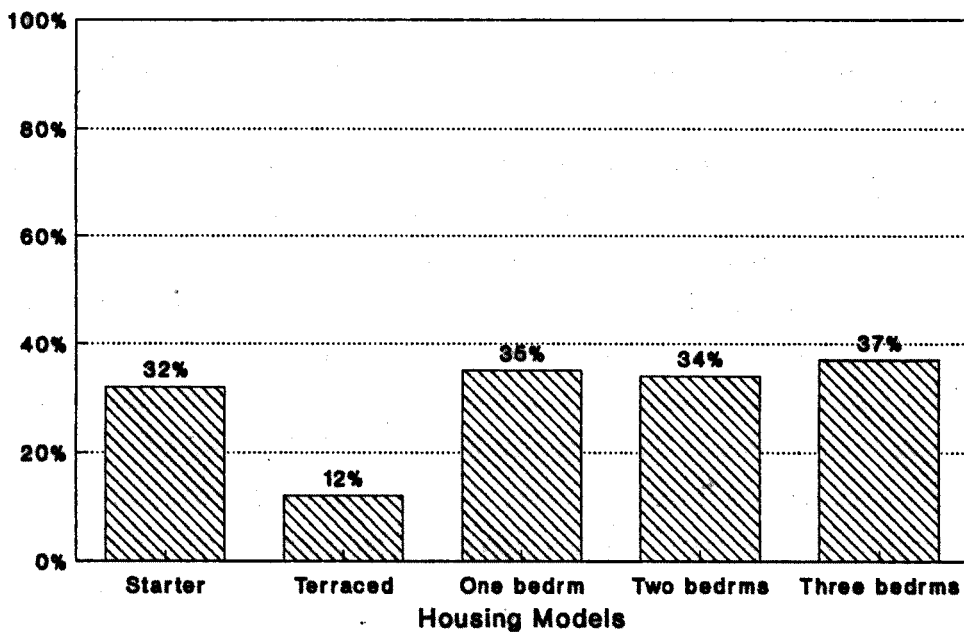
No comments.

### 5.3. Figures for the conflict.

As can be seen from the chart, apart from the terraced houses, all models are evenly affected by this conflict. The explanation for the lower incidence of this conflict in terraced houses can be found in the fact that this model has at least two sides that do not catch any sun at all, so the problem is minimized.

## THIN WALLS & THERMAL COMFORT

### CONFLICTS RELATED TO AMBIENCE



**FIG. 11.6** Proportions of conflicts related to the thin walls according to the diverse housing models.

## 6. Ambience.

Ambience has got two dimensions; one which is related to subjective aspects of spatial perception (colours, texture, light and smell) and the other which refers to objective aspects of environmental comfort (heat, cold, dust and the like). This Chapter is about the conflicts that residents have with the architectural elements that affect ambience in terms of environmental comfort. The conflicts provoked by the perceptual dimension of ambience have already been discussed in Chapter 10 (Conflicts Related to Identity). However, to conceptualize *ambience*, both dimensions, the subjective and the objective, have to be considered in this section.

It has already been said in the conceptual framework that man creates architectural places by differentiating and qualifying spaces. Setting up an inside/outside, which is a phenomenological dimension of dwelling, is an action to divide the perceived world into secure and insecure domains, in sacred and profane realms (Eliade, 1961, p. 48). The sacred realm is the inside, the indoors, the protected and cherished place, even if it is in the open, like gardens and patios. The profane is outdoors, exposed and unprotected. Thus, internal and external realms have diverse features and different qualities. It is precisely the qualities of the interior environment which is called here *ambience*. However this explanation does not clarify what ambience is, since one can very well say that almost all qualities of the *house-object* are, to a certain extent, related to ambience, or in other words, the ambience is the very inhabitability of architectural places. This is partly true, because ambience is the interior itself. Nevertheless the need for an adequate ambience is a phenomenon which is culturally related, as this section aims at elucidating.

The first obstacle to be transposed in the conceptualization of ambience is related to the scarcity of studies on this issues in the architectural field, although architects usually mention the "ambience of spaces" when describing their projects. However, when architects talk about ambience, one has the impression that they are talking about some supernatural quality that the built environment, specially buildings, may have or some hidden dimension of space. In fact ambience is a concept rather concrete, as will be demonstrated in this section.

Ambience has already been characterized as a phenomenon that is revealed in the process of dwelling, which is associated to the phenomenological dimension of *appropriation* (see Chapter 3, item 2.2). Appropriation of space is not an isolated action but a steady and continuous process of dwelling, in the sense that Heidegger has put forward<sup>2</sup>. Dwelling is caring, Heidegger says, so it is an endless process of building, arranging, cleaning, modifying and embellishing places. In this process man appropriates space, humanising it, that is, endowing it with his own character and nature. To humanise spaces means to improve them by changing them in a way which makes them more suitable and pleasant for people. Appropriation involves a reciprocal interaction user/space, in which the user acts to shape places according to their needs, wishes and desires and places, in turn, become responsive. This mutual influence man/environment is the reason by which in the places they shape, users can meet their identity as individuals or as members of any group. Responsive environments are those in which users' find themselves in perfect harmony with, in which they find their identity. The *ambience* of the environment is what enables this communicative process to take place. It has already been discussed in Chapter 10 what *identity* is. The task remains to describe *ambience*.

First of all it is necessary to distinguish between the two dimensions of ambience, the physical and the psychological. The physical dimension is related to environmental comfort, i.e., to the thermal, acoustic and luminous comfort. For example, if one feels either too cold or too hot he or she will not feel comfortable. This is because the human body must maintain a constant internal temperature, so it responds to thermal conditions in order to keep the balance between the amount of heat produced by the metabolic process and the amount of heat dissipated to the environment (Griffiths, 1975). Whenever the body has to make too much effort to keep its thermal balance, a sensation of discomfort will emerge and, as a consequence, behaviour will be affected. If environmental conditions like cold, warmth, humidity and the like affect personal comfort, they certainly will interfere in one's way of being-at-home (see Chapter 3). The physical dimension of ambience is then the need one has to be in harmony with the environment, well protected

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<sup>2</sup> See Heidegger, M. *Poetry, Language, Thought*, translated by Albert Hofstadter. New York: Harper & Row, Publishers. In the chapter entitled "Building, Dwelling, Thinking" Heidegger defines dwelling as the very state of being-in-the-world. Man dwells the world, he says.

against bad weather conditions. In this sense it is also associated with the phenomenological dimension of dwelling which is setting up an inside/outside. A comfortable inside (fresh when it is too hot outside, warm when it is too cold or dry when it is too humid) plays a fundamental role in the residents' satisfaction, in their state of being-at-home.

The psychological dimension of ambience is more complex, since it is associated with behavioural issues. In order to understand this concept it is important to look at the work of Jean Baudrillard (1968), the French theorist who discussed *ambience* as part of the structure of consumption objects. In his book "*Les Systemes des Objects*", Baudrillard develops the idea that man creates objects as projections of subjective impulses and wishes. He speaks of ordinary objects used in everyday life, such as the house, furniture, house appliances, gadgets and the like. These objects are grouped into three systems: the system of functional objects that comprises consumer goods, including houses; the system of nonfunctional objects that are the antiques and the collections; the system of metafunctional objects that are the gadgets and robots.

The system of functional objects, which is of interest for this thesis, comprises two structures. The structure of arrangement and the structure of ambience. The structure of arrangement is related to the disposition and combination of objects in order to obtain a functional setting which is able to communicate social values. According to Baudrillard, all societies have always organized their everyday life through the production, arrangement and use of objects. He discusses the layout of furniture in two different social environments, the bourgeois house and the modern home. The first, he says, is an expression of the familial structure, taste and tradition. The bourgeois interior type is patriarchal since it is organised to display the family's hierarchy and life style. Living-room, dining-room and bedrooms are enclosed spaces with fixed features, expressing the rigidity of the social pattern to follow. Modern interiors, by contrast, are more functional and stripped of social constraints. The objects are arranged in various functional combinations, so that a table can be used for eating or writing; a multipurpose couch can be used to seat or to sleep on as a bed. Modern home environments replace the enclosed spaces of walls by arrangements of objects that create diffusing functional zones of activities. These arrangements express the modern family, in which the authority is diffused and shared by the several members. They also



reveal the "organizational modern man", who is able to organise and control the objects, producing systems of order and communication.

The structure of ambience is the way in which colours, material, form and texture are combined in the artificial environment (the built environment). Thus, the ambience displays the residents' mode of living, their life-style. In the traditional environments, the colours, the materials and the forms used to be more linked to the real functions that the objects had to perform. The colours used to express the very material (white for cotton and paintworks, brown for wood, grey for stone and so on). The objects should last long, so they were made from durable materials like wood and stone and they had the natural colour of these materials. Over time, the objects produced with functional purposes ended up as symbols of what they were intended for. The chair became a symbol of seating, the table a symbol of eating and so on. In modern times, artificial materials like plastic and synthetics replaced natural and "living" materials like wood or cotton. According to Baudrillard, just because they are artificial, these new materials are stripped of any symbolic function since they can stand for (they can imitate) almost every thing. In fact, it is their artificial character that permits combining them as one wishes. In this way the ambience of the modern environment becomes a *system of signs* instead of a *symbolic system* as is found in the traditional environment. It is important to define the concept of sign which is taken here. A *sign* can be any element to which is given a particular meaning as for example the figures in mathematics or the notes in music. The main characteristics of signs are that their meaning is established by convention. Symbols also are elements to which a special meaning has been attributed. The difference is that symbols are culturally related, that is, it is the social "praxis" that creates symbols. Baudrillard says:-

*"The traditional object-symbol (tools, furniture, even the house), mediator of a real relation or of a lived (vecu) situation, clearly bears the trace, in its substance and in its form, of the conscious and unconscious dynamics of this relation, and is therefore not arbitrary." (Baudrillard, 1988, p. 22)*

Symbols are not objects of consumption. In order to become an object of consumption the *object-symbol* has to become sign. A system of signs are then

mere abstractions while a system of symbols are forged in the living experience and are rather concrete.

