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**UNIVERSITY OF SOUTHAMPTON**

FACULTY OF BUSINESS AND LAW

Winchester School of Arts

Volume 1 of 2

**Domestic Spaces in the Information Era:  
Architectural Design, Images and life in a Technological Age**

by

**Paolo Sustersic**

Thesis for the degree of Doctor of Philosophy

December 2013







UNIVERSITY OF SOUTHAMPTON

## **ABSTRACT**

FACULTY OF BUSINESS AND LAW

Design

Thesis for the degree of Doctor of Philosophy

**DOMESTIC SPACES IN THE INFORMATION ERA:**

**ARCHITECTURAL DESIGN, IMAGES AND LIFE IN A TECHNOLOGICAL AGE**

Paolo Sustersic

The aim of the research is to contribute to a critical interpretation of the multiple dimensions that shape the concept and the practice of contemporary living by analyzing the transformations that domestic space has experienced within the framework of the Information Society. The study emerges from the evidence that the changes that emerged due to the diffusion of information and communication technologies have originated a new social, economic and cultural paradigm that has deeply transformed the way in which contemporary domestic spaces are imagined, designed and lived. Deeply affecting life habits, these changes put into question the persistence of traditional conceptual models related to domestic space such as protection, intimacy, privacy and reproduction of consolidated family structures, recording the appearance of new interpretative categories with respect to private space and the activities developed there, such as connectivity, flexibility, ubiquitousness, transformability and mobile domesticity, among others.

The research deals with four main aspects: a) the social and cultural context in which the contemporary debate on domestic space is situated; b) the historical context of the second half of the 20<sup>th</sup> century when various interpretations of dwelling were formulated in an era dominated by technology and information; c) a proposal to reformulate the concept of living from the perspective of becoming in light of functional transformations of contemporary domestic space epitomized by mediascapes, workspaces and bodyspaces; d) a proposed reading of the interpretative keys on the basis of which the informational house is imagined and designed in relation to the stimuli of objects and spaces, flexibility, digital design and sustainability.

The research argues the multidimensionality and complexity of contemporary domestic space stemming from both the growing diversity of the actors involved in its production and the variety of factors that influence it. In the culture of dwelling, the role of technology is not univocal and involves all stages of the process of design, construction and use of domestic space. Focusing on advertising and specialized media, the research highlights the role played by images in the construction of a collective imagination of the domestic. In discussing changes in the functional environment, the research highlights how the domestic plays an important role in domestication of technologies. Finally, the research underscores the need for a reformulation of the idea of domestic space within the scope of considering dwelling as an art of becoming, more in keeping with the *zeitgeist* of the Information Society.

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## **Declaration of Authorship**

I, Paolo Sustersic

declare that the thesis entitled

**Domestic Spaces in the Information Era:**  
Architectural Design, Images and Life in a Technological Age

and the work presented in the thesis are both my own, and have been generated by me as the result of my own original research. I confirm that:

- this work was done wholly or mainly while in candidature for a research degree at this University;
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- where I have consulted the published work of others, this is always clearly attributed;
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- I have acknowledged all main sources of help;
- where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
- parts of this work have been published as: Sustersic, 2001a, 2001b, 2002, 2005a, 2005b (please, see the Bibliography for complete references);

Signed: .....

Date:.....



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A change of direction was eventually undertaken in my research, culminating in this thesis at Elisava and the University of Southampton thanks to the encouragement of Daniel Cid and the support of Bashir Makhoul, who believed in the viability of the project. During this phase, the advice and observations provided by Beth Harland and Ryan Bishop were helpful to define the structure of the work and to formulate the essential questions in a way that, I hope, is clear and guides the reader in the field of contemporary domestic space.

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Barcelona, December 2013



# **Introduction**

## **Architectural Design, Images and Life in a Technological Age**

The aim of this research is to contribute to a critical interpretation of the multiple dimensions that shape the concept and the practice of contemporary living by analyzing the transformations that domestic space has experienced within the framework of the new socio-economic and cultural paradigm based on technologies of information processing, which we know as the Information Society. My investigation starts from the evidence that the changes that emerged from the second half of 1980s onward with the diffusion on a planetary scale of information and communication technologies originated a new social, economic and cultural paradigm –based on scientific and technological innovations that were developed from the 1940s onward– that has deeply transformed the way in which contemporary domestic spaces are imagined, designed and lived. Deeply affecting life habits, these changes put into question the persistence of traditional conceptual models related to domestic space such as protection, intimacy, privacy, reproduction of consolidated family structures, recording the appearance of new interpretative categories with respect to private space and the activities developed there, such as connectivity, flexibility, ubiquitousness, transformability and mobile domesticity, among others.

### **I Objectives and Aims**

In this framework, my thesis arguments are that:

- 1) In the age of the information society, domestic space is intrinsically multidimensional and formed from a complex relationship between imagery, architecture and life, in a context in which technology and society are profoundly interrelated, mutually shaping each other.
- 2) In the contemporary world this interaction between society and technology shapes not only the present, but also future scenarios that, when materialised, often form different outcomes than those imagined, but which in any case need to be previously formulated on the basis of desires and images that are constantly changing.
- 3) These images and desires, which are only productive while maintaining their status as promises remaining to be fulfilled, establish themselves as drivers of the processes of change that shape the liquid era in which we live, far more than other more objective reasons that allow us to understand the historical, economic, social and cultural circumstances that these processes take place in.

- 4) Even in an area as seemingly remote from highly advanced research as that of domestic space, technology plays an important role since it is at home where technology is domesticated; where it comes closest to the real, everyday life of people.
- 5) However, this domestication process does not occur through in-depth technical knowledge of devices and their operation, which is the reserve of engineers and other technicians, but rather through a reading of the signs and codes on the basis of which we associate visual forms of advanced technology with concepts of modernity and progress.
- 6) As a consequence, the present time seems to be dominated by a fascination with the “magic” and “progressive” dimension of technology that prevents society from reflecting on its real nature and the way in which it shapes our culture while being shaped by it.
- 7) The dwelling, which has traditionally been formulated based on the concept of permanency, should be reformulated in terms of becoming and the house should be considered as a sustainable and flexible artefact; an expression of a new alliance between culture and technology capable of adapting to life’s changes over time as well as the multiple forms and requirements of individuals and families today.

The following is a synthetic explanation of the arguments on which I base my affirmations and which I will discuss in this work:

- 1) Domestic space is multidimensional since it is the result of the stratification of a number of different ideas about living that have been formed at different times in history, each of which has left a sediment (of greater or lesser relevance) regarding the way we understand housing at present.<sup>1</sup> In addition to this historical multidimensionality, another one of a more functional nature is derived from the overlap of activities traditionally present in domestic space, along with newer features of the information society, such as the importance of communication, connection to the network and interaction, the redefinition of the relationship between work and private life, and the redefinition of the image of the body. Finally there is a third multidimensionality derived from the fact that contemporary communication patterns shape our lives and identities in two complementary fields: those of physical space and digital one. Moreover, network connectivity is increasingly associated with devices such as mobile phones that force the experience of domesticity to occur in both the physical space of the home and in other places we do not usually consider to be ‘domestic’, such as cars and the invisible capsules that our electronic prostheses generate around us in public spaces.
- 2) The ability to modify the environment through the mastery of technique is a hallmark of the human species. Thus, novelty does not reside in the use of

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<sup>1</sup> The trail that different ways of understanding inhabitation has left on the contemporary home since the seventeenth century has been investigated by Georges Teyssot (1986, 1987) in the exhibition *Le forme dell’abitare* in the XVIII Milan Triennial of 1986.

technology, but in the absolute dependence that our society has with respect to a hyper-technological infrastructure that is an indispensable precondition for the existence of society, allowing us to confirm that technology and society both need and shape each other.<sup>2</sup>

3) In this context, I argue that the complex relationship between imagination, architecture and people's real lives also exists in the domestic sphere, relying on the idea that close interconnection between images is a process in informational societies that produces certain models of life, architecture and design, transforming them into objects and spaces in which the existence of individuals is defined by the consumption of these cultural products, a process that feeds back on itself continuously. A multidimensionality of the concept of information can also be appreciated here, implying both a more abstract acceptance of the term as proposed by Wiener and Shannon, as well as a more specific meaning as it relates to media, close to the formulations of McLuhan and De Kerckhove, among others.

4) The reflection I wish to pose considers architecture and design not only in its technical dimension but also as semantic disciplines –materializing objects that are likely to be interpreted as signs– that help to shape successive visual "revolutions" in which the concepts of reason, progress and innovation are configured as fundamental axes for societies that institutionalise the processes of change and convert the techno-scientific paradigm into an inescapable reference even on an aesthetic level.<sup>3</sup>

5) Based on these considerations, a convergence can be observed between the mechanisms of persuasion and desire-creation typical of advertising techniques and the ways in which technologically advanced domestic space is communicated to the public as a promise for a better, more desirable or more sustainable future. However, desire is productive only to the extent to which it remains in the state of a promise yet to be fulfilled. At present much of the planet's inhabitants participate to varying degrees in this game and we all try to pursue our ideal world, but we should be aware that we will never reach it since, even if we did, the future would finally become the present and would therefore become less desirable and more obvious, soon replaced by another future that is more modern, brighter and holds greater promise. If design products have entered this mechanism since the aesthetic obsolescence principle was invented in the United States after the 1929 crisis, its application in the domestic sphere is a more recent phenomenon, occurring in post-war decades, parallel to the affirmation of post-modern societies and consolidated in an information paradigm.

6) Even when the new seems to be the result of an effective process of technological advancement, we can detect the existence of a rhetorical substrate I propose to define as “innovatist”, which is configured as a self-referential system of values

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<sup>2</sup> This thesis is supported by Castells (1996: 31), among others, who in turn relies on historians such as Fernand Braudel and Melvin Kranzberg.

<sup>3</sup> With the institutionalization of the scientific method in the 17<sup>th</sup> century, a new modality of observation is introduced: research of natural laws and powerful environmental modification thanks to the systematic application of knowledge. This is a profound change of mentality in which logic and calculation acquire a dominant role, which is at the origin of the modern mind as raised by Kuhn (1962) and Koyré (2000).

intended to further the belief that progress is real, even if it is manifested in a purely aesthetic transformation. One could argue that this is the tribute paid to the logic of the information society: that which cannot be reduced to a single media image ends up being marginalised, ignored, or directly ceases to exist.

7) The idea of the house as a structure that crystallises a way of life, expressing a rigid relationship between functions and spaces, is not consistent with the needs of contemporary inhabitants whose lives are constantly changing. For this reason, I propose to reformulate the idea of dwelling in terms of an art of becoming, linking up to some ideas that have originated during the last century and that have questioned the concept of living as one of permanence and belonging to a place. I advocate instead a dialectical viewpoint in which domestic space tends to have less defined boundaries, sometimes blending with other private ones, and in which dwelling is constructed on the basis of the relationship between being and becoming, between permanence and mobility, between the need for security and the desire to expand the limits of experience. In this framework, ideas of flexibility and sustainability are important to encourage a more opened and balanced view of what the home of the 21<sup>st</sup> century should be from the perspective of a conception (largely remaining to be built), of technology as a tool of society and culture rather than one serving its own internal logic and the interests of those who govern.

## **II Relevance and Originality**

The aspects that define this investigation as a relevant and original contribution to the knowledge on contemporary domestic space can be resumed as follows:

a) This thesis is put forward as an interdisciplinary investigation dealing with aspects such as the meaning of the house, its functions, its form and its dwellers, which are usually analyzed as separate issues and that, in my opinion, is important to consider as intertwined aspects especially relevant for a deeper understanding of domestic space at the end of the 20<sup>th</sup> century and in the early 21<sup>st</sup> century.

b) My intention is to show how these factors contribute to set out a contemporary domestic landscape that appears to be dominated by traditions of permanence and dynamics of change inspired by social attitudes, functional restructurings and transformations of symbolic contents.

c) I argue that analyzing contemporary domestic space from the perspective of a deep interdependence between the reality of the image and the image of reality contributes to new insight on the nature of dwelling in present times as well as on the multiple ways in which information and communication technologies shape our personal imagery and private environment.

d) It is significant to observe the domestic space since this is the space in which the most ordinary aspirations are projected, the analysis of which is potentially revealing of profound aspects of our society.

e) The research also questions the hyper-technological approach to domestic space, and the effectiveness of improvements that its large-scale real life application represents beyond the fascination with the magical dimension that sees technology as the ability to always provide the correct solution to any problem. The difficulty in the widespread acceptance of the smart home at the beginning of the 21<sup>st</sup> century or the resistance to the modality of telework highlight doubtfulness on an approach in which the seemingly irrepressible logic of technology is always believed to be inherently good and desirable.

f) If considered from a wider perspective, this subject is the result of my interest in investigating how changes in recent decades have altered the way we understand the built environment, and it is part of a wider concern on the forms of living and the challenges that our contemporary condition poses to architecture, design and the criticism on domestic, public and urban scales. This research actually gains full meaning within the framework of a broader reflection on three architecturally relevant aspects proposed by this new technological and social paradigm, which are: the transformation and renewed importance of domestic space as a consequence of the modification of social habits; the transformation of the city and the changes in its content as a result of the restructuring induced by information technologies; the questioning of some of the most authoritative theories of architecture and design and the affirmation of new aesthetics derived from the creative use of information in all phases of design. The thread that connects these apparently heterogeneous issues is the interest in understanding how architecture and design interact with technology and how they contribute to build and disseminate its imagery in our society. Since the moment when our civilisation gave science and technology a primary role as the driving forces of human destiny, these issues become inevitable also for architecture and design, two disciplines that often showed themselves as discourses of adaptation to or resistance against technological imagery.

g) If interpretation is necessary in all periods of history because it gives meaning to facts and it places them in broader, better-structured narrative contexts, today the magnitude and speed of the changes are such that they turn interpretation into an irreplaceable tool even for the recognition of contemporaneity by generations which over a few years have seen a large part of the knowledge, forms of work and social and cultural practices in which they had been raised brought into question. More than ever, critical thought should exceed the limits of academia, seeking to set up new interpretative categories in order to become a useful instrument when comparing media power ever more capable of making us believe in the existence of a certain reality just by stating it, or rather by showing its image.

The research topic I present here is not an established route, but rather a critical exploration in a territory bounded by as yet uncertain limits which has become our daily reality, which discusses whether it is still possible to talk about dwelling in the 21<sup>st</sup> century and whether this presents new or different characteristics with respect to the known forms.

### III Problems

Tackling an investigation of this nature involves moving in a complex and extensive territory that covers housing studies, the theory and practice of architecture and design, technological studies and the culture of the image in the context of more general discussions on paradigms of modernity, post-modernity and the information society, thus requiring a multidisciplinary approach attentive to the contributions from different fields such as philosophy and social sciences, the theory and history of architecture, design and cultural studies, and others which I will discuss in greater detail in the first chapter.

The need to consider such a wide spectrum, without losing sight of the intrinsically project-based dimension of domestic space, is based on the consideration that studies, projects and texts cannot be convincingly explained as isolated phenomena in themselves, arising from the internal dynamics of a particular project-based environment. Instead, they always imply a complex relation with social, historical and cultural factors that help to interpret and give meaning to the work in a context and in a specific moment in time. The interpretation consists firstly in presenting those factors that the researcher deems relevant for understanding the phenomenon and relating it to a dense body of other facts and phenomena. In short, it is a question of recovering the etymological meaning of the word *θεωρία*, which does not indicate an abstract construction distanced from reality, but the careful observation of reality that leads to its comprehension and thus to the formulation of a general principle. Rather than just describing the contingency, the intention is to construct an interpretive discourse that is essential for perceiving our time from an open and pluralistic standpoint. Within this framework, determining the points of view is an integral part of the project, given that each theorist must construct his or her own way of observing.

My viewpoint is from the field of design culture, but with the awareness that architecture and design are never purely technical and self-referential disciplines even if they are based on specific knowledge from their own fields. This conviction, that design is able to provide adequate responses to contemporary problems from the complexity of reality and the suggestiveness of the imaginary entails a need to analyze problems from multiple points of view, as I have tried to do in this research on domestic space. This conviction, which has come to be articulated over the course of my studies at the IUAV with historians of the Venetian School, at the School of Architecture of Madrid and the Composition Department of the School of Architecture of Barcelona, posits the impossibility of reducing interpretation to linear schemes, privileging instead an articulated vision that is nourished precisely by contradictions, which ultimately also explains the rhizomatic structure of a research investigation motivated by a subject as vast and complex as dwelling. Although not a strictly historical work, I have tried here to build an interpretive framework of contemporary phenomena that continuously refers readings to history, philosophy, social sciences and cultural studies; with the conviction that these are the bases that allow depth to be given to interpretation in an age that tends to valorise any contemporary phenomenon on the level of unprecedented novelty and memory of the present that inaugurates a programmatically different future.

To avoid becoming lost in such a vast territory, some reference points have been set to aid in the definition of a specific perspective on contemporary living. In recent decades the areas of focus have widened considerably, but there are few

interpretations that propose an interdisciplinary synthesis, such as that which I am attempting to undertake in my research. On occasion, this type of approach has been proposed for collective projects, in which each scholar contributes a reflection on aspects of the domestic sphere from his or her speciality, framed within a theme or interpretive line proposed by the book's editor. Such work comes primarily from sociology, anthropology and cultural studies, with little focus on a project-based approach. The exceptions include anthologies by Taylor and Preston (2006) and Miller Lane (2007), which present a selection of texts related to architecture and interior design concepts, and, on a more interpretive level, Vitta's *Dell'abitare* (2008), an interesting multi-dimensional reflection on dwelling, which, in any case, does not specifically deal with the effects of social and technological change on contemporary domestic space. This verification reaffirmed my interest in putting forward a collective interpretation of domestic phenomena within the Information Society that links a project-based approach with theoretical developments and specific studies within each discipline. My analysis, therefore, emerged from a reflection on the disciplinary spheres that must be taken into account to outline a map of this multi-layered domain and on the contributions that each of them may provide for my research.

*Inhabiting and domestic space.* The first aspect that I have considered is the outlining of a map of interpretative approaches to dwelling and domestic space. First, it is necessary to deepen the understanding of the meaning we attach to domestic space. The complexity of the issue (as I discuss in more detail in the third section of the first chapter) stems from the universality of dwelling, as well as from the original connotation whereby each man builds his own home environment and lives in his own way, though obviously certain common tendencies can be defined that are determined by society, culture and the historical moment. A second aspect that influences the complexity of domestic space arises from the occurrence of the different actors involved in its construction, each with divergent interests, points of view and different and often contrasting forms of knowledge, all of which have to converge in domestic space. Architecture, in collaboration with town planning and engineering, has traditionally been the discipline that establishes theoretical and technical criteria for the design of the house, setting up criteria and standards that regulate house building though not often finding favour or understanding among inhabitants. This condition has increased in modern societies, in which the inhabitant has only partial control over the environment in which they live, precisely one of the issues raised by Archigram in the 1960s. Finally, a third aspect of complexity derives from the multiplicity of points of view and keys of understanding offered by researchers who observe and describe this space, which over time have increased.

The study of domestic space has traditionally interested disciplines related to architecture, but philosophy and the social sciences have also joined in, so that today we find a copious amount of contributions on this subject. In addition to sociology and anthropology, domestic space has interested geography, many areas of historical studies (from art, architectural and design history, to social and technological history), environmental psychology, psychoanalysis, cultural, gender, everyday life, consumption and media studies, providing an unprecedented understanding of a phenomenon that continues to be expanded and enriched with new contributions. Next I will highlight the key points that some of these disciplinary areas have

contributed to my viewpoint of domestic space, constituting an interpretive part of the framework within which my research is inserted.

Philosophy, epistemology and anthropology have served as reference points for understanding the concept of domestic space within the framework of an ontological interpretation of inhabiting space. The history of architecture and interior design, and cultural and gender studies have helped to form and perpetuate the theoretical models that have allowed the home to be studied in terms of modernity, either from the subject's perspective (intimacy, identification, empathy), or indeed from the object's perspective (display, function, efficiency). A critical awareness of the proximity and, at the same time, the distance between these models has enabled me to put forward an inclusive interpretation which responds more fully to the demands of a comfortable domestic living space; one that is suitable for contemporary needs, emotionally enriching and, at the same time, free and open to the wealth of possibilities offered by pluralistic and multi-cultural knowledge. Sociological research, the project's cultural aspect and architecture criticism have constituted the basis for structuring the observation of domestic space transformations, with a focus on the media, the body and work. In a similar vein, the theory of architecture, with particular regard to housing, has been important to direct the study of the conceptual models used to conceive and design the contemporary home. Anthropological, semiotic and cultural studies, along with design theory, have been key references in focusing the discourse on the relationship between domestic space and objects from the multiple viewpoints that focus on constructing identity and meaning.

In the text I have often used the expression domestic space, giving it a wider meaning than that of home, as I will discuss at the end of the first chapter. It can also include phenomena such as mobile domesticity, which does not necessarily arise from the home as a place, but, rather, from an environment that is sufficiently comfortable for someone to feel at home in.

*Information society.* My interest in the Information Society has been the second starting point of the investigation. Contributions from sociological research (Touraine, 1969; Bell, 1973; Masuda, 1983; Negropote, 1995; Castells, 1996, 1997, 2004; Bauman, 1998, 2005; Aronowitz et al., 1998; Virilio, 1998; Echeverría, 1999; Breton, 2001, Mattelart, 2001; Friedman, 2005; Granieri, 2006) have enabled me to understand the historical roots of the information society and its original features with respect to previous models such as the industrial society, within the framework of the extensive debate on the end or the transformation of modernity that characterised post-modern cultural theory (Lyotard, 1979; Berman, 1982; Touraine, 1992; Foster, 1993; Jameson, 1984, 1991; Giddens, 1990; Harvey, 1990; Kumar, 1995; Anderson 1998). In this way, I have been able to build the general interpretative framework in which my research is situated, with particular emphasis on some of the dynamics of change affecting the transformation of the family sphere, the redefinition of time-space relations and the fundamental role of image culture in an environment dominated by the media.

*Family.* Subsequently, it has been necessary to acquire some knowledge on the transformations that have occurred at the concept and structure of the family, shifting from a prevalence of the nuclear model to a more plural interpretation of family relations and the role of individuals, rooted in the movements claiming individual freedom, personal identities and recognition of differences that rose in

the 1960s. Sociological studies (Stacey, 1990; Giddens, 1992; Reigot and Spina, 1996; Castells, 1997; Guasch, 2000; Chapman, 2003; Beck-Gernsheim, 2003; Sapio, 2010; Beck-Gernsheim and Beck, 2012) have also been important in interpreting such transformations in the sphere of the contemporary family with regard to the weakening of the patriarchal model, the new role of women and multiculturalism promoted by new concepts of personal, social and geographical mobility that characterise information society.

*Technology.* Technology studies have been a useful guide for setting the discussion on the concept and the role of technology within industrial and informational societies and they have enriched my standpoint with an awareness of the deeply transforming relationship that modernity establishes between society, technology and culture. Special attention has been paid to the extensive research of Dusek (2003; 2006) as well as to those authors (Postman, 1992; Latour, 1993; Nye, 1996, 1997, 2007; Feenberg, 2003, 2012; Brey 2003; Misa, 2003) that in the last decades have questioned the vision of technological determinism and have considered technology as a fundamental factor that defines modern and informational societies at the same time that it is defined by them.

In this framework, it has been necessary also to consider the specific role that technology has played within architecture, as an important factor of modernisation through history, and especially since the Industrial Revolution (Giedion, 1948; Banham, 1960, 1969; Morabito, 1990; Benedikt, 1991; Abalos and Herreros, 1992, Kolarevic, 2003; Gausa, 2010). Different trends and research lines can be recognised in architectural approaches to technological innovation. First, innovation in materials should be mentioned, starting from iron, steel, glass and concrete and following with prefabricated light components, plastics, and composites and, in recent times, customised CNC produced structures and claddings as well as sustainable materials, which gave rise to specific constructive and aesthetic approaches. Second, an innovative use of architectural forms partly derived from innovation in materials and partly due to new concepts and design principles that consider the architectural work as the expression of the *zeitgeist*, which in the 20<sup>th</sup> century was associated with a modern and technological context in which it had been produced. And third, the innovation in techniques employed for conceiving, designing and communicating a design project has constantly changed throughout the past century, and it has been definitively transformed by the introduction of digital tools in the last two decades. Such powerful computer aided design applications are used as research instruments that can manage complex forms in detailed mathematical terms, enabling an unprecedented potential continuity between imaging, designing and building phases.

#### **IV Interpretative Approach and Methodological Aspects**

The first purpose of my research has been to offer a description of this shifting panorama from a perspective *d'ensemble*, which takes into account the impact that the image and the use of new technologies have in the redefinition of the contemporary domestic environment. From this start point it has been necessary to understand the dynamics that make possible the transformation of our experience of

home by technology. In order to answer this question my research proposes three lines of work.

The first one suggests an intervention on imagery, affirming the principle that inhabiting in the future differs from inhabiting in the present for its capacity to create a new environment technologically more advanced, which frees human beings from those especially boring or unpleasant everyday routines and enables them to set up a new and more satisfactory management of space and time that changes the whole of their lives. In this way, the myth of progress maintains its full meaning, renovating the conviction that the future will keep the promise of an improvement of human condition, which could be reached by setting up new and appropriate technologies according to every future need. The second line focuses on the capacity to offer consumers new devices that transform the functionality and meaning of domestic space. At a first moment, attention was directed to analogical communication systems such as telephone, radio and television, which became widespread during post-war decades. But since the 1990s attention has been focused on digital communication and connection systems such as Internet and the World Wide Web. The most relevant aspects are not the technologies themselves, but the fact that their availability also transforms domestic functions, especially ways of communicating, working and giving new meaning to imagery. The third direction focuses on the renovation of representational tools and techniques, which allows for new forms of designing and new theories of architectural composition to emerge. In this way, architects and designers have left the two-dimensional space of paper or the traditional three-dimensional space of the physical model and started to explore the computer's virtual space, where form is associated with a representation expressed in mathematical terms, by means of equations, algorithms or data sequences. Beyond representation techniques, the contemporary design-project is presented as a field of forces and information that require an appropriate treatment to achieve the desired result. Therefore, information can be considered an essential raw material involved in all phases of the process of design, construction and use of the building.

Starting from this first discussion point, a second question has been formulated in order to cast light on the original features that differentiate contemporary technologies from previous phases of the technification of domestic space, which played a key role in house modernisation since the end of the 19<sup>th</sup> century. The working hypothesis that has been followed in this case is that along with the emergence of the Information Society, a new dimension of domesticity is being experienced in which technology does not offer only a mechanical, electro-mechanical or electronic support to relieve the contemporary dweller from the burden of domestic routine, but expands into the organisation of his life as well as of social and family relations, detaching them from the traditional concept of place and location. Permanent connectivity seems to favour the redefinition of the boundaries between physical and digital space, modifying, as a consequence, the relationship between public and private and transforming the concept of dwelling into a new dimension of mobile domesticity.

The third point of discussion focuses on the transformations of the spaces and objects of the contemporary house (living room, kitchen, bathroom, bedrooms, etc.) under the pressure of new functions that have been added to the traditional ones as

a consequence of a transformation in the way in which these spaces are lived and imagined by their inhabitants, or as a consequence of messages spread by media and advertising interested in promoting new lifestyles. On these aspects, the research has been driven on the basis of the idea that contemporary architecture and design are deeply influenced not only by debates, which can be understood from specific disciplinary points of view, but also by a wide tissue of images and references that have their origin in media culture and that, at the end of the process, contribute to change the architectural imagery that those media themselves contribute to spread.

This approach to domestic space also raises some methodological considerations which I will discuss below.

As the investigation progressed, I became increasingly convinced that an understanding of contemporary living requires a multiplicity of views and perspectives. In fact, the need to find appropriate tools to perform this reading has led me to expand the field of observation to include such phenomena as the information society, changes in the contemporary family, technology, and the dichotomy that binds the paradigms of inhabiting and mobility, in order to then focus on some more specific but revealing aspects of the hallmarks of contemporary living such as the areas of media, work, intimacy and new ways of living and projecting domestic space. The wide range of literature that I have consulted in this research is a reflection of the complex web of ideas stemming from many different fields that have helped me construct this study on contemporary dwelling. Among the texts I consulted, one of the most stimulating was *The Information Age* by Manuel Castells. The decision to undertake this research work was partly a result of reading this book, which has become a classic of sociological research. Castells has lucidly revealed how the transformations of recent decades represent a turning point in the affirmation of a new information society paradigm rooted in the industrial era and the modern project, but which at the same time presents characteristics that are profoundly different from those known so far. I also consider exemplary from a methodological point of view how Castells connects fields seemingly as far apart as technology, economics, politics, culture, perception of space and time, power, family and identity in order to draw a large fresco depicting the emergence of a new form of society, identifying in each factor a unique and functional role. I especially appreciated Castells's ability to see detail without losing sight of the whole; an effort of synthesis that offers a clear and compelling vision of the world in which we live. In his interpretation, architecture is addressed in his consideration of the new spatial forms of the informational society. He defines (1996: 418-428) this as a space of flows characteristic of the dominant functions and elites that control contemporary society, as opposed to the space of places that represents the environment that is less and less able to generate shared meanings among the people living in it. According to Castells, in the informational society architecture loses its capacity of expressing a meaningful relationship with people and becomes an ahistorical and acultural construction communicating the interests and values of the dominant globalised elites. Surprisingly, Castell's reading is primarily focused on representative buildings and urban spaces, while domestic space, which is also transformed by information technology, is not mentioned. My research aims to fill this gap and to be a contribution to the debate on an issue that I consider relevant to articulate the individual and the social dimensions of the transformation that is occurring.

The fact that I was conducting research into domestic space also led me to question my approach to architecture in the contemporary world. On the one hand, it is unquestionable that the design of domestic space partakes in the spatial nature of all architectural work and that its study could be addressed in phenomenological terms as an analysis of the compositional and formal elements able to account for the invariant aspects of architecture. As I will discuss in the first chapter, while examining the concept of domestic space, and the fourth chapter, while dealing with flexible strategies for contemporary homes, such a phenomenological spatial approach has been fundamental for interpreting architecture in the twentieth century. However, it is also undeniable that the experience of space is often substituted by an interpretation of images of space, and that our knowledge of works of architecture is actually based largely upon representations from which we believe we can capture relevant aspects of a design. This step from space to the representation of space seems so obvious that we do not pay much attention to it, when in fact it has important implications for how we approach architecture. The dissemination of an architectural project implies its reduction into a series of icons that acquire new traits through a selective viewing of the image and through the messages that it is charged with transmitting. The house is known through representations even more than other building types since the experience of its space is one reserved almost exclusively for the members of the family that inhabits it. Therefore, the study of domestic space has to be approached from the awareness that our approach is unavoidably mediated. Media coverage is actually twofold, since not only the forms of architecture communicate, but their message is sent to us through a second communication filter, that of an image charged with intentions. It could be argued that architecture, since its inception, has had a communicative purpose that the classical system expressed by means of compositional structure, the classical orders, and *ornamentum*. After the dissolution of this system, the architects of the modern movement tried to formulate a new code that communicates the values of a technological society born of the industrial revolution. In the twentieth century, the interpretation of architecture as a communicative phenomenon was developed primarily in the fields of psychology of perception and semiotics. Since the 1960s it was increasingly believed that the forms and compositional elements of buildings could be read as a code of signs, and different theories about their language and communication mechanisms were developed (De Fusco, 1967; Eco, 1968, 1973; Koenig, 1970; Scalvini, 1975; Bonta, 1977; Broadbent, Bunt and Jencks, 1980). This interpretation influenced the way in which postmodern architecture sought to reinterpret elements of the past and has subsequently been challenged as too narrow in its perspectives and approaches (Maldonado, 1992b). More recently the attention of researchers has been directed toward other aspects of the communication process, emphasizing the role of agency related to architecture (architects and designers, publishers, museums, cultural and political institutions, etc.), and it has been pointed out how this was launched by the protagonists of the modern movement conscious of the impact that effective communication could have on the achievement of their objectives (Colomina, 1994), a *modus operandi* that since then has represented an inescapable dimension of contemporary design (Rattenbury, 2002). Directing a critical gaze and aware of the historical dimension of the topics discussed, this kind of reading aims to find the interpretive keys not so much in the work itself, but in the fabric of cultural references that form the background from which it acquires currency. Work acquires currency through its ability to reveal significant aspects of an era and the mindset

that the architect expresses perhaps unintentionally, but which does not go unnoticed by the researcher. If this ability to transcend phenomenology allows a rich understanding of nuances and new perspectives to be constructed, the extent to which this reading respects authorial intent and finds sufficient support through objective data remains open to discussion. In fact, this type of reading considers important not only what the author intends to express in his work, but also what remains hidden or is unconsciously revealed. In short, a work is a means to understanding the context that produced it, the conflicts, the intentions of the people who have lived in it, and to building a deeper understanding of the roots of our present. From an awareness of its limits, my proposed reading sympathises with this critical interpretation, focusing on observing the domestic environment and trying to understand how its images are produced, transmitted and consumed through the media according to new mechanisms characteristic of the information society. Therefore, while still aware of the three-dimensional nature of architecture, in my research I have decided to devote more attention to its two-dimensional and communicative aspect, because I think the consumption of the image of space is often more meaningful to the contemporary subject than their own experience of physical space. The image is thus configured as an essential means by which the inhabitant projects their identity and defines their expectations for real spaces.

To carry out the research I departed from a broad base of design projects and built works –mostly by architects and designers– that have been progressively chosen based on their relevance to my argument. In any case, I do not propose a complete catalogue of examples, nor an archive focused on a comprehensive search for materials from unpublished sources –a task that is part of current research methodologies when intending to undertake a monograph or a documentary. Rather, I have sought mostly published information which, in principle, is before everybody's eyes. I am aware that this decision can be seen as limiting the investigation, but I think that a thorough catalogueing and documentation of sources would have absorbed most of my time and energy and would not have been relevant in any case for the objectives that I established for myself, nor would it have contributed very much in the way of new knowledge, although it would possibly have allowed for a deeper understanding of certain aspects of each work. Moreover, in the information age the problem is not any scarcity of sources, but the opposite. Authors are the first to make information about their works available to the public in order to promote its dissemination in all means and media, challenging the very concept of any original source. I therefore considered it more productive to focus my attention on the construction of the *discourse* on domestic space, and in selecting and interpreting the most relevant sources so that connections might be established between them, and so that the information could begin to form an interpretive landscape that is highly nuanced and rich in relief. Furthermore, I found it useful to focus my efforts on analyzing information that is continually before our eyes and which we consider perhaps more obvious, such as advertisements for furniture and home accessories or pictures on the internet, which I discuss in the third chapter, and try to provide interpretive keys that permit the construction of a discourse about that which we are not always able to see. For example, an advertisement of the latest smart TV model is not perceived the same way when we are sitting on the couch at home and participating emotionally in the desire that advertising ignites, as when analyzing the same advertisement with a consciousness of how it intends to build a model of the connected home and the family living inside it, relating it moreover to

other messages conveying similar ideas. A methodological precedent for this type of approach is *Ways of Seeing* (1972), a text in which John Berger and his collaborators reveal how our way of interpreting reality is built on certain ways of seeing and how this analysis can be applied to both works of art as well as to contemporary advertising, both of which reveal traces of the particular form of looking that became defined in Europe since the Renaissance. Berger has taught us that the word is indeed a powerful tool to explain the image, but at the same time he has also warned us that the image has its own form of dialoguing with our mind and of asking questions. The images I analyse come mostly from an "official" environment, i.e. from the studios of architects and designers who designed the works, from photographers who have portrayed them, or from other professionals who have dedicated themselves to capturing certain contemporary living ideas in representations designed to be published in various media which are sometimes consumed by specialists and other times by ordinary people. When these images come from designers, they can range all the way from the development of the design process (drawings and sketches), to the objective description of space (plans, sections, elevations, axonometric projections), to idealized representation of it (models and renderings). When the work is already done, the skill of the photographer conveys the sense of space and atmosphere that exists in it and, at times, the relationship between people and architecture. When the image instead aims to show how the domestic space could or should be lived in by the use of certain products and services, the focus of attention shifts toward how to construct the image in order to maximize the delivery of its message. Despite the use of photographic technique, in this last case the image acquires a clear symbolic value in which each of the elements employed has a precise meaning that is functional for the economy of the message. Taken together, these codes help to shape the visual world through which domestic space is communicated authoritatively and credibly. The fact that each emitter uses differentiated and recognizable visual languages helps guide the public towards the correct interpretation of the messages depending on the given context and circumstances.

These considerations show how the construction of domestic space is performed in an institutional setting, transmitting its intentions to the people in the framework of a specific cultural context. The picture of domesticity that each family or individual produces does not come exclusively from institutional sources, since it is a process of continuous negotiation between the codes promoted by society and personal idiosyncrasy, but builds on them, if only to reject them. For this reason, I consider it relevant to address the research investigation from this official perspective on domestic space, being aware that it is not the only possible one, but in any case its presence is inescapable. I also used some images produced by inhabitants themselves. In chapter 3.3, on the field of domestic work, I discussed precisely the conflicts and contradictions that occur when the institutional image collides with the reality experienced by people in their daily lives. This type of conflict is actually an aspect that surfaces in various parts of the investigation, even if not always treated in detail.

## V Chapters Structure and Contents

I present the results of my research in four extensive chapters, dealing respectively with: the social and cultural context in which the contemporary debate about domestic space is situated; the historical context in which various interpretations of dwelling have been formulated in an era dominated by technology and information, whose influence is seen even today; a proposal to reformulate the concept of living from the perspective of becoming in light of functional transformations of contemporary domestic space; a proposed reading of the key points on the basis of which the house is imagined and designed in relation to the stimuli discussed in the previous chapters. This is not the only possible sequence for reading the text and, in fact, different issues permeate the chapters and are revisited from complementary and different perspectives.

Chapter 1, *Contemporary Society, Family and Home: a Shifting Panorama* defines some of the reference points of the interpretive framework in which my work is situated.

The first section surveys the new social context that we know as the Information Society. Its purpose is to provide a concise review of the specific features of this shifting context through a discussion of its most relevant interpretations. The Information Society focuses on key aspects of a changing technological paradigm and its consequences on some of the basic sectors of economic, productive and social organisation. A brief definition is provided for the principal interpretative categories constituting the reference framework of the work. It is particularly worth noting the change in the way of conceiving transformation, which from the paradigm of post-modern and post-industrial society –two terms that now seem provisional definitions of a new moment in history that was named in reference to the past– are now interpreted under the category of the information society, or network society as it has been defined by Manuel Castells. I also briefly examine other interpretations that provide a critical perspective to the discussion on the most relevant aspects of the debate on the open problems that the Information Society paradigm outlines and on the perspective of its continuity or rupture with the modernity paradigm.

The second section focuses on the crisis of the patriarchal system and the nuclear family, which represents the framework in which new relational models are being developed, directly affecting the perception and use of domestic space. The features that differentiate current family structures from those of modernity have been defined by the questioning of patriarchal family models by movements struggling for women's liberation and the right to individual expression and diversity that emerged in the 1960s. The most relevant factors of change can be recognised in the integration of women into the labour market, in improved and more effective family planning and healthcare practices, and in feminist critique of the patriarchal system. As a consequence, contemporary society shows an increasing reticence in accepting the constraints of traditional models, leading to a diminishment of the nuclear family and to the appearance of new forms of families, such as the single-person household, the childless couple, the single-parent family, the reconstructed family and the cohabiting family, all of which are likely to define the social panorama in coming years. Such a heterogeneous scenario does not seem to fit in dwelling models proposed by modern architecture, which were usually homogeneously tailored on a much more traditional family consisting of a couple with children, and which were designed to respond to a more standardised and predefined set of functions.

The third section discusses several approaches to domestic space in scholarly literature, focusing on those areas that have been more relevant in defining a contemporary interpretation of the concepts related to my research field. The analysis of philosophical and epistemological contributions casts light on the elements that define inhabiting, dwelling and home as universal experiences of the human being. I have taken into account the line of argument of Heidegger (1954), Norberg-Schulz (1984) and King (2003, 2004), who consider dwelling as a substantial element of permanence, stability and identification with a place, and the alternative positions of Cacciari (2000), who calls for a reformulation of dwelling in terms of transformation and mobility, which will be discussed in chapter 3. Since their investigation into “original” structures of dwelling in non-western civilisations in the 1960s and 1970s, anthropology and social sciences returned to European and North American contexts in the decades that followed, considering it worth their while to come to a better understanding of the complex meanings that the terms house and home have acquired in western culture. In this framework, I have focused on several approaches, proceeding from an architectural one such as that of Rudofsky (1964) and Rapoport (1969), concerned with understanding the form of the house in relationship to its socio-cultural context, to an anthropological approach, such as Cieraad’s (1999), who discusses home’s symbolic expression within western culture, and to a geographical approach, such as Blunt and Dowling’s (2006), tracing a multidimensional critical geography of the concept of home in contemporary culture. Among social sciences approaches, I have considered also the works of those scholars –Csikszentmihaly and Rochberg-Halton (1981), Miller (2001, 2009) and Pink (2004), among others– who deal with objects interpreted as a symbolic projection of the inhabitants, and those, like Attfield (2000) and Bosoni (2002), who focus on everyday life and design as a revealing manifestation of domestic culture.

A special mention should be made of studies like Massey’s (2005) and Vitta’s (2008), among others, who consider home as a multidimensional concept that includes the place, the space and the site where we live and also the ideas, feelings, meanings and cultural practices that take place in this domain.

Domestic space has been widely analyzed also by historical, cultural and gender studies, which focused mainly on the construction of the idea of home in bourgeois culture and its questioning by modernist thought and architecture. Rybczynski (1986) and Schama (1987) have traced the history of the ideas of intimacy, domesticity and comfort starting from its original formulation in the 17<sup>th</sup> century’s Netherlands and its spread across Europe and North America during the industrial revolution. Rice (2007) has discussed the emergence of the idea of the interior at the beginning of the 19<sup>th</sup> century in relation to the Benjaminian idea of modernity and the Freudian idea of interiority.

Feminist approaches have made a substantial contribution in recent decades pointing out that gender differences have deeply shaped the ways of imaging, designing and living domestic space, as has been discussed in extensive researches by Madigan and Munro (1990), Darke, (1994), Gilroy and Woods (1994), Attfield and Kirkham (1995) and Heynen and Baydar (2005), among others.

The relationship between the privacy and publicity of home has been another important point of discussion in recent scholarly literature, starting from classical works from Benjamin (1939), Ariès (1962), Ariès and Duby (1987-91) and the extensive discussion of the private/public dichotomy by Sennet (1990) and Weintraub and Kumar (1997). From these standpoints, several relevant research pathways have

been developed. Colomina (1994) has looked at the house from the point of view of consumption and communication strategies, which define a new relationship between private space and public exposure. Other scholars have focused on the role of information technologies and electronic media in the redefinition of the concepts of privacy and publicity in domestic space, discussing the deeply transforming action of media on the private sphere, as will be discussed in chapter 4.

Modern and contemporary architecture have been considered as epitomes of un-domestic and un-private space by Reed (1996), Heynen (1992, 1999) and Riley (1999), who discuss an approach that considers space as a projection of new ideas of living in an ever renovating “modern time”, which radically criticises 19<sup>th</sup> century bourgeois ideas of intimacy and comfort, inappropriate for the new inhabitants of industrial and informational societies.

The final sections of the chapter are devoted to defining some reference points on approaches to technology and the image, whose importance with regard to the interpretive framework of my research I have already mentioned.

Chapter 2, *The Technological House: Images of the Future, 1945-1986* investigates the historical background and focuses on the construction of a technological image of dwelling in post-war culture. It is interesting to note that parallel to the development of the conceptual tools that shape the information society –cybernetics (Wiener, 1948), the definition of information (Wiener, 1948; Shannon, 1948), the theory of mass communication, computing, and robotics, among others—architecture updates its discourse on the technological home, looking for new formulations that are distant from the early modernist interpretations, which had established a relationship between the house and the aesthetics of the machine. The American and British contexts are interesting study cases that show how unprecedented ways of designing, building and imaging a new domestic environment emerged. Such a visualisation of the home as a technological product should be considered as an attempt to bring closer architecture to “big science” in the decades where the space race and the techno-scientific infrastructure of the information society were built. I examine the different pathways that led to the renovation of the house considered as a technologically updated or futuristic environment. At the end of the war the use of new lightweight materials and largely prefabricated components led to a constructive and formal renovation of the American house, as shown by the examples of what Jarzombek has called “good-life-modernist homes”, such as the Case Study Houses promoted by John Entenza in California, which were an important contribution to defining the image of the American way of life in the United States and abroad until its symbolic destruction with Frank Gehry’s house in Santa Monica (1978).

A second pathway can be recognised in experimental architecture that seeks new domestic models and proposes future habitats in which technology plays a key role, such as *The House of the Future* by the Smithsons, a consistent part of the work of Archigram, and Kurokawa’s capsule architecture, epitomised by the Nakagin Tower. There we find different references, such as prefabrication, serial production and component assembly, which come from the automotive industry and the imagery of devices used in the space race. The capsule and cockpit convey a new idea of living no longer centred in the family but in the individual, from which family relationships can also be re-established. At the same time, and partly as a result of the focus on the individual, there is a blurring of the physical boundaries of domestic space through an environment continuously reconfigurable by its inhabitant, made

possible by programming and controlling facilitated by computers. These trajectories, widely described by Archigram, lead to a questioning of domestic space as a fixed environment, creating the aspiration for full freedom of movement over a territorial surface; portable habitats for new technological nomads.

Archigram's proposals mesh with an exploration of the limits of technology as a way of liberating man from the constraints of a capitalist and consumerist society while, at the same time, foreseeing a "radically" different human habitat that dispenses with obsolete concepts such as home and object; the main conceptual contribution of Constant's *New Babylon* and Superstudio's *The Continuous Monument and Fundamental Acts*. While in Constant's technological future an important place is given to architectural and spatial enjoyment as a way of expressing human creativity, in Superstudio's proposals there is a definitive deletion of architecture and objects because these are considered constitutive parts of an oppressive society based on power relations, discrimination and status differences. As a distant-future alternative, they envision a new society in which human beings dwell in direct contact with an apparently "natural" earth surface completely domesticated by a gridded hyper-technological surface that provides everything people may need, like dwelling, food and energy, allowing a totally mobile, nomadic life.

In this genealogical map I study a late-modern approach that focuses on the form of the technological device and its semantic signification in the Italian new domestic landscape –as it was presented in the 1972 exhibition at MoMA–, related to real industrial design products such as electrical appliances from Bellini, Zanuso and Sapper, which expressed a new aesthetic for communication and connection devices at home, or to modular and adaptable furnishing units from Colombo, Sottsass and Munari, which could be considered an attempt to transform a part of Archigram's ideas on flexibility and transformability into prototypes suitable for use in real spaces, even though with a much reduced technological performance.

Finally a post-modern interpretation of the technological home should be mentioned. This more critical and ironic attitude that Sottsass, Branzi and Santachiara displayed at the 17<sup>th</sup> Milan Triennale (1986), in which they reflected on the impact of communication and control technologies, the way in which the dweller uses the space of the home or relates to technological devices, which prompts an initial reflection on the actual smartness of "smart" homes and the role that humans play in them.

From this historical excursus, it can be affirmed that the period 1945 to 1986 was fundamental for the definition of new attitudes towards technology in the domestic environment that are still recognisable today and that are deeply related to the mechanisms through which innovation is accepted in society and in collective imagery. On the other hand, it is noteworthy that most of the works mentioned here had a markedly experimental character, and that the technology prefigured in them, intended for real application in real life, was largely not even available at the time. This step of anticipating possible applications of a forthcoming technology in the development of specific devices, was undertaken precisely from the mid-1980s onwards; a period which will be examined in the next chapter.

Chapter 3, *Living in the Information Era: Functions follow Flows* looks at how, to different extents, transformations occurring in the last twenty-five years due to the consolidation of the new technological environment of the information society are influencing the experience of domestic space, forcing us, on the one hand, to discuss the relevance of traditional models related to ideas of intimacy, privacy,

reproduction of traditional structures and, on the other, to propose new interpretative categories in reference to private space and the activities that are developed in it. In the framework of this shifting panorama, my research focuses on contemporary living, observing transformations in the domestic space in an effort to understand how new productive, social and cultural practices have modified the use, form and meaning of the home at the beginning of the 21<sup>st</sup> Century.

The first section examines some of the central questions affecting the contemporary domestic environment. These are problems that are obviously more widely dealt with in the current debate and which here will be considered reference points for a reflection on dwelling, or better still on the difficulty of conceiving models for contemporary dwelling while globalisation casts doubt on many of our customs and ways of thinking. The key points focusing the discussion may be summed up as follows: the experience of dwelling has changed due to the emergence of a different perception of space and time coordinates within the information society. As a result, contemporary life develops in a physical and spatial dimension related to places, and in a virtual dimension related to the physically inaccessible, but extremely real, space of information flows, which together characterise contemporary dwelling. In daily experience these two kinds of spaces are not perceived as alternatives, but rather as complementary, although their compatibility is not always easy and problem-free. From this expansion of human experience through electronic extensions, new forms of understanding physical and mental spaces of domesticity appear, which settle on the basis of views of house as home and house as device, and end up also generating new forms of understanding identity. In this framework, I discuss a new form of understanding inhabiting and domestic space in terms of transformability and becoming, rather than on the traditional basis of permanence. Second, third and fourth section of this chapter analyze in detail the transformation in contemporary domestic space dealing with the aspect of functional restructuring and focuses on three significant aspects for the functional redefinition of domestic space: media, body and work. Indeed, one of the most powerful transformational factors is related to information flows, that is, to the rise of a new real virtuality environment that integrates media in a global system in which information circulates in real time on a planetary scale. The presence of new generations of systems and devices related to new technologies has brought about important changes in the nature of activities that traditionally take place in domestic space (family life, rest, leisure, relationships, wellness, work). A discussion of each of these aspects is based on a crossing of conceptual reflections and examples of contemporary houses that cast light on several significant characteristics of the functionality of information age domestic space. Diller and Scofidio, Shigeru Ban, Rem Koolhaas and Ben Van Berkel are some of the architects whose works are examined as significant examples of a contemporary discussion on media, body and workspaces. The chapter also reflects on the failure of the concepts of telecommuting and smart home, suggesting that technology is not the only factor that should be taken into account at the moment of redefining the functions of the contemporary house.

Chapter 4, *Imaging and Designing the Domestic Body* focuses on design proposals and specific spatial solutions that have been suggested to answer to the challenges posed by new family configurations beyond the nuclear model and new functional demands.

The first part of the chapter reflects on the fact that objects and furniture are the essential complement that give meaning to the spaces and contribute to defining the identity of both the space and the inhabitants of a house. Domestic space cannot be lived in or understood without the presence of the objects that inhabitants display in logical sequences according to the taxonomies that respond to both the general and personal criteria of each person and circumstance. Objects contained in the domestic space make up a part of the material and symbolic patrimony of individuals and contain layers that reveal a profile of the domestic landscape, which can be interpreted using both social as well as individual parameters. My analysis of domestic spaces reveals how individual taste is “cultivated” by marketing and advertising, which shows significant models of what should be a “contemporary house”. Changes in imagery and ways of living regarding the most significant spaces of the home can be detected by observing images proceeding from advertising, which describe how a kitchen, living room, bathroom or bedroom is supposed to be lived and the sorts of models and lifestyles that are proposed to the public.

The second section shifts from the field of advertising to the domains of the design project to discuss in detail some theoretical and practical proposals that address domestic space from different ways of interpreting flexibility as an appropriate strategy for our lives’ becoming.

The third section closes the circle that was opened in the first chapter and deals with the house from the perspective of architects who consider the new domestic environment to be a testing field for the new aesthetics of the digital and sustainable, and of users, who also project the house as a series of images, aspirations and fantasies left by modern culture, forming a basis on which to imagine and build a future. In the information society the culture of the image has taken on an unprecedented importance, affecting all sectors of knowledge and experience. On the one hand, architects and designers are constantly called upon to theoretically reflect on contemporary changes; but on the other hand, their professional activity urges them to physically and materially materialise the new ideas that are formulated in such a period of deep changes. Even if it’s true that architecture and design have always taken part in image culture, it is also true that nowadays this phenomenon has grown to an unprecedented scale that goes far beyond traditional boundaries and it has turned into one of the most relevant expressions of information society.

Finally, it is necessary to mention the iconographic appendix that culminates this research. It can be read in different ways. The first, and most traditional, is as a body of information that illustrates the text and that supplements those areas that could not be discussed more extensively due to the limitations in the scope of this work. In this sense, the works and design projects that I include are an essential part of the discourse I have articulated in this research.

The plates fall into three categories. The largest of these is basic architectural documentation, either drawn (sketches, plans, sections, elevations, axonometric projections, etc.) or photographed (models, computer renderings, images of built work, etc.). This kind of information, essential for communicating the compositional and spatial characteristics of architecture, is basic to understanding any architectural design in terms of its most important elements. A second type of image does not describe projects or domestic spaces but serves as a visual corollary, providing additional information of a more historical or contextual character that I have considered relevant to the construction of my discourse. Finally, a third image

group focuses on aspects of domesticity as represented in advertising and internet images, revealing different modalities through which lifestyles are defined, possible paths are suggested, or perfect futures are prefigured.

It is also my intention for this series of images, and the sequence in which they are organised, to be readable as a narrative in its own right, not necessarily as an accompaniment to the text, in order to chart a visual history of dwelling in the information age in which the evolution and transformation of certain ideas and spatial solutions can be appreciated. In fact, it would be advisable to view the images *before* reading the text; as if it were a prologue to put the reader in the right mood, provoking their curiosity and raising questions. But it would also be advisable to look back at the images in the Appendix after the reading of the text is completed, to observe them with greater distance and without any urgency to recognize in them a visual confirmation of what the words are trying to convey. In this second observation, conscious readers may possibly perceive the images' affinities and correspondences, continuities, migrations of forms and elements, but also oppositions, contrasts, contradictions, truncated paths or lines of research only apparently discontinued and surprisingly reappearing several pages later. This proposal for a freer reading that is at the same time exposed to greater risk but also to the pleasure of personal interpretation is intended to place us in a remote position, observing ourselves as the camera portrays us living—even if simulated—in domestic spaces. From this distance, we might possibly become aware of how our identity is also constructed through the way we represent ourselves: we just might identify ourselves in the images, or they might instead reveal themselves to us as strange; familiar but at the same time unassumable in terms of a model in which to recognize ourselves. The sight of these images should be a stimulus for the readers to reflect on what is for them domestic space, and how it should be lived. Again, Berger's *Ways of Seeing* can be considered a methodological reference for reading this work, in particular as regards the non-textual essays that constitute some of its chapters.

As can be observed, I have chosen images, whenever possible, that portray interactions between people, objects and spaces. This does not mean that the people portrayed in them are always actual residents; indeed in most cases it is actors pretending to live in these spaces. The aspect I find interesting is precisely the perceived need to demonstrate that these proposals, which largely explore the boundaries of new ways of understanding domestic space, are actually inhabitable, accommodating a real resident made of flesh and bone. What is striking is how the very effort to convince a viewer of a design's viability ends up producing the opposite effect: increasing the strangeness of these images and acquiring a surreal, dreamlike dimension. But that is also what this is about: these images are carefully constructed and come from a perfect world where any superfluous items that might distract the viewer from the central idea have been removed so that these are not confused with real dwellings or with out-of-place real-life detritus that has been left behind. The only presence is that of the necessary signs and elements, so that those who look at them will desire to be part of the dream; they will want, even during the brief moment it takes to look at the image, to enter these rooms in which a radically different life can be lived; to eliminate traces of the past, memory, time and whatever it is that constructs our identity in order to enter a space of permanent

happiness and eternal bliss; to cross the threshold of the contemporary house of Adam in the paradise of information, technology and sustainability.

*Note on bibliographic references.* It has not always been possible to consult the English version of the texts cited herein, either because no English translation exists, or because access to an English translation was not possible. Therefore, I have used the following criteria in the footnotes and in the bibliography: works are cited according to the first edition date and in the original language of publication. When it has not been possible to consult the original version, I have cited also the consulted translation (English: Eng. transl.; Spanish: Sp. transl.; Italian: It. transl.) and, in this case, the pages of the translated version to which I refer in my text.

Example: the footnote text “Sennett, 1977; Sp. transl., 1978: 321-420” refers to the bibliographic entry: SENNETT, R. (1977) *The Fall of the Public Man*. New York: Alfred A. Knopf. Spanish translation (1978) *La caída del hombre público*. Barcelona: Península.

# Chapter 1



# **Chapter 1**

## **Contemporary Society, Family and Home: a Shifting Panorama**

If we interpret society as a dynamic system that adapts to changes in its environment at the same time that it fosters them, we can say that each age is characterized by a dialectic between the permanence of certain structures entrenched in the past, the decline of others that reveal themselves as obsolete or unusable, and the emergence of new ones that respond better to the requirements of the present and the perspectives of the future. Human societies can therefore be considered as ecosystems that survive and prosper to the extent that they are able to remain in a state of equilibrium based on continuous transformation. Not every age throughout history has known equally intense rhythms of change, but there have always been moments that can be interpreted as turning points capable of accelerating the transition from one form of society to another. The present epoch poses many characteristics that permit it to be described as a moment in which we witness the formation of a new societal paradigm based on information and communication technology, and the questioning of deeply rooted social, political and cultural structures which are proving unable to provide answers to contemporary problems or are not flexible enough to adapt to new conditions. In this chapter I will discuss some of the distinctive features of the transformation currently underway, focusing on the new paradigm of the information society and the transformation of the concept of family, since these are directly related to how we interpret dwelling and domestic space, two areas which are also seen to be in crisis and in need of change. The last part of the chapter will discuss in greater detail the interpretations and meanings of the terms by which we denote the spaces of domesticity: house, home and domestic space.

## 1.1 The Information Society

In the last two decades, sociological research has set up a new paradigm that, overcoming previous definitions of post-industrial society (Bell, 1973; Touraine, 1974) and post-modern society (Lyotard, 1979; Foster, 1983; Jameson, 1984, 1991; Harvey, 1990; Anderson, 1998; Kumar, 2004), described late 20<sup>th</sup> century's changes as evidences of a new social, economic and cultural form called Information Society, focused on generation, processing and control of information (Masuda, 1982; Castells, 1996).<sup>4</sup> The consolidation of this new form of social organisation that rose in western countries and quickly spread worldwide, not only has deeply changed productive and economic structures but it has also defined a new cultural and social context, opening an era in which, for first time in history, mankind perceives the planet as a highly integrated and interdependent system.

### 1.1.1 A New Technological Paradigm

Of the numerous studies that have gone into the new cultural, social and productive paradigm, the classical works of Manuel Castells still stand out. These interpret the society of information as the product of transformations in the capitalist form of production which, by becoming the informational system on the last two decades of the 20<sup>th</sup> century, managed to find a way off the 1970s crisis. The significance and consequences of this phenomenon have been compared with those of the industrial revolution. In this case too, this is a technological revolution that changes our material culture through a new paradigm organised around the information technologies.<sup>5</sup> What is new about this system does not lie in the application of knowledge and information to production, which was already given in the industrial revolution, but in the generation of a cycle at whose centre is the human mind turned into the principal productive force. The revolutionary nature of these dynamics is obvious when we see how the new technological applications transform the processes of production and distribution, and they in turn induce substantial changes in the social structures. This process of integration between minds and machines reorganises the “way in which we are born, we live, we learn, we work, we produce, we consume, we dream, we fight or we die”.<sup>6</sup>

The five distinctive traits of the information society identified by Castells allow a better understanding of its original characteristics with respect to the industrial model: a) information is the raw material of the new paradigm and the new technologies are used to act on the information, unlike other technological revolutions of the past in which the information served to act on the technology; b)

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<sup>4</sup> According to Masuda (1982: 72-73): “The civilisation of information, which will follow the agricultural and the industrial, will be based on the productivity of the same information through the use of communication technologies by computers.” Although it is now evident that in 1948 there was a substantial change in the form of thinking “information”, due to the works of Wiener and Shannon, James Gleick (2011) maintains that information always has been fundamental for human societies and that history can be seen as the narrative of information acquiring its self-consciousness (Gleick, 2011; Sp. transl., 2012 : 20).

<sup>5</sup> The expression 'information technologies' usually points to a converging series of technologies, such as micro electronics, computing (hardware and software), telecommunications/broadcasting, optoelectronics, to which Castells (1996: 30) adds genetic engineering (that decodes, manipulates and reprograms the information codes of living matter), and in which I also suggest including the nanotechnologies that manipulate matter by providing it with information. Important inventions and discoveries are concentrated around these technologies in terms of materials, energy sources, applications and techniques that represent what the new energy sources represented for the industrial revolution. The transformation process is enhanced by the availability of a common digital language that allows an interface to be created between the technologies.

<sup>6</sup> Castells, 1996: 33.

the new technologies have a high capacity for penetration, so the processes of our intellectual and collective life are rapidly modelled by them; c) interconnection is the key to the whole system and the network is the topological configuration that governs all kinds of processes, enhancing processes of development based on complexity and interaction; d) the logic of flexibility admits the continuous reconfiguration of the systems without destroying them, so we live in a reality in constant, rapid progress and in a society characterised by highly dynamic processes of change; e) the specific technologies converge in a highly integrated system in which they become indistinguishable.<sup>7</sup> For these reasons there are those, like Anthony Giddens (1990), who have said that the society of information represents an intensification of some of the distinctive traits of modernity.<sup>8</sup>

In the last two decades of the 20<sup>th</sup> century, as this new context was defined, there were important economic changes resulting in the rise of a global informational economy. It is an informational economy since the productivity and the competitiveness of its components (companies, regions or nations) depend on its capacity to generate, process and apply information based on knowledge; and global because the production, consumption and circulation of goods and factors of production are directly or indirectly organised on a global scale. This new economy works as a unit in real time on the scale of the planet, and its existence is possible thanks to the technologies of information that give support to a financial market where capitals are managed 24/7. Castells observes that the fact that the informational economy is global is a new reality, different from the world economy, in which capital accumulation proceeded throughout the world, which in Europe existed from the 16<sup>th</sup> century onward.<sup>9</sup>

The logic of what is global characterise the majority of contemporary activities. Management, production and distribution have been globalised and their configuration changes constantly on the basis of the specific conditions at all times and in each context. Companies have adopted a network structure passing from serial production modes to others of flexible production in a context that attributes greater importance to innovation, revises the models of organisation towards team management and customer satisfaction, turns management methods towards quality and seals strategic alliances in line with goals and changing circumstances.

In certain professional and scientific sectors the labour markets are also global, just as work also tends to be, so that companies may be able to choose their location, achieve resources and contract workers globally under the most advantageous conditions. However, in the areas of the global economy, a more flexible way of working has been confirmed that experiences continuous technological and organisational modifications around the network company and requires intellectual

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<sup>7</sup> Castells, 1996: 60-63.

<sup>8</sup> Giddens affirms (1990; Sp. transl., 1993: 16-17) that contemporary society should be regarded as a radicalization and universalization of the consequences of modernity rather than the affirmation of a new post-modern era.

<sup>9</sup> According to Castells (1996: 91-92) the process that has led to the rise of the global economy can be summed up as follows: the new technological system has transformed the industrial economy, accelerating its dynamics and spreading its relationships in a planetary context and creating strong competition between the existing economic players and between these and other new ones. This competition developed by companies and stimulated by state policies led to new, important technological changes, which made some sectors, companies and regions more competitive. In parallel there was a creative destruction of other economic segments that affected other sectors, companies and regions. At the same time, these dynamics have required a large process of social, cultural and functional institutional restructuring to adapt to the new productive system, a process which is still in course. The economies which were incapable of adapting rapidly to change (such as the USSR) collapsed amidst a process of redefinition of world balances and new techniques of international pressure also exercised with the tools provided by the new informational environment.

gifts such as capacity to analyse, competence and skill in decision-taking, which stand out over tasks that can be coded into programmable sequences.

Science, technology, information and, to a certain extent, culture have been globalised, but asymmetrically, for the more advanced research centres and ownership of strategic technological information are still concentrated in certain places of the planet. Even so, network logic also enhances distribution and access to knowledge from less privileged environments and contributes to their unprecedented democratisation.

Paraphrasing Max Weber, Castells (1996: 195-200) maintains that it is possible to talk about a “spirit of informationalism” that is still based on the typical values of capitalism such as the *ethos* of accumulation and the appeal of consumerism, and it is materialised in the network company characterised by a multifaceted and virtual “culture of the ephemeral” that is continuously reconfigured depending on the situations, the contexts, the opportunities and the interests, rather than on rights and binding obligations: “The “spirit of informationalism” is the culture of “creative destruction”, accelerated to the speed of the optoelectronic circuits that process its signals.”<sup>10</sup>

Castells and other sociologists have revealed how the information society is based on an absolute predominance of technology, and how the control of information ultimately guarantees control of the exercise of power at the most varied scales. Technology certainly provides powerful tools for research and work, but it also opens a series of disturbing questions over who has access to information and for what purposes. If on the one hand the availability of a global network of information transmission has opened unprecedented opportunities for communication and has transformed our perception of the world, it has also been shown how the network increasingly becomes a global system of control over people, even in the most intimate and private aspects of their lives. In this way, a new reality is shaping up in which everyone theoretically has access to increasingly complex technological devices, but only a small group has the ability to decide which technologies are made available to the public, for what purposes and under what conditions.

### **1.1.2. Continuities and Ruptures**

New problematic aspects also have been detected in contemporary society: the opposition between the instrumental logic of the Net and the particularistic identity of the Self (Castells, Touraine); the debate on the power of techno-science and limits of the human (Virilio, De Kerckhove); the relation between physical world and virtual reality (Maldonado, Lévy, Mitchell); the prominence of the image’s culture and the immediacy upon the written text and reflection (McLuhan, Gubern); the redefinition of public and private spheres in a society dominated by communication (Echeverría), only to mention a few aspects that show a stronger connection with my research.

Castells believes that in the period of accelerated change such as that which has seen the rise of the information society, in which there is a predominant sensation of living in uncontrolled, confusing times, individuals tend to group around primary religious, ethnic, territorial or national ideas. Therefore, in the world of global flows,

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<sup>10</sup> Castells, 1996: 199.

the search for identity related to certain cultural and historical traits becomes a fundamental aspect that ends up clashing with the abstract and universal instrumentalism of the network.<sup>11</sup> For Touraine (1994) in post-industrial society the defence of identity and culture of the subject against the logic of apparatuses and markets has replaced the idea of class struggle and also obliged the idea of equality to be redefined.

The information society once more asks itself about the role of technology in the processes of social change. From the awareness that the word technology is intrinsically polysemic (Slack and Wise, 2005: 98) in this study I am inclined to adopt the interpretation of technology as part of material culture and to define it as “use of scientific knowledge to specify ways of doing things in a *reproducible* manner”<sup>12</sup>, but to recognise also the cultural studies approach that considers it as “a process of development suspended between different possibilities”<sup>13</sup> that implies an “articulation and assemblage” of “flows, connections and interpretations among the living, the nonliving, producers, users, processes, possibilities and energies”.<sup>14</sup> In Technology Studies there is a wide agreement on the assumption that technology is socially shaped (Brey, 2003: 46-50). The social shaping thesis recognises that social factors have an important influence on technological change and it denies the determinist idea that technological development follows a fixed and linear path traced by some kind of inner technological or economic logic. At the same time, this thesis affirms that society is technologically shaped, assuming that technologies become a part of social fabrics and transform their structure and culture according to non-linear processes that imply a continuous renegotiation of technological meanings and functions by users and agencies. Castells (1996: 7) affirms that a dialectic relationship is established between society and technology: technology does not determine society, but rather forms it, and society does not determine technological innovation, but rather uses it. However, through the state of society it is possible to brake or accelerate the modernisation processes to reveal its capacity or incapacity to master the strategic technologies for a historical moment. Technology therefore forms societies' capacity to change and societies in turn influence the uses to which they put their technological potential. Furthermore, the development processes of the productive forces mark the characteristics of technology and its relationship with society, depending on historical, cultural and institutional factors that influence the speed and success of these processes. The information society is also an example of the dialectic relationships that have just been mentioned.<sup>15</sup> Neil Postman (1992), recovering Umberto Eco's well-known

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<sup>11</sup> According to Castells (1996: 1-4) at a time when our societies are structured more and more around a bipolar opposition between the Net and the Self, and each group is isolated in its identity and sees others as a threat, social communication can be affected. He therefore concludes that it is important to keep a balance between factors of identity search and techno-economic change.

<sup>12</sup> Definition proposed by Harvey Brooks and Daniel Bell and adopted also by Castells (1996: 29-30).

<sup>13</sup> Definition proposed by Feenberg (1991: 14) and reported by Slack and Wise (2005: 97).

<sup>14</sup> Definition formulated by Slack and Wise (2005: 97).

<sup>15</sup> In the 1970s, when the new technological paradigm was structured, a specific sector of North American society that interacted with the global economy and world geopolitics materialised this new form of producing, communicating and experiencing. The fact that this model was basically born in California and at a certain time of history was important in defining some of its traits, such as the fact of compensating the aspirations of the military and technocratic sector with a spirit of freedom, innovation, creativity and business development from the university campuses. As different countries and institutions have become familiarised with the new media, a plurality of forms and modes of use has been generated, accelerating the speed of the changes and the diversification. Since the 1980s, the information technologies have been determining in restructuring the capitalist economy, which ended up turning into a global system without competitors. In this time a large part of the original traits were

dichotomy between apocalyptic and integrated, has seen that in periods of technological change it is common to find technophyl positions that adopt ideological postures according to which technology is always positive and beneficial for society and other technophobic attitudes, which sometimes excessively alert to the risks of the new technological systems.<sup>16</sup>

Amongst those who have expressed more critical opinions of the new technologies and their consequences are Tomás Maldonado (1997) and Paul Virilio (1998). Virilio believes that science, turned into technoscience, has moved away from its philosophical foundations and is no longer the agent of acceleration of history but rather the agent of acceleration of reality. If with Galileo and Copernicus, there was a *science of the appearance* of a relative truth, with technoscientific investigation we pass to a *science of the disappearance* of this same truth, with the advent of a cybernetic knowledge that, having contributed to setting up means of representation of the world (optical, opto-electronic, virtual reality), tends to negate all objective truth and embarks on the eclipse of the real.<sup>17</sup> Similarly, the disappearance of geography in the space of the information flows poses a new interpretation of the global as the habitual, interior, central, known and dominated dimension, and of the local as exterior, the periphery. More than economic, the globalisation of exchanges would be ecological and would equally affect substances and distances.<sup>18</sup> In this ultra-concentrated world the idea is affirmed of a *systemic risk* and the possibilities increase of a general accident, which Virilio has not identified with the crisis of the economic-financial system, but rather with the three bombs already indicated by Albert Einstein in the 1960s: nuclear (proliferation of artefacts liable to escape the control of the states), computer (wars led from the manipulation of information), demographic (manipulation of the genetic code that opens up the possibilities to the transhuman).<sup>19</sup>

Virilio considers the possible problem of saying no to the power of seduction of an ever more pervasive technology which reduces some horizons of the human being. In fact, he regrets that there is hardly any criticisms of technology and that at the same time humans, alongside the self-limitation of their natural receivers, are obsessed with seeking artificial substitutes where the body hardly has a place. The body itself becomes the object of manipulation and genetic recoding, the object of endocolonisation.<sup>20</sup> According to Virilio, these and other phenomena show how the present technical revolution is a tragedy of knowledge, the Babelian confusion of

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transformed by the logic and the interests of the economic system, although there are still some areas that recall the initial spirit. These aspects are discussed syntetically in Castells, 1996: 40-52.

<sup>16</sup> The technophyl attitudes generally present an acritical opinion, whereas the technophobe attitudes adopt hypercritical positions. Postman (1992) characterises the technophyl positions by the following principles: the media question (resolution of a specific problem by means of a technologically new solution) is dominant with respect to the questions of the purposes (what the media are for); what is most technologically advanced is the best; all of the above has to be discarded as past and useless; technology in itself is neutral with respect to the purposes and views with suspicion anyone who casts doubt on this conviction; sophisticated means are often used to achieve banal ends, without being capable of critically assessing the true fulfilment of the generated expectations. See especially chapter I "The Judgement of Tamus" (Postman, ed. 2003: 3-20).

Furthermore, it must be remembered that all technology has to take on a transitory nature, for at a certain time it will become obsolete. To analyse the extent of the changes beyond the propaganda tones that both sides often take on, it is important to establish acceptable terms of judgement and to try to see the aspects that really undergo significant transformations and which remain more stable.

<sup>17</sup> See: Virilio, 1998; Sp. transl., 1999: 11-16.

<sup>18</sup> Idem: 130-131.

<sup>19</sup> Idem: 145-150.

<sup>20</sup> Idem: 65-67.

individual and collective knowledge that requires an action of opposition.<sup>21</sup> The power of information technologies requires a strategy of resistance to dematerialisation and deterritorialisation, not because we have to be against it, but rather because it encloses the possibility of a new totalitarianism without reflection, deterministic. Within this framework, Virilio claims that is important to preserve the sense of history, for this is written in local time and it is an antidote to the reduction of everything to the universal time of the summary and pure image.

The manifestation of this new productive and socio-cultural reality of planetary dimensions seems to reopen the debate on the end of the modern project or its complex transformation and updating. Without going into the merit of a question that was widely discussed in the last two decades of the 20<sup>th</sup> century under the category of post-modernity, I believe that in reality it is possible to talk of a plurality of paradigms, more than a unitary view: two lines may be distinguished, one that has interested part of the theoretical foundations of sciences and above all the field of thought and arts, which has often underlined the presence of irrational or not precisely determinable components, and another of interest above all to the techno-scientific and productive processes, where a certain kind of rationality proposed by modern mentality and determined ever more by economic dynamics seem to be in force and unquestionable, even though they come in new shapes.

Beyond the more enthusiastic or more critical evaluations, it seems unquestionable that the society of information has represented a qualitative change in human experience. According to Castells (1996: 477-478), if we can identify the first phase of human existence as a long time of dominance of nature over culture, and the second from the modern ages as a time of dominance of culture over nature, we are now coming into a third phase in which culture refers directly to culture, to the extent that nature becomes something permanently threatened, although sometimes threatening too. In this principally cultural model of interaction, information is the key ingredient of our social organisation and the flows of messages and images from one network to another are the basic fibre of the new social structure. Castells observes that this is not the end of history announced by Fukuyama (1992) but the beginning of a new phase of history in which the species enters a predominantly social organisation of the world. This is the beginning of a new existence and a new era of information marked by the autonomy of culture over the material bases of our existence. This new condition poses the question of whether humanity will have the capacity and sufficient intelligence to face the challenges and responsibilities that give it the new role it has assumed.

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<sup>21</sup> “Virtual inflation concerns not only the economy (...) but also the intelligence of our relationship with the world. Therefore, the famous *systemic risk* is no longer only that of the bankruptcy of companies (...) by chain reaction (...) but the terrible threat of a collective blindness of humanity, the extraordinary possibility of an *undoing of events* and therefore of disorientation of our relationship with the real...” (Virilio, 1998; Sp. transl., 1999: 127)

## **1.2 Family: Crisis of Traditional Structures and New Paradigms**

Family structures have been one of the key elements by which society itself has been structured throughout the history of humanity; an organisation that in many cases has been based on the patriarchal model. The rise of the Information Society is coinciding with important changes in these structures, as I will discuss below; prompted by the emergence of more heterogeneous family models hardly reducible to schemes such as that of the nuclear family, which played a leading role in modern society.

### **1.2.1 Towards the End of Patriarchal Models**

There is broad consensus among sociologists over the tendentially irreversible crisis of the patriarchy, a family model characterised by the predominance of the authority exercised by men over women and children, which, particularly in western culture countries, has been strongly questioned in the last quarter of the 20<sup>th</sup> century. The causes of this crisis can be placed in a complex series of factors from very different areas and demands, which the consolidated structures have been unable to understand.

Although the questioning of the structures of male family power has its roots in the late 19<sup>th</sup> century feminist movements, it was after the 1960s when women's social claims took on a new dimension and began to be structured in important movements of opinion, exercising a strong influence on the change of habits and mental schemes, as well as acquiring the traits of a planetary revolution (although of variable intensity in different contexts and countries).

According to Castells (1997: 134-138) it is not by chance that this revolution occurred at a precise historical moment due to the convergence of several factors. First of all, the transformation of the economy and the labour market in association with new educational possibilities have brought on the massive integration of women into the paid-jobs market, with their increasing negotiating power on economic subjects with men, as well as a certain disconnection from the household chores and education of children. Secondly, the advances in biology, pharmacology and medicine and the technological changes in contraception and reproduction have enabled more effective control of pregnancies. Thirdly, the growing weight of the feminist movement that arose along with the social movements of the 1960s and was consolidated in the afterward years, contributed to making a profound criticism of the female condition in the area of the patriarchy, which might be interpreted as the extension of the illustrated undermining of an institution that had remained virtually intact after the dismantling of the structures of the previous regime. Finally, the rapid dissemination of ideas in the globalised culture has allowed the appearance of a new awareness of the role of women in society in almost the entire world.

The consequence of this change has been the questioning of the patriarchal family, which in perspective appears to be the first step in a process of dismantling the very institution of the patriarchy. More specifically, the crisis of the patriarchal system is shown in the weakening of a family model based on the exercise of the dominant

authority by the man/head of the family. The difficulty of reconciling marriage, work and life, the frequent dissolution of matrimonial relations, the increase in number of single-parent households and the establishment of agreements of coexistence outside marriage in different forms can be interpreted as signs of a growing reticence to accepting the patriarchal structure.

