DIGITAL AGE HOUSE:
A MASS-PRODUCED
ALTERNATIVE DOMESTIC ENVIRONMENT

A Thesis
Presented in Partial Fulfillment of the Requirements for
the Degree Master of Fine Arts in the
Graduate School of The Ohio State University

By

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The Ohio State University
2001

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ABSTRACT

Among the most critical features of modern life, people's ability to relocate easily and the minimization of the importance of distance -affected by technological innovation in transportation and telecommunication- are calling into question the conventional sense of place.

This thesis dissertation is aimed at identifying emerging patterns of usage associated with the domestic environment in the digital age. This set of patterns will help us to define and design a domestic environment, a house that includes the original attributes of our times.

The taxonomy of these behavioral and environmental patterns will provide us with generic elements to build a poetic of everyday life. Our analysis of the disruption of the traditional notion of boundary informs our design options.

The site of exploration is a single-family house. A virtual model of the house is used in our design process to include time and memory as compositional elements.
To my family
ACKNOWLEDGMENTS

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CHAPTER 1
INTRODUCTION

The surrounding area of our living environment is a territory that extends from the scale of personal sphere to planetary proportions. The 20th century was marked by the acceleration of cultural globalization: the intensification of economic exchanges between different parts of the world and the emergence of a global consciousness manifests itself with the emergence of environmental, health or political issues threatening the integrity of our surroundings and our universal values as human beings.

The need for energy efficient solutions for housing is one of the issues generated by the use of fossil fuels and the emission of carbon dioxin in Earth’s atmosphere: Global warming pollution increases climatic instability. Environmentalist experts have predicted that if the world populations do not act to limit global warming we will observe:

- a rise of Earth’s temperature by 0.2° C every decade;
- higher sea level concomitant to the expansion of ocean and the melting of glaciers;
- changes in weather patterns (droughts, floods, higher rainfall intensity)
To solve this problem, households are invited to reduce their consumption of energy for heating, cooling, transportation, operating appliances. An effective operational solution would reconsider the energy efficiency of home design.

This thesis’ approach considers home design as an assembly that includes energy consuming appliances and systems; boundary markers and utility devices such as walls, furniture; and the federating representational attributes that carry aesthetics and social values. Technology in the 20th century has helped us to efficiently produce a large quantity of manufactured goods. The application of mass production processes has failed in proposing a different paradigm of housing that would appeal to the emotional nostalgic relation our we have with our homes.

This thesis will explore the notion of domesticity in the light of the ongoing digital lifestyle associated with digital revolution in the technologies of communication: this will inform our perspective on the production of a socially meaningful living environment. A survey of projects and realizations will examine the evolution of the domestic environment in relation to technical progress and cultural innovation. The evolution of habitat is characterized by changes parallel to technical progress: new techniques of construction and new materials are often supported by stylistic breakthrough. The major stylistic innovations of the early 20th century were marked by the tone of revolution. The Modern Movement emphasized a change in the societal project. As values of universalism, hygienism, and individualism are affirming the urban environment as the emerging center of cosmopolitism. The mixity of functions and of exchanges operated in the urban environment has favored the emergence of speed as an aesthetic value.
(informed by the development in transportation with the train, and the automobile.) The influence of the geometric abstraction of African art coupled to the Minimalism doctrine have contributed to the emergence of the very influential paradigm of modern architecture and design.

This thesis will articulate the cultural needs of everyday life rituals with the technological requirements of energy efficiency identified early. A comparative study showing the evolution the domestic environment in relationship to technological progress will help us to qualitatively define an emphasis on an integrative definition of home.
CHAPTER 2

DOMESTICITY

Between the territory and the universe, there is home then the city. They are the
enveloping scales between human beings, their social environment and the cosmos. They
organize the senses and the philters. Shapes affect the physico-esthetic sensations, and
spatiality offers a measure to the comfort of the bodies, the oriented forces of immobile
masses propose movements. Materials amplify or restrain the amplitudes of spatial
emotions. Their nature transforms the sensation of time. (Sautereau, 1998)¹

2.1 Introduction

Our activities usually determine the designation of the components of our
environment. This functional mapping of a function onto a spatial entity is very familiar
in the modern movement. The American Heritage Dictionary of the English Language
defines domesticity as the quality or condition of being domestic. The Latin root domus
designates a house, a residence.

This chapter will define domesticity, with the connotations that reveal the strategic
position it occupies in the imagery as well as the psychological life of individuals. In the

¹ Jacques Sautereau, Le regard du corps: Espace et surfaces, Maison-Megapole, Paris
1998, p.93
network of social activities and community interaction, the domestic environment has a
spatiality coupled with a complex temporality made of various routines. As we will
observe some of the routines of everyday life are emerging as events that perturb the
predictability of moving and living in a stable, immutable environment.

2.2 Definition

Domesticity is associated with *seclusion* and *exclusion*. These words are the
expression of social affections: both are synonymous of *retreat* and *unsociability*. Home
is the eminent sphere of *privacy* and *intimacy*: The state of being concealed; secrecy². A
caricature representation of the figure of home would be that of a protective enclosure
subtracted from eyesight. It is from the introverted perspective of the occupant that the
domestic environment would be generated. Indeed this would be an exaggerated
manifestation of the desire of privacy. In real life this extreme representation is
inappropriate, as it doesn’t take into account the almost inevitable network of social
interaction and the connective circuitry of transportation and energy and water supply.