As a system of signs the ambience of the modern environment is an object of consumption, i.e., it is to be purchased and consumed. For the last fifty years the concept of a *pleasant ambience* has been increasingly associated with the notion of what is fashionable. Thus, to precisely define what a *pleasant ambience* is, one also has to investigate what is fashionable in terms of internal environments. It has already been said that ambience has got two dimensions. One which is related to the subjective aspects of perception and the other which is related to the objective (corporeal) aspects of being into places. The subjective aspects are those activated by the way in which colours, materials, form and texture are combined to constitute the environment. The objective aspects are activated by thermal, acoustic and luminous conditions. Both have behavioural consequences. The main difference between them is that the former are cultural related only while the latter are inherent in human nature. However, the objective values of environmental qualities such as good thermal comfort, efficient noise insulation and adequate levels of illumination have also been changing. For example, a central heating system, in Britain, apart from being highly convenient in terms of economy and efficiency, displays status. In Rio de Janeiro, Brazil, it is the central air-conditioning. Such devices have become signs of development and prosperity, since they are able to artificially control the natural environment and cost a significant amount of money. Sometimes, as is the case of some upper middle-class flats in Rio, the buildings are designed to display the air conditioning apparatus. Many interesting examples of environmental control devices as part of a system of signs can be found in so called "high-tech" architecture. The Centre George Pompidou, in Paris is a classical case of displaying environmental control paraphernalia, and there is no doubt that it has set the fashion for a whole generation of architects all over the world.

From what has been discussed so far, it can be concluded that ambience, whether in its perceptual aspects or its physical constraints has entered into the realm of objects of consumption, as Baudrillard put forward in his book "Les Systemes Des Objects".

## 7. Conclusions.

The need for a pleasant ambience is a phenomenon which has been manifested in Palmital through the conflicts that residents have with the bad environmental conditions in their houses. It has been discussed above that ambience has got two dimensions, the physical and the perceptual. The physical dimension is discussed in this Chapter while the perceptual dimension has been treated in Chapter 10, which is about identity. The physical dimension of ambience comprises the aspects related to thermal comfort, acoustic comfort and luminous comfort. As Brazil is a tropical country, it is not surprising that thermal comfort is the main source of ambience conflicts in Palmital. Conflicts related to acoustic comfort seem to be restricted to the deficient insulation that the party walls provide. This issue has been included in the Chapter about privacy (see Chapter 8), since privacy seems to be the phenomenon which is first revealed by the comments on the lack of acoustic insulation between the semi-detached houses. No source of environmental noise other than from the neighbours has been identified in Palmital. There are a number of possible reasons for this but one that can be suggested from the observation of the site is that the settlement is in a very calm area, far away from road traffic and factories. The luminous comfort has not been mentioned anywhere in the disposable data, which suggests that this is not a source of conflict in Palmital houses.

Amongst the conflicts about aspects of thermal comfort, the gaps that have been left in between the roof and the walls account for the largest proportion of complaints. *"Look at those gaps. This house might as well be in the open!"* This dramatic comment shows very well that people feel as if they were totally unsheltered, "in the open", because of the gaps which allow dust, wind and rain to get in.

The conflicts related to the orientation of the houses - apart from being caused by objective aspects of environmental comfort - have got many subjective aspects as well. This comment suggests that there is a lot aesthetic intention behind the construction of a veranda, for example. *"We are building a veranda at the front, to get a bit of shadow and to embellish the facade."* There is no doubt that the shadow is being sought to improve the thermal comfort in the front rooms. However, there are other ways to get this improvement that are not only less expensive but are as efficient as a veranda, for example

growing trees at the front of the houses (some residents had already adopted this solution and were enjoying the shadow by the time the field work was carried out). Thus, it seems that the veranda aims at embellishing rather than protecting the facade against excessive sun.

This connection between ambience and aesthetic sense has been observed in all of the comments on the positioning of rooms and apertures. It also appears in the conflicts with the windows, as this comment shows: "*These windows are ridiculously small to provide a good ventilation. Besides they are not appropriate for living rooms.*" What is not appropriate, the window-sign or the window-equipment. The window-sign would display the message "this is a living-room" while the window-equipment would provide a good ventilation. It could be said that only the conflicts with the gaps seem not to be affected by aesthetic feelings. However, some comments suggest the contrary, as the following one: "*Cold air comes in through the gaps in the roof. Dust comes in as well. Why haven't these houses got a ceiling?*" Why does the resident demand a ceiling? It might very well be for aesthetic reasons or, as previously mentioned, for preservation of identity.

The conclusion is that it is very difficult to say whether it is *identity* (the preservation of identity) or *ambience* which is being revealed by the ambience conflicts. Maybe it is both, since the environmental control has become a sign itself, as Baudrillard has put forward.

# CHAPTER TWELVE

## Conclusions



## CONCLUSIONS.

### 1. The method.

Any research exercise must include the objective of evaluating and improving the procedures adopted (Ackoff, 1962, p. 4). This section - and perhaps most of the conclusions - is taken up with an account of the phenomenological approach. In architecture, as in Science, the phenomenological view claims to be opposed to the Cartesian approach that comprises objectivism, scientism, and technicism. Phenomenology, it is believed, comes to rescue the genuine creativity of the design process, as well as the human dimension of architecture.

A question put to the researcher at the very beginning of this research work was: "What is the advantage of using the phenomenological approach in housing research?" At that time the answer was: a scientific attitude has been adopted to reflect upon the problem and it was just because of this attitude that a non-scientific approach was brought forth. From the readings on the Philosophy of Science, the researcher has learnt that the distinction between trying "to answer a question" and "to solve a problem" is the distinction between pure and applied science and hence the first questions about architecture and the architectural creative process arose: Is it about answering questions? Is it about solving problems? Is it science at all? If not, is it art? Philosophy? What is it? Does the architectural object mean anything outside its relationship with the users? Then, remembering philosophy lessons at school in the early sixties in Brazil, this statement by Edmund Husserl came to mind: "*To the things themselves!*" This is the first link in the chain of events that led the researcher to Phenomenology, which is a method of inquiry into the relationship between people and the world, subjects and objects. Phenomenology, particularly Heidegger's phenomenology, if there is any, would lead to the primary question "What is a house for"? and then to the conceptualization of *house* as the material object that mediates *home* and *inhabitability* as the essential quality that enables *house* to meet *home*. If the same question about the usefulness of the phenomenological approach to housing is raised now, the answer will certainly be more extensive, although very far from being a complete one.

If one wants to know a) the average area of kitchens in southern London or b) how big is the housing deficit in Brazil, or c) how much gas is needed to heat a 80,00 m<sup>2</sup> dwelling, there is nothing phenomenology can do for them. On the other hand, if the question is "why do people prefer low-rise individual houses to high-rise flats?", there is no way of getting adequate answers through measuring, modelling and testing. The method of explanatory science - the scientific enquiry - applies to architecture, and hence to housing, only and if the study is focused on the objectual properties of buildings. Whenever subjective dimensions are involved, i.e., whenever the answer is likely to be neither in the "building" nor in the users but in the relationship between building/users, any scientific enquiry must be supplemented - or even replaced - by interpretative ones such as phenomenology. Territoriality, as an existential phenomenon, would have never been revealed through questionnaires. On the other hand, territoriality as a defence mechanism would. Why? What is the difference between these two concepts of territoriality that phenomenology could grasp? Is it important for architects to know this difference?

Suppose the range of possible questions - and answers - that a questionnaire-type survey for evaluating the Palmital residents' satisfaction could contain. It is not difficult to imagine that the dissatisfaction with the lack of surrounding walls would appear in connection with security. This could lead to the conclusion that policing the area would have solved the problem. In fact, surrounding walls interpreted as mere defence mechanisms could be dismissed in favour of an efficient police-watching scheme. The application to humans of the concept of territoriality as a mechanism of defence (as it seems to be in animals) has been strongly criticised. Almost all criticism is addressed to Oscar Newman's work *Defensible Space* which, roughly summarised, claims that criminality increases when the territory is not properly defended. Newman has been accused of not only misinterpreting the social origin of space (Hillier, 1973) but also of misconstruing a spatial-relatedness of crime. If an individual is criminal he or she will obviously chose defenceless areas to commit their crimes. This does not mean that crimes are provoked by defenceless areas. It is true that strong walls, neighbouring watchers, dog-guards and the like prevent crime. What cannot be said is that they are territorial mechanisms inherent in man to secure his territory and hence explain the origin of private property. It must be said in Newman's favour that the misconception to which he was led is rather a



consequence of the method used ("borrowed" from social sciences) than a limited view of the viewer. In Pamital, for example, questionnaires-surveys would reveal that over 60% of the owners had built strong surrounding walls and the reason was defence. This would have been partly true, provided the survey had been well conducted. What would have not been revealed by the figures is that those residents would have built any sort of border anyway, because they would never feel at home if they did not do so. What is the difference between the two conclusions as far as housing design is concerned? Why does it matter for designers? The "finding" that surrounding walls are needed because they provide protection against crime could mislead the architects in two ways. First, they could understand that preventing crime could be done cheaply by other mechanisms, like alarm systems and then design a very charming layout of free-standing and unfenced houses watched by an "expert" alarm-system. Second, they could alternatively think that a strong, high and expensive surrounding wall would be the only possible solution to the problem and then decide to reduce room areas in order to compensate costs. In both cases the cultural dimensions of borders would have been neglected, since territoriality as the need for setting up an inside/outside (see Chapter 3, item 2) had not been taken into account.