If the change experienced by the role and image of women in the past century is the principal historical factor that has cast doubt on the traditional family structure, in more recent times appeared that this has not been the only element of transformation, as other claims concerning the freedom of expression of sexual identities and the right to the family reveal. In this area too, there is agreement on the impact of the 1970s movements of sexual liberation, which also brought into question heterosexuality, another of the pillars of the patriarchal family, and considered the exploration of alternative ways of interpersonal relations (such as civil couples or gay and lesbian families) beyond the socially accepted schemes and limits. According to Castells, the claims to the right to diversity were so important for the questioning of such a deep-rooted structure as the patriarchy, for they considered the breakdown of the sexual frontiers, leading to a disconnection of the concepts of family, sexuality, love, gender and power:

Lesbian and gay movements are not simply movements in defence of basic human rights to choose whom and how to love. They are also powerful expressions of sexual identity, and therefore of sexual liberation. This is why they challenge some of the millennial foundations on which societies were built historically: sexual repression and compulsory heterosexuality.<sup>22</sup>

At the same time, individuality has been promoted as a driving force in contemporary society, widening the spaces of personal freedom and claiming for new rights. The body has taken an unprecedented prominence and it is a source of inspiration, concern and debate. The questioning of gender roles, changes in woman's position in society and family, the expression of identities excluded from family context are major factors that accelerated the crisis of the patriarchal system and the traditional family, promoting diversification and the rise of new and more heterogeneous structures. Several authors (Brubaker, 1993; Reigot and Spina, 1996; Beck-Gernsheim, 2003) also stress how these aspects do not mean the end of the family as an institution, but rather the dusk of a certain historical model, opening up a series of new possibilities, combinations and experimental formulae that are necessarily reflected in the conception and use of contemporary domestic spaces.

### **1.2.2 Open Family Relations and New Pacts of Coexistence**

A report of the Copenhagen institute for Future Studies, entitled *Family Life and Daily Life Towards 2017*, (2006: 7 and 13) describes the families of a near future as structures based on a variety of possible configurations

Maybe the best definition of a modern family is that of two or several people who generally live together and who are related by love, civil codes or blood. (...)

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<sup>22</sup> Castells, 1997: 220. For a wider discussion see the chapter "The end of Patriarchalism", Castells, 1997: 134-242.

The family life of today should be (...) a fruitful fellowship in which we stimulate each other, support each other's projects, and gather to share each other's often individual joys and worries.

If families have historically had a fundamental role of subsistence and support to their members in all circumstances and phases of life, in the so-called welfare societies they have been freed of certain burdens (social security, healthcare, subsidies, official education) to concentrate on the functions of solidarity, understanding and affectivity that are necessary for the development of the identity of their members and their psychological and emotional well-being, which are joined by economic, reproductive and educational functions that are fundamental for defining people's social placement. The family is therefore a strategic agent of society and it can be defined under various perspectives. From a functional viewpoint, it is the group that satisfies the functions of reproduction, maintenance of dependent individuals and psychic stability of its components; from a psychological-emotional perspective it can be considered a primary group of interests and affection; from a relational approach it is seen as a group of people, joined or not joined by biological connections, which maintains a continuous relationship and feels an explicit motivation to form a unit.

Although reference has been made to the crisis of the patriarchy system and to the smaller weight of the nuclear family, according to the sociologists it is not possible to talk about a crisis of the family model in itself, but rather the crisis of a dominant model (the nuclear family formed by a first marriage with children) and that of the appearance in a very short time of multiple family alternatives derived from the changes in the social values, the economic and demographic conditions of the contemporary world. It can therefore be said that the way to understand the family in the context of modern society has been replaced by a new way of understanding the family in a post-modern or informational context. In the first prevails the concept of family as a central social institution that deals with looking after all of its members, which is formalised in the structure of the nuclear family organised hierarchically in a context in which the union of the spouses is made official in a religious or civil form. In this context, the life cycles, previously marked by similar stages for everyone, are increasingly distinguished according to personal circumstances (divorces, returns after periods of coexistence) and generational circumstances (children tending not to repeat their parents' life decisions). In the post-modern context a new view of society is affirmed based not so much on respect for certain common and shared processes, but on the affirmation of values of personal realisation that lead to denial of the existence of absolute references, accepting difference and plurality while also defining family models. A single model therefore disappears, although maybe it remains as an idealised reference for certain social areas, and a range of possible options opens up, including that in which the individual chooses in accordance with their orientations and life project.

According to the report *New forms of dwelling*, drawn up by the Dwelling Tendencies Observatory, Valencia, Spain (Rodríguez Vives 2009), the factors that influence the dynamics of change in families can be summed up in the three areas of economy, demography and values.

Among the economic factors are particularly relevant: the reincorporation of working activities to the home, the greater independence of the generations thanks

to the system of social protection guaranteed by the welfare state, the greater independence of women by entering the labour market and a situation of greater work insecurity as a result of the deregulation of the labour market and the economic crisis.<sup>23</sup>

The demographic factors principally include the fall in the birth rate (meaning that 2 out of every 3 European households have no children), the rise in immigration (which partly balances the demographic balance and increases the number of multicultural homes), increased life expectancy (expanding the family cycle of a childless couple and increasing multigenerational families, but also single-person households) and the late emancipation of the young, especially in southern European countries (increasing both the number of core households and the age of marriage and the age when people have children).<sup>24</sup>

Amongst the values, greatest importance is given to individualism (promoting personal autonomy with respect to the family and prioritising the partner over the children), pluralism (deinstitutionalising the family by admitting other forms of coexistence, sexuality, maternity/paternity), egalitarianism (promoting a relationship of working, emotional and family parity between the members of the family), democracy (leading to negotiation rather than to the imposition of decisions, to a less hierarchised structure of intergenerational relationships, and to the affirmation of the principle of confidence over respect), freedom (making the members of the family less conditioned by external cultural pressures when determining their behaviour), privacy (which considers the family a haven of intimacy and family decisions as the exclusive competence of the family core without admitting the pressure of a social regulation) and secularisation (which considers that the individual is responsible for planning their existence without tolerating the intervention of higher institutions).<sup>25</sup>

The combination of these variables causes huge changes in the family structures. In all developed countries a pluralisation of the forms of coexistence is being seen, with an increase in the number of single-parent or single-person households, reconstituted families and complex families. There is also a fall in the average size of homes, as the formation of a couple is still the majority process for emancipation, but not the only one and the option of living alone is also considered. Alongside the increase in the number of young people's single-person households, those of older people have also increased, more so in the centre and north of Europe than in the south. On the other hand, these countries have a larger percentage of shared homes formed by three or more adults, which is justified by the tendency to put back the age of emancipation or the return to the family home in the event of a crisis.<sup>26</sup> Another interesting phenomenon is that of the so-called "privacy from a distance", that is the formation of independent households by different generations of the same family, but with an area of proximity to assure the possibility of maintaining frequent contact.<sup>27</sup>

The extension of this plural situation of family configurations with variable geometries leads us to foretell that some tendencies will be consolidated in the

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<sup>23</sup> Rodríguez Vives, 2009: 70-71.

<sup>24</sup> Idem: 72-81.

<sup>25</sup> Idem: 82-93.

<sup>26</sup> Idem: 94-101.

<sup>27</sup> The Spanish expression is "intimidad a distancia". Rodríguez Vives, 2009: 98.

future, such as the fall in nuclear families, greater freedom when deciding between different life options, with an increase in the autonomy of the young and women and a fall in the time spent in the family. The lifestyles will diversify and there will be greater freedom when deciding whether to live alone or with one's family, giving rise to a greater risk of experiencing situations of dissatisfaction and solitude, just as there will be a greater tendency to decide on the type of family in an environment that will still give more importance to the demands of the individual and, due to the greater possibility of choosing, a new evaluation of the new form of the family institution as a conscious, free choice.

With respect to the morphology of the new family units, the Dwelling Tendencies Observatory has singularised some emerging models that are likely to define to social panorama in the coming years: the single-person household, childless couples, the single-parent family, the couple with children or negotiating family, the reconstituted family, and cohabiting. Each of these has specific characteristics. Depending on the life circumstances of every person, they may live in different family models, thus making up a yet more dynamic panorama.<sup>28</sup>

It may therefore be said that the contemporary family is heterogeneous both in its generational and experiential segmenting and in its cultural and geographic origin. In the society of information the choice of way of living has expanded enormously and the family configuration varies in time, redefining hierarchies, life demands and existential expectations that require new domestic solutions.

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<sup>28</sup> *Idem*: 104-135.

### **1.3 Approaching the Complexity of Domestic Space**

When approaching domestic space, we are presented with a large number of observation points and focuses that reveal the great extension of a complex territory, which in itself shows the difficulty of realizing the variety of forms and means on the basis of which man organises its place for private life. This complexity is based on the fact that the domestic space is suspended between a universal dimension, as a manifestation of human inhabitancy, and an individual dimension, as a unique materialisation of the identity of its inhabitants. Furthermore, domestic space is the result of the intervention and negotiation of multiple actors. In addition to the inhabitants, the architects and the designers, the regulating instances, the cultural and aesthetic codes, the ideas and rules of social conduct have their influence depending on the specific nature of the reference context.

#### **1.3.1 Dwelling, House, Home, Machine, Organism and Device**

Scholars, as well as architects and designers, deal with the matter from many different perspectives that are revealed in the terminology used to name the object of study –house, home, dwelling, domestic space, but also the metaphors of machine, organism and device– and reflect a range of disciplines that in the last decades have extended and influenced each other.

Broadly speaking, it could be said that the house tends to be analyzed from two main perspectives that interpret it either as an object in which physical and material aspects override (which could be epitomised with the expression “house as a device”), or as a sign in which prevails the symbolic implication and the construction of meaning (which could be defined with the expression “house as a home”). With the expression House as a home, I epitomise a subject-centred idea of the house, focusing on values such as privacy, intimacy and identity, typical of the 19<sup>th</sup> century bourgeois mentality and with the expression House as a device, I describe an object-centred idea of the house, focusing on values such as exhibition, function and process, which were materialised by modernist architecture and design during the 20<sup>th</sup> century.

The house and the dwelling are classical topics of the architectural project, which aims at defining technical, functional and spatial criteria that are apparently objective and scientific, but which are deeply influenced by social, cultural and aesthetic factors. Since Vitruvius, architectural treaties and publications have taught what a house has to be like. This operative look, which aspires to turn the work into an example, a referent, a model, a rule or a manifesto, is complemented by another historical look that tends to approve the conceptual and formal transformations that the dwelling has undergone in time. The ideas of dwelling, house and home have taken on a special meaning in collective imagination and individual awareness, and have been loaded with new values and connotations that still represent the base for thinking of the future.

In last decades, in the framework of social and human sciences, domestic space has been dealt with in its cultural and symbolic aspects, which, in addition to sociology and anthropology, have interested geography, many areas of historical studies (from art, architectural and design history, to social and technological history), environmental psychology, psychoanalysis, cultural, gender, everyday life, consumption and media studies, providing an unprecedented understanding of the phenomenon that continues to be expanded and enriched with new contributions. The sociological reading has also traditionally dealt with the residential problem from an objective, and sometimes quantitative, perspective considering that the dwelling is one of the most important collective problems, especially for industrial and informational societies.<sup>29</sup>

Although in the above cases it is interesting to define operative criteria to back the processes of change and/or to analyse the factors of transformation, in the case of philosophical studies a discourse is favoured that focuses on the universal principles that form the essence of domestic space in the most extended area of the concept of dwelling. The search for the said essence or origin, which is considered lost in modern societies, has also led the study of the house to be spread to societies presenting forms of domestic dwelling culturally and geographically more removed from the western world. Moving from this initial area of interest, in the last decades social scientists have approached also our culture of dwelling, recognising in it new elements that could be studied by an anthropological perspective.

Before discussing some hypotheses on the contemporary living and whether this presents new or different characteristics with respect to the known forms, it is necessary to analyze some interpretations of inhabiting that have been provided throughout the 20<sup>th</sup> century. Given the impossibility of presenting a full literature review on the domestic studies, as the bibliography is highly extensive and its exhaustive examination would give rise alone to several theses, I have focused on some of the most recent critical interpretations that may serve as a reference to my research, favouring studies that have analysed life and domestic architecture in Europe and the United States from an interdisciplinary perspective aimed at revealing the relations between social aspects, life habits, mentalities and their projection on the idea and the form of the house.

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<sup>29</sup> Arising from the social critique of the 19<sup>th</sup> century, the sociological interest in the house has frequently been fed by ideological focuses. The Marxist approach related the dwelling with the social system and it reported that in capitalist economies the house (an essential good for reproducing the workforce) ended up becoming subject to cyclical crises of overproduction (Lipietz, 1977; Lojkine, 1977). This view has been countered by the neoclassical focus that defends the role of the market in residential processes (Saunders, 1990). Successively, there has been a preference for adopting criteria that are more sociological according to analytical and comparative criteria (Ghekiere, 1991 and 1992). Others have considered the dwelling in terms of participative action aimed at intervening in the processes of building the city to enhance participation and social cohesion, therefore being no lack of economicist focuses centred on economic reality from the production, commercialisation and consumption of the dwelling. There are also those who prefer to focus on the sociological concept of dwelling (Pezeu-Massabuau, 1983; Kemeny, 1992; Saunders, 2007), by expressing the relationships between houses and families within the framework of a certain social organisation (Cortés Alcalà, 1995), with the advantage of working with a more dynamic concept that takes into consideration the physical, spatial, economic, social, political and cultural elements that form the residential dimension of each society.

### 1.3.2 Philosophical and Epistemological Contributions

Philosophical reflection and the epistemological approach are intended to identify, first of all, the common elements that define dwelling and the home as universal experiences of the human being to successively go into the terrain of specific forms according to which these concepts are interpreted in different historical and cultural contexts.

When we think of dwelling, we implicitly think of domestic life (Vitta, 2008: 3-20), as this is the first area where humans have experience of the environment. However, Heidegger in *Building, Dwelling, Thinking* (1951, 1954) sees that the concept of dwelling covers a much broader area that defines the essence of our being in the world. In this view, the philosopher proposes the reversal of the building-dwelling sequence, by stating that building is a consequence of our dwelling, or being in the world, which is shown in other places more than spaces through which we establish a significant relationship with the land and accept our mortal condition. Heidegger believes that the present difficulty of dwelling is due to the contemporary man's incapacity to establish significant relationships with places and to look after them, due to the techno-scientific culture that defines our times and prevents the being. Paradoxically technology, which is a great collective achievement, is perceived as the means that enables ever more individualised and apparently self-sufficient dwelling, which in reality traps men in the logic of machines and separates them from the things they use, hiding their meaning. It would not be a rejection of tools, which are typical of homo as faber, but rather their abuse, which hides the true problem of the possibilities of dwelling. In the case of architecture, this fact is obvious when Heidegger wonders whether houses built according to the principles of modern architecture, though perfect in their functional and technical aspects, enable dwelling.<sup>30</sup>

The interpretation of the house as a phenomenological object proposed by Bachelard in *The Poetics of Space* (1957) has been another traditional starting point for interpreting domestic space. The house, the most intimate of all spaces, is the place for memories and experiences of the subject, evoked through the power of poetic image. The Bachelardian house is a dreamlike space, a place of tranquillity and contemplation, which, by allowing thought and dreaming, resurrects the past and connects it with the present. This imaginary entity expressing the ideal essence of inhabiting joins autobiographical memory with an unconscious Jungian collective that makes this imaginary house take on the universal cultural dimension in which at least those that belonged to western culture can feel identified, as it also reflects the model of the "house ideal" drawn up by bourgeois culture in the late 19<sup>th</sup> century.<sup>31</sup> The dreamlike Bachelardian house is a metaphor of the psyche, and its study is dealt with by *topoanalysis*, "the systematic psychological studying of the sites of our intimate lives"<sup>32</sup> that will enable us to experience the meaning of the domestic space and connect the homes of our life to the early house of our childhood. This house is structured by the polarity of the attic and the basement, which expresses the tension between rationality and irrationality and it is definitely rooted in the past. In fact, according to Bachelard, modern urban houses, lacking this

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<sup>30</sup> For an excursus on the Heideggerian interpretation and its relationship with architecture, see Lefas (2009).

<sup>31</sup> For a broader discussion, see: Moran, (2006: 27-42) and Korosec-Serfaty, (1984: 172-179).

<sup>32</sup> Bachelard, 1957; Sp. transl., 2000: 38.

essential vertical tension between attic and basement, allow only an artificial and unsatisfactory experience of domestic space.<sup>33</sup>

Also Theodor Adorno, a philosopher of such a different sign from those mentioned before, in *Minima Moralia* (1951), stated the sensation of ontological inadequacy, or “homelessness”, of the modern experience opposed to inhabiting.<sup>34</sup>

Of the already classical focuses of inhabiting as permanence, Norberg-Schulz (1984) has proposed an interpretation inspired both in the Heideggerian review and in the positions of Bachelard, which, just like that of Heidegger, has been formulated from the doubt concerning the value of the paradigm of techno-scientific progress. Coming down in favour of the existential structures of future qualitative inhabiting which must oppose the quantitative inhabiting of times present, Norberg-Schulz (1984: 13-25) proposes a more articulated structure than the Heideggerian, and he distinguishes four modalities and forms that graduate the relationship between the public and private areas of inhabiting an end up in the domestic space, the place where the private dwelling is materialised. The first form of inhabiting is the settlement, which establishes a significant relationship between human beings and their surroundings and fixes the reference point, the place from which one leaves and to which one returns. Collective inhabiting of the city, which in turns derives from the need to find other human beings to exchange ideas, products and feelings, follows this. Finally, in the city one distinguishes between the community inhabiting of public buildings, representation of the common values that the community shares, and private inhabiting, and the house, which emerges from defining a small personal world in which one is oneself. In this interpretation, the house is borne out of men’s demand to find an existential support for their being in the world: this is the place where we are before we opened to the world and this is our first element of contact with the world. This is the place of the daily as a representation of the continuity of existence, and also the place where personal identity is recovered, which is, according to Norberg-Schulz, the specific content of the private dwelling. While in the public area, it is the place for explanations and conventions, the house would rather be the place for showing the phenomena experienced first-hand such as atmosphere, a quality to which our mood must conform and which has also been referred to by Yi-Fu Tuan (1977) and Peter Zumthor (2006) as a fundamental constituent of architecture. The house as a refuge is a place where individuals accumulate their memories of the world and place them in relation to the acts of their daily existence. The house is the place for self-identification and security, because here there are familiar objects that represent our world. The house embodies a micro cosmos that expresses the quality of interiority and is a complement of our most private being; it is the scenario where intimacy is represented.

Norberg-Schulz is also critical of modern architecture, as it changed the harmonic condition of the traditional dwelling from the time when Frank Lloyd Wright conceived a new idea of house understood as a fixed point in space from which an individual experiences an unprecedented sensation of freedom and empathy with their surroundings. This new formulation of space understood as a continuous flow was effectively liberating at the beginning, but when trivialised became an alienating condition.<sup>35</sup> According to Norberg-Schulz, to overcome this situation it would be

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<sup>33</sup> Idem: 48-60.

<sup>34</sup> Adorno, 1951; Eng. transl., 1991: 38-39.

<sup>35</sup> Norberg-Schulz, 1984: 104-105.

necessary to resort once more to spatial figures talking about place, recognising that the modern house cannot fully satisfy the needs of modern inhabiting because it lacks the "figural quality" that identifies it as a house. The modern house does favour life in space, but not life with images (or at least the pleasurable images of a life of security and stability), which are those that, in the end, are longed for by the author.

<sup>36</sup>

From a different perspective, but equally focused on interaction between man and their surroundings, Franco La Cecla (1993) points out that inhabiting is a continuous, constantly changing interaction with the places in the local mind by which we draw up the mental maps that allow us to build our own personal anthology of the dwelling.

The concept of private dwelling proposed by Norberg-Schulz was later developed by the social philosopher Peter King (2003, 2004), who declares his preference for this term (which moves between the physical and psychological dimensions), as opposed to the excessively specific *housing* and the excessively vague *home*, which are more suitable for denoting psychological and emotional states. For King, the distinctive characteristics defining the private dwelling as an existential need are individuality (each person understands the dwelling as a private fact that depends on culture and personality) and universality (all human beings dwell).<sup>37</sup>

Therefore, the dwelling is configured as a topographical system comprising physical spaces and also as a series of meanings referring to our existential and emotional dimension. It is the place, which, by offering us security and protection, preserves our intimacy, and gives us a sensation of well-being on the physical, emotional and psychological levels. The house has the purpose of preserving what we have to allow us to be (what we want to be), and it is built through our memories, although these are much more specific than those of Bachelard. According to King, people do not seek change, but rather stability and therefore the private dwelling is ontologically contrary to transformation; it is an area that changes only under our control and through the effect of our actions. In this context, intimacy acquires its full dimension of domestic intimacy protection without involving isolation from the world, but rather the safeguard of the more personal sphere that can easily be lost when what is private becomes excessively exposed and ends up becoming public.

Once more questions arise with respect to the modern and contemporary condition. The private dwelling admits modern technological devices but finds it difficult to provide for them an aesthetic value, since as standard industrial products they tend to eliminate the idea of individuality, and become something "impersonal and implacable".<sup>38</sup> The risk of a destabilisation of the private dwelling does not lie in the introduction of television and Internet in the domestic surroundings, as King trusts the individual capacity to decide to what extent and with what importance to admit these media in our surroundings, but rather in having passed from the modern idea of the house as a *machine for living* to another post-modern idea of a *machine for desiring*. Obviously, King believes that desire, more than technology, is the motor behind changes that will always end up being illusory, for inhabitants start to project their wishes, aspirations and desires on the house in a continuous cycle fed

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<sup>36</sup> Idem: 108-110.

<sup>37</sup> "The importance of the dwelling is its meaning in the phenomenological sense, of that which is brought to consciousness. This presents itself as a universal, existential need, but because it is a need for intimacy, and the security necessary for intimacy, it is very much personalised. Private dwelling is also personal dwelling, (...) whilst still remaining a common experience." (King, 2004: 28)

<sup>38</sup> King, 2004: 71.

by consumer societies. In order to avoid being swallowed up by this mechanism that produces a permanent state of dissatisfaction and frustration, King once more calls on a strategy of resistance:

If we wish to use our dwelling fully (...) we have to stop. We have to see dwelling as a form of stasis, as tranquillity and not transformation: as a filling-up and not as a flow. (...) The meaning of dwelling –its existential significance– is based around the two ideas of *filling-up and the stopping place*. We fill up the dwelling with memories, happenings, with living and caring, with sharing with those we love. We do all these things by stopping still (...). Stopping in this sense brings with it familiarity, quietude, permanence and stillness. But most of all it brings a sense of belonging.<sup>39</sup>

Although it is unquestionable that the contributions dealing with the subject from the perspective of permanence are important in understanding the universal dimension of the dwelling, one should wonder to what extent these keys are suitable for interpreting the contemporary condition in which even stability and the sense of belonging referred to by King are the object of discussion (Bauman, 2005). In a world in which our identity is rapidly transformed under the effect of flows of information, appealing to stability and permanence may be important to establish a point of reference, but the risk is that, in time, this point will no longer be recognised as valid even by the subjects themselves. Furthermore, at the present time it seems difficult to maintain that the experience of mobility and constant change are but the concern of a small intellectual elite, as most people live in a “very local” dimension.<sup>40</sup> We should wonder whether this desire for change is something induced only by marketing techniques, or whether these techniques work because they operate on emotional springs in the way we consider identity as something liquid, to say the same as Bauman. It seems understandable that at times of change, one of the attitudes is the desire to look back to recover one’s security by returning to the abandoned path, but it is also necessary to question the reasons that have made a certain path impracticable and impossible to return to.

In a reflection that distanced from the Heideggerian focus, Massimo Cacciari (2000) also considered that the essence of contemporary dwelling should be reformulated in terms of future and transformation.

### **1.3.3 The Focus of Anthropology and Human Sciences**

In the 1960s and 1970s, the anthropological research on the dwelling shared with philosophical reflection the concern to investigate the original structures, in this case far from Western civilisation, in pursuit of a series of archetypes at the origin of the house, “the most representative result of man’s material and spiritual world”.<sup>41</sup>

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<sup>39</sup> King, 2004: 178.

<sup>40</sup> King, 2004: 108. King comments when analysing the work of David Morley, *Home Territories*, that the test of the local dimension of people’s experience are television series such as *Eastenders*, *Coronation Street*, *Neighbours*, *Sex in the City*, *Friends*, in which the domestic space is important and it has specific local references. However he does not go into how the models proposed here influence the spectators of other contexts that watch these shows.

<sup>41</sup> Cataldi, 1986: 14.

In the study of the forms of domestic dwelling, in addition to the anthropologists, some architecture researchers were also distinguished such as Bernard Rudowsky (1964) and Amos Rapoport (1969), who were concerned with understanding the relationships between the form of the house and the socio-cultural factors in contexts far removed from cult architecture, such as popular, primitive and vernacular architecture. For these researchers, studying the origins of the house meant acquiring greater awareness of the contemporary problems of accreditation at a time when local traditions are left on the fringe and they are replaced by ways of life that are ever more standardised to the western model. The interest of such studies lays not only in the work of documenting disappearing realities, but also in the new approach when studying domestic forms and cultures by a multidisciplinary one, by bringing together architecture, cultural geography, anthropology, ethnography and cultural studies. In this way it was sought to approach the deep feeling of peoples, by trying to reformulate the concept of function and avoiding all kinds of determinism to be inclined, along with Lewis Mumford, to also consider the importance of symbolic, ritual and cultural reasons when taking practical decisions.<sup>42</sup> According to this view, the house is firstly a socio-cultural and symbolic form successively modified by climatic, constructive, material and technological factors. This form represents an ideal atmosphere that is materialised in a certain physical organisation of space, which is more relevant than the architectural form. In the conclusions of his research, Rapoport opened an interesting perspective by observing how, although the forms of dwelling produced by Western culture were considered of little interest by anthropology since they were seen as excessively modified by the phenomena of modernity (capitalism, industrialisation, consumer society), it was possible to recognise symbolic values in certain elements of European and American domestic images as well.

In fact, focusing attention back on the phenomena of our culture was one of the paths followed by the anthropological studies in the subsequent decades.<sup>43</sup> If Rapoport had shown interest in the form of the house, Donna Birdwell-Pheasant and Denise Lawrence-Zúñiga (1999) focused on the relations and the reciprocal influences between house and family, claiming that Europe has been the place where social relations have historically been materialised in the constructed forms, according to modern and pre-modern models that have now spread to a planetary scale.<sup>44</sup> Irene Cieraad (1999) also followed an innovative research path in the area of our culture by focusing on the construction of meaning in domestic surroundings of modern times to the contributions of different research traditions that had never been mingled and brought together before, such as art and social history, women's studies, design and architectural history, cultural anthropology, ethnology, sociology and housing sociology, environmental psychology, material, culture and consumer studies. Still in 1999 Cieraad affirmed that qualitative research and interpretative

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<sup>42</sup> "The house is not only a structure, but an institution created for a complex group of purposes. For the construction of a house is a cultural phenomenon, its shape and organisation are highly influenced by the cultural milieu to which it belongs. (...) The house for primitive man is something more than a roof, and almost from the beginning, its "function" was much more than a physical or utilitarian concept. (...) If the passive function of the house is to provide a roof, its positive purpose is the creation of an environment that is more suited to a people's form of life; in other words, a social spatial unit." (Rapoport, 1969: 65)

<sup>43</sup> From a theoretical viewpoint, Messerschmidt's contributions were important. See: Messerschmidt, 1981.

<sup>44</sup> For this discussion, see especially: Birdwell-Pheasant and Lawrence-Zúñiga, 1999: 5-12.

research on Western domestic space and practices were scarce, and she observed that an anthropological approach surprisingly was still absent, considering that there was an anthropological school working on the house in those tribal and non-Western contexts that were seen as symbolically more authentic.<sup>45</sup> In addition to confirming that in our culture there is space for symbolic expression too, Cieraad reminded that it made still more sense to talk about anthropology of the domestic space and meaning in western culture, the place where this discipline arose when a difference began to be drawn between the domestic and the public.<sup>46</sup>

In the last decade, detailed research has been carried out on the different aspects of the house representing our culture, both from the general viewpoint and from historical focuses dealing with the significant times through which the western idea of home and domesticity have been built. For researchers moving in the areas of human sciences, understanding the different meaning of the word home has been a shared concern, which was not fully covered by other focuses dealing with the subject from the perspective of Housing studies, which rather concentrated on the political, economic, sociological, projectual and cultural aspects of the dwelling.

From this reflection, which has arisen from the need to distinguish the idea of home from that of house, and which has involved many disciplines such as sociology, anthropology, psychology, human geography, history, architecture and philosophy, some positions have emerged that are now widely shared. Birdwell-Pheasant and Lawrence-Zúñiga discussing on the terms house and home (1999: 5-6), write

While anthropologists have sought diligently to differentiate concepts of “house” and “home”, “household” and “family” the unity (or mutuality) of these concepts is embedded in many European cultural traditions. (...) Contemporary English alternatives for “house” – dwelling, residence, abode– reverberate with ancient notions of stopping or staying in a place or a habitual returning to a place. The term “house” comes from the Old English *hus* and related *huden*, meaning “to hide” and yielding also “hut”, “huddle” and “hoard”. This northern European term conveys the fragile and exposed side of the dwellers.

The authors, mentioning two articles by Arthur Danto (1982) and Joseph Rykwert (1991), affirm that this semantic sphere is completely different from that of the Latin term *domus*, which will be widely discussed in chapter 1.3.6, indicating symbols of domination and power. They also highlight that “house” refers to a physical structure, while “home” expresses a concept of place and belonging:

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<sup>45</sup> Cieraad (1999: 1-2) recognised the influence of different national research traditions in this field. In France ‘the interest in material aspects of daily life’ mixed an ethnological tradition with sociology of lifestyle and consumption (Baudrillard, 1981; Bordieu, 1984, Segalen and Le Wita, 1993, among others). In the UK the interest for the experience of women consumers (Douglas and Isherwood, 1979; Miller, 1987; Attfield and Kirkham, 1989; Roberts, 1991, among others) and in USA domestic studies were rooted in environmental psychology, sociology and material culture studies, focusing on housing and identity (Csikszentmihalyi and Rochberg-Halton, 1981, among others) and consumer studies (McCraken, 1988; Dittmar, 1992, 2008, among others).

<sup>46</sup> Cieraad (1999: 3) writes: “Reintroducing a spatial category such as ‘domestic space’ in combination with a regional focus on the West may seem a regressive act. However, an anthropology of domestic space is by definition rooted in the West. The concept of domestic space and its counterpart, ‘public space’, evolved in a Western historical setting of rising urbanism, tracking back to 17<sup>th</sup> century Europe.”

These two terms [house and home, German *Haus* and *Heim*] describe distinct cultural constructions. While “house” implies a physical structure or shelter, “home” defines a place of origin and retreat, such one’s natal village or birthplace, one’s country or other native place. Home is a concept of place rather than space, implying emotional attachment and meaning beyond the constraints of physicality of any particular dwelling house.

Home is a multidimensional concept that indicates a place, a space, a site in which we live, as well as imagination formed by ideas, feelings, cultural practices and meanings, and also the relationship between both spheres (Saunders and Williams, 1988; Despres, 1991; Douglas, 1991; Mallet, 2004; Massey, 2005; Vitta, 2008). It may be defined as a *spatial imaginary*: a set of intersecting and variable ideas and feelings, which are related to context, extend across spaces and scales, and which construct and connect places (Blunt and Dowling, 2006: 2).

Therefore, home covers a much wider area than house and household, which are some of its components. A house is not necessarily a home and personal relations that construct the meaning of the home extend far beyond household. “Home is a series of feelings and attachments, some of which, some of the time, and in some places, become connected to a physical structure that provides shelter. Conversely, one can live in a house and yet not feel at home.”<sup>47</sup> In any case, neither the physical nor the emotional component gives full meaning to the concept alone, a meaning which is rather derived from the combination of both: “While home may be located, it is not the location that is ‘home’. Home is the fusion of a feeling ‘at home’, sense of comfort, belonging, with a particular place”<sup>48</sup>

The home is a fundamental anchoring point and a key aspect in building identity, security and a feeling of belonging in people (Dovey, 1985; Dupuis and Thorns, 1996, 1998). Its perception varies depending on the position people hold in it, depending on a “geometry of power” that depends on the gender relationships and certain dominant messages. In our domestic culture, values have come forth such as family, patriarchal gender relationships, stability, security and housing under ownership (Massey, 1992), but calling on the centrality of the nuclear family, they forget other realities such as reconstituted families, the elderly, same-sex couples, children, those who for many reasons do not feel identified in the white race middle-class model.

Depending on these characteristics, the concept of home has been given to the construction of idealised domestic images that today still act as models in collective imagination, and which in recent decades have been critically revised under different points of view, as will be seen later.

Finally, home is a multi-scale concept that is not limited to the house, as our sense of belonging is related to different, not excluding dimensions such as the body, the dwelling, the city, the nation and the planet<sup>49</sup>.

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<sup>47</sup> Blunt and Dowling, 2006: 10.

<sup>48</sup> Easthope, 2004: 136.

<sup>49</sup> The difficulty of covering all, sometimes opposite facets of home in a single, coherent interpretation has been well expressed by Shelley Mallet in the conclusions of her article “It all depends...” (2004: 84): “Clearly the term home functions as a repository for complex, inter-related and at times contradictory socio-cultural ideas about people’s relationship with one another, especially family, and with places, spaces, and things. It can be a dwelling place or a lived space of interaction between people, places, things; or perhaps both. The boundaries of home can be permeable and/or impermeable. Home can be singular and/or plural, alienable and/or inalienable, fixed and stable and/or mobile and changing. It can be associated with feelings of comfort, ease, intimacy, relaxation and security and/or oppression, tyranny and persecution. It can or cannot be associated with family. Home can be an expression of one’s (possibly fluid) identity and sense of self and/or one’s body might be home to the self. It can

Starting with a reflection on the concept of home in our culture, Alison Blunt and Robyn Dowling (2006) have tried to trace a “critical geography of the concept of home” to reach their understanding of space as a place and imagination and also their politicised understanding of domestic space as an area where oppression and resistance takes place, showing that alongside the idea of *homely home* there is also another: the *unhomely home*.<sup>50</sup> Furthermore, the reading of this work shows up the urgency of overcoming the positions that interpret modernity and contemporaneity as threats *tout court* to the concept of home as a sacred place away from society and full of meaning, which is typical of the more immobilistic and conservative viewpoints. Therefore, based on the writings of Doreen Massey (1992; 2005), who questions the idea of the disappearance of the meaning of place and home in the era of globalisation, it suggests interpreting the home as an open and porous place, “intersection of social relations and emotions”<sup>51</sup> whose contemporary identity should be built on the basis of communication, movement, social relations and positive interaction, enriching the daily life of individuals through interaction more than through separation.

This more dynamic view leads to points of contact with other researchers who have explored the ways in which people feel themselves ‘at home’ and maintain their identity living their lives in movement through today’s global world and practicing contemporary “nomadic” strategies (Rapport and Dawson, 1998; Radkowski, 2002; Williksen and Rapport, 2010).

Within the dynamics that lead from house to home, there are some that have dealt with understanding the objects that fill our domestic landscape as a symbolic projection of the inhabitants. In addition to the precedent of George Perec (1965) who suggested understanding personality through the relationship we have with things, one of the first studies on the relationship of the inhabitants with objects in their immediate environment was that of Mihaly Csikszentmihaly and Eugene Rochberg-Halton (1981). Based on the idea of cultivation by Rochberg-Halton, according to which the construction of the meaning of active interpretation on the part of the person depends on emotional bonds and cognitive relationships with other subjects and ideas that change for each individual, the study considers that the things with which people interact are not simple tools, but embody goals and shape

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constitute belonging and/or create a sense of marginalisation and estrangement. Home can be given and/or made, familiar and/or strange, an atmosphere and/or an activity, a relevant and/or irrelevant concept. It can be fundamental and/or extraneous to existence. Home can be an ideological construct and/or an experience of being in the world. It can be a crucial site for examining relations of production and consumption, globalisation and nationalism, citizenship and human rights, and the role of government and governmentality. Equally it can provide a context for analysing ideas and practices about intimacy, family, kinship, gender, ethnicity, class, age and sexuality. Such ideas can be inflected in domestic architecture and interior and urban design and need multidisciplinary research.”

<sup>50</sup> As examples of domestic discomfort, Blunt and Dowling (2006: 121-131 and 253-268) mention disability, domestic violence and homelessness. The disabled often feel out of place in the house, because the spaces and the furniture are not conceived to meet their mobility and functionality needs. Situations of violence largely take place in domestic areas, which in these cases become insecure and threatening and in certain cases lead to abandonment of the home. The third situation of homelessness is not only given in the absence of a roof, but also in situations in which it is difficult to feel at home, to recognise a place as one’s own, like bad economic situations, earthquakes. Homelessness is not the same as being abandoned, as it is possible to be homeless even if you have a house: it causes a sensation of being abandoned, of disconnection, of a lack of bonds with any place.

<sup>51</sup> Blunt and Dowling, 2006: 27.

the identity of their users.<sup>52</sup> Clare Cooper Marcus (1995) focusing on psychoanalytical theories argues that, beginning at childhood, our psychological development depends on relationships with people, as well as on close and empathic ties with our physical environment. In the last decade the relationship between dwellers and things has been studied from different points of view: Daniel Miller's (2001; 2009), who asks for the active participation of the home and its material culture in the construction of our lives; Sarah Pink's (2004), who shows how everyday activities and items reveal how gender roles are performed in the domestic space; and Nicky Gregson's (2007), who focuses on centrality of consumption in our dwelling practices. The design culture has participated also in this debate: Judy Attfield (2000) focuses on the changing meanings of contemporary human-object relations and reveals the materiality of the everyday in terms of relationships between space, time and body, and Giampiero Bosoni (2002), propose the Italian design as a case study of the perceptive and productive transformation of domestic "culture of living" in the second half of the 20<sup>th</sup> century.

#### **1.3.4 Domestic Space From an Historical, Cultural and Gender Profile: from Intimacy to Mobile Domesticity**

The interest in a deeper understanding of the origins of the modern idea of home has led to their study from a historical and critical perspective, following the path started by Walter Benjamin with *The Arcades Project* (1927-1940), as well as approaching other concepts that make up the typical domestic universe of the bourgeois culture.<sup>53</sup> Several authors agree that the idea of the domestic environment as an interior space in which desires of intimacy, comfort, family life, gender roles, self representation aspirations and consumption processes are cultivated and manifested is largely an invention of modern times and bourgeois mentality, although there is not always agreement on establishing the time when these processes began. According to classical interpretations, the origins of a modern sense of the home can be found in the 17<sup>th</sup> century (Rybczynski, 1986; Schama, 1987), where intimacy, domesticity, and comfort emerged as organizing principles of domestic spaces among the bourgeoisie specially in the Netherlands, from where they spread across Europe and North

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<sup>52</sup> Distinguishing (1981: 90-120) between objects valued for action and objects valued for contemplation the authors also argue (idem: 146-171) that those families who have warmer or cooler emotional attachments to their homes also have more or less satisfactory relationship in other spheres as personal fulfilment and participation to social life.

<sup>53</sup> The unfinished text of *The Arcades Project*, or *Das Passagen-Werk* in German, to which Benjamin devoted from 1927 to his death in 1940, was edited by Rolf Tiedemann and integrally published in 1982; its importance was already highlighted by Theodor Adorno in 1950. See: Benjamin, 1982; Sp. transl., 2005: 9. According to the interpretation that Benjamin provides in *Das Passagen-Werk*, the bourgeois interior is the place where the identity of the man of the Industrial Revolution is built, and it compensates the lack of any sign of private life in the large city. If the passages and the arcades are the place where progress, technology and consumption are revealed, the domestic interior is the place where the bourgeois identity is affirmed and regenerated through decoration and objects. According to Benjamin, this conception of the interior as the projection of the owner's personality comes to an end with the *Jugendstil*, when architects take control of all aspects of interior design and open the way to the excitement of a life formed by art and turned into *gesamtkunstwerk*. The new architecture of the 1920s and 1930s, materialised in the transparency of glass and flowing spaces, will definitively wind up the interior as a refuge, replacing the decimononic idea of "leave traces" with another modern one of "erase traces", referring to the Brechtian phrase mentioned by Benjamin himself in a text titled "Experience and poverty" (Benjamin, 1996-2003, vol. 2: 731-736). For a broader discussion of the approach to the domestic space in Benjamin's thinking, see: Rice, 2007: 9-36.

America during the industrial revolution, varying and aesthetically expressing themselves in original forms according to specific social, cultural and historical contexts.<sup>54</sup> Rice (2007), on the other hand, prefers to establish the emergence of the idea of interior at the beginning of the 19<sup>th</sup> century and interprets it in relation to the Benjaminian idea of modernity and the Freudian idea of interiority, following its development in the 20<sup>th</sup> century in its double aspect of concept and material manifestation, also expressing criticism of previous interpretations.

It has been observed that this kind of home imagined as the dwelling of the ideal nuclear family, placed in a suburban area, warm, private and owned, achieved its stereotype in late-Victorian Britain and it was spread in the United States, where it was begun to consider living in contact with nature, away from the city and easily connected by tram or railway, just like the ideals of the garden city. Obviously this is a model aimed principally at the middle classes, which seals still more the house/female-work/male division and spreads its influence to 20<sup>th</sup> century domestic culture (Oliver, 1987; Blunt and Dowling, 2006).<sup>55</sup>

Feminist thought has also made a significant contribution to providing new reading keys, which have successively been adopted by many other disciplines.<sup>56</sup> This focus has shown how gender differences have been determining in setting out the way of living, imagining and projecting domestic space (Madigan and Munro, 1990; Darke, 1994; Gilroy and Woods, 1994; Attfield and Kirkham, 1995; Heynen and Baydar, 2005; Taylor and Preston, 2006), which first of all was radically criticised as an environment of oppression, violence and discomfort for women (Friedan, 1963;

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<sup>54</sup> Rybczynski, who has studied the idea of the house from its rise in modern times until its downfall in the early 20<sup>th</sup> century, maintains that the passing from the indistinction of the mediaeval house to the specific nature of the bourgeois family house was a long process that took place between the 17<sup>th</sup> and 19<sup>th</sup> centuries. This process, propitiated by the birth of individualism and the idea of the private being a personal area, was revealed in a desire for *intimacy* unknown in other times (1986: 15-50). Taking the 17<sup>th</sup> century Dutch bourgeoisie as an example, some important transformations are detected in family relations. The idea that one's partner is a separate entity, greater attention to children, children remaining in the family during their adolescence, the separation between the workplace and domestic places were the factors that led both to the development of a different kind of house, and to the birth of a new quality that can be defined as *domesticity*, related to the values and sensations transmitted by this new reality (1986: 51-76). During the 18<sup>th</sup> century, this conceptual core was enriched by the idea of *comfort*, which is related above all to furniture and its specialisation (1986: 100-143). Despite the success that this theory had among scholars, in the last decade wider studies on family and on the history of the notion of intimacy (De Mare, 1999; Ozment, 1999, 2001; Kertzer and Barbagli, 2001-2004) made clear that the nuclear family was a previous structure, whose dimension and households increased during the 18<sup>th</sup> and the 19<sup>th</sup> century, that the consideration for the children had not change so much, that the situation of middle-class women worsened in the second half of the 19<sup>th</sup> century, and that the separation between work and home varied significantly among countries in the modern era. These studies confirm that it is difficult to outline general trends and that the attitudes towards work and intimacy have been different in middle-class and working-class families.

<sup>55</sup> Blunt and Dowling (2006: 119-120) observe how the physical structure of the ideal house also corresponds to a structure in social and family relations. "It is the suburban house that is most often presumed to be home because it is the form of dwelling that is seen to most clearly correspond to dominant meanings of home as haven from the public world, a space of familial intimacy and a site of domestic comfort. (...) And suburban homes also demonstrate the oppressiveness of dominant ideologies of home, especially in terms of gender, sexuality and race."

<sup>56</sup> Barbara Miller Lane (2007: 2) describes the repercussion that studies originated in the area of feminist thought had in other fields as follows: "Not only have feminist writers helped to overturn traditional approaches, but they have also mobilized insights from archaeology, sociology, anthropology, psychoanalysis, film studies, economic and social history, politics and government, oral history, social psychology, literary theory, an-historical theory, landscape history, and the history of technology, in the study of the history of domestic architecture."

Butler, 1990).<sup>57</sup> The issues in the field of domestic gender studies have changed over the time. Initially scholars focused on the dominant male patriarchal structure and exploitation of women within the domestic sphere, as it may be read in the upper-middle-class Victorian house, with its specialised public and private spaces centred on the parlour or drawing-room, which were understood as the result of the separation between male work spaces and female home, the place where the wife and mother was presiding over a cult of domesticity, caring for the family and the dwelling (Forty, 1986; Sparke, 1995; Miller Lane, 2007).<sup>58</sup> More recently, it has been seen how this model of the use of space was flexible and not highly widespread in other social classes, and how the domestic atmosphere was also a platform for the political, social and reformist initiatives of women in the 19<sup>th</sup> century, without denying that the domestic space was also the stage for larger gender conflicts and that in this period domestic cultures were also shaped by class, ethnicity and race (Davidoff and Hall, 1987; Flanders, 2003, 2004; Darling and Withworth, 2007; Hollows, 2008).

A similar analysis was carried out on suburban house as a materialisation of the American dream (Wright, 1981; Gowans, 1986; Upton and Vlach, 1986; Hayden, 1984, 1996, 2003; Archer, 2005) and specifically on the high-modernist post-war house, with open plan, high-tech appliances and mass-media-inspired decoration, which isolated women from community life and work (Ockman, 1996; Argest, 1996; Colomina, 2006).<sup>59</sup>

The relationship between public and private was another widely disputed concept of the domestic sphere. It has been seen that the birth of private space occurs contemporarily to the definition of a new (also modern) life of public space as an area for circulation, movement, traffic, characterised by an ethic of neutrality and indifference, in which silence is a factor of protection for individual anonymity

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<sup>57</sup> Betty Friedan in the 1960s was famous for this kind of discourse and for calling for full female emancipation thanks to full access to the public spheres of work, politics, education and abandonment of the home. On another front, the Marxist perspective has also been criticised, as it also considers the house as a space for female work, thus broadening the gap between men and women still further.

<sup>58</sup> Linda Mc Dowell in *A Feminist Glossary of Human Geography* 1999: 75-76 writes: “The home was constructed as the locus of love, emotion and empathy, and the burdens of nurturing and caring for others were placed on the shoulders of women, who were, however, constructed as ‘angels’ rather than ‘workers’” (quoted in Miller Lane, 2007: 18). Heynen and Baydar (2005: 6-9) observe how the cult of domesticity passed through different stages and gradually became the area of the woman and the children, although until the mid-nineteenth century; it was also the place for men. Towards the end of the 19<sup>th</sup> century, opposition is already seen between the male figure and the domestic area, to such an extent that the values of intimacy and comfort are somewhat considered threatening to masculine values. Furthermore, domesticity is related to domesticated, that is, to the civilising mission of colonialism and imperialism, which is an essential part of industrial modernity. A domesticated private space is the expression of western civilisation. From this perceptive, therefore, modernity and domesticity are not opposed values.

<sup>59</sup> Traditionally domestic and work cultures have been considered from feminist thinking as the result of an unequal division of labour and unpaid domestic work. Recently, Diane Hollows (2008: 54-73) argued that some of this work is a key home-making practice that physically sustains household members and emotionally helps to create the meaning of home, criticising feminist positions on domesticity in order to achieve a more complex understanding of domestic culture’s contribution to social and political life. Also along this line, Suzanne Reimer and Deborah Leslie (2003; 2004) have analysed magazines such as *Elle*, *Decoration*, *Wallpaper\** and *Living* and have observed a changing tendency in the attitude of contemporary women with respect to what is domestic, for showing interest in the decoration of the house may be a source of non-oppressive pressure, understanding the care of domestic space as an extension of one’s interest in fashion and body. Therefore, the idea is transmitted that a modern interior is liberating for women, but also interesting for men.

(Benjamin, 1939; Ariès, 1962; Ariès and Duby, 1987-91; Sennett, 1978, 1990).<sup>60</sup> While in the 18<sup>th</sup> century the relationship between the public and the private was still in a state of equilibrium, in the 19<sup>th</sup> century Sennett (1977) detects a gradual shift away from the hope to control or participate in public life, and the withdrawal into the sphere of the family and intimacy.<sup>61</sup> According to Ariès, in modern, contemporary society it would not be advanced individualism, but rather the family as an area of what is private, progressively occupying the space left by the shrinking of sociability in the public sphere. This opinion was shared by Peter Berger (1974), who posits that the advance of the private dimension is precisely due to a conversion of what is public into something abstract and distant. Successively such evaluations have been widened and reviewed by a more careful understanding of the multiple meanings of the protean dichotomy public/private following the studies of Weintraub and Kumar (1997).

When domestic space began to be looked at from the point of view of consumption, and communication strategies intended to promote the idea of modernity in the media, the relationship was also reconsidered between the public and the private spheres. Beatriz Colomina (1994), based on Freud and Lacan's psychoanalytical theories, as well as the theory of cinema and media, focuses on the importance that the construction of the look has on the modern house, in which she suggests a new way to combine aspects of private space with others of public exposure.<sup>62</sup> Colomina (1994: 14-15) affirms that modern architecture, conventionally regarded as a "high artistic practice established in opposition to mass culture and everyday life", was fully involved with mass media culture, and actually was produced within its framework. As a consequence, the most important site of architectural production shifted from the construction site to the immaterial space of publications and exhibitions, which, notwithstanding their apparent ephemerality, secured a space in history for modern architects. Some of Colomina's theses have been successively taken up by Penny Sparke (2008), who argues that one of the characteristics of modern interiors is precisely the continuous recombination of the private and the public not limited to the domestic sphere.<sup>63</sup> From a modern perspective, as will be

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<sup>60</sup> A space which, as has been shown by Richard Sennett, begins to be conceived and planned differently when, after the 17<sup>th</sup> century and following William Harvey's studies of blood flow, the idea is disseminated of the movement as a positive, vital factor for bodies. See: Sennett, 1994: 255-281; Sp. transl., 1997: 273-301.

<sup>61</sup> In this period Sennett recognizes the origins of a different form of interpreting the relationship between community and city, with a community that begins to be conceived against the city as a system in defence of the search for greater contact and intimacy, impossible in the new urban space coded by the rules of personality and viewed negatively. The desire to recover this intimacy of the urban dimension, which could easily be interpreted as fiction, produces (above all in the middle classes) a desire to seek what is similar and to move further and further away from the possibility of finding what is different, of questioning the established conditions of life. The features of the new "intimate society" are discussed specifically in Part 4 of the book. See: Sennett, 1977; Sp. transl., 1978: 321-420.

<sup>62</sup> Colomina (1994: 13-14) writes: "To think about modern architecture must be to pass back and forth between the question of space and the question of representation. Indeed, it will be necessary to think of architecture as a system of representation, or rather a series of overlapping systems of representation. (...) The building should be understood in the same terms as drawings, photographs, writings, films, and advertisements; not only because these are the media in which more often we encounter it, but because the building is a mechanism of representation in its own right. The building is, after all, 'a construction' in all the senses of the word."

<sup>63</sup> Sparke (2008: 7-8) affirms: "The modern interior addresses in this study is defined by its relationship with the everyday experiences of modernity (...) which were as profound in the office, the factory, the department store and the café –as well as in the modern hospital and church– as they were in the home." She also points out (idem: 9) that industrialization "related to people's public and private experiences (...) affected both their self- and their collective identities" not without "tensions, ambiguities and contradictions" (idem: 10).

seen later, the discussion on the relationship between public and private has been linked with the media studies, by observing how information technologies and electronic media, generally including television and radio, substantially transformed the concept and area of intimacy in the domestic space (Meyrovitz, 1985; Silverstone and Hirsch, 1994; Turkle, 1995, 2011; Castells, 1996; Rheingold, 2000, 2002; Morley, 2000; 2007; Berry, Kim and Spigel 2010; Brey, Briggie and Spence, 2012).

Furthermore, reflection on the private links to another problematic concept, as domesticity is, has been questioned in relation to modern and contemporary architecture.

Although North American houses have been mainly interpreted as the continuation and update of family and domestic ideals, the modern house that was conceived in Europe between the wars has been considered a place of suppression of domesticity (Reed, 1996).<sup>64</sup> This idea is inserted in the framework of a more general view of modernity, interpreted as a process of change undertaken to achieve a better life and society under the ideal of progress (Berman, 1982; Giddens, 1990; Harvey, 1990), which directly rejects any expression of the past, including the home.<sup>65</sup> If being modern is a total project, a declaration of faith in the ideals of progress or rupture with conventions, the sphere of private life and domestic space have to be affected by this renovation, as it is one of the first manifestations of their inhabitants and the credo of the architect, the materialisation closest to their convictions.<sup>66</sup>

Other interpretations have been made, observing that the idea of home in itself changed with modern architecture, aimed at people who would like to live in spaces suited to a new time, away from the comforting traditions of the past, although at the expense of not feeling “at home” (Benton, 2006) and so “the modern era marked the rise of a new sense of domesticity that developed simultaneously with re-definitions of gender roles and that led to unprecedented articulations of sexuality with domestic space”.<sup>67</sup> In this framework, the modern discourse highlighted the

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<sup>64</sup> Reed bases his thoughts on the declared incompatibility that the avant-garde movements established between the idea of house as home and the expression of contemporary art. The essays set out in *Not at Home* are intended to analyse the antagonism of 20<sup>th</sup> century art and architecture against the idea of the domestic, and to explore some alternative positions. The problem that can be considered from the texts published by Reed is the incompatibility between a domestic ideal with its origins in the bourgeois culture, which becomes an unfortunate synthesis of images created both by nostalgia and marketing, a style well synthesised in Levittown or in the creations of Ralph Lauren, as Rybczynski said, and the idea of the house as an expression of different cultural values related to modernity, which requires another architectural expression, and which inevitably seems aimed at an elite audience.

<sup>65</sup> Some of the feminist interpretations have attributed a gender perspective to this reading, which explains the rejection of what is domestic in the following terms: modernity is basically a transformative action (masculine) that complains about stability (feminine) and, by opposing continuity and permanence, rejects the values of domesticity. This process of change seems necessary to involve leaving the home, which gives the sensation of “homelessness”, which such different philosophers as Heidegger and Adorno have attributed to the condition of the modern man, incapable of inhabiting. For a broader discussion on these positions, see Heynen and Baydar (2005: 1-25).

<sup>66</sup> Sparke sums up the way in which modernity shaped the interior space: “Modernity is a complex phenomenon [...] and its interface with the development of the modern interior has reflected that complexity. As well as [...] encouraging a subtle and evolving relationship between the public and private spheres, it was also characterized by, among other things, a progressive relationship with technology; a hyperconsciousness of what it meant to live in the present with an eye to the future; its positive embrace of the mass media, mass consumption and the marketplace; its emphasis on individualism, interiority and the self; and its acknowledgment of the importance of taste as marker of distinction and social status.” (Sparke, 2008: 4).

<sup>67</sup> Heynen and Baydar, 2005: I. Heynen addresses the subject by stating that the aspirations to the emancipation of the domestic environment of women in some cases are linked to the architects’ reformist purposes. Modern architecture must contribute (according to the left wing of the CIAM - Meyer, May, Schmidt) to a radical change in the structure of society and thus also in the structure of the

values of authenticity and integrity as opposed to those of comfort and consolation, considered decadent and petit bourgeois. On the other hand, a virile aesthetic of simplicity and sincerity is affirmed, which appropriately links with the idea of avant-garde, military front line “marching toward glory on the battlefield of culture” well synthesised in the attitudes of Le Corbusier in the time between the wars.<sup>68</sup>

Women too, it has been seen, take an active part in the processes of modernisation and they claim for their rights, but maybe in a more complex way. The idea of the New Woman which arose in the United States in the late 19<sup>th</sup> century and later found its roots in Germany became an icon of modernity. It presents a woman who enters a higher education and a professional and public life; she has a sexually free life, and she is cultivated and fashionable. Even so, after marriage, she looks after the house and the children, but applying modern and efficient methods and without giving up her independence. She has been noted as a figure not exempt of tensions and contradictions (Ward, 2001); her “architectural” figure is sculpted by sport and fashion, she takes on more masculine traits but her ambivalence lies precisely in the fact of being subject simultaneously to the pressures of modernising trends and the requirements of continuity and tradition.<sup>69</sup>

Alice T. Friedman (1998) has analysed the role of women as clients in some important 20<sup>th</sup> century projects, such as the Dana and the Hollyhock House, the Schröder House, Stein-de Monzie Villa, the Farnsworth House, and the Vanna Venturi House, amongst others. With more or less success (maybe the case of the Venturi house) the author shows how women have often played an active part in defining programs and unconventional forms of inhabiting, which implied a review of the traditional criteria of domesticity, in physical and spatial, as well as social, terms. Her interdisciplinary reading is interesting for the relationships it takes into consideration between the sociological aspects, specifically the need to express a series of aspirations that failed to find their place in domestic and family life, and the need to represent a different lifestyle in architectural terms, also including other forms of unconventional family relationships and domestic spaces coming closer to the heterogeneity of the contemporary dwelling.

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dwelling, which must include new concepts such as “open plan, transparency between inside and outside, collective housing, rationalization, hygiene, efficiency and ergonomics.” (Heynen and Baydar, 2005: 16). Karel Teige and Walter Benjamin are significant examples of this attitude. Teige in *The minimum Dwelling* (1932, Eng. transl., 2002: 158-175) goes back to Marx’s statement that women have been made slaves by the bourgeois dwelling and family model to argue that the minimal dwelling of the working classes must be conceived on radically new bases, releasing women and men from domestic chores (by means of centralised services) to give them the chance to take part on public and collective life. Benjamin is also convinced of the need to overcome the model of bourgeois dwelling. In his text *Experience and poverty* (1933; Eng. transl., 1999, vol.2: 734) he interprets the transparency of modern architecture as a preconfiguration of the liberation from oppression of excessive possessions and traces left by the inhabitants. It is not surprising that modern dwellings with their radical approaches should be difficultly accepted by the public, as they went against the logic of a capitalist market in which products have to be distinguished in terms of the taste and status of the consumers. This is why in nearly all countries the dwellings of the modern movement were interpreted as being contrary to the idea of domesticity. On this issue, see also: Van Herck, 2005.

<sup>68</sup> See Reed, 1996: 7-10. Heynen and Baydar (2005: 4-6) note how alongside this interpretation of heroic avant-garde formulated by authors like Poggioli (1962) and Calinescu (1977; 1987), which was very extended until the 1980s, there is another expressed by Peter Bürger in *Theory of the Avant-Garde* (1972) that stresses the will to break down the barriers between art and life in order to bring art into life. Here modernity has a feminine load capable of subverting the dominant culture, rather questioning the conventional hierarchies between masculine and feminine.

<sup>69</sup> Ward (2001: 74-81) studied extensively the relation of the New Woman with functional architecture and interior, and (idem: 81-91) the fashion’s construction of the modern female body in the Weimar Republic.

However, it is shown how these changes are also conflictive, because they often require the female role to be redefined both with respect to society and in the sphere of private relationships, children, possible partners and other people sharing the area of the house. In the traditional family structure, women are seen as the muse of arts devoted to activities of the spirit and as the protector of a domestic kingdom that is also her main area of independence. In the new context required from the early decades of the 20<sup>th</sup> century, other perspectives are opened for her as the actress of social life and somewhat later as a professional and intellectual, perspectives that do not limit her aspirations in the sphere of marriage. They are these needs (from different sexual behaviours to new forms of life) that fail to fit into the family spaces of the house, which put forward expressions of a different idea of freedom, utility and modernity. Architects are therefore called to give shape to these new expectations and to alter the conventions of domestic life in different ways: the expansion of the program to include several types of leisure and work activities; the reinterpretation of the domestic form thanks to a different spatial distribution or the revelation of the house as a place for representing the activities of its inhabitants; the definition of new spaces for singles, same-sex couples, separated women with children, which require a different program capable of guaranteeing independence and community. However, the suspicion arises that these affirmations of independence or individualism need convention and uniformity (or at least the idea that by contrast convention and uniformity are the ones that have to be broken) as a background. In this sense, the client's will to distinction meets the ambition of the vanguardist architect, and modern architecture is considered the perfect set for an unconventional life. Therefore, it can be said that for 20<sup>th</sup> century women, the domestic space of modernity was the promise of a different life and it was perceived as a place of satisfaction from where they might be projected into society.

This statement links with the subject of the house as an image and representation, of the house as a manifesto, a subject dealt with by Beatriz Colomina (1994) within the framework of a discourse successively taken on also by Kersten Rattenbury about contemporary architecture (2002), which deals with the relationship between architecture and media as a privileged environment for disseminating the images that it produces. It is stressed how the house has played a prominent role in 20<sup>th</sup> century architecture since architects of the period frequently developed their most important ideas in housing projects that often became public declarations despite their nature of private spaces. Therefore, exhibitionism is presented as an essential character of the model house, built in the media and for the media.<sup>70</sup>

Blanca Lleó (2005: 16-17) noted how the 20<sup>th</sup> century house is the result of a difficult balance between the values of permanence and the transformation suggested by modernity. It is in this unstable position of the modern home between the circumstantial and the lasting, between the past and future, where the force of the modern project would still be recognised.

Terence Riley's (1999) focus must be added to these, which links modern tradition with the thesis of the end of the house as a place of intimacy in the era of electronic media that annul the distance between people and things, to then take the discourse to

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<sup>70</sup> Rybczynski (1987: 173-193) considers that the dwellings of modern architects were in fact no more comfortable or functional than other contemporary models, not only as social dwellings, but that in fact they looked significantly more practical, modern and functional. Reed is yet more categorical: "On a very fundamental level, the 'problem' for which modernist design proposed the look of rationality and functionality as a solution was not the needs of workers, but deviation from traditional middle-class norms of sex and gender." (Reed, 2009: 80).

a principally architectural domain in which proposals of important figures in the contemporary panorama such as Koolhaas, Van Berkel, Diller and Scofidio, Ito, Tschumi, amongst others, are presented.<sup>71</sup> Can this type of transformed domesticity still be understood as domestic? Heynen asks and precisely answers with Riley's observation of *The Un-private House* that maybe this is the price to be paid for sex equality in the domestic space. In any case, Heynen also concludes that the situation of the bourgeois interior full of nostalgia, effects and memories as well as the impersonal dwelling of classless society in which it is impossible to feel "at home" seem to be ideas incapable of approaching the needs of real life: they are attitudes that do not bear in mind the anthropological implications of the domestic dwelling and the fact that there are acts which are of family, cultural, ritual or emotional importance, whose theatre is precisely the house itself.<sup>72</sup>

Therefore a contemporary discourse on dwelling would have to be based on the awareness that the proposed innovations had to reply not only to the architects' desire to express the *zeitgeist*, but also the requirement of satisfying anthropological needs of occupying space, in which context it is possible that the interpretive categories used up to the present time have to be revised in accordance with new ideas of "mobile" domesticity.<sup>73</sup>

This new area has been explored by David Morley (2000) starting by the consideration that the house has become an "electronic landscape" that takes the public arena into the private while allowing the rites of the private to be shared from the public. In any case, it is shown how the medium that overcame the barrier of intimacy was television, before computers and Internet, as it allowed the impersonal world to come into our houses and forced us to look at external reality with foreign eyes.<sup>74</sup> More recently (2007), Morley warned that in order to deal with the problem of information technologies in the domestic environment, it is not sufficient to update the previous ideas of the impact of television on homes, but that it is necessary to describe a new panorama in which the portability and integration of different apparatuses in technological ecosystems draw out new forms of domesticity and relationships in which "the new forms of electronic communication

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<sup>71</sup> Riley observes (1999: 11) that although it is true that "The private house has become a permeable structure, receiving and transmitting images, sounds, text and data", this process already began in the 19<sup>th</sup> century with the introduction of books, magazines and newspapers in bourgeois houses, thus revealing a permeability to what is public and showing that in fact domestic space has never been completely closed, but rather it has been built precisely on the filtered relationship between the public and the private.

<sup>72</sup> "Both extremes –the bourgeois interior and the naked utopia– seem to deny of the crucial qualities that is inherent to most people's experience of domesticity: the fact that "making a home" is a continuous process that requires a lot of effort and work, and that is obviously never "finished." (Heynen and Baydar, 2005: 26)

<sup>73</sup> Once more the example of the traveller and the migrant is brought forth, with their nomad identities, such as those evoked by Chantal Mouffe (1994, quoted in Heynen, 2005: 22): "This concept refers to the idea that, since any identity is always relational and defined in terms of difference, it can hardly be fixed in some positive essence: every identity is irremediably destabilized by its exterior and therefore subject to a process of permanent hybridization and nomadization. This [...] is what is at stake in the most radical version of modern architecture's dream of ultimate changeability and transparency: if people's identities are all the time moving and shifting because of ongoing interactions with the outside world, they can only be accommodated in interiors that do not determine them, but rather allow for the greatest possible flexibility."

<sup>74</sup> This issue is discussed in the central part of the book, especially in chapters 4 to 6, where Morley focuses on the construction of domestic image through the media, not limited to the house, but including also national identity and urban space policies. See: Morley, 2000: 86-148.

have become the infrastructure of family life”, allowing us to be present in different places at the same time, in a virtual form but, to a certain extent, also physically and mentally.<sup>75</sup>

The relationship between domestic space and the media has been interpreted from another perspective by Rice (2007) who analyses the impact that images produced by the media have on domestic imagination. He reaches the conclusion that at present these are a constituting part of the interior, capable of reconfiguring the duality of space and image.<sup>76</sup>

### 1.3.5 Technological Studies

A reflection on the contemporary concept of domestic space cannot avoid the technological aspects. In fact this stance connects with those sustained by the technological studies, an area in which, in the last two decades, a close relationship has been revealed between technology and modern and informational societies (MacKenzie and Wajcman, 1985; Feenberg, 1999; Misa, Brey and Feenberg, 2003; Dusek, 2003, 2006; Nye, 2007; Brian, 2009).<sup>77</sup> Misa (2003: 1-13) maintains that it is impossible to understand the phenomenon of modernity without considering technology, not only because the concepts of technology and modernity have a complex and tangled history (it can be said that modernity is shaped by technology as well as technology is a creation of modernity), but also since technology should be seen as the truly distinctive feature of modernity, notwithstanding the scarce attention paid to this aspect by social theorists and philosophers who in the last decades have outlined theoretical reflections on modernity and post-modernity. In the information era even more than in modern times, technology not only is a symbol of progress through its most outstanding achievements, but also should be considered as the real infrastructure of daily life. According to Nye (1996; 1997) technology also had a high impact on the social imagery since the end of nineteenth century, when in the United States a new form of “technological sublime” appeared that played an important role in twentieth century’s society and culture.<sup>78</sup>

Precisely after the end of the 19<sup>th</sup> century, technology started to be considered the means capable of also bringing the benefits of progress into the domestic arena by improving comfort, a concept that appeared in the 17<sup>th</sup> century and that may be considered the origin of the interpretation of the dwelling in terms of physical

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<sup>75</sup> Morley, 2007; Sp. transl., 2008: 132.

<sup>76</sup> According to Rice (2007: 112-119), it is unquestionable that there is a close relationship between the images of many media that take what is domestic as their content, and the consumption of such images, which is also mainly domestic. Television programmes such as *Big Brother* or the series *24* in which the domestic stage or its fictitious reconstruction take the lead, reveal how these images have great constructive power on spectators. In this case, through the techniques of assembly and the combination of different fragments, the media build a narration that is plausible and apparently coherent on the life of certain people in a space. Domestic life is not represented, but rather built.

<sup>77</sup> Technological studies is defined as a multidisciplinary field which is fed by different disciplines such as sociology, history, cultural studies, anthropology, policy studies, urban studies and economics and focus on the relationships between technology and the social and cultural context, starting from the idea that society is technologically shaped, which means that “technology seriously affects social roles and relations; political arrangements, organizational structures; and cultural beliefs, symbols and experiences.” (Brey, 2003: 53)

<sup>78</sup> Nye develops a concept originally formulated by Leo Marx. According to Marx (1964: 195) in the 19<sup>th</sup> century, and specifically in the United States, nature was substituted by technology as a source of the sublime and, as a consequence, a new “rhetoric of the technological sublime” emerged.

comfort. If in Europe comfort was presented as a mixture of visual pleasure, physical well-being and utility, as a generalised sensation related to a series of environmental and architectural factors, in the United States this idea was developed in terms of efficiency and backed by rational and technological processes, as indicated by Giedion (1947). Comfort thus became something related to the comfort of the uses, with the saving of time and effort in domestic work. Favoured by the approaches of positivism, the subject became the object of scientific study both by domestic engineering, which aimed to rationally organise the household chores, and by technology, which would deal with improving the physical and environmental conditions through heating, ventilation, lighting and hygiene, areas that referred more to the culture of the social reformers, doctors and engineers than to that of the architects.

Whereas at the end of the 19<sup>th</sup> century the developments in domestic technology are accepted due to their capacity to improve comfort, in the early decades of the 20<sup>th</sup>, technology becomes an aesthetic referent just as the machine takes over as the central metaphor for architecture and design. The mechanical model becomes an alternative to the model of what is domestic and affects not only the interior space, but also the whole of the building.<sup>79</sup>

Therefore the rationalistic battles for the modern house can also be interpreted as the architects' attempt to recover control over aspects of the house that were not in their hands. The materialisation of objects suited to their function and to the body thus becomes the ideal, and from this time onward the progress of technique is constantly projected on the image of architecture. The aesthetisation of new instruments necessarily becomes creative and at the same time contributes to the social acceptance of what is new. In this context, the mass media take on new importance by sealing the relationship, which is characteristic of industrial and informational societies, between communication, consumption and market. From these observations it is possible to conclude that the modernisation processes involve the dissemination of the idea that consuming technologically and aesthetically advanced products makes one feel modern within the framework of a cultural process of education of taste, which is also a commercial strategy.

From these general considerations, it must be observed that by applying the technologies to different scales of the project –from the whole of the building (Banham, 1960; 1969; Morabito, 1990), to the technologies that I believe should be defined as performative, which improve or increase the services of a house, turning it into an electronic home (Moran, 1993; Kraut, Brynin and Kiesler, 2006), a smart home (Harper, 2003) or better still into a connected home (Harper, 2011), to domestic technologies that from the earliest electrical appliances (Faravelli Giacobone, Guidi and Pansera, 1989) to infodomestic appliances and robots (Nacci, 1998)– domestic workload has been reduced and displaced to the machines and

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<sup>79</sup> Sparke (2008: 4-5) states: “The modernist architects and designers saw in what they believed to be the underlying rationalism of the machine a means of escaping from what they perceived to be the ‘irrationality’ of the middle-class Victorian domestic interior that, in their eyes, had brought in its wake all the ‘evils’ associated with feminine taste, domesticity, fashion and conspicuous consumption. Linked as it was to the public world of work, the machine, many of them felt, could save the dwelling from the same fate.” On the other side: “A positive relationship with progressive technology was more than a metaphor for modernist rationality, however. It also fed in to the broader culture of modernity and into a number of different formulations of the modern interior, both domestic and otherwise. Embracing technology and all that it could offer signified, on the part of the consumers, occupants and users of interiors, an acknowledgement of modern life.”

news forms of leisure have appeared. The last two aspects seem particularly relevant to me, as they consider a reflection on the discrepancies that may sometimes occur between excessively optimistic views of promising futures drawn out by technology or marketing, and the demands effectively expressed by users. In Harper's writings it is possible to follow the development of the idea of smart home, a concept that arose in the United States in the mid-1980s and that focused on a house capable of interacting with its inhabitant through advanced interactive technologies, which interested building engineering, electronics, architecture, energy conservation and telecommunications, and which in time turned out to be more a hyper technological fantasy than an object adapted to the real demands of the users. When Harper reconsidered the subject (2011), he recognised that these expected changes in interaction with domestic space did not occurred, probably because they were intended to design an excessively smart environment in a context where there was no need for it. As a result, at present, automation and control of the domestic environment have focused on more prosaic technologies, such as the ubiquitous sensing and routine automation technologies. According to Harper (2011: 3-18), this path, which is less spectacular but more reasonable and adheres to the reality of domestic life, leads to what is called a connected home, a house where connections enable environmental parameters to be controlled, new forms of sociability to be engaged and the enjoyment of a large series of on-line services ranging from consultation of e-books to medical assistance.

While William Webb (2011: 19-28) suggests distinguishing between the older "time-saving" goods that reduce the time needed for jobs (i.e. vacuum cleaner and washing machines) and more recent "time-using" goods, which occupy discretionary time and improve its perceived quality (radio, television, video, computer), Morley (2000: 25-26) highlights the "privatising technologies" such as the freezer, washing machines, television (we might add microwave, videogames) which nurture more individualised habits and reduce the margins for family discussion. According to this last interpretation, the new domestic technologies have a double effect: disembedding, when they connect us to a wider, more global reality that standardises our lives under a series of global signs and brands; atomising, when we use technology to separate ourselves from others and create our own tailor-made world in which we individually consume global products.

Other researchers have observed that the unprecedented growth of domestic time-saving technologies, in addition to drawing up a new domestic panorama (Chapman, 2004), they have in fact, rather than reducing domestic work, contributed to producing new expectations and increasing demands due to the suitable availability of media to achieve better results (Schwartz-Cowan, 1989).

### **1.3.6 The Domestic Space: a Proposal of Contemporary Reading**

My research assumes that the interpretations discussed so far are an essential starting point, and intends to focus on the transformations of dwellings in recent decades, a field that has been studied by different approaches but that has not been the object of an overall critical interpretation capable of relating the multiple aspects that give this panorama depth and relief. My wish to study contemporary phenomena here is not due to a desire to consider newer discourses, but is based upon the conviction that in many respects, the last two decades have been an important time in the definition of

new forms of understanding domestic living which redesigned the panorama of the residence in the early 21<sup>st</sup> century.

The formulation of a coherent discourse on new forms of habitation needs to begin with a review of the terms we use to denote different areas of the domestic realm. As seen, the concepts of house and home are loaded with meanings and nuances that have been built up over time and that influence our current view. In fact, I believe that sometimes they are not very helpful when it comes to expressing other characteristics of the environments we inhabit today and for this reason I prefer to use the term "domestic space", with some qualifications that I will explain below.

According to Briganti and Mezei (2012: 3-4)

the concept "domestic space" (...) takes into account the material, psychological, spiritual, gendered, social, cultural and political aspects of house, home and garden in the context of the everyday and of human relationships within and beyond the house. (...) It blurs the borders between inside and outside, private and public, physical and psychological; it also encompasses spaces beyond traditional ideas of home such as trains and ships, hospital, daycares, prisons, shops what Michel Foucault described as "other spaces" or "heterotopias".

According to this interpretation domestic space covers an area that revolves around the concepts of house and home, including both to some extent.

Any discussion of domestic spaces naturally invokes two of its central components, house and home. Whereas the house is generally perceived to be a physical built dwelling, for people in a fixed location, the home, although it may process the material characteristics of a built dwelling, implies a space, a feeling, an idea, not necessarily located in a fixed place.<sup>80</sup>

Domestic space is thus suggested as a broad category that takes into account both the physical and material elements of the house, as well as the emotional aspects of habitation. Briganti and Mezei observe that the category of the domestic is more extensive, since it is not limited to the perimeter of the house and can be recognized also in other less "comfortable" spaces that should be included in the human experience of inhabiting.

Moreover, the term domestic space is frequently used by architects to denote the area of dwelling, namely, that private perimeter wherein the relationships between people, functions and environments of the residence are carried out. Its study has therefore been approached from very different perspectives. For some architects it is a category capable of being described using taxonomical criteria for typological classification (Cornoldi, 1988), while for others it is a context in which the concept of use –with all the richness of nuances associated with the life of people and their vision of living— shapes environments (Dell'Aira, 2004). For yet others it is a terrain wherein universal acts of dwelling are expressed individually and emotionally.<sup>81</sup> For some contemporary architects concerned about "how can architecture plays a role in the social, economic and cultural changes associated with housing" and "raise awareness about the

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<sup>80</sup> Briganti and Mezei, 2012: 5.

<sup>81</sup> "Domestic space is the universal container of emotions and the place where any activity becomes intimate: eating, talking, working, reading, procreating, watching TV, listening to music, surfing the net, cleaning. But this universal characteristic does not mean we should make the error of assigning it a formal concretization that is universal, defined and closed." (Arroyo and Guidotti, 2006: 123)

potential role of architecture in the current and evident transformation of lifestyles” (Herrerros, 2008: 203) it is a field for theoretical research and projectual experimentation.

For other researchers domestic space is a specific type of space whose characteristics during different historical times and in different cultures (Kent, 1993), or during specific periods such as the Greco-Roman world (Baldini Lippolis, 2001; Nevett, 2010) or the 20<sup>th</sup> century (Parodi, 2005), or in specific geographic contexts like Canada (Ward, 1999) or Spain (Blasco Esquivias, 2006), can be studied from a multidisciplinary approach including archeology, anthropology and architecture. Spanning large periods of time considered significant, such studies permit an observation of how domestic spaces have been shaped by cultural and aesthetic phenomena as well as by family and social relationships. In yet other cases domestic space is viewed from a cultural perspective of communication and consumption (Minestroni, 1996) or gender (Amann, 2011) and described as an environment that records the changing role of women and the redefinition of family relationships and therefore of contemporary residential space.

Beyond the aspects of great interest raised in these approaches, I think there are other nuances of the definition enabling domestic space to be considered as a relevant category in the description of different forms of contemporary living. To move forward, we must further examine the two elements of the term: the concept of space and that of domesticity.

Since the second half of the 19<sup>th</sup> century, when it was first proposed as a new interpretive category of architecture, up to the present, the concept of space has been enriched with meanings, keeping it at the center of theoretical and design reflection in architecture. Three moments that reveal the transformation of meaning and change of approaches that have occurred in this time span can be highlighted.

The first moment –which can be located between the 1880s and 1930s– revolves around an extensive art theory debate that emerged in Germany which questioned whether architecture was an art of volume (Wölfflin, 1886) or an art of space (von Hildebrand, 1893; Schmarsow 1894, Riegl, 1901), or whether it was a synthesis of both (Brinckmann, 1915; Sörgel, 1918), reaching its fulfillment in the new form of cinematic and time-based perception characteristic of modernity (Zucker, 1920, Giedion, 1941).<sup>82</sup> While on one hand art theorists and historians focused on the great epochs of the past to elucidate the hallmarks of architecture as an art of space, architects, especially those who identified with the search for an adequate expression of modernity, set out to implement a new spatial form in their designs, supported by a formal language based on abstraction and the incorporation of time interpreted as a fourth dimension of space, later canonized in texts on modern architecture by Giedion, *Space, Time and Architecture*, 1941, and Zevi, *Saper vedere l'architettura*, 1948.<sup>83</sup>

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<sup>82</sup> For a discussion of the debate on the concept of space between the late nineteenth and early twentieth century see: Van de Ven, 1977.

<sup>83</sup> Beyond the texts cited, several historians developed an extensive theoretical corpus which not only sought to define the elements of a new modern code with which they proposed to counter the classical code (Zevi, 1973, 1974), but also tried to interpret works of the past as examples of the manifestation of different spatial concepts (Giedion, 1962-1964, 1971; Argan, 1966), thus developing the central arguments of the approximation to space already traced by Schmarsow.

Thus theories of pure visibility contributed to consolidate the formal basis for a new architecture that was initially intended to meet the demands of the machine age and the spirit of a man who identified with the values of technological and social progress. This approach, which essentially defines the dominant spatial model of the modern movement, began to be questioned after the 1930s by some architects concerned with recovering the individual dimension of experience, such as Aalto, or architecture's inheritance from local cultures and the vernacular, such as Rudofsky and Sert, aware of the need to find antidotes to the overly abstract, impersonal and decontextualized nature of modernism.

The second moment, from the 1960s to the 1980s, was characterized by the affirmation of a new conception of space understood as an existential dimension, built starting from the subject and its relationship with the objects in its environment. This change reflects the crisis of universal values and the aspirations of modernism after World War II. New disciplines such as anthropology and psychology reveal not only how people move and act in space, but how they exist in space and therefore create space according to their vision and perception of the environment on the basis of mechanisms that develop from infancy (Piaget, 1956) and that organize the world through processes of "assimilation" of surrounding objects and of "accommodation" within the environment (Piaget, 1950: 8). Through this approach architectural space can also be understood as the realization of man's existential space (Norberg-Schulz, 1971) in which body image, perception of the environment as place (Norberg-Schulz, 1979), the system of relations with other members of the family and society (Moles, 1972), communicative and semantic mechanisms of forms revealing dialectical complexity (Venturi, 1966) become relevant. Ultimately, the viability of thinking about the experience space from physical or mathematical concepts is questioned, and a new vision sensitive to emotional and affective dimensions is argued for.<sup>84</sup> The legacy of this approach can be seen even today in the interpretations of the domestic made from the social sciences that I described above.

From a different perspective, Henri Lefebvre (1974) proposed a radical critique of the modern Western conception of space, observing that epistemological-philosophical thinking has failed to furnish the bases of a "science of space", since it considers space from an abstract, mathematical and mental perspective far away from the real, physical, sensory and social perception that people have of it in everyday life.<sup>85</sup> He recognizes the origin of this failure in the modern, although different, approaches of Descartes, Newton and Leibniz to space as an empty extension or container prior to "whatever ends filling up it". This vision finally led to the fragmentation of space into a multitude of spaces "geographical, economic, demographic, sociological, ecological, political, commercial, national, continental, global, not to mention nature's (physical) space, the space of (energy) flows" approached from autonomous disciplines that reflect such functional distinctions also in specialized architectural, urban, and domestic spaces experienced in our life, such as work, transportation, leisure, play and public facilities.

Criticising such an approach that considers space to be a neutral container, Lefebvre proposes a "unitary theory of space" concerned with the physical, the mental and the social dimensions of space, starting from the awareness that space is fundamentally a

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<sup>84</sup> According to Norberg-Schulz (1971: 17-33) existential space can be defined by elements like center and place, direction and path, area and domain which establish patterns of interaction between individuals and their surroundings and could be recognized in different cultures throughout history.

<sup>85</sup> Lefebvre, 1974; Eng. Transl., 1991, (ed. 2007): 7.

political construction which reflects the social relations of production.<sup>86</sup> Neither physics nor philosophy can be the model for this new theory, which Lefebvre finds in the universal concepts of *production* and the *act of producing*, that, despite their Hegelian origin, do not belong to any particular specialization and have a “certain abstract universality.”<sup>87</sup> As a consequence, Lefebvre affirms that “(Social) space is a (social) product.”<sup>88</sup> Thus, space is something that is produced by interaction, according to three related modalities constructing a theoretical unity which is apprehended separately: a) the *spatial practice* that defines and materially produces the forms and uses of space in a certain society; b) the *representations of space*, which are spatial models conceptualized by different institutional actors such as scientists, planners, urban designers, architects, social engineers, etc. c) the *representational spaces*, spaces lived through images and symbols that overlay with physical space and makes symbolic use of its objects, expressing themselves also through non-verbal signs.<sup>89</sup> From this viewpoint Lefebvre posits that space has an increasing importance in contemporary societies, not only on the level of the everyday experience, but also in the organization of global flows. Every society shapes its own space by means of different agencies contending one with another, such as violence, politics, diplomacy and labour.<sup>90</sup> Therefore, space is not only a social construction, but also a battlefield in which an alternative spatial project characteristic of each innovative social model has to be affirmed.

The third moment, which can be situated between the 1990s and the present time, is characterized by the blurring of the physical limits of the two previous types of spaces and the emergence of a new form of fuzzy spatiality of the flows of information and communication networks. One could argue that the space of flows is represented by the variable geometry of the network<sup>91</sup> but it is also true that both the network and the contemporary city have a shape and limits that are beyond the individual's perception, only vaguely sensing its extent and ramifications, but hardly able to make an accurate representation of it; a representation that in any case would be a single snapshot of a system in constant transformation. This space is even harder to see because of its essentially virtual character, which makes it physically inaccessible, although partially habitable. Approaching a wider interpretation of space in the framework of contemporary thought, the geographer Doreen Massey (2005: 59-61) observes that if we conceive time as “open to a future of the new”, we must conceptualise also space as “open, multiple and relational, unfinished and always becoming”. Therefore, contemporary space can be defined as “the dimension of a dynamic simultaneous multiplicity”, implying that “if time unfolds as change, then space unfolds as interaction”. If space is conceived as the social dimension of engagement within multiplicity, that is to say, as “the sphere of the continuous production and

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<sup>86</sup> Lefebvre (idem: 11-12) writes: “The theory we need (...) might well be called (...) a ‘unitary theory’: the aim is to discover or construct a theoretical unity between ‘fields’ that are apprehended separately, just as molecular, electromagnetic and gravitational forces are in physics. The fields we are concerned with are, first, the *physical* nature, the Cosmos; secondly, the *mental*, including logical and formal abstractions; and, thirdly, the *social*. In other words, we are concerned with logic-epistemological space, the space of social practice, the space occupied by sensory phenomena, including products of the imagination such as projects and projections, symbols and Utopias.”

<sup>87</sup> Idem: 15.

<sup>88</sup> Idem: 26.

<sup>89</sup> Idem: 38-39.

<sup>90</sup> Idem: 421.

<sup>91</sup> Castells, 1996: 469-478.

reconfiguration of heterogeneity”,<sup>92</sup> the narrative of globalization cannot be approached from an “a-spatial view” that reduces space to a “surface” annihilated by time.<sup>93</sup> Massey (2005: 91) claims that the main concern is about what kind of multiplicities and relations will be constructed with the new spatial configurations of cyberspace, and proposes an alternative approach based on the recognition of space as: a) a product of interrelations, “from the immensity of the global to the intimately tiny”; b) the sphere that makes possible the existence of multiplicity understood in terms of “plurality” and “coexisting heterogeneity”; c) a dimension that is “always under construction”, since it is the product of “relations-between”, the result of a process of becoming.<sup>94</sup>

Currently, the three types of space that I have described are not mutually exclusive, but overlap, touch and intertwine, representing some of the most significant dimensions of spatial experience of our time. We live both in the space of places as well as in the space of flows. The contrast that Castells saw between these two spatialities, as representative of the elite and the common people, may possibly have become nuanced and have acquired new connotations. Castells presents the space of flows and the space of places as two opposing forms of spatiality that portray relations of power between the dominant elite and the rest of society.<sup>95</sup> On the contrary, I argue that the space of flows has entered more and more the space of places, including the domestic space, and that, conversely, people are increasingly joining the space of flows. People tend to be increasingly global and places tend to lose their local characteristics, since mobility is another constituent element of the information society. This obviously does not mean that people control the dynamics of the space of flows: rather, people are its users, and are increasingly aware of being observed and controlled when accessing the network or moving around the planet. Therefore, the space of flows is also a new form of Panopticon through which various powers seek to monitor people, their actions and ideas.

The space that my research is concerned with is this threefold condition of the physical, existential and virtual environment as well as the space of the house, a space which we define as domestic.

The adjective *domestic* is often interpreted as a purely descriptive qualification of value: “belonging to the house.” Etymologically, it comes from the *domus*, a word that in Latin eventually referred to the house of a wealthy family. But originally it did not refer to a house in the sense of a physical construction (*aedes*, from which the verb *aedificare*, to build, is derived) but rather as the familial, social and moral institution controlled by the *dominus*, the person who exercised authority in a

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<sup>92</sup> Massey, 2005: 61.

<sup>93</sup> Idem: 88-89.

<sup>94</sup> Idem: 9.

<sup>95</sup> On this issue, see: Castells (1996: 415-416): “Articulation of the elites, segmentation and disorganization of the masses seem to be the twin mechanisms of social domination in our societies. Space plays a fundamental role in this mechanism. In short: elites are cosmopolitan, people are local. The space of power and wealth is projected throughout the world, while people’s life and experience is rooted in places, in their culture, in their history.” and (1996: 428): “People do still live in places. But because function and power in our societies are organized in the space of flows, the structural domination of its logic essentially alters the meaning and dynamic of places. Experience, by being related to places, becomes abstracted from power, and meaning is increasingly separated from knowledge. It follows a structural schizophrenia between two spatial logics that threatens to break down communication channels in our society. The dominant tendency is toward a horizon of networked, ahistorical space of flows, aiming at imposing its logic over scattered, segmented places, increasingly unrelated to each other, less and less able to share cultural codes.”

household.<sup>96</sup> Since antiquity the term *domus* has been considered as the center of a lexical system comprised of words that identified both owners (*dominus / domina*) as well as the concept of residence (*domicilium*), as well as the action of domesticating animals for the home (*domare*) or the indication of belonging to one's house (*domesticus*) as opposed to somewhere foreign, or that which lies beyond the door (*fores*) of the home. Although the etymological rigour of this system has been questioned by Benveniste (1955, 1969) based on a philological investigation of the Indo-European roots of these terms, it is nevertheless demonstrated that in ancient times there was a tendency to identify the "social group" which the concept of *domus* refers to with the material habitat of the house.<sup>97</sup> According to Benveniste, the differences in meaning observable between "family-house" and "building-house" in languages such as Latin and Greek is a reflection of change that indicates the passage from a social organization based on genealogy to one subdivided by geography.<sup>98</sup>

From the complexity of its origins, it could be said that the range of the meanings of "domesticity" has expanded further, referring to both the house as a physical and relational space (*domus*) as well as the persons responsible for its control (*dominus / domina*). Such control of both the physical space and the family is made possible through domestication, that is, the transformation of something that was previously uncontrolled and potentially hostile, alien and wild (*indomitus*) into something familiar. The transformation has been produced through a process of adaptation, appropriation and compliance with a set of rules of conduct through which society has established control over individuals within the private domestic sphere. In this sense domestic space is an environment in which certain uncontrolled forces of nature have been subjected to the civilizing effect of culture. Consequently, the domestic sphere is a space of security that comes from keeping a situation dominated. It is a space that we understand; in which things and people occupy defined and predictable positions. It is precisely because of this knowledge that we can control its space, make it feel ours, perceive it as a cosmos. When domestic sphere transcends these rules it becomes disturbing, unknown, and threatening: *unheimlich*.<sup>99</sup>

Domestication entails a becoming, a transformation that modifies both the subject and the object. At present the area of domestication seems to have shifted from nature to work environments, consumption and technology. Today the house is also the space in which our identity is constructed through consumption practices and the use of information and communication technologies. At the same time consumption and technology, together with work, encourage the domestication of other spaces not traditionally associated with the house, such as offices and public spaces.

The domestic space indicates then that space that we come to feel as ours after a process of appropriation that establishes a significant link between subject and

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<sup>96</sup> For a complete discussion on the origins and meanings of this term, see Benveniste, 1955: 14-41 and 1969, vol.1: 293-319.

<sup>97</sup> According to Benveniste *domus* originates from the term Indo-European root \*dem-(house, family), which also derive *dominus* and *domesticus*, which etymologically must not be confused with the homophones \*dem(ə) (to build), from which the Greek words *δομός/δομή* (house, building), and \*domā- (to subjugate, to tame) from which the Latin verb *domare* stems. Benveniste, 1969, vol.1: 307.

<sup>98</sup> Benveniste, 1969, vol 1: 293.

<sup>99</sup> Vidler (1992) has proposed a broad reflection on how architecture can become a field of estrangement based on the Freudian concept of *unheimlich*.

environment. I therefore believe that the term “domestic space”, more than those of house, home or dwelling, transmits better the organizational, distributive, relational and formal aspects of the material environment in which our life unfolds, along with emotional and psychological aspects as well as the idea of a low-intensity domesticity that transcends the limits of the domestic environment, leaving open other dimensions of contemporary living that do not fall strictly within the scope of the house.

The focus that I intend to provide to the research considers the contemporary domestic space as the outcome of a series of complex transformations that are reflected in the materialisation of the architectural object and interior space, but which cannot be considered the exclusive domain of the architecture or design, as well as of architects or designers. Furthermore, there is awareness that the contemporary dwelling does not present an exclusive form but rather a range of positions that refer both to modern tradition and to the typical attitudes of the contemporary, which in certain manifestations may be considered a form of hyper modernity, despite showing distinctive signs in others.

One of the questions that have arisen when dealing with the research subject is whether it is still possible to talk about a dwelling on the 21<sup>st</sup> century, or whether it has new or different characteristics with respect to known forms. In reference to the modern condition, Blanca Lleó noted how:

The modern form of inhabiting is a dream, an aspiration difficult to achieve. These two words together, inhabiting and modern, enclose a fruitful contradiction that seems irreconcilable. On the one side *inhabiting* [...] suggests permanence and refuge, implies stability and continuity [...]. On the other, *modern* [...] is machine and new times and means dynamism and unceasing transformation.<sup>100</sup>

If modern inhabiting is a dream, it would be necessary to define and understand what inhabiting is in the Society of information flows: inhabiting on the multilayers of the contemporary where the dimensions of the material and virtual are mixed and recombined in a new way from the physical support of the place, which at present is one of the possible components of our experience of space. Maybe a first consideration of this understanding comes from the reflection that we should not continue thinking that inhabiting and contemporary are two contradictory though fruitful terms, but rather two terms that should find a point of balance between the area of meaning, typical of views that enhance the mental and reflexive dimension where psychological well-being stands out, and the area of materiality typical of the positions that favour somatic well-being achievable from more quantifiable, objective factors. Although the dialectic tension between the two concepts is what has largely determined the idea of the 20<sup>th</sup> century house, suspended between the circumstantial and the lasting, between the past and future, it is now the hybrid, inclusive models that should prevail, as these are the ones that seem to adapt best to a fluid, changing situation as the one we have now.

Living is our form of being in the world. It is a polyhedral concept, which mixes material aspects referring to the body's physical reality with more abstract meanings,

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<sup>100</sup> Lleó, 1998: 15.

shaped by cultural models. Maurizio Vitta (2008: 3-21) suggested that living can be described as an interrelation between bodies, spaces, objects and images. Living begins with the fundamental presence of body occupying a position in space that is materialised by a home. While shaping his space, man is shaped by it. Such a space achieves full function and significance by the daily use of objects, which defines everyday life's rituals and finally leads to images' generation that from the individual dimension project themselves into the collective sphere, closing the circle and influencing individuals' choices and tastes again. Both body and living spaces can be observed from the pragmatic point of view of the object and the function or from the idea of an existential project that express the individual's singularity. The stressing on symbolic aspects or functional characteristics lie beyond the idea of the house as a home or as a machine/organism. The first term focuses on a reflexive and "poetic" dimension, relying on concepts proceeding from philosophy and anthropology. It refers to meaning (Hölderlin, Heidegger, Bachelard, Norberg-Schulz, Rybczynski). The second term mainly deals with physical aspects and it is concerned with a well-being dedicated to the body (Descartes, Beecher, Friedrich, Giedion, Banham), which is achieved through scientific, quantified and objective environmental control factors, pertaining to the sphere of technique. It refers to function.

With the avant-gardes, modernity appears as a total project that imposes an aesthetic of progress and breaks with previous conventions. As an expression of the dweller's personality and the architect's convictions, private life and domestic space shifts into built manifestos. Insisting on incompatibility between the house as an ideal home and the expression of contemporary art and life recognised by the avant-gardes, modern architecture proposed the suppression of domesticity. Notwithstanding post-modern efforts, in contemporary architectonic culture there is still such incompatibility between a pseudo-traditional and conservative domestic imagery, often created and fed by nostalgia and marketing, and the idea of the house as an aesthetically and technologically innovative output, directed at cultural elites. The dialectic tension between those two concepts dominated the idea of the house in the 20<sup>th</sup> century, oscillating between the longing for the past and the promises of the future. Shifting from architectural culture to everyday life these references generate a wide range of hybrid models.

## 1.4 Conclusion

The topics discussed in this chapter define the essential aspects of the interpretive framework of my research and contribute to the understanding of contemporary domestic space as a shifting context related to the productive, social and cultural changes of the information era.

The first section discussed the most relevant features of the new technological paradigm that we know as the informational society and its consequences on economic, productive and social organisation, as well as some critical perspectives on the problems that the new paradigm outlines. Specifically, it can be affirmed that since the 1970s, a new paradigm based on the processing of information, which represents the core of our economic and social system as well as a new unprecedented dimension of human experience, has emerged based on information and communication technological research triggered by military imperatives during World War II and developed further in the post-war era. If these technologies have changed the way of approaching every aspect of our life and have improved our capacity to generate knowledge and communicate worldwide, they have also raised serious concerns about the consequences of their use as a new opaque and threatening control system capable of intruding even on the most intimate aspects of our lives.

The second section was focused on the questioning of the patriarchal system originated by the changing role of women in society. Women's wider integration into the labour market, more effective family planning and healthcare practices, and feminist critique of patriarchal models contributed to a change, especially in Western culture. As a consequence, contemporary society is increasingly reticent to accept traditional models such as the nuclear family, as the rise of new pluralistic forms of families (the single-person household, the childless couple, the single-parent family, the reconstructed family and the cohabiting family, among others) makes evident, and which are likely to transform the social panorama in coming years, requiring new and more flexible dwelling models.

In the third section of the chapter I have discussed several approaches to the domestic domain in recent academic literature, highlighting how the concepts of house, home, dwelling and domestic space are investigated from many points of view involving philosophers and epistemologists; social scientists such as sociologists, anthropologists, geographers and semioticians; architects, urban planners and designers; art and architecture historians; communication and media researchers, as well as feminist and cultural studies scholars. These fields offer an interpretation of dwelling from perspectives that range from technical approaches focused on specific disciplinary methods to a broader cultural interpretation of the phenomenon of living as a whole. Such an unprecedented abundance of studies probably highlights interest, but it also raises questions about what we mean at present by dwelling, house or domestic space. Despite the differences and nuances, some issues on which there is broad consensus can be highlighted. The philosophical approach defines inhabiting, dwelling and home as universal experiences of the human being. Traditionally, dwelling has been considered an element of permanence, stability and identification with a place, but recently alternative

positions have arisen calling also for its reformulation in terms of transformation and mobility, as will be discussed in chapter 3. Despite being a universal experience, dwelling has different forms related to specific socio-cultural contexts and to individual and/or family dimensions. The concepts of house and home express the material and symbolic aspects of inhabiting, showing that domestic space is a multidimensional concept that includes the place, the space and the site where we live and also the ideas, feelings, meanings and cultural practices that take place in it. When one approaches the complexity of the meanings related to the concept of home, the perspective widens into a plenitude of research fields and interpretations. Among the most relevant approaches that should be mentioned are those that consider the home as the cradle of bourgeois concepts such as domesticity, intimacy, privacy, comfort and gendered space, or see it as the place in which these ideas were questioned by modern architecture and continue to be debated by contemporary culture. Home and its content are interpreted also as symbolic projections of the inhabitants in the framework of identity, consumption and communication strategies, which define a new relationship between private space and public exposure. In recent studies the transforming action of technology on dwelling in general, and specifically of electronic media and information technologies on domestic space and the private sphere have also been approached, as will be widely discussed in chapter 4.

Based on interpretations that constitute a framework of contemporary living and account for extensive possible approaches, I have proposed a reflection on the most appropriate terminology to describe the environments of contemporary domestic experience, proposing to use the term “domestic space”, which seems more comprehensive and open than the traditional terms of “house” and “home”, which are burdened with meanings and nuances from a long and sometimes onerous tradition.

After this initial limiting of the scope of my research, in the next chapter I will discuss how the image of the technological house was constructed during the decades in which the paradigm of the information society was beginning to take form.



# Chapter 2



## Chapter 2

### The Technological House: Images of the Future 1945-1986

Since the house, like all artefacts produced by man, contains a technological component, it is arguable that a house always reflects the level of technology of the society within which it has been built. Those who, like Pagano (1936), Rudofsky (1965) and Rapoport (1969), studied popular or vernacular architecture, have shown how construction techniques, structural systems and materials employed respond to the need to achieve effective solutions adapted to the environment from resources available nearby (stone, wood, clay, etc.) and technical solutions adapted to materials whenever possible and in the absence of other cultural factors that recommend otherwise. This situation began to change in the 19<sup>th</sup> century, when building techniques developed based on new materials such as iron and steel, glass, concrete and countless other products that did not arise from an established tradition, but rather from tests conducted by engineers, architects and other specialists willing to experiment in the spirit of progress, innovation and performance improvement. Thus, expert knowledge based on repetition and the gradual transformation of elements of tradition was replaced definitively by a new technical knowledge certified by experimental practice and a curriculum of academic study. Under this new legitimization of projective and constructive disciplines, domestic space also dissociates itself, to varying degrees, from local constraints in order to be founded on knowledge of a more universal and abstract character that sees housing as a *technical* —and in some cases also aesthetic and symbolic— solution to an essentially *functional* problem of habitation. Since the late nineteenth century's abandonment of languages derived from the long tradition of classicism or "timeless" vernacular forms, domestic space also seeks a new form of representation that it soon finds, in one of its new formulations, in technology. The example of the hotels by Victor Horta reveal how the utilisation of new materials leads, also in the domestic realm, to a new sense of space, shapes and the early expression of

technological elements without the rejection of ornament. It is precisely against this way of expressing modernity through a domestic architecture in which forms of ornament are reinvented that the Adolf Loos of *Ornament and Crime* speaks up in 1908. Appealing to a principled consistency with the *zeitgeist* that is expressed in the formality of the masculine suit, the architect calls for a quiet and austere expression of the modern house as it presents itself in society—that is to say in the city—with his smooth and discrete volumes and elevations marked by alternating solids and voids, deploying all the complexity and richness of his in-depth study exclusively in the interior of the *Raumplan*.

The domestic space of modernity is not only constructed thanks to new materials and technologies, but it is also represented through them, as shown by the early apartment building on Rue Franklin by Auguste Perret or the later Maison de Verre by Pierre Chareau. At the same time, forms derived from geometric abstraction—inspired by Japanese tradition in the case of Wright or by the avant-garde artistic experiments in the case of de Stijl and Suprematism—and machines—in the case of the Futurists, the Constructivists and Le Corbusier—are interpreted as the best expressions of the essence of a new time, a new man and a new way of living, necessarily universal and as widespread as the very geography of modernity. The synthesis between modern technology and form that is at the centre of the concerns of several architects in the interwar period becomes, for Mies van der Rohe, the core issue around which both domestic space as well as any architectural work that wishes to express the spirit of its time revolves, aiming to achieve a new balance between the perfection of technique and the sensibility of the contemporary man.

In parallel with the consolidation of a poetics of modern living and technological form, another process of modernisation developed that was centred on the furnishings of domestic space, though not exclusively on appliances or devices designed to facilitate housework. New service networks formed requiring a physical connection, such as running water, electricity, telephone, gas, waste disposal through the sewer and garbage removal, along with later connections via electromagnetic waves such as radio, television and Internet, generating a series of internal circuits that start to make the house seem like a body, not only with skeleton, organs and skin but also with its first functional systems.<sup>101</sup> The concepts of domotics, smart home or connected home developed over the past three decades are intended to add new functionalities of management, control and connectivity to these rudimentary systems, providing them with greater capacity for interaction, intelligence and remote control. This raises the possibility that object and space react under certain situations and make certain decisions, substantially shifting the boundaries of what is traditionally understood as architecture. But before focusing on contemporary domestic space and its possible theoretical boundaries, it is necessary to reconstruct its genealogy and understand how the relationship between technology and the house was conceived during the gestation period of concepts that structure today's informational society.

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<sup>101</sup> In *A house is not a home* (1965) Reyner Banham expressed this view of the modern house as an infrastructural system, asking what sense it made to keep thinking about the house as a home and proposing the idea of an un-home: "When your house contains such a complex of piping, flues, ducts, wires, lights, inlets, outlets, ovens, sinks, refuse disposers, hi-fi reverberators, antennae, conduits, freezers, heaters - when it contains so many services that the hardware could stand up by itself without any assistance from the house, why have a house to hold it up?" The text is re-published in Miller Lane, 2007: 54-60. Quote: 54.

## 2.1 Post-War American Modern Homes

I propose to begin this reflection on domestic technology from the second half of the 20<sup>th</sup> century with housing models that were defined in the United States, assembling ideas generated by Modern Movement architects who opportunistically distanced themselves from this movement's most compromising ideological connotations, adapting themselves instead to the aspirations of a middle class committed to again becoming the country's economic engine once the conflict was over and the consequences of the Great Depression finally overcome.

### 2.1.1 Frames for a Contemporary Way of Life

As of World War II, the United States acquired an important role in the formation of taste and in the design of proposals for domestic space, either because of the immigration of some of the most prominent European modern architects or because of the new economic and social conditions that occurred as a result of the war. Initially, housing designed according to the criteria of the modern movement by Rudolph Schindler and Richard Neutra —who were joined in the late 1930s by Walter Gropius, Ludwig Mies van der Rohe and Marcel Breuer, among others— were aimed at an educated upper middle-class public, but after 1945 the objective was focused on the middle class. (Plates 2.01 to 2.06) Construction industries, banking establishments, architectural schools and museums became fully engaged in promoting a new kind of suburban family home that demonstrated the refinement, elegance and comfort of 'the American way of life'. Although differentiated with respect to specific aspects of floor plans, combinations of materials or details, the houses made during the 1950s and 1960s shared traits of what Mark Jarzombek, based on a concept that Banham already noted earlier, defined as "Good-Life Modernism":

The houses all had spacious lawns, patios, generous roof overhangs, well-equipped kitchens, separate rooms for children and large, uncluttered living rooms with walls of glass opening to the outside. In the living room there was an obligatory stone or brick fireplace. Its rhetorically exaggerated massiveness and rusticated texture meant to stand in contrast to the smooth wall surfaces of the rest of the house. Invariably, the vertical shaft of the chimney would punctuate the low and staggered profile of the roof.<sup>102</sup>

Although this large-scale project occasionally involved important figures such as Breuer, Schindler and Neutra, it was mostly local architects of lesser prestige who took it upon themselves to make international style architecture understandable to the middle classes, appealing not so much to ideological reasons but to practical

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<sup>102</sup> Jarzombek, 1991: 77. Regarding the postwar American house, Reyner Banham wrote in *A house is not a home* (1965): "What is under discussion here is an extension of the Jeffersonian dream beyond the agrarian sentimentality of Frank Lloyd Wright's Usonian Broadacre version—the dream of the good life in the clean countryside, power-point homesteading in a paradise garden of appliances." Quotation from Miller Lane, 2007: 59. Banham interpreted Philip Johnson's Glass House as an epitome of such a specifically American approach to the house.

reasons that made a modern house preferable.<sup>103</sup> The living room –the core of family life– was organised around the three principal elements of television, fireplace and view into the front garden through a large picture window. The distinction between the living space, which also included the kitchen, and the private bedroom area became one of the most unquestioned organisational principles of the modernist American home.

Another successful initiative for the promotion of a modern lifestyle in the United States was the Case Study Houses program (1945-1964) promoted in California by John Entenza, editor of Arts and Architecture magazine, which commissioned young architects such as Charles and Ray Eames, Richard Neutra, Craig Ellwood, Raphael Soriano, Pierre Koenig and Ralph Rapson, and which was supplemented by the active search for clients willing to become accomplices of an experiment in exchange for publishing their homes and allowing visitors into them for a period after completion.<sup>104</sup> (Plate 2.07) If Case Study House # 8 or Eames House, realised as a personal home and studio by Charles and Ray Eames in Pacific Palisades (1945-49), was the most emblematic project to emerge from this initiative, perhaps Case Study House # 22 or Stahl House by Pierre Koenig in Hollywood (1960) is one of the works that best sums up the spirit of this Californian program as immortalised by Julius Schulman's impressive photographs portraying a couple of its inhabitant-actors 'living' in their home or enjoying the sunset from a living room open to the contemplation of the city lights below. (Plates 2.08, 2.09, 2.10)

Despite the nuances that distinguish the Case Study Houses from the examples of Good-Life Modernism, a similar interpretation of the role that technology plays not only in the construction but also in the definition of the image of domestic space is revealed. Charles Eames had claimed in 1944, while pondering the question "What is a house":

We are interested in the house as an essential tool for living in our time; [...] the house that, above all, takes advantage of the best engineering techniques of our highly industrialized civilization.

So it was no longer a question of the use of machines, but of taking control of the future using the productive capacity of industry to improve the living conditions of humanity:

We now know that the miracle of the war industry can and should be part of the world in peacetime [...] For now it's just about directing our will and intelligence toward the appropriate use of the mountains of materials and technologies that are at our disposal to solve the most pressing problems that concern the material welfare of mankind.<sup>105</sup>

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<sup>103</sup> In the first issues of the magazine *House & Home*, one of the main dissemination platforms of the modern house in the United States, published since 1952, the architects most published were: Edward L. Barnes (New York), Giorgio Cavaglieri (Connecticut), Gordon Drake (California), Edward Elliott (Michigan), Landis Gores (Connecticut), Henry Hebbeln (New York), Roger Lee (California), George Matsumoto (North Carolina), Warren Platner (Michigan), Edward Stone (Arkansas) and Cowell & Newhaus (Texas). See: Jarzombek, 1991: 79.

<sup>104</sup> On the Case Study Houses, see: McCoy, 1977; Smith, 1998, 2002; Buisson, 2004.

<sup>105</sup> Eames, 1944: 32-37.

In most cases a lightweight steel frame is used, constructed out of standard structural profiles that are combined with corrugated sheet metal or prefabricated panels for the exposed ceiling roof, and large panels of glass, plasterboard or plywood as the vertical enclosure; creating an interior that is light, transparent and open. The house transmits the idea of a life always happy, confident in the future and glamorous; and free of concerns, difficulty or existential weight. The car is outside the front door, while children and dogs play in the garden. The wife takes care of the house and family, but at the same time she is as elegant and attractive as an actress. She is the perfect companion, ready to efficiently manage the home and willing to accompany her husband in the pool or the *apéritif* when he returns from work or the home studio; she is a figure who always knows how to fulfil the role assigned to her by both family and society. Equal but different; complementary and happy; without conflicts, real or imagined; as seemingly close and as unreachable as a dream; desirable and light like the houses they dwell: that is how the promoters of the American way of life want people to live in their superpower nation.<sup>106</sup> (Plates 2.11, 2.12, 2.13) The construction of a space for the ideal family is completed with domestic consumer goods that are promoted in consideration of the wishes of the American woman. New appliances, with their aesthetically appealing large sizes, colours, shapes, streamline forms and chrome finishes find their showcase in the kitchen, which, along with the living room, becomes the centre of the house and the place where the latest technology is learned.

### 2.1.2 The Eames House

Despite the many points it has in common with the Case Study Houses program, the Eames house and studio also introduces some of its own concepts to the more generic and idealised vision of the new American house in its attempt to redefine domesticity in a way that is more attentive to the personal and unique relationships dwellers have with objects and souvenirs that embody the drama of their private lives. (Plates 1 and 4) Formed by two pavilions —constructed using a steel structure and lightweight prefabricated materials— that are aligned along a retaining wall and separated by a courtyard, the work is inspired by both Japanese homes as well as Mondrian's abstract paintings, generating a space that is capable of being continuously reconfigured.<sup>107</sup> The exterior combination of planes of glass with opaque prefabricated panels in primary colours gives way to an interior space characterised by nooks, crannies and movable panels that propose a lifestyle that is at once both modern as well as casual. The essential complementary element of the house, which makes it truly special, is the collection of furniture, objects, books and toys that the Eames also used in their memorable films, establishing a continuity between work and life while revealing a transparency and permeability between

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<sup>106</sup> Jarzombek (1991:85) highlights how this 1950s vision of modern American domesticity proposes a social model despite shunning any ideological position: “Admittedly, American modernism was devoid of fiery European socialism, but it did have a social vision nonetheless, one claiming to be in keeping with the American spirit. *House & Home*, for example, propagandises an ideology of family life, of a clean and orderly domestic environment of responsibility to the suburban aesthetic, of a hands-on, do-it-yourself approach, and of an unshakable faith in an improving world.” More recently Beatriz Colomina has devoted an important text to the postwar American house, observing from different viewpoints an interlocked relationship between architectural culture, military and mass culture that gives rise to a domesticity that she defines as “obsessive and besieged”. (Colomina, 2006 : 19)

<sup>107</sup> On the Eames House, see especially Eames 1950; Neuhart 1994; Steele 1995; Kirkham, 1995, 2009.

private and public; creating, in effect, a theatre in which the inhabitants themselves become actors. The house itself is an experimental work that grows and becomes modified over the years. Its interior space is thus constructed, moreover, through a 'curatorial' operation in which heterogeneous objects of the most diverse provenance are selected and combined; mixing nature and artifice, craft and industry, technology and art. (Plates 2.14, 2.15)

The industrial materials artfully assembled by the architects of the Case Study House program may be the real protagonists when it comes to defining the technological image of the interior, since the average inhabitant, whose taste is formed by advertising and marketing, can leave only very few truly personal traces in these houses, effectively becoming interchangeable with the actor hired by Entenza's journal for the photographic reportage. In the Eames House, in contrast, the same materials, although equally evident, become accessorial elements that give form to the staging of objects and souvenirs of life, as intense, personal, obsessively collected and exhibited as the artefacts that showed up decades later amongst the dense layers of the interior materials with which Enric Miralles completed his Barcelonese houses.<sup>108</sup> (Plate 2.16)

The American dream house model exemplified by Good Life Modernism and the Case Study Houses is demolished forever by Frank Gehry's provocative renovation of his own family home in Santa Monica (1977-78, then renovated again in 1991-92). The existing wooden house, constructed using standard balloon framing just like every other American suburban house, is enveloped by a new structure constructed out of economic lightweight materials typically found in backyard 'cheapsapes'. Corrugated sheet metal, galvanised pipes, chain-link fencing, anodised aluminium windows, wooden slats and asphalt floors become publicly exposed, much to the ire of neighbours who see the design as an attack on the bland dignity of a middle-class neighbourhood to which not even modernity seems to have arrived yet. The icon of the traditional house and its happy home poetics are symbolically destroyed and replaced by a casual aesthetic that flaunts heterogeneity and fragments, declaring the impossibility of new ordering principles. The house is instead an affirmation of individuality, displaying the contradictions of its context and undermining the social values identified therein. (Plate 2.17)

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<sup>108</sup> I discuss some aspects of Miralles's houses and the idea of dwelling they propose in the interview and text "Enric Miralles. Arquitectura del devenir" (Sustersic, 1999), to which I refer. For a more comprehensive critical study of the work of Miralles, see: Rovira et al., 2011.

## 2.2 Imaging a Brand New Domestic World

While in the American proposals of the 1950s technology is used to convey the image of a possible future available to all and destined soon to become the desired present, in other cases the reflection on the technological house leads to more distant imagined futures that propose, with varying degrees of realism, profound reforms of society, life and dwelling. This practice already inaugurated by the modern architects of the interwar period –take for instance the Pavillon de l'Esprit Nouveau by Le Corbusier and Pierre Jeanneret– is renewed after the war and permanently linked with the image of a technologically advanced domestic space. The idea that innovations in architectural forms and technological devices are essential for visualising a concept of the future thus becomes consolidated.<sup>109</sup>

### 2.2.1 Houses of the Future

In Europe, the impact of technology on society was one of the issues addressed by the Independent Group in the context of a wider debate about the media, advertising and consumption that, coming out of the United States, were painting a new reality generally ignored by British cultural strata.<sup>110</sup> While recognizing the commercial nature of mass culture, IG members admitted that their message had permeated society since it activated emotional mechanisms that gave a new sense of freedom to individuals, and that design played a key role in these processes through concepts such as styling, planned obsolescence and the planning of the dynamics of change. If in *Theory and Design in the First Machine Age* (1955) Reyner Banham focuses on technological devices that gave form to modern architecture, claiming a less intellectual and more emotional technological dimension for the future,<sup>111</sup> Peter and Alison Smithson propose a new role for it in the field of architecture understood as consumer product. The Smithsons acknowledged that while architects were still thinking of forms of contemporary living, advertising had already set new standards for domestic space while mass production had already revolutionised the kitchen, bathroom and garage, prompting a rethinking of the relationship between

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<sup>109</sup> Since the mid-1940s, the idea that a static conception of architecture had to be abandoned in favour of a dynamic interpretation capable of responding to environmental inputs was strongly defended. In *Mechanization Takes Command* (1948) Siegfried Giedion emphasises the centrality of the concept of motion as the “spring of mechanization”, a key factor in scientific thinking and the culture of modernity. Karl Popper in *In the Open Society and its Enemies* (1945) posed an unstable universe dominated by entropy and fluctuating systems, in the same way that Norbert Wiener in *Cybernetics* (1948) sought a formula to combat locally the disorder of entropy through the concept of information. In the field of visual culture, an important influence was exerted by *Vision in Motion* (1947), a posthumous publication by Lazlo Moholy-Nagy in which photography captured movement at every moment of human existence and argued that modern architecture had to seek a symbiosis with the dynamic paradigms of biology. The shift away from metaphors based on technologies of industrial production toward others centred communication, information, evolutionary systems and transformation was definitively posed. For an elaboration on these concepts, see Steiner, 2009: 13-20.

<sup>110</sup> The Independent Group was formed in 1952 around the London Institute for Contemporary Arts (ICA) as a forum for discussion by artists, critics and architects among whom figured Eduardo Paolozzi, Alison and Peter Smithson, Richard Hamilton, Reyner Banham and Lawrence Alloway, and it played a key role in the cultural renovation of Great Britain in the 1950s (Robbins 1990; Massey, 1995).

<sup>111</sup> Banham's approaches also informed the exhibition *Man, Machine and Motion* (1955), organised with Richard Hamilton, which analysed, much in the spirit of Futurism, human empathy toward machine movement and the feeling of excitement and power derived from this.

architecture and industrial production. Richard Hamilton was able to synthesise the impact of American culture on the still austere British home of this period in the famous collage *Just what is it that makes today's homes so different, so appealing?* (1956), drawing attention to the construction of a new form of dweller identity through objects, values and signs of consumption.<sup>112</sup> (Plate 2.18)

With *The House of the Future* (1955-56), a project for the Ideal Home Exhibition organised by the Daily Mail of London and Edinburgh, the Smithsons looked toward another goal already distanced from the emerging consumerism of the present, attempting to prefigure a domestic environment of 1981 by generating an introverted and biomorphic space, built using principles of modelling, fabrication and assembly of components that are closer in spirit to the automotive sector than to the prefabricated building industry itself.<sup>113</sup> Presenting a home that was different from any other type of housing proposed in the context of the Ideal Home exhibitions, usually quite realistic in the way the domestic sphere was presented, the Smithsons imagined future housing as an innovating concept.<sup>114</sup> The house is a disposable product built fully out of prefabricated plastic elements and mass-produced, but the fact that each of its components is different preserves a semblance of individuality, thus achieving economies of scale due to the large number of units produced.<sup>115</sup> The project, which aroused great interest among the public and in the media, proposed a model of urban housing articulated around a small central courtyard garden into which every room in the house opened. (Plate 2.19) Rooms were differentiated by size, height and shape based on their functions, and connected and separated at the same time by irregularly shaped diaphragms; a technological cave of sorts.<sup>116</sup> The structure of the house was carried out in plastic resin, the lighting was integrated into the walls, and the shape of the roof formed smooth curves to improve natural light entry and water collection. Except for the four types of chairs, all the furniture was built into the house in order to limit unnecessary objects. All the major domestic functions were carried out with the help of technological devices designed to control the environment and eliminate the effort of domestic work, freeing people from pesky daily chores. Without reaching the compression of Archigram's house-capsules, *The House of the Future* was nourished by a declared fascination on the part of its designers with caravans, understood as the paradigm of a new concept of freedom of movement and efficient space organisation, as well as with submarine environments and spacecraft; myths of a society whose imagination was aimed toward the conquest of new worlds. Hermetically closed and inaccessible to a public that can only observe the house and its inhabitant-actors from outside, but exposed to continuous observation by spectators and cameras, *The House of the Future* is at once a stage –televisual even more than theatrical– from which everything can be transmitted to the outside,

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<sup>112</sup> Despite this collage being considered, together with the Punk series by Paolozzi, to be the first examples of British pop art, it must be emphasised that in the context of the Independent Group, the very term “pop culture” already implied consumer products from the United States.

<sup>113</sup> On this project, see especially: Banham 1956; Smithson, 1956, 1994, 2001; Heuvel and Risselada, 2004; Colomina, 2004.

<sup>114</sup> For a history of *The Ideal Home Exhibition*, see Ryan, 1997.

<sup>115</sup> Colomina (2004: 32-33), citing Peter Smithson, stresses how in reality the prototype was constructed out of plywood, plaster and emulsion paint simulating a continuous moulded plastic surface and how the entire house can be seen as a stage set representing the life and the inhabitants of the future.

<sup>116</sup> Peter Smithson has recognised that one of the references for the spatiality of *The House of the Future* was *Caves Le Baux en Provence*, which he visited in 1953 (Colomina, citing Smithson, 2004: 43)

and an almost self-sufficient aseptic redoubt into which its happy inhabitants have withdrawn from the outside world to survive for a long period on food rations that have been vacuum-packed and gamma-ray sterilised. (Plates 2.20 to 2.25) As suggested by the garden occupying the centre of the house, the life of this future becomes a pleasant game that takes place in an Edenic space loaded at the same time with veiled erotic allusions. But it seems that this condition is attainable only at the expense of isolating ourselves from the (perhaps post-atomic) outside world, like the Patio and Pavilion stage that the Smithsons made soon after for the exhibition *This is Tomorrow*, accepting retirement in an ineffable condition of beatitude that only makes us direct our gaze toward the universe beyond the courtyard-framed sky; voluntary prisoners of the architecture of the ideal house.

### 2.2.2 From Space Race to Domestic Space

While the Smithsons never completed the investigation opened up by *The House of the Future*, perhaps because they understood that they had come to explore the conceptual boundaries of their proposal, in the 1960s the interest in imagining future habitats shaped by technology was continuous in the activity of the Archigram group.<sup>117</sup> The conquest of space, which in 1956 was still a forthcoming issue following the launch of Sputnik in 1957, the first spaceflight of Yuri Gagarin in 1961 and the ambitious programs launched by NASA that year to send a manned mission to the moon, had become a reality that positioned technology at the apex of the values of the time and declared obsolete the machine aesthetic of modern architecture. (Plate 2.26, 2.27, 2.28) This is how David Greene declared it in the first issue of Archigram:

The love is gone. The poetry in bricks is lost. We want to drag into building some of the poetry of countdown, orbital helmets, discord of mechanical body transportation methods and leg walking. (...) A new generation of architecture must arise with forms and spaces that seems to reject the precepts of “Modern” yet in fact retains these precepts. We have chosen to bypass the decaying Bauhaus image that is an insult to functionalism.<sup>118</sup>

The covenant sealed with the *zeitgeist* requires the occasional application of its clauses: what was modern in the interbellum can no longer be considered as such. The time of technology never stops. Progress advances inexorably toward the conquest of new dimensions and renders the foregoing obsolete and exhausted, condemned by the very principles that previously contributed to their exaltation, and devoured by those who claim to be its epigones: this is precisely what it means to reject and at the same time retain the precepts of the modern. From this declaration of intentions, the Archigram’s proposals perpetuate a “long-standing

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<sup>117</sup> Archigram was formed by the union of two groups of young architects. The first, also known as the Swiss Cottage Group, comprised of Peter Cook, David Greene and Michael Webb, was the driving force behind the first issue, in May of 1961, of the magazine Archigram, acronym for Architecture Telegram, which published nine issues between 1961 and 1970. The second group, known also as London County Council Group, formed by Warren Chalk, Dennis Crompton and Ron Herron, joined the endeavour the following year. Archigram was definitively consolidated when the two groups were invited to work on experimental projects in the sphere of the Taylor Woodrow Design Group, under the direction of Theo Crosby. On the activity of the group, see especially: Cook, 1972; Guiheux, 1994; Costa Cabral, 2001; Sadler, 2005; Schrijver, 2009; Steiner, 2009.

<sup>118</sup> Quote of the original text from Cook, 1972: 8.

British tradition of technological utopianism<sup>119</sup> where a fusion of engineering and social progress is nourished by multiple sources that define the culture of the moment, defying the professional establishment by way of an infiltration of popular culture into architecture. Thus the attitude of finding a response to problems from an innovative engineering perspective, typical of Buckminster Fuller, intersects with cybernetics, computers and the American auto industry culture. (Plate 2.29) But it is also nourished by the diffusion of images of technology made famous through the space program with its rockets, ships, orbital stations and moon buggies, together with science fiction, comic books and forms of communication typical of advertising and media; of a pop aesthetic Archigram themselves substantially contribute toward. In any case, the project is not approached from a rigorous study of technical aspects, but rather from a poetic attitude that prompts an abandonment of the world of art and history in order to fully enter into the logic of the industrial product and the kit. Steiner has noted (2009: 23) that it is precisely this attitude of ignoring a technological foundation based on professional expertise that allowed Archigram to think about the future without the limitations and constraints imposed by feasibility, as opposed to other figures like Cedric Price or Arthur Quarmby who also aimed to build what they designed.

### 2.2.3 The Capsule as a Paradigm

The domestic cell, the city and the personal microhabitat are the three levels that comprise Archigram's reflection, whose attitude oscillates between an apparent pragmatism and a radical utopia. If *The Home of the Future* sought to convey an image of glamour and sophistication tempered by the incognito of a possible post-atomic future, Archigram's proposals speak to us about current consumer products for a society in which technology is not something entirely controlled from above by a techno-scientific and political-economic elite, but something shared and popular that all citizens understand, know and enjoy using optimistically, assuming without question that it provides them with a better life. The sequence in which David Greene explains the construction process of the Spray Plastic House (1961), a dwelling that the inhabitant excavates out of a large block of polystyrene according to their desires, and whose surfaces are subsequently enshrined by spraying plastic and fibre glass, reveals precisely this idea of participation and collaboration between citizens and technicians.<sup>120</sup> (Plate 2.30) However, in a few years the burrow self-constructed by Greene is replaced by Warren Chalk's prefabricated and technologically perfectible Capsule (1964), which combines automotive industry manufacturing processes and interchangeability with the efficiency and sophistication of space exploration devices.<sup>121</sup> (Plate 2.31) Interpreted as a set of components, the capsule enables a new concept in tower shaped residential building in which the supporting structure, more durable, is the backbone to which modules, easily replaceable by crane when obsolete, are connected. If the technologically

<sup>119</sup> Steiner, 2009: 22.

<sup>120</sup> The project was published in *Archigram 2* in April 1962. Available at:

<[http://www.archigram.net/projects\\_pages/sprayplastichouse.html](http://www.archigram.net/projects_pages/sprayplastichouse.html)> Accessed: 27 January 2013.

<sup>121</sup> Archigram's proposals brought new ideas against a backdrop of sensitivity about the prefabricated house. In the United Kingdom, Arthur Quarmby had designed the reinforced plastic modules for British Railways (1962); in France, Pascal Hausermann had produced an experimental house made of plastic (1962) and in Japan Kisho Kurokawa was working on a mixed system that combined concrete modules with plastic interior components.

advanced world of space exploration suggests that the house can be an environment in which surfaces are reduced and optimised thanks to ergonomics and design, the world of the automotive industry contributes the manufacturing techniques, integration principles, easily replaceable components and customisable logic in addition to the very idea of housing as yet another consumer product for a society shaped by technological determinism and market logic. Despite statements about its technological complexity, ergonomics and design, the inside of the Capsule deploys limited functionality, does not show great versatility of use, and is effectively more a hotel room than a house. In contrast with the realisation of the House of the Future, in which Allison Smithson is concerned with finding a place for all objects that will accompany us in the life of the future, the Capsule proposes instead an image and a lifestyle – "perhaps a dream-machine as well as a mere house?"<sup>122</sup> – as suggested by the two young women greeting the visitor from inside, afloat above his head and inviting him to share the dream. (Plate 2.35, 2.36)

The capsule dwellings soon became understood as one of the basic components of the new urban megastructures designed by Archigram. In this regard Costa Cabral (2001) has noted how the concept of Plug-In can be understood not only as a physical connection to the urban structure, but also as an electronic connection to the communication media that were beginning to define the new central nervous system of the planet prefigured by McLuhan. If the capsule is plugged into the corpus of a still isolated tower, the Plug-In Dwellings of Peter Cook and Dennis Crompton (1965) or Gasket Homes of Ron Herron and Warren Chalk (1965) plug into true machine-cities that take the form of Peter Cook's Plug-In-City (1964) or Ron Herron's Walking City (1963-64) with the intention of declaring obsolete the 20<sup>th</sup> century city as represented by Manhattan, in the foreground of which these new moving cities parade in one of their most famous depictions.

Arguments are always linear, easily leading from premises to inevitable conclusions. To demonstrate the viability of Plug-In Capsule Homes as modules of a future city, Warren Chalk writes:

If we turn to the back pages of the popular press we find ads for do-it-yourself living room extensions, or instant garage kits. Let's face it, we can no longer turn away from the hard fact that everyone in the community has latent creative instincts and that our role will eventually be to direct these into some tangible and acceptable form. (...) We cannot expect to take this fundamental right out of [people's] hands and go on treating them as cultural and creative morons. We must tackle it from the other end in a positive way. The inherent qualities of mass production for a consumer-orientated society are those of repetition and standardization, but parts can be changeable or interchangeable depending on individual needs and preferences. (...) The techniques of mass-production and automation are a reality (...) The Plug-in Capsule attempts to set new standards and find an appropriate image for an assembly-line product. (...) First, a better consumer product, offering something better than, and different from, traditional housing, more closely related to the design of cars and refrigerators, than placing itself in direct competition with tradition.<sup>123</sup>

<sup>122</sup> Cook, 1972: 44.

<sup>123</sup> Warren Chalk, "Housing as a consumer product", 1966 (Cook, 1972: 16-17). The article was originally published in *Arena*, Journal of the Architectural Association, in the same year. Costa Cabral (2001: 66) has observed how this text can be interpreted as both a manifesto in favour of a consumer-product architecture and as a defence of architecture as a product of the consumer.

The text highlights how at this stage Archigram understand "creative freedom" primarily in terms of the possibility of choosing between different models produced by industry, putting into question the extent of a concept of freedom that reduces citizens to users and consumers whose tastes need to be educated. Clearly, Archigram does not associate its progressive vision of the future with an overcoming of the capitalist system, but with exploring other ways to increase the degree of autonomy of the individual within the logic of the system itself and through the concept of architecture as a product generated by the inhabitant-consumer. Their attitude is not configured as a frontal opposition, but as a strategy for locating spaces of freedom and control, intervention possibilities and sometimes participation through activities fostering the appropriation of space by residents and its possible subversion through "unexpected" use or through ludic mechanisms.<sup>124</sup>

Towards the middle of the 1960s, Archigram began to explore a new territory linked to nomadic dwelling, with the vague idea of overcoming the stasis of urban form in favour of a dynamic relationship with the environment on land, sea, air, and space. The automobile is the starting point of this liberating mobility that converts nomadism into the new paradigm of the era of the emerging network society. Air Hab by Ron Herron (1967) was conceived as an inflatable interior contained within a car, allowing camping anywhere and the formation of instantaneous villages that are born only to disappear depending on the spontaneity of groups congregating in one place. (Plate 2.37)

The car is useful for the game of freedom. The implication that the whole surface of the world can give equal service is possibly pointing to the time when we can all be nomads if we wish. At the same time the network of support (even if "soft" like radio) is still there to be escaped from.<sup>125</sup>

With Archigram, this approximation toward the poetics of life on the road, emerging from the beat generation and embodied by the hippie movement, is always decanted as a hyper technological expression resolved through the design of a household or individual microhabitat that is portable and easy to deploy anywhere, imposing a new idea of home and human relations.

At the moment the situation is open-ended. This is the attraction of the car-as-satellite-of-the-pad. Next the car becomes its own pad. Next the pad itself takes on the role of the car. It divides and regroups. (...) The status of the family and its direct connotation with a preferred static house cannot last.<sup>126</sup>

The rigid skin of the capsule gives way to membranes that unfold from expandable skeletons and machines that automate vital functions. David Greene's Living-Pod

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<sup>124</sup> Costa Cabral (2001: 80) has observed how concepts like freedom, choice and emancipation thus acquire an almost domestic scale and how, through play, these generate a new dialectic between the private and individual dimension of the domestic, and the social and public dimension of urban technological infrastructure.

<sup>125</sup> "Open Ends", editorial from *Archigram 8*, 1968 (Cook, 1972: 74). Paul Virilio was also insistent on this celebration of mobility as a contemporary paradigm (1977; Eng. transl., 2006: 151): "We have to recognize that geographic localization seems to have definitively lost its strategic value and, inversely, that this same value is attributed to the delocalization of the vector, of a vector in permanent movement –no matter if this movement is aerial, spatial, underwater or underground."

<sup>126</sup> Cook, 1972: 74.

(1966) resembles an artificial body kept alive by peripheral devices, a kind of heart within which we find the space to live.<sup>127</sup> (Plates 2.38, 2.39) With the Cushicle (1966) and Suitaloon (1968) by Michael Webb and the Suit-Home by David Greene (1968) the car is also dispensed with and individual high-tech systems that enable "an explorer, wanderer or other itinerant to carry a complete environment on his back" are conceived. The basic necessities for achieving a "high standard of comfort with a minimum effort" include food, water supply and heating, as well as a radio and a miniature television projector contained within the helmet of the Cushicle. The Suitaloon harks back to space exploration imagery, taking as its reference a space suit that is interpreted here as a minimal house which adheres to the body and is able to simultaneously expand in order to generate a habitable bubble. The difference between house and suit is erased the moment in which these additional skins coincide in the Suitaloon. Thus, living can become an experience completely centred on a subject who no longer perceives the environment with their own eyes but with an electronic prosthesis, as demonstrated by the performance of David Greene wearing Infogonk, a virtual reality goggle prototype, during the launch of the Suitaloon at the Milan Triennale of 1968. It has been observed (Steiner, 2009: 174) how Archigram demonstrate a new relation between the body, the home and the outside world, dramatizing the transformation of the dialectic between privacy and publicity within a technological environment, and foreseeing an issue that would be widely discussed in the following decades.

The idea of minimum habitat raised by these proposals extends its influence literally to Kosuke Tsumura's Final Home (1992-94) and metaphorically to the Basic House by Martín Ruiz de Azúa (1999). (Plates 2.40, 2.41) If Tsumura's suit, "a cloth that can be adapted according to need",<sup>128</sup> contains within its pockets items useful under every sort of circumstance, the Basic House is a pocket habitat in which all technological content is resolved on the one hand by the characteristics of the only material of which it is comprised, a thin sheet of metallic polyester that protects from the cold and from the heat when reversed, in combination with, on the other hand, the exploitation of the physical principles that allow the volume to self-inflate through body heat or through heat from the sun. However, the differences between the Suitaloon and the Basic House are even more revealing of the distance separating the current technological gaze from that of the Archigram era. Supported by Ezio Manzini's claim that "design's role, in a future, will be to make poverty attractive" Ruiz de Azúa puts forward that "cultures that maintain a more direct interaction with their environment show us that the idea of habitat can be understood in more essential and reasonable terms". Consequently, his attempt is to make attractive a radical proposal, assuming that the saturation of products in developed societies is no longer a sign of progress, but of a threat to the planet. From

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<sup>127</sup> During the decades of the 1950s and 1960s, substantial progress was made in the design and fabrication of artificial organs such as the kidney, liver and heart thanks to collaboration between surgeons and engineers. In the early 1950s extracorporeal circulation techniques were perfected and in 1953 John Heysham Gibbon first used a mechanical heart and blood purifier during a successful open heart surgical operation. Between 1961 and 1963 Paul Winchell, with the collaboration of Henry Heimlich, designed and patented the first artificial heart. In 1964 the United States National Institute of Health started the Artificial Heart Program, with the aim of implanting an artificial organ into a human by the end of the decade. For a timeline of the main achievements in artificial organ design and surgery, see: "Artificial Organ History: A Selective Timeline", available at: <<http://echo.gmu.edu/bionics/exhibits.htm>> Accessed: 05-02-2013.

<sup>128</sup> Tsumura, 1995.

this standpoint, the Basic House is understood as a concept of extreme reduction, specifically conceived for a life on the move:

If a house is kept in a pocket is obvious that it can contain anything and it breaks with our lifestyle based on consumption of products. Have it all [freedom] without having almost anything.[sic]<sup>129</sup>

Both objects and technology have changed status: objects because most are increasingly dispensable if we can immune ourselves to the siren song of marketing; technology because it is becoming less apparent, hidden within the “magical” properties of new materials.

#### **2.2.4 Communication, Control and Flexibility**

In addition to the capsules and the nomadic habitats, Archigram were among the first to address the automated house in which computing devices and programming assume a key role. In the Living 1990 exhibition sponsored by the Weekend Telegraph and inaugurated at the Harrods department store in 1967, Warren Chalk, Peter Cook, Dennis Crompton and Ron Herron imagined what a home would be like in 1990. The exhibition itself was a demonstration of the future of automation and information technology integration for everyday life, focusing on concepts like control, programming, expendability, customisable comfort and leisure.<sup>130</sup> The space prefigured in Living 1990 surpasses the modern principle of an activity corresponding to an area of the house in the same way that in a machine each part carries out a particular function, proposing a singular environment capable of adapting to the widest possible range of functions through technologically advanced systems and devices, thereby also redefining the traditional concept of furniture. (Plates 2.42, 2.43)

Recalling some of the ideas of Peter Cook's Plug'n Clip Dwellings (1965), the limits of space dissolve and are defined at all times by the inhabitant. The enclosures of the living area –walls, ceilings and floors– are adjustable and “can be programmed to move up and down, in and out” and signify a shift into environmental conditions that can be modified on demand. At particular points, the floor can be hardened for dancing or else softened for sitting on. Seating and sleeping arrangements are inflatable and details such as the weight of bedcovers and desired number of cushioned elements are controlled by the user. Movable chairs turn into travelling chair-cars designed on the hovercraft principle, which can also be used outside for driving around the megastructure city. James and Fred, a couple of mobile assistant robots and parents, carry out transformations of the domestic space and provide services to the dwellers. They can erect privacy screens to enclose a needed private area, blow up the inflatable furniture, extract dust or serve refreshments. The robots also incorporate multimedia devices such as radio and panoramic television screens, which can be switched on and programmed on demand, “so that viewers are surrounded by realistic sound, colour and scent effects”. The megastructure city provides a vast service stack trough a “service wall” placed in the house. The kitchen

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<sup>129</sup> Ruiz de Azúa, 1999.

<sup>130</sup> Archigram, 1967: 146.

is also equipped with new technological devices: gamma rays aren't 'in' anymore, so now "each living area is fitted with ultrasonic cooking equipment for cleanest, quickest cooking".<sup>131</sup>

Living 1990 is understood as a point of departure, as a first experiment in "transient pads" within the context of a process that, in the future, should lead to the complete dissolution of static domestic space and its replacement by individual transportable habitats; true "homes-on-your-back" that would ensure total freedom of movement, like Cushicles. Archigram again pose reducing the decision-making power of the designer, responsible only for the carcass of the building, so that the inhabitant can exercise effective control over their environment choosing at each moment the configuration of an environment that is mobile and locational, elementary and elastic.<sup>132</sup> A new concept of house is introduced in which the semantics of shapes and materials is replaced by the semantics of information, networks and personalised services designed to provide a comprehensive psychophysical well-being.

Seen from this perspective, the possibility of living not only with but also inside intelligent machines is not just a utopia of the future but a present reality, to which Eliot Noyes was trying to provide a solution from the point of view of design in the same years. The innovative series of IBM System/360 mainframe computers (1964) had not only been designed to be mounted in a flexible way according to customer requirements, with a similar principle to Plug'n clip, but it was also understood by Noyes as a set of volumetric elements treated like pieces of furniture in a "domestic" space inhabited by the personnel in charge of its operation. (Plate 2.44)

Technological systems are therefore integrated within a new robotised house concept that Warren Chalk, Peter Cook, Dennis Crompton and Ron Herron subsequently develop in the project Control and Choice (1967), presented at the Biennale des Jeunesses de Paris.<sup>133</sup> (Plates 2.45, 2.46) The word "metamorphosis" that appears in several of the depictions of the project summarises the idea of a constantly changing environment, "where the hardware, software and ephemera are all intermixed (and interdependent at any one time)", requiring a much looser hierarchy of parts. The conglomeration of systems, organisations and technical apparatuses enable the exercise of control and choice, contrasting "the physical limitation of a piece of hardware" with "the unlimited atmospheric power of an ephemeral medium". Control and Choice reflects once again on the possibility of expanding realms of personal expression in the context of a high density structure of collectivity. The house is not a defined physical space, but a kit of components that ideal family members —George and Doris, their Children Rita and Bob and Uncle Wilf, assisted by their two robots Simon and Mark— can reconfigure at any time in order to get "what you want where you want it", thus realizing the possibility of obtaining the maximum freedom based on the maximum satisfaction of individual desires. If these conditions cannot take place within the framework of common

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<sup>131</sup> Cook, 1972: 62.

<sup>132</sup> In the text "Control and choice" that accompanies the project the natural hybridity of this new environment is specified: "The Auto-Environment and its developments suggested that the domain is at once mobile (car) and locational (pad); elemental (made up from identifiable components, and able to realize identifiable 'places') and elastic (since the components could be changed around and the places redefined). Inevitably this led to some loosening up of ideas about the significance of otherwise useful labels like 'city' or 'unit'". (Cook, 1972: 68)

<sup>133</sup> Archigram Group, 1967b.

space, Rita notes that there is always the possibility of resorting to the capsule: “If I really want to be on my own, my personal capsule moves out into a more remote space”.<sup>134</sup> Control and Choice reveals the limitations of representing such processes through the traditional vehicles of drawings and diagrams: “it becomes necessary to try to summarise a time-space-atmospheric sequence that may never take up a finite configuration.”<sup>135</sup>

With Living 1990 and Control and Choice, Archigram propose a reflection on the transformation of the private sphere as a result of technology: that in the future the house will no longer represent the realm of privacy and intimacy, which will be displaced to the individual sphere as represented by the capsule or the suit, but that of the interaction between humans and machines, or the convergence of complex systems comprised of material objects and intangible services that are the true structure of the network society. At the last stop of its trajectory as a group, Archigram's projects insist on researching this new interaction scenario in which, as noted by Costa Cabral (2001), machines are no longer an expression of cleanliness, perfection and efficiency, but ambiguous organisms increasingly resembling humans.

At the same time that Archigram point toward this new context of integrating men and electronic systems, they nevertheless show themselves to be aware of the inherent paradox that is apparent when a concept of a life of freedom is linked with that of an absolute dependence on a technology that cannot even be represented through meaningful signs:

There is a natural fear in most of us that suspects the power of the machine and its takeover of human responsibility. This familiar bogey of the first machine age becomes even more terrifying with the dependence upon the unseen potential of electronic systems (they have even greater power of control than the obvious, symbolic and almost humanoid presence of a machine). The dependence upon such things for an emancipatory life is one of our paradoxes.<sup>136</sup>

The lines of inquiry opened by Archigram contributed powerfully toward looking at the relationship between technology, habitation and environment in a new way, prioritising the debate on concepts of city and life in the present and future of humanity to a vision focused exclusively on the building understood as an isolated object. If the proposals produced by modernist architects had sought an initial representation of movement by referring to ships, cars and airplanes, or the rupture of the unity of perception as determined by perspective, Archigram's projects posed a real possibility of understanding architectural objects as flexible parts, mobile and impermanent, intended for a society that had converted mobility into a paradigm and whose highest forms of expression were the huge machine-edifice space station and the astronaut's individual space suit.<sup>137</sup> If on the one hand Archigram appeal to

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<sup>134</sup> This text appears in one of the presentation drawings of this project (see appendix: Control and Choice, 1967).

<sup>135</sup> Cook, 1972: 68.

<sup>136</sup> Cook, 1972: 70.

<sup>137</sup> Peter Blake describes the emotion aroused by the world that Archigram invited looking at as follows: “Then Archigram struck and my world hasn't been the same since. I took off for Cape Kennedy and saw that “walking buildings” easily the size of Seagram were, in fact, a reality; that plug-in capsules containing highly sophisticated workshops, and unpluggable at any time, were, in fact, a daily reality in the huge gantry that service the Saturn rockets.” (Blake, in Cook, 1972: 7)

the powerful and exciting images of big science, on the other they seek to convey a poetic and optimistic interpretation of the future that places architecture within the orbit of communication media, in the conviction that the important thing is to think through images; to define firstly some conceptual and visual references for the buildings of the future with the consciousness that those images would not ever materialise directly into an architectural object.<sup>138</sup> From our current perspective, these proposals may reveal excessive naivety and confidence befitting a time when the perception of the limits is not yet clear. Therefore, it is still possible to believe in the existence of an intrinsic rationality in the world of science and technology that always provides correct solutions to problems. Progress is unlimited and history still can have an evolutionary sense, despite the criticisms of productive reason and the industrial model that are silenced by the system's ability to provide an environment that can fully satisfy its inhabitants.<sup>139</sup> Additionally, it is assumed that, from objects to the city, the entire human environment is susceptible to an unlimited transformation capable of metabolizing its own traces. In any case, Archigram are aware that in this new context architecture and the city are no longer defined based on form, but on the basis of information and processes, and that their representation is therefore increasingly more difficult and can only ever be partial and indicative, as the image *Computer City* published in *Archigram 5* (1964) shows. (Plate 2.44) Viewed from a contemporary perspective, the importance of Archigram's research turns out to be even more relevant than it might have been at the time, precisely for addressing some issues that eventually would prove decisive, such as planned obsolescence becoming the norm for the purpose of accelerating consumption and the transformation of the technology of mechanisms and artefacts toward one of systems and networks, mobility as a paradigm of a newly globalised society, and the problematic relationship between people and large technological systems.<sup>140</sup>

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<sup>138</sup> According to Hans Hollein, Archigram's powerful and evocative images, together with those by other experimental groups of the period, representing "Plug-in-cities with cranes hovering, walking cities, cities of giant trusses between gigantic Doric columns, aircraft-carrier-city in a landscape", have to be understood as "evocative images", mediatic ways of provoking a debate that calls attention to these issues. (Hollein, in Cook, 1972: 6)

<sup>139</sup> Archigram closely followed technological advances, but it was much less receptive to the studies that, since the early 1960s, began to question unlimited growth and that warned of the risk to human health and the environment of the use of certain technologies. Two of the influential texts of this period are *The Limits to Growth* by the Club of Rome (1962), and *Silent Springs* by Rachel Carson (1962) that, from a study of the impact of pesticide use on the environment ends up questioning the purpose of a total control of nature through technology.

<sup>140</sup> For a more extensive discussion of these aspects, see especially Costa Cabral, 2001.

## 2.3 Radical Approaches

Archigram's proposals and striking images not only had a great influence on the design culture of the period, but also established a dialectical relationship with other proposals that emerged from vanguard practices of the time that also posed a reflection on the role of technology in transforming the habitat. The trail of some of their ideas about the organisation of domestic space could be seen to follow numerous directions. Given the impossibility of conducting an exhaustive study in this venue, I will discuss some that I believe to be particularly significant to the topic at hand, such as those of Kurokawa in the field of Japanese metabolism, those of Constant in relation to Situationist approaches and those of Adolfo Natalini and Superstudio in the framework of Italian radical design movements.

### 2.3.1 From Metabolism to New Babylon

Archigram felt proximity to the spirit of megastructures proposed by the Japanese group the Metabolists, who also interpreted architecture as a vital process in order to reformulate the relationship between design, domestic habitat and the city in the context of a society deeply marked by technology.<sup>141</sup> In this domain, the building that has materialised most usefully the idea of a vertical mini-city comprised of prefabricated plug-in cells is the Nakagin Tower by Kisho Kurokawa in Tokyo (1969-72), which embodies the idea of a repetition and variation of a habitation module that has been reduced to a minimum, collecting not only the ideas of Archigram, but more generally the intentions of other proposals such as the Dymaxion units by Richard Buckminster Fuller and Marine City by Kiyonori Kikutake (1958), who along with Kurokawa was a prominent member of the Japanese Metabolist movement.<sup>142</sup> (Plates 2.32, 2.33, 2.34) In the Nakagin Tower the 140 capsules are individual, prefabricated welded lightweight steel-truss boxes clad in galvanised, rib-reinforced steel panels, which are attached independently and cantilevered from the two cor-ten steel and reinforced concrete cores with only four high-tension bolts, so that any capsule may be easily detached and replaced without affecting the others. Each capsule is a 2.4 x 3.6 x 2.4m fully equipped apartment or studio with built-in appliances and furniture, designed to accommodate individuals as well as families by connecting units. According to Kurokawa, the Nakagin Capsule Tower takes on the challenge of testing the potential of mass production to express innovation and high quality standards for a new mobile urban lifestyle. The Nakagin Capsule Tower epitomises the ideas of metabolism, exchangeability and recyclability and at the same time criticises the Japanese idea of a booming modernisation in which no space is left for the establishment of any individual dimension for the self. In the words of the architect:

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<sup>141</sup> The Metabolist group, founded in 1960 and comprised of architects Kiyonori Kikutake, Kisho Kurokawa, Masato Otaka, Fumihiko Maki and the critic Noboru Kawazoe, operated in a wide field that ranged from design to urban planning, with the intention of reacting to the lack of urban planning in Japan, which condemns architecture to express itself through isolated episodes in a context that is ever more chaotic. Their proposals are for different types of urban and rural aggregations, with the expression of structural and technological devices as their common denominator.

<sup>142</sup> Guiheux, 1997: 49.

Individuals should be protected by capsules in which they can reject information they do not need and in which they are sheltered from information they do not want, thereby allowing an individual to recover his subjectivity and independence.<sup>143</sup>

In Kurokawa's interpretation, the capsule is thus a home for *homo movens* prefiguring a new way of living: a cyborg architecture in which man, machine and space form a new organic body as well as, at the same time, the space that expresses the individuality of the individual that permits, out of this principle, a new family system to be instituted.<sup>144</sup>

Many similarities can be observed between the positions of Archigram and the Situationists, although the latter manifest a radical critique of capitalism that does not exist in the British group.<sup>145</sup>

The reformulation of life and urban relations away from capitalist and functionalist principles was one of the central concerns of the Situationist International, founded in London in 1957, and whose promoter and intellectual reference is Guy Debord. According to Debord, the construction of "situations", that is to say "the edification of a transient micro-ambience and of the play of events for a unique moment in the lives of several persons" is one of the paths by which individuals, once critically analyzed in their everyday life, may recognise and fulfil their very desires.<sup>146</sup> Debord's theorisation of the *dérive* as a method for capturing the 'psychogeography' of the city similarly falls within this sphere.<sup>147</sup> (Plate 2.49) To achieve its aims, the Situationist International regarded necessary the reformulation of the living environment based on the principles of "unitary urbanism," a concept that, while present from the outset of the group's program, came to be clarified on November 1958 in the Declaration of Amsterdam, a document that emerged out of the collaboration between artist and *de facto* architect Constant Nieuwenhuys with Debord. Defined as a "complex, ongoing activity that consciously recreates man's environment according to the most advanced conceptions in every domain", unitary urbanism was considered "the fruit of a new type of collective creativity" responding to the lack of emotionally enriching urban experiences in the functionalist city. According to the Situationist theory, the solution to the problems of housing, traffic and recreation, typical of the modern city, may "only be envisaged in relation to social, psychological and artistic perspectives" within the framework of a "synthetic hypothesis at the level of daily life". The creation of ambiances favourable to such a development was considered "the immediate task of today's creators", to be pursued by "the coordination of artistic and scientific means" that "must lead to their total fusion".<sup>148</sup>

<sup>143</sup> Kurokawa, 1969a. Quoted in: Vanderbilt, 2008.

<sup>144</sup> Kurokawa, 1969b. Quoted from: Prestinzena Puglisi, 1999: 96-97.

<sup>145</sup> Archigram was familiar with and appreciated the work of the Situationists. The *Living City* (1963) exhibition included a fragment of one of the psychogeographical maps of Paris by Guy Debord and Asger Jorn. *New Babylon* also became known through the monograph 'Architectures fantastiques' published in *L'Architecture d'Aujourd'hui*, n. 102, in June-July of 1962.

<sup>146</sup> Debord defined the term situation at various occasions. The citation corresponds to the formulation provided in point 10 of "La déclaration d'Amsterdam" published in *Internationale Situationiste* n.2, December 1958. English translation: *The declaration of Amsterdam* (1958), in Wigley, 1998: 87.

<sup>147</sup> The objective is to move around the city without any determined finality, in a small group and for a certain length of time, for example 24 hours, to live experiences that may arise unexpectedly.

<sup>148</sup> Debord and Constant, points 5 to 9 of the *The declaration of Amsterdam* (1958), in Wigley, 1998: 87.

Consequently, unitary urbanism is opposed to the "temporary fixity of cities", defending transience, permanent transformation, abandonment and the continuous reconstruction of urban environments and, as formulated by Gilles Ivain, it aims to overcome the boredom and utilitarianism of conventional urban planning, introducing concepts such as imagination, flexibility and the potential for people to change the appearance of architecture, laying the foundation for a new civilisation in which experimentation is the engine of life.<sup>149</sup> For the Situationists, like Archigram, the notion of play occupies a prominent place in a process of societal restructuring since it allows humans to liberate themselves from the banality of consumption and the monotony of bureaucracy.

Inspired by these principles Constant Nieuwenhuys sought to shape the city of unitary urbanism with his project titled New Babylon (1956-1974), which developed to a large extent after his move away from the Situationist International.<sup>150</sup> (Plate 2.50) The studies and models of New Babylon that Constant developed over nearly two decades of work seek to offer visions, inevitably patchy, of a utopian social alternative capable of generating a new urban form and a new way of living in which rules, conventions, traditions and habits are dispensed with. New Babylon argues that automation of production will eventually lead to a society in which work will no longer be necessary, allowing individuals to use all their free time to pursue personal realisation through creativity. The surface of the planet becomes covered by a new urban form that is continuous, elevated above the ground and articulated in sectors, resulting in megastructures in which people inhabit an environment that they may constantly control and transform at their leisure. Inhabitants can change environment settings and atmospheres generated therein by means of simple operations. Such control is carried out through technological systems that adjust the temperature, humidity, and intensity of environmental aromas or light. (Plate 2.51)

Technology is the essential means for the realisation of utopia in Constant's vision:

Technology is the indispensable tool for realising an experimental collectivism. To seek to dominate nature without the help of technique is pure fiction. As is collective creation without the appropriate means of communication. A renewed, reinvented audiovisual

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<sup>149</sup> Ivain, 1958.

<sup>150</sup> The distancing of Constant from the Situationists occurred between 1959 and 1960, due to a number of disagreements on the modalities of implementing unitary urbanism proposals. Debord was against proposals that were too specific and too focused on the structural problems of urbanism, which he felt limited the aims of a wider program of societal transformation. For a detailed chronology of Constant's relationship with the Situationists, see Wigley, 1998: 26-39. As a result of this distancing, social and political concerns begin to take precedence over art in the Situationist International, mainly under the leadership of Guy Debord and Raoul Vaneigem. Their reasoning was as follows: if the social system is organised so that people are reduced to passive consumers alienated from their needs and desires, leisure activities planned as "spectacular" and without any possibility of real participation by individuals reduced to passive 'spectators' only perpetuates this impoverishment further. This mechanism also applies to the work of art, which enters into a logic of the market. *The Society of the Spectacle* expounds these theses, drawing on the support of Hegel, Marx, Lukács and Lefebvre, and promulgating that twentieth century capitalist society is fundamentally different from that of the nineteenth century because attention is not focused on commodities or material things, but in the spectacle. Everything that is directly lived tends to become pure image and such images acquire the status of reality, putting a hypnotic spell on society. The ideas raised by Situationism were echoed by the critical events of May 1968, in which the Situationists themselves took part.

media is an indispensable aid. In a fluctuating community, without a fixed base, contacts can only be maintained by intensive telecommunications.