## **2. The findings.**

### **2.1. Introductory issues.**

The generality of findings and their future applicability is an issue which is rather controversial in research, and researches on housing are particularly vulnerable to this polemic. This is because the approaches of researches on housing are modelled either on those of the natural sciences or on those of applied social sciences and both paths lead to the use of standardised questionnaires on large scale surveys. The criticism to these approaches is that they have been unable to provide information about the more subtle aspects of housing, as meanings and symbols, which are extremely relevant to cause people's satisfaction or dissatisfaction with their home environments (see Darker, J., 1985, pp. 416-419). However, it must be pointed out that another serious shortcoming of the application of the scientific method to housing research, specifically to housing evaluation is about the supposed

limitations that many researchers mention, regarding the generality of findings. Amongst those that claim to have adopted a scientific approach to housing evaluation, it is becoming commonplace to write a section - dedicated to discuss the limitations for generalising the conclusions - which blames the method for not permitting generalisations. It seems to be rather contradictory that the scientific approach be advocated in the first stages of those researches and, in the end, be dismissed as incapable of providing generalisable conclusions. Then, what on earth was the scientific method used for? Was it scientific at all? The only thing that such researches end up by suggesting is that the scientific method is not applicable to those cases. This may be true but, it must be said in favour of science that, in some cases, non scientific enquiry will be preferred even where science can do better job. For example, there are many situations in which costs, labour, time, distance and other restriction do not recommend the use of science. Thus, if in these situations, despite all restriction, the scientific method is brought in, it cannot be blamed for weaknesses, misrepresentations and whatever else that comes along. The present study has reached some conclusions that can be generalised, despite the fact that a non scientific method was adopted. Other conclusions permit further applications in limited areas and situations, since they refer to a particular environment.

## **2.2. The universal and the cultural aspects of the phenomena observed.**

The theoretical construct and the analysis of Palmital's conflicts suggest that, as far as housing is concerned, phenomena have both universal and cultural characteristics. The universal are those related to the being-in-the-world, which means that they are - and always have been - present in every human being and are manifested everywhere, independent of race, culture or religion. The cultural features are time-related and space-based. To clarify this argument, the example of territoriality is given. The universal aspects of territoriality are: 1) demarcate the individual or group piece of land (the place in the room, the room in the house, the house in the plot, the plot in the region, the region in the city, and so on); 2) caring for the territory. The cultural aspects of territoriality are: a) how to demarcating the territory, whether by fencing, walling, or putting symbolic markers and signs; or fitting gates, doors and curtains; or furnishing and so on; the features of the elements that are used to define the territory are culture specific as well (materials, shapes, colour, texture, size, strength, etc.); b) how to care,

whether by tidying up and arranging the furniture; or repairing defects, decorating and planting; or defending against intruders and so on.

### **2.3. Phenomena revealed by the conflicts between the residents and dwellings in Palmital.**

One of the most intricate problems in the creation of the architectural form is to establish the right connections between concepts and architectural solutions. The process of translating philosophical speculations into architectural forms, elements or details has not been fully dissected yet, maybe because it is much too close to the borderline of consciousness and hence almost inaccessible. Nevertheless, some progress has been made on how to precisely define the qualities that architectural objects must possess in order to be accepted by their users. This thesis seems to be a step forward in this direction. It has demonstrated that the qualities any house should have are related to its ability to mediate the phenomena that constitute the dwelling. Dwelling is not just being sheltered. It is also to be in a place which is one's reference to the world; this dwelling place defines the "inside" (the familiar environment) which is opposed to the "outside" (the unknown). The inside has diverse levels: the room, the house, the plot, the neighbourhood, the suburb, etc. Each level defines a territory and hence a feeling of territoriality. Each territory has its limiting borders, which can be actual obstacles or just markers. The architectural elements that affect territoriality are surrounding walls, fences, edges, doors and gates.

The need for setting up an inside\outside is connected to the need for concealing and displaying. The phenomenon of privacy comprises what must be concealed from the outside, what must be kept in secrecy, in intimacy. The architectural elements that intervene in this process are walls, apertures, disposition of rooms and facilities, and the housing layout. The phenomenon of identity - or preservation of identity - comprises what must be displayed, what must be shown to the external world. The architectural elements that affect the preservation of identity are all features that define the internal and external appearance of the house. Finishes, fixtures, adornments, formal configuration, furniture layout and the like mediate the need for preservation of identity.

Territoriality, privacy and identity are encompassed by the ambience, which is the need for a pleasant environment. All architectural elements that

intervene in the environmental comfort (thermal, acoustic and luminous) affect the ambience. It also has been demonstrated that, in the case of Brazilian housing, these phenomena are affected by a range of elements and solutions that can be precisely defined.

Could these findings be generalised? The universal aspects of those phenomena, yes, can be generalised, since they are universal. The culture-related, obviously no, they cannot be considered beyond the cultural boundaries to which they belong.

### 2.3.1 Territoriality.

As has already been said, territoriality addresses itself to a phenomenological dimension of dwelling which is setting up an inside/outside. In Palmital it has been achieved by building surrounding markers in the plot (walls, fences and edges) to define the group territory; and by fitting doors in the doorways, to define individual's territory. Palmital's space readings have revealed that it does not matter whether the plot has got a fragile fence or a sound wall, since it has a marker that clearly defines the territory, the place for being-at-home, the anchoring point for "Being", as Heidegger puts for it. As for the individual territory, the readings have revealed that bedrooms are a sort of refuge for the self, so they should be protected accordingly. The lack of the door in the bedroom doorway is not accepted because this makes the individual territory vulnerable and exposed to "intruders". i.e., to those who do not dwell in that particular space. These findings do not dismiss possible defence implications of territoriality. What they mean is that, in the Brazilian cultural milieu, territoriality is an existential phenomenon which is revealed by the need for demarcating, enclosing and caring for individual or group territories.

In Palmital, territoriality has been manifested at individual level, which is the need for defining the personal space as well as at group level, which is the need for demarcating the family's territory (the plot). The theoretical construct suggests the existence of subsequent levels (the neighbourhood, the city, the region, etc.) which have not been examined. Since the observation was focused on the houses, the other levels have been left for future researches.

### 2.3.2 Privacy.

In Palmital, the need for privacy has appeared as the need for controlling social interactions, whether within the family group or with outsiders. There are activities that tradition prescribes to be performed in private, inside the house, away from public curiosity. Some of these activities are related to domestic chores such as doing the washing, cooking, cleaning. These tasks are prescribed to be performed indoors, within the family, although the presence of very close friends would be tolerated. Others activities are understood to be strictly personal, so they are prescribed to be performed in private, inside a room with the doors closed. Among these are sex and personal hygiene.

The Palmital housing models have got some features that are particularly critical regarding privacy requirements:

- a) The service area at the front of the house, without any protection from the view of passers by. This means that residents cannot avoid being overlooked when they are doing the washing, which they find disgusting.
- b) The wash-basin fitted outside the bathroom, being viewed from the living-room, which does not give any privacy when using it.
- c) The party wall which does not provide adequate acoustic insulation from one house to another, so that one can hear everything from the next door.
- d) The lack of doors in the doorways inside the house, which does not permit either a clear definition of individual territories or personal privacy.

It must be pointed out that the Space Readings in Palmital revealed that privacy is a very important requirement amongst people on low incomes. This is not in accordance with conclusions from previous works (Willis, Chermayeff & Alexander) that suggest exactly the opposite, i.e., that privacy requirements are of the utmost importance only amongst middle and upper-middle classes. From what has been seen in Palmital and in the body of the literature on the subject, it can be understood that people's need for privacy may differ qualitatively from one social class to another, but it is a phenomenon inherent in human nature, in the *being-in-the-world* as Heidegger puts for it. The qualitative differences are those related to cultural backgrounds and social status. For example, being overlooked while doing

the laundering would not have been a problem for a Brazilian middle class lady who has never done the washing anyway, since she can pay domestics to do the work.

### 2.3.3 Identity.

In the process of dwelling, the phenomenon of preservation of identity is manifested through every element that users introduce to their houses. The plants in the garden, the furniture, the spatial distribution of activities, the allocation of places in the diverse rooms, the adornments, the modifications to plans and facades, the replacement of finishes and fixtures, all these things are intentional and aim at preserving the individual or group identity. In Brazil, the planners of mass housing projects tend to believe that, as long as a low-cost house provides shelter and basic sanitary conditions, it is good for living in. Palmital Space Readings suggest something different. It has been found that people will not give up customs, traditions and aesthetic preferences in order to save money. Less than 10% of the 175 Palmital houses visited had never had any element replaced or modified yet. This finding may produce a greater awareness that subjective aspects should not be neglected. If the house does not serve as a medium of communication for people talking to each other about themselves (their identity), it will not be considered as a dwelling place, but just as a provisional shelter. This is because Palmital residents, despite being on a very low income, have spent so much money on changes they have introduced to their houses. There would be no way they would feel *at home* if they did not do so.

In Palmital, the feature that most affected the users' need for preservation of identity was the spatial disposition (zoning) of rooms and apertures, specially the location of the service area at the front of the house. Such a solution is totally unacceptable and offensive to people's identity as human beings. Another characteristic of the Palmital housing models - that affects users' identity to the utmost - is the small size of the rooms, particularly the kitchen and the bedrooms. It has already been said that space saving was a counterpart of cost cutting and that this policy was detrimental to essential qualities. Space savings in Palmital have reached unacceptable levels, to the point of not providing space for very basic items of furniture such as a dining table.

Summing up, Palmital Space Readings have shown that even people on low incomes are very concerned with signs that denote social status and cultural involvement.

#### 2.3.4. Ambience.

The need for a pleasant ambience is a phenomenon that, to some extent, encompasses identity and privacy. However, the aspects related to environmental comfort (thermal, acoustic and luminous) are specific and were taken separately in this thesis. The Palmital Space Readings revealed that some failures in the design have led to poor environmental conditions inside the house, particularly the thermal conditions. The gaps between the roof and the walls that let in wind and rain; the type of window which does not ventilate properly; the thin walls which get hot and irradiate heat to the inside; the bad orientation of bedrooms; these are failures that worsen the internal environment and consequently affect the need for a pleasant ambience. It must be pointed out that in Palmital the dissatisfaction with the environmental conditions of the houses seems to be much less intense than the dissatisfaction with subjective aspects like privacy and identity. The figures for the conflicts with the ambience do not show proportions as high as those in the figures for the conflicts with identity, for example. What is more intriguing in this issue is that, by and large, research works on low-cost housing design in Brazil show a great concern with these objective aspects of ambience - that is thermal, acoustic and luminous comfort - while the subjective aspects related to identity and privacy are put aside.