Technological devices are alleged essential for the existence of this new environment and electronics is the key to the control of space, sound and lighting. However, the use of technology has a purpose not only instrumental, but also at the service of creativity:

Each sector will be provided with the latest equipment, accessible to everyone, whose use, we should note, is never strictly functional. In New Babylon air conditioning does not only serve to recreate, as in utilitarian society, an 'ideal' climate, but to vary ambience to the greatest possible degree. As for telecommunications, it does not only, or principally, serve interests of a practical kind. It is at the service of ludic activity, it is a form of play.

If Archigram's proposals articulate a flexible complex dialectic between the private space of the capsules and the public space of the city, such an idea of a division between public and private becomes blurred in New Babylon, to the extent that the collective characteristic of its new society is stressed as a concrete aspiration for the purpose of overcoming an individualism of which the home and the family can be seen as prime manifestations.<sup>151</sup> In New Babylon, specific areas are designated for different activities ranging from scientific experiments, film and radio production to erotic games, and rest and relaxation, all of which are part of the collective space. This social space is under constant change due to the creative and transformative activities of its inhabitants, who are themselves also constantly on the move, living in a nomadic condition that prevents them from ever returning to the same location since even if they did so, they would find it completely transformed. Therefore, one of the most obvious outcomes of the creative liberation of human energies is the intensification in the use and occupation of space, so that "a relatively small surface offers as many variations as a trip around the world", made possible by the creative use of technical means. (Plate 2.52) According to the proposal by Constant, space appears as a projection of the will of a new man who has overcome the concern for survival, and as the place for the realisation of freedom, in which desires are expressed in forms:

To succeed in life is to create and re-create [space] incessantly. [...] Man can only have a life worthy of himself if he himself creates. When the struggle for existence is no more than a memory, he will be able, for the first time in history, to freely dispose of the whole of his life. He will be able, in complete freedom, to give his existence the form of his desires.

New Babylon, therefore, is an environment that makes the notion of dwelling understood as a "static way of life" impossible, not only because it tends toward the elimination of private space, but also because by placing creativity at the centre of life, no option is left for letting people "fall into the trap of habit", in the same way

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<sup>151</sup> In the text "Un autre ville pour un autre vie" (Another city for another life, 1958) Constant writes: "The space voyages that are being announced may influence this development, since the bases that will be established on other planets will immediately pose the problem of sheltered cities, and will perhaps provide the pattern for our study of a future urbanism. Above all, however, the reduction in the work necessary for production, through extended automation, will create a need for leisure, a diversity of behaviour and a change in the nature of the latter, which will of necessity lead to a new conception of the collective habitat having the maximum of social space, contrary to the conception of a ville verte where social space is reduced to a minimum." Reproduced in: Wigley, 1998: 115.

that an artist would find it inappropriate to repeat one of his works.<sup>152</sup> Hilde Heynen (1999) has noted that indeterminacy is the permanent condition of dwelling in Constant's ideal city, which is configured as the fulfilment of that desire for transparency with which Walter Benjamin characterises modern architecture and houses.

New Babylon is thus confirmed as a model of "another city for another life" and, we might add, for another man, *homo ludens*, who has finally replaced *homo faber*<sup>153</sup> and who creates a genuine mass culture, not one generated only by a few but by the act of collective participation of a society freed from the bondage of production and consumption, pursuing no other finality than that of spiritual realisation in a condition of techno-Edenic bliss, which at present can only be shown by means of a pale image. New Babylon is thus conceived as a habitat in which both history and memory become irrelevant within an eternal present, although Constant himself hints that its most appropriate form would be that of the colonisation of space, in which the need to generate an artificial environment completely isolated from the outside becomes an imperative beyond merely an image that may provide an idea for the future with visual consistency.

Despite the continuous criticism that Constant and New Babylon soon received from those who judged these proposals as expressions of either "utopianism" or "technocracy", the influence exercised on a broad range of designers by architects who, alongside Archigram, were working on the concept of megastructure, such as the Metabolists, Yona Friedman and Schultze-Fielitz was very significant. As pointed out by Wigley (1998: 63), this influence spread successively to others such as Architecture Principe, Eventspace, Superstudio, Archizoom, all the way to more recent examples such as the Office for Metropolitan Architecture and NATO.

### **2.3.2 Superstudio and the Destruction of Architecture**

If for Constant the elimination of the capitalist economy's specialised and repetitive work is the advent of a new society that finds its highest expression in a new form of permanently reconfigurable habitat, then for the groups associated with the Italian debate in the late 1960s— Superstudio, Archizoom, UFO, 9999, Ziggurat, and Strum, all of whom were united under the umbrella term "radical architecture" by critic Germano Celant— the same assumptions lead to stronger claims loaded with greater political implications that, in other debates, remained further in the background. In this scenario Superstudio —a group founded in 1966 by Adolfo Natalini and Cristiano Toraldo di Francia, to be joined later by Frassinelli Piero and Alessandro and Roberto Magris— had a very prominent role, focusing on topics that would become characteristic of the whole radical architecture movement, such as the destruction of the object and the disappearance of the city, construed as indispensable steps toward the affirmation of a post-capitalist social project based

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<sup>152</sup> In the text "New Babylon, een schets voor een kultuur" (New Babylon: Outline of a Culture, 1960-65) Constant writes: "The dynamism of a permanent creation excludes all automatism. Just as an artist cannot and does not want to repeat one of his works, so the New Babylonian who creates his life cannot exhibit repetitive behaviour" Reproduced in Wigley, 1998: 160-165. Quotation: 164.

<sup>153</sup> For a discussion of the influence that Huizinga's text had on post-war culture, see: Goldhagen and Legault, 2000.

on the full development of individuals and the widespread use of advanced technology.<sup>154</sup>

Based on the writings of Baudrillard, the "destruction of the object" invoked by Superstudio proposed disabling the attributes of status and removing meanings imposed by the establishment, with the aim of achieving a new, more balanced, relationship that would encourage us to "live *with* objects (reduced to the condition of neutral and disposable elements) and not for objects." While Banham and Archigram had vindicated the need for a consumer culture of objects, Superstudio initiated a substantial turn by declaring such a culture to be based on a bond, perhaps seemingly sweeter than others but equally oppressive, which enslaves people in contemporary society. Condemning, for moral reasons, design that lends itself to the game of the marketplace, Superstudio instead advocated enduring objects loaded with symbolic value and intended as vehicles of social communication, or else ephemeral utilitarian objects intended for simple operations that would die at their appointed hour. In either case these would be "objects that can easily be carried about"<sup>155</sup> suitable for a new nomadic lifestyle that would emerge after the disappearance of architecture and the city.

The aspiration to eliminate the city arose from a questioning of urban form understood as an accumulation of structures of power, the typical outcome of a social model based on hierarchy that institutionalises inequality. As an alternative, Superstudio proposed a system based on the "search for a new free egalitarian state in which everyone can reach different grades in the development of his possibilities, beginning with equal starting points." [sic]<sup>156</sup> The elimination of architecture would be an indispensable step in this process.

In fact, the works by Superstudio between 1968 and 1973 allow one to traverse the stages of a trajectory that reveals growing doubt about the possibility of a positive role for architecture in the larger context of the environment. The exhibition Superarchitecture (1966), organised by Superstudio with Archizoom and that introduced these two groups onto the scene,<sup>157</sup> was followed by Architecture Histograms (1969), a theoretical research project that proposed a system of "abstract Platonic bodies" intended as the most generic and universal possible expression of a three-dimensional grid, capable of materialising objects, furniture, environments and architectures, thereby eliminating any problem of architectural sensibility. (Plate 2.53) A distrust of architecture's ability to improve the human habitat without aggravating social and environmental issues soon became a radical criticism, which, from a strictly political perspective, encompassed the whole of society. The Continuous Monument (1969) series of works aims to radicalise the Histogram proposals, using negative utopia and *demonstratio per absurdum* to reveal the paradoxes that would result from carrying the abstract logic of the "rational" modern movement to its ultimate consequences. Compared by Biraghi with the mysterious

<sup>154</sup> For early definitions of "radical architecture", see: Celant, 1972 and Navone and Orlandoni, 1974.

<sup>155</sup> As cited by Lang and Menking, 2003, in "Distruzione, metamorfosi e ricostruzione dell'oggetto" (Destruction, Metamorphosis and Reconstruction of the Object) *Archizoom and Superstudio, 1971*, 120.

<sup>156</sup> Ibid.

<sup>157</sup> The Archizoom group (1966-1974), which emerged in the same year and was comprised of Andrea Branzi, Gilberto Coretti, Paolo Deganello and Massimo Morozzi, initially shared some of the same objectives and strategies as Superstudio, but later differentiated itself substantially under the critical direction of Natalini and his colleagues. For more on Archizoom, see: Gargiani, 2007.

monolith in Stanley Kubrick's film *2001: A Space Odyssey* (1968),<sup>158</sup> here the entire built environment would be reduced to a single form of definitive, absolute architecture capable of imposing itself upon the environment in any situation, always external to any place and understanding and, paradoxically, always contextual by way of its Olympic indifference. (Plate 2.54) According to Superstudio, architecture, through the square block, which is “the first and ultimate act in the history of ideas in architecture”, becomes “a closed, immobile object that leads nowhere but to itself and to the use of reason” and, in doing so, reveals its very nature of oppressive power, which no longer needs the mask of a fictional variety of forms or ‘styles’.

Eliminating mirages and will-o'-the-wisps such as spontaneous architecture, sensitive architecture, architecture without architects, biological architecture and fantastic architecture, we move towards the "continuous monument": a form of architecture all equally emerging from a single continuous environment: the world rendered uniform by technology, culture and all the other inevitable forms of imperialism.<sup>159</sup>

The Continuous Monument, intended as an "architectural model of total urbanisation", is configured as the only alternative to nature: an expression of the relentless homogenisation of the world resultant from a technology culture perceived as a condescending chain of power values.<sup>160</sup> After the disturbing descriptions of *Twelve Ideal Cities* (1971) –which portrays the present through cities apparently situated in a science fiction future dominated by crushing and destructive logic– the series *Fundamental Acts: Life Education Ceremony Love Death* (1971-73) represents the culmination of this corrosive reflection on the condition of human living and existence.<sup>161</sup> Originally conceived as films, some of which never made it past the story-board stage, *Fundamental Acts* reflects on the fact that architecture never touches the great issues of human life, remaining always on the edge and unable to present alternative proposals different from those conventionally accepted by the establishment. According to Superstudio, the re-definition of primary acts and the examination of the relationships between architecture and these acts becomes, for any architect unwilling to become an accomplice with the system, an unextendable ethical concern; an anthropological and philosophical refounding of architecture. Superstudio's work speculates with the idea that future life will not be based on the alienating relationships induced by specialised and repetitive work, but

<sup>158</sup> Biraghi, 2008: 188.

<sup>159</sup> *Il Monumento Continuo* was published on various occasions as of 1969. For the Italian version see: *Domus* n. 481, Superstudio, 1978 and Pettena, 1982. English translation as cited by: Lang and Menking, 2003: 122.

<sup>160</sup> Fredric Jameson, in *Post-modernism or, the Cultural Logic of Late Capitalism* (1984, 1991), would later aim precisely at a change in the status of culture as symbolic of the transition of modern societies, in which culture is still an instrument of critical consciousness, antagonism and alienation of the economic system, to post-modern societies, in which culture becomes a phenomenon of accompaniment marked by new patterns of production and consumption more related to market dynamics that nullify the ability to maintain a critical distance, a perspective from further afield. It is now culture that suppresses what falls outside of commercial culture, absorbing everything into one system. (Jameson, 1984: Sp. transl., 1991: 101-111).

<sup>161</sup> Natalini, in a recent interview in which he re-evaluates this period, recognises that Superstudio's work is intended as “a criticism of the contemporary situation, [...] in a sort of no-man's land that stretches between art and design, between politics and utopia, between philosophy and anthropology, [...] an attempt at a radical critique of a society understood not only and therefore simply as a consumer society, but as the entire context in which we found ourselves working. Therefore it was a work with a destructive character, a rather dour work.” Interview with Adolfo Natalini, available at: <<http://www.educational.rai.it/lezionididesign/designers/natalinia.htm>> Accessed: 12-01-2012.

on human relationships in which false needs induced by consumerism are replaced by basic needs. Technology would be capable of mediating this relationship without recourse to architecture, achieving a control of the environment through a better use of the body and the mind –directed to the improvement of human mental potentials as well as to new corporeal symbioses like cyborgs and genetic modifications– and through an efficient management of energy and information that wouldn't require architectural objects anymore. We can see how, on the road toward the elimination of the limits imposed by the system, the oppressive volumes of *The Continuous Monument* have been crushed and converted into a supersurface, leaving individuals to become masters of the planet and their own existence, finally liberated from the impenetrable planes of curtain wall that kept them imprisoned. (Plates 2.55, 2.56)

We can imagine a network of energy and information extending to every properly inhabitable area. Life without work and the new “potentialised” humanity are made possible by such a network.<sup>162</sup>

A new environment derived from the integration of technology and the surface of the land is thus established, homogenised by a network whose ordered and rational distribution of resources is symbolically expressed in the Cartesian gridded surface. With the removal of architectural signs in charge of expressing functions, Superstudio defined a new, virtual concept of place based on human density and proximity:

If a person is alone, the place is a small room; [...] if there are ten, it is a school; if a hundred, a theatre; if a thousand, an assembly hall; if ten thousand, a city, if a million, a metropolis...<sup>163</sup>

Although it is still possible to formulate distinct ideas of the city as a network hub of communication and services and the surrounding territory as a “natural” space to be exploited wherever the network does not reach, it is clear that the goal toward which the supersurface aspires is that of isotropy. Superstudio thus seeks to challenge the historical motives that have led to the institutions of the city and the house, stating that if their grid is able to provide effective but invisible protective barriers to humans, then any need to differentiate between interior and exterior disappears. McLuhan's words resonate in these arguments:

Metropolitan space is equally irrelevant for the telephone, the telegraph, the radio, and television. What the town planners call “the human scale” [...] is equally unrelated to these electric forms. Our electric-extensions of ourselves simply by-pass space and time and create problems of human involvement and organization for which there is no precedent.<sup>164</sup>

Despite the strength of the images with which Superstudio illustrates its supersurface in *Fundamental Acts*, it is clear that the grid need not be taken literally, but rather as a way to visualise this unprecedented organisation of the space and the time of information. For the functioning of this system Superstudio's project

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<sup>162</sup> As cited by Ambasz in the section titled “Superstudio”, 1972: 242

<sup>163</sup> Idem: 244.

<sup>164</sup> McLuhan, 1964: 121.

proposes a universal system of exchange of information, prefiguring and anticipating, with its availability of huge quantities of information on a network and the ability to access it anywhere through personal terminals, the logic of the Internet, which in these same years made its first steps. Through this journey, we are not only witnessing the destruction of architecture and the object of a consumer society, but also the disappearance of technological objects' signs of surface functionality: the abstract Cartesian grid is only intended to express its uniform distribution at any point on the surface, reflecting the principle of absolute equality on which the new (network) society is founded.

Man may dedicate himself therefore to essential things such as the enjoyment of company, the contemplation of nature or the evolution of his own existence, in a condition of absolute calm and happiness that even death will not disturb.

Indeed, *Fundamental Acts* by Superstudio—which in 1971-72 had participated in a major competition for the Modena Cemetery that was eventually won by Aldo Rossi—can also be seen as a reflection on the concept of death, the cemetery and memory in the context of a technological society. If we accept death as a normal fact of life, then we would not feel the need to resort to monumental architecture in order to remember our ancestors since in reality this memory would be preserved indefinitely by a huge energy-powered database storing memories of people available through digital devices by all of humanity. The centre of the cemetery is thus a deep well in which bodies would be transformed through recycling into their constituent elements (perhaps an anticipation of cradle to cradle?), leaving only memory, the real essence of every human being. (Plate 2.57) Superstudio's critical and instrumental proposal for the vision of the ideal society's technology is the real substitute of objects, as well. Technology is what nature has never been for man: that which spontaneously offers its fruits and allows man to forget material needs because it is taken for granted that such needs will be met. It is the pathway for man to recover that lost paradise in which he can once again become pure intellect. This is expressed by Superstudio at the conclusion of their project text accompanying their exhibition in Italy: *The New Domestic Landscape* (1972) organised by the MoMA in New York:

Thus, beyond the convulsion of overproduction a state can be born of a calm in which a world takes shape without products and refuse, a zone in which the mind is energy and raw material and it is also the final product, the only intangible object for consumption.

The designing of a region free of the pollution of design is very similar to a design for terrestrial paradise...

This is the definitive product -this is only one of the projects for a marvellous metamorphosis.<sup>165</sup>

While in *New Babylon* Constant still believed in space as the highest expression of creativity, Superstudio's critique eliminates precisely this possibility, declaring an absolute distrust of any built environment and of any attempt to define a non-generic form that does not respect the logic of a Cartesian grid extended over the entire surface of the inhabitable part of the planet. Man therefore also renounces his

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<sup>165</sup> Ambasz, 1972: 251.

desire to express his creativity by transforming space and recovers, through technological infrastructure, his primordial condition.

If *Fundamental Acts* is the end point of a journey that conscientiously explores an unattainable ideal dimension of the human condition, it is also true that the desire to arrive at a composition of the tensions that characterise real life is a concern that affects much thinking related to the contemporary home. This more concrete point of view was expressed in a text entitled *A House of Calm Serenity* (1969) in which Adolfo Natalini states, even at the beginning of the career discussed so far, that the house has to be proposed as a space for "serene living" above any zeal for following trends or for the sake of novelty itself, which is only another manifestation of consumer society hysteria. Radicalism regains its etymological meaning of back to the roots with regard to what is truly important for existence: of not wanting to participate in a race such as that of consumption, considered profoundly mistaken at its core, and manifesting ecological sensitivity precisely when it was beginning to mature, at the end of the 1960s. The house, therefore, has to be a place of stability and equilibrium, precisely because man is already on the move in today's world.

The problem is not that of searching for a house that imitates movement, which follows the man who moves, lives, consumes, dies; the great problem is that of finding a house above passion, a house of calm serenity, a house for all seasons. We already move about enough ourselves to render the architecture variable, changing its relationships with the passing of time, with the changing of the seasons and life.<sup>166</sup>

As can be seen, according to Natalini the inhabitant's present-day conditions and his nomadic but imprecise future coincide in so far as man is placed in front of the meaning of his existence.

Superstudio's participation in the exhibition *Italy: The New Domestic Landscape*, where some of their reflections on *The Fundamental Acts* were displayed, is representative of the international recognition of their work, but at the same time it also seems to mark the exhaustion of the energies that had led to their emergence, not unlike that of other groups that were part of the radical design movement. This is due not only to an institutionalisation of attitude that an exhibition at MoMA implies, but also the fact that after having dynamited the foundations of society, architecture and design, no relevant targets remained at which the weapons of radical critique could be as boastfully aimed. Reality had to once again become the subject of research if new planes from which to propose ways and values alternative to the system were to be identified. Dissemination formats would also change: from now on this would be carried out through university teaching rather than through media.<sup>167</sup> It must be said that the activity of Superstudio always remained squarely in two distinct realms, and that their provocations never really entailed a renunciation of their professional activities. In any case as of 1973, Superstudio's theoretical activity also began to take a turn. Members of Superstudio identified a

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<sup>166</sup> Natalini, 1969. English version in Lang and Menking, 2003: 73-77. Quote: 74-75.

<sup>167</sup> In September 1973 the experiment *Global Tools* was launched, an international structure through which Superstudio, Archizoom, Sottsass and other members of the Radical Architecture movement intended to spread their ideas using workshops understood not only as learning experiences, but also as vital cooperation. In any case *Global Tools* failed to ensure sufficient stability for its survival and in the years following its positions scattered.

new focus of interest in the rural world, which, having stayed away from the transformative dynamics of urban culture, was considered a form of resistance to modernizing standardisation and an example of autonomy capable of "destroying the notion of a single, dominant, middle-class culture." The Extra-Urban Material Culture study still permitted revealing traits of a kind of dwelling and design capable of transcending medium limitations and responding intelligently to use requirements, as reflected in the research project Zeno's Conscience (1973-78). "Our work at University consists in the analysis of designing [...] and in the investigation of alternative modes and practices. [...] Simple utensils are examined as survival kits. Through critical inventories, reductive design, manuality and use one attempts to understand their very structure".<sup>168</sup> In any case, such an understanding is not directed toward practical knowledge to be applied in the design of new objects or spaces, but "instead it foreshadows a much different activity in which project, use, construction and recycling coincide".<sup>169</sup> Superstudio thus proposes reconsidering the deeper purpose of design, understood as a process for responding effectively and sustainably; responses that a culture of plenty has tended to lose sight of and that, on the other hand, cultures of scarcity have always held in high regard.

### 2.3.3. Italy, The New Domestic Landscape

Upon returning to the exhibition Italy: The New Domestic Landscape, curated by Emilio Ambasz, it is possible to reflect further on the manner by which design culture channelled the stimuli to rethink the domestic habitat that was coming from the *milieu* that I described in this chapter. We have seen how, since the Situationist movement, a functionalist conception of the world is rejected while identifying an important new dimension of desire that ranges from the design of objects to alternative human habitats, and how the works of Superstudio and Archizoom, which propose a new space full of new symbolic values, can also be seen to fall into line with this notion. The exhibition dedicated to the Italian context sanctions, within this trajectory, the emergence of a new object of design that is not exclusively a response to a specific function, but especially also to a system of desires and symbolic elements.

The key statements that Ambasz makes in the introduction of his highly documented catalogue reveal that he saw Italian design as a useful case study for reflecting upon the status of the profession in advanced societies. According to his interpretation, three types of attitudes are recognisable among designers. The first approach, subscribed to by the most visible cohort of Italian designers, was conformism towards the expectations of the system of production. Instead of questioning the socio-cultural context, this approach focused on the refinement of already defined and sometimes innovative forms, functions and techniques, exploring the aesthetic quality of objects through colour and new synthetic materials in order to "answer the traditional needs of domestic life."<sup>170</sup> The second attitude was reformism, "motivated

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<sup>168</sup> The fragment is from the text *La coscienza di Zeno*, which documents the somewhat anthropological research that members of Superstudio undertook on "Extra-Urban Material Culture" in their academic activity at the Faculty of Architecture of Florence. Quoted from Pettena, 1982: 95.

<sup>169</sup> A full English version of "Extra-Urban Material Culture" is available in Lang and Menking, 2003: 222-226. Quote: 224.

<sup>170</sup> Ambasz, 1972: 19.

by a profound concern for the designer's role in society that fosters consumption as one means [sic] of inducing individual happiness, thereby insuring social stability"<sup>171</sup>, raising an ethical dilemma between professional design practice and social concerns. Notwithstanding a conviction that renovation in design would imply social changes, reformist designers did not commit themselves to promoting these changes, but rather to "engage in a rhetorical operation of redesigning conventional objects with new ironic and sometimes self-deprecatory socio-cultural and aesthetic references" according to a wide range of strategies varying from revivalism, kitsch, pop art, recycling and conversion of the object into a fetish for domestic rituals. Finally, the third approach was an open response comprised of both, an absolute refusal to take part in the socio-industrial system, leading to a decision "not to make objects" in favour of political actions or philosophical statements, as well as participating actively in a critique that considers object and user as components of an intertwined system. In this last case, objects should question society and individuals, allow for multiple and flexible uses, and be designed as "environmental ensembles" that stimulate social as well as user interaction, providing an "open-ended manner of use".<sup>172</sup>

In accordance with the map just mentioned, Ambasz divided the exhibition into two sections called, respectively, Objects and Environments. The first, Objects, included three categories of products, selected for their "formal and technical means", for their "socio-cultural implications" –including objects such as the UP 5 Lady armchair and UP 6 hassock by Gaetano Pesce, the Big Meadow mat by Gruppo Strum, and the Mezzadro seat by Achille and Piergiacomo Castiglioni– or "for providing more flexible patterns of use and arrangement", the Sack beanbag lounge chair by Piero Gatti, Cesare Paolini and Franco Teodoro, among many other multifunctional folding furniture systems.

The products included in the first group were chairs, tables, shelves, lamps, and table objects responding to more traditional domestic programs and rituals, along with communication and entertainment devices such as the Cricket telephone, the TS 502 portable radio and the Doney and Black television sets by Zanuso and Sapper, the Totem Hi-Fi set and the GA 45 Pop automatic record player by Bellini, and the Valentine portable typewriter by Sottsass Jr. Seen from a greater temporal and critical distance, it is possible to affirm that these new objects of communication and entertainment had a more ambitious goal than the merely formal or technical innovation pointed out by Ambasz, since these objects also sought to find a new way to convey the presence of technology and of signs of an incipient information society within the domestic realm. Design did not focus on the primary function of use, but instead on the secondary function of meaning expressed through communicative and symbolic values that served to imbue users of technological devices with closeness and familiarity, without sacrificing the transmission of ideas about the future and modernity. (Plate 2.58)

The Environments section was more propositional and innovative, "especially researched, designed and produced for the exhibition". These fragments of the new domestic landscape were the outcome of a design program elaborated by the

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<sup>171</sup> Ibid.

<sup>172</sup> Ambasz, 1972: 21.

museum in which participants were asked, taking into consideration the recent history of design and —as Ambasz recognises— its association with modern movement pioneers, to propose prototypical solutions capable of transporting us “from an imperfect today to a harmonious tomorrow”. For Ambasz the idea was not to question a goal that still seemed achievable, but to correct its course in this “long journey” according to the changing demands of society and “the day-to-day activities along the way”.<sup>173</sup> Among the contemporary factors to be taken into consideration that most stood out were:

new forms and patterns of use of domestic space emerging as a result of changing life styles, more informal social and family relationships and evolving notions of privacy and territoriality, as well as the exploration of new materials and techniques of production.<sup>174</sup>

The design program, in fact, indicated some of the problems to be addressed by the new domestic landscape. First to be mentioned was the nexus between domestic space and urban context, which, with the guidance of Abraham Moles, was interpreted not only as a physical environment but also as a source of information and cultural formation.<sup>175</sup> Secondly, the close relationship between family structure and physical space was highlighted, thus advocating a transformation of the roles assigned to each member of the nuclear family, as well as the spaces that express them.<sup>176</sup> Finally, the nature of the “private domain” of domestic space was emphasised, leading to symbolic and affective relationships with objects determined by social factors and individual behaviour; relationships for which participants were invited to create empowering environments.<sup>177</sup>

To achieve this ambitious program Ambasz proposed both a traditional path suitable for designers who believed in the possibility of providing a positive answer to social demands, which consisted of designing the spaces and the objects for the long-range meanings of daily rituals and ceremonies, as well as another more experimental path, with affinity to the counterdesign representatives, whose intention was “to divest ourselves of the spaces and artefacts inherited by our present culture, in order to arrive at a redefinition of the ideal way to live”.<sup>178</sup>

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<sup>173</sup> Ambasz, 1972: 137.

<sup>174</sup> Ibid.

<sup>175</sup> Moles wrote, in a letter to Ambasz dated January 10<sup>th</sup> 1971: “The domestic environment appears to be more readily the basic unit or individual cell, for it acts as the direct connection between the individual and urban environment. It is into this more or less closed individual environment that the individual is able to introduce “News of the World”, i.e., messages from the immediate socio-cultural world (and from remote historical worlds) that cross (independently) time and space, influencing his ways of thinking, judging and decisions, only to the extent that he wants to pay attention to them”. Ambasz, 1972: 143.

<sup>176</sup> The kitchen was cited as the epitome of such a relation: “For example, the particular case of the kitchen, the heart of the home in certain cultures, can be reinterpreted by modification of traditional spatial definitions and by the introduction of new home hardware (for example, totally mobile equipment).” Ambasz, 1972: 144.

<sup>177</sup> Functional and symbolic aspects of innovative design were highlighted in this area: “A radical design operation would, thus, imply not so much returning to the protohistorical and functional reasons for the artefact’s existence [...], but, rather, becoming conscious of this meaning-accrual process and designing the domestic environment in such an adaptive way that it may satisfy the requirements for the enactment of any play [...]. Furthermore, the environment should be so designed as to permit us to improvise ceremonies and gestures, the meaning of which we need not be conscious of at the time of their spontaneous performance, but of which we may become aware afterward, when we reinterpret them.” Ambasz, 1972: 137.

<sup>178</sup> Ambasz, 1972: 137.

Both the program and the projects carried out by designers who adopted more realistic positions –among which the Total Furnishing Unit by the recently disappeared Joe Colombo, the modular components by Ettore Sottsass Jr., the mobile houses by Alberto Rosselli, the habitat by Marco Zanuso and Richard Sapper and the "mobile human space" of the minivan Kar-a-sutra by Mario Bellini stood out— revealed how Archigram's ideas could find common ground with other points of view of a more anthropological bias in the attempt to provoke a transformation of contemporary domestic space, although at the cost of renouncing technologies of control and choice, by interpreting the flexibility and customisability of space through simple mechanical devices actuated by the subject, thus revealing how in practice it was not so easy to overcome the mechanical era. (Plates 2.59, 2.60, 2.61)

Among these proposals, the Total Furnishing Unit can be considered the end point of an investigation that Joe Colombo had endeavoured in the last years of his career with the aim of combining design, ergonomics and ecology for the definition of a:

individual habitat as a microcosm, which should serve as the point of departure for a macrocosm attainable in the future by means of coordinated structures created through programmed systems of production.<sup>179</sup>

Some of the concepts of Total Furnishing Unit had already been tested by Colombo in his Environment Visiona '69, designed for the firm Bayer on the occasion of the Interzum lounge furniture fair in Cologne in 1969 and manufactured entirely from plastic materials produced by the company such as fibreglass, Duromer, ABS, expanded polyurethane and synthetic fabrics.<sup>180</sup> (Plate 2.62) The functions of the domestic habitat had been structured in three cores that allowed the space to be freely configured: the Central Living, a block with sofa and suspended TV to relax, read and interact; the Night Cell, a nightlife area consisting of a bed surrounded by a walk-in closet and a heatable bathroom equipped with a striking semi-spherical tub and several electrical appliances; and the Kitchen Box, a sort of command post allowing everything necessary for cooking to be reached without moving, and that was complemented by a sliding table which could be moved from the kitchen to speed up the serving of food. If Visiona 69 proposed a bold and comfortable habitat that conveyed the pleasure of living in an unconventional atmosphere, the Total Furnishing Unit sought a perfect functional organisation with more Spartan solutions and forms and with a certain dose of discomfort, intending to question domesticity and provoking a more active relationship with the collective spaces of the city. (Plate 2.63)

It therefore becomes necessary to create a dwelling unit that more closely approximates the actual life style of today and tomorrow, but that is also closer to man's true requirements, and thus less restricting and less representative of taste, prestige, and so forth.<sup>181</sup>

For Colombo the focus on what is really necessary for modern life implies a process of selection and synthesis that surpasses the bourgeois mentality and allows volumes to be compacted and space to become more dynamic. The four units –Cupboard,

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<sup>179</sup> Ibid.

<sup>180</sup> Colombo, 1969.

<sup>181</sup> Ambasz, 1972: 172.

Bathroom, Kitchen, and Bed and Privacy— could be distributed in space according to the needs of the user, while the configuration of the Bed and Privacy unit could be changed based on the activities and moments of day.

The space within this unit should be [...] in a continual state of transformation, so that a cubic space smaller than the conventional norm can nevertheless be exploited to the maximum, with a maximum economy in its interior arrangements.<sup>182</sup>

Despite its realism, the Total Furnishing Unit also presumes a new type of resident willing to give up the accumulation of everything that the consumer society induces wanting to own, and who is also willing to accept the imperative of the transformation of space so that life can take place in it. Yet rather than guaranteeing bliss in the paradise of electronic control, this transformation is condemned to the hell of the effort of pulling out and retracting the beds, table and wardrobe every day; of having to win every morning the battle against disorder that is incumbent in both the home and the city.

The Environments section contained another interesting project presented by the artist and designer Ugo La Pietra titled *The Domicile Cell: A Microstructure Within the Information and Communication Systems*, which explored new modalities of communication made possible by technology. La Pietra considered "audio-visual objects for information and communication" to be ones that would best lend themselves to hypotheses regarding new applications likely to produce a "complete overturning of all formal principles, acquired typologies, and rites developed within the domestic landscape", and that would also overcome the logic of the object understood as a "message" that communicates membership in an "identifiable class of users".<sup>183</sup> To avoid the total domination that a "productivity-oriented system" has on people, La Pietra argues for the need of an "unbalancing system", or a strategy for the identification and appropriation of spaces of freedom existing in the social structure that is capable of using the very logic of the system in order to transform it from within.<sup>184</sup> (Plate 2.47)

In the contemporary context, the audio-visual devices allowed a new awareness of the world to be acquired from the sphere of private space, but it was imperative to subvert its use and meaning in order to establish a direct relationship between individuals and environment. It was important to "eliminate the filter that the apparatus interposes between us and reality" by controlling information, with the aim of "eliminating every risk (beyond the naive dreams of the technocrats) that our society can perfectly become organised and managed solely by means of such 'instruments'."<sup>185</sup> It is interesting to note the coincidence between the strategy proposed by La Pietra and what began to happen with the Arpanet network, whereby a communication system between leading research centres in the United States, intended for scientific and military purposes, was also becoming a personal means of communication among members of that community. The *Domicile Cell* intended to give shape to a place, either public or domestic, in which information from outside is

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<sup>182</sup> Ibid.

<sup>183</sup> Ambasz, 1972: 226.

<sup>184</sup> The "unbalancing system" concept had been developed in books previously published by La Pietra. See: La Pietra 1970, 1971.

<sup>185</sup> Ambasz, 1972: 227.

collected and, after processing, released once again into society. In this way, the Domicile Cell becomes:

a microstructure that can intervene in the information system by enlarging and multiplying exchanges among people, with everyone participating in the dynamics of communication.<sup>186</sup>

La Pietra designed three models of such a cell, conceived as unfolding volumes that are triangular in section, and in whose interior several accessible containers hosting all kinds of communication and information devices such as television cameras, video recorders and video screens were placed.

Within these three models one may perceive –always expressed in a symbolic way– the possibility of considering the private domicile structure as one among many points in which information and communications are gathered, processed, and put into circulation.<sup>187</sup>

The three models proposed different modalities for such communication, from information sharing between a group of private individuals, to receiving public information privately, or, in the third case, to broadcasting information from the private to the public sphere through audiovisual media.

The solutions developed for The Domicile Cell would be developed shortly afterwards in another unbalancing system called Occultamento (1974), which La Pietra understood as a new flexible domestic habitat capable of upsetting coded uses of space as well as furniture and storage concepts.<sup>188</sup> (Plate 2.48)

Through these ideas, La Pietra raised both the issue of people's access to information and communication technology for purposes of receiving and delivering messages unfiltered by the system, as well as the issue of the enormous capacity for transformation that such a possibility implies, and which in the following decades became one of the keys to consolidating and expanding the information society on a global scale. In the early 1970s, the elements still missing so that this idea could be realised were the availability of a suitable terminal, which would eventually arrive with the transformation of large computers into personal computers, and a telecommunication infrastructure capable of handling a new, multidirectional flow of information. What La Pietra possibly did not foresee was that this subversion from within produced by free access to communication technology would become a big business opportunity and transformation also for the system itself, which quickly took advantage of the enormous potential that opened up with its passage from institutions restricted in scope toward infinitely larger market of individual consumers.

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<sup>186</sup> Ambasz, 1972: 228.

<sup>187</sup> Ibid.

<sup>188</sup> La Pietra, 1974.

## 2.4 Post-modern Ironies

The fourth section of my research into the history of habitation in light of technology and the image studies a rather different period, that of the 1980s, during which the information society begins to materialise and becomes a real-lived experience for the inhabitants of the most advanced countries and during which, moreover, views on technology begin to lose much of their lustre. This is a period during which the concept of modernity becomes seriously questioned, with much of the support coming from the field of architecture, as certified by Charles Jencks's book *Post Modern Architecture* (1977) after a gradual period of maturation that began in the 1960s with texts such as *Complexity and Contradiction in Architecture* (Venturi, 1966) and *The Architecture of the City* (Rossi, 1966). In this context, a study that addresses the house becomes much more complex and characterised by a predominance of concepts whose character is more linguistic and semiotic as opposed to functional and technological, along with a general outlook increasingly concerned with history and memory.

### 2.4.1 The Domestic Project and its Technological Nightmares

I have chosen another exhibition to put a temporary end to this journey across the ideas and forms of the house considered from a technological perspective; one that reveals how, in the middle the post-modern debate, interests shifted to these other areas of dwelling just mentioned. The exhibition in question is The Domestic Project, an ambitious initiative realised on the occasion of the 17<sup>th</sup> Milan Triennale of 1986 that proposes an itinerary through the most relevant moments of the modern history of western domestic space.<sup>189</sup> In order to overcome the limitations of the concept of "new contemporary landscape" that Ambasz had focused on in New York, a diachronic reading was proposed that would outline a wide archaeology of the interior and that would be capable of reconstructing the origin and history of the ideas of domestic space that had become sedimented over time, using an historical, architectural and anthropological perspective influenced by Foucault's ideas on the need to identify "genealogies" that approach the past in order to reveal its active influence on the present.<sup>190</sup>

The exhibition and the two catalogue volumes looked into the persistence of certain archetypes, the existence of spatial models, and the promise of domestic revolutions driven by technology, hygiene, mobility and telematics, interpreting the tradition of living, which had been deployed in the long cycle of modernity from the 17<sup>th</sup> century

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<sup>189</sup> The exhibition, the direction of which fell upon Mario Bellini, with the support of Pierluigi Nicolin and Leonardo Mariani Travi from the executive board of the Triennale, contained a historical section curated by George Teyssot, Monique Mosser and Marco De Michelis, and another section dedicated to design projects curated by Mario Bellini, Giovanna Bonfanti and Agata Torricella, in which the aforementioned Teyssot and De Michelis were also present.

<sup>190</sup> In a recent interview Pierluigi Nicolin commented in reference to the exhibition: "What we were interested in was the composition of an episteme, the reconstruction of a whole range of discourses at work within a certain epoch, and the use of geographic and social context to see how a culture of the interior is generated. We wanted to understand the myth of the domestic landscape." (Bellini, De Michelis and Nicolin, 2012: 97)

to the present, as a layering of models and problems that were partly ongoing. According to Teyssot each of the cultural models that were surpassed throughout this long period (monarchical, aristocratic, bourgeois, reformism, artistic and nomadic) leaves traces that are reworked by successive models, such that the Western tradition of dwelling can be interpreted as a stratigraphic configuration of topical models.<sup>191</sup> Thus, it became evident how certain domestic models of the 20<sup>th</sup> century, by way of their spatial and functional divisions, may be interpreted as simplifications and contractions of aulic models from the past set up in aristocratic dwelling since the 17<sup>th</sup> century and successively adapted to lower social contexts and enriched by new concepts.<sup>192</sup>

A peculiar aspect of the exhibition was the fact that the ponderous research was complemented by the mounting of a spectacular exposition in which architects, some already established along with other figures who would acquire prominence in the following decades, were invited to provide a contemporary interpretation of the proposed themes through symbolic and metaphorical installations. Mario Bellini recalled recently how:

We were mainly interested in the architectural aspects of these people, because designing lived space is not a question of industrial design. And when I say “architect” I am not referring to a title, but I mean someone who has a broader awareness of the problem of living.<sup>193</sup>

The exhibition also devoted space to the technological house, but the tone of Teyssot's reading had changed substantially from that of Ambasz, stating that the implicit presumptions of progress and the explicit declarations of hope emitted since the Great Exhibition of London with regard to the future of the house had lost all their force and splendour. In fact, the projects presented at the Triennale by Denis Santachiara, Andrea Branzi and Ettore Sottsass did not address metaphors likely to be forthcoming, but a utopia that had already become reality through the present-day technology of robots, remote controls, telecommunications, and mechanical and computer devices.

In *Beyond the Bed: Sleeping Places and Machines*, Ettore Sottsass reflected upon the bedroom as a place where all sorts of devices from our electronic civilisation are concentrated, such as television, videotape recorders, videotapes, cassettes, compact discs, records, and electronic clocks displaying the time in all parts of the world. Yet the accumulation of these devices no longer produces excitement or happiness, but rather a feeling of excess and sometimes incapacity since we do not always know how to use them. “I went on thinking that by this time existence was a simple matter of information, since the more you have, the more you exist. Even to make love, by now, you have to have a lot of information (...) to do it properly.”<sup>194</sup> The project

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<sup>191</sup> Teyssot 1986a: 11.

<sup>192</sup> Marco De Michelis remembered how, in addition to Teyssot, an important consultant role was played by Robin Middleton “who came up with the idea of “Il progetto domestico” as a story of the specialisation and functionalism of interiors. Middleton arrived one day with a small piece of paper on which he had drawn up a list of all the key issues that the historic section should cover: from the baroque home as a “ceremonial house” to the Victorian villa as a place of comfort and specialised homeliness, right through to the “Taylorisation of Existenzminimum”. All these themes were then debated and shared by the work group.” (Bellini, De Michelis and Nicolini, 2012: 98)

<sup>193</sup> Bellini, De Michelis and Nicolini, 2012: 98.

<sup>194</sup> Sottsass 1987: 56.

limits itself to satirise this situation by proposing a bed full of gadgets that emit information. (Plate 2.66)

In *The Remote Controlled Home: Living in an Armchair*, Andrea Branzi focused on the inverse relationship that exists between people and objects in the home whereby contemporary man tends to remain stationary at a point in space from which he remotely controls the movement of objects around him. On one hand, this reflection led him to see how the western house is still organised upon the productive principle of man moving in space to perform a series of dwelling operations or functions, while eastern space is imagined with a man sitting in the centre, among objects surrounding him, such that the whole house seems to be an emanation coming from his body. On the other hand it led him to imagine the remote-controlled house as a place of animate objects, suggesting that these new objects should be friends who surround us instead of servant or slave-like robots capable of performing any task. According to this interpretation, the living room is still the centre of the house, not so much as a place to watch TV or to receive friends, but as the command centre of an enriching environment that founds a new culture of living. The collective sofa, symbol of a social and mundane vision of the house, would give way to individual seats similar to those *triclinia* in which we would spend the increased amount of time at our disposal for devoting to leisure and culture. A new form of individual and group hedonism becomes apparent. The plan of the house becomes more elementary and primary once again, a centralised house-plan with the living room in the centre and the rooms and services at the perimeter.<sup>195</sup> Read together the Santachiara and Sottsass projects seem to parody houses published in *Playboy* magazine in the 1960s, in which the bed is obviously the centre of a universe of seduction controlled by a remote. (Plate 2.66)

Denis Santachiara in *Ines, the Terminal Home*, presented a robotic house that seems to have developed some form of independent thought despite the stringent criteria, based on Isaac Asimov's three basic laws of robotics, which were used to guide its design.<sup>196</sup> (Plate 2.67) It occurs to its owner, the philosopher Wilson, who the machine may have come to think by chance, precisely because of a series of fortuitous combinations that escape the programmer's logic. This opens an unsettling question in the human brain, which also sees its conscience under threat, i.e. the last stronghold of his superiority over the machine. To some extent this project can be seen as a reinterpretation of *Living 1990* to the extent that it also presents a technological habitat for an unspecified future date in which robots do not occupy space as assistants, but man himself lives within a robot house moving through the Earth's surface with an intelligent and interactive "mobile automation". In comparison to *Living 1990*, *Ines* represents a substantial transformation since the narrative reveals the disturbing aspects of a machine intelligence that escapes the control of its owner, even if only due to a series of unforeseen and fortuitous circumstances, representing a dark, vague threat to man. *Ines* prefigures somewhat the "disturbing lively late twentieth-century machines" that "have made thoroughly ambiguous the difference between natural and artificial, mind and body, self-

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<sup>195</sup> Branzi, 1986: 58.

<sup>196</sup> The short story that describes this situation is from Santachiara, 1986 and a large fragment, also in English, is from Santachiara 1987.

developing and externally designed",<sup>197</sup> as described by Donna Haraway in *A Cyborg Manifesto*.

Considered within the context of the exhibition, these proposals reveal themselves to be marginal, in a sense, not only because greater emphasis falls on the aspect of "design" rather than that of "architecture", but because they reveal how in the context of an outlook broader than the universe of living, the choice of technology does not promise to build a perfect world but becomes a narrative that no one believes, along with the myth of progress that supports it, just as Lyotard posited. Furthermore, their artefacts are not capable of configuring a new coherent environment, but are diluted in a domestic landscape composed of heterogeneous fragments from different places and times that the resident has in accordance with an individual and unique order of its own, as represented by, for example, the giant "scientific theatre" by which Aldo Rossi welcomed visitors to the exhibition. In closing the trans-Atlantic debate that begun with the exhibition in New York, a domestic landscape is described that is quite different. In Italy: The New Domestic Landscape, attention was fixed on the ability of Italian architects to think of the domestic landscape from a perspective capable of overcoming the functionalism of good design by accentuating hedonistic components, but from the conviction that the reformist program of the pioneers of the modern movement could still be corrected and maintained, with technology at the controls. In *The Domestic Project*, on the other hand, a profoundly different situation emerges in which the concept of landscape cannot be interpreted as being consistent, but rather as a composition of fragments in which the search should not be for a unity of time, but rather for a possibility of coexistence, as Nicolini observes:

When we design an interior today, we do not force someone to live in a certain way, nor do we put a series of coherent objects in some sort of order: objects are 'incoherent', they come from different hands, worlds, products and therefore we are led to create a landscape.<sup>198</sup>

A landscape, we might add, that is not built in the empty and uninhabited places of the future but in the congested alleyways of the present, full of the messy bundles of our existence.

### **2.4.2 Hedonism at Home**

A final project from the Milanese exhibition may serve to conclude this chapter and close the circle with the images of the happy inhabitants of American houses with which we started. Despite its appearance of empty and uninhabitable, *Body Building Home: the Gymnasium-House*, by Rem Koolhaas and OMA, is based on the premise that the modern house is essentially a hedonistic device and that "its severity, abstraction and rigor are only a framework on which more provocative settings for that experiment which is modern life are constructed."<sup>199</sup> (Plate 2.68)

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<sup>197</sup> Haraway, 1991. As cited by Bell and Kennedy, 2000: 293-294.

<sup>198</sup> Bellini, De Michelis and Nicolini, 2012: 99.

<sup>199</sup> OMA, 1987: 106.

Perhaps the starting point of this discourse is not even in a private home, but in the Bauhaus, the house common to those students and teachers who between 1919 and 1933 believed in an unconventional education that united life, art and industry, and that considered the balance between body and mind to be part of the creative process in the modern era. Recalling the importance that hygiene and the body enjoyed in the programs of modern architects within the scope, at the time, of a general interest in the classical ideal of *mens sana in corpore sano*, it is not surprising that the harmonic motion of the body was a machine goal at both the Weimar Bauhaus, where it was tinged with mystical strands, as at Dessau, where it acquired a more organic function within the curriculum as a discipline intended to achieve a balance between spiritual and creative activity. Is not just a question of promoting fitness and physical education, but, in general, a spirit of free life that is based on the recognition of individuality, differences and sexuality in the context of a variegated community. Of the numerous photographs documenting life at the Bauhaus, attention is drawn not only to how to construct the new image, driven in particular by Moholy-Nagy, but also the interest in the representation of the body as a means of expression of a freer, more open and tolerant existence that —precisely because of its challenge to the hypocrisy of bourgeois convention— the public opinion of Weimar interpreted as a threat, just like the architecture and modern design that form part of this ideal. (Plate 2.69) Starting from these considerations, it is not surprising that several of the gymnasium houses from this time were designed by Marcel Breuer, such as the bedroom-gym Piscator Apartment (1926-1927), the living room-arena of Hilde Levi (1930) and the House for a Sportsman, presented in the section titled "the Apartment of our Time" at the Building Exhibition in Berlin (1931) directed by Mies van der Rohe,<sup>200</sup> and that the echoes of this sensitivity toward the body moving in space would also be extended to a project for a house on a lake for an artist, presented by Terragni at the 5<sup>th</sup> Milan Triennale (1933). (Plates 2.70, 2.71)

In a similar way a suggestion emerges that the modern interior is also a space for eroticism and sex, as exemplified by an engraving by Farkas Molnar that portrays Georg and El Muche as two lovers before the Haus am Horn (1923), or by ads that feature modern interiors as spaces for the new woman. (Plate 2.69, 2.72) Some examples of graphic communication can be revealing. Even more than Moholy-Nagy's design of the cover of *Die Neue Linie* (1931), in which an idea of a modern interior for a young and refined housewife is transmitted, this association is revealed in the Dorlan firm's advertisement for Venus lingerie (1937), in which abstract planes suggest a fragment of interior space that, through transparency, establishes a diachronic relationship between a classical sculpture and the contemporary sensual and desirable woman whose image, a metaphorical reflection of the former, is cast as the background of a dihedron. This background is not transparent like the one that reveals the sculpture in the distance, so the image of the woman is an integral part of the space, projected onto a screen or super-stencilled onto a wall, and presented as the modern goddess's lovable icon.

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<sup>200</sup> Detailed graphic information of these projects is available at Marcel Breuer Digital Archive, promoted by Syracuse University Library. Available at: <<http://breuer.syr.edu/>> Accessed 01 March 2013.

Let's return to the triennale. Accepting the exhibition curators' invitation, which, indeed, was accompanied by images of some of the Breuer projects, Koolhaas proposes a short-circuit between historical interpretation and architectural proposal, declaring that the project itself is a critical reading tool. In the same way that Manhattan is a place of delirium in which all the fantasies of the twentieth century are projected, even more than the city of the exasperation of the logic of capitalism described by Venetian interpreters of the American city,<sup>201</sup> the modern home is a manifesto: it is the set in which to locate scenes of a life that enjoys the body and sex so much more than it enjoys the Protestant work ethic, production and efficiency. The choice of the Barcelona Pavilion as the setting of this post-modern reading of the modern house is significant; not only because the Milanese exhibition occurs in the same year in which the image of Mies's work materialises again in the very place it had stood in 1929, but because, besides being a manifesto, the pavilion is not a house. Destined to be the setting for one of the events during the opening ceremony of the exhibition, the pavilion was intended to be more of an *ur-haus* representing the values of a new civilisation that the Germany of that time intended to embody, based on the dominance of spirit over technique in order to ensure a full and balanced existence. The distortion of the pavilion is therefore twofold: not only is there a physical distortion in the plan's curvature to fit the exedra of the Triennale Palace, simulating a sky-pavilion located on the top of a New York skyscraper,<sup>202</sup> but also an intellectual distortion that loads the project with new meanings and that transforms the space with projections and sound effects situated "in the ambiguous zone lying between the pleasure of physical exercise and that of sexual activity."

Koolhaas accepts playing the game proposed by Teyssot in the invitation letter, in which he gave specific indications to the architect: "We suggest you accept the 'fiction' of a home intended to promote the health and beauty of our bodies and design today, all over again, a 'body building home'."<sup>203</sup> The placement of quotation marks around these words suggests both the seriousness as well as the ambiguity with which the words are to be understood. In the contemporary home one cannot aspire to any balance between body and spirit, but rather the hyperbole—as revealed by images projected on the pavilion—converting corporeal training and the pleasure of sex into hypertrophic obsessions like body building and pornography, activities that are ends in themselves and focused entirely on appearances. "The house will be deconsecrated and open, and will illustrate its perfect adherence to even the most suggestive aspects of contemporary culture." The exhibition hints at action and the aim of the display is "to shake people up and make them aware of the possible 'hidden' dimensions of modern architecture"<sup>204</sup>

The house thus loses definitively its sacred aura of domesticity, of harmony and of cultivation of family values in order to become the space of the body: not of that frail body seeking shelter and protection in Banham's shell, but that other self-sufficient and perfect body seeking to be built and displayed, knowing that the house is the theatrical scene in which we all have the possibility to act, a theme to which we will return in the third chapter.

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<sup>201</sup> See in this regard: Ciucci et al., 1973.

<sup>202</sup> For the significance of this placement see Gargiani, 2006: 69-70; English version, 2008: 124-125.

<sup>203</sup> Teyssot, 1986b; OMA, 1987: 106.

<sup>204</sup> OMA, 1987: 106.

## 2.5 Conclusion

The historical background and the examples discussed in this chapter show that, in the decades after World War II, new kinds of images of dwelling appeared in an attempt to adapt to a new cultural context, searching for formulations now distanced from the early modernist interpretations based on the aesthetics of the machine. In the United States, Britain and Italy, unprecedented ways of designing, building and depicting the domestic environment emerged. Influenced by space race imagery and the consolidation of the techno-scientific infrastructure of the information society, designers attempted to bring architecture closer to “big science”. I have examined different pathways that have led to the reformulation of the image of the house as a technological device.

At the end of World War II, the use of new lightweight materials and largely prefabricated components led to a constructive and formal renovation of the modernist American house, which had hitherto resulted from the adaptation of European modernist design principles to American domestic culture and family lifestyle. Among many other examples, the Case Study Houses promoted by John Entenza in California epitomised the image of the American way of life, contributing to its dissemination throughout the world.

Experimental architecture was a second pathway, highly influenced by a futuristic imagery nourished by advanced technologies, but not specifically directed to their immediate implementation in the real world. The House of the Future by the Smithsons, the work of Archigram and Kurokawa’s capsule architecture are significant examples of an approach focused on design solutions and technologies proceeding from automotive industry as well as from space exploration. The capsule and cockpit conveyed a new idea of living centered more in individuals than in family, blurring the physical boundaries of domestic space through an environment continuously reconfigurable by its inhabitant and made possible by computational technologies. These trajectories led to a questioning of traditional forms of dwelling, creating an aspiration for full freedom of movement over the planet and inspiring models of portable habitats for the nomads of the future.

The exploration of the limits of technology was seen also as a way of liberating man from the constraints of consumerist society, foreseeing a radically different human habitat that dispensed with obsolete concepts such as home and object. As a distant future alternative, Constant and Superstudio envisioned a new society in which human beings would dwell in contact with an apparently “natural” earth surface domesticated by hyper-surfaces that provide everything people may need, allowing a totally mobile, nomadic life. While Constant considered architectural and spatial enjoyment as important factors expressing human creativity in his New Babylon project, Superstudio called for a definitive deletion of architecture and objects, considering them constitutive part of an oppressive society based on power relations, discrimination and status difference.

I discussed also a late-modern approach that focused on the form of technological devices and its semantic signification. The electrical appliances designed by Bellini, Zanuso and Sapper proposed a new and more empathetic aesthetic for communication and connection devices at home. At the same time, modular and adaptable furnishing units from Colombo, Sottsass and Munari attempted to transform some of Archigram’s ideas on flexibility and transformability into

prototypes suitable for use in real spaces, even though with much reduced technological performance.

The last approach discussed in this chapter has shown a more skeptical and ironic attitude, epitomised by the displays of Sottsass, Branzi, Santachiara and Koolhaas at the 17<sup>th</sup> Milan Triennale, in which they reflected on the impact of communication and control technologies upon the domestic environment, or focused on giving new and unexpected meanings to modern architecture from a post-modern hedonistic perspective. Occurring at a time when these technologies had already invaded the domestic sphere, these reflections intended to pose questions to the viewer-dweller on how our relationship with technological devices transforms our perception and use of space as well as our relation with objects, questioning the actual smartness of “smart” homes and the role that humans play in them.

This historical excursus highlights how the period of 1945 to 1986 was fundamental to the appearance of new attitudes towards technology in the domestic environment that are still recognisable today and that are deeply related to the mechanisms through which innovation becomes accepted by society and by the collective imaginary.

However, polarised positions also become evident. On the one hand, realistic attitudes that intend to construct new domestic environments using new materials, construction techniques and products are set out, while on the other utopian positions dealing with the extreme consequences of a technology dominated world are defined. In the latter case, some, such as the Smithsons and Archigram, opt for substantially progressive interpretations that see in technologies that enable new ways of living the promise of improving the human condition, while others such as Superstudio and Constant see it as a promise of deliverance from the bondage of capitalism and consumption. Finally, a third group no longer confers any redemptive power upon any magical aura, but warns of the capability to transform the domestic scene and determine human behavior. It is noteworthy that most of the works mentioned in these last three groups prefigured technologies largely not available at the time, but futurible. This step of anticipating possible applications of a forthcoming technology in the development of specific services and devices for domestic space was undertaken from the mid-1980s onwards and will be examined in the next chapter.



# Chapter 3



## **Chapter 3**

### **Living In the Information Era: Functions Follow Flows**

Chapter 3 is intended to examine some of the central questions in defining the contemporary domestic environment. These are problems that are obviously more widely dealt with in the current debate and which here will be considered reference points for reflection on inhabiting, or better still on the difficulty of conceiving models for contemporary inhabiting while globalisation casts doubt on many of our customs and ways of thought.

My reflection proceeds from the consideration that in the information society, even more than in the previous paradigm of modernity, the notion of change has acquired new importance that affects many areas of life, including that of dwelling. However, assuming transformation as the core of existence is not easy, since it involves an ongoing challenge to the extent that we do not want to see change as just superficial fads or as something conditioned by the imperatives of consumption. So I think that if we are going to interpret inhabitation from a perspective of change, we must first frame it within a consideration of the concept of becoming, and secondly we must discuss how changes in the perception of the dimensions of space and time also end up affecting our ideas about identity and dwelling. Focusing on the home means focusing on the traces that our existence leaves, and implies also reflecting on the need of each new generation to reformulate the concept of the domestic in tune with the times in which we live. Our time is not only shaped by change and mobility, but also by technology. Here I'm not referring to the obvious statement that technology has always been a fundamental part of history of mankind, but instead to the fact that nowadays, more than ever, our existence is deeply shaped by technology and our lives are changing according to the unprecedented pace of technological shifts. The Information Society is a clear example of this condition. Starting with this evidence, in this chapter I attempt to define some keys to interpreting and understanding how a discourse on domestic living can be articulated in relationship with recent technological shifts, investigating the limits and new perspectives of habitation in a technological age.

The key points focusing the discussion may be summed up as follows: The experience of inhabiting has changed because in the information society a different perception of space and time coordinates exists. As a result, contemporary life is developed in a physical and spatial dimension related to places, and in a virtual dimension related to the physically inaccessible but extremely real space of information flows, which together characterise contemporary inhabiting. In daily experience these two kinds of spaces are not perceived as alternatives, but rather as

complementary, although their connection is not always easy and problem-free. From this expansion of human experience through electronic extensions, new forms of understanding physical and mental spaces of domesticity appear that settle on the basis of visions of house as home and house as device, and end up also generating new forms of understanding identity.

The following three sections deal with the aspect of functional restructuring and focus on three significant concepts for the functional redefinition of domestic space. Functionalist interpretations have always affirmed that the need for protecting the body is the primary reason of the house. The house is an extension of the body, designed to satisfy physical requirements of security, comfort and the development of material processes of life. According to this point of view, the house is a technical device whose complexity has increased, not only in materials and components, but also as a whole system. Traditionally, such a protective function was played by passive elements answering to fairly simple requirements. Since the end of the 19<sup>th</sup> century the house has increased its technical complexity with the introduction of new devices, initially mechanical, later electrical, that increased comfort standards. The metaphor of the house as a technological habitat was a constant concern for architects and designers during 20<sup>th</sup> century, inspired by the inanimate model of the machine (Le Corbusier, Fuller, Archigram) or by the evolutionary model of the organism (Steiner, Kiesler). During the second half of the last century in design culture the concept of function has also evolved thanks to the contribution of semiotic studies and communication theory. The traditional view of the modern movement focusing principally on the so-called practical functions has been replaced by a broader interpretation that includes aesthetic and symbolic functions that play an important role in transmitting the intangible values of a space or an object. In last decades this approach has shifted toward the idea of the house as an intelligent and programmable organism, capable of providing a flexible and partly autonomous response to users, capable of taking care of itself at the same time it takes care of us. The traditional pattern of man taking care of a place should be reformulated in terms of partnership between man and object. The computerisation of the house extends far beyond traditional communication devices and expands into domestic walls, involving aspects of environmental comfort and control, from security to climatic parameters, from objects to services, under the definition of domotics and smart home. In the automatic home the body seems to be an object less and less active in perception and experience, a still necessary shell approaching obsolescence due to its powerful prostheses. In the digital house, interfaces take an unprecedented prominence, which involves other interesting aspects such as cognitive ergonomics. What are the limits of such a digitalisation of functions? Despite those futuristic models that define different *concept houses*, it seems that advanced domestic digital technologies have not yet reached sufficient equilibrium between costs and benefits. At the moment those proposals are research fields of major electronics companies, but have only partial application on wider scale.

On the one hand, the social changes, the transformations in the area of the family and the increased expectations regarding quality of life have burdened domestic space with new functional demands that were not originally contemplated or which did not even exist when many dwelling were designed. I suggest reflecting on the transforming role of these new functions by grouping them around three references: the media (functions of connection, communication and information), work (functions of production, management and preservation) and body (functions of protection, comfort and representation).

### 3.1 Inhabiting as the Art of Becoming

The crisis of the concept of living as permanency runs throughout the history of the 20<sup>th</sup> century architecture and the transformations that have occurred in recent decades have further accentuated the belief that it is necessary to reformulate the concept of dwelling on the basis of a dynamic model that takes into consideration new space-time coordinates and the paradigm of mobility, with the aim of offering an interpretation that comes closer to contemporary sensibilities. In this context, I will discuss some concepts that may be useful to propose a new interpretation of living as art of becoming, which describes the relation between the subject and domestic space in a lifelong perspective.

#### 3.1.1 Paradigms of Becoming

Before addressing in detail some of the points that might be useful for reformulating a theory of habitation from the perspective of change, it is necessary to see how the concept of ‘becoming’ has occupied an important place in philosophical thought from its origins to the present. Although this is clearly not the venue for a complete discussion of such a vast and complex subject, I think it may help to mark some points of reference that will also be useful for discussing the approach to ‘becoming’ formulated by Deleuze and Guattari, which has been one of the most original contributions of the past decades.

From its origins Western thought has been nourished by two ontological views that privilege either a static conception of being, such as Parmenides’s eternally immovable and immutable being, or a dynamic vision that calls for constant transformation and dialectic of opposites, such as Heraclitus’s theory of becoming. In fact, in its original formulation the concept of becoming can be interpreted as a pre-Socratic philosophical response to the difficulty of explaining multiplicity from the point of view of a primordial substance that is unique and immutable. The solution provided by Heraclitus was to assert that the essence of being is not its immutability but in transformation, that is to say, the permanence of impermanence. Consequently, only becoming can be affirmed as the unique and true first principle (λόγος), represented by fire, the element which symbolises life, movement and destruction. However, this idea is opposed by Parmenides’s equally incontrovertible affirmation, which argues that becoming only exists in appearance, since transformation from non-being to being cannot take place: things appear as a permanent state of becoming, but they actually *are*.<sup>205</sup>

In ancient thought one of the possible ways to overcome this aporia was indicated by Aristotle in *Physics*.<sup>206</sup> Based on the evidence that beings are subject to becoming in

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<sup>205</sup> For a wider discussion on this issue see Cisney (2013: 1.a and 1.b), who argues that Parménides, in his defense of the immutability of being, champions the capacity of the philosopher to go beyond appearances, about which Heraclitus’s theory of becoming, on the other hand, maintains a “non-philosophical” attitude.

<sup>206</sup> Aristotle’s *Physics*, which is usually dated to 350 BC, seems rather to be a collection of the philosopher’s texts assembled by his disciples, like most of his philosophical works that have reached us, and is divided into eight books, of which the first four deal with nature and the last four more specifically with movement. Among other publications, see: Sachs, 1995.

the world of the senses, and refuting both the theories of Parmenides and Heraclitus, Aristotle proposed the existence of multiple modes of being and considered generation as the form of passage from non-being to being.<sup>207</sup> Becoming is considered a form of motion (κίνησις or μεταβολή) belonging to the sublunary world; one which Aristotle moreover describes as a passage from *potentiality* to *actuality* through the intervention of an efficient cause or *mover*.<sup>208</sup> In the Aristotelian system, becoming results from four types of motion –generation and corruption (in substance), alteration (in quality), increase or decrease (in quantity), translation (in place)– that are the cause of all possible transformations and that were accepted as unquestioned philosophical principles until the end of the Middle Ages.<sup>209</sup> Aristotelian physics thus became the general framework for the study of all natural phenomena, setting out to investigate its principles using a method based on logic and empirical observation. In this domain, becoming is explained based on the concept of motion, which in turn refers to the existence of a polarity of opposites, but also to the existence of a transcendental principle represented by the Prime Mover, guarantee and ultimate explanation of the universe, that declares the failure of physics and the need for a metaphysics able to arrive through logic toward that which can not be investigated and known from experiencing the world of the senses.

The modern thought that emerged from the scientific revolution of the 17<sup>th</sup> century, while questioning Aristotelian theories, discussed becoming from a mechanistic perspective, considering it primarily a variation on the physical problem of motion, as is evident in Newton and Descartes.<sup>210</sup> Enlightenment thought, on which the paradigm of modernity is based, and beyond any of its authors' more specific interpretations, largely affirmed a worldview based on the transformation and reflexive appropriation of knowledge: definitely asserting a paradigm of becoming that places concepts of reason, research and progress in opposition to a paradigm of permanence based on consolidated values such as faith, authority and tradition. As we will see, this change also implied the shift from a circular model of time to a linear and progressive model.<sup>211</sup> Therefore, one could argue that modern science fully assumes the paradigm of becoming to the extent that they propose to explain not only the fundamental properties of matter and living beings, but also the dynamics of change in different realms of society.

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<sup>207</sup> The hypothesis of the multiple forms of being is discussed in Book I in which, in addition to demonstrating the false conclusions which the theories of being of numerous earlier philosophers including Heraclitus and Parmenides led to (Physics, I.2 and I.3), Aristotle establishes the first principles governing multiple ways of being: the *form* and its opposite, the lack of form or *privation*, and the *substrate* or matter, defined as that which persists after a process of change (Physics, I.6 and I.7).

<sup>208</sup> The discussion on potentiality and actuality is the issue of the first part of Book III in which Aristotle analyses motion in terms of change (Physics, III.1 to III.4).

<sup>209</sup> The four species of movement are described in Book V. The most general of them is translation, which implies a change in place and is present in every case of motion. The most controversial is generation and corruption, which implies changes in substance. As the substances do not have opposites, they do not properly become in the sense of motion, because according to Aristotle motion implies a change between two opposites (Physics, V.1).

<sup>210</sup> According to Descartes "motion (...) is nothing more than the action by which any body passes from one place to another." (Principles, II, 24).

<sup>211</sup> The concept of progress implies a dynamic model according to which humankind moves forward, moves toward a goal of improvement of life (usually material, sometimes spiritual) conditions. This idea was fundamental in Western culture from 17<sup>th</sup> century onward. On this issue see: Nisbet, 1980 and, for a synthetic discussion Slack and Wise, 2005: 9-25.

In the 19<sup>th</sup> century, becoming figures prominently in the Hegelian system, which interprets reality as a process subject to the fundamental law of dialectics. Hegel thus acknowledges the intrinsically complex and contradictory nature of reality, understood as a tension of opposites that is overcome by the mediating intervention of a reason that thinks the contradiction through in order to overcome it. This dialectic is structured around the principles of affirmation, opposition and overcoming (traditionally described as thesis, antithesis and synthesis), the mechanism through which the transcendent principle of the Spirit creates itself and from which history can also be explained teleologically as a path towards the realization of the Idea.<sup>212</sup> As noted by Deleuze (1968: 41 and 266-267) Hegelian dialectics places difference at the center of becoming only in appearance, configuring it in reality as a thought based on the logic of the identical. In fact, Hegelian dialectics, connecting with the discussion of the Presocratics, understands becoming as a synthesis that encompasses and overcomes the two opposing terms of being and non-being only in appearance, therefore denying difference-in-itself when it admits that there is a synthesis, becoming, that achieves a higher unity between opposites.<sup>213</sup>

Following the observation of Deleuze, it is possible to recognize another form of approximation to becoming that remains in the plane of immanence, turning to the ideas formulated by Nietzsche and Bergson.

For Nietzsche existence is formed by the interaction and the play of many forces that can not be reduced to a single principle, and his philosophy can be interpreted as a plan for becoming what one is. This implies the need for the subject to be free from psychological and intellectual inheritances, forging their identity through a process of self-realization that does not need to be grounded in any transcendental concept. If human existence is manifested primarily in an expression of a will to power that unfolds in a world without beginning or end, eternally changing, the problem of becoming becomes how to find a path towards a creative transformation capable of accepting and also overcoming the eternal recurrence of sameness.<sup>214</sup> Again, it was

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<sup>212</sup> The most complete picture of the dialectic of history is presented by Hegel in the central section of the *Phenomenology of Spirit* (1807), titled *Der Geist* (Spirit).

<sup>213</sup> The concept of being is in fact at the core of Hegelian Logic, which the philosopher developed in *The Science of Logic* (1812-16) out of the first dialectical triad. If being is considered the most abstract and absolutely indeterminate concept, lacking any content whatsoever even if it implies all content, it can be understood how being is in reality at once *everything*, because nothing can exist outside of it, and *nothing*, because it is impossible to grasp or intuit anything in a being. Its antithesis, non-being, is equally elusive: when we try to think it through and affirm it is nothing, it becomes in reality identical to the concept of being. Becoming is thus configured as an overcoming of opposites, a synthesis of being and non-being, in the sense that what it becomes still remains itself, but is no longer what it was before. Becoming is for Hegel that which allows an indeterminate being to become a determinate being, or *Dasein*, which has a quality that determines it (it is something and not something else) and which is further specified as being in itself or *Insichsein* that is a unity with itself. This mechanism allows passage from the "dialectic of being" to the "dialectic of essence" and finally the "dialectic of concept", since it allows the foundation of being to be captured through a process in which a subject reflects upon an object to capture its essence, and from which it is possible to arrive at the formation of a concept, i.e. an understanding that places the specificity of the object within the framework of universality guaranteed by reason, which finds its highest expression in the Absolute Idea. Among the numerous studies on the subject, see: Bencivenga, 2000; Burbidge, 2006.

<sup>214</sup> The theme of eternal recurrence was addressed in several works by Nietzsche. In one of the letters collected in the posthumous fragments 1881-1882 eternal recurrence is seen in a cosmic perspective, noting how in a finite world and an unlimited time it is likely that the same events would repeat themselves over and over again. In *The Gay Science*, 341 (1882) the hypothesis of an infinite repetition of the life of a person with all their events, thoughts and feelings is conceived as a prison sentence or a

Deleuze (1962) who interpreted Nietzsche's eternal recurrence not as a repetition of the same, but as a selective affirmation of difference regarding the element that makes change possible within the framework of a process of becoming.<sup>215</sup> According to Deleuze, Nietzsche provides affirmation of a new vision of time that differentiates itself from the circular view of the time of the seasons as well as from the myth marked by repetition and habit along with the linear view of Kantian origin in which nothing is repeated, turning the past into a meaning that can only be learned as memory, that is to say, through an interpretative synthesis of something that has never existed as such. Deleuze proposes instead to consider repetition as "form of time", associating it with the concept of difference, arguing that only when beings are repeated as something different they reveal their disparateness. Difference can be understood as the essence of that which exists and repetition never appears as a repetition of the same if seen under the perspective of the eternal return. In conclusion, these three forms of time describe the present, the past and the future: habit as the time of present, memory as the dimension of the past and the eternally returning repetition as the time of the future.<sup>216</sup>

With Bergson, the association of becoming with time takes on the new significance of the "duration of consciousness", which emphasizes the importance of the psychological experience of the subject also in the perception of a seemingly "objective" dimension such as time. Bergson (1889, 1907) interprets existence as a ceaseless flow in which the human being passes from one unique and unrepeatable state of consciousness to another. In this steady flow in which the future becomes the past going through the present, each moment is attached to and preceding it happens and is consciousness that gives a qualitative difference that makes it unique and variable duration based on the experience of the moment. Seen from the subjective point of view, the perspective of time is reversed. Admitting that the stream of consciousness is the reality most proper to the human being, one must admit that duration is the most proper form of perception of time, and that the idea of time as a succession of moments all equal, evenly divisible and measurable in physics is a construct of intelligence<sup>217</sup> that tries to set in a rigid and abstract

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prize, depending on whether the human being has really been able to live intensely and freely every moment of his existence. In *Thus Spake Zarathustra* (1885) the eternal recurrence is discussed as a truth that man discovers and which introduces cracks in both his circular or linear perception of time, suggesting that the eternal recurrence does not have to scare the man who, once he overcome his fears, has attained the status of superman. The interpretation of this concept has been in any case one of the most debated arguments of Nietzsche's thought. For a discussion on the subject, see: Vattimo, 1991: 81-94.

<sup>215</sup> This issue was already discussed by Deleuze in *Nietzsche and philosophy*, especially in Chapter 2, (1962: 44-82), where he affirms that "The eternal recurrence is the being of becoming." (1962:81) and expresses the idea that the subject of the eternal recurrence is not the same but the different. "According to Nietzsche, the eternal recurrence is not a thought of the identical, but a synthetic thought, a thought of the absolutely different that claims for a new principle beyond science. Such a principle is the reproduction of the different-in-itself, that of the repetition and the difference." (1962: 52-53)

<sup>216</sup> Deleuze, 1968: 96-168. For a wider discussion of the deleuzian reception of the problem of time, see: Roffe 2005: c. "Repetition and Time".

<sup>217</sup> For Bergson there are two complementary paths to knowledge: intuition and intelligence. Intuition is a moment preceding intelligence: it tends to be more abstract and allows us to approach the object with empathy and to understand it. Intelligence is primarily directed toward a practical, operational and specific purpose that privileges action and is therefore fundamentally analytical. See: "Pensiero di Bergson", in Wikipedia, Italian version.

Available at: <[http://it.wikipedia.org/wiki/Pensiero\\_di\\_Bergson#cite\\_note-7](http://it.wikipedia.org/wiki/Pensiero_di_Bergson#cite_note-7)>. Accessed: 24 September 2013.

structure that which for consciousness is actually a continuum of varying lengths and speeds which is our inner reality.<sup>218</sup>

To a large extent, the approaches mentioned in this brief discussion represented the foundation from which Deleuze reinterpreted becoming throughout his work, formulating an ontology and epistemology distanced from large remote totalizing systems that attempt to explain and represent the world and the I from transcendence, like Platonism, mechanism or Hegelianism. For Deleuze (1953), as for Hume, in whose thought the source of some of his ideas can be found, action prevails over the existence and becoming prevails over being. Consequently, the subject is defined as the effect of a process, i.e. as an entity that has become ontologically, that is not a primary principle of knowledge of reality, but a multiplicity of perceptions that in time become a subject, that in turn actively transforms itself through the effect of contact with the world.<sup>219</sup> Therefore, neither the subject nor things have to be considered as stable entities formed on the basis of a fixed and permanent structure, but rather as synthetic processes that imply a becoming. If becoming is the ontology of the subject and of things, it stands to reason that difference is a more important trait than identity, and indeed Deleuze's thinking has been defined as a philosophy of difference.<sup>220</sup>

It has been observed (Leon Casero, 2013: 3.1) how in the work that Deleuze did with Guattari these ontological assumptions have an initial practical application in the formulation of a new psychoanalytic theory (Schizoanalysis) which enables man to freely change his subjectivity by decoding social codes on the basis of which his unconscious was initially formed. The reconfiguration of this new subjectivity is made possible by the concept of the rhizome, which is to some extent the opposite of the concept of the tree that is proper to philosophies of transcendence. The rhizome is a configuration that “is not amenable to any structural or generative model”<sup>221</sup> in which “any point (...) can be connected to anything other and must be”<sup>222</sup> and in which in reality “there are no points or position (...), such as those found in a structure, tree, or root” but “there are only lines”<sup>223</sup>, and that, moreover, if cut or interrupted, is always able to re-develop from the remaining part.<sup>224</sup> Because of its

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<sup>218</sup> Bergson addressed the issue of duration, an idea that he had already formulated in his 1889 doctoral thesis, in the first chapter of *Creative Evolution*, where he resumes his ideas as follows: “If I want to mix a glass of sugar and water, I must, willy nilly, wait until the sugar melts. This little fact is big with meaning. For here the time I have to wait is not that mathematical time which would apply equally well to the entire history of the material world, even if that history were spread out instantaneously in space. It coincides with my impatience, that is to say, with a certain portion of my own duration, which I cannot protract or contract as I like. It is no longer something *thought*, it is something *lived*. It is no longer a relation, it is an absolute.” (Bergson, 1907; Eng. transl., 1911: 9-10)

<sup>219</sup> “Philosophy should be constituted as the theory of what we do, and not as the theory of what it is. What we do has its principles, and Being can never be grasped other than as the object of a synthetic relationship with those very principles of what we do.” (Deleuze, 1953; Sp. transl., 2007: 148)

<sup>220</sup> As has already been shown, this concept was developed by Deleuze in the study on the concept of eternal recurrence in Nietzsche. Cisney (2013) has situated the thought on difference in Derrida and Deleuze, that he defines “differential ontology”, in the framework of the history of Western philosophy, stressing the originality of the approach of the two French thinkers. “We can say that Derrida and Deleuze are the two *key* differential ontologists in the history of philosophy. While others before them were indeed thinkers of multiplicity, as opposed to thinkers of identity, none, so rigorously as Derrida and Deleuze, came to the conclusion that what was required in order to truly *think* multiplicity was an explicit formulation of a concept of difference, *in itself*.” (Cisney, 2013: 4)

<sup>221</sup> Deleuze and Guattari, 1980; Eng. transl., 1987: 12.

<sup>222</sup> Idem: 7

<sup>223</sup> Idem: 8

<sup>224</sup> The concept of rhizome is widely discussed in Deleuze and Guattari, 1980; Eng. transl., 1987: 1-25.

ability to challenge the structures of knowledge of Western culture, the rhizome raises the possibility of all kinds of "becomings".<sup>225</sup>

The rhizome is therefore a principle of continuous variation, impossible to encode a priori, which follows its own internal logic and allows maximum connection to the other and the transformation of subjectivity. Despite its unpredictable settings, the rhizome follows planning rules or diagrams representing the open possibility of intensities that promote the creation of a new kind of reality. The rhizome therefore guarantees the possibility of a becoming in which creativity and experimentation are located in the center.

Viewed from the perspective of the subject, becoming is the mechanism that allows the encounter and relationship with otherness, with the alien, without the subject being forced to give up their identity. Becoming implies a change that makes the subject have a different relationship with their existence, since it is placed in front of the other, pushing him out of himself and putting oneself into discussion. The event is made possible by the existence of two irreducibly different experiences that can not be put together, but that do mutually implicate each other. Each of the two parties involved has caught something from the other and from this moment a becoming common to both by virtue of the relationship that has been established between them comes into being. Although the relationship ends up modifying the two parties, it does not imply neither an imitation nor an identification, but rather finding a middle ground between two entities which become:

A becoming is always in the middle; one can only get it by the middle. A becoming is neither one nor two, nor the relation of the two; it is the in-between, the border or line of flight or descent running perpendicular to both. If becoming is a block (a line block) it is because it constitutes a zone of proximity and indiscernibility, a no-man's-land, a nonlocalizable relation sweeping up the two distant or contiguous points, carrying one into the proximity of the other (...).<sup>226</sup>

The two elements, while maintaining their individuality, become united by a common destiny. Deleuze and Guattari (1980; Engl. transl., 1987: 279) describe multiples forms of becoming, or "segments of becoming", ordered a sort of progression, involving forms of the human (becoming-woman, becoming-child), of

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<sup>225</sup> The principal characteristics of the rhizome are summarized as follows: "Unlike trees or their roots, the rhizome connects any point to any other point, and its traits are not necessarily linked to traits of the same nature; it brings into play very different regimes of signs, and even nonsign states. The rhizome is reducible neither to the one nor the multiple. (...) It is composed not of units but of dimensions, or rather directions in motion. It has neither beginning nor end, but always a middle (*milieu*) from which it grows and which it overflows. (...) Unlike a structure, which is defined by a set of points and positions (...) the rhizome is made only of lines: lines of segmentarity and stratification as its dimensions, and the line of flight or deterritorialization as the maximum dimension after which the multiplicity undergoes metamorphosis, changes in nature. (...) Unlike the tree the rhizome is not the object of reproduction (...). The rhizome operates by variation, expansion, conquest, capture, offshoots. (...) The rhizome pertains to a map that must be produced, constructed, a map that is always detachable, connectable, reversible, modifiable, and has multiples enterways and exits as its own lines of flight. In contrast to centered (even polycentric) systems with hierarchical modes of communication and preestablished paths, the rhizome is acentered, nonhierarchical, nonsignifying system without a General, and without an organizing memory or central automaton, defined solely by a circulation of states. What is at question with rhizome is a relation to sexuality –but also to the animal, the vegetal, the world, politics, the book, things natural and artificial– that is totally different from the arborescent relation: all manner of "becomings." (Deleuze and Guattari, 1980; Engl. trans, 1987: 21)

<sup>226</sup> Deleuze and Guattari, 1980; Engl. transl., 1987: 293.

non-human (becoming-animal, vegetable, or mineral), and of the biological and the physical (becomings-molecular, becomings-particles). They all are segments rushing toward a becoming-imperceptible, “the immanent end of the becoming, its cosmic formula”. It is seen therefore that this relationship with the other refers not so much to an other-self, but rather a other-from-self, which involves an interaction with what is not human, with which it represents another expression of a possible world. Reaching the limit, Deleuze and Guattari suggest that in reality all becomings are essentially molecular:

That is because becoming is not to imitate or identify with something or someone. Nor it is to proportion formal relations. (...) Starting from the forms one has, the subject one is, the organs one has, or the functions one fulfills, becoming is to extract particles between which one establishes the relations of movement and rest, speed and slowness that are *closest* to what one is becoming and through which one becomes.<sup>227</sup>

As Zourabichvili (1997: 9-10) points out, becoming is a way of thinking about encounters and what is produced through this interaction process in terms of the resonance of sensitivity of one within another, without losing awareness of the irreducible gap that separates the two terms: the encounter with the other “has made us feel differently; has made us reach a zone of ourselves where we do not recognize ourselves and where feeling otherwise makes us feel equally ourselves, but in a different way.” This is then the dimension in which becoming occurs. It does not imply a renunciation of subjectivity, nor a mystical fusion with another being, but rather an immanent synthesis of the heterogeneous.

Despite the success that Deleuze has had among architects in recent times, I believe we should be very wary of applying terms from philosophical discourse to other, more concrete fields like architecture, because of the evident risk of trivializing or misinterpreting them.

In any case, from a broader perspective, interest in a philosophy of becoming and difference is indicative of the new sensitivity of an era that, like ours, is characterized by changes much more than by permanences. However, it is interesting to note how the perspective from which we study becoming has changed dramatically, suggesting that it is essentially an experience linked to the perception of the subject rather than an external objective reality, and this also has to be addressed from a recognition of differences rather than one of similarities. As Deleuze suggests, becoming is only possible at moments when an irreducibly different other is also in existence. Despite the much greater extent of the concepts I commented below, I agree that becoming does not imply a renunciation of subjectivity, but rather its affirmation from a position where a meeting ground with otherness can be found. From such a principle, it is possible to entertain the notion that habitation is a form of becoming in the sense that living does not involve the repetition of sameness. Instead of recognizing the subject in a crystallized image of space with its surrounding objects, this implies an active process in which the subject enters into a dialectical relationship with its surroundings, necessarily making its process of living a form of becoming. Therefore, inhabitation should be understood as an art of becoming not only because the human being is exposed to a passage of time and circumstances

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<sup>227</sup> Idem: 272.

that transform his material needs, but also because their space and objects imply the exploration of an area in which the subject is compelled to reflect on its own identity through a relationship with difference. We may thus dare to draw a parallel between the Deleuzian interpretation of the concept of eternal return as the return of difference and habitation, understood not as a return to a *habitus* marked by strenuous routine that is always the same, but as a return to a domestic space of difference configured in accordance with our rhizomatic becoming.

### 3.1.2 The Transformation of Space-Time Coordinates

One of the most important effects of the development of information technologies has been the integration of different media in a system of global communication, which has been defined as mediasphere, datasphere or cyberspace.<sup>228</sup> There is broad agreement among researchers that in this new post-modern or information environment the perception of space and time has changed. Harvey (1990; It. transl., 1997: 295-374) associates the condition of modernity with a progressive understanding of space-time that must later be accelerated with post-modernity, producing important consequences on forms of thinking, feeling and acting. Virilio (1999) classifies a series of temporalities that are doubted by others whom I have mentioned: the universal and *world time* of information flow studies replacing all of the *local times* that had known how to make History; a *superficial time* produced by the immediate presentation of events enabled by remote interaction, which replaces a *deep time* of the millions of years of geological phenomena; the *time-light* of a virtual reality, of telecommunications, which even modifies the truth of all duration and causes an acceleration of reality (things, beings, socio-cultural phenomena), as opposed to the *time-matter* of the geophysical reality of places.<sup>229</sup> According to Castells (1996), this system is characterised by the construction of a real virtuality, an area where reality is captured and restored in a scenario of virtual images in which make believe becomes a powerful instrument for creating reality. This new dimension in which information circulates on a planetary scale and (potentially) in real time, has led to redefining the perception of space and time coordinates. In this context, the Catalan sociologist has proposed the terms *space of flows* and *timeless time* to define the two fundamental categories of the culture of real virtuality.<sup>230</sup>

Based on the consideration that “space is the expression of society”, according to Castells it is reasonable to think that the information society generates “new spatial forms and processes” that raise questions about the effectiveness of the concept of

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<sup>228</sup> The term “cyberspace” was coined by science-fiction and cyberpunk novelist William Gibson, who used it for first time in the short story “Burning Chrome” (1982) and popularised it with his novel *Neuromancer* (1984). According to Gibson’s description, cyberspace is a datascape, a virtual environment generated by the attempt to give a visual form to the complexity of the data flows “Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts... A graphic representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the non-space of the mind, clusters and constellations of data. Like city lights, receding.” (Gibson, 1984: 67). By the 1990s the term became a synonym for the internet, and later the World Wide Web, both in academic and digital culture contexts, in reference to objects and identities existing within the communication networks. For a wider discussion on approaches to cyberspace, see: Bell and Kennedy, 2000; Bell, 2001. On the other hand, the term “cyborg” defines a new kind of organism, part animal and part machine, and was coined in 1960 in the framework of the space race experiments (Clynes and Cline, 1960).

<sup>229</sup> Virilio, 1998; Sp. transl., 1999: 129-159.

<sup>230</sup> Castells, 1996: 376-428 and 429-468.

space as “the material support of time-sharing social practices”, which until recently had been widely accepted in social theory.<sup>231</sup> While up to the end of the 20<sup>th</sup> century it was considered that said social practices had to be simultaneous and associated with forms of contiguity, the study of dominant practices in the information era have revealed that material supports of simultaneity also exist that are not based on physical contiguity. Present society is built rather around flows, which are not only elements of social organisation, but also the expression of the processes dominating economic, political and symbolic life. It may therefore be said that the new spatial form characteristic of the network society is the space of flows, which, according to Castells, is based on three layers of material supports. The material basis of the network society is formed by a circuit of electronic impulses –integrating microelectronics, telecommunications, computers, broadcasting systems and information’s superhighways– that shape a network topography in which “no place exists in itself, since positions are defined by flows” defining the new spatial organisation of the main functions of our society. The second layer consists in a system of nodes and hubs, which reveals how the space of flows is still based on places, although their structural logic is independent of them, for it connects areas with social, cultural and physical characteristics still well-defined. The functions that must be fulfilled by each network determine the characteristics of the places that will become their hubs and nodes. The places in turn occupy a place in the network according to this criterion, although the hierarchies can change. In fact it might be possible to question whether these principles are entirely new, despite their new formulation in informational terms. The last layer represents the spatial organisation of the new elites that move in a cosmopolitan space of airports, hotels, shops and resorts substantially different from the local space of people, living in “secluded communities retrenched behind the very material barrier of real estate pricing” and that adopt specific lifestyles and dressing codes.<sup>232</sup>

Even coexisting with other spatial modalities, the space of flows is the dominant expression because it represents the logic of dominant functions of our society and the cosmopolitan elites that move within it. Therefore, according to Castells, a division exists between the experience of uprootedness and approval of values driven by the elites that need a recognisable space somewhere in the world, and the local dimension of people whose lives and experiences are rooted in places, in their culture, and in their history. In the informational society architecture loses its capacity of expressing a meaningful relationship with people and becomes an ahistorical and acultural construction communicating the interests and values of the dominant globalised elites. Thus Castells interprets architecture as an expression of the dominant powers, which impose their control logic and rhetoric about space, while trying to communicate the dominant values of the society they represent. In fact, one could argue that power has always used architecture to be represented and has sought to project its image on space and to transmit it over time. As Tafuri has widely discussed in his work that covers all the modern history from Renaissance to 20<sup>th</sup> century, this transmission is not linear in any case, because it involves many different factors and because power reveals also tensions and conflicts behind its mask. To a certain extent, it seems obvious that the architecture of airports, hotels and railway stations express the generic and impersonal nature of the space of flows. However, the discourse is not very discredited when the space of flows also enters

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<sup>231</sup> Castells, 1996: 410-411.

<sup>232</sup> Castells, 1996: 416-417.

into our homes and forces us to reconsider the forms of the domestic, the private, the individual.

Information technologies also substantially change the perception of time. On the one hand, the universal, shared value of the linear, irreversible, measurable and predictable time of clocks is weakened. It is not only a question of relativisation of time according to local social contexts, but of a deeper transformation aimed at creating what Castells calls a 'timeless time' where technology is used to get away from the specific contexts and to selectively appropriate any value that can be used in building an eternal present.

A second aspect refers to the modification of certain basic coordinates of human existence: the work modes inside the network company, in the context of which time, like people, becomes a further resource in the productive process and is managed as such; the blurring of the life cycle which leads to a rupture of the schemes of order and biological and social rhythmicity, as shown by the prolongation of the duration of life, the control and unconventional forms of reproduction; the occurrence of events in real time and in the media sphere, which influence the capacity for reaction or directly affect the construction of opinions.

Therefore the culture of real virtuality associated with multimedia means that time is defined under the categories of simultaneity and timelessness. Globalised information gives an immediacy of real time.

The mixture of times in the media, within the same channel of communication and the choice of the viewer/interactor, creates a temporal collage, where not only genres are mixed but also their timing becomes synchronous in a flat horizon with no beginning, no end, and no sequence. The timelessness of multimedia hypertext is a decisive feature of our culture, shaping the minds and memories of children.<sup>233</sup>

A culture of the eternal and the ephemeral is produced. Of the eternal because it reaches the whole sequence of cultural expressions, of the ephemeral because each specific sequence depends on the context and the objective for which a certain cultural construction is required.

Such a new perception of spatiality and temporality is superimposed on consolidated structures and creates a difficulty in facing the different forms of spaces and times, influencing the development of relations and social structures. Timeless time belongs to the space of flows, whereas temporal discipline, biological time, etc, characterise places, materially structuring and deconstructing our segmented societies. According to Castells these new forms of space-time perception are not in a predetermined relationship, but one that is potentially conflictive, between globalisation and localisation, between a space of the flows interpreted as a space of power and knowledge and a space of places like the space of people. However, I think it is necessary to say that the term 'place' seems to have two different meanings when we talk about it in the context of the space of flows, one where it indicates the location at a certain strategic point of a territory or network, and another when it talks about a place with reference to people's space, where it rather indicates a connoted area with specific affective or psychological characteristics that approach the concept of *genius loci*. In all of the above interpretations related to the

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<sup>233</sup> Castells, 1996: 462.

ideas of the domestic, inhabiting is based on the permanence of a relationship that binds man with a certain place on earth and with characteristics that also deeply mark people. If we consider our present relationship with places, which tends to be less and less stable from the physical and mental points of view, we can find reasons for crisis. Not only do we find it hard to imagine our relationships as permanent or lasting, but also the idea of this stability seems excessively binding, for it goes against the continuous *novitas*, the continuous transformation that the acceleration of events of media reality transmits and imposes on us.

But even if we subscribe to Castells's reading, it should be noted that time has shown how frequenting the space of flows is an increasingly shared experience not only for the elite members of the information society —elites have always ultimately sought marks of distinction— but for a growing number of people on the planet; all in the context of a reformulation of our existence based not so much on the static model of a space of places, but on the dynamic model of mobility, which in recent decades has constituted one of the most innovative fields of research in the social sciences as well.<sup>234</sup> In fact, I think the interest in the mobility paradigm represents a more appropriate interpretive category to describe a new social and cultural context based on transformation rather than on permanence; that sees the emergence of a society built on the idea of speed, that unites digital mobility and physical mobility and that, therefore, obliges us to reformulate the concepts of place and of dwelling. It is precisely in the experience of mobility and travel that we find the principle that throws into question the notion of dwelling understood exclusively as the construction of a place, raising the need for a new interpretation based on both mobility as well as on permanence understood not as opposites, but as two elements that are mutually implicated; like the terms of a dichotomy. This approach also allows us to understand the space of flows and the space of places as two sides of our contemporary spatiality, and as the expanded context in which information-age social relations are constructed.

Researchers have widely discussed the characteristics and problems of the new environment created by the information technologies. If Castells's analysis has contributed to specifying the economic and social traits of the era of information, Javier Echeverría's proposals seem significant to me in understanding some of the distinctive properties of this new area, which he calls Third Environment or E3.<sup>235</sup> The term information society would not be sufficient to describe this phenomenon, as this is a larger transformation based on a new space of interaction between human beings, which especially affects all aspects of life (production, work, trade, money, writing, personal identity, idea of territory and memory, politics, science, information, communications and economy). In developing the hypotheses considered in *Telepolis*, Echeverría has suggested that E3 might be conceived as a global city, electronic, digital and technological, where conditions are provided for developing many of the public activities that are private and intimate in an analogical urban environment. Understanding the city as a social space where actions and interactions are developed between people more than as an architectural

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<sup>234</sup> See: Urry, 2000, 2007; Kaufmann, 2002; Cresswell, 2006; Larsen, Urry and Axhausen, 2006; Sheller and Urry, 2006; Adey, 2010; Elliot and Urry, 2010; Cresswell and Merryman, 2011.

<sup>235</sup> Echeverría states in his hypothesis that information and communication technologies enable the existence of a new social space, the electronic space or third environment, which has now acquired sufficient importance to be able to stand up to the other two large social spaces in which human beings have traditionally lived and acted: E1: nature (*physis*) and E2 city (*polis*).

and urban form, the need is seen to understand the nature of E3 in order to civilise it, that is, to enable civil life to be developed in it and for it to be urbanised in order to build the global city that present technologies enable.<sup>236</sup>

The changes induced by information technologies are the preliminary steps towards building this new deterritorialised city that unlimited by political and geographic frontiers and based on the topological structure of the network, which technologically connects geographically distant points, and is thus superimposed on villages, cities and metropolis without physically destroying them.<sup>237</sup> Therefore, Telepolis and the third environment represent a new form of colonising the planet organised on the basis of the principle of reticularity and not the complex characteristics of the cities and states we know. Their main force lies in their capacity to transform domestic life and the activity carried out in closed spaces. In fact, these are the points from which we enter Telepolis, through windows such as television and doors such as computers and mobile devices connected to the Internet, in other words open to the network configured as the main avenue of the new global city. However: “Telepolis is not a habitat: we do not live in the third environment, but we do act there. Between the multiplicity of functions that form the life of people, only some of them can develop in E3, as this is a representation of (non corporeal) and bisensorial area.”<sup>238</sup> Unlike Echeverría, I believe that if we understand the network of virtual space to be a new area of human socialisation, we have to admit that it can be inhabited and that it is in fact inhabited by millions of people at any time, although in different forms from those in the space of places.<sup>239</sup>

Claudia Donà (1988) describes the individual’s new condition of electronic nomadism in the society of information: “As telematic nomads, we have been freed of the constrictions of a “unique” historical coincidence between “place” and “time”, and we can perceive the power of being everywhere while remaining in one place.” Based on these considerations, Derrick de Kerckhove has considered the need to expand the psychological identity of the individual beyond the limits of their skin and body. He has therefore suggested replacing the Renaissance concept of matrix of point of view with another informational matrix of the point of being.<sup>240</sup>

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<sup>236</sup> “A new form of society is being set out in the electronic space, normally known as the society of information (...). Agricultural society (livestock, mining, etc.) is the canon of social organisation in E1 and mercantile and industrial society in E2; electronic space is the area where the society of information can be developed. Therefore, as E3 is superimposed (literally) on the other two, the Information Society is superimposed on other previous forms of society, and not without conflict.” (Echeverría, 2003: 17)

<sup>237</sup> Their architecture is organised on different levels, descending from the atmosphere to the surface of the planet, made up of satellites, satellite dishes, urban communications towers, repeaters, telematic network servers, aerials and wiring networks that take information to destination and connect to the citizens.

<sup>238</sup> Echeverría, 1999: 170.

<sup>239</sup> According to Echeverría, the third environment is required as a broader concept of extension and cyberspace, as cyberspace refers above all to the internet but excludes other networks (telephone, television and telemonetary, military, etc.). Cyberspace would therefore be a part of the third environment.

<sup>240</sup> According to Kerckhove (1995; Sp. transl., 1999: 205-206), we should “give up our single dimensional points of view and recognise that they are rapidly being overcome by the new perception of our “point of being”. The real question is where, as individuals, we fit in to this expansion of awareness reducing the planet. The idea of a point of being allows us to remain in contact with ourselves when our technologically expanded senses are operating around the planet. (...) Instead of removing me from reality as a point of view would do, my point of being becomes my point of entry to share the world.”

In this new reality, the human being enters a new timescale (ranging from nanoseconds to millennia) and space (from the subatomic to the planetary) in which the model of the human body as a measure of everything is read the latest by the perception of a much larger person resulting from the awareness that the I and the environment are two parts of the same entity. It could be discussed whether this idea is not actually also present in Renaissance thought, for instance in Leonardo da Vinci. (Capra, 2008)

Virilio (1999) has said how visual adjacency has replaced territorial adjacency, by passing from tele-vision to tele-vigilance from which potentially no place is hidden. An optics of replacement is thus described: the loss of geographic perspective and the elimination of physical horizons (of as yet unexplored spaces) lead to a new *replacement horizon* that is visible on the screen where the media perspective replaces the perception of space. According to this interpretation, virtual reality is not only materialised by navigating in cyberspace, but is also through the amplification of the optical thickness of the appearances of the real world. A *stereo reality* is therefore produced which is made up of a *present reality* of appearances and a *virtual reality* of media transparencies.

In its long history, architecture has mainly dealt with acting in material reality. However, as every creative action consists of designing or imagining *a priori*, architecture has always lived partly in a “virtual” dimension where objects or situations are simulated, only to be eventually materialised in the physical world under certain circumstances. And it was almost always relatively clear that the simulation recreated aspects of material reality. Today, by contrast, virtual reality has sufficient means to be configured as something independent governed by its own laws which do not necessarily coincide with those determined by the physical world. As it is an area dominated mainly by representation, the possibilities are extremely broad, defined and limited only by cognitive processes, inventive and technical capacities and the possibility of reviewing or sensing said representations. The possibility of visualising our thoughts is appearing on the horizon.

If this can be the direction of an internal voyage of ever deeper exploration into the regions of the mind, in the unexpected dimensions of the real-virtual (Virilio describes the discovery of the interior as the new boundary of a humanity that has exhausted the possibility of discovering its planet and that is suffering from claustrophobia), it is nevertheless also true that we cannot release ourselves from everything in that other material reality that constitutes our most immediate surroundings. An ever closer relationship therefore exists between two levels of experience: that of the physical domain of our bodies and that of the virtual and extended environment opened up by our electronic prostheses. In the following sections I will raise some hypotheses about how concepts of dwelling and domestic space can be articulated in this new context.

### **3.1.3 Domesticity and Identity**

As I have discussed in chapter 1, modern and post-modern interpretations tend to consider the two models of the house —one as a home and the other as a device— as alternatives, giving priority either to the values of domesticity or to those of the expression of the spirit of transformation. The latter erases the former’s identity traits to build an environment that prefigures the future, inaugurating those that are necessarily presented as new forms of living through domestic space. Another dichotomy has been added to this: one that tends to distinguish between space of flows and space of places. In my opinion the condition of contemporary domestic inhabiting is fed by inclusive rather than exclusive mechanisms, though not free of contradictions and conflicts. The idea of contemporary inhabitation is built from a syncretism between different models that are freely reinterpreted by each individual

and family and, which, in very broad terms, is fed by the tension between a basic need to return to a protected place in which to recover (ideally) one's identity and intimacy, and a tendency toward dispersal that is typical of subjects undergoing continuous, accelerated becoming; of figures in transit whose existence is developed in that stimulating and electric, but physically inhabitable space of information flows. The difference seems to me to reside in the fact that for some people, what is familiar is the space of flows and it is here that they seek their identification; while for others what is familiar is to recognise oneself in an often mystified and unattainable idea of the home. The perception of this inevitable duplicity is maybe one of the most powerful motors behind a diffuse sense of nostalgia.

Nostalgia is a disease associated with mobility. Joan van Dooren (2005) has established a relationship between the Heideggerian form of dwelling as permanence and dwelling as travel, suggesting that the tendency toward individualism and increased mobility makes it increasingly difficult to intellectually establish a lasting bond with a given place. In my opinion, this resistance is not driven solely by external factors, but also by our *forma mentis*, which considers change and transformation as positive factors of advancement, progress and growth oriented toward the future. Remaining in and taking care of the same place results, instead, in routine and repetition, monotony and boredom.<sup>241</sup> Limits provide security and protection, but also nourish dissatisfaction and a desire for adventure. From a distance, the house transforms into image, souvenir, and memory. While containing a promise, the journey also represents a risk because it can reveal a better place—in which case returning becomes impossible—or else it can disappoint—in which case returning becomes inevitable—but in both cases nostalgia lurks. Nostalgia implies not only a movement in space, but also in time. In this case it is a longing for the impossible return to a past that acquires mythical dimensions, and that in its current state remains stripped of all content that does not fit within the flat surface of an image. The contemporary flatness of nostalgia becomes evident if we compare themed cities and neighbourhoods in the style of Celebration, the Ideal Home Exhibition, *heimat* or vintage—wherever there is someone who demands an "authentically" styled place that proposes a return to the idealised life of a middle-class neighbourhood in the interwar period or any other class and time—, with that other nostalgia that moved intellectuals and artists of the early 15<sup>th</sup> century to study the ruins of antiquity in order to resuscitate what they considered an age of splendour and a civilisation superior to theirs. Contemporary nostalgia, on the other hand, is a ready-made consumer product that requires no effort, and that is used to sell Mulino Bianco cookies in Italy and frozen apple pies in America, or to search for that kitchen that is reminiscent of the one that belonged to our grandmother who lived her final days in a residence for the elderly; all for the purpose of domesticating technology further and celebrating a time that never existed beyond a paper or screen image that is desired, produced and consumed. This mechanism implies a separation between historical time, out of the depths of which memory objects surface, and the image of the objects themselves that we have before us. Separated from its context the object is dumb; a pure form onto which new content can be projected; a form that, in fact, is continually reinterpreted, resignified and

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<sup>241</sup> The writer Jacob Gael in "Over het reizen" in *Onderzoek en Phantasie*, observed: "What impels us to travel? We wish to see that which is outside the circle within we normally move. We thereby indicate that the circle is not enough for us. Because it is not good enough for us we are dissatisfied with it; and because we are not satisfied with it, we are bored with it." Cit. in: Cornelissen, 2005: 25.

reinvented.<sup>242</sup> Domestic space takes shape as a collection of fragments of times, moments and different stories that coincide in the here and now. It definitively acquires the nature of a hypertext whose links have to be continuously reconfigured by the inhabitant. The difference between Renaissance nostalgia and the current version may lie in the kind of relationship that unites the object with its past: the former tries to reconstruct the *trait d'union* between form and meaning, while in the latter form it is isolated and resignified mainly in the image plane.

Sooner or later so much simulation will bore us and will end up being thrown away, possibly recycled. Maybe we will want something new because we are already bored of seeing the same thing all the time. Indeed I think we should not underestimate the role of boredom as the driving force behind the new in a society that no longer relies on the myth of progress. Rather than addressing the real problems of the day, technology feeds fantasy, promising a new identity that is defined as a lifestyle. Based on studies by Sobel (1981), Heckman has made some interesting reflections on this discussion:

Lifestyle is a process of remembering, manifesting itself in terms of what one ought to do [...] Taken as a whole, [...] lifestyle provides a narrative about its owner. To return to Sobel's discussion: "In this context, the modern significance of lifestyle may arise as a solution to the existential problems of boredom, meaninglessness, and lack of control, problems created by the confluence of affluence and the destruction of the traditional centres of meaning, religion, work, family, and community" (171). In other words, lifestyle is a technology by which subjects are able to tell a story about themselves through consumption. By embarking on a mission to find satisfying solutions, one discovers available answers that reflect the "personality" of the subject. Taken this way, lifestyle is a time-delayed tale of self-identification.<sup>243</sup>

From the western theoretical point of view, loyalty to the *zeitgeist* prevents conciliation between avant-garde and tradition. Inhabitants who want to be truly contemporary once more have to give up their old customs in order to project a new existence and make a programme of it: they will form an integral part of the experiment and the limits between art, architecture, design and life will tend to blur. Inhabitants either negotiate or directly accept the impositions of the design and the designer, and in exchange receive the privilege of living in an exclusive dimension that they are not always capable of assuming. It may also be a programme that can be continuously changed and reprogrammed in line with the growing speed of fashions and technical developments becoming immediately available on the market. Therefore, uprootedness represents an essential characteristic of inhabiting in the 20<sup>th</sup> century. And there is no need to remember that the need for an unceasing change is also and above all an economic imperative. The semantic sphere of inhabiting and habit contrasts once more with the ideas of modern and fashion. Furthermore, if inhabiting is modern, fashion becomes habit. In order to be truly contemporary, today's dweller must continually outdo himself, unlearning old ways and learning new ones: maybe to do the same things but in a different way, with 'revolutionary' technologies that need to be

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<sup>242</sup> In the 1980s the architect Robert Krier theorised the need to return to a *Stadtraum* modeled on the late-Baroque city and reinterpreting nineteenth century residential typologies and their perimeter blocks in order to counteract the feeling of estrangement that the modern city produces.

<sup>243</sup> Heckman, 2008: 86-87.

continually learned. What is hidden behind this apparent nostalgia for the past, then, is a certain discomfort towards the present; a difficulty with having to reinvent ourselves to the rhythm of change. Nostalgia thus expresses a feeling of tiredness with the ceaseless change of modernity, seeking a point of attachment, as exemplified by pieces of solid wood furniture that incorporate the latest television set. Today's technological product actually moves in the narrow margin between being attractively innovative and subtly familiar, posing a constant challenge to the concept of habitation, which involves 'habitual' repetition and frequency of the known. "Habitation is the very essence of existence; the deepening of the roots of life in everyday reality",<sup>244</sup> but at the same time it is an experience that takes place in space and time, and that is played out in the precarious balance between being and becoming; between stability and *vicissitudo*. This is why I argue that dwelling in a technological age is a path that in large measure remains to be travelled; a challenge that modernity has posed but not resolved.

### 3.1.4 Inhabiting in a Mobile Life

In order to propose an interpretation of dwelling as an art of becoming I think it is useful to revisit some aspects of dwelling and permanence. We have seen how the Heideggerian concept of dwelling detects an irretrievable condition because it refers to a social structure based on the feeling of belonging to a place exposed to the elements of the fourfold and therefore requiring care and commitment over many years. Heideggerian dwelling is based on the primary relationship between man and the elements of nature. The city seems to be absent and this absence is telling, considering that the city is the most characteristic form of human habitation. Even so, if we consider dwelling in the face of nature, we still cannot strictly speak of a static situation. Nature changes, and the environment transforms itself despite the seemingly immutable cyclical rhythm of the seasons.<sup>245</sup> In nature, living things are also born, grow old and die, as Heidegger himself recognises in his discussion of mortals. Therefore dwelling represents accepting the human condition within the flow of becoming. If something gets in the way of this flow it is precisely architecture, a result of the action of building that, according to Heidegger, is in turn a result of dwelling. Building represents man's effort to limit his exposure to natural agents, not only because it provides safety, security and identity, but also because it shows a will toward permanence. Through building we try to fix the spatial configuration of a place so that it will endure over time. Thus, an idea of dwelling materialises in built form that, in certain circumstances, manages to express the *genius loci* of a place. One could argue that dwelling is inherent to a subject that, in successful cases, is made visible by architecture, and that a place is more intense and more perceptible thanks to the action of architecture. However, if dwelling is inherent to the subject, we can say that this concept does not have to be bound by a permanent space, precisely because the subject is becoming. Dwelling in time would not therefore mean waiting the cyclical repetition of the seasons, but accepting the challenge of

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<sup>244</sup> Vitta: 2008: 8.

<sup>245</sup> A suggestive reading of how these dynamics have transformed over a long period of time is provided by De Landa, 1997.

living in a dynamic situation, exposed to the flows and ready to transform us along the way.

In the city this relationship becomes more complex and conflictive. The city is the space of community —of security provided by the fact of having to face in common the challenges of *vicissitudo*— but it is also the space of negotiation, knowingly accepting the limits imposed by coexistence. Urban dwelling imposes not only the acceptance of internal rules when building —such as those that determine the form of the original construction, of the mythical cabin of Vitruvius and Laugier, the house in the middle of nature— but also the dynamic mechanisms that articulate the relationship between subject and community. If the mythical dwelling in nature expresses an individualistic relationship to control and symbiosis as far as the environment is concerned, living in the city implies accepting the social and collective dimension. In the city the ability to control is manifested through the exercise of power and influence, creating spaces that communicate values and rules using symbolic codes. It is thus no coincidence that since the late nineteenth century, the detached ‘single-family home’ has become the ideal type of housing for the nuclear family, expressing the burden of individualism so characteristic of the culture in which we live. From this perspective, the city is uninhabitable.

Below I will discuss some interpretations that have addressed this issue and that may be useful for supporting a theory of dwelling as the art of becoming, starting with the role of architecture and housing in the 20<sup>th</sup> century’s modernisation process. In *Architecture and Utopia* (1973), Tafuri, following the interpretation of Benjamin, Bloch and Adorno, argues that since the Enlightenment, it is impossible to understand the history of architecture separately from the economic infrastructure of capitalism. In this regard, avant-garde movements take on an important role since they contribute to modernisation, stating that there is a necessary connection between the destruction of values of the past and the creation of the future.<sup>246</sup> Although demonstrating themselves to be incapable of influencing the evolution of capitalism even when explicitly prompted to do so —as in the case of the Bauhaus— the vanguard movements are nevertheless functional in modernity since they redefine the dialectic between the chaos of the metropolis in constant transformation and the rational order of production systems; an area in which housing also finds itself. However, modern architects did not dare to bring the logic of industrialisation and planning to its ultimate consequences because it would have led to the demise of the architect endowed with an individual personality, which is ultimately what Superstudio’s Continuous Monument made evident. In this interpretative framework, Dal Co (1982a; 1982b) has addressed the issue of living in modernity as an experience of uprootedness. The modern house seeks to find a new synthesis between the self and the world, expressing it as a smooth transition between interior and exterior, but this operation proves impossible to carry out since, as Nietzsche demonstrates, there is no correspondence between interior and exterior in the modern man. The crisis of dwelling is a crisis of the values of rootedness. Hermann Hesse's position is significant in this regard, reformulating the notion of *Haus* (home) based on an observation of the nomadic nature of life in the metropolis. If the existence of modern man is an experience of travel and displacement, the

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<sup>246</sup> According to Tafuri, the fusion of the destructive and the creative moment can be symbolised by the convergence of interests between Dada and Constructivism in 1922. See: Tafuri, 1973; ed. 2007: 87-88.

*Heimat* (homeland) belongs irrevocably to the past, to a desired memory and nostalgia. Modern housing, on the other hand, hopes to reconcile these tensions between home and homeland; between home soil, country and the spirit of the people. According to Dal Co, this idea is based on the difference that Tönnies and Spengler established between the traditional social form of *Gemeinschaft* (community), based on an organic relationship between community and territory, and the modern *Gesellschaft* (society) that prevails in the metropolis and is based on difference and uprootedness. Urban housing therefore does not seek to be part of a community, but to set a limit, consolidating personal fulfilment and individuality of the ego. Emmanuel Levinas's view captures the experience of being uprooted through the notion of extraterritoriality, stating that the house is not an end but an origin; the condition that makes it possible for man to be in the world and exist in it, but that at the same time is the element separating man from the land and natural existence, instituting a dialectical relationship between interior and exterior.<sup>247</sup>

For the citizens of a metropolis living means residing in a place that has been chosen based on 'objective' criteria such as location, price and means of transport; factors that override any ideas of community and seeking harmony with the environment.<sup>248</sup> Thus, in modernity there is no way to rebuild the Heideggerian fourfold and remedy the uprooting condition of the metropolis and man's nomadism that is reflective of the modern home. Furthermore, the house that would have to protect us from the metropolis becomes more and more inconsistent in neighbourhoods that sprout overnight in times of economic boom. The Italian writer Carlo Emilio Gadda (1959) notes how the modern house cannot even defend us from the toughness of the neighbourhood, as well as from daily and seasonal variation of termic conditions or annoying noises of our neighbours.

The house of today, the reformed house, the transformed house is impotent to preserve and defend its residents and their nerves from the outrageous strain [of modern life].<sup>249</sup>

The domestic ends up showing its wildest side and poses an ongoing challenge to the inhabitant, to the point that the house can become a strange territory, or uncanny, as has been suggested by Vidler (1992). Other times, the extreme difficulty of inhabiting a space that imposes its own rules is declared, as in Peter Eisenman and John Hejduk's residential projects of the early 1970s. House VI, like the other houses by Eisenman (1973), stems from a procedure inspired by Noam Chomsky's Transformational Grammar, comprising the application of a set of grammar rules to the architectural object as if it were a linguistic text, and built based on its own internal logic regardless of the factors of function or meaning. (Plate 3.01) In such a situation, in which space is allocated a function only *a posteriori*, the inhabitant feels like a stranger in an environment that is neither familiar nor comfortable to live in. The resident must renounce all known schemes and redefine his covenant with the house's habitability: Eisenman thus poses a radical break with the tradition of

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<sup>247</sup> Levinas discusses the issue of dwelling in *Totalité et Infini* from a substantially different perspective than Heidegger. For a detailed study of Heidegger's and Levinas's interpretations of dwelling, see: Gauthier, 2011.

<sup>248</sup> We can see how this vision represents well the Western mentality, while in the case of other cultures the necessity to form part of a community is precisely the determining factor in the choice of where to situate a home.

<sup>249</sup> Carlo Emilio Gadda "La nostra casa si trasforma e l'inquilino la deve subire" (1959) in: *Le meraviglie d'Italia. Gli anni*. Torino, Einaudi, 1964: 133-134. Available at: <<http://www.gadda.ed.ac.uk/Pages/resources/essays/nostracasa.php>> Accessed: 12 September 2013.

dwelling and directs a rebuke to modern architects for not having sufficiently challenged traditional concepts and for overconfidently trusting in their ability to rebuild that definitively unattainable harmony with the environment.

Lyotard (1988) has also insisted that we can inhabit contemporary cities only in so far as the *domus* of the megalopolis is declared uninhabitable and we apply an "anamnestic thought" capable of investigating the chasms of culture in order to confront us with the errors and perversions of the past in an attempt to move toward a different future. Heynen (1999: 222) has considered Lyotard's proposal as a reformulation of Benjamin's appeal for the need to find a new way of living consistent with an accelerated contemporary world. In this context, dwelling cannot settle with being a *Baukunst* that offers security and protection, but must be able to suspend the continuity of the normal to generate a moment of intensity that subverts what is evident. Dwelling must therefore approximate itself toward porosity and transparency, adaptability and flexibility, as we will see in Chapter 4. In short, a more active role for the dwelling is vindicated; one that is capable of creating a suitable environment for life, optimistic feeling at home in different circumstances. According to Heynen, dwelling and the modern should not be regarded as polar opposites —as Norberg-Schulz and Heidegger pose— but as two complex and dynamic elements in a constant dialectic that must be questioned and redefined in the space of each home.<sup>250</sup>

In conclusion, against the virtualisation process that characterises contemporary times it is necessary to reformulate the concept of inhabiting and transfer it to a more interior, nomadic sphere; in other words, to think of inhabiting as taking care of a mental, rather than a physical, place. As Braidotti has suggested (2006), contemporaneity requires a reconfiguration of our being in the world, in the framework of a global and nomadic conception of the subject.

In this sense, inhabiting would mean discriminating between different forms of life, knowing how to choose the principles that will define the relationship between the self and the surrounding environment. Inhabiting might thus become wisdom gained above all from relations, forms of being and cultures transportable from one place to another, as light luggage moved and deployed in the place representing our dwelling at any given time. Dwelling should mean to be at home in the world, since the house is not the exclusive place of domesticity anymore due to the fact that the idea of domesticity itself has changed and extended to virtual spaces, accessible not only from home-based terminals, but also from laptops, tablets and smart phones connected to the web from any corner of the world adequately served by wi-fi or other connectivity services.<sup>251</sup> In this way, the thin surface of the screen is the interface and the threshold that grants access to another part of our domestic space, in which our information could be kept private in the (relative) secrecy of our digital memories or could be made as public as we allow in social networks and websites, redefining the concept of, and the boundaries between, publicity and privacy.

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<sup>250</sup> Here, according to Heynen, a role is played by mimesis, which responds to program but offers as well something additional, a complexity of superimposed and interlaced interpretive strata.

<sup>251</sup> Morley argues that at present the house is a totally connected environment, but that at the same time domesticity suffers a radical dislocation due to the de-domestication of the media. (Morley, 2007; Sp. transl., 2008: 145). As a consequence he argues that a privarization of public space is occurring, anticipated in the second half of 20<sup>th</sup> century by cars, walkmans and mobile phones (Morley, 2007; Sp. transl., 2008: 148-151).

## **3.2 Communication and Connection: Mediascapes**

Media, I believe, has to be the starting point in our approach to the territory of contemporary domesticity for the role it plays in the redefinition of our relationship with the dimensions of the public and the private as well as the functions that take place in existing houses. In late-modern society domestic leisure was often linked to television and the pleasure of looking. In the Information Age this way of looking at things and acquiring knowledge of the world has changed. The introduction of television has led to an individualisation of leisure, a focusing of attention on the screen. The participation in dialogue between family members has lost importance, substituted by a more passive and personal gaze directed to an action developing in a virtual space beyond the screen. A part of domestic space became devoted to the art of looking. In the digital age, TV screens are substituted by computer screens, becoming active interfaces with wide possibilities of interaction. New forms of communication have arisen. The space on the other side of the screen is now accessible, and spectators can also be actors. Contemporary living is not only rooted in real places and homes, but also in virtual spaces such as websites, blogs, social networks and cloud computing; physically inaccessible, theoretically unliveable, but consistently shaping our daily experience.

What is the place of the body in this new virtual environment? Television or Internet's gaze without responsibility offers each of us the possibility of exploring aspects of the world that have been digitised and uploaded to the web. With our body protected by physical distance and domestic comfort, our eyes and mind can embark on virtual travel in total security, without risks, difficulties or real contact. Virtual travel is substituting real travel and generating a new form of perception and experience of reality filtered by media; an unprecedented dimension of contemporary living.

### **3.2.1 House and Media**

Today, people are increasingly inseparable from terminals connected to the information distribution network. Until the appearance of wi-fi networks in public places, the workplace and the household were the centres of professional and personal connection and will probably continue to be so, though not exclusively. In the contemporary house, media channels the two-way relationship with the exterior through connection, communication and information, defining the degree of permeability of domestic space and influencing the balance between what is considered public, private and intimate. The presence of the media in domestic spaces is not a phenomenon that has appeared with the information society, but has rather passed through a long process, the previous stages of which have been the oral transmission of news, post, books, newspapers and magazines, telephone, radio, television and finally Internet. Each of these media has changed the relationship with the exterior public context by increasing connectivity and reducing the dissemination time, oscillating between a collective level of fruition and another more individual. In the last decades of the 20<sup>th</sup> century traditional media have

definitely shifted into electronic media<sup>252</sup>, inaugurating a new era in which content is produced, transmitted and consumed according to unprecedented modalities supported by digital Information and Communication Technologies (ICT).

The two most revolutionary aspects of the new media, and particularly of the Internet, have been the possibility of disseminating information in real-time on a planetary scale –which radio and television already introduced to a certain extent– and the possibility of establishing a two-way interactive communication turning all receivers into potential transmitters and vice versa. Derrick de Kerckhove (1999) has pointed out how electronic media have not only expanded our nervous system and our body, but also our psychology. According to this interpretation, digital media is the support for a collective mind that exceeds the capacities of any individual, the embryo of which is the Internet.

In this context, Silverstone, Hirsch and Morley (1994) pointed out that no general model of household practices and relations can ignore how people use objects. When those objects are information and communication technologies (ICT), the problem of understanding and modelling their use is extremely complex because these technologies are not just objects but also media. As media, they provide links between members of households and the world in complex and often contradictory ways. The significance of ICT in the home can be approached from different perspectives.

Media has, in general, a great impact on domestic space, but there are several aspects that seem more relevant for my discourse, which can be summarised in the following aspects: media contributes to the construction of contemporary individuality and collective identity; media redefines the relationship between the public and the private; media is deeply involved in the construction of the domestic sphere since it connects society and households defining behaviours, tastes and lifestyles; media influences the cultural patterns that drive the appropriation of technologies at home; and the consumption of media is still considered a form of identification for a household's members.

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<sup>252</sup> The term electronic media has several meanings and covers a wide spectrum. Broadly speaking, it defines a media that uses electronics or electromechanical energy to access the content and requires electricity and digital encoding of information to be created. A concise definition says: "Electronic Media is information or data that is created, distributed and accessed using a form of electronics, electromechanical energy or any equipment used in electronic communications. The common equipment we use on a day to day basis to access Electronic Media is our television, radio, computer, cell phones and other devices transporting information to and from us by means of electronic involvement."

Available at: <http://www.electronicmedia.co.za/>. Accessed: 25 March 2013.

More specifically, the term is used to indicate: 1) electronic storage media such as "any type of device that stores and allows distribution or use of electronic information including memory devices in computers (hard drives) and any removable/transportable digital memory medium, such as magnetic tape or disk, optical disk, or digital memory card"; 2) electronic transmission media, used to exchange information already in electronic format such as "the internet, extranet (using internet technology to link a business with information accessible only to collaborating parties), leased lines, dial-up lines, private networks, and the physical movement of removable/transportable electronic storage media. Certain transmission, including of paper, via facsimile, and of voice, via telephone, are not considered to be transmissions via electronic media, because the information being exchanged did not exist in electronic form before the transmission"; 3) electronic publication media such as websites, blogs, on-line press and social networking sites; 4) electronic broadcasting media, such as television, radio and other digital broadcasting services.

Acceptions 1 and 2 available at Washington University in St. Louis website:

<https://secpriv.wusm.wustl.edu/privacy/Lists/HIPAA%20Glossary%20of%20Terms/DispForm.aspx?ID=13>; for acceptions 3 and 4, see: <http://www.businessdictionary.com/definition/electronic-media.html> and: <http://www.animationcareerreview.com/articles/electronic-media-degrees-what-coursework-included-typical-electronic-media-program>. Accessed 25 March 2013.

ICT are, of course, crucially implicated in this work of social reproduction, not just as commodities and appropriated objects, but as mediators of the social knowledge and cultural pleasures that facilitates the activities of consumption as well as being consumables in their own right.<sup>253</sup>

Media are objects to be consumed in ways that depend on the specific cultures of the household and as other technologies they suffer a process of domestication, which can be seen as a historical sequence as well as a series of phases of appropriation, objectification, incorporation and conversion into familiar objects of the domestic space.<sup>254</sup> Starting from this standpoint, Morley (2007) has underlined that it is necessary to understand the historical process of the domestication of technology, and particularly the media, in order to see how ideas currently presented as revolutionary have their roots in previous times, in which the media and communication were also seen as spectacular factors promising technological futures, which, in most cases, were never realised as described.<sup>255</sup>

From an initial moment of euphoria with the unlimited and almost magical possibilities of Internet that defined the 1990s and that exploded with the crisis of the dotcoms at the end of the decade<sup>256</sup>, at the beginning of the 21<sup>st</sup> century we have moved on to a situation of normality in which people see how new media has become part of daily life and has provided new opportunities for interaction.<sup>257</sup> The computer has substantially contributed to transforming family activities in the fields of communication, information, home management and social networking. Yet its perception and use has changed in the last decade. The semantic field of the computer has shifted from utility to excitement, given that today it is no longer considered a work or study tool, but rather a versatile device that provides access to areas of communication, information and entertainment. This provides evidence that a domestication of technology has occurred that is no longer perceived as fully integrated with homes. This integration involves computer use extended to the whole family, although there is some concern about children's access to certain online content.<sup>258</sup>

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<sup>253</sup> Silverstone, Hirsch and Morley, 1994: 19.

<sup>254</sup> Appropriation refers to the moment of purchase and full possession of the object by the owner. The artifact becomes an authentic object and achieves significance. Objectification refers to the perception of the status of the object in the framework of domestic space, from a functional and symbolic point of view.

Incorporation refers to the way in which technology and media are used and the place they occupy in the moral economy of the household, that is, in the incorporation in the routines of daily life. Finally, conversion refers to the relationships between the household and external world, describes the feedback that household members can give to their environment through the use of media. See: Silverstone, Hirsch and Morley, 1994: 20-27.

<sup>255</sup> Morley, 2007; Sp. transl., 2008: 122-170 and, especially: 139-145.

<sup>256</sup> Rampini, 2001; De Biase, 2003.

<sup>257</sup> "The first age of the Internet was a bright light shining above everyday concerns. In the euphoria, many analysts lost their perspective. The rapid contraction of the dot.com economy has brought down to earth the once-euphoric belief in the infinite possibility of Internet life. It is not as if the Internet disappeared. Instead, the light that dazzled overhead has become embedded in everyday things. A reality check is now underway about where the Internet fits into the ways in which people behave offline as well as online. We are moving from a world of Internet wizards to a world of ordinary people routinely using the Internet as an embedded part of their lives. It has become clear that the Internet is a very important thing, but not a special thing. In fact, it is being used more - by more people, in more countries, in more ways." (Wellman and Haythornthwaite, 2002: introduction)

<sup>258</sup> Venkatesh, Dunkle and Wortman, 2011.

Statistics provide interesting details on the domestic use of electronic media. Focusing on the United Kingdom, Hamill (2011) has shown that in 2005, out of an average of 17 hours a day spent at home, nearly four hours were dedicated to leisure time, mainly in the form of watching television and DVDs or listening to the radio and music, with an increasing use of electronic media and Internet that was at 71% of all households in 2009. The survey also reveals significant differences in relation to age and cultural level among users of new media. In 2010, 99% of people aged 16 to 24 had used the Internet, but this rate decreases to 40% between those aged 65 and over, revealing also a consistent 50% of non-users of Internet under the age of 65. In 2010, 9 million adults had never used Internet in the UK.<sup>259</sup>

The introduction of new communication technologies at home has changed daily time-use patterns, accentuating the feeling that people in the information society are time-poor and money-rich, leading to new forms of entertainment, consumption, domestic management and leisure. The time needed to access online content has meant a decrease in the amount of time spent on other activities, a factor that varies according to age and habits. Among those younger than 35, a reduction in time spent watching television –and seemingly also sleeping– has been observed, while there has been an increase in multi-tasking, a practice that is understood as a multiplier of daily time.<sup>260</sup>

Despite the introduction of computers, television is still seen as the centre of a household's social life. Television has transformed the house into a media consumption theatre. Although in the United States television has been a commercialised product since 1928, playing a prominent role in the New York Fair of 1939, it was only after 1945 when it began to be more widespread in American homes, finally becoming consolidated in the 1950s. The value of this medium, as repeatedly pointed out since Raymond Williams's studies of television as a system for mobile privatisation, was to convey the feeling that all families may have a window to the world from their home and be made to feel like participants in events through the mere fact of having lived them via the screen, building a collective identity much more homogeneous than in the past. According to Heckman (2008) television consolidates a new way of seeing the house as the scenario of a representation in which image and reality mutually reinforce one another.<sup>261</sup> Recently Lynn Spigel has registered the shift from the post-war domestic sphere, in which television was considered a medium that integrated the family, safe in its home but illusorily participant in the life of the city, to another in which the house has become a digitalised "smart home" that offers the image of a sensitive space perfectly connected to the world and at the same time cosy and private, in which media still guarantees the reproduction of a conservative ideal of home and family.<sup>262</sup>

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<sup>259</sup> Hamill, 2011: 49-50.

<sup>260</sup> According to Kenyon (2008) multitasking adds some 7 hours to the day. See: Hamill, 2011: 52.

<sup>261</sup> According to Heckman (2008: 46), the image of the house as a "set" where a drama unfolds defines the domestic space after the arrival of television. "An inversion of the verb to set, in which inanimate objects are "placed" by people, the "set" is the environment which calls forth and makes manifest a human story. The set is that place that has been preordained to see specific actions take place. This concept of set as an organized place for human action to occur casts the home as a process of "enframing." [...] The home is thus a "set" both in the sense that it represents a whole that is greater than the sum of its parts and in that it is the context for lifestyle dramas to be staged."

<sup>262</sup> Berry, Soyung and Spigel, 2010: 55-93.

The technology of television has also changed in recent decades, configuring a medium that has lost the general character it had in its early days and instead adapts very flexibly to individual tastes and preferences. The stages of this journey have involved the broadening of content through the multichannel television, the ability to change channels without getting up through remote controllers, the possibility of watching programs asynchronously through VCR recording, the option of watching content beyond that programmed by television broadcasters by means of the DVD, a choice based on content preference with Pay TV, and most recently flexibly managed and customised programming with Personal Video Recorders (PVR), time shift TV and Internet television, allowing the decision of when and on what kind of device (i.e. television, computer, tablet or smart phone) to view content. Each of these stages has corresponded with a different way of using the medium and consuming its content. Currently television is still the most widespread form of entertainment in the domestic sphere, despite the coexistence of different methods of television watching, from the classic television set to downloading and streaming over the Internet, allowing a more diversified enjoyment of content both in time and space and combining moments of isolation with others of socialisation.<sup>263</sup>

Television sets themselves are changing to compete with other media, evolving into the more versatile "smart TV", which enables, for example, 3D vision through accessorial eye glasses for stereoscopic vision, connection to and browsing the Internet, control of the domestic intranet and eventually the management of domestic systems, the ability to comment on the program being watched on social networks in real time, and access to supplementary content. Furthermore, the connection to a domestic intranet allows digital content from any device connected to such a network to be played back on the television screen. These devices allow the streaming of 3D video, the possibility of transmitting content directly from point to point on enabled devices and the ability to program the recording of content on an external unit.<sup>264</sup>

Further possibilities are opened up with the "cloud TV", whose television screen also enables the management of custom content and family activities such as, for example, real-time updated information, family calendar management, messaging and photo album sharing.<sup>265</sup> However, the bigger picture created by these marvels of technology remains highly conventional, with the entire family usually gathered on a couch while contemplating a giant screen. (Plates 3.02, 3.03, 3.04)

One of the questions arising with respect to these new forms of on-demand programming is the extent to which television will remain a means of constructing the social order and knowledge of the world, and to what extent it will become a mirror in which the user can only see a reflection of their own tastes and preferences. Recently, in the domestic environment new communication modalities based on electronic media have overlapped onto these more conservative, though technologically updated, uses of media described by Spigel. A technological saturation can be detected that leads us to consider that electronic media have become the very infrastructure of a family life in which everything is negotiated and occurs on the smart phone or tablet display: availability at a touch, affection, parental surveillance and education are driven through digital means that connects

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<sup>263</sup> Brown and Barkhuus, 2011: 98-108.

<sup>264</sup> The information refers to Toshiba's WL968 series of Smart TV. See: Casadomo 2013c.

<sup>265</sup> Toshiba America Information Systems, 2013.

with members absorbed in their professional lives, so far and yet so close at the same time.

Furthermore, both in the domestic and public space, media enables situations of fragmentation and individualisation: the book, the music unit, the walkman or ipod with its updated version, the mobile phone, generate areas of image and sound that tend to isolate us from the environment within a space of portable, diffuse domesticity. Mobile phones dislocate the idea of home and make it portable, isolating the user from their physical context and keeping them permanently immersed in their own private universe, part of an experience that Richard Powers has defined as that of always being connected, updated, available, living in several dimensions at the same time in a dystopic present. Mobile communication technologies have substantially contributed to the spread of space of flows and timeless time in our everyday life and at the same time the mobile phone has built a new space of selective communication connecting people at any time and in any place, privileging connectivity over mobility.<sup>266</sup>

Thus, the new technologies that personalise communication can be seen to redefine the centrality of the home, changing the relationship between the private and public dimensions by privatising public space and publicising domestic space.

Parallel to the introduction of electronic media in the domestic environment, architecture has also been experimenting with the creative possibilities of image and information processing, joining these with traditional design concerns that focus on the control of physical and natural elements.

The Slow House (1991) by Diller & Scofidio offers a reflection on the visual relationship we have with the environment, becoming trapped within multiple picture frames that in different ways crop and frame the view: the windshield of the car with which one arrives, the gateway which replaces the traditional façade, the large window that opens onto the sea horizon and the images thereof captured by a camera in one of two antenna-like stacks that project from the volume of the house—the other is a chimney—referencing past and future symbols of domesticity.<sup>267</sup> (Plate 3.05) The inhabitant is placed in the centre of a curvilinear physical space that deforms the view of reality at the same time that it is an abstract space in which a convergence takes place of the moving view provided by the car, the slow-motion view of the landscape slowly transforming under the atmospheric changes and natural cycles it is subjected to, and the digital image of this evolving landscape transmitted onto the screen, synchronously or asynchronously, decomposing temporality into fragments that can be edited *ad libitum*. The analogue and digital images become trapped and blurred in this device that slows down the passing of time—hence the name of the house—and that also serves to control its very inhabitant according to a mechanism that Anthony Vidler has described as a replacement of panoptic vision by a cyborg vision.<sup>268</sup>

Screens could eventually become privileged means of contact with the outside, perhaps even end up being interactive walls of new housing, as in the project The Digital House (1998) by Hariri & Hariri, where the heart of the home is configured as a giant electronic home comprising liquid crystal flat screens that the architects themselves define as "the building blocks of the future". (Plate 3.06) The days in the

<sup>266</sup> For an extensive discussion on mobile communication in contemporary society, see: Castells (et al.), 2006.

<sup>267</sup> The project is published in: Riley, 1999: 52-55 and Incerti, Ricchi and Simpson 2007: 80-87.

<sup>268</sup> Vidler, 1990: 55.

digital house are patterned by the moments of connection to networks and those of disconnection and a return to material reality; moments, moreover, that are becoming increasingly rare: even when preparing food the blonde housewife in a night gown is aided by a virtual chef on the screen telling her step by step how to make a pumpkin pie.

The presence of the world of computing is not limited to these areas: house segments, prefabricated and brought to site in a truck, plug into the main structure not unlike the way applications are installed on a computer's hard drive. The house, intelligent, is proposed as an extension of the mind; a mind that prefers increasingly to consume foreign images rather than produce its own.

In some cases the relationship with communication media passes through the filter of artistic experience, as in the Kramlich Residence (1997-2000) of Herzog & De Meuron, designed as both a dwelling as an exhibition space containing an extensive collection of electronic art. (Plate 3.07) Here, the architects intentionally play with an ambiguity of the house as an electronic media installation and the domestic realm as a permanent installation. Scenes of everyday life mix with flows of constantly overlapping images projected on screens, reviving the old dream of a blending of art and life.

These examples suggest that the nature of the contemporary house as a space of calm, privacy and reflection —the place where it is possible to get away from circumstance— becomes redefined by its turn to the world of communication and media. Isolation is now sought at the same time *among* people; in public places. Another paradox is highlighted as well: while the intrusion of a stranger in a house is normally worrisome because it is considered a violation of the most private and intimate sphere, we increasingly tolerate the continuous invasion of any type of media in this particular sphere, filing it under the category of 'information' while its real purpose is of course lucrative. Although the house is still perceived as a place that belongs to the private sphere, the defence of its privacy becomes meaningless since inside of it we find the very same mediated and ritualised spectacle that occurs outside.

### **3.2.2 Privacy and Publicity**

In the first chapter I discussed some interpretations that address the relationship between public and private in the domestic sphere, but now we must reconsider this issue in the context of the changes produced by electronic media. We have already seen how throughout the 20<sup>th</sup> century the modern house has been spoken of as uninhabitable; a space that is un-private, understanding by this term a domestic space that does not meet the criteria of comfort, privacy, and protection as historically defined by bourgeois culture. The new domestic environment seems much more permeable to external events and is presented as a physical and virtual space at the same time, an interactive point from wherever it is theoretically possible to reach any part of the planet and that in turn can be reached from anywhere. This duality between the dwelling as a place for the intimacy of physical relationships and as a domain for an extended virtual community to meet is represented as one of the most interesting and problematic aspects of the house at the present time.

Peter King observes that “the term privacy simply means the state of being private and undisturbed [...] and the right to be so”.<sup>269</sup> Privacy is a subjective, non-transferable, and impenetrable state that aims to generate a veil of opacity that keeps us out of the reach of the public and protected from unwanted eyes. Thus, even if its walls are entirely made of glass, the house is the space that fulfils our desire to be private, in the company only of people whom we consider close and whom we selectively admit into the different spheres of privacy that comprise domestic space. To exist, privacy involves controlling intrusions and maintaining a balance between connection and separation from the outside, admitting no prying eyes since these induce a change in the behaviour of showing what may be shown to observer. This explains the human temptation to see without being seen.

Even before the deployment of the Internet and webcams, the Wall House (1970s-2001) and the Good Neighbor House (1975) by John Hejduk reflected on the tension between public and private, placing reciprocal observation at the centre of an architectural proposal intended to subvert the idea of the privacy and intimacy of the home. (Plate 3.08) The Wall House, reduced to a single wall that supports the rest of the structure, exposes the inhabitant to the views of passers-by, while in the Good Neighbor House neighbours are observed by each other through a peephole and a periscope. In both cases, the interior becomes visible and the façade does not protect anything, despite maintaining an apparent division between interior and exterior. With these projects, displaying a limit of uninhabitability that links ideologically with the aforementioned Eisenman, Hejduk issues a critique of the modern European housing movement and its principles of transparency, hygiene and lack of privacy, finding a point of contact with the tendency toward separation and isolation that is more characteristic of the ideal home in the United States.

If Hejduk denounced this situation, Shigeru Ban instead accepts the game between privacy and publicity, and between concealment and exposure, in the Curtain Wall House (1995) built in Tokyo, continuing it with the House Without Walls (1995-1997), a reflection that was started by the models of the Farnsworth House by Mies van der Rohe and Philip Johnson’s Glass House.<sup>270</sup> (Plates 3.09, 3-10) Behind its apparent simplicity, the space proposed by Ban is complex, satirizing the modern movement’s curtain wall with a façade comprised of a real curtain suspended flush from the third floor’s recessed structural slab, some distance behind which sliding glass doors are located. The degree of spatial and visual integration with the environment is defined based on the positioning of the curtain and the glass sliding doors, ranging from a fully open aperture that transforms the house into a neighbourhood space to a complete separation that returns to the house its nature of being a private space. Note that in this case, by being situated outside of the rain screen and furthermore permitting visual connection between second and third floors when drawn with sliding doors open, the curtain acquires a public and clearly architectural character. Finally, Ban also proposes a reflection that oscillates between Eastern and Western cultural codes, not unlike the House Without Walls, in so far as its internal divisions, which still remain in the Curtain Wall House, are mobile and can be made to disappear, allowing a total reconfiguration of its space.

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<sup>269</sup> King, 2004: 40.

<sup>270</sup> On the Curtain Wall House, see: Riley: 1999: 72-75; on the House without Walls, see: Ban, 1998: 136-141.

Returning to the gaze, electronic media has expanded this ability to look out from the security of our domestic spaces to excess. This establishes a new link to the issue of boredom or the search for fun, of which one of the most affordable and immediate form is that of the pleasure of looking. The novelty does not reside in the possibility of the idea of virtual travel, which existed long before the invention of television and Internet with narratives, books and pictures representing virtual ways of travelling elsewhere, but rather in the modalities and in the scope of this gaze. It concerns an observation ever more exhaustive but distant, burdened with little responsibility, which allows what is distant to be 'explored' from the comfort of one's home without effort, without obligation, and without contact. With the body protected by distance, the eye and the mind can venture on trips and voyages in full assurance of a true return. A part of the house thus becomes a device for viewing, not anymore towards interior landscapes but to a reality captured by video cameras. The gaze is not limited to a distant one, also becoming an observation of the everyday. According to the logic of what Virilio has defined as a 'substitute horizon', the commitment of direct relationships is preferably replaced with observing events either recorded live or simulated. Thus contemplation of the domestic and the intimate becomes an object of almost morbid interest. As art critic Rosa Olivares has written:

The biggest spectacle of all, in a society that is bored with itself, has proven to be privacy. The day-to-day misery and desires, loneliness and sex, old age, sickness, love; everything that has always been an intimate world kept out of the sight of strangers has become a spectacle for all.<sup>271</sup>

The public display of what once belonged to the intimacy of the home and the personal is redefining forms of privacy in contemporary times. But it also raises a question about the sense it makes to observe a mediated representation; a dramatisation of this alleged privacy. One of the clearest examples of the fictional reconstruction of a private space for purposes of spectacle is the television program *Big Brother*, which, rather than an opportunity for a sociological study, as its promoters have defended on some occasion, seems more the stage set of a zoo in which two parallel circuits are established: one for 'people' and another for the cameras and the program staff, creating a show that simulates normal everyday life and at certain times verges on a light peep-show, all opportunistically managed by the program's producers. In this case, media not only transmits the images, but also collects feedback from a viewing public that is offered the possibility of intervening in the events of this 'house'. (Plates 3.11, 3.12) Yet, as Banash has noted (2000), what is totally excluded from the set of *Big Brother* is precisely media: "no phones, televisions, computers or radios", revealing even further, if possible, the absolute fiction that lies behind this representation of a domestic realm. In any case, the attempts on the part of television networks to recreate such a panopticon situation in which everything is under surveillance fall short of the reality of a world permanently subjected to visual control from cameras everywhere, as Banash notes further:

The rise of webcams operated by individuals, trained on office cubicles, streets, bedrooms, dorms, the interiors of refrigerators, and other spaces both public and

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<sup>271</sup> Olivares, 2000.

private are already doing more to deliver on the promise of reality television than anything the networks are ever likely to undertake.<sup>272</sup>

In my opinion it should be recognised that there has been a radical transformation of the idea of privacy and publicity, for, as we have seen, media has displaced traditional barriers. Now people are prompted to reveal aspects of their private lives through social networks because they perceive that between their private image hanging on their Facebook wall and their house there is a barrier of a similar nature that isolates people amidst the urban multitude with smart phones.

In short, it seems that we enjoy others' observing what we do, as long as this observation is from afar, we do not see them doing it, and we think only our friends are watching us. Although virtual space connects us, we think that physical space suffices to maintain our privacy. The distance between ourselves and the images that portray us, which is to say between our physical identity and our digital identity, tends to increase when these circulate in cyberspace. With the presence of a multiplicity of converging media on our television or smart phone screens our environment is becoming even more complex and multifunctional, such that we receive in turn an even more abundant and continuous flow of information, wanted or unwanted. Contemporaneously, increasingly detailed information about our privacy (habits, tastes, expenses, health, economic situation, etc.) is available somewhere and is used—in the most optimistic case—for promotional and commercial purposes. As a consequence, the limits between the public, private, and intimate realms are progressively questioned, blurred, and challenged.

Access to information through electronic media implies, therefore, the loss of a strictly private and intimate dimension that goes far beyond the physical space of our homes. This dissemination of the traces of our private sphere—consensually accepted or inevitably assumed—also implies that we cannot be aware of others' use of our traces, at least not until the moment when cyberspace hits us back with an unpleasant surprise that impacts our physical space and our real sphere of privacy. I believe, therefore, that in our information society, domestic space, as it is currently being redefined by networks and flows, appears to be destined to become the scene of a conflict between public and private; a conflict that in good measure we will not be conscious of because its cause is going unnoticed.

When it is seen that this virtual barrier can be overcome and the inhabitants feel attacked in the space of their own intimacy, the reaction is one of defence and ever stricter access control. It is therefore possible that forms of contemporary privacy are not only passing through physical limits to the domestic environment, but also through the electronic limits and more sophisticated levels of privacy protection. The question is whether this might still be of any use.

I close this section with two projects that display their owners' obsession for security and isolation from their surroundings, revealing other aspects widespread throughout the threatened territories of domestic suburbia. The Villa Wilbrink by Van Berkel & Bos (1992-1994), built in the Zielhorst neighbourhood on the outskirts of Amersfoort, assumes that the only possible strategy against a residential environment devoid of any interest is isolation within another world whose architecture, sufficient unto itself, asserts a capacity to build a domestic landscape

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<sup>272</sup> Banash, 2001.

capable of inactivating the flatness of the non-place in which it is situated. (Plate 3.13) The reference —or diagram as defined by Van Berkel & Bos— of a bunker is presented as the most appropriate one in order to configure a stealth house that extends over the largest possible area around a courtyard, immersed in a field and displaying on the exterior only a nondescript gravel incline and a desolate garage door; even less than the provocative façade of Frank Gehry's own house.

With the Anti-Thief House (2003-2004) Shigeru Ban has taken his strategy of dematerializing space another step forward, driven by the client's requirement to find an effective solution for protecting a vacation home against theft during periods of absence.<sup>273</sup> (Plate 3.14) The house disappears into the ground when not in use, since the entire roof of the living room can be lowered to the ground, engulfing the furniture in its thickness. The space of the pavilion is thus completely flexible and mobile, leaving only an ethereal metal frame to secure canvas sheets.

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<sup>273</sup> See: Ban, 2004.

### 3.3 Production and Household: Workplaces

In terms of statistical incidence, teleworking has probably not become the widespread practice it was hoped it would become in the 1990s, but it raises a number of interesting reflections on the domestic environment. If it seems perhaps an exaggeration to speak of a return to the spirit of the medieval house, defined by a plurality of domestic and work activities developed in rooms that alternate use between day and night, as suggested by Terence Riley (1999), it is nevertheless true that computerisation allows the residence to be converted into a workplace, and that this issue raises an important series of questions ranging from the organisation of the house to the entrenchment of social habits.

#### 3.3.1 House, Work and the Division of Time

Since ancient times, the house has been a place of both domestic and productive work. Domestic work, consisting of maintaining the house and the family, has traditionally been seen as a feminine domain located since the 1960s at the centre of feminist claims, precisely because it is believed to be discriminatory and oppressive. Although on numerous occasions female domestic work also included activities intended to increase the income of the household (weaving, embroidering, sewing, craftwork, etc.), specifically productive work has been considered principally a masculine activity associated with the presence of a workshop or a commercial business. Normally these two forms of work require spatially and symbolically distinct environments: the first was carried out in the private area of the family (which in ancient cultures corresponded to *gynaecium*) and the second in the semi-public area of the extended family working in the workshop or trade. These practices were materialised in specific domestic typologies that characterised the residential fabrics of European cities until the end of the *ancien régime*. In the last decades of the 19<sup>th</sup> century, work that had not been transferred to the factory, the office or other public areas and remained at home began to change. Female domestic work took on a character of efficiency and scientific management of tasks, underlined by the growing functionalism of apparatuses and pieces of furniture, whereas male productive work also became more abstract and it was often related to managing businesses, liberal professions and intellectual activities, finding its own private or semi-public place in the bourgeois dwelling. Modern architects either adapted to the separation between house and work by planning smaller dwellings based on criteria of *existenz minimum* or reformulated and updated the bourgeois models for customers still requiring dwellings with studies or spaces for working.

Before analyzing some cases of housing that have been designed with the reinsertion of work activities in mind, it is important to understand how the workplace has changed in recent decades to clarify in what sort of context and on the basis of which sort of exigencies this option has been proposed. According to Castells, the emergence of the “network enterprise” has led to the emergence of a new culture of flexible working.<sup>274</sup> Since the mid-1970s, to cope with the accelerating pace of

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<sup>274</sup> Castells, 1996: 151-200.

change in technologically advanced societies, there has been an organisational restructuring of companies focused on increasing the flexibility of the production, management and marketing of goods and services. Mass production has been replaced by flexible production, which is more suited to a highly diversified market that is constantly changing. The vertical and overly hierarchical organisation of large firms has been questioned by introducing participatory and more adaptable organisation models focused on process, team management, the measurement of results through customer satisfaction surveys and results-based remuneration in a work environment more attentive to the qualitative training of workers. In management there are also newly adopted methods such as 'Toyotising' systems focused on reducing costs and increasing customer satisfaction through 'just in time' delivery, the 'total quality control' of products during the production process, and the participation of workers in the production process to ensure greater autonomy and better results. Moreover, strategic alliances and the convergence of common interests and goals have proved particularly relevant to small and medium enterprises that have found themselves confronted with being forced to self-promote in a global environment for purposes of new business opportunities or increased competitiveness.

Work and employment have changed dramatically as a result of the changes mentioned above. With the information paradigm, the work process focuses less on performing encoded and programmable sequences and more on analysis and decision-making operations that require greater involvement, responsibility, autonomy, capacity and preparedness on the part of the worker. Moreover, the flexibility of processes and labour markets impose a model of flexible working and workers with more flexible time. Thus the traditional form of full-time work, with well-defined tasks over a stable lifelong career tends to be increasingly rare in informational societies, as evidenced by several countries recently taking measures to make labour markets more flexible. As pointed out by Carnoy's (2000) case-study research of Silicon Valley, the social definition of employees is no longer linked to a specific job in a specific company, but based increasingly on the skills and knowledge a worker has acquired, which form fundamental assets for positioning oneself in the labour market.

Within a framework in which the distinctive features of each worker are highly emphasised, experienced persons are attracted by the possibility of developing a job that does not bind them to one company or workplace. In this case the option of working from home is also an assertion of individual autonomy *vis-à-vis* an organisation. Thus workers performing remote management under the control of a company have to be distinguished here from others who provide expert services to companies from their home, approaching more the profile of a freelancer or a professional who carries out a consulting activity.

With Information and Communication Technologies, the possibility has once more been proposed of the house also recovering its productive function. From the early formulations of Alvin Toffler (1970) developing some ideas already expressed by Norbert Wiener, the subject has been discussed both in social sciences (Craipeau and Marot, 1984; Nilles, 1985; Gurstein, 1995, 2001; Salaff, 2002; Ellison, 2004; van der Lippe and Peters, 2007; Atkin and Lin, 2007; Eikhof, Haunschild and Warhurst, 2008), and in business (Illegems and Verbeke, 2003; Arvola and Kristjuhan, 2007; Malecki and Moriset, 2008) and architectural contexts, to the extent that at times of

greater enthusiasm, telework has been conceived as a kind of return to the spirit of the mediaeval house (Riley, 1999) or to the fostering of family and community values (Mitchell, 1999). In recent decades telework has constantly been in the spotlight, but at present only a small proportion of workers actually work at home. A 2009 study on teleworking in United Kingdom revealed that only 2% of the British workforce –about half a million people– can be properly considered as teleworkers; that is, people who usually work at home using a telephone and a computer.<sup>275</sup> According to Morozov (2013), quoting an Ipsos Reuters poll, about one in five workers in the world frequently work from elsewhere, this practice being more extended in the Middle East, Latin America and Asia-Pacific than in Europe and the United States.<sup>276</sup>

Furthermore, the delocalisation of workers may fulfil the dream of maximum efficiency and productivity, reproducing the example of global financial markets where the prices of securities may be consulted 24 hours a day. William Mitchell formulates this possibility as follows:

Sometimes, the combination of rapid electronic delivery with convenient time zone differences allows an effective new form of twenty-four-hour shift work. International architecture and engineering design firms can, for example, establish offices in cities approximately eight hours apart, then electronically hand off CAD files from one to the other in a continual circle around the globe.<sup>277</sup>

Although telework is still not a highly widespread practice, due also to the difficulty of management for companies<sup>278</sup>, the reincorporation of work in the domestic sphere does raise interesting questions. The digitally connected and perfectly acclimatised house breaks the modern division between home and work, which came into being with the industrial revolution.<sup>279</sup> In general terms, the fact that this activity has returned to the residence suggests the end of an attitude typical of industrial society and its organisation in space and time based on the separation of functions, and imposes a reorganisation of both productive habits and the spaces of the house, which are largely unprepared for the development of such activities. The most evident phenomena of this new form of work are the supposed interest in specific qualities of places and the potential elimination of travel between house and the workplace, suggesting a considerable saving in resources both by workers and by companies.

An important aspect in the present debate refers to the possibility of using technology to solve the problems of location, guaranteeing the possibility of increasing quality of life and recovering contact with natural surroundings thanks to the indifference of the location of a teleworker. Indeed, in texts that emphasise

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<sup>275</sup> Hamill, 2011: 38-39.

<sup>276</sup> Morozov, 2013: 31. The Ipsos Reuters poll is available at: <<http://www.ipsos-na.com/news-polls/pressrelease.aspx?id=5486>> Accessed: 19 March 2013.

<sup>277</sup> Mitchell, 1999: 102.

<sup>278</sup> This productive form based on the worker's individual responsibility more than on an ostensibly collective participation in a certain job, poses considerable relational problems in the context of the enterprise, as companies have to exercise control over people through remote systems, as well as the personal contact between the workers is largely lost.

<sup>279</sup> Thompson (1963, 1967) as part of his fundamental research on the working class conducted one of the most influential studies on the reorganization of people's lives according to the division of time between home and work. For an updated view on the subject, see: Mollona (et al.), 2009.

the virtues of telework, the ideal setting is never the urban centre but the sprawling suburban periphery. Social and urban models that seek to recover some of the most traditional values of Anglo-Saxon culture are thus reproduced. Howard's Garden City has been converted into a wired neighbourhood capable of retrieving what is really important in life, such as family relationships and participation in community life. According To Mitchell:

We will be able to count the wired, live/work home a social success if it can provide opportunities to devote more time and energy to our most valued primary relationships. The small-scale twenty-four-hour neighbourhood will be a winner if it can encourage and reward renewed attention to community building.<sup>280</sup>

In any case, it appears that these objectives continue to belong to the world of e-topia, because we must not forget that companies always look to maximise profits and to make the management of labour more efficient. They would be willing to take into consideration the pursuit of happiness only if they thought it would help them achieve their goals.