#### 2.4. The findings and the participatory design.

The design of housing which involves the future occupants participating in the design process has been broadly mentioned as the only solution capable of filling the gap between architects and users. In the body of consulted literature, no objection to this assertion has been found, thus it has also been assumed by the present researcher that participatory design is a thing to be sought. In the case of individual clients, there will be no difficulty in attaining such an objective, as soon as the architect's attitude to the client is to encourage his or her participation. On the other hand, in larger housing projects there are some difficult obstacles to overcome. In Brazil, for example, mass-housing projects are practically impossible to be carried out with the direct assistance of the future occupants. This is because the homeless and



the "favelados" (slum dwellers) are scattered all over the urban fabric and do not constitute organized communities. Moreover, they apply for housing programmes individually, regarding their own convenience. In addition to these organizational obstacles, there are some methodological difficulties to be considered. How does one get the effective participation of hundreds or even thousands of users in the design process? This is almost unthinkable in practical terms and other strategies - which enables the communication process between architects and mass groups - must be conceived. Palmital's experience suggests that, taking into consideration the phenomenological dimensions of dwelling, its universal characteristics and its local (or regional) features could greatly contribute to the solution of such impasse. This is because it could help architects to form a rather precise image of those they design for, by observing their existing environments and collecting data from previous researches. As the phenomenological approach is interpretative, it can provide information about many subtle aspects, as for example aesthetic preferences, which may not be caught up in large scale questionnaire-type surveys. If their requirements are taken into account, users are more likely to identify themselves with the designed environment and hence meet so called residential satisfaction. This would be an indirect participation, whereas an effective one, in that the design, besides considering technical and economical constraints standards, would contemplate all cultural aspects involved in the dwelling.

### **2.5. The alterations to the original design.**

One of the most interesting findings of the Palmital Space Readings is related to the modifications that users introduce in their houses. There is a widespread understanding in Brazil that pattern book houses are not well accepted by users because everyone wants to personalize their place, to endow the house with their own identity. Thus, any modification introduced to the original plans of pattern book houses were accredited to the need for personalizing dwelling places. Palmital suggests there could be another interpretation to this fact. The Space Readings have revealed that, in many cases, the modifications aimed at correcting some failure that was causing conflicts between user and house. As the faulty element had to be replaced, the owner preferred to adopt a different solution, believing that the original one was totally wrong and hence should not be repeated. If the original windows were not working properly and needed to be replaced, the owner

would not see any reason to fit a similar one. Conversely, he or she would reject the solution given by the architect and seek their own way out. The same reasoning apply to the extensions that they built. The design of Palmital housing models anticipate the extensions to be built. However, residents know from their own experience that the rooms are too small, the finishes are inadequate, the appearance is ugly, the construction is substandard and so on and so forth. Why should they follow the pattern to extend the house? Why not try something better? The myth that low-cost houses are altered by users only because they need to personalize them must be the object of further investigations.

### **3. Recommendations.**

Before putting forward any recommendation, the researcher wants to state that she has deep conviction that the Brazilian housing problem is political rather than technical. The government has to subsidize the housing needs of the underprivileged sectors of the population, which account for as much as 90 millions, whether by promoting homeownership through indirect subsidies or by providing public rental housing. Further researches are needed on the most appropriate way to carry out any of these policies. What seems to be unacceptable is that the ninth economy in the world cannot afford to accomplish one of the basic human rights which is housing. If the role for the State in housing low-income people is not increased, there will be no short or even medium term solution to the problem.

Another point that should be stressed here is that the recommendations are targeted to the architectural design for the units of future large scale low-cost housing programmes in Brazil only, since they deal with the culture-related aspects of territoriality, privacy, identity and ambience. These aspects can be generalised only within the context they are related to. However, further questionnaires-type surveys are needed to quantify the intensity in which the diverse phenomena are revealed, in order to establish priorities as for implementing solutions, since the resources are limited.

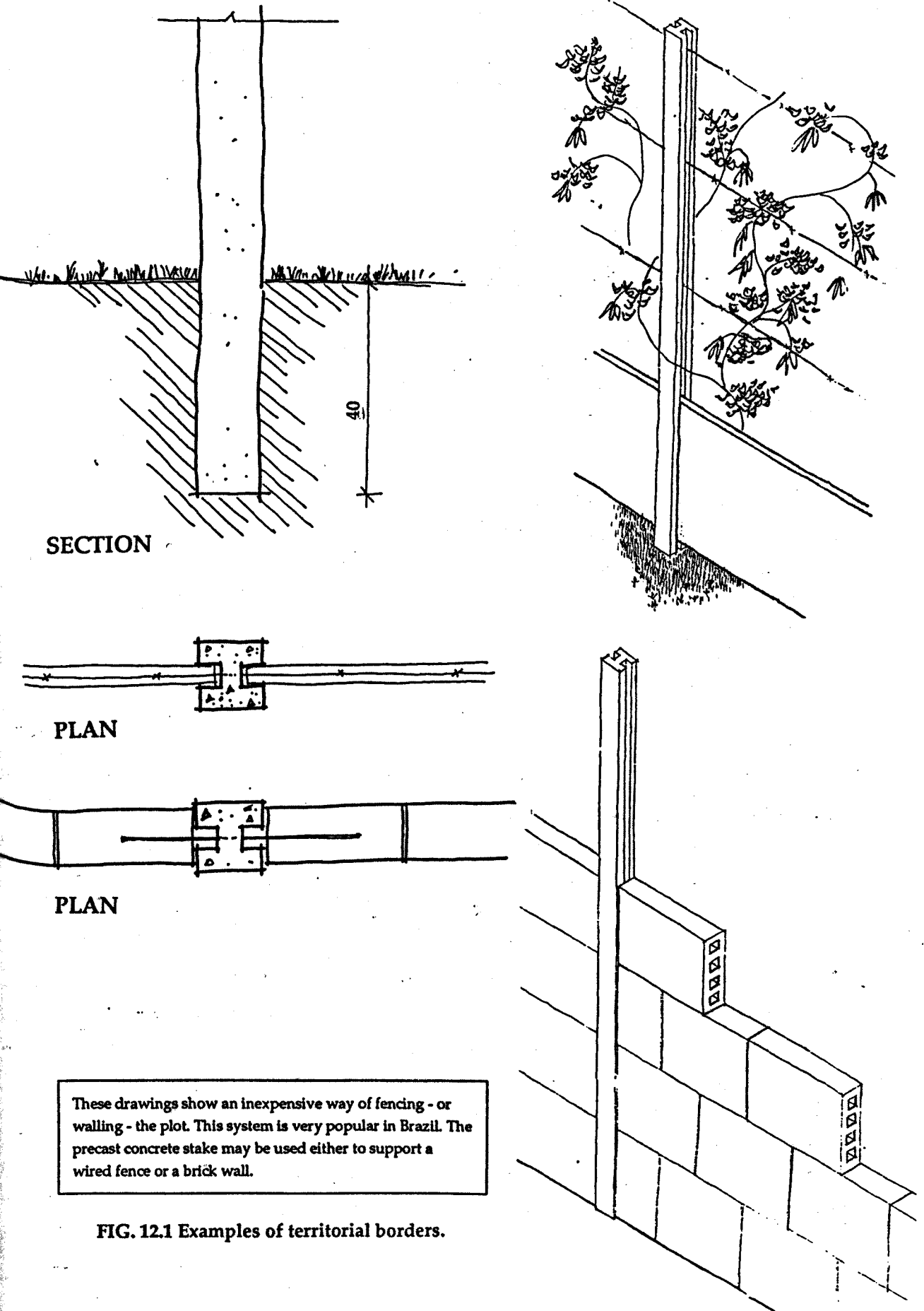
#### **3.1 Territoriality.**

The elements that affect territoriality are surrounding borders, gates and doors. The plot must be delineated by walls, fences or edges. The ideal

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situation is a decorative fence at the front and walls 1,80m high, on both sides and at the back edge. The materials to build the border, whether walls or fences, will depend on the client's ability to pay. The illustrations in Fig. 12.1 provide some suggestions on what could have been built in Palmital.

### SURROUNDING BORDERS



SECTION

PLAN

PLAN

These drawings show an inexpensive way of fencing - or walling - the plot. This system is very popular in Brazil. The precast concrete stake may be used either to support a wired fence or a brick wall.

FIG. 12.1 Examples of territorial borders.

All rooms must be provided with a closing door, which is intended to mediate the move between the personal and the group territories. The main entrance door must be preceded by a transitional space that could be a veranda, a porch or just a shelter. This space is intended to make the transition between the outside and the inside territories.

### **3.2. Privacy.**

Providing privacy is to provide mechanisms for controlling unwanted interactions. Thus, all elements that play any role in controlling unwanted interactions affect privacy. Acoustic control and visual control are the most important mechanisms for achieving privacy at home. Walls, doors, windows, spatial distribution of activities (zoning), location of the house on the plot, position of apertures, all have to be examined from the point of view of providing privacy.

As for the control of unwanted acoustic interactions, the house must provide acoustic insulation on two levels, from one room to another in the house, and from one house to another in the settlement. Inside the house, doors, walls and ceilings must be conceived to permit the control of unwanted noise. External and party walls must be designed appropriately and employ suitable materials.

The control of visual interactions inside the house can be done as follows:-

The spatial distribution of activities must consider the pertinent privacy requirements. The activities to be performed privately must be located in a such way that they are hidden from the view of strangers. Inside the house, the location of doors plays a very important role in controlling unwanted visual interactions.

The control of visual interactions with the outside is done through barriers that can be fixed, such as walls, fences, edges and vegetation; semi-fixed such as doors, gates and windows; mobile as in curtains, screens and furniture. The way in which the houses are laid out is extremely important in controlling visual interactions between public and private space. Care should be taken with the location of external doors and windows so that they do not front onto neighbours windows and doors; the creation of visual barriers using vegetation or taking advantage of the topographic characteristics of the

site; the orientation of rooms; all of these features can contribute to the improvement of privacy. After thoroughly exhausting the exploration of those mechanisms for controlling unwanted interactions with the outside world, designers may rely on curtains and screens to complete the job.