Beyond good intentions, I believe that the most striking effects of working at home can be seen in the changes in the traditional use of space and division of time. Up to now, a large part of the organisation of daily life had been marked by the rhythms, timetables and sociability patterns defined by a working day, which was mainly adapted to the not very flexible productive demands and customs of each country. Now the possibility of considering other forms of production related not so much to hours worked but, for example, to productivity and fulfilment of objectives, substantially changes the division of daily time, and it also brings much greater flexibility into each worker's personal organisation. This may seem a positive factor because it allows people greater control of their time, but in fact the limits between the time put into work and that put into other domestic or leisure activities fade and become diluted in a continuous time that runs the risk of becoming an unending working day in which it is difficult to calculate the time put into each activity. In the return to a situation of working at home, time management difficulties join other factors that have to be taken into account, such as the tension in family relationships that can occur when the domestic realm is invaded by activities that significantly modify its possibilities of use, or the greater difficulty in establishing a network of professional relationships and knowledge creation, the responsibility of which rests largely on the individual through the personal capability to become integrated into new virtual networks and professional forums. Moreover, the aforementioned Ipsos Reuters poll reveals a lack of consensus on whether working at home is more beneficial to the worker and to labour productivity. What is evident, however, is that the presence of technology by which the teleworker is monitored by the company jeopardises the privacy of domestic life and causes more time to be spent on work activities due of the easiness of access to information. Thus, it appears that teleworking tends to further destabilise the relationship between family life and work, aggravating the very problem it was intended to solve.<sup>281</sup> It seems obvious that

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<sup>280</sup> Mitchell, 1999: 121.

<sup>281</sup> The data from other surveys cited in the mentioned article, by Morozov, such as the one on Networked Workers from the Pew Research Project (2008) tend to confirm these opinions. Available at: <<http://www.pewinternet.org/Reports/2008/Networked-Workers/1-Summary-of-Findings.aspx>> Accessed: 19 March 2013.

the psychological consequences of this new form of work are very important, as the division is eliminated between areas that may need to be kept apart and in which the space-time separation up to now had been unable to be perceived as different.

### **3.3.2 Houses for Teleworking**

The reinsertion of work activities in the domestic space is an interesting design subject defining the contemporary house, but at the same time it questions the functional organisation of limited spaces. If considered from a strictly functional point of view, the equipment used in telework in most cases largely comes down to a terminal and telephone connection allowing network communication, which does not take up a large amount of physical space. However, the aspect I believe to be most problematic is the definition of a physical area to set up this equipment, which inevitably mingles with others devoted to other activities. Flexible spaces transformed throughout the day for different activities, like “in the mediaeval house” or in the planning of ‘stations’ that might be set up in the lounge, bedroom, kitchen or in any other place the teleworker might wish have become a much discussed topic. This attitude obviously attempts to solve the problem by using existing models, by compressing the functions of an already limited space, but does not seem to reflect on the real needs and problems of adaptation caused by bringing production back into the domestic environment, and which maybe requires more complex answers. The problem is not solved by merely finding a physical space in which to install the hardware, but by creating an environment that is conducive to the concentration needed to carry out the work. Spaces for performing tasks with a computer abound in wired homes, usually in living room or bedrooms, but this solution is not always suitable for work activity that is continuous or frequent. In fact, the solution for working in a space shared with other functions may only be acceptable when the family routine clearly prevents any overlap between conflicting activities. It would therefore be more appropriate to have a separate space identified as a work area, helping to psychologically separate work activity and family environment, but these conditions are not always possible because of the limited floor area of most housing, especially in urban settings.

Therefore, the high functional density of the domestic environment (and maybe its tendency to produce a growing sense of claustrophobia) would be compensated by the old myth of recovering neighbourly relationships, or a still more idyllic “contact with nature” now enabled by information technologies, and which causes greater pressure on the surviving natural environments. The debate is still open and it is possible that large scale teleworking could be taken more seriously into account in the future, considering its economic and energetic benefits.

Telework and its tools are not being treated merely as a new physical presence in the domestic sphere, but also as an opportunity for expressing the advanced capitalist society through a new, modern aesthetic. This is the case with the Lipschutz / Jones Apartment (1988) designed by Frank Lupo and Daniel Rowen for a couple of Wall Street currency traders, in which screens provide a continuous flow of stock market data in order to keep the owners informed on their transactions

twenty-four hours a day, not only in the trading room, but even in the bathroom.<sup>282</sup> (Plate 3.15)

Among the residences that include spaces dedicated to work, the Möbius House (1993-1998) realised in Het Gooi, Netherlands by Ben van Berkel and Caroline Bos, reflects on the rhythms of contemporary living and converts a junction of different activities and functions into an organising principle for a domestic space in which the owners can isolate themselves or bump into each other during moments of pause from their work activities, both of which unfold in the house.<sup>283</sup> (Plate 3.16) The concept of the Möbius strip, with its continuous surface confounding inside and outside, thus represents the paradigm of a contemporary life that is cyclical and multifaceted, public and private, individual and shared. The Möbius House is an architectural device that organises daily time including both owners' activities and their perception of the landscape from different quadrants of the house. Thus, a domestic space here becomes the nexus between the rhythms of everyday life and its physical surroundings. With its trajectories that run smoothly through interwoven concrete surfaces and views open to the surroundings through large glass surfaces, the house also transmits the feel of a nature walk articulated in accordance with differentiated routes leading to the personal spaces of each one. (Plate 3.17)

In any case, the Möbius strip is posited as a conceptual reference that has not been translated literally into built form but it is the indication of a working method that uses the concept of diagram to trigger a creative process capable of interpreting complexity and discovering new relationships between the actors involved, as Van Berkel and Bos have stressed on numerous occasions.<sup>284</sup> Their interest in the concept of the diagram is not centred on the possibility of transferring a functional scheme linearly into a spatial sequence, as in the era of modernism, but is based on the possibility of bringing Foucault's and Deleuze's readings on the diagrams to the field of architecture, either as, in the case of the former, "an abstraction of expression of cultural, political and organisational effects" or, in the case of the latter, as a "picture element of the image diagram". The diagram can thus become a kind of abstract machine that serves as a starting point in the development of a design project, as a mechanism for the proliferation of ideas that can find a way to come to light through the design process. In the case of the Möbius House, Van Berkel explains how the shape of the Möbius strip illustrates the idea of two people and two materials captured in a diagram:

The idea for the design of the Moebius House started with a diagram of two interlocking lines, which complemented our theory about the two users of the house: husband and wife, who are going to work and live in this house. Within the twenty-four hour cycle of working and living they will want to be together at some times, but at another times not. The two lines from the diagram could be related to the two people living in the house. This diagram [...] initiated the idea of working with two materials, of using the notion of time in relation to the distribution of the program.<sup>285</sup>

The Möbius House and its loop scheme, with neither beginning nor end, presents an architecturally unexplored spatial model for the concept of cyclicity of existence;

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<sup>282</sup> The project is published in Riley, 1999: 44-47.

<sup>283</sup> The project is published, among others, in: Van Berkel, 1995: 86-91; UN Studio, 1999: 84-91 and 2000: 116-127; Riley 1999: 128-131; Betsky 2007: 30-35.

<sup>284</sup> Van Berkel, 1999a; Van Berkel and Bos, 2002.

<sup>285</sup> Van Berkel, 1999a: 75.

effectively representing the idea of interweaving work, family life and leisure that characterise modern life and the need to achieve concentration and other spaces of encounter between two people carrying out their everyday and lifelong trajectories. In this way, the abstract diagram machine ends up producing a domestic space that metaphorically expresses existence, and the house ends up becoming an icon of complexity. (Plates 3.18, 3.19) Despite its irreducible exclusiveness, the Möbius house somehow aspires to become the prototype of a new inclusive and continuous space, concepts that Van Berkel and Bos have also explored in other projects, including domestic ones, such as Dreamhouse (1996) and the recent Villa NM (2000-2007) and Haus am Weinberg (2008-2011) in which we can observe the application of principles for organizing and defining space that are rooted in the Möbius house. (Plate 3.20)

The paradigm of the daily cycle is also chosen by Diller, Scofidio + Renfro to narrate life in the Phantom Eco House (2007), a prototype house for the desert climate of the American Southwest, designed in collaboration with the environmental design firm Atelier Ten, which updates the idea of the dream-home, showing how it is possible to have at once a luxury home and a sustainable high-performance machine able not only to manage resources effectively, but also to produce more energy than it consumes. In this case again we imagine that the house belongs to a professional couple formed by M, a male consultant for an Internet marketing company, and J, a female engineer for a software-development firm, and that they do part of their work from home. (Plates 3.21 to 3.24) In the description made by the architects of a typical day that life in the Phantom House promises, an intertwining of work and well-being is evidenced, away from stress and burden. It is Monday morning. At about 6:00 am, while the owners are waking up, the house automatically adjusts the parameters of temperature, light, and power generation. By 8:30 –after eating breakfast while reading the news published online or in yesterday's newspaper– M leaves to go to his office and J stays to work at home. After an hour and a half on the job, J grants herself a long pause, first in the gym, where she exercises on the WorkOut Generator, a device that accumulates human energy produced during sporting activity in a battery along with all the other devices capable of generating power at home –including the bed– and then in the garden, where she refreshes herself in the pool and then basks in the sun on the LawnDrawer, a mobile platform covered with grass that can be positioned in either sun or shade, depending on the preferences of the inhabitant. At 12:00 noon J is ready to return to her laptop again and an hour later she is out with her electric vehicle to attend meetings. The house, sensing that there is no one, goes into hibernation mode and minimises energy consumption, until, at 3:00 pm, the warning system is informed that M is on his way home and activates comfort parameters. M rushes out to run some errands he had forgotten for the evening meal and at 4:00 pm J also returns to meet the installer of a company that carries out periodic replacements of parts of the recyclable floor of the house, and then takes advantage to work more and relax again at the swimming pool. At 6:00 M is back and J begins to prepare dinner while the house deploys an additional system for water harvesting, having forecast a downpour. An hour later M and J are ready to receive guests Leonard and Casey for a nice evening dinner of rasam, somewhat mild since M has forgotten to buy chillies, then finishing with a last dip in the pool before saying good-bye to their guests and lying down to watch a good movie or to configure the domestic entertainment system for the next day's individual

screenings; all with the view of the city lights in the background. Who would not want a life like this? Working a scant six hours to a customised flexible work schedule that allows for time to relax by the pool while earning enough to afford a well-designed, sensible and economical "guilt-free, sustainable luxury house that thrives on excess".<sup>286</sup> Half a century later, the American dream is still alive and the promises of the Case Study Houses are updated thanks to information technology. Clearly, there comes a time when there are no more concepts on which to reflect or horizons to discover; a perfect time to improve existing techniques and optimise existing systems for achieving the good life, and possibly earn a commission.

### 3.3.3 Telework Imagery

To continue the analysis of domestic workspaces at home, it is interesting to contrast the proposals we have discussed with other images of teleworking that do not originate in academia, but come from specialised websites and blogs that express more directly the pulse of society. This greater proximity does not translate into greater spontaneity in the images that accompany those articles on the Internet, since usually they are carefully constructed to convey certain messages and values. In fact many of them come from image banks and they are used in numerous pages, although sometimes with different meanings and nuances provided by the texts. I find it interesting to take these images into consideration since, while these represent fragments of domestic activity, they also propose models of life and visualise a series of desires and aspirations regarding what working from home should be like, which does not always match the actual situations.

When promoting telework and flexible hours, the tranquillity of the home environment and the ability to use time otherwise lost commuting for other more useful and motivating activities are frequently cited. Although companies value this method, especially for reducing costs, there are some who see it as a way to attract the best professionals, wherever they may be.<sup>287</sup> One of the most recent campaigns in favour of telecommuting is sponsored by the Department of Broadband, Communication and Digital Economy of the Australian Government (2012), which, besides providing all Australian households with access to the National Broadband Network<sup>288</sup>, aims to achieve the goal of having 12% of Australia's public servants work at home in 2020. Since teleworking is not as widespread in Australia as in other Asia-Pacific countries, communication campaigns focus on conveying the idea that working from home ensures a better quality of life, exhibiting pleasant imagery in which —more than an emphasis on the formal aspects of the work— domestic and relational values are heightened to convey the image of a desirable and inclusive situation. One of the images shows a couple in their home. (Plate 3.25) She is sitting at the computer with the cat on the table and he is speaking on the phone while seated on the couch with a glass of wine.<sup>289</sup> In this case, an idea of teleworking as

<sup>286</sup> Diller and Scofidio + Renfro, 2007: 85.

<sup>287</sup> MacKay, 2012.

<sup>288</sup> It is expected that the NBN, which will serve the 93% of Australian homes, schools and businesses with access to fiber optic network and the remaining 7% with fixed wireless and next-generation satellite, reach 33% of Australian households in mid 2015 and for the network to be completed in 2020. See: Australian Government, 2012.

<sup>289</sup> Michael, 2012.

reconciling the most comfortable and endearing aspects of family life with a relaxed, modern and young lifestyle is conveyed. A second image that describes Australian Telework centres on the possibility of being in contact with others online via a videoconferencing system and working in a pleasant and well-lighted environment.<sup>290</sup>

In other contexts, however excessive informality is considered inadequate, because it can generate a dangerous confusion over roles and times, making us forget that this is about developing a work activity that requires planning, concentration, seriousness and dedication.<sup>291</sup> (Plate 3.26) On pages and blogs that offer advice on telework, there is an abundance of cases of women seeking a solution for reconciling family life and professional career.<sup>292</sup> In the images that illustrate these situations it is common to see a young woman sitting in front of a computer patiently attending to a child. (Plate 3.27) Despite conveying the idea of compatibility between work and family life, the texts reveal that, obviously, telework and childcare are hardly compatible.<sup>293</sup> In the case of the picture accompanying an article by BBC News titled "Is teleworking driving us crazy?" (Wall, 2012), which maintains a more critical stance regarding the benefits of telework, a man demonstrates being overwhelmed at having to care for a child and a computer simultaneously. (Plate 3.28)

The efficient organisation of time and space thus becomes very important. To install a home office the location is generally considered essential; preferably a room that can be converted into a private workspace, or an area of the house quiet and free of distractions, well lit, comfortable and equipped with electrical and phone connections, enough space to place a desk, a chair and a file cabinet along with any other specialised equipment required for business.<sup>294</sup> Considering the number of hours that a teleworker spends at home, it is surprising to note how often the focus is on technological infrastructure at the expense of attention to location, furnishings and accessories. There is thus a noticeable gap between the culture of professional designers offering carefully planned spaces —though often more scenographic than adequate for day-to-day— as presented in the literature, and public sensibility, with solutions that are often homemade and sometimes unsatisfactory.

In the picture accompanying the article "How to develop a corporate telework pilot plan" (Nelly 2010), little care is expressed with regard to space, neither in the choice of the workplace in the corner, nor the furniture that, despite a certain order, proves to be an economical, bland product. (Plate 3.29) The image thus transmits a feeling of lack of space, disorder and discomfort. The rotated chair seems to suggest that, rather than taking a break, the teleworker seems to have fled. In contrast, the illustration of "Insider tricks for new teleworkers" (Murphy, 2012) shows us a nice workspace, spacious, tidy and well lit, which transmits sensations of comfort (expressed by wooden floors and carpet), cleanliness (as shown by the light tones of the furniture and walls), efficiency and cheerfulness (sunlight that enters the room). The Tulip chair, a classic piece of 1960s furniture designed by Eero Saarinen, white and slightly rotated, seems to communicate that our teleworker has taken a short break and will soon return to his place. The difficulty of reconciling work and family life is clearly expressed in the image illustrating "Not the type for teleworking" (Dry,

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<sup>290</sup> Australian Government, 2012b; Green Building Council Australia, 2012.

<sup>291</sup> Renfro, 1985; Reisem Hanna, 2011; Curtis, 2012.

<sup>292</sup> Anand, 2012; Reisem Hanna, 2013.

<sup>293</sup> Reisem Hanna, 2011; Santonocito, s/d.

<sup>294</sup> Totka, 2012; Webb, 2012.

2011), an article that discusses the reluctance to implement telework in Spain due a corporate culture that favours control and physical presence, and a domestic environment unsuitable for achieving the necessary tranquillity. Finally, the image of the work table situated on a veranda overlooking the garden of "Making teleworking work" (Webb, 2012) does not represent a real space, but materialises shared desires and aspirations such as finding a balance between work and life thanks to a satisfactory activity, and not under the pressure of stressful work patterns (the screen is still off but everything is ready to work), that allows us to enjoy the small pleasures of the everyday (the sight of a garden setting and relaxation) from a cosy and comfortable house (with a softly lit wooden table). The work at home space also reveals personal experiences and stories that the images are not able to reveal. Hence the interest in some narratives like those that can be found in the photo gallery of Melanie Pinola, who invites the doors of some of these private areas of work to be opened in order to tell the meanings we attach to certain objects, as well as the aspirations and frustrations associated with both the spaces and the actual experiences (Lawless, s/d; Weintraub, s/d; Pinola s/d). (Plate 3.30)

It is precisely between cultures of excessively designed space on the one hand and overly neglected space on the other that Ikea's market niche is situated, which has always paid increasing attention to the new features of our domestic space and the small business furnishings sector. The pages of their catalogues are evidence of the ability to propose a complete range of products and design solutions at affordable prices, ranging from furniture to accessories. (Plate 3.31) Whoever sees these is easily convinced that what is available here is transferable to their home. Indeed, the catalogue pages have the dual function of proposing a spatial model as well as teaching us about the variety of products; all in a credible context.<sup>295</sup> Absolutely everything is ready for sitting down at the table to begin working. This is precisely the quality that is missing to a large degree in the images coming from the journals, in which the abstract and perfect aspect of space dominates, and which is overabundant in the real images, where personal traces of the inhabitant are too evident. (Plate 3.32, 3.33)

While the computer and the telephone consistently appear in the images of teleworking since these are its most characteristic iconographic references, it is in fact the coffee cup that expresses most clearly the subtle differences between different kinds of offices. In fact, it is a sign that appears with surprising frequency. The cup of coffee or tea represents an activity —coffee and tea are stimulants— but also the freedom to enjoy a little pleasure that, in a traditional work environment, is not as well seen, neither on the desk nor directly associated with a break. At the same time, the cup emphasises a blurring of the boundaries between (Plate 3.34) domestic and public; between a formal pose required for working and informal behaviour we can afford because we are at home or, incidentally, in a café. In some of the images I have chosen from the many that can be found on the Internet, this concept is reinforced by the presence of other signs that introduce some nuances, such as the roaring fire, plants and fruit or snacks. In the case of the image that

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<sup>295</sup> Using a semiotic approach in accordance with the terms proposed by Saussure, it could be said that in these images there is a balance between the two elements that form the Syntagma / System dichotomy since the systematic form of the catalog finds a syntagmatic expression in the concrete image of the space proposed. On the history and strategies of Ikea, see: Kamprad and Torekull, 1998.

portrays "a well equipped desk", the cup and saucer with brownies lend themselves to different use and interpretation at the same time that, in some cases, they are used to emphasise the comfort and pleasure of working in tranquillity,<sup>296</sup> while also serving to remind us that eating too much at the wrong time is an unhealthy practice.<sup>297</sup>

In conclusion, we can observe that in real life, domesticated technology is important to the extent that it makes work easier, but the essence of the experience of teleworking is still the possibility of enjoying the space of places, more than that of flows.

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<sup>296</sup> Anand, 2012; Smith, 2012.

<sup>297</sup> McLoughlin, 2013.

### **3.4 Identification and Comfort: Bodyspaces**

The third aspect I am interested in highlighting in this panorama of the early 21<sup>st</sup> century is the relationship established between the idea of the body and the domestic domain. There are several important aspects to be borne in mind, in which the impact of information technology is revealed as well as others that refer more to the use of domestic space as a representation of the body. In the debate on the characteristics of the digital age, scholars have referred to a loss of interest in the physical, as opposed to the new dimensions of the virtual, and I believe that many of the phenomena observed with respect to the way in which the body is currently perceived refer to this attitude, even though the physical and the virtual should be considered as complementary aspects of our contemporary world.

In addition to our skin and our clothing, the house surrounds and protects the body like a third layer, an enveloping container specifically designed to satisfy needs of a highly diverse nature. The house is the container of the human body and also a body in itself, a sequence of spaces and diaphragms that both separates us from the environment and also connects us to it. Therefore, when we talk about bodies, we must bear in mind both the facet of the house as the artefact that functionally and symbolically interacts with the inhabitant's body, and its facet as an architectural body. These two ideas of body have also changed in the society of information. In this chapter I will focus on the changes in perception of the idea of the body of the inhabitant, while in Chapter 4 I will discuss the changes to the physical body of the house as an architectural object. From a discussion of some contemporary interpretations of the body, I will focus on two areas that represent the house as a space of performance by a desired / desiring body and as a smart, well-tempered environment that provides security and comfort, representing relevant aspects for the understanding of unprecedented facets of the contemporary house.

#### **3.4.1 The Body as a Programmable Object**

The body is an object more programmed and programmable according to psycho-social demands than it was ever in the past. After the 1960s, the image of the body also began to undergo considerable change with the doubt arising on a series of behavioural schemes related to personal freedoms, including the rupture of certain bonds or social inhibitions with respect to sexual practices and the use of the body, as well as the consistent improvement of medical and surgical technologies that allow actual interventions on our living matter. One of the consequences of this disconnection of our physical perception from precepts imposed by religious and moral criteria is the consideration that the body is an object that can be transformed, even quite substantially, in line with a person's desires. There is a very wide range of available techniques, from the most traditional, acting mainly on the development of muscular mass through physical and pharmaceutical stimulation, to more aggressive surgical interventions that eliminate or add volume in order to improve one's physical image. The body has therefore become the object of a fictitious construction intended to satisfy the expectations of the person and others, which is maybe one of the most obvious demonstrations of how an apparent interest in the body conceals a

deep hatred of an image that fails to adapt to certain schemes determined by fashion or other social inputs. It is significant that celebrities are amongst the most compulsive builders of their fictitious image. But it is in the realm of art where the most significant reflections on the contemporary image of the body are being developed.

With the reincarnation of Saint-Orlan (1990-1995), the French body artist Orlan — or "carnal artist", as she prefers to be called— a new extreme has been reached in the reflection on the mutant body in its fight against the impositions of nature and the genetic code that characterises the contemporary world. Since the 1990s Orlan has been undertaking a radical project, transforming her body, through plastic surgery, into a synthesis of ideas of female beauty as depicted by male artists. Her performances and films are shown in art institutions throughout the world.<sup>298</sup> (Plate 3.35) With her work, Orlan reflects not only on the conventions of society, but also on the possibility of the body to become a means of exploring new boundaries of artistic experience and new ways of imagining 'beauty' in a technological age.

Along with the great euphoria over the possibilities of new information technologies, the idea of the cyborg became popular, a functional symbiosis of man and machine originating in a being whose faculties are enhanced through technological extensions or additions, revealing a desire to take a further step in programming a body considered to be an obsolete device in need of updating to overcome the limitations of the species. According to Katherine Hayles (1999), a prominent theorist of the technologised body, at present we are already experiencing the fusion of body and machine, so the question is not whether we will become post-human, for post-humanity is already here, but rather what kind of post-humans we will be.

Among the first cyborgs, it should be mentioned, are Kevin Warwick, cybernetics professor at Reading University,<sup>299</sup> and his wife Irene, who since 1998 and 2002 respectively have each had a chip implanted in their arms that allows, among other functionalities, connecting parts of their nervous system to a computer and perceiving and sharing their moods, thus enabling new types and spaces of relationships (Novak, 2001: 12). (Plate 3.35)

The Australian artist Stelarc has pioneered the exploration of the cyborg body, a theme that he has been working on since 1976, driven by the idea that the obsolete human body "needs to be repositioned from the psycho realm of the biological to the cyber zone of the interface and the extension".<sup>300</sup> According to this interpretation, a new idea of freedom arises that consists of the modification of the body through medical technologies by choice, affirming a radical principle of individuality in overcoming DNA genetic mechanisms. With the Third Arm Project (1980) he experimented with the extension of the human body into an artificial limb moved by electrical signals generated by abdominal and leg muscle contractions, which are "picked up, pre-amplified, rectified and sent to the switching system". Originally designed as a semi-permanent prosthesis, actually it could not be worn for long periods of time due to its characteristics and became a performance device. Stelarc

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<sup>298</sup> The official website of Orlan shows some images of these surgical operations, beginning from the Emergency Surgery (1979), a video which documents a surgical operation performed in 1978 in order to remove a non-viable foetus as a consequence of an ectopic pregnancy (Jeffries: 2009). For Orlan performances, see: <<http://www.orlan.eu/works/performance-2/>>Accessed: 10 March 2013.

<sup>299</sup> For further information on professor Warwick, see: <<http://www.kevinwarwick.com/Cyborg2.htm>> Accessed: 10 March 2013.

<sup>300</sup> Stelarc 2000: 560.

points out that in this case the technological prosthesis is not “a sign of lack, but rather a symptom of excess”. (Plate 3.35) In the performance *Ping Body* (1995) he transformed his body into a living form of monitoring, mapping and performing Internet traffic by connecting a computer to a multiple muscle-stimulation system that generated involuntary, and sometimes painful movements on his own body, which reacts according to the intensity and characteristics of the data flow. In this manner Stelarc expresses the fact that the collective activity of the network literally moves individuals and that these become an integral part of the network. But he also raises a reflection that is proposed constantly in his work on the limits of the concepts of “mind” and “individuality” in the information society, focusing on the materiality of the organic as a system that reacts in predictable and programmable ways to context-specific stimuli, and that can therefore be engineered.

The body is seen not as a site for the psyche nor for social inscription but rather as a sculpture. Not as an object of desire but an object for possible redesign. What’s interesting [...] is examining the body as an evolutionary architecture and experimenting with alternate anatomies.<sup>301</sup>

In the case of Stelarc, the body is perceived primarily as a system that needs to be redesigned invasively from a materialist perspective that privileges the dimension of interactivity over that of individuality. In the work of Norwegian artist Stenslie Ståle, on the other hand, a reflection on haptic experience as a way to explore and convey the aesthetic dimensions of pleasure is privileged; a pleasure produced by the interaction of the sensitive interface between a body and a brain aided by technological devices. Quoting Constance Classen (2005: 69-71), Stenslie reminds us how touch and pleasure belong together and how the sensation of pleasure is the most self-affirming and self-transcending of experiences, inviting us to push the limits that an increased sexualisation of the sense of touch can represent. In projects such as *CyberSM* and *Inter-skin* (1993-1995) or *Erotogod* (2001-2003), Ståle focuses precisely on the erotic dimension or autoerotic haptic experience, not only for its unquestionable centrality but perhaps also because of the ease of connecting with the public through this channel. (Plate 3.36) In any case, Ståle’s research poses some interesting questions on how corporeal pleasures can become a part of interactive and multimedia experiences in the framework of a new tactile aesthetics.

The focus on the design of haptic bodysuits relates to questions such as: How can corporeal pleasure constitute the user experience? How can the sensations of the body be understood as an artistic and design specific ‘material’? And, can we aesthetically manipulate our bodies to sense a physically reproducible pleasure? How can the body be experienced as a canvas of sensations? Or even a design product?<sup>302</sup>

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<sup>301</sup> Donnarumma, 2012. In the same interview Stelarc resumes his contemporary idea of the human: “what makes us human is not merely our physical bodies but our social institutions, our political structures, our cultural conditioning and our technologies that effectively become our external organs. (...) There is no “I” in the way we generally imagine. There is only a body that interacts with other bodies, situated in history. (...) What is important is not what’s “in” you or me but rather what happens between us, in the medium of language within which we communicate, in the social institutions within which we operate, in the culture that we’ve been conditioned by - at this point in time in our history. (...) And what constructs our identity is no longer our physical presence nor location but rather our connectivity. To be curious and creative is to be human. And perhaps what it means to be human is not to remain human at all”.

<sup>302</sup> Stenslie, 2010: 259.

With the Solve et Coagula project, *Mating Man and Machine* (1997) this haptic dimension was developed into an interface attempting to generate a new life form, half digital and half organic, sensorially merging man and computer into a “transhuman cyberorganism”. (Plate 3.37) In this experiment, user and machine “are joined through a sensory stimulation-suit in combination with visual and aural immersion”, which allows experiencing how man and machine can feel each other in a trans-species encounter.<sup>303</sup>

Thus the cyborg, organic or mechanic, is revealed to be a symptom of something that “cannot otherwise be represented” and that appears in times of change, “when the current ontological model of human being does not fit a new paradigm”; a milestone of substantial change in human perception.<sup>304</sup> Note that the use of cables and mechanical devices such as those used by these artists will probably be seen in a few years as only an initial stage in a process of manipulation of living matter, and that it will probably find its most appropriate dimension in biotechnology and genetic engineering as, indeed, the most recent projects of Stelarc seem to indicate, although we cannot discuss these in much detail here.

If the aforementioned seem to be the current limits of a hyper-technological way of interpreting the deep symbiosis between man and machine, there are also other less extreme though no less effective forms of implementing cyborg technologies, such as smart-phones. (Plates 3.37, 3.38, 3.39) Combining mobile telephony with the considerable information processing capacity of computers, these devices have become an almost indispensable complement for our bodies, and are increasingly configured as terminals of a system of body-based applications still in development. In a less invasive manner, this idea of the need to increase one’s performance or level of information not directly in the body, but in one of its technological prostheses is being materialised in the concept of enhanced or augmented reality.

From these contemporary reflections, it is clear how the status of the body in our information society tends towards an increasingly controllable object that, in some cases, is programmable in its reactions through systems that not only act upon the context, but also delve into the most intimate and unexplored space of our flesh and intellect. Such exploration, conducted from the perspectives of art, science and technology, is configured as a journey towards new dimensions of what still remains to be known. But at the same time, it also raises questions about a society in which knowledge ends up turning into an increasingly capillary ability to exert control, thanks to technology, even when it is presented in the most captivating and positive way through the promise or duty of pleasure. The question arises mainly around the extent toward which the principle of the pursuit of individual pleasure impedes taking into account other factors, thus either transforming our perception of the environment, or simply making us indifferent to it.

### **3.4.2 Spaces for the Desired/Desiring Body**

In a widely interconnected culture dominated by image there is a high capacity to transfer ideal references to real situations. In this section I will discuss how domestic

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<sup>303</sup> Stenslie, 2010: 171.

<sup>304</sup> González, 2000: 541-543.

space is affected by the search for a stage upon which to construct identity through bodily performances, which had been outlined at the end of chapter 2. In a context where the boundaries between reality and fiction are increasingly blurred, the domestic sphere has become a stage upon which to project our desires regarding what the body should represent, and that we ourselves would like to be. New scenarios are thus outlined for intimacy, determined by the influence of a media culture that is dedicated not only to representing private life, but also to suggesting behavioural models and patterns. This is probably not a new phenomenon if we think about literary models or, even more, about the suggestive power of film, but the hypothesis that I suggest is that the idea of the house as a theatre for the pleasure of the body has been reinforced based on changes in the perception of sexuality and eroticism, from both the point of view of the subject as well as that of the relationship. In this way, a circle can be drawn linking the reality from which fiction is built, and the impact of fiction on the construction of a reality that we want to revive in our domestic spaces.

In modern architecture, the body was treated mainly from the perspective of health and physical well-being. But it was also the subject of an aesthetic construction. Le Corbusier's idea of the house as an expression of a new physical culture in contact with air, sun, nature and sport poses a parallelism between the *machine à habiter* and the body as a *machine habitée*. Both are about machines that have to be exercised in order to remain in perfect shape and also possibly to achieve the ideal beauty and harmony that the body sculpted by exercise presents, not unlike another, perhaps original, form of architecture; another “masterly, correct and magnificent play of masses brought together in light”<sup>305</sup>, which paradoxically, rather than in mechanical Venuses, seems to find one of its most forceful expressions in the timeless athletic physique celebrated by Leni Riefenstahl in Olympia, amongst many other images disseminated by all the regimes of the 1930s. (Plates 3.40, 3.41)

In addition to the promotion of a culture of sport embodied in the gym space, which, as we have seen in Koolhaas's project for the Triennale, finds its most extreme example in the culture of body building, other spaces and devices associated with relaxation and body culture include baths, whirlpools, saunas and hammams, which I will discuss in chapter 5, along with others that refer more explicitly to eroticism, which I will focus upon in this section.<sup>306</sup>

In Western culture the fields of eroticism and domesticity pose a troubled relationship, since the imaginaries to which they make reference have traditionally been kept apart. One could argue that the suspicion about eroticism is part of a widespread distrust of the body, characteristic of a philosophical tradition that stretches from Plato to Christianity and Cartesian rationalism.<sup>307</sup> We find ourselves in a strange situation: the house is the abode of the body, but it has rarely been perceived as a place to enjoy its pleasures. Discourses on domestic space have tended to avoid one of the more characteristic activities of the private realm, which is precisely erotic play. Despite these constraints, the association between eroticism and inner space emerges constantly in the history of art, from the Pompeian paintings of antiquity to the Venuses of the Renaissance and up to more explicit references in eighteenth and nineteenth century painting. Below these trends lies a conflict between the rules handed down by the authorities that seek to control the

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<sup>305</sup> Le Corbusier, 1923.

<sup>306</sup> I dealt with some aspects of this subject in a text entitled “Domestic space as an erotic context” (Sustersic, 2005)

<sup>307</sup> For a synthetic approximation to the issue, see: Azpeitia Gimeno, 2001: 245-290.

body socially, and practices of everyday life that refuse to accept the supposed immorality of the pleasure it provides.

At the same time, the social interpretation of sexuality and eroticism has changed through the second half of the 20<sup>th</sup> century, building on the desire for a relationship based on equality between partners that arises in the context of questioning patriarchal structures. According to Giddens (1992) the origins of this vision emerge toward the end of the eighteenth century, when a separation between sexuality and reproduction and the idea of marriage based on romantic love, i.e. lasting emotional ties between husband and wife, began to take hold. Despite introducing a degree of integration within the couple, bourgeois morality nevertheless enhanced gender differences. Thus, during modernity the feminine universe focused even more on family values, while the man affirmed his breadwinner role through recognition in the public sphere, seeking the comfort of a home characterised by the idea of a spousal love that compensates for erotic desires involving lovers or prostitutes. In this view of transgression and concealment, eroticism is generated out of the contemplation of the female body, which becomes an object of worship—but also of degradation and consumption—through the male gaze. Although this attitude has been present throughout the 20<sup>th</sup> century and it has been enhanced by the cinema, as pointed out by feminist critique,<sup>308</sup> important changes have nevertheless been registered. In the interwar years, the idea of the modern woman, emancipated and working professionally outside of the home, was born and it began to claim its space in the areas of labour, culture and the arts, and in which female students from the Bauhaus also played a part in establishing, as we have seen. This new female is aware that her body is not just an object of contemplation or satisfaction of male desire, but also a tool for achieving her goals.<sup>309</sup> However, it was not until the 1960s, when we would begin to question the concepts of family, intimacy and sexuality on the one hand, and the affirmation of the idea of the body as an object that may be changed according to personal desire on the other, that a relevant transformation of the erotic imagination would emerge. At the same time that freedom was claimed regarding sexual orientation and a concept of gender began to emerge, many artists began to wonder what a female gaze of the male body might look like, or in what ways a vision of the body approached from the point of view of women might be represented, affirming the right to a female expression of desire.

These changes have fostered a greater relationship of equality between partners and thus a profound transformation in the area of intimacy that, despite the difficulties, represents an important step forward in the democratisation of the domain of the interpersonal. Consequently, romantic love tends to be replaced by what Giddens has defined confluent love, an active love based on sincerity, communication and

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<sup>308</sup> With respect to cinema, in an article entitled "Visual Pleasure and Narrative Cinema" Laura Mulvey published in 1975 wrote: "In a world ordered by sexual imbalance, pleasure in looking has been split between active/male and passive/female. The determining male gaze projects its phantasy on to the female form which is styled accordingly. In their traditional exhibitionist role women are simultaneously looked at and displayed, with their appearance coded for strong visual and erotic impact so that they can be said to connote to-be-looked-at-ness. Woman displayed as sexual object is the leit-motif of erotic spectacle: from pin-ups to striptease, from Ziegfeld to Busby Berkeley, she holds the look, plays to and signifies male desire. Mainstream film neatly combined spectacle and narrative." Available at:

<<https://wiki.brown.edu/confluence/display/MarkTribe/Visual+Pleasure+and+Narrative+Cinema>>.

Accessed: 15 March 2013.

The message from the film divas or certain artists reflect this clearly. Tamara de Lempicka, for example, did not hesitate to turn her home into the stage set where she invoked herself as an ambiguous erotic attraction, like the sophisticated, voluptuous and distant female protagonists of her paintings.

dialogue in expectation of reciprocal pleasure. Confluent love thus provides "the possibility of revitalizing the erotic [...] as a generic quality of sexuality in social relations, formed by mutual care and not unequal power." In contemporary society eroticism is defined as "the cultivation of sentiment expressed by the bodily sense, in the context of communication", becoming an "art of giving and receiving pleasure."<sup>310</sup>

We are also, however, witnessing an intensification of the prominence of individuality focused on meeting expectations that do not necessarily lead to desiring a physical, in-person relationship with a partner. It is in this field of distance that the game of cybersex is played<sup>311</sup> and from which the success of a relationship modality arises that limits the risks and implicit links in direct contact, not only in terms of sex —the emergence of cybersex as "sex without exchange of body fluids" coincides with the emergence of AIDS— but also emotional, somehow limiting the exercise of individuality at a time when it must be measured in relation to the demands and the presence of the other; cybersex as "sex without the morning after."<sup>312</sup> In this case, the cyborg does not so much manifest an insufficiency of the body, but rather the self-sufficiency of an individual who can satisfy their desires or act out their fantasies using teledildonics or suits in front of a screen, accompanied by a virtual partner, driven by complex psycho-mechanical devices or brain waves, but ultimately more and more alone inside their house or hotel room capsule. Possibly the first cybersex suit was CyberSM (1993-1994) designed by Stahl Stenslie and Kirk Woolford, described as "a sensual communication link challenging our concept of eroticism, adding missing sense to electronic communication" that "extends our physicality over networks and allows humans interacting in virtual space to actually feel each other with their bodies".<sup>313</sup> (Plate 3.42) As we have seen, Stenslie has worked extensively on haptic perception, treating the body as an interface responsive to different forms of physio-pleasure, including erotic stimulation. The CyberSM and Inter-skin experiments raised the possibility that cyberspace could become a means for reciprocal transfers of a personal and intimate experience such as the tactile stimulation of a body by another body located elsewhere, within the scope of a new way of understanding art as a means for an aesthetic experience "on and through the body".<sup>314</sup>

In the field of cyberpunk culture also lies the Cyberesthésie group, led by Yann Minh. Focusing on the exploration of informational space, in 1998 Minh proposed the term "noonaute" to define the contemporary artist interested in venturing into these new dimensions of human experience provided by the technical means required in every circumstance, which he defines as "nooscaphes".<sup>315</sup> In this context,

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<sup>310</sup> Giddens, 1992: 182.

<sup>311</sup> Howard Rheingold (1990) was the first to describe the physical cybersexual VR system of the future based on the technologies used by NASA, imagining it as a data suit able to record the data and the movements of the body and convert them into information that could be shared with others. With the term *teledildonics*, Rheingold defined the technology that enables humans to have sex in virtual reality.

<sup>312</sup> Both expressions are from Arthur Kroker quoted in: Bell and Kennedy, 2000: 391.

<sup>313</sup> Quotation proceeds from the video Cyber SM (1994) by Stenslie and Woolford available at: <<http://bhaptic.net/archives/189>> Accessed: 05-03-2013. For a detailed description of the project, see: Stenslie, 2010: 162-170. Others, like Libideon network, rather vaguely propose to "apply neural interfaces to erotic pleasures". Available at: <<http://libideon.com/index.html>> Accessed: 05 March 2013.

<sup>314</sup> Stenslie, 2010: 111.

<sup>315</sup> Between 1999 and 2009 Minh has elaborated various versions of his "Manifeste du noonaute". Available at : <<http://www.yannminh.org/french/TxtNoonautes010.html>> Accessed: 12 March 2013.

Minh interprets cybersex and teledildonics as means of amplifying sensory stimuli and exploring new forms of sensuality through technological devices that even enable erotic interaction between people and avatars who inhabit worlds like Second Life, warning in any case of the risk of dependency on objects that provide access to such newly intensified kind of pleasure. (Plate 3.43) According to Minh, in an apocalyptic and overcrowded future, characterised by humanity confined to its homes in the few parts of the planet that remain habitable, the only possibility of escape and having a relationship is cyberspace crossed with the "nooscaphes", which, in this case, are configured as "cybersex immersion engines" intended to provide a comprehensive psychophysical pleasure for post-humans, which the performances by Cyberestésie try to prefigure.<sup>316</sup> (Plate 3.44) Although most of these artistic performances take place in public spaces like museums and digital art festivals, this last example nevertheless confirms that the ideal dimension for the encounter between pleasure and technology is a private domestic setting open to the relations one might want to establish through digital space. I think this apparently individual domestic private space, nevertheless open to observation, interaction or action by another subject who is distant and unknown and with whom we maintain an encounter that can reach beyond the physical to be embraced by the psychic but we know to be momentary, can be interpreted as a metaphor of the subject and his desires in an information society; a subject willing to undertake exciting adventures in a space remote from everyday experience, involving the ability to penetrate or be penetrated by a teledildo or perhaps by the brainwaves of another, but secure in his capsule, protected from possible risks or drawbacks, always confident that he can disconnect any time and regain control of the situation, definitely suspended in a playful dimension where reality and fiction are blended and liquefied into an indistinguishable mixture that feeds back the desire.

If the above can be considered an experience at the outermost limit, although revealing of less visible aspects of contemporary sensibility, in the context of the relationship between domestic space and the body, it is interesting to consider that the fundamental role played by eroticism in sexuality is what is leading to new stagings for privacy, but I think it is also necessary to recognise that these are determined by the influence of an image culture that emphasises a scenographic character, converting the body into a subject of particularly captivating representations for which appropriate architectural atmospheres are preconceived. Several examples reveal how the staging of the body is an element of relief in the contemporary home, beyond the experience that art, materials and forms could provide. To highlight the gap between the intentions of current architects and the masters of Modernism, Terence Riley confronted the purity and simplicity of the architecture of Mies van der Rohe with the casual and Hollywood-like reading that Koolhaas makes of it in some of his domestic spaces.<sup>317</sup> The Barcelona Pavilion is thus reinterpreted in terms of consumption: the image of a model showering in the bathroom of the Two Patio Villa (Rotterdam, 1984-88) could be considered as another remake of the statue by Georg Kolbe in the pavilion's pool. (Plate 3.45) However, between these two images profound differences are established. While in the Barcelona Pavilion the artwork contributes toward reinforcing the sense of

<sup>316</sup> Minh, 2011. On the nooscaphes, information available at:

<<http://noozone.free.fr/noocrypte/viewtopic.php?f=28&t=629>> Accessed: 13 March 2013.

<sup>317</sup> Riley 1999: 31.

distance with its silent presence, in the image of the Koolhaas house the figure, positioned behind frosted glass but perfectly recognisable, is an erotic claim more than explicit, we could say almost kitsch, inviting us to enter there.

The body thus becomes an object of particular representations to which end suitable architectural atmospheres are predisposed. In the case of the Ost / Kuttner Apartment (1997) built in New York by Kolatan & MacDonald, the bedroom design emphasises the relationship between the bed and the bathroom. (Plate 3.46) The intention is to suggest the possibility of erotic play, as evidenced by the staging of the bedroom, the translucent walls and the transparent crystals that separate the bathtub from the bed. The styling of the photograph for the publication of the project is significant: the bathtub is filling up with water while high heels are visible beside the bed, suggesting the presence of a woman who from one moment to another could appear in the sexy fibreglass setting. The Bachelor House by Joel Sanders (1998) expresses the charms and lifestyle of its owner portrayed in all the splendour of his muscular body. (Plate 3.47) The Digital House by Hariri and Hariri (1999), among its many tech gadgets, proposes a device for the recording of dreams whose object appears on a large screen in the bedroom, while in The Loft of the Future (1999 -2000), another project by the same architects, a couple is represented which we could interpret as playing an erotic game: he is in the foreground while she is behind an ethereal curtain with her back turned toward us. Bernard Tschumi at City House (2000) creates a perfect identification between the film image and the actual situation; developing yet another sophisticated skypavillion with city views. (Plate 3.48) The message of these images seems clear: the situations and atmospheres that we have become accustomed to through endless movies can be reproduced in our own home. Everyone can live out their fantasies, maybe record them and post them to the net; indeed, less glamorous versions of these kinds of projects abound in decorating magazines.

Today, for both buildings as well as persons, media existence is almost more important than real existence. Domestic space is disseminated far more than any other kind of architecture through the images that circulate in the media, therefore it is exactly where a strategy of seduction must be deployed in order for the designer to become recognised: the building has to be photogenic and the photographer has to demonstrate an ability to convey in the most convincing way not only the qualities of space, but its message to the public.

Architectural photography in this sense has not always known how to communicate beyond the most descriptive and obvious characteristics of space. We have seen how the house can also be represented as a theatre where actors simulate domestic life just as the director understands that it could or should develop. The image plays on the ambiguity of showing us simply to see or to also learn through observation. Seduction is further enhanced when the promise of a pleasant life is added to the expectation of the architecture: when a human figure or erotic suggestion is superimposed onto the spatial content. A few decades ago, the information about what life would be like in the contemporary home was more innocent, even when the female figure was evoked, as in Shulman's images of the Case Study Houses. Actually, it seems that this imagery continues to act as a reference in many current representations, though with subtle differences affecting precisely the erotic dimension. At the opposite end of this spectrum we could locate references to cases

of homesickness or episodes of violence, which also have as their setting the domestic sphere, though obviously one converted into a battlefield and so lacking any charm. This topic, however, would lead us into a discussion beyond the limitations of this work.

All that which traditionally has been hidden or only vaguely hinted at because it is considered part of the private domain has become the subject of exposure in recent decades. Certainly this phenomenon is the result of profound social changes that have accentuated traces of individualism and narcissism in the men and women of the information society, but it is also the result of the dissemination of a media culture in which erotic suggestion is a promise of success, an effective resource for maintaining the viewer's attention. Therefore, the novelty does not consist so much in the strategy employed but its use in the representation of architecture, which is revealed here as the powerful appendage of a wish production machinery. In fact, throughout the twentieth century architectural representation has crept slowly but steadily from the description of spatial qualities to the suggestion of certain lifestyles, largely making explicit what has been silenced by rational and objective project justification. That is to say, architecture responds not only to a need that is functional and constructive, but also to one for new spaces of representation in line with new political and social programs, whether these be theatres of public events or stage sets of private life. Thus while there is a hitherto unprecedented mixture between reality and fiction, between actor and spectator, between dream and experience, the question also arises of whether eroticism has not become another piece of standard equipment in the contemporary home; a marketing tool for a product intended to be unique in the increasingly spent market of desires.

### **3.4.3 Maison à Bordeaux or the Domestic Panopticon. From the Armchair to the Wheelchair**

Taken to the other extreme, the house can become the very world of a person whose mobility is restricted, as evidenced by the Maison à Bordeaux (1994-1998) that OMA / Rem Koolhaas designed for Jean-François Lemoine, CEO of the publishing group Sud Ouest, who became confined to a wheelchair after a car accident left him quadriplegic in 1991.<sup>318</sup> In this situation, the aforementioned image by Branzi at the Triennale in 1986, of a dweller controlling all surrounding objects from a central chair, enables new and unexpected readings. (Plate 3.49)

The requirement to ensure the highest possible mobility on the part of the client, who demanded a complex house able to help overcome the limitations of his

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<sup>318</sup> The Maison à Bordeaux has been widely published since its completion. See, among others: Lucan, 1998a, 1998b; Colomina and Lleó, 1998; Wortmann, 1998; Gargiani, 2006; Lamapariello, 2011. The first contact between the client and OMA was made in 1988 when Lemoine asked Koolhaas, among other renowned architects such as Gehry, Herzog & de Meuron, Ando, Ito and Foster for some ideas for a house he wanted to build on the outskirts of the city. After the accident the construction of a new house was seen as an opportunity to substantially improve living conditions for Lemoine, who lived with his wife Hélène and their three children in the center of Bordeaux. Jean-François Lemoine (1943-2001), son of the founder of the newspaper Sud Ouest, occupied the position of general manager of the homonymously named publishing group between 1974 and 2001 and was also vice president of the International Press Institute. See: <[http://fr.wikipedia.org/wiki/Sud\\_Ouest](http://fr.wikipedia.org/wiki/Sud_Ouest)> and <[http://elpais.com/diario/2001/02/19/agenda/982537202\\_850215.html](http://elpais.com/diario/2001/02/19/agenda/982537202_850215.html)> Accessed: 14 March 2013.

disability, is the starting point of a sophisticated process of superposing three different houses that are also a reinterpretation of important domestic models of the 20<sup>th</sup> century. On the ground floor Koolhaas provides a half buried courtyard house where automobile movement generates a spiral at the perimeter of which a service area and the areas allocated to family life—the kitchen, dining room and TV room—are located. On the second floor, contained in an opaque floating volume pierced by portholes that have been strategically positioned to permit outward views from the most important points of the interior, two cores separated by a narrow courtyard contain bedrooms for parents and children. Finally, the middle floor, which houses the living area, is an open space that expands directly into the garden when large glazed panels are opened, and visually to the landscape of the Garonne valley and the city.<sup>319</sup> (Plate 3.50) We can see here a complex set of references, assemblies and disassemblies of modernist domestic icons ranging from the Villa Savoy to the Farnsworth House, pieces of which are selected and reconfigured according to another order that changes their meaning and constructs a new discourse. According to Jacques Lucan, *Maison à Bordeaux* is Koolhaas's expression of some recurring themes, such as the use of asymmetries intended as a vector of instability that leads to increasing complexity and overlapping areas already described in *Delirious New York*, to the stratification of floors with completely different and unrelated functions and distributions characteristic of skyscrapers.<sup>320</sup>

However, the superposition of these three homes can be interpreted also as a reinterpretation of the history of habitation, beginning with the cave and courtyard downstairs, followed by the glass pavilion that looks out at nature and ending with the shell—of a spaceship or submarine—of the bedrooms that suggest not only a return of the "floating swimming pool" and the constructivist "floating box" mentioned by Gargiani<sup>321</sup> but also the possibility that this *maison* is a new Nautilus for travelling through the liquid spaces of life, sleep and dream.

It contained everything the husband might need -books, artwork, and in the cellar, wine...

<sup>322</sup>

We could also see in these three levels a contemporary reformulation of Bachelard's phenomenology of home; a search for a poetics of space devoid of any nostalgia, challenging the inhabitant to outdo himself. The element that makes this *machine à habiter* most surprising as well as functional is the platform that allows the owner easy movement throughout the entire house, and which has been compared with both Elisha Otis's theatrical demonstration of his elevator at the New York fair of

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<sup>319</sup> The proposed lifestyle reflects a strict and fairly conventional concept of family where parents' and children's activities are separated. The space devoted to children is less important and attractive than that of the parents and, in several cases, the two areas are on opposite ends. Lucan (1998) suggests that it is not only a requirement of the program, but also a strategy of duality, alliance of opposites and asymmetries that is typical of Koolhaas.

<sup>320</sup> Lucan, 1998: 18-21.

<sup>321</sup> Gargiani, 2006: 116.

<sup>322</sup> Jacques, 1998: 61. Gargiani explicitly mentioned the reference to the Louvre platform (2006: 117), while OMA indicates that the solution was inspired by the retractable cockpits of cargo barges that ply Dutch canals: "For a long time, barges have faced the problem of passing under low bridges, which requires steering the bow from a cabin located at the stern. This has caused the loss of a significant volume of freight. To overcome the problem, cabins were eventually placed on mobile platforms, allowing both a 360° control tower view from a high position and a maximum load. The cabin can drop down behind the load only while passing under a low bridge." (Jacques, 1998: 92)

1863 and with several science fiction films.<sup>323</sup> (Plate 3.51) The ramp that articulated the *promenade architecturale* of the Villa Savoye is replaced by a remote-controlled bridge by which Monsieur Lemoine controls his now stranded existence sitting at his large desk. *Mobilis in mobile*. In fact Koolhaas emphasises the role of the platform, suggested by a similar device located in the Louvre pyramid, as the centre of the house:

The movement of the elevator changed each time the architecture of the house. A machine was its heart.<sup>324</sup>

There are two motion guidelines in this house: one in the horizontal plane, determined by the wheels of the chair, and the other in the vertical plane, determined by the hydraulic device that allows the displacement of a segment of the floor between the three levels of the house. (Plate 3.52) In this way the space in the house is capable of being continuously reconfigured depending on the position of the platform. Moreover, the platform is inseparable from the space in which it moves, which is configured as a room of vertical extent to which the great library, located at one edge, lends continuity and sense. The owner's movement inside the house is not only spectacular, but also loaded with symbolic connotations. It is configured as an act of recognition of the complexity of the world and of dwelling condensed into the variety of the domestic spaces; it is the means of access to knowledge represented by the fragment of *enkiklopaideia* each library tries to gather in its unequal struggle against the "winter of the spirit"; it is the affirmation of the will to maintain control and command by overcoming the adversities of life; it is also the construction of an *axis mundi* connecting the depths of the earth with the clarity of the sky, affirming a problematic centrality of the human being in the contemporary world. Mechanisation converts the house into effortless movement, weightless and essential in its rectilinear path, ultimately panoptical and very different from the zigzagging movement of the eye discovering space through the sight of the promenade. Configured as a space of power, the displacement of the platform enables visual dominion as a last resort. Although the body is almost completely immobilised, the eye and mind can still exercise control. A somewhat sinister shadow is projected amidst so much clarity and the marked separation of the children's' zone can also be interpreted as the realisation of an area that escapes this logic, symbolically and materially inaccessible to the eye of the father. The mind of the owner may be imprisoned in an inert body, but the project represents his escape route. Hence domestic architecture, which is apparently the place of a voluntary seclusion, contains within it the promise of liberation of a body not content to live confined within the limits of its disability: dwelling becomes a heroic enterprise; here the cyborg loads up with new connotations, more human and earthly. Interpreting the commission as a challenge to conventions is precisely what unites Koolhaas and Lemoine.

In any case, this attempt to organise the fragments in an ensemble endowed with a certain coherence cannot be but temporary, suspended in a precarious condition achieved through an equilibrium of forces that have come to an acceptable resolution of their opposing tendencies in what we could define as a stability pact. The structural configuration is thus resolved in a complex set of elements in tension

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<sup>323</sup> Lucan, 1998; Gargiani, 2006.

<sup>324</sup> Ibid.

and compression for which Koolhaas availed himself of Cecil Balmond's collaboration, one of the best structural engineers at that time. The volume floating on the top floor, defined by two long wall-beams and closed only at the valley end, is in equilibrium due to three points of support centred on two structural elements consisting of a metal gate and a slightly shifted concrete cylindrical volume that contains a spiral staircase, upon which a steel beam rests—from which in turn the wall beams hang—stabilised thanks to a tie-rod anchored to a concrete block sunken in the soil of the patio. The Cartesian order of the structural grid—clearly identifiable in the Domino system that nourishes the Villa Savoye and most ethereal of the gleaming cruciform pillars of the Villa Tugendhat or Barcelona Pavilion—is here replaced by a game of dynamic equilibriums close in sensitivity to constructivism, which indeed is another source of inspiration for Koolhaas. (Plate 3.53)

Even as a borderline case designed to overcome a disability, it is significant to think about the Maison à Bordeaux as the paradigm of a future in which the house becomes one's sole and exclusive universe, eliminating any need to leave it because everything comes to it in the form of atom or bit. Yet this magnificent ship can only be piloted by her captain, only making perfect sense for him as a prosthesis.

The last image upon which we will focus, published by Koolhaas on a double page for *Content*, shows the epilogue to the story of Maison à Bordeaux: it is dated January 21, 2001 at 20:45. It is rare to find a picture like this in a book about the work of an architect, but *Content* is more like a magazine than a publication for connoisseurs. The command bridge has reached the end of its journey, on the top floor. The worktable has been replaced by a huge sofa cushion in which an absent body has left an imprint. The face from *Life-Head* smiles with renewed intensity, looking with hope toward the blue sky.<sup>325</sup> The image conveys a sense of liberation, peace and tranquillity. We now breathe relieved. The captain is gone, the Pharaoh—do you remember the pyramid?—has ascended into heaven mingling with the solar disk and from this moment on a new order reigns at the house, precisely the order that the patriarch Lemoine repressed: the female order of Hélene, based on "informality, hospitality and fun". (Plate 3.54) From this point onward it will be necessary to reformulate the meaning of home and domesticity on new foundations or let "the empty vessel" crystallise into what have come to be many house-manifestoes, myths turned into museums of themselves, strangely familiar places we think we know down to the smallest details in the eyes of the cameras, houses that have surpassed the condition of private residences to become scenarios in which modern living culture is presented, in which everyone—starting with the architects—can experience the thrill of space and also the subtle and somewhat fetishistic pleasure of crawling inside the skin of their owners, even for the short duration of the visit.

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<sup>325</sup> *Life-Head* (1988), the work that appears in the image, is of the artists Gilbert and George, and consists of 16 silver gelatin prints. Jean-François Lemoine died on February 15<sup>th</sup>, 2001 due to complications arising from a surgical intervention. See: <[http://www.lesechos.fr/16/02/2001/LesEchos/18344-89-ECH\\_disparition-de-jean-francois-lemoine--pdg-du-groupe-sud-ouest.html](http://www.lesechos.fr/16/02/2001/LesEchos/18344-89-ECH_disparition-de-jean-francois-lemoine--pdg-du-groupe-sud-ouest.html)> Accessed: 15 March 2013. The date indicated by Koolhaas thus relates to the time that the patient was taken to hospital.

### 3.4.4 The House as Programmable Object

The technological body of the house has also evolved. Since the late nineteenth century the house has undergone a gradual technification and has equipped itself with devices, initially mechanical and later electrical, that are able to provide services or modify environmental conditions. As we saw in Chapter 2, the vision of the house as a technological and programmable cocoon has been present in the futuristic imaginary throughout the 20<sup>th</sup> century, not only in European culture, but also in the US as demonstrated by Heckman (2008) in his genealogy of the smart house that has its roots both in the fairs —from the Chicago Fair of 1893 to New York 1939-1940 and 1964— with their speculation of technology that is quickly transferred to the domestic scene, as well as in the entertainment industry epitomised by Walt Disney's Proposals for EPCOT (1966), the Experimental Prototype Community of Tomorrow, which proposed to create an ideal community in which families could live in a technologically advanced and continuously perfected environment.<sup>326</sup> (Plate 3.55)

While Europe conceptualises on the space of the future, the United States is more interested in testing concrete and adequate technological solutions for possible practical use. A fact that has not been valued much in discussions about the imaginary of the smart home but that I think is highly relevant to help explain the high degree of interest that lay behind proposals for a different and more advanced dwelling is, I believe, the geopolitical context of confrontation between the United States and Soviet Union in the post-war decades. During the Cold War the field of combat had no defined limits and battles could be fought in any setting, from outer space or the fields of Korea and Vietnam to the territory of lifestyle. After the death of Stalin in 1953 and the famous "secret speech" to the 20<sup>th</sup> Congress of the CPSU in 1956, the myth of advanced technology became the central axis of the USSR's modernisation project. Khrushchev replaced the idea of an inevitable conflict with the capitalist countries by the possibility of a "peaceful coexistence", which over time would prove the superiority of the Soviet system because of its ability to ensure the welfare of all citizens through achievements in the fields of science, technology and culture. In the early 1960s the United States found itself in a difficult position in the technology race, giving the impression that they were falling behind in the peaceful use of atomic energy and in the space race. Therefore, it does not seem out of place to suggest that the smart home was also being developed in this context, being a useful product for demonstrating how technological superiority can have a positive impact on future everyday life.

In fact, the 1960s is precisely when the first real home automation experiments began to be carried out. One of them was the ECHO IV system or Electronic Computing Home Operator (1966-1968) designed by Jim Sutherland, a computer engineer employed by Westinghouse, who came to design this system in order to manage different functions of his own home, which ranged from weather forecasting, family finance and inventories management, temperature and appliances control to

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<sup>326</sup> Heckman argues that the smart home is the culmination of an idea of home rooted deeply in American culture that is built throughout the 20<sup>th</sup> century and that interprets domestic space as a controlling device over space, time and information in the context of an ideal of "the good life" that currently tends to create what he calls the Perfect Day, an everyday experience in which only that which matters to the satisfaction of personal utopian desire is selected, eliminating as much as possible the rest.

storing and delivering messages. Some trials of computerised systems for domestic functions were also performed in the high-tech sector by companies such as Honeywell, which in 1969 launched the H 316 Kitchen Computer, one of the first real attempts –though unsuccessful– to introduce an appropriately modified computer into the kitchen for providing recipes and nutritional information on food, even before the invention of graphical interfaces necessary for viable use. As usual with the computers of that time, the data had to be entered via teletype, unless binary code was entered directly, and the output was provided in the form of light signals, which also needed to be decoded.<sup>327</sup> (Plate 3.56)

At the same time that Disney opened to the public a themed and uninhabited version of EPCOT (1982) that continues to offer trips to Future World to this very day, Robert Masters and Roy Mason inaugurated Xanadu (1983) in Kissimmee, outside Orlando within walking distance of EPCOT. (Plate 3.57, 3.58) Also in the form of an exhibition, this prototype for a Computerized Home of Tomorrow was made as a structure of blobs modelled in polyurethane foam. This smart home was run by the House Brain, a computer capable of controlling various functions including, among others, energy, air conditioning, security, information and entertainment in addition to food preparation, and it had great success until the early 1990s, when interest waned as the technologies it taught had become current.<sup>328</sup>

On the other hand, those same people who in the 1980s were queuing to enter EPCOT or Xanadu witnessed how their houses were being transformed as a result of devices, perhaps not as spectacular but increasingly ubiquitous, such as electronic media, cameras, video games and the first PCs, employing information technology in a more or less obvious way and introducing new home programming and control functions, sometimes naively represented by a home kitchen computer such as the one in the Super Single Wimpey, presented at the Ideal Home Exhibition in London in 1983. (Plate 3.59)

Finally, in the second half of the 1990s, with the boom in Internet and mobile telephony, Domotics or the Smart Home came to be seen as a real alternative to the integrated management of a multitude of devices and systems that had entered our home.<sup>329</sup> Experimental smart homes were designed in several countries and often promoted by high technology firms. Possibly the first was Ken Sakamura's TRON House in Tokyo (1988-93), followed by Microsoft Home in Redmond, Washington (1994), Cisco Home near London (1999) and Cisco Internet Home in San José, California (2000), the Orange Future Home in Hertfordshire (2000), the Philip's Homelab in Eindhoven (2002), the Toyota's Dream House PAPI and the Siemens and Weber T-Com-House in Berlin (2005). Other smart houses were conceived as research programmes, like the inHaus project at Fraunhofer Institute in Duisburg (1995-2001), the Michael Mosler's Adaptive House in Boulder, Colorado (2000-2005), the Aware Home Research Initiative promoted at Georgia Institute of Technology, the Delta Smart House at Duke University (2006) and the House\_n at MIT.<sup>330</sup>

<sup>327</sup> The only H 316 still in existence is exhibited in the Computer History Museum. See: Hernández, 2012.

<sup>328</sup> A preliminary version of the Xanadu houses, designed by the architect Stewart Gordon and built by Robert Masters, was built in Dells, Wisconsin, in 1979. Mason et al., 1983: 126-129.

<sup>329</sup> The term domotics is mostly used in countries speaking neo-Latin languages, such as France, Italy or Spain, linking the concept of *domus* with robotics, informatics and telematics.

<sup>330</sup> For a wider discussion on those and other intelligent buildings, see: Eisenbrand and Von Wegesack, 2006.

The Domotic Home is intended as a habitat that automates certain tasks and daily routines, such as managing functions of comfort and optimisation of energy use (lighting, air conditioning, building skin, creating scenery, controlling energy consumption), controlling the communications and entertainment system (Internet, telephony, television, music), security (access control, detecting emergencies, sounding the alarm) and the operation of devices (electric and informational appliances) in an integrated way through systems that are programmed to detect situations, interpret data and act on instructions given by the user or by the system itself. Communication capabilities allow this connected home to transmit a series of teleservices that can be particularly useful for certain sectors of the population, such as the possibility of receiving certain kinds of medical care at home without having to be seen by a specialist in person.

To achieve these objectives, automated systems make use of hierarchically organised devices that act as controllers, sensors and actuators. Connected by either wires or by wireless systems, these form the neuromuscular system of the smart home. The controller is responsible for the overall management of the system and he or she is equipped with a graphical interface, visual or tactile, for communication with the user, who can access each of the elements and be informed on the status of the house in person or remotely. Actuators are devices that are responsible for performing the actions required by the controller, such as turning on the light or switching off the oven. Sensors —for detecting human presence, temperature, wind, smoke, water or gas, among others— detect changes in the environment and inform the controller. Besides programming functions, domotics also enables the automation of tasks, so that the detection of a situation activates responses that are appropriate to the circumstances.<sup>331</sup> In order for the system to operate in an integrated manner, the majority of a house's technological devices have to be connected to the system and equipped with the capability of responding to the actuators.

In the early 21<sup>st</sup> century several experiments were carried out to test the extension of new technologies beyond the functions already prefigured by domotics to configure new smart environments that could not only run a series of routines, but also respond interactively to the presence and needs of the inhabitant. One of them was the Media House Project (2001), carried out in Barcelona by the Metapolis group, MIT Media Lab and the Polytechnic University of Catalonia and Elisava, with the aim of building an informational prototype house based on the idea of turning the whole house into a computer. (Plate 3.60) A diffuse intelligence structure based on a network of microservers of reduced cost, high processing capacity, and capable of being introduced in the structure of the building, it would be able to share information in real time with the objects in its area of control.<sup>332</sup> The house, designed for a couple working in the field of information technologies and the biomedical industry with two school-age children, is not only imagined as a working environment, but also as one of knowledge. According to its designers, the Media House has to be understood as a prototype that simulates environments rather than a specific space (interestingly, it was presented in a theatre). A look at its program

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<sup>331</sup> For example a night-time configuration could be programmed for a house in which the system is responsible for lowering the blinds and turning off the lights, closing the doors and activating any alarms or similar devices for moments of absence that also simulates the presence of someone turning on certain lights or moving certain blinds up and down.

<sup>332</sup> See: Guallart, 2004.

and its functionalities reveals significant differences with 'traditional' domotic systems, as this informational domestic space is conceived as a multipurpose environment that is more polyvalent, flexible and transformable and that provides a holistic experience in which all parts of the world can be simulated. In addition to areas of telework, interactive play, enveloping videoconference and a half-kitchen, it is imagined that the Media House has an area of chromotherapy and virtual windows that project natural and artificial landscapes captured everywhere so that we can enjoy a sunrise in the Grand Canyon and a sunset in Paris, and can even customise the climate in combination with these images. Furthermore, all objects are endowed with an IP address and connected to the home network accessible through a specially designed interface that combines all the functions of a domotic system and also controls and monitors the behaviour and health of the inhabitants. More recently, some of the ideas from this project have been developed further in the Fab Lab House (2009-2010), a proposal for a sustainable house that took part in the Solar Decathlon Europe competition.<sup>333</sup>

Donald A. Norman (2010) has questioned the evolution and limits of the interaction between man and machine in a near future in relation to the prominence that artificial intelligence may have in new devices that are more capable of taking decisions autonomously, given that they will be provided with a greater power of action that would reduce our control over them.<sup>334</sup> In the last decade, the study of the interaction between people and machines has been reconsidered, introducing concepts such as implicit interaction, natural interaction, symbiotic systems or environmental technology. Environmental technology in particular studies the inclusion of a technology capable of dominating the environment into the landscape (Aarts and Marzano, 2003; Aarts and Encarnação, 2006). The car and the house are precisely two of the areas that are experiencing "environmentally intelligent" systems that capture and analyse our behaviour in order to predict our intentions. For those investigating intelligent environmental systems, the answer to the question "Could a home automatically relax its inhabitants when it detects that they are suffering from stress?"<sup>335</sup> would pass through a technological solution such as designing a system of sensors based on neural networks to observe the behaviour of the owner and adjust the environmental parameters according to the analysis performed.<sup>336</sup> Even if the system were able to respond correctly and in a reliable manner in each circumstance, the doubt would still remain as to whether an application of such sophisticated technology to resolve such a simple problem (for a human being, not for an artificial intelligence system) would make any sense in terms of costs and benefits.

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<sup>333</sup> See: <<http://www.fablabhouse.com/>> Accessed: 28 March 2013.

<sup>334</sup> In order for the relationship between man and machine to fully develop, Norman poses that machines, just as humans, must know how to act in an efficient, reliable and safe manner in the real world. To do so, they need to be able to perceive the world and act in it: think, take decisions, solve problems, reason and also develop emotional process in their own way. Norman proposes using three levels of processing for the machines that he has suggested for the human brain: visceral, behavioural, and reflective.

<sup>335</sup> Norman, 2010: 34

<sup>336</sup> Neural networks imitate the capacity of learning and recognition of human neural pathways and are the basis of the Adaptive House that Mike Mozer, cited by Norman, has built in Boulder, Colorado. In this manner, the system controls heating, lighting, atmospheric parameters, security, etc., using software capable of learning and making the house adapt its behaviour to the preferences of the inhabitant. Mozer himself prefers not to describe the house as intelligent, but rather "adaptable". On Adaptive House, see: <<http://www.cs.colorado.edu/~mozer/index.php?dir=/Research/Projects/Adaptive%20house/videos/>> Accessed: 25 August 2012.

The smart home expresses the aspiration toward total control of the environment and the dreams and obsessions of an era in which there is never enough time to get everything and experience everything. The smart home promises to take care of our well-being and comfort, and to satisfy our desires, offering safety, business and entertainment. Ultimately it promises to be an electronic companion who cares and solves any problem we may have so we can, indeed, have more time and eliminate all that is annoying and unwanted out of our lives. Heckman has noted that the fact that the smart home takes over responsibility for a number of control functions that previously belonged to the resident questions the notion of well-being as a process or goal that has to be reached, converting it into more of a mass-produced standard that hands over control to the machine and ultimately converts the house into a haunted-house that, rather than being comfortable, is an unhomely device that constantly controls us, albeit, in theory, for our own good.<sup>337</sup>

Even if we are optimistic over the benefits of the smart home, the question still remains whether their sophisticated endowments are not really more responsive to our desire to be surprised by the possibilities of technology than to our real needs, since domotics require considerable investment and it is not so clear if the benefits outweigh the costs.<sup>338</sup> Moreover, most innovative experiments are confined largely to research centres; in both cases the solutions quickly become obsolete. We know that the stimulation of desire through the rhetoric of the new is a structural component of our societies, however we have also seen that in the field of housing more cautious attitudes prevail. Not everyone is willing to invest in devices whose utility is not understood.<sup>339</sup> Thus, at present domotic systems are a status symbol installed primarily in luxury homes of "high standing" for the purpose of distinguishing not only an economic position, but also the ability to exercise power. We could interpret the smart phone touchscreen not only as a magic wand, but also as the transformation of the remote control into a real sceptre. We have seen how most of the works are intended for special customers: people who work in the field of new technologies, brokers, designers, architects, art collectors ... that is a faithful representation of the most fashionable of professional sectors, which could be the portrait of a cultural elite for whom it is still important to declare it is up to date through a medium of social representation such as the house.

### **3.4.5 Systems that Make People Intelligent**

The smart home approach, directed at providing a wide margin of initiative to an intelligent object so that it progressively widens its scope of action leads to the development of systems that are potentially very efficient but scarcely user-oriented. It seems that the focus to achieve a total control over the environment does not

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<sup>337</sup> Heckman, 2008: 107.

<sup>338</sup> According to a recent survey conducted by the portal Casadomo on current challenges of domotics, respondents consider reducing costs (41%) to be the top priority, followed by the need for better public knowledge (30%), the extension of its field of operation (13%) technological improvement (9%) and the facilitation of installation (7%). Casadomo 2013a.

<sup>339</sup> Harper (2011: 24-25) gives four reasons behind the failure of the smart home's expectations: 1) Adding new applications to the fabric of the home is difficult; 2) All home systems are stand-alone and users prefer the simplicity this provides; 3) Complex control systems are fragile; 4) Devices are increasingly personal, so the home is not the exclusive network people use to access information.

correspond with the need for a digital house understood as a stimulating domestic environment in every respect and rich in new experiential possibilities.

Another approach for designing domestic spaces is one whose technological systems make people intelligent, enriching or facilitating the performance of tasks based on a study of the behaviour of the person in his everyday life.<sup>340</sup> Such projects favour an increase in intelligence rather than simply automation or intelligent autonomy. The augmentative devices leave the decisions about the actions to perform in the hands of people. In 2012 Philips launched Hue bulbs, with LED home lighting system customisable and accessible through a smart phone or a tablet that can emit any hue, tone and intensity of light from digital images or user-defined configurations based on the task at hand or the atmosphere that is desired. The lights can be synchronised to music and interact with motion sensors or other household devices.<sup>341</sup> In this way, the user can decide what type of lighting is most appropriate at all times, converting the home into a changing and more enriching environment. (Plate 3.61)

According to Norman, automation and augmentation respond to different needs. The autonomous devices are useful in routine tasks and predetermined sequences, dangerous or harmful activities, or in the cases in which an activity could not be performed without them. However, there are situations in which an augmentative technology is more desirable because it gives users the option to choose, even though the system provides them with a suggestion at a determined moment.

The challenge is to add intelligent devices to our lives in a manner that supports our activities, complements our capabilities and increases our well-being, our comfort and our achievements, but without increasing our level of stress.<sup>342</sup>

Perhaps not so much in agreement, we can be of the belief that:

it is evident that the future of design resides in the creation of intelligent devices that drive for us, that prepare our food, monitor our health, clean our floors and tell us what to eat and when to do exercise.<sup>343</sup>

Another example of insights into future concepts of domestic space is the Philips Design Probes, which explore lifestyle scenarios based on rigorous research in a wide range of areas through projects that “are intended to understand future socio-cultural and technological shifts with a view to developing nearer-term scenarios. These scenario explorations are often carried out in collaboration with experts and thought leaders in different fields, culminating in a ‘provocation’ designed to spark discussion and debate around new ideas and lifestyle concepts.”<sup>344</sup> In this framework, a project like *Metamorphosis* (2010) reflects on people’s detachment from the natural world and the negative effect it has on human sensory experience and lifestyle. “Within the themes Light, Air, Sound and Body, design concepts have been created that view the home as a filter to limit air pollution, electromagnetic smog,

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<sup>340</sup> It is the path followed by the investigators of the Microsoft Research Group at Cambridge or the Aware Home at the Georgia Institute of Technology.

<sup>341</sup> See: Philips Electronics, 2012; Porges, 2012; Casadomo, 2013a.

<sup>342</sup> Norman, 2010: 125.

<sup>343</sup> Ibid.

<sup>344</sup> Information available at:

<[http://www.design.philips.com/about/design/designportfolio/design\\_futures/design\\_probes/index](http://www.design.philips.com/about/design/designportfolio/design_futures/design_probes/index). page> Accessed: 28 August 2012.

and industrial noise penetrating our living and working space while letting in natural light, air and sound. The concepts work as a filter between people and the natural world from which, over time, people have become detached.”<sup>345</sup> The Microbial Home project (2011) goes even farther in exploring a new domestic ecosystem that “challenges conventional design solutions for energy, cleaning, food preservation, lighting and human waste.” (Plate 3.62) In this project, the home becomes a biological machine that filters, processes and recycles what is conventionally thought of as waste, transforming each function’s output into another’s input. In doing so, designers adopt a systemic approach to many of the domestic processes that people take for granted and ask questions about how society deals with resources.

Philips’ designers propose an interesting reflection on the mental patterns that allows us to imagine and then materialise our future, substituting the electro-mechanical model of the machine with the informational process of biology:

While the electro-mechanical age may have caused the problem, it could also help us find the solution. Technological development has enabled us to mimic nature’s processes. Now, all that is lacking is a collective change of consciousness to take us into a biological age, one where materials can repair themselves and where by-products are no longer waste, but fuel for other systems. We are going to live through this epoch of change whether we choose to or not. Failure to adjust our thinking, and with it our behaviour, will force the earth to exercise its self-correcting mechanisms over us. Necessity, as the old adage goes, is the mother of invention. Only one question remains: what role do we want to play.<sup>346</sup>

The last promise, the sustainable house, also displays a complex technological system that controls and optimises techniques, materials and processes in order to reduce the environmental impact of human life. Traditional low-tech passive systems are substituted by high-tech solutions and genetic architecture. In this new environment walls are not only intelligent structures and skins served by a digital nervous system, but also objects imagined as intelligent devices that can communicate and offer additional services, shifting into *infodomestics*. However, the body of the house can also express its intelligence without involving high technology, which sometimes appears to be more of a display of showmanship than a response to a real and effective need. One could argue that the smartest solutions are those that achieve the best results and performance with greatest efficiency and lowest resource consumption, a result that not only comes out of the choice of materials and technologies, but design solutions that best respond to requirements; a position that Glenn Murcutt has been developing for some time in the area of domestic architecture.

These last considerations suggest that the 21<sup>st</sup> century house should be imagined as a structure able to combine being and becoming, stability and flexibility. It should ensure stability in terms of structure and satisfaction of the basic functions that remain unchanged over time, and flexibility regarding techniques and materials that

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<sup>345</sup> Information available at:

<[http://www.design.philips.com/philips/sites/philipsdesign/about/design/designportfolio/design\\_futures/metamorphosis.page](http://www.design.philips.com/philips/sites/philipsdesign/about/design/designportfolio/design_futures/metamorphosis.page)> Accessed: 28 August 2012.