The visual control inside the house is done through doors, screens and furniture. Bedroom and bathroom doors should not disclose the interior at a glance. Their location must be associated with a careful layout for the facilities or furniture.

### **3.3. Identity.**

Designing houses which contribute to the preservation of people's identity implies looking at the following features:-

- \* Fixed features such as the spatial distribution of rooms; allocation of space for essential activities, whether indoors or outdoors; form, proportions and dimensions of rooms; aesthetic qualities (architectural style).
- \* Semi-fixed features as finishes, fixtures, and decoration.
- \* Space must be allocated to all basic activities such as eating, personal hygiene, resting, house work and socializing. Planners and designers have to bear in mind that any innovation introduced in the plan must be in accordance with the customary way of doing these essential activities.

The diverse activities must constitute three areas:

1. Social areas, which comprises the main entrance, veranda, living-room, garden and any other space for communal activities and social interaction.
2. Private areas, which comprises the bedrooms and bathrooms.
3. Service area, which comprises the kitchen, dining-room, a place to do the washing and ironing, the back yard and vegetable garden.

All areas must provide sufficient space for the furniture and appliances needed.

The spatial hierarchy must follow the traditional pattern which is to place the social area and the main entrance to the house at the front of the plot and the service area at the back. Lateral entrance is acceptable, providing the

transition between public and private realms is articulated by means of a veranda or porch.

The finishes must facilitate the upkeep of the house and special attention should be given to the specification of floor coverings, bearing in mind that kitchens, bathrooms and service areas are more subject to frequent cleaning and washing than the other rooms. The floor covering for the living room must be attractive in the first place and distinguished from the floor coverings of ordinary areas.

As far as the external appearance of the house is concerned, the designer should be aware of the social and hence cultural differences between them and those they design for. This does not mean that architects cannot innovate on the traditional patterns or introduce new aesthetic values to the environment they design. What is recommended is that the innovations must not break existential links between the residents and their houses. Once the phenomenological dimensions of a dwelling and their related phenomena are respected, aesthetical innovations are welcome.

### **3.4. Ambience.**

Besides the requirements that have already been contemplated on identity, to ensure that the need for as pleasant ambience is satisfied, environmental comfort inside the house must be looked at. Environmental comfort comprises thermal, acoustic and luminous comfort. The thermal comfort may be achieved by means of:

- \* orientating the house so that unwanted sunshine is avoided;
- \* designing, dimensioning and positioning the windows so that good and controlled ventilation is achieved;
- \* designing and constructing watertight roofs and windows;
- \* using vegetation to provide shadow for critical situations in the incidence of the sun.

Acoustic comfort has been approached with the recommendations related to privacy. The luminous comfort may be achieved by means of positioning and dimensioning the windows properly.



The illustrations in Fig. 12.2 and Fig. 12.3 show some ways of contemplating territoriality, privacy, identity and ambience in accordance with these recommendations.

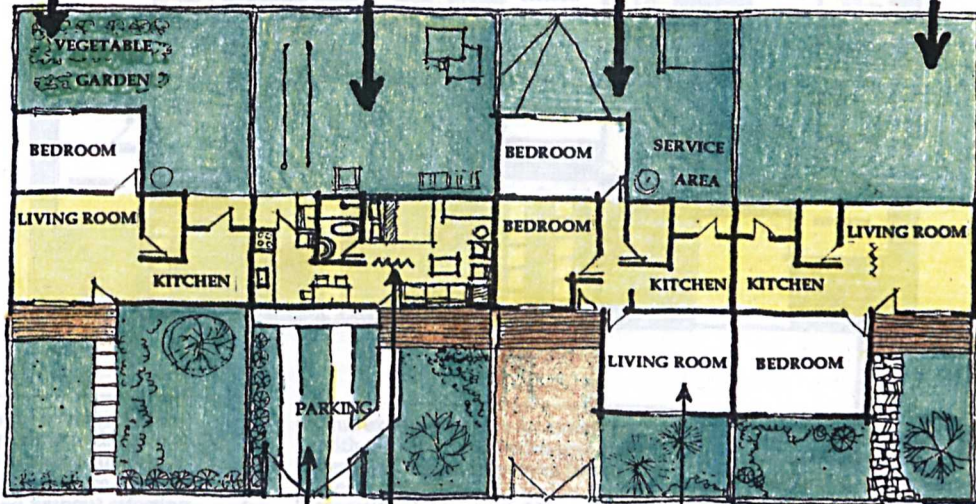
# TERRACED HOUSES

This extension creates a large bedroom and preserves the mechanisms for privacy as well as contemplates the other three phenomena.

In this extension the option can be to maintain the living room as it is and to create a comfortable bedroom fronting the street. This solution also contemplates the phenomenological dimensions of dwelling.

The spatial zoning is in accordance with the traditional distribution of the residential space, i.e., service area to the back, social area and entrance to the front, a dining space and a transitional space between the outside and the inside. All requirements for privacy, territoriality, identity and ambience seem to have been achieved.

In this extension, a new living room is built, more spacious than the former one, which has been adapted to be used as a bedroom. Another comfortable bedroom can also be provided. Note that the traditional organization of space has been kept and the mechanisms for privacy have been greatly improved.



The front garden is big enough to provide car parking space even if the house is extended.

Curtains can be used as mechanisms for privacy.

The spatial distribution of doors and windows contribute to achieve an adequate zoning, since the furniture can be laid out to improve privacy, identity and ambience. It also helps the territorial requirements.

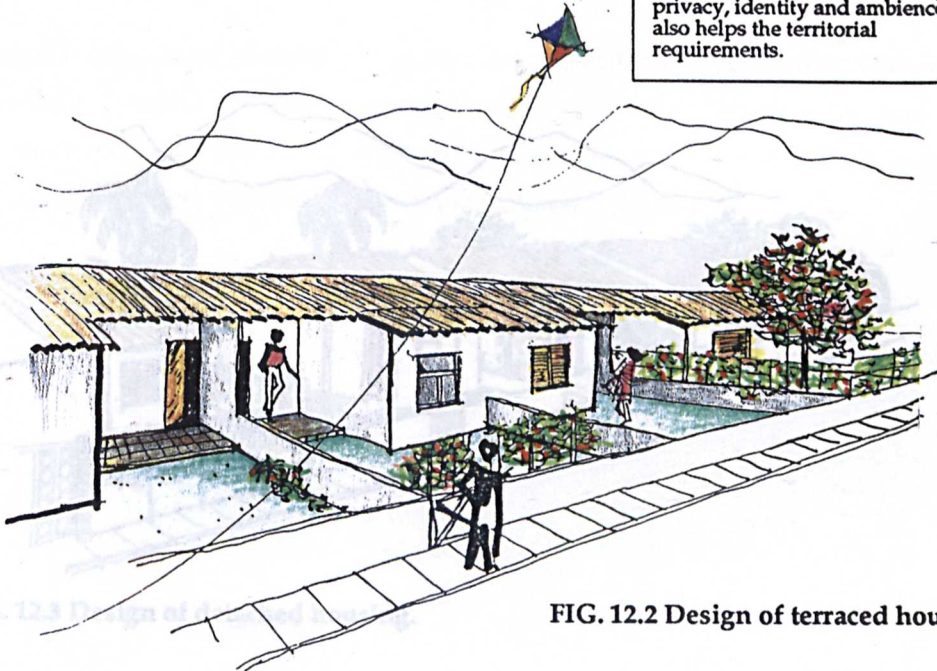
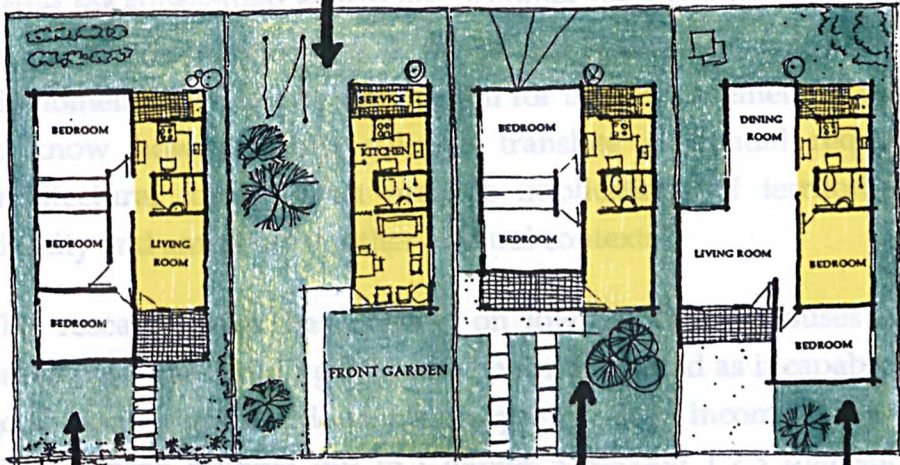


FIG. 12.2 Design of terraced housing.



## DETACHED HOUSES

This detached starter house, besides providing basic accommodation for two people, has got the main features of a traditional layout and good potential for future extension, as can be seen from the accompanying drawings.



This extension provides three bedrooms opening to the side of the plot and a veranda at the front. The position of the entrance door has been modified without affecting privacy.

This example shows an extension with two spacious bedrooms and a veranda, which improves the facade (identity) and makes the transition between public and private realms.

This extension duplicates the social area, creates an extra bedroom, a parking space and a veranda. The former living room is used as bedroom in order to maintain the traditional distribution of residential space (social area, bedrooms area and service area).

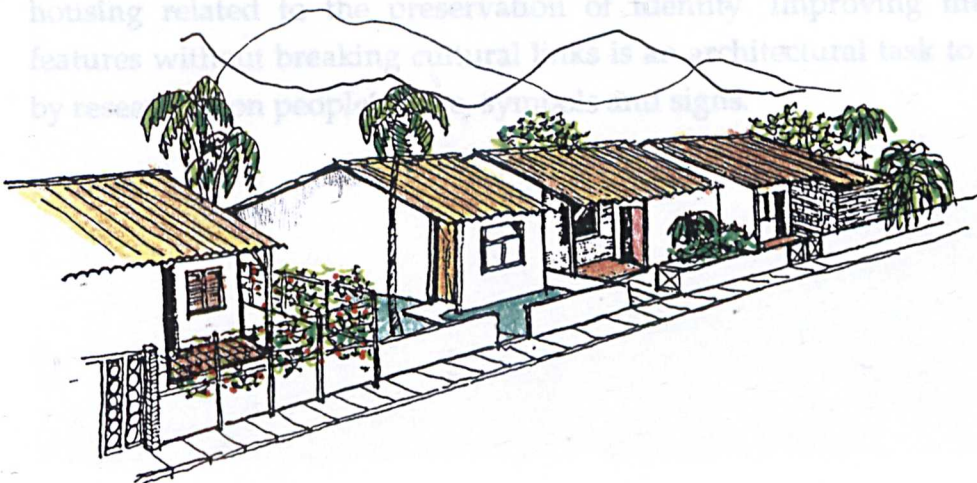


FIG. 12.3 Design of detached housing.

#### **4. Implications for future research.**

In this thesis some basic aspects of the phenomenological approach to the post-occupancy evaluation of housing have been set out. However, it has been focused on the housing unit, without paying due attention to the settlement. This points to a fundamental direction of research, which is to study the phenomena of territoriality, privacy, identity and ambience at the urban level (the settlement, the region and the city). These are important issues for subsequent researches. Another necessity for future studies seems to be a cross-cultural analysis of the culture-related aspects of these phenomena. It would be very useful for the improvement of housing design to know how different cultures translate existential requirements into architectural forms. What are the implications of territoriality, privacy, identity and ambience in other cultural contexts?

This research work has focused on low-rise family houses only, since in Brazil high-rise building flats have been dismissed as incapable of providing good dwelling conditions for people on low incomes. However, it has already been pointed out in Chapter 5, section 1.2.3 that such a housing solution (high-rise building flats) has not been properly evaluated in Brazil. Thus, future researches on how architectural elements affect existential phenomena (territoriality, privacy, identity and ambience), would greatly contribute to clarify not only the issues related to people's satisfaction with high-rise buildings but also other design aspects involved in this housing type.

Special attention should be given to future researches on the aspects of housing related to the preservation of Identity. Improving the aesthetic features without breaking cultural links is an architectural task to be backed by researches on people's taste, symbols and signs.



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# APPENDIX I

**SCIENCE, PHILOSOPHY AND ARCHITECTURE**



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## APPENDIX I

### SCIENCE, PHILOSOPHY, ARCHITECTURE.

This section is intended to supplement the conceptual analysis of architectural space that has been carried out in the Chapters dedicated to the theoretical construct. It presents a brief account of natural science, its interactions with philosophy and its influences on architecture.

#### 1. Science & Philosophy.

Throughout its long development, from the Greeks to the present days, Natural Science - or just "Science" - has been characterized as a form of knowledge that aims to control the processes and events of the natural world. To exert such a domain upon nature, Science claims to be rigorous in its method, objective in its observations, universal in its concepts. It also claims to be neutral in its assumptions and non-historical in its findings. Nevertheless such claims are deprived of any support, since no kind of knowledge is an entity detached from the individuals who produce it, and these individuals belong to a certain space/time that is cultural related. Thus, Science cannot be disconnected from the entire history of the environment in which it was generated and has grown. It cannot be totally rigorous nor can it be objective either, since its methods are carried out by human beings who are highly subjective, therefore not rigorous at all. Being universal is a false claim as well, since it takes place in a definite space/time. In fact, what is usually called "Science" is an element of the total western culture, so that to speak of it is the same as to speak of the whole history of the western civilization. This also means that the critique of Science will be

the critique of the total cultural environment in which such a Science has developed.

In this century, many authors have addressed themselves to this critique, in particular those who are said to belong to the phenomenological movement. The criticisms are specially focused on the Science which claims to be rigorous; its methodological abstraction from the life-world; its illusory independence of subjective human interests; and last, but not least, the presumed non-historical character of its laws and explanations. According to Patrick A. Heelan (1977) these features may be summed up in three basic characteristics: objectivism, scientism and technicism. These characteristics are prominent in the two most influential philosophical systems that are most strongly influenced by natural science, Cartesianism and Positivism. It is not pertinent here to describe in detail what are the characteristics of each one of these, but a rather general view of them should be given to clarify some aspects that will be discussed when the architectural subject is considered.

Objectivism is the dogmatic assumption that objectified knowledge represents the world, i.e., that human observations represent things as they exist in themselves, independent of human structures of interpretation (intentionality structures, as Husserl put forward). This "objectivation" of knowledge generates a scientific image of the world, based on objective processes of measurement. The world, in the objectivist view, comes to be an objective world-picture, to which the human spirit adds meanings. The picture itself is believed to be totally free from the many idiosyncrasies those who have obtained it. Thus, the meanings are believed to be a "a posteriori" endowment instead of an intrinsic part of the whole process of knowledge. This is a radical separation between "object" and "spirit" (or body and soul, so to speak)) and includes the idea that there is a perfect spirit, capable of being in itself to create the other beings: God.

Nevertheless, the critique of objectivism is not interested in discussing God but in pointing out that, in a such approach, the ontological dimension of ontic beings is systematically concealed; the historicity of the human subject is lost; and knowledge is conceived erroneously as a mental copy of what is antecedently out there. For a such approach, the object of knowledge is to be "looked at".

Edmund Husserl (1965), in his book *The Crisis of European Sciences and Transcendental Phenomenology* criticises this "objectivism" of sciences, for which the world appears objectively as a universe of facts whose lawlike connection can be grasped descriptively. He says that, in truth, knowledge of the apparently objective world has its basis in the pre-scientific world, i.e., the possible objects of scientific analysis are constituted a priori in the self-evidence of our primary life-world (the world of perception, as Merleau-Ponty (1980) put forward later). The opposite of "objectivism" is what Husserl (1965) calls "transcendentalism". This is the view that knowledge is the achievement of experiencing prescientific world: the "object" has to be experienced.

"Scientism" is the second criticism addressed to Science. What is called "scientism" is the dogmatic belief that the methodology of the positive sciences is in principle capable of answering all meaningful questions and that philosophy is nothing but a pre-scientific stage of culture that will wither away in a superior "scientific" culture. Scientism, then, comprises claims both about the comprehensiveness of the methodology of the positive sciences and about the superior rigour of that methodology vis-a-vis knowledge.

The third criticism of Science is "technicism", that is, the view that science is just a very successful "techne" for manipulating and exploiting nature. The argument that supports this criticism is that science deals with functional concepts, which are ways of relating mere entities to construct abstract models that will serve man's interest in a technical control.

Summing up, it could be said that scientism, technicism and objectivism are historically linked with the development of science and are deeply rooted in western culture. Moreover, they constitute the core of the philosophical position of most scientists in the past and continue to represent some. It could also be said that science actually is non-historical in that it is completely disinterested of culture; it is non-hermeneutic since it does not consider the interpretation of subjective meanings; it is non-dialectical since its progress is through cumulative knowledge and not through the conflict of opposing facts.

In the philosophical field, phenomenology has the task of opposing such "Science", attempting to eliminate its deformations and then to rescue the

true creative scientific spirit. Thus, phenomenology will consider the hermeneutical and the dialectical dimension of the scientific knowledge as well as will take into account the cultural milieu in which the experience (the process of knowing) takes place.

After giving this general view of natural science and a brief account of the opposition between phenomenology and Cartesianism, the task remains to discuss the architectural object vis-a-vis science and philosophy. The next section of this chapter examines how the criticism on Science can also be addressed to the architectural "praxis".

## **2. Architecture vis-a-vis Science, Philosophy.**

It has just been said that objectivism, scientism and technicism are the main criticisms addressed to science and that science is an element of total contemporary western culture. The question now is to verify whether the same criticism applies to western architecture or not. The deliberate comma between science and philosophy is to emphasise that these two fields are bound together, since it is within a certain philosophical environment that a scientific paradigm takes place. Thus, examining architecture vis-a-vis science, philosophy is to look into how scientific procedures, generated in a certain philosophical context, have influenced the architectural "praxis". As it is not pertinent to the scope of this Appendix to carry out a comprehensive analysis of the architectural "praxis" throughout history, this section aims at giving just a brief account of the most striking influences that the architectural thought has received from science and philosophy.

The first criticism addressed to science - objectivism - surely applies to architecture. Describing their works, most architects try to demonstrate the "objective factors" that were considered in the design process: climate and topography of the area; adequate construction materials; functional requirements; economy and the like. The final design, they say, comes out of the interaction of those factors and constitutes a unique solution to the given problem. In short, the objectivistic view interprets the architectural form as just the result of a skilful manipulation of quantitative data. Even the aesthetic dimension is understood as result of objective - and hence measurable - requirements (good proportions have to keep certain ratios, beautiful forms are those geometrically arranged and so on).

Scientism, the dogmatic belief that the methodology of positive science is capable of answering all meaningful questions, is a criticism that can be addressed to architecture as well. The profusion of scientific design methodologies in the sixties and seventies is a clear evidence of the fascination that architects held for positive science. Modernist manifestos also are examples of scientism in that they are teeming with assertions about the advantages of employing scientific procedures in architectural design.

Finally, technicism, i.e., the understanding that rational procedures are non-ideological, is also a criticism to be addressed to architecture. The replacement of vernacular buildings with "modern" ones in developing countries, for the sake of "technological improvement", is a striking example of architectural technicism. The priority given to technical requirements detrimental to the symbolic dimension of buildings, which is found everywhere, is another aspect of architectural technicism that should be pointed out.