<sup>346</sup> Information available at:

<[http://www.design.philips.com/philips/sites/philipsdesign/about/design/designportfolio/design\\_futures/microbial\\_home.page](http://www.design.philips.com/philips/sites/philipsdesign/about/design/designportfolio/design_futures/microbial_home.page)> Accessed: 28 August 2012

allow greater adaptability in spatial configurations and toward uses difficult to predict for now. Such flexibility would be manifested at different levels, prompting us to consider domestic space not only from the point of view of architectural design or the choice of technological systems, but also from the point of view of the ability to respond to an ever-widening range of individual needs and types of family configurations.

In this sense there seems to be some contradiction between virtual representations of shapes in motion and the ability to materialise those aspirations in the real world of rigid and heavy matter. The resistance on the part of the construction industry and consolidated habits make it still very difficult to see housing as a spatial field able to provide greater freedom to its user and in which modifications can be made cheaply and easily.

In conclusion, the 21<sup>st</sup> century house should be thought of not only in the terms of a digital house, but as a device efficiently tailored along criteria of sustainability, which provides high quality in its essential fixed components (structure, enclosures, provision and supply networks) and allows easy customisation and replacement of parts subject to rapid obsolescence. In short, it should be possible to achieve a house conceived as an entity of becoming; able to take advantage of the diffuse intelligence of its technological devices to quickly and easily adapt to the demands of its inhabitant. To dwell in the information society means inaugurating a new relationship between the inhabitant, space and objects; leaving behind technophilic visions of the house as technological gadget, end in itself, or unique product converted into status symbol, as well as technophobic visions that consider any system of minimum intelligence to represent a disturbing manifestation of a menacing haunted house.

### 3.5 Conclusion

It has been discussed in this chapter how the information society transforms the experience of domestic space on different levels. In this framework, my research focused on how new productive, social and cultural practices have modified the use, form and meaning of dwelling at the beginning of the 21<sup>st</sup> century.

In the first part I have addressed the problem of change from a broader perspective, which sees in the paradigm of becoming a significant conceptual framework for thinking about existence through transformation and difference more than through stability. In this context I think it is necessary to reconsider the concept of habitation not so much in terms of the security by the subject's recognition of itself when looking at the reflection of domestic space, but rather in terms of a relationship with space that is constructed through becoming, both the subject's and the environment's; a relationship that opens habitation to a view of life as a process that makes sense precisely through its unfolding. In any case, living this way is not easy, because it requires the ability to affirm the individual's judgment over the criteria of those parties –always with certain interests in mind– that formulate "normative" interpretations of domestic space (architecture, design, production, advertising, etc.) which are then consumed by processes of reappropriation and customization. In short, understanding the art of habitation as becoming involves being able to replace the I-consumer by an I-designer. It is also for this reason that habitation as the art of becoming is a project that is still in large part awaiting to be developed.

In more operative terms, I have attempted to make evident how at present inhabiting has changed due to the emergence of new experiences of space and time. Contemporary life develops in a physical and spatial dimension related to places, and in a virtual dimension related to the physically inaccessible, yet real, space of information flows, which are perceived as complementary dimensions of our daily experience. As a consequence, new forms of understanding physical and mental spaces of domesticity appear, which settle on the basis of views of house as home and house as device, and generate also new forms of understanding identity.

In second, third and fourth section of this chapter, transformations have been analysed in detail, focusing on three significant aspects for the functional and symbolic restructuring of domestic space: media, body and work.

Regarding media, I have discussed how information flows not only have generated a new real-virtual environment in which information circulates in real time on a planetary scale, but have also transformed the use of domestic space, the nature of activities that traditionally take place in it (family life, rest, leisure, relationships, wellness, work), and the relations between the components of the household. At the same time, information technology has turned the house into an increasingly permeable space, necessitating a reconsideration of the relationship between publicity and privacy, and the very forms of protection of privacy, raising the question of how far technology really makes life easier for us and to what extent it becomes a means of intrusion aimed at gathering information about our profiles as citizens, users or consumers.

The fact that domestic space has become an area of domestication of technology has also been evident in discussing telework and the not always so easy return of work

activity within the walls of home. One aspect that should be addressed as a corollary to the observations made in my research is the domestication of the workplace, revealing how in today's society we can talk about areas of low-level domesticity that has little to do with housing. On the other hand the issue of telework also reveals how the messages launched from official bodies often come in conflict with everyday reality and how, in the end, the dream of the perfect worker generating minimum cost to the company is not even a credible option for entrepreneurs and, conversely, the dream of the perfect job conducted out of the ideal home threatens to turn domestic walls into a gilded cage that distances its voluntary prisoner from the opportunity to share experience beyond the possibilities offered by video conferencing and email. In some way, the *Maison à Bordeaux* by Koolhaas can be interpreted as a corollary of this situation of symbiosis, now absolutely necessary, between resident and house, turning the house itself into the device that made possible the life of the owner. The myth of telework, with its exaltation of domestically isolating the body from everything that is annoying in contemporary life (cities, commuting, congestion, inadequate offices, unbearable bosses, annoying colleagues, etc.) connects to some extent also with the theme of the body lived through technology, which is the last theme that I have covered in this chapter.

On the one hand, it is apparent how the rapid pace of technological innovations is highlighting the fact that our biological body is being increasingly perceived as obsolete, in need of an upgrade brought about by different types of technological grafts that either improve performance or enable new types of feelings and emotions. But on the other hand, I have demonstrated that the domestic space viewed from the perspective of the body is presented not only as the theater of function and hygiene, but also as the space of eroticism and sex, perhaps one of the few remaining activities that we still do not dare to practice in public but that in recent decades has been explicitly mentioned when constructing certain architectural representations of domestic space, as if it were a marketable standard feature of the contemporary home. To some extent, the consequence of this view of the body as an obsolete and perfectible object can be seen in the interest in smart homes that constitute vicarious bodies, capable of capturing with even rudimentary nervous systems inhabitants' needs and satisfying them. The relationship between subject and object in this case becomes somewhat ambiguous and unsettling to the extent that technology provides the object with some subjectivity and autonomy. The question of who controls whom becomes apparent more urgently if we look at the issues remaining open, insinuated but not developed in my work, the "internet of things".

# Chapter 4



## **Chapter 4**

### **Imagining and Designing the Domestic Body**

The contemporary home cannot only be characterised by its greater functional complexity resulting from electronic media and ICT, but also by certain ways of viewing, projecting and communicating the values of domestic space, which introduce new elements into theories based on well-established traditions and communicative codes. I therefore propose focusing on how the domestic body is imagined and designed, in the understanding that architecture and design are disciplines entrusted with modelling the spatial organism that surrounds us, which has a shape, structure and organs that enable it to perform living functions with greater or lesser efficiency.

Firstly, I will focus on domestic spaces, which can be likened to the organs that make inhabiting a space possible, with the help of the objects contained within. In this case, I will not adopt a functionalist interpretative approach, but instead will analyse how visual communication narrates domestic spheres and activities, looking at the more representative spaces of the house from the viewpoint of advertising found in prestigious architecture and design magazines. I have chosen this approach as I believe that advertising is capable of expressing the desires of the public better than other forms of communication and because it links with issues and foci from previous chapters. This will enrich the discourse with new elements and will allow other themes to be observed which have already been examined from different perspectives.

In the second part I will discuss the structural aspects of the domestic body, bringing together theories of home design and projects that look at strategies to increase flexibility and porosity with the aim of achieving an organism more suitably adapted to today's living needs. I deem it relevant to focus on theoretical concepts that form the basis of the domestic project, as it is at this level where decisions are taken that determine the level of habitability and comfort of our homes, which directly influences both our experience of the space and daily actions.

Finally, in the third part I will refer to the forms that the domestic body adopts under the paradigms dictated by digitally-modelled technologies and the latest technologies in sustainability. Although brief, I believe it is important to highlight how, in the information society, the form of the architecture is the result of compositional principles and technical systems that are not limited to solving problems, but that can also communicate the symbolic values on which buildings base their expression.

## **4.1 Communicating Contemporary Living: Objects and Spaces**

Objects are the essential complement that gives meaning to the domestic domain and contributes to defining the identity of both the space and the inhabitants of the house. The domestic space cannot be lived in or understood without the presence of the objects that man has arranged in logical sequences according to the taxonomies that respond to both the general and personal criteria of each person and circumstance. Objects contained in the domestic space make up a part of the material and symbolic patrimony of individuals and they have layers that outline a domestic landscape, which can be interpreted from both social as well as individual parameters. The first part of this chapter will define the most relevant traits of objects in relation to the domestic panorama. The second part mainly focuses on the actors that define the characteristics of domestic objects and their approach to new scenarios in the interaction between technology, objects and inhabitants.

### **4.1.1 Objects and Domestic Landscape**

The domestic space finds its full meaning when complemented with objects, which superimpose themselves over architectural elements forming subsequent layers, and becoming a spatial interface when coming into contact with people. Therefore, the domestic space is the place of the body, but also the place of objects (Baudrillard, 1968; Moles, 1974, Vitta, 2008), whose presence helps to form hierarchies, landscapes and environments. The inhabitant thus establishes a very close relationship between objects and space, which completes that which exists between objects and the body. Both from a functional and emotional perspective, the domestic space appears to admit certain objects and reject others and it is precisely this interplay of inclusion and exclusion, of showing and concealing that the space of domestic life needs.

The availability and choice of objects responds in part to the criteria of functional order, but in many cases, a reasoning of an aesthetic or symbolic nature takes precedence lending these objects a significance that builds and strengthens the identity of the inhabitant, as proposed by the everyday life and interior design studies (Csikszentmihalyi and Rochberg-Halton, 1981; by Certeau, 1983; Attfield, 2000; Miller 2001, 2009; Pink, 2004; Edwards 2005, 2011).

On the other hand, the role of objects in the domestic environment must be framed within a more general reflection on the relationship between society and objects. According to Semprini (1995), a contemporary closeness to objects requires a multidisciplinary focus that calls upon philosophy, sociology, linguistics and anthropology, the four disciplines that throughout the 20<sup>th</sup> century have tackled the relation between subject and object from different perspectives. The modern investigation into the nature of objects arose from a relatively marginal position in the scope of philosophic and sociological thought, which considered the object as a thing, in other words, a simple material phenomenon. Marx, on the other hand, attributed it with the capacity of expressing not only a theme or a function, but also

labour and value, an ideal that was adopted by the Frankfurt School and then by Barthes (1957) and Baudrillard (1968, 1983).

A new focus was defined between the end of the 19<sup>th</sup> century and the beginning of the 20<sup>th</sup> when the strictly dualist interpretation of the subject-object relationship originally put forward by *Décartes* entered into crisis. Husserl proposed a more complex relationship that joins subject and object based on intersubjectivity and later, upon this base, Merleau-Ponty (1945, 1964a; 1964b) went into further detail on the sensitive nature of perception and the role of the body in the intersubjective domain.

During the same years, even the sociologist Mead underlined the essentially social character of the intersubjective relationship and the importance of self-awareness. Therefore, the subject-object relationship was situated in a context of practical interaction. Schutz also insisted on the importance of social context and especially the social practices of everyday life in the subject-object relationship. The ethnomethodological approach of Garfinkel (1986) maximised the intersubjective and practical dimension, stating that it is the social actors in their interaction that produce the social reality, such as the social and cultural objects of that same reality. Following on from this, Maffesoli (1979, 1985) observed how this process has a minimum social unit as its main setting: the group. Thus, the importance the object has in reduced social settings united by strong emotional ties is understood.

In the area of linguistics, it has been mainly Greimas (1976, 1979) that has addressed the essentially textual and discursive nature of the social reality, a framework in which the "non-objective" nature and its predisposition to admit and transmit meaning is made more comprehensible.

Jean Baudrillard (1968) also proposed studying the relationships between people and objects with the intention of somewhat filling the gap that he detected in the functional, formal and structural analysis of the technical objects of modernity carried out by Giedon (1947). This study had not gone into evaluating how objects are perceived by users, thus demanding a response beyond the functional, and nor into the mental structures that guide their use in everyday life. To address this analysis, Baudrillard distinguishes between a technological plane, an essential, denotative dimension, that explains the structural evolution of the object, and a plane of the meanings attributed to the object, which would be an inessential, connotative, semantic dimension.<sup>347</sup> In the aforementioned object classification framework divided into four systems –functional, dysfunctional, metafunctional and socio-ideological– furniture and domestic objects, together with their complement, the mobile living space of the car –a private, daily object open to the world– are presented as epitomes of the first system, which centres around the concept of functionality.<sup>348</sup>

In the traditional setting of the bourgeois society, Baudrillard recognises a direct relation between the configuration of the house with its furniture and the family structure and patriarchal social order.<sup>349</sup> In the modern setting, furniture expresses

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<sup>347</sup> According to Baudrillard (1968; Sp. transl., 2010: 1-9), in the industrial production system, this inessential part (the form of the object not strictly determined by its technical elements) is also subject to a project and a systemised production, whereas in the handcrafted object, it had more freedom. The denotative plane and connotative plane are therefore not dissociable in the object.

<sup>348</sup> See specifically the first part of Baudrillard's text: "The functional System or the Objective discourse" (1968; Sp. transl., 2010: 13-74).

<sup>349</sup> The dining room and the bedroom are two poles around which this order is structured, in which every item of furniture and each room has a destiny related to the various activities of the family unit

the new structure of the relationships of the individual with the family and society. Furniture loses its monumentality and the scarcity of space sharpens its design. It affirms the logic of flexibility and the reduction of the form to its essence. The lack of style is therefore a consequence of the lack of space and maximum functionality provokes the loss of interior organisation of the intimacy dimension. Therefore, the modern interior is presented as an unstructured group, in which nothing has replaced the symbolic, disappeared ancient order. The relationship between the individual and the object is apparently more liberal, but it mainly concerns the liberation of the function of the object. This, reduced to its essential form, at its zero degree, liberates its function, which no longer remains hidden behind the moral theatrics of decoration and it is exposed through a series of signs. However, in these conditions it does not establish a true relationship between the objects, incapable of articulating a space, given that each one talks of its own formal freedom through which they express their function. Furthermore, in the systems composed of modular elements that Baudrillard defines as the "interior model", it reveals the tendency to exceed the idea of the object-function and it highlights the organisational value thanks to the infinite possibility of configuring the components based on criteria defined by the user. Rooms open up, they lose their characteristic as havens and integrate into a fluid space, organised into zones or sectors. Light, both natural and artificial tends to be diffused, revealing objects that are freely placed in the space, without any of them becoming too intense a focal point.

It substantially changes the meaning of interior space: "Today, the value is no longer approval, nor intimacy, but information, invention, control, continual availability; with objective messages: it is in the syntagmatic calculation, upon which the speech of the modern inhabitant is founded".<sup>350</sup> Decoration ceases to be a determining factor for an aesthetic correspondence according to the secret affinity between objects, and it becomes communication. Objects do not have a singular presence, but group coherence, being willing elements of a code according to a calculated relationship. There is no affirmation of a taste or willingness to define a theatre of objects, but a problem to which a spatial solution must be given. It is about a "space of placement" that corresponds to a new type of inhabitant, defined as "placement man", not owner, or user, but an attentive controller of the space as a distribution centre. This man does not consume the objects but dominates, controls, and orders them.<sup>351</sup>

In the modern order, this technical imperative of placing presided over the functions is complemented with a cultural imperative of atmosphere dominated by colours, forms, materials and the space that defines the connotative values of the interior and provides it with its character.

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and end up interiorising their function, which subsequently becomes draped with a symbolic dignity. In this order, the main function of furniture and objects would be to personify human relationships, populate space and possess a soul. Beings or objects are related by an elevated affective value that determines the interior in opposition to the exterior. The formal aspect of these furniture-monuments talks of the persistence of the traditional family structure (Baudrillard, 1968; Sp. transl., 2010: 13-15).

<sup>350</sup> Baudrillard, 1968; Sp. transl., 2010: 23.

<sup>351</sup> The traditional setting is the reflection of the order of nature, in which man, through the imposition of a form that is also cultural, transubstantiates nature. The modern symbolic order is phallic and fecal, of production, calculation, functionality, an order of self-improvement and transformation of that which is given, but also through hypochondriac obsession in the flows, in the absolute circulation of the messages (Baudrillard, 1968; Sp. transl., 2010: 26-28).

Through the use of colour and material, a system of signs is defined, as well as the atmosphere, which expresses a combination of hot and cold, of closeness and distance that symbolises the relationship between the people that move around in it. The same logic also extends to objects. The modern form loses the symbolic relationship with the traditional gestures of labour and effort, and establishes the symbolic power vacuum of technical control and its functional gestures. Whereas objects are made more complex and their scope of action is widened, human movement and behaviour remain reduced, concentrated on the periphery, and in the activity of monitoring the senses and the brain. The remainder of the physical operations are transferred to electromechanical or electronic devices. The forms are separate from the practical forms. The "fluid, transitive, encompassing" form is the only thing that remains to express a power that cannot be symbolised by the functional forms, only connoted.<sup>352</sup> If man once played a vital role for a sequence of gestures needed to put objects to use in order to achieve an objective, he is now a simple spectator of a global process in which the objects are actors and therefore "in the face of the functional object the human being becomes dysfunctional, irrational and subjective."<sup>353</sup>

The consequence of this process is an internalisation of the dynamic effort "into a mental dynamic, that of a functionalist myth, that of the virtuality of a totally functional world, of which each technical object is an indication." Therefore, the technical object, that requires only formal participation, talks of "a world without effort, an abstract and completely mobile energy, and the total efficacy of sign-gestures."<sup>354</sup>

Arriving towards the end of the analysis of the values of placement and setting, Baudrillard specifies the ambiguous nature of the term functionality upon which the whole system rests. Functional, deriving from function

suggests that the object is consumed in its exact relation to the real world and with the needs of man. Functional does not qualify what is adapted to a purpose, but what is adapting to an order or system: functionality is the power to integrate within a group. For the object, it is the possibility of rising above its function and arriving at a second function, becoming an element of play, of combination, of calculation in a universal system of signs.<sup>355</sup>

The criticism of the object as a sign that acquires a meaning beyond that of its value of interchange and use, in a dimension of symbolic interchange influenced by two logics that Baudrillard defined as *phantasmatic* (related to a psychoanalytic dimension of projection, identity, sexuality) and *social differential* (linked to sociology and anthropology and centred on consumption as a production of signs, social differentiation and prestige), means that the object is seen as a sponge for the subject, as a projection of an intimate "projective, imaginary and symbolic" universe in a setting that may be domestic or urban, in which the private/public differentiation has a precise meaning, as indicated by Walter Benjamin. Reflecting

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<sup>352</sup> The form acquires an increasingly connotative role: "This is how after a very brief phase in which the machine and the technique, proud in their emancipation, exhibit their practicality in an obscene manner, modern decency is attacked to ensure the practical function of things" happy to express the 'inoffensive nature of signs'." (Baudrillard, 1968; Sp. transl., 2010: 63-64)

<sup>353</sup> Idem: 58.

<sup>354</sup> Idem: 58-59.

<sup>355</sup> Idem: 65.

on the post-modern condition, Baudrillard (1983) considers that these aspects lose their centrality and tend to disappear in a society dominated by information processes, given that "people no longer project themselves onto their objects with their affection and representations of their fantasies of possession, loss, sorrow, jealousy". "In the place of reflexive transcendence of the mirror and scene", describes Baudrillard, "there is a screen and a network", in other words "the smooth operational surface of communication, a non-reflective surface [...] where operations unfold." According to this interpretation, a period of "Faustian", Promethean (possibly Oedipal) production and consumption replaces the "narcissistic and protean era of connections, contact, contiguity, feedback and generalised interface." Therefore, also for the new objects, the fundamental questions are communication and control, the performativity of their abilities to which we can add the sustainability of their production, consumption and rejection processes.<sup>356</sup>

The consequence of this shift to the intangible universe from the informational one makes what is real appear as a large, useless and desert body. The body, landscape and time, but also what is public and private progressively disappear as scenes. The body presents itself as superfluous, excessive in the complexity of its physical dimension, given that it is concentrated in the brain and genetic code. The country seems to be a useless extension compared to the urban concentration that contains and synthesises events. Time becomes never-ending and empty when compared to the light speed of electronic processes. Baudrillard concludes his reasoning by affirming that in public and private scenarios, the mechanism of representation is the spectacle, which articulates the relationship between what is shown and what is concealed, whereas in the information society there is no spectacle without obscenity, given that everything is equally exposed, hyper-revealed, immediately visible: "Obscenity begins when there is no more spectacle, no more scene, when all becomes transparent and immediately visible, when everything is exposed to the harsh and inexorable light of information and communication."<sup>357</sup> We therefore live in a moment of communication ecstasy, in which the obscenity does not refer to the prohibited, but to the excessively visible, to the permanently exposed, an ecstasy that is at once dizzying and fascinating.<sup>358</sup>

Perhaps the concept of obscenity or hyper-exposure can help us understand the apparent contradiction of the information societies, in which the reduction of reality to the surface of communication has not determined the death of the object, but quite the opposite; its proliferation, reinforcing its role as a medium defining a new liquid identity.

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<sup>356</sup> The mutation of objects and the environment in the modern era originate, according to Baudrillard, from three irreversible trends: a) towards a formal and operational abstraction of elements and functions, that are homogenised into a single virtual process of functionalisation; b) towards the displacement of bodily movements and efforts to electrical and electronic controls; c) towards the miniaturisation, in time and space, of processes whose contexts are memory and screen (Baudrillard, 1983; Sp. transl., 1985: 191). According to Moles (1972), in the consumer society, the object is intended to last a limited time and it is inexorably destined for destruction, in an ethic of creative destruction as opposed to the models of a previous society in which, in contrast, the object was designed to defy time within the scope of an ethic of that which is eternal or meant to be a material and tangible sign of wealth in the scope of an ethic of accumulation.

<sup>357</sup> Baudrillard, 1983; Sp. transl., 1985: 193.

<sup>358</sup> If hysteria was the pathology of the scene, where the subject overacts, Baudrillard (1983; Sp. transl., 1985: 191) suggests that schizophrenia is the pathology of the hypercommunicated society, of the excessive closeness to everything, of the impossibility to maintain one's own, private, intimate sphere. "He cannot produce the limits of his own being, can no longer produce himself as mirror. He is now only a pure screen, a switching centre for all the networks of influence."

Deyan Sudjic (2008) points out the paradox of our homes, in which we spend increasingly less time, full of objects destined for infrequent use as a result of a mechanism of infantile desire: "They are our toys: consolations for the unremitting pressures of acquiring the means to buy them, and which infantilise us in our pursuit of them", but he also suggests that behind the object there is the pursuit of reaching a model of ideal life, as if the object were an instant resource capable of replacing the time necessary –that we are not prepared to spend- to convert the ideal into reality: "Those of the middle class fill our kitchens with electrical appliances and, whilst we buy them, we dream of the domestic happiness that they are supposedly going to provide us."<sup>359</sup> Sudjic is a sceptic of the simplistic explanation that this wish is exclusively fed by advertising and believes that in order to understand it, it is necessary to call upon the design that is surprisingly absent from the analysis of Barthes and Baudrillard, which they decanted for considering objects as "the physical manifestation of the collective psychology" rather than the result of a creative activity such as design, which, from its origins onwards, was used not only to solve problems but also to channel desires.

#### 4.1.2 Between Function and Image

The operation of furnishing is also the first form of taking possession of the domestic space, of defining its functions, the routes, the frameworks in which the objects will be ordered in a cosmic form, an ordered set, related by a chain of meanings and logical sequences, but also of the demands of representation and projection of the personality of the inhabitant. The framework is thereby defined by which objects will be exposed on the surfaces or hidden in the depths of cupboards, searching for a precarious balance between the satisfaction of the practical demand and the search for a narrative and visual sequence with which the inhabitant feels identified.

Vitta (2008) distinguishes between three phases in the process of appropriation of the domestic space by the inhabitant: equip, furnish and decorate (*attrezzare*, *ammobiliare* and *arredare*), a process that can be seen as a disposal of three different layers, the first still pertaining to the architectural body (coverings such as floors, panels, elements like fittings), the second pertaining to furniture objects, and the third pertaining to the world of arranging the objects in the space and throughout a lifetime.

It is in this slow development of functional decisions, of formal solutions, of aesthetic options, of unreflected attitudes that the inhabitant takes possession of the dwelling and makes it his or her own. The sense of the possession is manifest in the constant search for an identity, in the willingness of recognition that feeds the "desire" and it is projected in a sense of belonging in which archetypical images and modern roles precipitate and amalgamate.<sup>360</sup>

The universe of objects in the domestic landscape acquires linguistic connotations, as it turns into a narrative structure. In saussurian terms, we could say that each inhabitant chooses from the *langue's* vocabulary of furniture design, the *parole* of his or her items of furniture. On a second level, the language tends towards more

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<sup>359</sup> Sudjic, 2008: 9.

<sup>360</sup> Vitta, 2008: 207.

specific terms when objects are arranged in space according to rules, sequences and meanings defined by each family or individual according to a personal and unique vocabulary of a family lexicon or even an idiolect.

This process of individualisation responds to a need to distinguish that achieves social significance and becomes a search for prestige, in the framework of a class or group that needs to express its difference through a specific language or style. In this case, the inhabitants select an option among a menu (classical, vernacular, ethnic, vintage, modern, high-tech, hyper-designed) depending on their generic and often fashion-driven stylistic features rather than their individual sensibility and taste.

Vitta maintains that the space of the functions reveals itself as a diagram of forces that guides a series of acts, behaviour and situations according to plans that make up domestic rituality. The everyday actions and gestures take place in the architectural space, which governs them according to distances and sequences, but always implying the presence and use of objects that subsequently acquire a ritual consistency. It is the specific function for which a determined object is used that becomes reinforced by the everyday ritual. If I always use an object to carry out a determined operation, this means that this object becomes indispensable to me from a functional point of view and therefore is definitively associated to the function. The modern concept is somewhat more legitimate and the rituality of inhabiting remains linked to the specific function.

In modern times, furniture has received different interpretations by architecture, which understands it as an integrated and derivative component of the architectural space, and design, which sees it as a form of autonomous, independent pieces, which are mass produced and susceptible to being combined in variable ways according to the plans and preferences of the inhabitant.

In recent decades, design has delved into the logic of the system, adaptability, the capacity to achieve ever differing and varied configurations from a series of limited components, whilst specific service areas such as kitchens or bathrooms have acquired a definitive, functional, formal and semantic autonomy. Architecture has given up on imposing a sole projective principal, and it has renewed its interest towards longer lasting solutions that propose multipurpose, modular and flexible devices, or that integrate the functional part of furniture into elements that separate spaces, such as built-in wardrobes, equipped walls and micro-rooms. In this manner, only on rare occasions does the architect take charge of the design of the furniture of his projects, referring much more often to the products on the market, which will be combined according to his sensitivity, the characteristic of the space and the always complex relation between the project's architect and the client.

Vitta maintains that at the beginning of the 21<sup>st</sup> century, the new products are being produced rather along the lines of form than in defining new functional and spatial concepts. The home has not witnessed such profound changes as the office and commercial sectors, where technological innovation and the change in social behaviours have led to redefining not only the spaces but also the position, the relations and the role of each actor in the process. In this manner, the loft, the open space, the idea of the open and flexible house must be interpreted as models fed by the imagination of Hollywood cinema and destined for minority, yet very visible groups. This discovery raises questions about the weight of tradition and the idealised images of what a home should be, which are still held by the public.

In the contemporary domestic space, objects that pose a new form of interaction seem to acquire a special relevance with their users or explore the limits and possibilities of performing some of the domestic activities based on unexplored manners of thinking and acting. Generally, the proposals of the designers have been directed at or reflected on the use and meaning of the object in relation to the cultural setting or the possible innovation linked to technology. In these cases, the technological response is not enough in itself to offer convincing solutions, but it must be combined with a study of the potential real needs of the users, avoiding the creation of false problems that will need resolving. It is probably within this scope where the study of the new forms of family and their different life habits opens interesting fields of experimentation and diversification of the solutions required in each case.

### 4.1.3 Communicating and Envisioning the Contemporary House

The relationship between objects and the domestic space, while already complex and dependent on each specific context, is paradigmatic when it comes to communicating the values that a piece of furniture from a highly integrated system, such as a kitchen or bathroom, brings to the house as a whole. Various functional or historical-cultural interpretations have been made of the spaces of the house (Bachelard, 1957; Teyssot, 1986; Busch 1999; Vitta, 2008; Bryson, 2010); therefore, I do not consider it necessary to continue along such lines. Instead, I propose a different interpretation focused on the values that are transmitted through the advertising published in prestigious architecture and interior design magazines in recent years, such as *Domus*, *Casabella*, *Abitare*, *Diseño Interior*, *Wallpaper*, *Architectural Review*, to name but a few. I believe that the images are a reliable way to interpret the expectations of both the advertisers, who are transmitting the messages, and the public, which can supposedly identify themselves with these messages. This study looks at the main areas of a house –living room, kitchen, bathroom and bedrooms–, as well as briefly comments on some of the dynamics that have transformed our way of understanding and inhabiting the spaces of the house throughout the 20<sup>th</sup> century, and which inevitably also determine how we envision these environments today.

We will begin in the living room, which, in the 20<sup>th</sup> century home, is the result of compressing a series of spaces and functions that, in the bourgeois home, were spread across different rooms, such as: the dining room, the lounge, the study or library, the *fumoir* and, to an extent, the *budoir*; and which in earlier times did not always have a specific place. The living room is now a multifunctional place that serves as the main room for socialising and as a theatre for domestic rituals that symbolise the family union and strengthen ties with extended family and friends. The two poles of this space form the archetypal circles of the dining room, focused on the conviviality associated with consuming food, and the living space, focused on entertainment and hospitality. The living room, therefore, has a collective calling and it is the most public space of the house, where its representative elements are to be found. How open this space is depends on customs, and slight differences can be found even between countries within Western culture. These traditional, social functions are brought into question, however, both by the pace of life, which at times makes it difficult to devote time to family and sociality, and the presence of other

activities that transform the nature of the living space. One of the first major transformations was brought about by the television, now the focus of entertainment, which then spread throughout the domestic environment assuming other interaction and control-related functions, as has been seen with reference to the media. A second transformation is owed to the introduction of new activities such as work, study, play, hobbies and other domestic occupations that have not been assigned any other space, which convert the living space into a truly multiuse space that can change character and function throughout the day, depending on the circumstances. Observing how the living room is represented in the sphere of communication, with a focus on design, we find a surprising homogeneity, which aligns with well-established values such as the exclusiveness and luxury provided by large spaces with minimalist finishes, the expression of an individuality generically identified with a “my life” or through customised furniture that satisfies each client and it is proof that “not all houses are created equal”. (Plates 4.01, 4.02) Other messages emphasise the satisfaction derived from looking towards nature and a horizon uncluttered by our existence from a comfortable and safe setting; or reference is made to the enjoyment and happiness derived from a living space where we feel at ease and ready to take part in the game of life. (Plate 4.03) On rare occasions a living space is presented as a study area and a workplace, in the same way as office spaces are assimilated with convivial zones, which are light-filled and spacious, reinforcing the idea that the domestic areas extend beyond the perimeter of our homes. (Plate 4.04) If we move away from the advertising of companies specialised in exclusive design and focus instead on that of Ikea, we can see how their scope is more closely connected with multipurpose environments and coexisting functions, emphasised by the short texts that accompany the images and express ideas and sensations. (Plate 4.05) In this last case, certain nuances should be underlined that vary depending on the geographic area. The example scenario of a dinner between friends is a case in point. (Plate 4.06) The Australian and US version presents a medium-shot of a relaxed scene in which one of the women is barefoot, while the UK and Spanish version shows the same scene, only as a close-up, which continues to express intimacy but also a more formal attitude. This shows how the more exclusive products, directed at a public with a higher purchasing power, offer images that portray the living room as a representational and distinguished space, while in the case of products directed at a wider public, the situations depicted are much closer to reality.

The living room also features in several advertisements for automated home systems, thereby communicating the idea that these provide not only comfort, but also calm, rest and more free time with friends and family. (Plates 4.07, 4.08) As alternative values the communication also transmits the idea of saving money and the possibility of achieving personalised solutions, as well as distinction and elegance, which appear in the communication of the same manufacturer with four years of difference, confirming the observations of chapter 3. (Plate 4.09) In several advertisements, emphasis is given to body-language focused on the hands, indicating power and control, or directly to the totemic value of the remote control itself, showing how the power of technology has been updated in terms of media, but remains in the hands of the new women-managers of the information era. (Plate 4.10)

Traditionally the kitchen has had special value in the domestic space as a symbol of the family’s upkeep, represented by the preparation and transformation of food and

also as a social space. However, in convents, palaces and bourgeois homes, the kitchen has been the space for the lower ranks, centre of a system that is independent of the circulation and flows and must be kept separate from official and representational life. After the mid-19<sup>th</sup> century a new interpretation began to be formed focused on the efficiency and rationalisation of processes (Beecher, 1845; Frederick, 1915), which was firmly established in the social housing experiments in 1920s Germany, exemplified by the Frankfurter Küche (1926) of Grete Schütte-Lihotzky. (Plates 4.11, 4.12) This transformation has been accompanied –and in part also produced– by a change in the organisation of middle-class housing, which has witnessed the disappearance of the service staff and the arrival of a female figure and housekeeper who efficiently manages the home, and who, in 1950s America, adopted a central role in the domestic space thanks to kitchenettes that were open to the living space, while in Europe they were still confined to closed rooms. Contemporary kitchens, whether separate or as part of the living space, have become representative spaces of the home, equipped with increasingly sophisticated household appliances and furniture that combines a high level of functionality and storage capacity with a design that considers the smallest details, from the materials and finishes to the organisation of the internal spaces. (Plate 4.13) The images continue to communicate the idea of functionalism and reliability in a space where everything is perfectly ordered and ready to be used, where the technology of household appliances offers avant-garde, innovative and perfect solutions, represented in the essential keys of design, touchscreen controls and impeccable finishes of metal and glass, which create subtle contrasts with stone worktops. (Plates 4.14, 4.15) The kitchen, therefore, defines the style of the interior and integrates perfectly with the design of the living areas, becoming, in effect, a specialised zone of these. (Plate 4.16) In certain cases, the capacity to create style or confidence is underlined with the mention that it is an Italian or German design. However, emphasis is also given to other values like equipment quality of a professional standard suggesting that the inhabitant is an expert chef capable of preparing the most fashionable recipes of the moment and turning the kitchen into a sensory experience. From the functional domain of conserving and preparing food, the kitchen becomes a socialising centre for the family unit, the couple and friends and a guarantee of an “authentic life”. (Plate 4.17) When the essence of the message is family life, objects appear that are related to the world of children, like toys, pushchairs and highchairs that speak of the possibility of combining a modern house with a permanent and stable environment, connected to the memory of the kitchen of yesteryear, the centre of domestic life. (Plates 4.18, 4.19) If the message is directed at couples, the images accentuate partnership or a youthful lifestyle and can include the latest technology. (Plate 4.20) Finally, in the case of social relationships or friendship, the kitchen is presented as the centre of the soirée or the aperitif, but also as a space for creativity, for the man to display his culinary skills or a more ambiguous scenario that leaves the situation open to the interpretations of the spectator. (Plate 4.21)

The bathroom is the place where once again the intimate relationship with our bodies takes the lead, through small daily rituals related with hygiene, health, beauty and wellness, which in previous eras were carried out in other rooms of the house, or which were not even allocated a specific place. The key to overcoming the shame linked with the image of the naked body in the 19<sup>th</sup> century was found in hygienic practices. These led to the appearance of apparatus like the water closet and other

sanitary objects equipped with running water that required a fixed location, unlike commodes, ewer and basins and bathtubs, which could be put anywhere. Although not generally spoken of, the process of transforming food that starts in the kitchen ends in the bathroom, and it is suitably overseen by designer solutions that turn forms that were initially functional into suggestive pieces, which are at times ergonomic and more frequently sculptural, and convey a hedonistic and narcissistic perspective of the bathroom in the contemporary home. The focus of attention on the body continues to revolve around water, poured into bowls and bathtubs by elegant mixer taps and an integral part of hydro massage and multifunctional shower cabins, which embody the desire to see the bathroom not just as a place for hygienic practice, which is now taken for granted, but also as a room to recover psychologically and physically from the stressful pace that the nomadic and hyperconnected life of the metropolis subjects us to. (Plate 4.22) The bathroom, therefore, is a place to disconnect from the world and once again focus on the essence of our person –the domain that the 2013 Ikea catalogue, ever attentive to registering domestic sentiment, defines as “me-time”. At the same time as in other circumstances it has to be an organised and efficient space where the family can quickly get ready in the morning. (Plate 4.23) This intimate space is also the terrain for negotiation in the variable and fluid geometries of contemporary existence. The negotiation between desires and reality materialises in the surface of the mirror where, every day, we see the reflection of how we are perceived and how we would like others to perceive us. It is also an instrument for examining the visible and secret changes that the course of time and our lives are leaving on our bodies. The advertisements express the complexity of this space that is an increasingly integral part of the system of domestic rooms, reflecting the values of activity and inclusiveness, as well as the boost of rejuvenation and positive energy that it can give us, symbolised by the little girl playing beneath the shower protected by a light yellow umbrella that protects her in her “fantasy world”, still safe from that other real world of unrelenting time that stretches out beyond the doors of her home. (Plates 4.24, 4.25) Furthermore, opening the bathroom to the rest of the house puts an emphasis on characteristics like style and comfort of sanitary objects, surfaces and finishes. The perfect world of advertising neglects to mention the effort involved in keeping the glass shower screens, which whisk us away to a world of relaxation, free from the lime in the city water. (Plates 4.26, 4.27, 4.28) On other occasions the aromas of oriental spices emanate from the pages inviting us to refined exoticisms, inspiring dreams of pleasurable reading or promising us suggestive scenarios that invite eroticism beneath mood lighting. (Plates 4.29, 4.30)

Frequently, the ideal continuation of this scenario for exhibiting and contemplating the body is the bedroom, which always has more complex meanings if we move away from the contemporary vision of it mainly as a place for sleep, sex and rest, as well as a place to store our clothes. The bed, which continues to be the centrepiece of this space, has long been seen as a sign of stability and the family. Homer in the *Odyssey* explains how Ulysses carved his bed directly from the stump of an olive tree, making what should be a piece of furniture into the physical and symbolic centre of our roots with the earth and the matrimonial bond. Significantly, the domestic bed is the scenario of Molly Bloom’s infidelity in Joyce’s *Ulysses*. Indeed, in the context of the functional disintegration of ‘essential acts’ the bed has lost its role as the alpha and omega of human existence, replaced by its medicalised, impersonal and aseptic surrogate, the hospital bed. In this change of scenario the transformation of the

living space is synthesised in the age of technology, in which, as a general rule, both the beginning and end of life can no longer strictly be considered to be natural and domestic, but rather are part of the more calming sphere of what is artificial and public. Here, the person becomes patient and the responsibility of the decisions regarding life and death lie with the members of the medical team. Relieved of the burden of symbolism and memory, the bedroom becomes a light space, available for other additional uses like exercise, entertainment and work. This is less frequently referred to in advertising, which focuses on intimacy, transmitted through subtle tones and soft lighting, the comfort of a bed, which takes us away to a world of dreams, or, on other occasions, the togetherness and fun that may unite the couple, portrayed by the exercise equipment shown in one of the advertisements. (Plates 4.31, 4.32) There seems to be a link with the bedroom-gymnasiums of the 1930s, but whose meaning is filtered through the post-modern factors mentioned in the first chapter. If the main bedroom is a space for the couple, normally granted a privileged position in homes designed by property developers, despite its ultimately non-intensive use, the children's or young person's bedroom acquires very different connotations. This is at once a play area, battle ground, study zone and a stronghold of privacy where the first steps towards independence from parental control are taken. Even more significantly, reference to these bedrooms is scarce in the advertising of prestigious magazines, while there is an abundance of it in the world of practical furniture and therefore, again, also in the Ikea catalogues. (Plates 4.33, 4.34) These are transitory solutions, rendered obsolete by growth and changing demands, with an emphasis on versatility, transformability and furniture with playing possibilities for young children, and on creating a hybrid between bedroom, study area and living room, completed with its corresponding technological infrastructure, for teenagers.

Our journey through the spaces of contemporary domesticity may be extended towards other places like terraces, gardens, swimming pools and cars, which represent other dimensions of home life, frequently seen in the pages of magazines. However, it is unlikely that this would enrich our view with elements very different to those we have just seen. These reflect the interrelation between the image and the reality created by our aspirations and desires –to which advertising offers visual consistency based on expressed and latent sentiments–, and of the reality of the image that is manifested when society adopts the models and values created by advertising to try to replicate them in daily life. However, it can be observed that most of the messages transmitted by specialist magazines, which have provided the advertisements that I have selected, generally align with deep-rooted values that give a contemporary look to houses closely linked to bourgeois imagery, which continues to reflect the public's ideal tastes and life models. This panorama shows us the difficulties that contemporary planning culture has in presenting wider segments of society with proposals for a type of inhabiting known as the art of becoming, which we will now analyse.

## 4.2 Strategies of Flexibility

In this section I will focus the attention on some of the strategies that designers have put forward to respond to the challenges posed by new functional demands, the redefinition of the relationship between public and private domains, lifestyles determined by the mobilities paradigm and today's variable family structures. The typical home defined by the modern movement is largely the result of a formula conceived for a nuclear family that divides its time between the house and an external workplace. Generally speaking, activities in the domestic environment were linked to maintaining the inhabitants' psychic and physical integrity (feeding, resting, care, and recreation), the preservation of the space (cleaning, chores, and small repairs), reproduction and upbringing (childcare, play, study) and relations (partner, friendship). In terms of space, these activities were divided between functionally distinct areas: the day area (dining room, living room), the night area (bedrooms) and the service areas (kitchen, bathroom and storage), set out according to precise spatial relationships and sized from the minimum surface areas determined for each space, which may vary depending on the composition of the family, its social standing and financial level. It might therefore be said that the typical dwelling of the modern movement is a clear example of the spatial transposition of a functional diagram that reflects a predominant family structure and that hardly fits the variety of demands and situations of contemporary life.

The earliest alternative to this model of compartmentalised domestic space, which responds to the need to carry out different activities without excessive interference, came in the form of the artist's atelier and later as the loft apartment, a space that was functionally divided, yet spatially and visually integrated. From the 1980s onwards the loft became a fashionable option, distinguishing members of affluent society, desirous of being seen in environments loaded with emblematic signs. Works of art, design pieces and vintage furniture are inserted into a context that turns what in the past was marginal and untidy, into something that today is comfortable and sophisticated. The loft is the result of a process of gentrification that has affected neighbourhoods like Soho, Greenwich Village, Chelsea and Tribeca in New York and similar urban areas in other cities around the world, and can be interpreted as another sign of today's times, where the productive economy is replaced by the financial economy of the information era. In fact, the loft is the final transformative stage for buildings built in the 19<sup>th</sup> century for purposes of production, which, as of the late 1940s, started being used by artists, in search of large, economical and well-lit spaces, as workshop/living spaces. These people appreciated the "raw, unfinished, industrial, defiantly unpretty and antibourgeois" character of these environments, which went on to become stages for the 1950s' underground culture.<sup>361</sup> (Plate 4.35)

While large-scale production, in response to growing metropolitan areas, has led to standard solutions for families being applied to both social and bourgeois housing, modern architects are also interested in more flexible and participative solutions, which have rarely been taken beyond a small-scale pilot stage and on many occasions can only be found in the pages of magazines and books, confirming that the new housing typologies only make sense for society if there are significant

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<sup>361</sup> Rus, 1998: 13.

changes in our lifestyles.<sup>362</sup> In the early 1970s, Paola Coppola Pignatelli considered the need for a thorough change in the criteria of the domestic project to adapt to the demands of a changing society and family. Although in the times of the modern movement the priority had been to attend the basic demand of a decent dwelling for everyone by applying criteria of industrialisation and scientific organisation of work, Coppola Pignatelli observed that the project of the contemporary dwelling must also apply to the needs of the individual's psychological well-being, and believed that quality of life depends largely on the place where daily life occurs, on small gestures and full satisfaction of fundamental needs such as being supplied, eating, making love, communicating and belonging to a group.<sup>363</sup> Despite the time passed, it can be said that only on certain occasions has the domestic project managed to achieve these objectives, for different kinds of pressures continue to place these aspects on a lower level, as well as indicating that the inhabitants largely lack a spatial education to make them aware of the importance of these factors when considering the quality of the domestic space. As it has been seen in previous chapters, in recent decades the domestic domain has become loaded with new expectations that have added to its traditional functions. This situation has, on the one hand, led the use of the existing spaces to be redefined, and, on the other, the criteria of the domestic project to be reconsidered in order to approach a new concept of existence as "living in motion". This concept includes both spatial mobility, linked with the desire to find new places that offer greater possibilities for fulfilling people's life expectations, and mobility in terms of configuring content and forms of existence thus providing new ways to inhabit space without necessarily implying geographical movement.<sup>364</sup> The functional changes have led to a reinterpretation of the characteristics and nature of the traditional spaces, which have changed in meaning and the way in which they are experienced. As we have seen, the living room, the bedroom, the kitchen and bathroom are imagined and experienced differently today even in the relatively stable area of the nuclear family, and this range of interpretations and uses of space extends if we look at other types of families such as those mentioned in chapter 2. But the changes are not limited to these aspects, since living in motion also implies that our cities are multicultural and that lifestyles tend to differentiate. With such a high number of variables and combinations it would make little sense to offer rigid and closed solutions, and less so if we mean to give shape to an apartment building that will house diverse inhabitants with differing demands and who, as a general rule, the planner does not know. Therefore, flexible and indeterminate solutions are perhaps the most suitable for changing individual and family

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<sup>362</sup> For an extensive discussion on flexible housing in modern and contemporary architecture, see: Schneider and Till, 2007.

<sup>363</sup> Coppola Pignatelli expressed this concept as follows: "the challenge of contemporary architecture is to build a habitat for huge amounts of people, but taking into account the quality of life of each person. It is the challenge, it has been said, between Marx and Freud, between the collective's socio-political requirements and individual's psychological ones" / "la sfida dell'architettura contemporanea è quella di realizzare un habitat per il grande numero, tenendo però presente la qualità della vita di ogni individuo. E' la sfida, si è detto, fra Marx e Freud, fra le esigenze socio-politiche della collettività e quelle psicologiche dell'individuo." (Coppola Pignatelli, 1977: 8)

According to the author, the planner should conceive the dwelling not only from functional criteria, but also from a deeper understanding of spatial experience, from an empathy with the inhabitant's gestures and daily activities. Coppola Pignatelli defines as "feminine" this approach that considers space as a "resource" to be used carefully and sensitively, taking advantage of the elements that nature provides. This model is opposed by another, masculine, model of space understood as "conquest", and that of the hunter and warrior, the result of appropriation, straight lines, abstract and transforming, which is the kingdom of geometry, line, abstraction and proportions, that of monuments and square cities.

<sup>364</sup> Rammler, 2002: 202.

expectations and also for accommodating new demands and habits that are difficult to foresee. Gili Galfetti (1997) has proposed that a distinction be made between two types of flexibility, which he defines as initial and permanent. The former consists in giving the option to the future inhabitant to intervene in the interior organisation and allowing them to make certain decisions before the work has been finished. The latter allows the domestic space to be modified over time developing alongside the variants of mobility –variation of functions according to the time of day and specific demands–, evolution –transformation in the long term based on life and family changes– and elasticity, which allows for the possibility of varying the floor surface area destined to certain activities, incorporating other rooms if necessary. In recent studies on the theory of dwelling, the conclusion has been reached that in the face of complexity and variety of forms of the contemporary home it makes no sense to define excessively rigid models, but rather to plan spatial strategies that allow the home to be adapted to a continually changing reality. This posture must not be interpreted as a reluctance to propose new solutions, but rather as a significant change of attitude on the part of the architects, who in the 20<sup>th</sup> century had become accustomed to establishing the rules, sometimes too rigidly, for living in modernity. However, the fact that the architect leaves options open also implies that the inhabitant assumes a greater responsibility when deciding how to create a setting that offers their true comfort. This idea raises the question; to what extent is society aware of the importance that must be given to the art of dwelling, if people are to be able to enjoy a full life beyond the stereotypes created by the media?

Moreover, I believe when considering suitable responses to the demands of living in motion, it is important to avoid today's commonly held belief that nomadism is an almost absolute principle, on the basis of which we should turn our living spaces into mobile homes or give them the anonymity of a hotel bedroom.<sup>365</sup> Despite the fact that we, and our demands, change, the home is still, fundamentally, a building that should allow us to establish a relationship both with the place that surrounds us and the world. Each person's home should be able to offer an environment suited to their times, which unites the spatial, environmental and psychological qualities necessary for it to be experienced as a home, whether as a temporary dwelling or the theatre for an entire existence, whether a single-family house or part of an apartment block. Although the task of constructing the home is a personal responsibility that involves all inhabitants and all families, we look towards architecture because it offers the specific elements that allow the physical space of the house to provide suitable responses. In this sense, a project should always be developed as a positive, creative and enriching response to a problem, and not, as is too often the case, the result of a logic that does not, even, contemplate these possibilities.

The issue of flexibility can be tackled from different points of view and also from cultural standpoints that are not solely the domain of modernity. A case in point is that of Japanese architecture, which in the last decade has offered an especially rich terrain for original suggestions to create domestic space that is flexible, non-

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<sup>365</sup> Laurits Ortner, cited in Cornelissen (2005: 133) writes: "The city dweller therefore has to see himself as a traveller and his house functions as a hotel room; a place to bathe, change clothes, eat and sleep – in short, a transit place on the way to appearing somewhere else in the city". Javier Mozas (2006: 44) expresses a similar opinion: "The attachment to the place where one lives and where one works has gone, and the place where one lives seems to be, more and more, the place where things are produced. The house of the future will be an office; an office where one sleeps and sometimes, only sometimes, one cooks. It will also be hotel in which all ancillary services will be taken care of and -why not?- an old people's home, where it will be necessary to comply with the strictest rules of access."

hierarchical and anti-conformist. Their projects are based on a tradition that views the house as a light construction destined to be periodically renovated, whose spaces, which conceptually and visually follow the idea of a void to be filled by the inhabitant's presence, can be reconfigured spatially and functionally in accordance to circumstances.<sup>366</sup> In Japan's dense urban contexts, characterised by the constant threat of earthquakes, highly priced floor surface area and a fragmentation that noticeably reduces the available surface area, the house is an environment of apparently simple forms but spatially complex. It is designed to generate a feeling of spaciousness and calm, thereby showing how "less can be more", in the words of Geetha K. Metha<sup>367</sup>, who also observes how:

Comfort is often sacrificed for poetry. Everything that can be eliminated is, and the calm space that is achieved is enhanced by a few symbols to evoke nature and beauty.<sup>368</sup>

The contemporary Japanese home, continuously reinterpreted by the architects' intent on making the most of small scales, can be an interesting model for living in motion from various points of view. This is not a house designed as a permanent construction in which to accumulate the inhabitant's objects and memories, but rather conceived as a transitory dwelling destined to last a few decades only. It does not require a lot of storage space, as there are few objects and the wardrobe is often frequently renewed, nor big kitchens, bearing in mind that people often eat out and that packaged food requires few and simple operations before being consumed. Furthermore, in Japanese life the importance of the home is equal to that of the urban environment, which is made especially attractive thanks to the wide range of activities on offer there. Although characteristically Japanese homes are introverted in nature, their idea of privacy is also different, and the need to establish visual barriers between public and private space is not always so great. This owes to the fact that "the Japanese have developed social mores that allow individuals relative privacy even in public spaces".<sup>369</sup>

Based on different approaches to flexibility and an extensive selection of projects, I will focus on five strategies for configuring domestic space, which I believe to be especially relevant and that can be sufficiently generalised. These may be summarised using the following definitions: blurring of hierarchies, frame and generic space, disaggregation and spatial porosity, facility-sharing and transformation and new opportunities. This taxonomical proposal does not define mutually exclusive categories, but rather aims to draw attention to five concepts that can be applied to achieve greater use of and possibly transform the domestic space according to modalities and temporalities more suitable to the present day.

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<sup>366</sup> See: Engel, 1964; Chiorino, 2005; Metha, 2005. According to Engel (1964: 428-429), simplicity in the Japanese house is not an end in itself but a medium used to express contents of utilitarian, religious, traditional and social nature. "It is the key [...] for understanding the meanings underlying form and space and for the delight in contemplating these meanings." The concept of function is not limited therefore to an utilitarian aspect, but rather encompasses a very wide area that includes social, philosophic and religious issues.

<sup>367</sup> Metha, 2005: 10.

<sup>368</sup> Metha, 2005: 12.

<sup>369</sup> Metha, 2005: 10.

### 4.2.1 Blurring of Hierarchies

We have seen how if the relation between the functional programme and space distribution is too rigid, the possibilities of transforming spaces to accommodate uses different to those initially foreseen are likely to be limited. A single room can adopt a new function in so far as it has a suitable form and surface area for arranging the necessary furniture and objects. In many cases, however, this is not a viable option as the space has been sized based on the optimal use and distribution of the objects. Sometimes a dwelling can be so hierarchical that the division of daytime and sleeping areas hampers any reconfigurations of space.

An initial strategy allows for degrees of freedom within the existing space, in such a way as to be able to establish new use configurations and relations. This concept refers to the theory of supports developed by N. John Habraken in the 1960s that proposes “the separation of 'support' or base building from 'infill' or interior fit-out in residential construction and design” with the purpose of developing a planning methodology for adaptable housing.<sup>370</sup>

The project can help the inhabitant by providing him or her with the tools necessary for this type of transformability, as it is the case in Void Space/Hinged Space Housing (1989-1991) carried out by Steven Holl in Fukoka, in which the traditional flexibility of the *fusuma* is reinterpreted through the use of pivoting cupboards, panels and doors that connect or separate the spaces allowing for changes in use as well as variable room sizes.<sup>371</sup> (Plate 4.36) The Aranguren-Gallegos team has also incorporated this principle of transformability in three apartment buildings in Bentaberri, San Sebastian (1993), Leganes, Madrid (1995) and Carabanchel, Madrid (2003), in which the dwellings can be transformed by adopting an open-plan layout for the daytime, and with partitions that provide intimacy and rest at night, saving compact strips that serve as the main storage and service areas. (Plate 4.37)

Catalin Sandu and Graham Hill in the Life Edited Apartment, New York (2012) have proposed a solution that makes full use of this principle. (Plates 4.37, 4.38) The project shows how a single room with reduced dimensions can take on multiple spatial and functional configurations through moveable wardrobes with a compact shelving system and by optimising the furnishing elements and storage areas concealed in the perimeter.<sup>372</sup>

The mobility of the components of the Life Edited Apartment interior relates to two interesting precedents in which the domestic space is basically considered as an empty space filled with the pieces that are needed at a given moment. This means there is no initial hierarchy, since the inhabitant defines the sequence of the pieces and the space according to the circumstance. In the Azioni a Scomparsa (1997) project carried out in Milan by Dante Donegani and Giovanni Lauda, all the furniture elements are stored in two perimeter strips of the apartment and can be extracted like giant inhabitable drawers depending on the activity. (Plate 4.40) In this way the functional core is kept compact and there is always ample surrounding space. In the case of the Naked House in Kawagoe, Tokyo (2000) Sigheru Ban

<sup>370</sup> Habraken, 1972. Habraken's book *Supports, an Alternative to Mass Housing* was first published in 1962. As director of SAR (Foundation for Architects Research) in the Netherlands, from 1965 to 1975 Habraken carried out a wide research on methods for the design and construction of adaptable housing and inhabitants participative processes. The support defines the permanent conditions of the dwelling as its surface and geometry, the relationship between façade depth and lines, the position of the access, the structure and the position of the inalterable cores, like the stairs and installation ducts.

<sup>371</sup> Holl, 1996: 94-107.

<sup>372</sup> Life Edited, 2011; Alter, 2012; Green, 2012; Daily Mail Reporter, 2013; Friedlander, 2013.

suggests reducing the entire house to a translucent container in which the bedrooms, conceived as volumes mounted on wheels, can be moved and oriented freely, and can even be taken outside if any of their inhabitants wants to be or sleep outdoors.

(Plate 4.41)

The systems we have mentioned in this section enable an immediate transformation of the interior based on the daily cycles and activities that are frequently repeated, proposing an integration between architectural and product design criteria, thus providing versatile and relatively economic proposals. Montaner, Muxí and Falagán (2011), however, have tackled the problem of dehierarchisation of the interior in the context of a more articulated theoretical proposal conceived as the basis for redefining regulation criteria for collective housing. (Plate 4.42) This is focused on the dimensional aspects, which form the base for considering a long-term transformation of the domestic space. They suggest systems of analysis and project methods starting from the consideration that a contemporary domestic project is established by social, urban, technological and environmental factors. From a social viewpoint, the diversity of the ways of living and the evolution of family models suggests a diversification of the domestic solutions depending on demands and stages of life, so that not only it is necessary to think of dwellings for families and couples, but also for young people, elderly and people in a state of vulnerability. The technological systems are also considered fundamental in this reading, both for the general quality of the dwelling, as well as to achieve transformability through advanced design solutions and perfectible, adaptable and flexible devices that might be repaired, updated and modified in time. In addition to being flexible, contemporary dwellings must be smart, not only because they must enable effective use of resources (by encouraging the use of the conditions of the place, energy-saving, the use of renewable energies, collection and reduction of waste), but also because they must be planned from the awareness of the scarcity and the finite nature of the territory. It is precisely this last aspect that leads to connecting the domestic project to a reflection on the environment by defending the model of a compact city with highly efficient groups of dwellings to avoid unnecessary land expenditure. From a Mediterranean perspective, a claim is made to the fundamental role of the city as a generator of spaces for relating and proximity values that constitute an enriching experience for their inhabitants, while reaffirming the role of the necessary urban policy to uphold these ideas, and urbanism as the essential complement to achieve their formalisation. Within this framework, a call is made for a dwelling where flexibility is achieved by relieving it of hierarchy, based on which the intention is not to define rooms with preset names, but rather to guarantee habitability conditions that direct them towards the uses that the inhabitants might consider, establishing a certain complicity between the planner and the user, and understanding domestic space not as a closed project, but rather as a support for life that will be defined and modified in time.<sup>373</sup>

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<sup>373</sup> After trying several options, Montaner, Muxí and Falagán suggest an abacus with modules of 9 m<sup>2</sup>, capable of housing different activities and furniture setups, based on which it is possible to define new minimum dwellings or basic dwellings as they are called by the authors, of 45 m<sup>2</sup> that might satisfy the demands of a core of two people.

### 4.2.2 Frame and Generic Space

The second strategy that I will examine proposes going beyond the concept of the building as a whole that shares a unit of time and space, to understand it as the result of a process of assembling elements with different lifespans, which can be replaced in parts without detriment to the integrity of the whole. This proposal links with another less considered characteristic of machines, which is that they can be repaired and updated, and considers a more efficient use of the resources used in construction based on the principle of perfectibility. Ignacio Paricio (2000) has proposed positioning the concept of perfectibility within the framework of a more flexible interpretation of the contemporary home, which should abandon the excessively rigid concept of the “case house”, customised according to the inhabitants, in favour of the “box house”, capable of containing multiple programmes and configurations. This means extending criteria to the domestic sphere that are used frequently in office buildings, and consist of employing dry assembly systems and installation networks that can be adapted to the desired spatial configurations. The result would be a programmatically unfinished home, which can be completed by the inhabitant in accordance to his or her needs. This idea emphasises the home’s technological components, which actually make up the catalogue consulted by designers looking for suitable solutions to their project ideas. In this context, the Proyecto Casa Barcelona, developed between 2000 and 2003 in the framework of the Catalan capital’s Construmat lounge was proposed to explore innovative concepts for facilitating transformability and flexibility of the domestic realm by inviting respected architects to design components such as improvable windows (Van Berkel), movable partition walls of varying thicknesses (Ito), raised floating floors (Clotet and Paricio), lattice systems (Vázquez), movable modular kitchens (Perrault) and bathroom furnishings (Chipperfield) in collaboration with leading companies of the sector. (Plates 4.43 to 4.47) Flexibility in this case acts on two conceptual planes. First, it enables a distinction to be drawn between permanent and obsolescent elements, proposing the structure to be maintained, as well as periodically updating the parts and technological systems with a shorter lifetime. Second, it adopts the idea that living demands are also subjected to an obsolescence related with life circumstances and the desire for change so that inhabiting can continue to be perceived as an enriching experience.

Based on the concepts of frame and generic space, which also link with the studies of Habraken, Bernard Leupen (2005; 2006) has suggested that flexibility can be attained by improving the quality of the permanent elements, in the context of a dialectical interpretation of inhabiting trends. Leupen (2006) shows the limits of architectural dogmatism founded on scientific bases by seeing how a house from the post-war reconstruction period in Amsterdam, planned along the most advanced functional criteria of the time, allows no transformation to new demands and therefore ends up being a much more rigid, unusable structure than a traditional Dutch house of the early 19<sup>th</sup> century, much less defined in its functional program and therefore more open to change. From the need to think on the flexibility and transformability of a house that will survive its inhabitants and will surely suffer functional changes throughout its existence, Leupen suggests working on the permanent elements of the architecture (structure, skin, scenery, services and access) defining the *frame*, to relieve the *generic space* of bonds that may be interpreted as the element where change might effectively come.

The dichotomy of the frame and generic space refers to a more general condition of tension between opposing concepts that I have already discussed such as *Localisation and nomadism*, *Security and openness*, *Modernity and tradition*, and *Functionality and indeterminacy*, which is an integral part of the contemporary home.<sup>374</sup> Consequently, Leupen proposes three conceptual and spatial schemes that articulate the relationship between the permanent and impermanent parts of the house. Despite being abstract models, I have related them with certain contemporary works that indicate possible directions for applying them to specific cases, without, by doing so, falling into automatic and lineal models. (Plate 4.48)

The first type is defined by a service core, which concentrates the elements that require more technology and efficiency, such as kitchens and bathrooms. Around them are the areas for self-realisation in which the inhabitant seeks greater comfort. The core and the envelope are also distinguished by their characteristics of being serving and served spaces, areas that are functionally determined and undetermined and areas of permanence and change defined by the easy transformability of the envelope, which is made from light materials. This typology can be seen in the Dapperbuurt housing (1989-91), Amsterdam, designed by Margaret Duinker and Machiel van der Torre, where the liveable space is organised around a central core containing the bathroom, a small hall and a kitchenette. If necessary, domestic space can be sub-divided by means of large sliding panels stored in the perimeter walls of the core as in Japanese traditional houses. (Plate 4.49)

The second model is focused on the concepts of protection and openness symbolised by a cocoon and transparent skin. The cocoon is the area that provides security, contact with the earth, a feeling of permanence and continuity, while the transparent part, made with more permeable materials, represents the view of the world, contact with the exterior and all that is changing. The inhabitant will have to determine how the relationship will articulate between the permanent and the mutable, so that “the house effectively records a history of the act of dwelling around one fixed point, the Earth.”<sup>375</sup> The N House carried out in Oita-shi, Oita, (2006-2008) by Sou Fujimoto offers an original use of concentric spaces and redefines the inside and outside areas through a series of envelopes that delineate the core of the house, and which at the same time dilate it visually through large gaps that allow light to pass, filtering it in an infinite interplay of shadows and planes accentuated by the white of the surfaces.<sup>376</sup> (Plate 4.50) Through these resources, the domestic space also provides a sense of protection and lightness, incorporating the vegetation and semi-outdoor spaces into the building, which thereby exceeds the limits of the plot. If in the N House the inhabitant moves on a single plane, although their gaze is lost between layers of domestic skin, in House H, Tokyo (2007-2009) the movement extends to multiple planes connected by lightweight wooden stairs, reminiscent of a Piranesian space in which the dramatic darkness of the prisons has been replaced by a diffused luminosity that also blurs the limits of the architectural object.<sup>377</sup> (Plates 4.51, 4.52, 4.53) Stretched out onto the glass planes or surrounded by immaculate surfaces, the inhabitant becomes the weightless master of the whole house space, overcoming the vertigo of leaping into the void, which occurs when moving between certain rooms. In the Nest House, Onomichi, Hiroshima (2010-2011) carried out by Keisuke Maeda at the head of UID Architects, the materiality of nature, the tangible presence of the

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<sup>374</sup> Leupen, 2005: 169-175.

<sup>375</sup> Leupen, 2005: 174.

<sup>376</sup> Fujimoto, 2007; 2009a; 2011a.

<sup>377</sup> Fujimoto, 2009b; 2011b.

earth and the atmospheric agents that penetrate the heart of the dwelling and the textures of the materials provide a more specific consistency both to the core that accommodates the floor and the envelope that is configured as a single layer that protects the house's topography.<sup>378</sup> (Plate 4.54) In this case, the more intimate spaces are arranged around the concrete core of the ground floor, while the top floor participates in the surroundings and it is organised on levels that define the functional areas of the house. All three cases redefine the relationship between the interior and exterior space, according to criteria removed from the mechanisms of fluidity based on the principles of the modern movement and traditional Japanese architecture.

The third model proposes an envelope around a free interior, inverting the spatial concept of the two previous models. The envelope becomes a thicker layer equipped with all the technological devices, service spaces and modular systems of vision and lighting, enabling the free organisation of a double-height central space. Also, for this concept there are previous examples such as Esherick House (1959-61) by Louis Kahn, which in turn links to the distributive principles of medieval Scottish castles, in which thick perimeter walls housed micro-spaces at the service of the main halls. With the house Y2K (1999-2000), a project not carried out, that was to be built in Rotterdam, Koolhaas tries out a different strategy to his previous boxes project, proposing a multifaceted volume in which the box is transformed into the void destined for family life.<sup>379</sup> (Plates 4.55, 4.56) The house is configured as a sequence of spaces with different degrees of privacy, that of the relationship between husband and wife. If in an initial phase of the project the private and service spaces are conceived as volumes attached to the central box, in later versions a thick skin or "layer" eventually wraps around the ensemble.<sup>380</sup> This allows an initially tectonic way of conceiving the volume as a sum of parts, to become stereotomic, seeking to excavate the solid mass with voids to accommodate the programme. The main space of the living room is thus configured like a telescope directed towards the landscape, which in one of the last versions of the project becomes an entire house in a volume mounted on a rotating platform that can be oriented towards the desired points of the panorama. The perimeter rooms lose their traditional form to adapt to the sloping sides of the polyhedron, which with its translucent finish aims to suggest the domestic life that is developed in its interior, through the silhouettes that the objects trace behind the glass and which to an extent are reminiscent of the *objets trouvées* of the Patio installation and the Smithsons' Pavilion.

Through these three models, which should be interpreted as mental maps or diagrams, the complexity of inhabiting is transferred to spatial systems that do not aim to be materialised lineally in constructed forms, but to stimulate reflection on the dimensions that being and becoming acquire in the context of the contemporary house.

Each of the types (...) represents a different response to the dualities of modern dwelling. Each type has a differently adjusted balance between permanence and change, security and openness, frame and generic space, and tradition and modernity. The balance determines

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<sup>378</sup> UID Architects, 2010, 2012a, 2012b, 2012c; Maeda, 2011.

<sup>379</sup> Fernández Galiano, 2000; OMA, 2003: 106-124.

<sup>380</sup> OMA, 2003: 108.

the character of this type. Different houses can thus be based on the same concept- the concept of dualities.<sup>381</sup>

According to Leupen these three concepts enable us to go beyond seeing the house as an object designed by a single designer and suggest that the domestic space is the result of a process of organising areas with different characters, natures and materials available to the inhabitant, in accordance to their criteria, and which can be executed in part through self-construction. This way, constructing and inhabiting would be part of the same act, bearing in mind the inhabitant inhabits as they constructs and gives meaning to the space according to their needs and experiences.

#### 4.2.3 Disaggregation and Spatial Porosity

Both in single-family houses and in housing projects, complex programmes and changing demands are frequently organised into compact volumes and, in the case of collective housing, in spaces with a reduced surface area and highly functional density. However, some architects have sought alternatives to this way of fitting space together Tetris-style, and they have opted for disintegrating the programme's spatial elements into minimum units that can be distributed with greater freedom across the available surface and volumetry. Thus interstitial spaces are generated that propose a wide variety of situations and possible uses, while the house acquires a disintegrated and porous form, which brings the complexity of the urban space closer to the domestic interior. I will now discuss some examples that give an account of multiple approaches to the principle of dispersion.

If in the Koolhaas project the polyhedron contains the set of articulated spaces in its interior, in some projects by Alvaro Siza such as the casa Fluxà, Mallorca (2004-2007), and the Alemão House, Sintra (2002-2007), the programme disintegrates into a series of volumes with varied orientations towards the landscape and based on its topography. (Plate 4.57) In the Alemão House the uniform volume ceases to exist and the fragmentation also informs the exterior aspect of the house, which in this way conceals its considerable surface area with the more reduced scale of the pavilions, leaving the communication axes to articulate the linking of spaces and pathways. The House O, Rubeshibe-cho, Kokkaido (2008-2009), by Jun Igarashi follows a similar strategy, but emphasises the volumetric differences and eliminates the passageways, which are replaced by a sequence of rooms that are distributed along six different guidelines around a central living space, thereby achieving an unprecedented variety of angles and combinations that both connect and separate the rooms.<sup>382</sup> (Plate 4.58)

The projects that we have just mentioned are dominated by the idea of disintegrating the programme into especially determined units grouped according to functional sequences that give sense to the movement of the inhabitants through the space. In the house Roofecture HH, Shisho, Hyogo (2009-2010), designed by Shuhei Endo, the central space, identified by the translucent roof, is configured as a small domestic square that articulates the relationship between the individuality of the perimeter pavilions and the community of its inhabitants. (Plate 4.59) The

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<sup>381</sup> Leupen, 2005: 172.

<sup>382</sup> The origin of this dispersión strategy in Japan can be found in several early works by Fujimoto at the beginning of the new century.

House K, Sapporo, Hokkaido (2012), by Yoshichika Takagi proposes an interplay in which the archetypal figure of the house with the gable roof serves both to generate a singular reference in an anodyne environment, and to identify each of the “houses” that the dwelling is composed of.<sup>383</sup> (Plate 4.60) The inhabitants can meet in the living room-kitchen as if they were in the village square and they can also inhabit the roofs of their rooms, colonising unprecedented spaces and recovering the childish fascination for cabins, which indeed represents our first experience of the emotion of constructing, inhabiting and possessing our own house.

The ordering centrality of the works of Endo and Takagi disappears in the porous spaces and the hierarchied volumes of the dwellings for the Tianjin Project in Tanggu, China (2004-2005), by Kazuhiro Kojima, as well as in the Moriyama House, Tokyo (2005), by Ryue Nishizawa.<sup>384</sup> (Plates 4.61, 4.62) In the first case the voids are excavated from the compact volume, thus achieving a fluid relationship between interior rooms and terraces on each floor; in the second case the entire plot is occupied by ten small volumes of up to three levels that can be used independently and even rented out in an interplay of dispersion in which the connective tissue is formed precisely by the empty spaces between the built prisms, which thereby adapt to the small scale of the context. The large windows of the volumes of the Moriyama house propose an interaction between private space and the surroundings that are taken to the extreme of total exhibition in the House NA, Tokyo (2007-2011) by Sou Fujimoto.<sup>385</sup> (Plate 4.63) Following their clients’ wishes, who wanted a space that was totally open to the street, the architect compares the experience of inhabiting the House NA with that of living in the porous and undetermined space of a treetop. In this case it is not a question of dispersing the volume, but of fragmenting the habitable surface area into twenty-one floor plates situated at different heights and connected with short flights of stairs that allow the house to be experienced as a single space or as a succession of spaces differentiated by the planes of the floor and by the light curtains that separate some of them to ensure intimacy. Once the limited surface area of each platform and the fixed location of certain rooms has been accepted, the space can be used in different ways for each inhabitant, who can find the place is suitable for their needs in different places in the house, even turning the short flights of stairs into living spaces. With this project Fujimoto has brought to dematerialisation his interest in generating spaces for which the continuity of floors is essential, as well as new ways of occupying space are sought, which refer to both the Loosian *raumplan* and the slim structures of the city in the Kiesler space, in whose tapestry are safeguarded the smiling inhabitants of the House NA. (Plate 4.64) However, there is no longer anything left of the layer of discretion that the ineffable Loosian domestic walls stretched between private and urban life. Here in Tokyo this layer of discretion is built rather over the sensitivity of the passer-by who is already accustomed to not looking into other people’s house interiors. (Plate 4.65)

The works that I have discussed in this section are surprising due to their use of compositional mechanisms that are uncommon in the West, where the most foreseeable response to such a small surface area would be to try to achieve rooms that are as continuous and open as possible, rather than further accentuating the fragmentation. However, the mechanism that the projects propose, which I have focused on, is more complex, since it determines the surface area and sometimes the

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<sup>383</sup> Takagi, 2009, 2010, 2012.

<sup>384</sup> Arquitectura Viva, 2005; Nishizawa, 2007.

<sup>385</sup> Fujimoto, 2009c; 2012a, 2012b.

volumetry, accentuating the small scale and the sense of protection of the body, but at the same time generating a complex and stratified spatiality that allows in-depth views and incorporates fragments of the surroundings in the domestic spaces, so that the perceptive limits are considerably lessened and at times are lost in the non-definition of the streets or the sky.

With the Project of the Inmuebles Villas (1922) Le Corbusier had already proposed that porosity might be applied on an urban scale to break with the compact image of the large housing blocks, offering a generous landscaped terrace to each family and questioning the relationship between the interior courtyard and the street. (Plate 4.66) Despite this, this option has never been seriously considered since, from an economic point of view, it represents an expense in constructible volumetry that is deemed unacceptable in terms of maximising space while minimising cost. Often when a dwelling has a terrace, the owners try to close it to gain another extra room that can be used throughout the year, so that in the end the outdoor space has almost disappeared from collective housing, worsened by the declining conditions of urban environments. Recently MVRDV and Blanca Lleó have proposed recovering the idea of the terrace, in this case as a space shared by small groups of neighbours, in the Lattice Building, Sanchinarro, Madrid (2003-2009). (Plate 4.67) The whole block is composed by 30 built volumes and 30 voids positioned in a checkerboard pattern, which offer the dwellings better ventilation, far-reaching views and a generous outdoor space that significantly increases the surface area available to the inhabitants.<sup>386</sup>

#### **4.2.4 Transformation and New Opportunities**

The issue of intervening in buildings and neighbourhoods built during the boom decades will arise with increasing frequency over the coming years. Many will fulfil neither the demands of their inhabitants nor today's requirements of more rigorous criteria in energy savings and sustainability. Acting in this context makes designing and managing buildings a complex task, since the property is often fragmented and the homes inhabited. In this sense, Anne Lacaton and Jean Philippe Vassal have proposed an interesting transformation project of the large-scale residential blocks on the periphery of various French cities in collaboration with Frédéric Druot.<sup>387</sup> For a long time Lacaton and Vassal have studied the limits of social and urban housing, deeming it important for an European inhabitant to have more space at home to carry out other activities, and in the belief that true luxury does not lie in material wealth, but rather in the possibility of having surface area and abundant light, but without this excessively increasing the price of the home. Part of their work is aimed at achieving existenz-maximum using economic and effective constructive systems, such as employing a greenhouse construction as a low-cost solution to covering and heating spaces, as demonstrated with the housing project in Mulhouse (2005) carried out as part of the experimental project Cité Manifeste, which questioned traditional policies in social housing.<sup>388</sup> (Plate 4.68) In this project, the upper floor is built with a light steel structure covered by a polycarbonate cladding, which acts like a greenhouse and provides each dwelling with a generous additional space.

<sup>386</sup> MVRDV and Lleó, 2005, 2009; Mozas and Fernández Per, 2006: 274-279; Actar, 2010: 278-283.

<sup>387</sup> Lacaton, Vassal and Druot, 2010, 2011.

<sup>388</sup> De Diego, 2010; Actar, 2010: 84-89.

For the refurbishment of the Bois-le-Prête Tower in Paris (2010-2011), similar goals are achieved through more complex action strategies, with the proposal of a substantial transformation of the building's relationship with its envelope, which has been opened to the light and views by removing its solid encasing and adding new spaces in the form of terraces and glazed balconies. (Plates 4.69, 4.70, 4.71) Similarly, unnecessary divisions are removed from the inside to create a more diaphanous and flexible space. It can be observed how this concept of transformation employs ideas such as dehierarchisation and the selective replacement of the building's obsolete elements, thus achieving maximum comfort with minimum expense. In addition, the intervention has been used as an opportunity to offer the building's inhabitants the option of exchanging their homes, thereby allowing them to relocate to positions that best suit everyone. The architect, in this case, is not restricted to intervening on a material level alone, but is also more widely concerned with the conditions that are likely to improve the dwelling experience.

I believe that the intervention strategy put forward by Lacaton and Vassal proposes a specific approach to the problem of residential property becoming obsolete. It also poses an intelligent response to the challenges of an age in which the urgency to build homes for everyone has been replaced by the need for a deeper understanding of what it means to inhabit space and the demand for greater quality. As we have seen, this does not just mean satisfying functional demands, but also creating a more enriching domestic experience from all points of view.

#### **4.2.5 Community and Privacy: Facility Sharing and Cohousing**

The last strategy proposes rethinking the concept of community living based on spatial formulas that encourage collaboration, closeness and friendliness regarding neighbourly relations, mainly, but not exclusively, in the context of collective housing. Housing theory has stressed that the quality of the local surroundings, coupled with the possibility for neighbours to intervene in this environment is vital for inhabitants to feel like they are partaking in and that they are responsible for their surroundings.<sup>389</sup> In these cases, designers adopt the role of a cultural mediator capable of proposing spatial formulas that favour cohesion and make the urban environment more attractive for community life. In today's cities, where inhabitants feel little connection to their immediate surroundings and they can choose between various locations, the value of a place is also based on its capacity to shape identities and lifestyles, making it a distinguishing feature in an environment where the residents' professions or status are not always reflected in the building façades. This approach does not just aim to improve the quality of the urban space near the residence, but also to create intermediary areas so that the inhabitants can extend links between neighbourhoods.