In architecture, as in Science, the phenomenological view claims to be opposed to the Cartesian approach that comprises objectivism, scientism, and technicism. Phenomenology, it is believed, comes to rescue the genuine creativity of the design process, as well as the human dimension of architecture. Thus, the phenomenological approach will consider the architectural object as to be experienced, instead of being for looking at.

The next section gives a brief account of phenomenology as interpreted by Herbert Spiegelberg (1984), one of the most prominent contemporary phenomenologists.

### **3. A brief account of Phenomenology.**

What is phenomenology? This question arises whenever the expression "phenomenological approach" is mentioned. Herbert Spiegelberg, in the preface to the first edition of his book "The Phenomenological Movement" recognises that, although this question is more than legitimate, it cannot be answered. He points out:

*"Among the many misconceptions which this book is meant to rectify is the idea that there is such a thing as a system or school called*

*"phenomenology" with a solid body of teachings, which would permit one to give a precise answer to the question "What is phenomenology?"*  
(Spiegelberg, 1984, p.XXVII)

To overcome this dilemma, he tries to determine a common core within all the varieties of phenomenologies since Husserl, calling it "The essentials of the Phenomenological Method". In determining this core, he first discusses the several phases of what he calls "the phenomenological movement":

1. The preparatory Phase.
2. The German Phase.
3. The French Phase.

In the part four of the book he reports on the geography of the movement and finally, in the part five, he presents what might be understood as the common core of all the "phenomenologies" he had just discussed in the previous Chapters. This part of the book is an attempt to organize the variety of phenomenologies into a systematic pattern. Thus, it is worth summarizing it to get a general view of what phenomenology could be.

At the beginning of the Chapter Spiegelberg makes clear that, the attempt to catch the essentials of phenomenology is going to be restricted to only those phenomenologists who had been included and discussed in the historical part of the book and who have recognised themselves as adopting the phenomenological standpoints. He also points out that it would be impossible to determine the essentials of phenomenology by a summary of its results, because even the more specifics and undisputed insights - such as the intentional structure of consciousness - are interpreted differently by several members of the movement. He concludes that the only thing that could bound Brentano, Husserl, Heidegger, Sartre, and Merleau-Ponty together would be the method. He Says :

*"At least at the present stage its most characteristic core is its method. There is a little disagreement among phenomenologists about this point. This following attempt to present the essentials of phenomenology will therefore refer to its method only."* (Spiegelber, 1984, p. 679)

First he examines the phenomenological method as a protest against reductionism. In his view, phenomenology gives the phenomena a fuller and



fairer hearing than traditional empiricism has accorded them, since it emancipates the phenomena from crystallized beliefs and theories that perpetuates preconceptions and prejudgments. Among those preconceptions is the principle of simplicity or economy of thought.

Secondly he lists the steps of the phenomenological method as follows.

1. Investigating particular phenomena;
2. investigating general essences;
3. apprehending essential relationships among essences;
4. watching the constitution of phenomena in consciousness;
5. suspending belief in the existence of the phenomena;
7. interpreting the meaning of the phenomena.

He points out that the first three steps have been accepted and practiced by all those who have aligned themselves with the phenomenological movement, while the later ones have been practiced only by a small group.

### **3.1. The first step: investigating particular phenomena.**

Under this heading Spiegelberg includes three operations: (A) the intuitive grasp of the phenomena, (B) their analytic examination and (C) their description. The customary label for these three operations is just "phenomenological description". As "phenomenological description" is rather popular when the phenomenological approach is explored in human sciences, it is worth examining in detail the operations that comprise such a description:

#### **3.1.1. Phenomenological intuiting.**

According to Spiegelberg, the student phenomenologist cannot be given precise instructions beyond some metaphorical phrases such as "opening his eyes," "keeping them open," "not getting blinded", "looking and listening," etc. (Spiegelber, 1984, p. 682) Comparing the phenomena with related ones, giving special attention to similarities and differences could be useful in the attempt to grasp the uniqueness of specific phenomena. Trying to clarify this subject, he gives an example of how phenomenological intuiting could be applied to the phenomenon of force, that is, to a non subjective phenomenon.

Finally, he asks an interesting question: "*Does phenomenology explore only subjective phenomena?*" (Spiegelberg, 1984, p. 687) Answering his own question he contests the widespread belief that phenomenology consists essentially in a study of merely subjective or private phenomena. His view can be summarised as follows:

All experience is basically "subjective" in the sense that it is one's own experience. Even a report about measurements is a "first-person experience." No empirical knowledge, however purged and "objectified", can get away from this subjective matrix of all experience. As far as the approach to phenomena is concerned, the main difference between phenomenology and empirical knowledge is that the former is open-minded and accepts phenomena without asking them at once whether they are "subjective" or "objective". If they are "merely subjective" this will show up in due time.

### 3.1.2. Phenomenological analysing.

Phenomenological analysis is analysis of the phenomena themselves, not of the expressions that refer to them. In the Spiegelberg's words "*it comprises the distinguishing of the constituents of the phenomena as well as the exploration of their relations to and connections with adjacent phenomena.*" (Spiegelberg, 1984, p.691)

### 3.1.3. Phenomenological description.

Phenomenological description of the phenomena goes usually hand in hand with the preceding steps. A phenomenological description should consider all disposable means to indicate the uniqueness and irreducibility of the described phenomena. Thus, the following operations could be carried out, whether separately or simultaneously:

- \* Classification of the phenomena. A description presupposes a framework of class names within which the phenomenon will be located.
- \* Description by negation. This is usually the simplest way to indicate the uniqueness of a certain phenomena: it is not...nor...
- \* Description by metaphor and analogy. Sometimes an analogy must be used to fully capture the specificities of phenomena, nevertheless, analogies and metaphors should be used cautiously, to avoid mere comparisons.

As it is impossible to exhaust all the properties of any object, the phenomenological description has to be selective, focusing on the central and decisive characteristics of the phenomenon and abstracting from it its accidentals.

Summing up, investigating particular phenomena by intuiting, analysing and describing particulars in their full concreteness may be considered a common programme for all those members of the Phenomenological Movement.

### **3.2. The second step: investigating general essences (eidetic intuiting).**

Investigating general essences is particularly useful in scientific investigations in which the single data will provide generalizations. About this procedure Spiegelberg writes:

*"In order to apprehend the general essence we have to look at the particulars as examples, i.e., as instances which stand for the general essence. Thus, using the particular red of an individual rose as a point of departure we can see it as an instance of a certain shade of red in general. But we can also see it as exemplifying redness and, finally, colour as such. Thus the intuiting of particulars provides stepping stones, as it were, for the apprehension of the general essences".(Spiegelberg, 1984, p.697)*

### **3.3. Third step: apprehending essential relationships.**

A phenomenological study of essences includes the discovery of certain essential relationships pertaining to such essences. These essential relationships can be of two types: relationships within a single essence or relationships between several essences.

In the case of relationships within one essence, we are concerned with the question whether its components are or not essential to the essence. Questions like the following would arise: Can a triangle without three sides and three angles still be a triangle rather than another figure? The operation to answer this question is called "free imaginative variation". It may involve two things:

- 1) The attempt to leave off certain components;

2) or the attempt to replace certain components by others. Such experiments can lead to three possible results:

- a) The fundamental structure designed by the general name remains unaffected by such an omission or substitution, which proves the omitted or replaced component to be unessential. It is admitted by the essence as an essential possibility.
- b) Such an omission or substitution will change the character of the entity without changing its essence (e.g., increasing the sum of the angles in a triangle beyond 180° will convert it into a spherical triangle). In this case the omitted or replaced component is relatively necessary as long as the specific essence is to be maintained. It is a relatively essential necessity.
- c) Such an omission or substitution "explodes" the whole essence. In this case the component is of absolute essential necessity.

Essential relations between several essences are established by the same procedure i. e., by imaginative variation.

#### **3.4. Watching modes of appearing.**

Phenomenology explores the phenomenon not only in the sense of what appears but also of the way in which things appear. There are, at least, three different senses of appearance:

1. The given aspect (or side) from which we know the object as a whole.
2. The different perspectives of these aspects.
3. The modes of clarity and distinctness the object presents itself.

Watching modes of appearance is a really new operation, as far as philosophical methods are concerned.

#### **3.5. Exploring the constitution of the phenomena in consciousness.**

Constitutional operation consists in determining the way in which a phenomenon establishes itself and takes shape in the consciousness. This operation does not mean, however, a psychological case study. It aims at determining the basic structure of the phenomenon, i.e., the essential steps that take place when the phenomena occurs.

### **3.6. Suspending belief in existence.**

Suspending belief in existence is called "phenomenological reduction", and it is, for Husserl, the master key of phenomenology. Nevertheless, phenomenological reduction is not a common ground for all phenomenologists.

This operation is to detach the phenomenon of our everyday experience from the context of our natural living by suspending judgement as to the existence or non-existence of the contents of the phenomena, in order to preserve these contents as purely as possible. Husserl associated the basic meaning of reduction to the mathematical operation of bracketing.

### **3.7. Interpreting concealed meanings (hermeneutics).**

This operation consists of discovering meanings that are not immediately manifest to our intuiting, analysing, and describing. Hence the interpreter has to go beyond what is directly given. This is one of the most controversial facets of the phenomenological method, since it implies considering instances of the phenomenon that do not show themselves. There are some phenomenologists that do not accept interpretation of meanings as a phenomenological enterprise. Even Spiegelberg is extremely cautious to introduce this step in the phenomenological procedure. Nevertheless, Heidegger's hermeneutic phenomenology, expressed in *Being and Time* (1962), provides many examples of an unveiling of hidden meanings that are not immediately manifest. Heidegger's performance leaves no room for contesting about whether interpreting concealed meanings is pertinent or not to a phenomenological enterprise.

## APPENDIX II

### EXAMPLES OF SPATIAL READINGS

## PALMITAL HOUSING ESTATE MG/BRAZIL

SPACE READING NUMBER	132
TIPOLOGY:	ONE BEDROOMED SEMI-DETACHED HOUSE.
ADDRESS:	HERMINIA BAHIA DINIZ, 76.

### 1. GENERAL INFORMATION

Eight people live in this house; the owners, their four children and the husband's parents. They used to live in Belo Horizonte before they moved to Santa Luzia (Palmital). Both man and woman have a permanent job. The grand-father is retired and the grand-mother has never worked away from home.

### 2. CONFLICTS

#### 2.1. Unwalled plot versus territoriality.

They want to build a surrounding wall to delineate the plot to prevent unwanted people to come in. They say that nobody respects their property because there is no border between the pavement and the plot. They feel very unprotected in this unwalled plot. *"Children from the neighbourhood are always throwing stones at the windows and therefore breaking window glasses. If there were a wall this would not happen."*

#### 2.2. Party wall without acoustic insulation versus privacy.

They complain about the fact that the house is semi-detached. They say: *"the smaller the house the worse the problem of being semi-detached, because you by no means can stop neighbours' noise."*

#### 2.3. Missing internal doors versus privacy.

*"We've fitted all missing doors in the doorways, to divide all spaces. I think they were in a hurry to get the houses ready for the Mayor's inauguration, then they hadn't enough time to fit the doors. They should refund us, shouldn't they?"*

#### 2.4. Sink and service area at the front of the plot versus privacy.



The woman says that this is a major problem for her since she works away from home in a part time job during the morning so that she has to do the washing in the afternoon. The sink catches the afternoon sun, which is very hot in the summer. *"This provisional shelter is working... at least I got some relief in this sweaty job.(Talking while washing.) When those bushes grow up I'll be able to do the wash in bathing suit."*

#### 2.5. Rough floor versus identity.

They say that the original floor was very difficult to clean and too rough for the small children to crawl around. *"We've covered the floor to make it smooth and easy to clean."*

#### 2.6. Sloping back yard versus the need for flat land to plant.

The back yard, besides having a huge slope, has not any covering or vegetation. *"The water and mud that drain into the house are appalling and this is because of the slope. We can't plant anything outside or the rain washes it away."*

#### 2.7. Window design versus ventilation requirements.

*"I wish I had money to replace these windows by more efficient ones. My home would get a better ventilation and a nicer facade as well."*

#### 2.8. Height of walls versus cleaning requirements.

They complain about the fact that the lack of a ceiling makes the walls too high. They say:-

*"The walls are much too high. They are not proportional, you know? Besides, they're very difficult to clean. I'll put a ceiling in the future."*

### 3. USE OF SPACES

#### 3.1. External areas.

The front garden has been paved over and is now used as a play ground for the children. The back yard is impossible to use because of the reasons listed above.

#### 3.2. Bedroom and living room.

The only existing bedroom is occupied by the couple and the youngest. The grand-parents and the other three children sleep in the living room. Adults and children have their meals either in the kitchen or outside in the back yard (if it is not raining).

## PALMITAL HOUSING ESTATE MG/BRAZIL

SPACE READING NUMBER	23
TIPOLOGY:	TWO BEDROOMED SEMI-DETACHED HOUSE.
ADDRESS:	RUA ETELVINA VIANA COUTINHO, 108

### 1. GENERAL INFORMATION

There are five people living in this house; a couple with three children (four, six and eight years old). The mother is housewife and the father works in building construction so he has to wake up five o'clock a.m. to get work at seven. The couple is originally from a remote area on the northern part of Minas Gerais. They have extended the house to create a new bedroom for the girl who is now eight years old.

### 2. CONFLICTS

#### 2.1. Wash-basin outside bathroom versus privacy and aesthetic sense.

The woman says that her husband works in construction of buildings and that he has never seen a wash-basin outside the bathroom. *"I wonder if they think that people on a low income are less intelligent than other people. Why is the wash-basin in the corridor?"*

#### 2.2. Washing area at the front of the house versus privacy and aesthetic sense.

Besides being awkward, the service area at the front of the house implies in extra work. The woman says:-

*"I do the laundering here and hang the washing out to dry in the back yard. You see, it is a lot of trouble to take away the washing in a bucket, but it would be worse if I hanged it in front of the house, wouldn't it?"*

#### 2.3. Quantity and dimensions of rooms versus layout wanted.

*"I'm used to large kitchens, with a cooker, a dining table and everything else. I can't cope with this tiny kitchen. It is ridiculously small. My husband built another room but he doesn't care about the kitchen. He doesn't cook, does he?"*

#### 2.4. Sloping back yard versus difficulty in cultivating greens and vegetables.

The woman says that in her home town she used to plant a vegetable garden to have fresh and cheap vegetables. She no longer can do it because of the slope. *"It is impossible to grow any vegetables on the slope in the back yard... we used to grow a lot in our home town."*

#### 2.5. Position of rooms and openings versus identity.

*"The kitchen door is at the front, straight near the street while the living room door is totally hidden, on the side. Who can understand these architects?"*

#### 2.6. Unwalled lot versus territoriality.

The woman stressed her need for delineate their piece of land:-

*"I did not feel that I was in my corner, you know? Whenever I was here I thought it could be anywhere. Then I had the fence built. It is weak but now I know what is mine, what is me!"*

#### 2.7. Missing internal doors versus privacy.

The major problem with the missing doors is that, even if the residents can afford new doors, there is not enough space left for fitting them. *"The curtains are the only way to minimize the problem of the lack of doors inside the house, because if we had doors the furniture wouldn't fit in..."*

#### 2.8. Gaps between the roof and the walls versus environmental comfort.

*"Can you see these gaps? They let the wind in; insects and rats come in as well. When it is raining it drizzles inside. We are planning to build a ceiling in concrete (in-situ concrete)."*

#### 2.9. Windows design versus the need for an adequate ventilation and better appearance.

*"I wish I had money to replace these windows. The house would get a better ventilation as well as a nice facade."*

#### 2.9. Quantity and dimensions of rooms versus quantity of space required.

The residents have built a new room to use as bedroom. They did not follow the anticipated pattern.

### **3. USE OF SPACES**

#### **3.1. EXTERNAL AREAS.**

They have paved the front garden and the flat part of the back yard in order to reduce dust (or mud).

#### **3.2. INTERNAL AREAS.**

The new bedroom is being used as a sewing room as well. The couple occupy the smaller room, which has not a party wall.

## **PALMITAL HOUSING ESTATE MG/BRAZIL**

<b>SPACE READING NUMBER</b>	56
<b>TIPOLOGY:</b>	THREE BEDROOMED SEMI-DETACHED HOUSE.
<b>ADDRESS:</b>	RUA BETITA RODRIGUES DA ROCHA,54.

### **1. GENERAL INFORMATION**

Nine people live in this house: a couple with six children (five female and one male) and one brother-in-law. Thus, the house is pretty crowded. The father has already retired and the mother does not work away from home. The grown up children are unemployed. Only the brother-in-law has got a job. When we arrived to visit the house some people were sitting down in the covered back yard, chatting and having a cup of coffee. The oldest daughter was cleaning the house while her sister was spraying water on the floor to refresh the inside (it was very hot inside the house). When we were finishing the READING, some neighbours came to visit the family. The visitors gathered together with the householders in the covered back yard.

### **2. CONFLICTS**

#### **2.1. Wash-basin outside bathroom versus privacy and aesthetic sense.**

The housewife is not happy with the wash-basin standing outside the bathroom. She wants to move it to the inside. She says that the family does not have privacy when using the wash-basin. She also complains that, from the aesthetic point of view, it is very unpleasant to see the wash-basin when you are in the living room. Being looked at by visitors when one is using the wash-basin is unpleasant, she says.

#### **2.2. Washing area at the front of the house versus privacy and aesthetic sense**

In the housewife's opinion, it is nonsense to place the washing area at the front of the house. She says: "The washing area is traditionally placed at the back of the house. I'm not used to doing the washing like I've got to do here. Everybody passing by can see me. I don't have privacy in my own house!"

#### **2.3. Rooms dimensions versus layout wanted.**

There are lots of complaints about the size of the rooms. Residents find them quite small to fit all furniture they need. The couple wish they had a larger double bedroom which could accommodate a dressing table.

#### **2.4. Sun-drenched back yard versus difficulty in cultivating greens and vegetables.**

The front garden and the back yard have a lot of sunshine. Consequently, it is almost impossible to grow vegetables there. Before they moved in they used to grow their own vegetables to have more food. Now, there is no shadow in the back yard and the plants get burnt.

#### **2.5. Inadequate entrance door versus rain water getting in.**

The owner told us that the rain water gets through the door of the living room because it is not water-tight. In addition, the door is located on the wall that faces the most strong winds and rain.

#### **2.6. Unwalled lot versus territoriality.**

Residents say they are not safe at home because the missing surrounding wall is an invitation for thieves. They do not feel at home when they are outside in the garden. They complain they cannot stay outside as much as they would like.

### **3. USE OF SPACES**

#### **3.1. LIVING ROOM**

The residents have their meals and watch TV in the living room. Children do their homework there too. The TV is often kept switched on all day long. When the father is out, children are given a chance to listen to music and dance in this room. Thus, this space is always being occupied by someone.

#### **3.2. BEDROOMS**

The couple occupies the bedroom "A" because the double bed fits only there. The bedroom "B" is occupied by the girls. In this way the father can control what time they come back home in the evening. The son and the brother-in-law occupy the third bedroom which is walled off from the neighbours,



house. This room was intended to be the main bedroom, i.e., the bedroom for the couple in that it is the largest one. Nevertheless, the partition wall does not provide good insulation from noise. As a consequence, it does not provide privacy.

### **3.3. BATHROOM**

There is only one bathroom for nine people and it is used under a system of rotation: the brother-in-law has got priority because he has to leave early to work.

### **3.4. KITCHEN**

The entrance to the house is in fact through the kitchen door (the main entrance, in the living room is not used at all). The kitchen is also the place in which residents have their meals.

### **3.5. WASHING AREA**

Users had the washing area covered in order to provide the place with some shadow. The washing hang drying in the sun, in front of the house. They do c iron clothes because it consumes a great deal of electricity and they cannot afford it.

### **3.6. BACK YARD**

The back yard is not used at all. It gets a lot of hot sun-shine, in addition to being devoid of any attraction for users.