The architecture of the 20<sup>th</sup> century is rich in examples that understand collective housing as something more than the sum of residential cells, and rather as an area for rebuilding neighbourly relations that the modern metropolis has a tendency to erase. Notable examples of these proposals that offer new social forms are the Narkomfin building in Moscow (1928-1929) by Moisei Ginzburg and Ignati Milinis,

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<sup>389</sup> Cornelissen, 2005; Uyttenhaak, 2008.

and the Casa Bloc (1933-1936) built in Barcelona by Josep Lluís Sert, Josep Torres Clavé and Joan Baptista Subirana as a prototype for what should have been apartment blocks for the working classes within the framework of the Plan Macià. (Plate 4.72, 4.73) In the post-war period the Unité d'Habitation, Marseille (1947-1952), represents one of the most ambitious proposals for turning collective housing into a community equipped with all the necessary basic services: from a nursery, meeting rooms and an area for sports activities on the roof garden, to nearby shops and the *rue interieure* that connects the neighbourhoods. (Plate 4.74) It shows Le Corbusier's concern to find spatial formulas for creating the ideal community environment during the reconstruction years. Despite the difficulties of putting this cohabitation model into practice, which requires both a willingness to share spaces and moments of family life, and a high level of civic education and respect towards others – not always easy to achieve in a society where individual interests tend to reign supreme –, there are projects today that continue to follow this path. In this context, I propose distinguishing between two complementary approaches, the first of which is focused on the economy of scale and functionality, and the second on community and relational aspects.

In the first case, the community space is understood as compensation for a reduced private space –for example, by offering play areas for children, a room for meetings and celebrations or a place for keeping bikes– or as an opportunity to enjoy facilities that would not be attainable for an individual –like a garden, gymnasium or swimming pool–, or even as a system for reducing living expenses and increasing the efficient management of resources –for example, sharing certain household appliances and services. In certain circumstances, collective spaces acquire a presence that transcends their functional value turning them into urban landmarks, as is the case in Balcony Social Housing Block in Sanchinarro, Madrid (2001-2005), where MVRDV and Blanca Lleó have concentrated most of the public area in a viewing terrace that defines the singularity of the building. The terrace here seems more effective in providing the building with an iconic aesthetic than as a space with a practical use.<sup>390</sup> (Plate 4.75)

In the second case the community space is valued for its capacity to favour encounters, interpersonal relations and the sharing of experiences, knowledge and interests. The members of Team X, whose proposals included semi-public areas in the major inner-city residential blocks, already addressed similar concerns. A similar strategy has been proposed by Claus Smed Sondergard and Martin Andersson of Domus Architekter in the housing block Faelledhaven, Copenhagen (2006), where an articulated spatial system graduates the transition from the public areas to the homes and it makes use of access verandas to create terraces that favour encounters between neighbours and other activities that promote closeness.<sup>391</sup> (Plate 4.76, 4.77) In high density contexts it is even more important to have spaces for neighbourly relations and ones that encourage interaction. In Block 1 of the Shinonome Canal Court housing project in Koutu-Ku, Tokyo (2003), designed by Riken Yamamoto, the head of Field Shop, some of the apartments, known as SOHO (small office/home office) have an additional space that can be used for work or other activities. (Plate 4.78) These spaces open towards communal terraces that interrupt the line of the façade with double-height openings, generating a series of filters that enables

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<sup>390</sup> MVRDV and Lleó, 2004, 2005, 2006; Mozas and Fernández Per, 2006: 256-263; Actar, 2010: 284-289.

<sup>391</sup> Arc en Rêve, Centre d'architecture, 2009: 84-88.

inhabitants to move from the private space of the home to the work space, which is visible from the outside, and on to the communal area.<sup>392</sup>

The concept of facility sharing becomes the centre of the residential project in the case of housing for collectives like students and the elderly, who need private space but also benefit from social areas and sharing facilities. For several decades the benchmark for this type of residence has been the hotel, which, as a rule, proposes a spatial and functional separation between the bedrooms and the communal areas. Some recent projects, however, are based on a housing concept that allows for the intermediate scale of the group, between that of the individual and the community. The Tietgen Dormitory, Copenhagen (2002-2006) designed by Lundgaard & Tranberg Arkitekter is an exemplary project not only for the brilliant resolution of functional aspects, but also for the purpose of expressing in architectural form the meeting of the collective and the individual.<sup>393</sup> (Plate 4.79)

The building's circular form –symbol of equality and the communal– is contrasted by projecting volumes expressing the individual residences.<sup>394</sup>

The 360 residence units are placed along the perimeter, looking towards the city, and the communal spaces shared by each group of students are oriented toward the inner courtyard, completed by common facilities accessible to all residents at ground level. Instead of emphasising the monumental scale of the building, the architects focus on the “individual's unique identity”, which is expressed by way of differing depths in an alternating rhythm of volumes that define each apartment in the framework of the cylindrical form. This means that the student life has suitable spaces for all moments, whether in the central courtyard, the kitchens, living rooms or terraces located on each floor, which offer places for sharing experiences and forming relationships. The Student Halls of Residence also known as Case dell'Accademia, Mendrisio (2006), designed by the team Könz, Molo and Barchi for the students of the Academy of Architecture, provides an even more domestic scale.<sup>395</sup> (Plate 4.80) The individual bedrooms, arranged in groups of four, share the central service area, and the kitchen-living room adjoins the exterior veranda, blurring the transition between collective spaces and private areas. The central garden, the ground floor with communal areas and the verandas form a system of shared spaces, thereby reproducing on this scale dimensions in keeping with a residential estate.

The different modalities for sharing facilities and life experiences that we have analysed so far find their most developed form in cohousing projects, in which a group of people and/or families form a community of private dwellings share facilities and activities based on the collective planning, governance and management of the community.<sup>396</sup> Cohousing is becoming an interesting residential option not just for efficiently managing time and resources, but also due to the human-centred values that it proposes. With respect to the previously described

<sup>392</sup> Yamamoto and Filed Shop, 2005; Mozas and Fernández Per, 2006: 390-397; Actar, 2010: 318-325.

<sup>393</sup> Lundgaard & Tranberg, 2007, 2008; Bløndal and Weston, 2012.

<sup>394</sup> Lundgaard & Tranberg, 2008.

<sup>395</sup> Könz, 2006; Casiraghi, 2007; Hollenstein, 2007; Könz, Molo and Barchi 2012.

<sup>396</sup> The word cohousing is the English translation of the Danish term *bofællesskab* (living community). It was introduced in English language by the architects Kathryn McCamant and Charles Durrett after a travel and research period spent in Denmark visiting several cohousing communities in 1984-1985. For further information see: McCamant & Durrett Architects, 2009.

models, cohousing proposes a form of cohabitation that is much more proximate, as well as entailing sharing a wide range of activities and spaces like kitchens, dining areas, laundries, guest rooms, offices and workspaces, but also nurseries, leisure and culture facilities, among other possible formulas. Although this way of life relates to social utopias that have long been discussed in philosophy, the first practical experiments for sharing the domestic domain were set up in the 1960s in Denmark with the support of the architect Jan Gudmand-Høyer and the social activist Bodil Graae, whose ideas led to a national debate on cohousing and to the completion of Tinggarden (1971-1976), the first rental cohousing community, designed by architectural firm Vandkunsten.<sup>397</sup> Since the 1980s the Danish experience has been an important benchmark for spreading cohousing principles, which Kathryn McCamant and Charles Durrett introduced in the United States and then worldwide through their books and projects.

In Europe, one of the most relevant and successful cohousing experiences is the Sargfabrik (1992-1996) and Miss Sargfabrik complex (1999-2000), Vienna, designed by BKK-3 Architects and owned by the Association for Integrative Lifestyle (VIL).<sup>398</sup> In the Sargfabrik building the seventy-five residential units composed by maisonnettes can be linked up to a maximum of six dwellings, forming small communities. (Plate 4.81) The Miss Sargfabrik building offers more residential options, including several residential and working ateliers. The whole complex disposes of generous common areas that comprise a roof garden, a swimming area, a twenty-four-hour bathhouse open to the public, a cultural space, a restaurant, a kindergarten and several shared services, which are further increased by the facilities included in Miss Sargfabrik, comprising a community kitchen, a library and a rehearsal space.

These examples of different residential options, which are now being proposed in the field of housing with shared facilities, could be extended further to cater for the elderly, a sector of the population that will increase in size in the future, especially in Europe, and which, with increasing frequency, are deciding to leave their homes to be closer to their children and other relatives, or for health reasons, depending on their age and physical/mental condition. For these people it is especially important to have a viable alternative to a nursing home – an option at times unnecessary and often met with rejection – in the form of a space that unites domestic comfort with facilities suited to their specific needs, which may range from domestic services to medical care.

Facility sharing and cohousing therefore offers another approach to flexibility, which enables people to choose the most suitable residential solutions for each stage of the life cycle, without the need to undertake a transformation of the home, which in some situations is not the best option. However, perhaps the most outstanding value of this residential option does not lie in material benefits, but in the possibility of participating in a community, which, without negating them, transcends the limits of the individual and the family nucleus, extending them through shared spaces that give more meaning to life.

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<sup>397</sup> Graae, 1967; Gudmand-Høyer, 1968; McCamant and Durrett, 1994, 2011; Milman, 2013.

<sup>398</sup> Association for Integrated Lifestyles, 2004, 2011; Ruby and Ruby, 2005; Fitz, 2008.

### 4.3 Images of the Informational House

In the past two decades, the principles that guide the design of the domestic body have been redefined by the introduction of digital technologies and the formulation of sustainability criteria aimed at reducing the impact of housing on the environment in the context of transformations affecting architecture on the whole. I believe that both trends point at new ways of understanding the design project in an informational environment. In the case of architecture generated in virtual spaces it is self evident that the processing of information can only be performed by a machine capable of performing all the calculations necessary for the manipulation of complex forms. However, the design of a sustainable housing project also requires processing a significant amount of information. Adequate computing power is also necessary for determining which parameters are most favourable for the fulfilment of objectives for lower energy consumption and emissions. In both circumstances, therefore, information becomes indispensable for achieving a desired result. However, it is not the only one, as we shall see below.

#### 4.3.1 Problems of form. The aesthetics of Information Technology

With information technologies having firmly taken hold, a new phase has also begun for architecture, in which computerised means are used as powerful, creative instruments, endowed with their own specificity. A change of attitude has caused a profound effect on the theoretical statute of architecture, even in terms of new modalities of coordination between thought and expression. The gradual decline in the capacity of the drawing hand, which deposits fragments of ideas and information on a material medium, is substituted by the possibilities of a digital format that is configured like a prosthesis capable of exploring new dimensions, concepts, shapes and sensations that, up to now, have not been a part of this practice. Architecture, in turn, once more faces the need to respond to the demands made by a society in transformation, seeking the expression of the new *zeitgeist* that is emerging from the informational context and the reinterpretation of modern themes. The exasperation of the technical paradigm, the renewed faith in a technology that is capable of providing answers to contemporary demands and the recreation of a certain climate of vanguardism are thus blended with other less immediate references, such as the use of images of expressionism, organic elements, the world of science fiction, comics, design and future realities, the roots of which are deeply embedded in 20<sup>th</sup> century culture.

Architecture mainly acts within the sphere of the material reality. However, as in all creative procedures that require planning (i.e. having an a priori vision), architecture has always existed in a virtual dimension where it has simulated objects and situations that are likely to arise in the physical world through representations that are both bi-dimensional –sketches, plans and perspectives– and three-dimensional –scale models–, used as architectural research tools and as a means to communicate with the public. The planning process is based on an experimental method that uses drawings and scale models to express ideas and solutions that are ultimately defined through the critical examination of different alternatives. The project makes use of representation and to an extent is subject to its limits, as it is

difficult to create objects and spaces that we are not able to represent, and which in general can only reach a certain level of complexity. In fact, when its form is complex the drawing tends to be replaced by the model, as is the case with Gaudí, Kiesler and Gehry. The more complex the geometry and the form, the more problematic it becomes to represent the reality.

Within this framework an important transformation has taken place with regard to ways of thinking, projecting and executing architectural objects: the conditions have been created for a stimulating studying of complexity, which has freed architecture from its disciplinary concerns, connecting it to other spheres of contemporary knowledge, ranging from philosophy to genetics. From the end of the 1980s it was clear that computers were going to play a key role in architecture as creative tools, far beyond the possibility of reproducing more efficiently analogical design methods and techniques. Among the architects that Philip Johnson convened under the doubtful category of deconstructivism in 1988, especially Peter Eisenman, Frank Gehry, Zaha Hadid, Daniel Libeskind and Coop Himmelb(l)au were the first who approached the problem of managing the complex form in architecture.<sup>399</sup> In general terms, the digital tools allowed the work with every kind of complex formal, structural and material variables, whose management was almost impossible with traditional systems. The availability of increasingly powerful hardware and sophisticated software introduced the possibility of processing the huge quantities of data necessary to work with dynamic systems.<sup>400</sup>

Meanwhile, others reflected on the concepts of virtuality and dematerialisation, a subject to which Lyotard had already dedicated an exhibition at the Centre Pompidou in 1985, which addressed the question of how to visualise information flows. One of the paths addresses light, transparent and immaterial architecture, dominated by claddings or skins that play with the expressive properties of glass and other translucent materials.<sup>401</sup> In this field are several projects by Toyo Ito, who in the 1990s proposed a reflection on the image of architecture in the electronic age, seeking alternatives to the complex and deformed geometries that he considered inadequate for expressing contemporary ideas. According to Ito, architecture in the 21<sup>st</sup> century has to instead look for neutral, homogenous spaces that are not governed by perspectives, transparent almost to the point of disappearing, without losing sight of what is natural. A text from 1995 entitled *The image of architecture in the electronic age* reads:

In contemporary architecture, we must link ourselves with the electronic environment through the figuration of vortices of information. The question is how we can integrate the primitive space linked with nature and the virtual space that is linked with the world

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<sup>399</sup> See: Johnson, 1988.

<sup>400</sup> The programmes used most often as a base are Microstation, AutoCAD, ArchiCAD; Form Z Softimage, 3D Studio for modelling and renders; programmes like Alias and Maya for animations and complex modelling. The traditional scale model has evolved towards more sophisticated techniques of laser-cutting and 3D plotters, which allow what has been generated to be represented in virtual space.

<sup>401</sup> Research into skins and transparency in contemporary architecture was the subject of the exhibition *Light Construction* (1996) at the MoMA, which addressed new forms of intangibility, lightness, instability and evanescence, thus revealing the differences between the experiments of the Modern Movement and contemporaneity. For a more detailed vision of envelopes in contemporary architecture, see: Trovato, 2007.

through the electronic network. Space that is able to integrate these two types of body will probably be envisaged as electronic biomorphic.<sup>402</sup>

Ito suggests that architecture has to become a media suit for expanding the mind and projecting time, superimposed by a static physical space and a constantly transforming virtual space. In fact, his ideas reinterpret the Japanese city, where the transport infrastructures represent the permanent, and architecture the transitory. Ito himself has defined Tokyo as a simulated city that mixes scenes of reality with images from the media. This view is also manifest in various projects. The exhibition *Visions of Japan*, (1991) presented at the Victoria and Albert Museum in London, recreated the dense and ephemeral atmosphere of urban space by projecting sequences of images onto the neutral surface of the exhibition room. In the Tower of Winds, Yokohama (1986), and the Egg of Winds, Tokyo (1991), the aim is to materialise the workflows that circulate in the air through changes in lighting or images taken from the surroundings and projected from the inside of the egg.<sup>403</sup> (Plate 4.82) Even so, Ito suggests that despite having transcended the age of the mechanism in many ways, we still have not found a formulation of space that adequately reflects life in the electronic age, which he compares with a sea set in motion by the waves or a gust of wind.

Other architects have addressed in depth the possibilities of finding new forms, exploring the specific characteristics of the project in the digital media. Since the 1990s the concept of virtual space has acquired a new meaning due to hardware and software that have substantially increased the capacity for generating objects, moving and working in this domain, turning it into a virtual reality, whose rules do not necessarily correspond to those of the physical reality. In the digital world images are sequences of data that are structured through mathematic models in which three modelling techniques converge (replica or imitation, simulation and mathematical formulation). Today the CAD programmes enable all these functions to be joined in the digital dimension, and they also offer greater interaction, as they allow for the integration of different representational media, process description or dynamic transformations. Repeatedly, throughout history, architects have attempted to represent dynamic phenomena in an essentially static and permanent medium, resorting to configurations that express movement suspended in a moment in time, incorporating devices that allow onlookers to reconstruct a dynamic sensation through form, the generation of trajectories, a breaking away from the limits of the object or the generation of other phenomena that act on perception. Now, traditional constants are being replaced by variables, which when modified are capable of reconfiguring the whole system through processes that simulate the development of evolutionary structures that are able to grow, organise, modify or transform themselves on the basis of algorithms, defined by a great variety of models that are inspired in mathematical equations, geometric applications and topological, biological or genetic systems. The concept of the process has taken on a prominent role in research that will determine the final configuration of the object, as it has an interest for non-linear systems, topological geometry and, in general, the new shape generating modalities. These concerns are evident in the work of architects as heterogeneous as Greg Lynn, Marcos Novak, Karl Chu, Preston Scott Cohen, Kolatan

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<sup>402</sup> Toyo Ito, *The image of architecture in the electronic age*, 1995: cited from Maffei, 2001: 342.

<sup>403</sup> The projects are published in Maffei, 2001: 66-71 and 100-103; Ito, 2009: 58-63.

& MacDonald, Reiser & Umemoto, from groups such as dECOi, NOX, Foreign Office Architects, Ocean to cite just a few names in this panorama. (Plates 4.83 to 4.86)

The experimentation in the field of form-generating processes was one of the most relevant aspects of the architectural study during the first decade of the 21<sup>st</sup> century. Architects were presented with the problem of seeking metaphors capable of expressing the new dimension of a process that is mainly developed in the immaterial form of cyberspace, and which constitutes the most distinctive feature of the information society.

In the field of representation, traditional criteria of perspective have been superseded by new possibilities of visualising a digital hyperspace in which data flows intersect, generating simulations and animations of virtual objects. The intersection between the levels of the *soft* reality of the mediasphere and the *hard* reality of the physical environment poses the existence of a hybrid space that some architects consider to be the most suitable dimension for contemporary projects, this being understood as an inclusive operation able to move between these different layers of reality. Studies into what have been defined as "hybrid forms", "liquid architectures" or "digital architectures" pose the end of architecture as a tectonic discipline, related to a fixed expression of the process of assembling parts, of construction and materials, given that in this new situation it rather seems that the object is determined by the design of a shell or skin that is capable of transforming itself according to the circumstances. This generates a universe of complex surfaces that refer to NonEuclidean geometries, the toroid, the Moebius strip and Klein's Bottle, or directly to the soft geometries of body cavities, and which tend to explore dimensions with no beginning or end and no exterior or interior. May these be the formal analogies of the *timeless time* described by Manuel Castells?

An analysis of several of the architectural proposals produced within this environment registers numerous coincidences that go beyond formal expression or digital format: the sensation of immateriality, an absence of gravity, fluidity and the perception of the speed of the information flows that emanate from the projects, thus defining the fluctuating image of cyberspace. In this way the efforts of the architects that are most committed to enquiring into this new contemporary panorama aspire to become materialisations of a new dominant social and spatial model, anticipations of a spectacular architecture that the authorities needs for their representation at the beginning of the new century. Some architectures are even more deterritorialised and absolute than those of the modern movement, aspiring to become universes in themselves, dazzling spatial and mediatic experiences that hope to approach the space of flows.

Noteworthy among the numerous theoretical and planning reflections put forward in the age of computer-aided planning, are those of Greg Lynn and Kas Oosterhuis who have proposed new approaches for conceiving the house in the realm of the digital culture.

Lynn also considered it necessary to go beyond the discontinuities of deconstructivism in search of ways to represent complexity through inclusive systems founded on concepts such as topological geometries, morphology, morphogenesis and catastrophe theory. To achieve these goals, Lynn suggested going beyond the concept of complexity understood as the conflict of multiple differences to reformulate it based on an approach founded in the simultaneous notions of multiplicity and singularity derived from the Leibnizian combination

theory.<sup>404</sup> With the philosophical approach defined, Lynn proposed investigating systems of order and proportion that were capable of coping with diversity, difference and discontinuity, like composites, which are characterised by being organised as a singularity, but also by having internal multiplicity. Using topological geometries, alternatives are proposed to volumes of Cartesian space, such as the isomorphic polysurfaces –defined as *meta-clay*, *meta-balls* or *blobs* in the field of animation<sup>405</sup>– that could be the basis for a new formal typology of complexity. In this conceptual context, simplicity is seen as a borderline case of undeployed complexity. A sphere is a blob that is uninfluenced by time. Therefore, the potential for complexity is always present, even in the simplest of forms.

Based on these assumptions, the architectural form can be conceived in terms of *animate design*, a concept that goes beyond the modern idea of motion –understood as the sum of movement and action– replacing it with that of animation, focused on the evolution of a form based on the forces acting upon it. This proposes updating the conceptual tools of architecture, which are still connected with an essentially Cartesian and cinematic view of space, looking towards other disciplines like naval, aeronautical or automotive engineering, which deal with models defined by flows, turbulences, viscosity and friction. The project is therefore seen as a set of forces that the form is subjected to and by which it is modified. The intention is confirmed to replace the Cartesian spatial approach of the 20<sup>th</sup> century with another Leibnizian one, that posits that a position in space can only be calculated continually as a flow of vectors, and which leads to developing topology, a fundamental discipline for exploring complex forms based on calculus. The presence of topological surfaces in the CAD programmes has allowed us to introduce coordinates like time and forces, using calculus to draw and represent. It is therefore a question of understanding this potential beyond a simple repertoire of new forms, while being aware of the risk for the power of representation to lead computer-generated images to be considered from a mainly stylistic point of view, rather than from a calculative perspective.

Lynn's ideas have been reflected in, among other works, the Embryological House (1997-2002), a digitally planned experimental dwelling project that integrates structure, envelope and domestic landscape in a single system of modular elements that vary depending on the project parameters. (Plate 4.87) A single surface area, designed to specific requirements, resolves the structure, lighting, openings and spatial articulation. One of the most representative elements of the Embryo House is the *Responsive Floor System*, composed of several layers of materials that adapt to changing uses. Computer-aided manufacturing is used to differentiate and personalise the pieces following a general model, thereby switching from standardised series production to customised production. For the interior spaces of the Embryo House, Lynn has designed a self-supporting, double-skin volume known as *Soft Ball Project*, comprising a generic sphere that can be modified according to multiple parameters to avoid repetition, allowing it to be adapted to the user's needs and for the steps, openings and materials to be modified. (Plates 4.88, 4.89) Lynn's

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<sup>404</sup> In architectural terms, Lynn aimed to go beyond the interpretations of complexity proposed by the Venturi of *Complexity and Contradiction* or by the Wigley and Johnson of *Deconstructivist Architecture*, warning that: "If Cartesianism is associated with isolation and reduction of systems to their constituent identities, the *Ars Combinatoria* of Leibniz is an alternative epistemology founded in the systemic nature of the combination changes in identity, which are produced with high levels of complexity." See: *Blobs*, in: Lynn, 1998: 161.

<sup>405</sup> The meta-balls are objects defined by a centre, a surface area and a mass, and they are surrounded by a halo of influence that allows their transformation and fusion in the presence of other objects, forming a single surface with them. They are, therefore, an expression of singularity and multiplicity.

intention is that this type of space “embodies a sensibility of contemporary domesticity and corporeality that expresses voluptuousness, dynamism, animism, vitality, and sensuality, through light, texture, structure and shape”.<sup>406</sup> The matriarchal composition is also applied to other components of the Embryo House, like the lath houses made with *Plastic Flowers*. These cladding elements allow surfaces of almost any form to be created generating intermediary spaces that form visual and climatic filters between the surrounding environment and the domestic interior. Lynn’s proposals create an informational architecture that can only exist thanks to digital technologies.

The computer also introduces a new aesthetic vocabulary of curves based on calculus equations. Although we have been using calculus to analyze form in the design processes we have never had a tool that would allow us to intuitively design using the logical curves of calculus equations.<sup>407</sup>

In the Embryo House project Lynn also suggests using new materials and innovative production processes from the automotive, naval and aerospace industry. The production offers a different scenario that implies defining a priori all the characteristics of the product and proposing a series of possible variables with the elements of the system. This would enable an adaptation to topographical circumstances and individual needs; a possibility that has been tried out through parametric planning systems, which were also used by Kas Oosterhuis in the Variomatic House (1999-2005). (Plate 4.90) Undoubtedly, the desire to experiment and the need for a production apparatus that uses advanced technology, robotic systems and flexible and customised production criteria, means that the production of this type of digitally designed houses is not within reach of construction companies, which continue to work with more traditional systems. This approach once again focuses attention on the differences that separate a designed object that arises from a complex study paid off due to the production of multiple pieces, and an architectural object, which is normally the result of a process aimed at producing a single piece, with an elevated unitary cost and much less time and investment spent on research.<sup>408</sup>

Several of the issues addressed by Lynn can also be found in projects and papers by Kas Oosterhuis, who in Europe has been one of the most committed architects to constructing a theoretical reflection on the new potential for planning in the digital realm. Already in the early 1990s Oosterhuis addressed the need to give shape to the electronic evolution, moving the planning focus from functional aspects towards the expression of concepts, images and emotions that the building is able to transmit.<sup>409</sup> This step towards architecture that Oosterhuis defines as synthetic is also expressed in a reformulation of the Le Corbusier’s famous five points.<sup>410</sup> In the informational house the structural skeleton of pilotis shifts into a self-bearing body, wired, electrified and highly efficient in its energetic and climatic performances, that no

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<sup>406</sup> Lynn and Rashid, 2002: 72.

<sup>407</sup> Lynn and Rashid, 2002: 84.

<sup>408</sup> It has been calculated that a car needs 1.7 million hours of research and development –which if a million models are produced yields a value of 400 euros per unit– while the design of a single-family house is the result of only 880 hours of planning work, and it is therefore much less “intelligent”. (Trudgeon, 1998; Pawley, 1998: 196)

<sup>409</sup> See: *Synthetic Architecture*, 1990 in: Oosterhuis, 2002: 238-239.

<sup>410</sup> See: *The Synthetic Dimension*, 1991 in: Oosterhuis, 2002: 197-209.

longer needs to express mechanical movement. The roof garden has been substituted by a wider concept of building as an element participating in a global ecosystem. The open plan transforms into an open volume designed in virtual space through parametric systems that allow for individual and customised forms obviating the monotony of mass production. The horizontal window shifts into a smart membrane, redefining the technological nature of the cladding. Associated with the open volume, the façade evolves from a concept of protection from a hostile environment towards the idea of a membrane that selectively allows permeability in both directions, and which is capable of reacting both to interior and exterior conditions thanks to its sensors and domotic systems that enable certain properties of the materials to be altered. The free façade is therefore absorbed into the free volume and the form claims its autonomy with respect to its function, in a move from “form follows function” to “form allows function”. It is not the function, but the individual intuition and sensitivity of the designer that determines the form, thereby bringing architecture closer to the visual arts.

In the information society, technology configures architectural bodies, which are connected and programmable according to new modes of interaction:

What were initially technological extensions of the human body to increase the power of humans are now moving step by step towards complex emotional instruments whose behaviour is unpredictable. Technology is turning wild.<sup>411</sup>

Oosterhuis, like Lynn, suggests that architecture should go beyond its static image and become an animate system. However, for him the animate form is just the first step towards an animate body; in other words, an architectural body whose structure does not have to resist deformations, but rather allow movement. This means that the building form may be modified at any time depending on the circumstances, as it has been proposed in the projects for the competition for the World Trade Center, New York (2002) and the E-motive House (2002): (Plate 4.91)

Architectural bodies can now be literally animated. Architecture no longer has a static final image; its visible form is becoming as unpredictable as the weather. Architecture is turning wild.<sup>412</sup>

This new e-motive architecture produces a hyperbody (that is to say a programmable constructed body) that changes its form and content in real time; in architecture the hyperbody represents the same as hypertext for written information. The building increasingly resembles an organism bestowed with some autonomy over its own metabolic processes:

A building is a set of fixed and moving components, a totality giving form and substance to the flow of information passing through it. [...] Buildings absorb the incoming information, process that information and release it in another form. Buildings have their own form of metabolism. [...] So that the architecture can itself be regarded as an information-processing vehicle.<sup>413</sup>

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<sup>411</sup> See: *Wild Bodies*, 1999 in: Oosterhuis, 2002: 101.

<sup>412</sup> Ibid.

<sup>413</sup> See: *E-motive architecture*, 2001 in: Oosterhuis, 2002: 39.

In the description of the E-motive House, the organism is described as a fully programmable muscular construct that responds to the urgent needs and whims of the inhabitants, but is also able to take its own decisions, to surprise and play games with its users. “In other words: the house is a social semi-independent extension of the human bodies of the inhabitants. The E-motive house is a complex adaptative system”.<sup>414</sup>

Such architectural experiments have found their natural environment mainly on computer screens and in the glittering images that have circulated in fashionable magazines. While for the objects the passage from virtual reality to the physical dimension has become a natural process, inspired by the industry in the framework of a more efficient productive output, for architecture it has been more difficult to observe the continuity between an advanced conception of architectural design and an equally advanced conception of a building process on a large scale. Nowadays, the traditional project executed on the basis of plans, sections and elevations is replaced by computer-controlled three-dimensional modelling that guides both the ideation of the object and the production of its parts. Peter Zellner has suggested that architecture should become firmware, the digital construction of a projected space by means of software and materialised in the hardware of construction. The data that describe the complex geometry of surfaces are the same as those that determine the production process of constructive components.

The resulting reduction of all the information to a digital format also allows for the almost immediate transfer of data to a construction industry that is beginning to consolidate new computer-aided construction methods. The transposition of technologies and materials, already confirmed in other more advanced and dynamic spheres, to this sector, which is traditionally much slower to evolve, has now begun. The possibility of producing individualised parts such as those that make up the shells of Greg Lynn's Embryo House, the Torus House by Preston Scott Cohen or the surfaces of the Yokohama Terminal by Foreign Office Architects, not to mention the widely celebrated titanium cladding of the Guggenheim Museum by Frank Gehry, means an important change in the concept of the industrialised production of constructive components, still dominated to a great extent by a concept of repetition in series, at most with slight variations on a number of standardised parts. Thus an interesting circular effect is produced between the application of new technologies and the influence that these, in turn, will have on the project. It is interesting to observe how certain buildings, created and generated in the virtual and abstract space of information flows interact with the real contexts in which they are located, speaking to us and prefiguring the new dimension from which they undoubtedly spring, and, on the other hand, creating an effective dynamic that is capable of adding certain qualities to the buildings that make the experience of materialised space even more interesting than that of the digital simulation. In short, this is the reason for the special significance of current efforts to convert digital tools into the expression of a new contemporary aesthetic, indicating that digital architecture aspires to keep alive a part of the avant-garde spirit of the modern movement, but in a post-modern way, fascinated by the enormous possibilities for generating unprecedented forms, and less concerned with the social challenges that used to be one of the driving forces of modern architects.

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<sup>414</sup> Oosterhuis, 2003: 54-55.

### 4.3.2 The Aesthetics of Sustainability

Despite the fact that technical capacity has distinguished the human race since the dawn of our history, never before have humans affected the environment of our planet as much as since the 19<sup>th</sup> century. The processes set in motion by capitalism and the industrial revolution have accelerated the rhythm of change with a progressive reduction in the implementation time of technologies and the increase of their impact due to ever faster and more efficient devices. To these factors are added a constant expansion of the planet's population owing to a decline in limiting factors such as high mortality rates, shorter lifecycles, epidemic diseases, conflicts and the scarcity of food, among others. Also, some of the contemporary forms of understanding nature go back to positions defined in the 19<sup>th</sup> century, both those of a positivist character that support its domination by technology, and those with a more ecological view that defend a more balanced and respectful relationship between man and his environment, which emerged from an admiration for the natural order of Rousseau, Diderot and the German romantic movement. After the 1960s, people began to question the viability of an economic model based on the consumption of non-renewable resources, becoming aware of the planet's limits and of its irresponsible overexploitation by humans. It is not my intention to detail a history of environmentalism, but rather to succinctly present a new, more balanced and realistic approach to inhabiting the domestic space based on an awareness of our environmental responsibility.

In recent decades sustainable design has emerged as one of the most compelling approaches to contemporary problems, and it is therefore relevant to ask whether it would also substantively transform the aesthetics of architecture and design. In this context, I understand the term aesthetics not as a synthesis of stylistic elements, but as a series of principles that define a sensitivity in planning regarding natural ecosystems, which obviously also influences technical and formal solutions.

Since the Brundtland Report (1987) the concept of sustainable development has led the debate on the mechanisms that attempt to make today's economic growth viable, through a responsible use of resources that favours the "quality of life" of future generations.<sup>415</sup> Not everyone, however, sees sustainable development in the same way. There are at least three approaches to this topic. The first, the materialist viewpoint, holds that man dominates nature and advocates an efficient use of resources, defending a model of continual economic growth as a solution to poverty, and trusting in advanced technologies as a solution to environmental problems. The second, a committed environmentalist approach, proposes limiting the overexploitation of nature and holds the belief that we need a model of degrowth and self-sufficiency that favours low-impact technologies and an updating of traditional and local systems, from a systemic perspective that considers man as part of nature. These stances can be understood as two poles between which answers must be sought that are not merely superficial measures aimed at appeasing consciences. Essentially, the first interpretation addresses the question from an economic perspective, concerned with conserving certain reserves of assets and resources, and the second believes that, most importantly, the environment that humans belong to needs to be preserved. A third possibility maintains that

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<sup>415</sup> The Brundtland Report (1987) defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". English cite from: Edwards, 2005: 19.

sustainability is not an end in itself, but a medium for achieving the real objective of a more balanced relationship between man and his environment and greater global well-being.

In this context, architecture has addressed the issue of how to design buildings and cities that have less impact on the environment, which some architects had already started to investigate in the 20<sup>th</sup> century.<sup>416</sup> More objective evaluation criteria have also been developed like the Life-Cycle Assessment, which calculates the resources and materials that a system absorbs to determine its efficiency and viability.<sup>417</sup> This standpoint underlines the shortcomings of human design regarding natural ecosystems, which Brian Edwards has expressed as follows:

As a rule, nature creates the maximum of richness and complexity with the minimum of resources and the maximum of recycling, whereas humankind creates the minimum of richness and complexity, with the maximum of resources and the minimum of recycling. As a consequence, mature systems in nature (rainforests, coral reefs) are beautiful and life enhancing. Humankind mature systems (cities) are rarely beautiful or life enhancing. (...) Ecology provides a useful framework to bring mankind and nature closer together.<sup>418</sup>

Notwithstanding the recent diffusion of a wide feeling of greening in architecture and design, it seems that the discourse is often centred on the idea that we can alleviate our environmental problems by replacing a selection of materials and technological systems with others that are more efficient and less polluting. Beyond this common and superficial perception, the question of the structural issues of sustainability still remains largely unanswered. As Lee (2011) suggests, “Can we simply replace the bits and pieces that make up the built environment in order to make it sustainable?”<sup>419</sup> If a deeper change of mind is required, what kind of aesthetic changes may we find in this structural revision of the relationship between our society, culture and economic system and our natural and human environment?

Aesthetics of architecture refers to the expressions in built form that closely relate to the way in which the form is not only conceived but also produced in relation to a certain purpose and its context. In regard to the relationship among form, function and context, a built form should inform and express the principles of its programmatic, structural, material and spatial qualities. And an aesthetic is supposed to emerge from, as well as be embodied in, the order that ties them together as an indivisible whole. Therefore, in short, if a building or an environment is designed and built to be sustainable, it should inform how it was conceived and situated, and what makes it to be so under what kind of conditions. And in the presence of such a work, it should be perceivable and/or understandable that it serves and fits such purpose.<sup>420</sup>

According to this point of view, aesthetics of sustainable architecture and design arise from a systemic approach that understands that the elements and relations necessary to sustain the process will not be exhausted and they will be available in

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<sup>416</sup> Porteous (2002) and Steele (2005) have highlighted the manifestation of environmental sensibility in some key architects of 20<sup>th</sup> century including Frank Lloyd Wright, Alvar Aalto, Le Corbusier, Louis Kahn, Josep Lluís Sert, Hassan Fathy and Balkrishna Doshi, among others.

<sup>417</sup> For a specific life-cycle approach to buildings, see: König (et al.), 2010.

<sup>418</sup> Edwards, 2005: 92-94.

<sup>419</sup> Lee, 2011: 9.

<sup>420</sup> Lee, 2011: 11.

order to allow the process itself to continue in the future. The concepts of sustainability and durability should be combined with the three fundamental strategies of ecological thinking: conservation (reduction of the amount of material and energy employed in the process), efficiency (maximising the output in relation to the resources employed) and regeneration (replenishing of limited natural resources).

If considered from these points of view, domestic space has a great impact on the definition of aesthetics of sustainability not only in terms of image, but also in a deeper way that involves materials, processes and use of resources. Lee indicates a set of interrelated and fundamental issues in the debate on sustainability and the environment.

It is currently understood that our environmental problems arise from the kind of energy we use and how we use it. They mainly originate in the extensive use of fossil fuels and from the resulting emissions of greenhouse gases, as well as from the release of solid particles that pollute the atmosphere, the soil and the water. The connection between architecture and energy is evident also in individual buildings, thus being pertinent to reflect on the change that a new sustainable or renewable energy pattern may bring to architectural design.

The extraction, production and assembly of materials used in architecture are strongly connected to the use of energy, as well as to their useful lifecycles and potential recycling. Aesthetic features can be found not only in the materials' visual qualities, but also in relation to their performance during their whole lifecycle in a cradle-to-cradle perspective. As the selection and assembly of materials are intimately tied to the architectural aesthetic dimension, it make sense to ask what potentials can be found in current trends of sustainable materiality.

The way our buildings and cities are designed also has an important impact on the quantity of water we use and on the possibility of a sustainable management of the whole water cycle. If in the past, civilisations have been able to turn water into a central aesthetic element, sustainable design should also give a fresh prominence to this fundamental aspect of the built and domestic environment.

Technology plays a key role in contemporary design processes, starting by the way in which it affects architectural thinking by supplying unprecedented means of design and simulation that can increase efficiency and optimisation, as well as the overall performance of the project. This new way of conceiving the project as a result of a complex datascape process has far-reaching consequences on architecture's theoretical and aesthetical foundations. "Is there an inherent logic in the relationship between efficiency and form?" asks Lee, as an example of a question that arises from biomimetic logic.<sup>421</sup>

Although concern for the environmental impact of buildings is increasingly present in society, the solutions proposed by architects reflect different ways of understanding the role of technology in sustainable homes and, more generally, in architecture.

Technologically advanced countries are largely of the idea that the path towards greater sustainability is through research into innovative systems, techniques and products that are the foundations for interventions aimed at taking advantage of and/or counteracting natural effects with the aim of reducing the environmental

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<sup>421</sup> Lee, 2011: 16.

impact without foregoing spaces that offer a high level of comfort. It is about acting upon planning solutions, the selection and production process of materials and the efficient management of consumption during the useful life of the house. Among those who share this standpoint, are the ones who lean towards high-performance active and passive systems, convinced that the right technologies can resolve any environmental issue, and others who mostly favour passive technologies with less impact, considering these to be efficient only when applied in response to specific and identifiable needs.

The first of these opinions has brought about a switch from high-tech to eco-tech, basing their proposals on innovative solutions, often reflected in unconventional forms and an emphasis on technological systems that transmit the idea of an environmentally efficient machine. This stance finds its precedent in Richard Buckminster Fuller, who in the 1920s took an interest in industrially produced, low-cost housing, while also investigating design solutions capable of saving resources and increasing efficiency. The Dymaxion House (1928-1945) addressed aspects such as optimising the form to avoid excessive heat loss and withstand tornadoes, recycling greywater, and natural ventilation and heating. Among the followers of technological architecture with a focus on sustainability are Richard Rogers, Norman Foster, Nicholas Grimshaw and Michael Hopkins, along whom we may also include Renzo Piano. In many of the projects proposed in this sphere, it is believed that the project can solve environmental problems and repair the damage made by man. Rogers' proposal for the Parc BIT on the island of Mallorca (1994-1998) was for the construction of a series of dwellings and offices for five thousand inhabitants, in which the buildings are seen as part of a rainwater collection and reuse system on an island with scarce water resources. (Plate 4.92) In this case the architectural project is an integral part of a process that includes environmental and political mechanisms for managing land, water and agricultural resources, making it an uncommonly seen systemic approach. A different position from the traditional high-tech one is characterised by the approach of Werner Sobek, an engineer-architect who synthesises modern architecture principles with emission-free, zero-energy building technologies.<sup>422</sup>

The House R128, Stuttgart (1998-2000) and H 16, Link, Balingen (2002-2006), are dwellings that combine technologically advanced solutions with a strict compliance with criteria for a passive dwelling. The House R128, inspired in the tower houses of North Yemen and built on a rugged site on the outskirts of Stuttgart, proposes the figure of a glass prism that dominates the landscape and contains an almost completely diaphanous space, distributed across several floors. (Plate 4.93) The advanced technology allows the glass box to fulfil energy-saving criteria: the glass façade consists of triple-glazed panels provided with a metal-coated plastic foil that reflects great part of the infra-red radiation of the sun and, along with the inert gas filling of the space between the glasses, avoid excessive heating or cooling in the interior. Photovoltaic solar panels on the roof provide electric energy and the domotic system controls energy, lighting, water and other domestic comfort parameters.

Recently, Franca Trubiano has called attention to the possibility of also using high-tech materials and solutions in the residential sector to achieve high-performance

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<sup>422</sup> Blaser, 2001; Sobek, 2001; Heinlein and Sostmann, 2008.

houses, in the opinion that improving the performance of single-family houses is a major step in controlling the environmental impact of human settlements, since they represent more than half of the built heritage of various countries.<sup>423</sup>

Another approach focuses on respecting ecosystems as much as possible and it is aimed at maintaining natural processes or attempting to recreate them artificially. It proposes taking full advantage of the specific conditions of the site, learning from the bioclimatic solutions of the local architecture, which can be reinterpreted with contemporary materials and techniques. This is not solely aimed at achieving a sustainable building, but also at minimising the environmental impact caused by extracting raw materials or from the emissions produced by the manufacturing processes of certain construction materials. It favours the use of natural and biodegradable materials, as well as those that require little processing, and avoids modifying the site or maximises integration with it. Following similar principles, Gunter Pauli has developed the blue economy concept to replace that of the green economy, which proposes generating well-being from resources available at the site and finding synergies in the production processes, looking for the integration of economic benefit and environmental sustainability and responsibility.<sup>424</sup>

One of the most important examples and pioneers of applying sustainable criteria using low-tech systems in the residential sphere is Bed Zed, (Beddington Zero Energy Development), Beddington, (2000-02), designed by Bill Dunster.<sup>425</sup> (Plates 4.94, 4.95) The design principles of what Dunster has called the ZED Living focus on minimizing carbon-dioxide emissions, substituting fossil fuels with renewable sources, reducing energy demand and enabling a high quality of life on a low footprint.<sup>426</sup> Firstly the energy needs have been reduced through passive solar strategies consisting in optimising the orientation and insulating the rooms to make the most of natural heating and ventilation. To generate power there are no non-renewable energy sources used, opting instead for using biomass and photovoltaic solar energy, which also provide energy for a fleet of 40 shared-use electric cars. The efficient management of water resources includes rainwater harvesting and reducing consumption through dual-flush toilets, low-flow taps and energy-efficient electric appliances. The construction uses mostly recycled materials or new ones from industries located mostly within a radius of less than 50 km, minimising costs and transport emissions.<sup>427</sup> The building is completed with amenities like a nursery, health centre, ecological food shop and sports facilities, thus generating spaces that promote community and participative dynamics. Beyond the concrete solutions, the importance of Bed Zed consists in demonstrating the viability of a way of life that unites criteria of sustainability and environmental footprint reduction with the possibility of combining individual life with a sense of community.

Sensitivity to environmental factors has characterised the work of Glenn Murcutt since the 1970s, a singular architect on the international panorama known for his

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<sup>423</sup> Trubiano, 2013: 8. See also: Pérez Arroyo, Atena and Kebel, 2007.

<sup>424</sup> Pauli, 2008.

<sup>425</sup> Dunster and Zed Factory, 2009, 2013.

<sup>426</sup> Dunster, Simmons and Gilbert, 2008: 5.

<sup>427</sup> Over time the operational and maintenance cost of some of the services were too high, such as that of the biomass plant and the wastewater treatment system, which are no longer in operation.

determination to continue working almost entirely alone and his handcrafted approach, which allows him to closely follow his projects, mostly comprising single-family houses. As well as his respect for nature, learnt partly from aboriginal cultures, another of his sources of inspiration has been Australia's rural constructions, such as the woolshed, admired for its close relationship between logic and use, appropriateness of materials, respect for environmental and climate conditions and its low cost. These practical lessons, which are reflected in the Marie Short House, Kempsey, New South Wales (1974-1975, extended in 1980), have allowed Murcutt to approach projects from an exhaustive study of the climatic, physical and natural conditions of the sites, with the aim of achieving maximum comfort with minimal resources, and only including essential technological features. (Plate 4.96, 4.97) Recognised as an inflection point in his career, the Short house offers simple solutions for a project located in a rural setting. Prominent among these are the wooden modular and demountable constructive system, which allows the house to be extended reusing all its components, and the climate control system, which uses a triple skin –metal or wooden slats, mosquito screens and aluminium blinds towards the exterior- to adapt to the changing climatic conditions, which in any case create a warm and cosy interior. The Marika-Alderton house in the Yirrkala Community in Eastern Arnhem Land, Northern Territory (1991–1994) reflects the closeness to the aborigine culture while remaining contemporary. (Plate 4.98) In this case it was a question of conceiving a house that adapted to the customs and lifestyle of its inhabitants, by designing a house adapted to the tropical climate, where the elements respond to multiple demands, which include solar protection, ventilation of the rooms, protection from the rain and cyclones, privacy and a connection to the exterior without resorting to windows with no use. Murcutt's projects display an intention to achieve architecture based on leaving out what is superfluous and ostentatious, and focusing on perfecting the simplicity of what is necessary. Ultimately, Murcutt believes there is no need for architecture to oppose nature, but instead it should allow man to live within in it. The house becomes as self-sufficient as possible, adapted to the natural and climatic conditions, conceived as a precise response to human needs and environmental demands, opposed to the logic of consumption, inserted into the order of natural cycles and resolved with expertise and intelligence. Asked about the point of architecture, the purpose of a lifetime, Murcutt answers:

The only purpose is to live so that you end each day saying: "Well I've achieved something today." But architecture holds a remarkable series of issues. We deal with people, with building, with materials, with clients, with art; we deal with structure, life style, food preparation, bathing, sleeping, privacy, prospect, sound, acoustics, music, finishes, colours, access, vehicular movements, street patterns, landscape. (...) It is a marvellous expression of the process of discovery. It is like a scientist on one level, who does not know the answer but knows the path to it, the path of discovery.<sup>428</sup>

This definition, in effect, sums up the meaning of the domestic space as one for life and all aspects that the home is expected to take into account. For Murcutt, the project of the house implies addressing issues that may sometimes seem

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<sup>428</sup> Farrelly and Murcutt, 2002. In the same interview Murcutt affirms: "I like the lack of fat as an idea. I like a lithe building. I love the quality of emptiness. I love light and space and connectedness to landscape, the outside, the sky, the plants. I find those connections really important."

unimportant, but serve to define the locality and habitability of the space. If, by way of example, we examine the sketches for the Walsh House, in Kangaroo Valley (2001-2005)<sup>429</sup>, we may observe how, through the alternatives that Murcutt proposes to his clients, a detailed reflection unfolds on the elements that compose domestic architecture. (Plate 4.99, 4.100) It deals with the smallest of details such as: how to enter the house and avoid the unpleasant sensation of an excessively long hall; the optimum position for the furniture in a living room in such a way that it favours circulation and a fluid transition to the exterior, as well as the relations of the chairs and sofas with the fireplace and the television; the arrangement of small areas on the perimeter of the house to acquire their own coherence in the form of habitable bow windows for resting or somewhere to place a work desk with views of the landscape, so that when not in use the table can be decorated with a vase of flowers.

It may seem surprising that the architect should consider everything down to the flowers on the table. But it is precisely in this detail that the deepest dimension of the project of domestic space is revealed: that of studying apparently insignificant aspects of daily life, which are ultimately what make the difference between a comfortable house that is tailor-made for its inhabitant, and another that is attractive to look at, but uncomfortable. Space in a house is extremely sensitive to the tiniest of variations, such as the light that enters a window at a particular time of day and falls in a certain way on the walls and surfaces, or the interdependent relationship between a room's furniture. Murcutt's drawings manifest a dual dialogue, that of the architect with his work, through which the planner lays out the details of the form and use of the space, and that of the architect with his clients, proposing and discussing a series of options, expressing preferences and creating a common ground that will help clarify intentions and satisfy expectations. This is how Murcutt expresses his vision of the culture of the domestic project: as a collaboration and constructive dialogue between the architect who gives shape to the domestic space, and the inhabitant, hoping to see their desires reflected in a space replete with the gestures, movements and habits that form the dimensions of daily life.

In recent years, examples of sustainable housing have multiplied and it is impossible, in this venue, to recount the wide variety of solutions and approaches and their growing body of literature.<sup>430</sup> But I think it is necessary to provisionally conclude this research by targeting a number of principles consolidated over the last decade that have set out to change our perception of the house and its contemporary habitat. (Plate 4.101, 4.02)

We are regaining today, once again, a historic awareness of scarcity and appreciation of resources that the rise of consumerism, in the second half of the 20<sup>th</sup> century, prompted us to forget. The main challenge now is how to maintain the quality of life we have achieved without destroying the planet. Because the consumption of goods is associated too often with personal fulfilment and the pursuit of happiness, this challenge requires a thorough appraisal of what products we design, produce and consume; for what purpose and with what consequences. The era we are living in is evidence of a particular model of growth that has entered a crisis, although all too often it seems that those who have the ability to act do not know which direction to

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<sup>429</sup> Murcutt, 2007.

<sup>430</sup> Schittich, 2005, 2012; Guzowski, 2010; Costa Duran and Schleifer, 2011; Drexler and El Khouli, 2012.

take, nor do they take sustainable alternatives seriously. It is clear that this cycle needs to be urgently interrupted, but while appealing to more responsible consumerism or promoting cradle-to-cradle is worthwhile, it is not enough: there needs to be a fundamental change in attitude towards our relationship with (and the desire to possess) objects. This starting point, seemingly distant, comes closer when we consider that the house —itself an object— is the space of the body as much as that of the objects that we accumulate.

Regaining consciousness of scarcity also puts us in touch with tradition, which represents the accumulated knowledge of previous generations who had lived in the same places that we are living today and that had developed effective ways of dealing with the control of microclimatic factors with available means. Tradition, in this sense, is inextricably intertwined with technology, since history is also the history of systems and techniques intended to improve our ways of living. This is not to advocate for a nostalgic return to a happy past that never existed, but to know how to look intelligently at what the past can teach us when facing present and future problems. As Brian Edwards states, the challenge that architects face is to make ecologically viable the process of shaping technique by design.<sup>431</sup> Evolution does not imply each generation reinventing the world, but a process of selection and improvement of the most appropriate strategies for survival. It is clear that the evolution of our species is based on the accumulation of knowledge, both in its social and cultural as much as in its scientific and technological aspects. Research and technology are some of the tools at our disposal to address the unprecedented challenges of our time and, therefore, it should not be interpreted as threatening and destructive, but as a way to find solutions to problems. However, this possibility is only viable if we are aware that technology cannot be seen as an end in itself nor as a logic that exclusively serves to maximise the economic benefit of a few, but as a way that allows us to increase the chances of success in reaching a common goal involving none other than the survival of a human race that has never been so numerous and no longer has room to behave irresponsibly.

In a world of large numbers the future implies a greater concentration of population and the growth of urban environments. However, the design principles of cities have to be reconsidered, moving from a logic of purely economic and speculative criteria to sustainability and quality of our habitat. In this framework, the problem of the house cannot be considered separately from the spaces for work and business, knowledge, mobility, services, leisure and relationships, which together make the urban fabric. As noted, the single-family house, which has served as the main reference in this panorama of contemporary living, is a highly desired type of residence that I studied for its ability to reflect the complexity and variety of meanings of domestic space today, but it is an unsustainable model regarding land consumption, contrary precisely to the need for greater urban density.

Sustainable design carries with it a set of criteria, strategies and technical solutions that consider the ethical, social and aesthetic implications of 21<sup>st</sup> century living. Steele affirmed that the role of sustainability is to 21<sup>st</sup> century architecture what that of new materials was to the 20<sup>th</sup>.<sup>432</sup> However, this is not only about implementing a new eco-technology, but being aware that it is necessary to think about the architecture of the house, or any other building, as an integral process that begins by understanding its design as an opportunity to provide quality spaces for life and

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<sup>431</sup> Edwards, 2005.

<sup>432</sup> Steele, 2005: 10-14.

ends up by producing an object that is sustainable throughout its lifecycle. Flexibility strategies find here a framework that extends beyond meeting the inhabitants' requirements, and which best guarantees admitting further possibilities that are at present undeterminable. Untying form from function, the use of simple and logical systems over others too complex and time-specific, pursuing durability rather than rapid obsolescence, taking into account the different life cycles of construction elements and designing in anticipation of the replacement and upgrading of parts without prejudice to the whole structure are some of the criteria that approximate design to the culture of scarcity and efficiency. The concepts of sustainability and durability should be combined with the three fundamental strategies of ecological thinking: conservation (reduction of the amount of material and energy employed in the process), efficiency (maximizing the output in relation to the resources employed) and regeneration (replenishing limited natural resources). It all comes down to interpreting the aesthetics of sustainability as a synergy between technology and dwelling, looking for forms, techniques and materials most appropriate for the task while providing the sensitivity needed to interpret the exigencies of life as becoming. To live in the 21<sup>st</sup> century therefore requires a new partnership between society, culture and technology with the belief that the road ahead beckons to be travelled.

## 4.4 Conclusion

The conclusion on this chapter, which is also a short reflection on the general meaning of my research, starts from the last works I have discussed in the text, since in my opinion Murcutt, Lacaton and Vassal, and Fujimoto are examples of an attitude that invites a rethink of some relevant aspects of contemporary living. From different countries and with different modalities, their work attempts to answer to real needs through design instruments and methods based on criteria of ethical, social and environmental sensibility that apparently had been forgotten in last decades. For this reason in the last chapter I used the expression “aesthetics of sustainability” to describe a new way of feeling that generates also an unprecedented formal language. This new sensibility, born from the awareness of the limits that define our relationship with environment, lead to the questioning of technology as a compliant expression of a will to power transformed into an end in itself and to the questioning of domestic space as an ostentation of status, two features that are evident also in some of the works I have discussed in the text.

This attitude is embodied by the principle of “touching the earth gently” that Murcutt applies not only in material terms, using the minimum of resources and avoiding fleeting rhetoric, but also in conceptual terms, being respectful of places, understanding them in depth and proposing appropriate solutions, that is to say, solutions which satisfy the client’s needs as well as the specific conditions of the place and the work along with the architect’s own expectations. Consequently, the work reveals its technical and aesthetic precision, avoiding flaunting its technological values. Murcutt’s works confirm also the importance of the dialogue with a sensitive client, who understands that the designer looks for something different than the right solution to specific family requests or to a mere functional program. This is what Peter Zumthor has called the search for atmosphere, for immaterial aspects that architecture seeks to shape by working on space, form, materials and light. The concept of space underscores the idea of “in between”, that is, the relation between the physical elements which define a room and the perception that the inhabitant has of them. This point connects with the work of Fujimoto, an architect who in the last decade has formulated also an original vision of domestic space as “in between” interior and exterior, architecture and nature, privacy and publicity, embodying some of the most relevant aspects of our contemporary condition. His works propose a new experience of domestic space based on porosity and a certain degree of indeterminacy, so that the inhabitant recovers their freedom and prominence since they have to decide how they want to use and live their home, “becoming” together with their space. In *The Geometric Forest*, Fujimoto achieves a poetic synthesis of two of the archetypes of the house amidst nature, the hut and the glass box. The mythic hut of Vitruvius and Laugier reminds us of the emotion of the origins, of architecture as well as of dwelling, represented by one of the first moments of nature’s domestication; the glass box represents the possibility to take shelter from the elements regardless of the opaque density of matter: The very triumph of the visual is celebrated, giving to the eye the freedom of the gaze that from the interior gets lost in the landscape and enjoys its presence, while from the exterior it observes a domestic scene deprived of its privacy. The works of Lacaton and Vassal also connect with these issues, but their insight focuses on the potential of nature and architecture to reformulate the principles of

urban density. Undertaking a review of the concepts that define the design and use of domestic space in terms of maximization of its possibilities and minimization of its costs, these architects suggest that the transformation of existing dwellings could be the driving force of the renovation of urban fabrics, leading to a new form of city that is friendlier, more sustainable, and responsive to contemporary requirements; a city that could be a real alternative to the failures of modern planning and the unsustainable logic of urban sprawl.

Through these projects, the fact of living in a technological age can be seen from a new perspective, highlighting the limits of the concept of home as a sophisticated device that fascinates the inhabitant initially but soon becomes obsolete or unusable. Questions arise about what is the most appropriate technological content for the contemporary house and which are the best mechanisms for reconciling the fast pace of innovation with the slow rhythm of domestic life. The fact of living in a technological age requires us to look at the house from this perspective, but this point of view reveals also that the technological approach only partially fulfils the needs of inhabitants. Technology and society mutually shape each other—and therefore we can say that we live and dwell in a certain way because we have a technology that allows us to do certain things and not others— but I argue that the problems of contemporary inhabitation can't be answered only by technological solutions. In theory, technology makes our lives more comfortable and easier, and I have even suggested that it could be seen as man's attempt to regain the a lost paradise, but actually it is an instrument that needs to be considered within an idea of dwelling that itself needs to be redefined.

These considerations led me to focus on the relationship between being and becoming in the domestic. The questioning of the concept of permanence is one of the major problems that domestic culture has faced since the 20<sup>th</sup> century; a problem that nowadays presents new aspects and features. I argue that if we look to domestic space from the perspective of mobility, the picture changes substantially because places are not considered entities in themselves, but nodes in a network of flows, or points that become meaningful since they are a part of the logic of the network. In this rhizomatic perspective, the fact of inhabitation is not associated with a place, but rather with a subject that inhabits and therefore frequents certain spaces and places. The paradigm of mobility affects both the physical relation with space and the perception of time. In a world of constant and rapid transformation it is hard to imagine something as permanent, although we still need a point of reference. The house can still represent this *axis mundi*, but in itself it is a shifting object. I maintain that the structures that articulate the relationship between permanence and change to a great extent have not been defined yet. The culture of living in the 21<sup>st</sup> century should be nourished by this dialectic between being and becoming, whose centre is the inhabitant, the subject who carries a specific culture that no longer expresses the culture of one particular place, although it is evident that it is fed by elements proceeding from one or many different places. Thus, contemporary living should be defined as a process that dialectically relates a subject with a space and projects the subject's identity on the environments he frequents. This diversity makes it increasingly difficult to identify standard types of individuals or families, including when some common features can be described. The examples discussed in this chapter show several pathways towards domestic complexity, opening a new focus of discussion on contemporary inhabiting.

In such a heterogeneous context, image culture is proposed as a new *koiné* attempting to bring together a multicultural world in which visual communication seems more effective and immediate than text. My reflection on the role played by visual culture in the domestic realm stems from this point. Although it might sound tautological, I would say that its aim is to build a contemporary imaginary. Therefore, from a representational dimension, the image shifts toward the domain of design. The house is designed by a professional –usually an architect or an interior designer– which controls technical and aesthetic codes specific to his time-period and training, but at the same time it is designed by the messages of the media that provide visual forms and influence latent desires of the public. It is also designed according to the images that its future inhabitants attempt to visualize when thinking how they would like to dwell in the home, images which are deeply influenced by their desires as well as by messages of their cultural context. Currently these fields intersect and overlap in an unprecedented play of mirrors.

My research attempted to provide an insight that is close but at the same time mediated by a critical distance, expressed by the reference to the original meaning of the word theory, as I explained in the Introduction. I also discussed the contradictions of this imaginary. The house is a complex body where the “objective” criteria of functionality, technology and economy intermingle with “subjective” suggestions of image. Broadly speaking, the domestic image doesn’t seek the universal principles affirmed by the Modern Movement anymore, which to a certain extent sustainability is now claiming, but seeks, rather, signs of distinction. John Berger in *Ways of Seeing* (1972; sp. transl. 2000: 146-148) affirmed that advertising messages are based on a mechanism of generation of a feeling of envy towards a future and better condition that the consumer associates with the possession of a product, but I prefer to highlight the concept of desire, since envy is not always sufficient motivation for an active search for the new. As I discussed in this last chapter, the domestic image promoted by advertising feeds from a conservative background, even though it presents up-to-date products and forms as well as ultramodern devices. Technology finds its place in this discourse since it connects with the present and builds the future, fully participating with an image and fashion system. This fact possibly explains the lack of a real technological culture in the Information Society, substituted by a consumer culture usually limited to the knowledge needed to use the technological devices and feel integrated with the present.

The fact that the image is charged with expressing this message is not a new phenomenon. What is new is the prominence it has achieved in sectors traditionally driven by their own disciplinary debates, such as architecture and design. By attributing so much emphasis to image, design risks being reduced to a creation of signs of status within societies whose inequalities are tending to increase. Over the past decades architecture has been fully involved in this logic, whose highest expression is the star-architect who uses their initial innovative push to establish themselves as large global firms that sell “exclusivity”.

At the level of the imaginary, another contradiction appears when the domestic is the ground of encounter and confrontation between different ideas of the house. If we look at European culture and, by extension, Western culture, it is clear that the bourgeois house model is still influential, even when it is reduced to an unattainable dream or becomes a target of criticism. Moreover, inhabitation in modernity is a

promise only partly fulfilled. One of the obstacles encountered by the idea of the modern house has been its inability to address the problem of the flowing of time; of passing and leaving sediments. The fact that modern houses age badly can be seen as a circumstantial fact, but in my opinion this evidence reveals something deeper about the idea of inhabiting. The modern house is designed for the present and projected into a near future, although it often feeds from the idea of a new society for a new world: the past has no place in it. Walter Benjamin argued that modern living consists in erasing traces. Even when moving away from the concept of the 19<sup>th</sup> century bourgeois house designed as a case tailored to its inhabitant, with which Benjamin opposes the idea of modern house, one confronts the fact that inhabiting is a process consisting of, among other things, leaving traces and attributing meanings and values to objects and spaces around us. By the act of inhabiting, objects and spaces lose their generic features, even when they are just a mass-produced good equal to many others, and become ours insofar we project our experiences and memories on them. If we want to be fully modern we should periodically remove the traces of our past, our memory also becoming a throwaway object. How can we preserve domestic memory without transforming it into a crippling burden?

Finally, what is the role played by architects and designers in this complex game? Returning to my initial considerations, architects also require a new commitment and a new social responsibility in a world whose priorities are bound to change. Today the need of reducing the consumption of non-renewable resources and limiting emissions makes many people worried about the criteria that should guide architectural design in the coming decades, in which the problem of large numbers of people on a planet that is becoming progressively smaller and fragile will have an unprecedented prominence.

If this is the conceptual framework in which my research is inserted, and approaching some of the central issues of the debate on contemporary living, I am also aware of the impossibility of undertaking a thorough investigation, and actually this hasn't been the aim of my research. My reflection –and I think that this is also its most relevant and original feature– focuses on the interaction between the spheres of architectural design, technology and visual culture as three major factors that shape the domestic, and therefore, give form also to our lives. The themes I have chosen and the works I have cited can be interpreted as significant samples taken at different sensitive points of such a cultural topography. These have been analysed both in reference to their specific contexts, such as the disciplinary discussion of architecture and design, and in terms of a broader picture that these make visible and of which these are revealing signs.

In conclusion, my research argues that it is necessary to rethink the house and domestic space of the 21<sup>st</sup> century on the basis of new concepts of function, form, meaning and use, since many of the concepts that have served in the past are no longer helpful in facing the challenges of future dwelling.

# Conclusions

## I Domestic Spaces in the Information Era

In the four chapters that present the results of my research, I have tried to focus the attention on the issues that I considered most relevant for a description of the contemporary living condition from an interdisciplinary perspective, though centred on design culture. Regarding the points I mentioned in the introduction as more specific objectives of the research, we can conclude the following:

**1.** The research has shown that contemporary domestic space is multidimensional and possesses a high degree of complexity that stems from both the growing diversity of the actors involved in its production and use, and the variety of factors that influence its materialisation. The main dimensions of this complexity are summarised in the following points:

a) The descriptive dimension. It has been noted that dwelling and domestic space are described within a widening panorama of views and approaches, as reflected in the breadth of an academic literature constantly enriched by new contributions, as I discussed in section 1.3.

b) The social dimension. The most important phenomenon of recent decades has been the consolidation of a new social, cultural and productive model focused on information and advanced technologies that allow its processing, as seen in section 1.1. The inherently transformative nature of the Information Society paradigm causes profound changes in all areas of life, including the domestic sphere.

c) The family dimension. In a society that has become more pluralistic and tolerant, family models tend to diversify and are not describable from a unique perspective. Consequently, there is no standard model for a domestic space capable of satisfying the wide range of contemporary situations, as I discussed in sections 1.2 and 4.2.

d) The life dimension. The demands of living have also become more diversified as life expectancy has lengthened, so that individuals and families express more diverse needs over a longer period of time and tend, more than in the past, to seek spaces capable of satisfying them, as I discussed in section 4.2.

e) The spatial dimension. With the consolidation of the Information Society, the conception of dwelling as permanence has revealed even more clearly its limitations and its need to be replaced by a new approach that takes into consideration mobility, in both its physical and informational aspects. Various forms of mobility can be distinguished with respect to the domestic realm: firstly, a mobility that leads people to change residence ever more frequently for personal, family or work reasons; secondly, a mobility that tends to domesticate spaces that are not private (workplaces and public spaces) as well as elements of the mobility landscape

(transportation vehicles, waiting areas, and transit hubs such as airports or train stations); and thirdly, a mobility that takes place in physically inaccessible virtual spaces that are nevertheless significantly integrated into our daily lives as parts of the domestic sphere. These aspects have been discussed to varying extent throughout Chapter 3.

f) The temporal dimension. The mobility paradigm also prompts a reformulation of the temporal dimension of existence, which leads to interpreting the dwelling as an art of becoming in terms of transformation and change, as discussed in section 3.1.

g) The functional dimension. Domestic space presents itself as a functionally complex environment in which new activities have been added to already consolidated ones, modifying –not without tensions and conflicts– the way of life and use of rooms in a house. In particular, I have discussed new functions in relation to media, work and the body, and their role in transformation processes affecting the domestic environment in Sections 3.2, 3.3 and 3.4. It has been shown how the presence of media causes a redefinition of our notions of publicity and privacy, producing situations in which inhabitants interchange the roles of actors and spectators according to different circumstances. Teleworking, embedded in the process of a redefinition of patterns of working and blurring the boundaries between private life and professional activity is an opportunity to reconcile work and family life, but also a source of tension in the domestic environment that needs to be appropriately addressed through design. I have discussed the relationship between space and the body from two different perspectives centred, on the one hand, on intimacy and the role of eroticism, and on the other on comfort, understood in terms of improved environmental parameters and services through automated systems, revealing furthermore the limits of an all-encompassing view overly focused on the benefits of technology at any cost.

h) The design dimension. Although housing design is, in a strict sense, the responsibility of technicians and specialists who act according to their disciplinary knowledge and the scope of limitations established by technical codes and regulatory norms, in reality it is an even more complex process that prompts a social and cultural reflection on the meaning of dwelling; one that can vary depending on the context and the moment. The multiple actors identified by my research highlights the designers, the people, and the media; each expressing different logics that have to resolve their sometimes contradictory interests in domestic space, which is always configured as a result of their interaction.

**2.** In the Information Society, technology stands by as an essential support mechanism of human life. Building always involves the use of technology that can be either based on the application of established rules and proven systems, or respond to a desire to explore outer limits. Since the industrial revolution technology has caused a continuous shifting-forward of boundaries. It is not about reproducing consolidated knowledge, but about generating new knowledge through scientific research and the technical application of results in a constant feed-back process. The form that results from the application of innovative technologies must itself also appear innovative; it has to be able to express the novelty it embodies in semantic terms, with the objective of being properly interpreted despite often not being

understood or agreed with by society. The prospect of change therefore becomes the touchstone of the relevance of the object.

In the field of the culture of dwelling, the role of technology is not univocal and it is deployed on different planes involving all stages of the process of design, construction and use of domestic space. In Chapter 2, I discussed how the technology of the house has focused the attention of architects and designers throughout the second half of the 20<sup>th</sup> century, while the foundations for an Information Society were becoming consolidated. The research has also clarified that technology has many fields of application in the domestic design project, which include not only the materials, construction techniques, technological systems and devices, but also the design project principles of composition and aesthetics. In some cases, technology is a means to improve human comfort, but in others it tends to become an end in itself, presenting itself as a prodigious future, a promise usually not met. A significant example in this regard is the smart home, whose objectives of automation have not found correspondence with reality but have served as testing grounds for new experimental systems, as seen in section 3.4. An alternative view is instead proposed for technologies focused on connectivity; less advanced but more useful for making domestic life easier for users, as discussed in section 3.4.5.

**3.** I have also taken into consideration the modalities according to which domestic space is communicated. I focused on the reading of images coming from both advertising as well as specialised media that disseminate the work of designers, highlighting the role that these images play in the construction of a collective imagination of the domestic. I have also observed how the image is used for different purposes depending on issuer and purpose. The architectural image tries to convey the look of the space, but on occasion it is used to convey the charms of a design project or give credibility to an experimental proposal, as we have seen in 2.1, 2.2 and 2.4. In the case of the advertising image a believable world tends to be built, but one nevertheless stripped of any aspect of "imperfection" of reality in order to arouse desire to own a new product or partake in a lifestyle, as seen in section 4.1. Ways of constructing images vary considerably depending on the audience and the message intended to be conveyed, accentuating fictional and realistic characteristics and sometimes tweaking the same message for different contexts. It has also been observed that the presence of people in images tends to increase the impact of their message, since it triggers a mechanism of substitution between the figure portrayed and the observer. In Section 3.3 a third type of image has also been considered that comes from inhabitants and that reveals how real spaces differ considerably from those disseminated by professionals, focusing much more on people and traces of life, aspects that the official image tends to neutralise since it complicates the visual appropriation of space by the viewer.

Finally, in Section 4.3 I have shown how the discourse on the image is also of interest to the mechanisms of production and legitimation of the shape of the domestic body in the field of the architectural discipline. In the last two decades, interest has focused on finding an adequate expression for objects generated in virtual space, despite not usually having much success when eventually constructed. The image has also been directed towards the aesthetics of sustainability, either as a return to traditional, simple and inexpensive solutions, or else high technology solutions involving new materials. Each of these options is communicated through an aesthetics of the object or through the language of the technological system that is exhibited.

**4.** In discussing changes in the functional environment I have shown how the domestic plays an important role in making technologies accessible since it is one of the environments in which these are domesticated, along with the work environment and social circles, which also tend to organise themselves increasingly using technological devices. As seen in section 3.2, the computer has become domesticated during the last decades of the 20<sup>th</sup> century, as well as becoming complemented by more innovative, versatile and lightweight devices such as tablets and smart phones, or by traditionally consolidated domestic technology such as television, which is currently being updated through the introduction of the smart TV.

**5.** Surprisingly, the fact that we live in a technological age has not led to a widespread technological culture that understands devices to be manipulable, modifiable or programmable tools. In most cases the relationship with technology is limited to the consumption of products and systems from a user perspective, regulated by the logic of the market, advertising and pricing policies. While the technological product is therefore an entity enveloped in its modern form, it can perfectly coexist with a neo-traditional spatial environment without the user noticing any contradiction, as I discussed in section 3.1. Probably, this is a consequence of the lack of the technological culture mentioned above. Moreover, the technological house packed with cutting-edge devices tends to be seen as an exclusive product that generates status rather than as an effective solution to specific problems, as we have seen in section 4.1. The aesthetic and the rhetoric of the new are common strategies in contemporary culture. In any case, the future is no longer seen as utopian or something worth struggling for, but only a promise of an immediate materialisation because the cycle of the expression of desire and its satisfaction must be short, efficient and profitable. Such a strategy probably will not be successful much longer due to the evident limits of available resources. Architecture and design are directly involved in finding new ways of expressing and communicating the difference between a positive and necessary innovation and a mere rhetoric of innovation, as posed in Section 4.3, in which the perspectives that the diffusion of sustainable housing should open are discussed.

**6.** Information technologies, with their concealment of all visible traces of the process that lead to their result, tend to emphasise the "magical" dimension of objects and the expectation of always immediately responding to any problems. Although I have not had the space to discuss this aspect in detail, but which I mention in discussing Baudrillard's positions regarding technological objects in 4.1, I believe that the contraction of time between the formulation and the satisfaction of a demand that often comes down to the speed of an Internet search or the soft touch of a touch-screen introduces a distorted interpretation of instantaneity. The immediacy of the response, achieved rather with minimal effort, hides the fact that this result, like any other in the area of technological advancement and knowledge, requires a great deal of research, programming, time and previously invested resources in order to achieve a desired result. Thus, science and technology never offer immediate nor magical solutions, nor do they have the ability to solve any problem. And when solving a problem, moreover, they often end up generating another, since the environment is a system and not a sum of finite elements. These considerations extend to domestic space as well, coinciding with a reluctance regarding devices seen as too complex and rapidly obsolescent, and prompting a

reflection on the cost-benefit of technological systems whose utility the public does not understand and that seem more the result of commercial strategies than real demands.

7. Further to the conclusion raised in point 1.e on multidimensional space, I believe that this research has shown the need for a reformulation of the idea of domestic space within the scope of a view of dwelling as an art of becoming, more in keeping with the *zeitgeist* of the information society. Beyond the enthusiasm of the last decades toward the possibilities of the designing forms in virtual space, the concept of information is revealed as key to solving housing problems in the 21<sup>st</sup> century, which should be designed from a greater concern regarding the quality of our habitat and the elimination of unsustainable environmental burdens. Addressing this problem requires new design criteria based on concepts of flexibility and sustainability being part of a paradigm of scarcity and mass application. As I discussed in sections 3.1 and 4.2 and paragraph 4.3.2, there are already some conceptual proposals and some examples that point to a different way of conceiving the design of the 21<sup>st</sup> century domestic space, collecting the best fruits of the culture of dwelling from the last century and facing the challenges of a profoundly different time in which the project of modernity must be rethought on a more viable basis. The house has been imagined through prototypes that have tried to embody the ideal home, according to a program and a pre-defined concept. Probably architects will continue to design manifesto-houses –actually several of those I have examined in this work belong to this group– but it is important to note that the prototypes have always failed, probably since it is impossible prototyping existence. From this awareness, it seems more productive to follow the pathway of imaging spatial conditions and atmospheres rather than defining rigid and short-term functional programs.

## II Limits and Further Research

I am aware that, despite and because of its wide extent, this study has several limitations. In particular, I emphasise two that are significant.

The first is the level of depth of the issues I have addressed. Given the size of the field that I have covered, it is clear that every one of the issues I have touched upon may itself form the subject of a detailed study that would allow going into greater depth, although in this respect the bibliography represents an indication of the most important works from which more precise work can be undertaken. Considering all the limitations of the text, I chose to try to build a general interpretative framework that would define domestic space in the information age. Therefore, I have focused in the discussion on what I have identified as problematic nodes coming from the specific literature and a self-reflection, seeking to provide unprecedented perspectives or interpretations.

The second limitation refers to what has been left out of my interpretive discourse. Perhaps the aspect I most regret not having been able to address is the approximation toward domestic space from the fields of art, photography, film and literature, which contain rich stimuli on this subject. In a later stage of the investigation, this omission should be remedied, though probably this would lead to another work of equal or even greater breadth. In some research points I mentioned

that the approach to domestic space is incomplete without a reflection on that which lies beyond our homes, be they mediating adjacent spaces, proximity spaces such as neighbourhoods, or urban or metropolitan areas. To live in the 21<sup>st</sup> century also implies a reconsideration of the city and the modalities on the basis of which the structuring or dismantling of the urban fabric occurs in the information age. I think this aspect is particularly relevant since cities are also destined to undergo a profound transformation over this century, not only due to increases in population, but also because of the obvious failings of the many neighbourhoods built during periods of economic boom that pay little attention to the quality of housing and of urban space. If the city of the 21<sup>st</sup> century is destined to be a dense city, it is necessary to think of ways in which density can be compensated for by a new kind of qualitative urban space that overcomes the limitations of current town planning. Moreover, the current city is an informational city, and in principle technology can be an aid toward a more efficient management of resources, services and mobility. However, the current concept of smart cities seems to some extent a reformulation of the concept of the smart home, similarly giving only an illusion of efficient management and control over urban space from a perspective that takes into account the logic of corporate management and large technology companies that have seen in this area a great business opportunity and that take little account of the role of citizens, which are considered primarily as customers rather than protagonists of urban scene. It is time to say more on these issues, but it is clear that a wider debate on housing should also delve in this direction.

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