In real life home is an extension of the self. As such, the domestic environment
participates to the constitution of our identity. The envelope of the domestic environment
projects the surface of our appearance in the public sphere: it mediates the interiority of
the residence. The ambivalence of the domestic environment’s envelope resides in its
double function of hiding and casting. This ambiguity is increased by the double

legibility of the dual functionality from the perspectives of a viewer inside or outside the domestic environment.

The conceptual complexity of the domestic environment lies in the movement between introversion and extraversion\(^3\). In psychology the term *introversion* designates the direction of or tendency to direct one’s thoughts and feelings toward oneself, while *extroversion* describes an interest in or behavior directed toward others or one’s environment rather than oneself; A turning inside out, as of an organ or part. Because of its dual properties of introversion and extraversion, the domestic environment can be characterized by the concept of ambiversion.

2.3 Activities and their private/public status

*Just give me a home, in a great circle dome / Where stresses and strains are at ease.*

(Buckminster Fuller)\(^4\)

Home is the theater of our daily activities. As a convention there are two main zones of organization: private and public. As a node in the network of social interaction, the domestic environment welcomes visitors. As a cultural practice, the invitation of a guest in one’s residence often involves sharing. The commonality of an experience helps to build social connection, it reinforces community. Sharing a meal, a drink, watching a show, a game, celebrating a birthday.

\(^3\) Also extraversion

\(^4\) Lines for tune of “Home on the Range,” ib
The tone of the aforementioned activities may cover different moods contributing to the quality of the experience. The unpredictability of those set of emotions and events taking place in the environment are constitutive of the charm of everyday life. The way our environment is designed can alter the relationship between individuals and their well-being. This raises the issue of comfort. Providing the environmental and psychological conditions contributing to our well-being is a prerequisite of design project. The sophistication of environmental design as the designer's intentions carry compositional effects meant to have an emotional appeal in all modes of occupancy.

The modern movement with its ideological rationality has defined a mono functional approach to the definition of spatial entities. The living room, the bedroom, the bathroom... This specialization of function has its limitations. Although in most case the rationalization helps to optimize the management of the plumbing, electric and equipment systems, challenging functionalism should extend a symbolic agency confined to modalities of use that are actually exceeded in practice by occupants. Furthermore, the change in lifestyle introduced by new information technology has extended the perspective of social interaction to an extent that blurs the geometric boundaries of physical space. The function of protection of privacy that was once supplied by the domestic environment and its physical boundaries is nullified to a certain extent by the permeability of digital networks. Instead of concluding about the death of privacy, Beatriz Colomina foresees the emergence of a liberal approach to privacy that consists in contextual choices by individuals to give up their shield from intrusion for an interval of
time. This sociological perspective implies that more subtle design strategies are needed in order to achieve effects with an emerging aesthetic based on mutation, transformation, blending, layers, cross-fading, iteration, fluidity, mixing, sampling, extrapolation: a catalog of modalities of combination with a strong theatrical potential which, combined with technology, can provide for a total experience of being in a constructed environment that invites all the senses.

Figure 1: View of the Barcelona Pavilion, designed by Mies van der Rohe: the building was the German entry for the 1929 World Exposition in Barcelona. The boundaries between interior and exterior are masterfully blurred in this building.
2.4 The domestic environment in the network of social activities

*Ambiversion* is a personality trait that includes the qualities of both introversion and extroversion⁵. The social occupant of a domestic environment belongs to a network of social interaction that ranges from the necessity to work (duty) to leisure. The ambiversion of home pertains to both its representational attribute—oriented towards the public field— and its protective function of shelter. Hence, the envelope of a home projects the social status of its occupants. As a cultural artifact, home bears signs and values of taste, social position. Designers use various techniques to convey the representational function of an artifact. There are architectonic strategies and sensory-based techniques.

- Architectonic strategies include monumentality (monumentality may be interpreted as the emphasis on an element), and architectural effects playing with transition, contrast, and surprise.
- Sensory based strategies of distinction include, the use of precious materials (value); the arrangement of textures and colors achieving a high sensory appeal.
- Breaking conventions by negation, exaggeration, poetizing the ordinary or simplicity (modern movement)

The abovementioned techniques will vary according to the cultural context and the social status of the occupants. A home is a status symbols as well as a shell. Ambiversion

and occupancy is designed in the context of contemporary culture to display the
interiority of the environment in continuation of the exterior. The modern movement has
revolutionized the traditional orientation of architectural space by blurring the limits
between the exterior and the interior. This is achieved at the scale of carefully crafted
details allowing the play of transparency with interior and exterior limits. Conceptually
the ambiguity interior/exterior is further blurred by the instantaneity and the trans
geographical abilities of the new technologies of communication.

2.5 Contemporary perspective

Contemporary culture is lead by urban lifestyle and its plural channels devoted to
consumerism. Consumerism is constitutive of the identity of individuals as much as
trends, subcultures and styles are the expression of an emerging societal agreement. It is
the mutation of the smallest common factor into an elective sign of commonality.

The semantic boundaries of contemporary culture are exceeded by the contiguity of
different universe and systems of expression competing by their seductive appeal to sell
their mercantile value or to project their social status. Billboards, buildings, shop’s
facades, television, monuments are emitting signs that are “competing” in order to catch
individuals’ attention. These signs, messages, and signals often collide—in the life
narrative of each individual—in sequences amplified by the cinematic attributes of
memory and the enhancement of the visual imagery by multi-media digital technology.

The sophisticated trans cultural, trans media contemporary culture has supplanted the
adjacency driven collage aesthetic of early modernism: the non-linear aesthetic of layer,
transparency, distortion, morphing, remix, has considerably extended the additive
modernist approach that was based on diagrams, zoning, specialization.
CHAPTER 3
THE SOCIO ECONOMIC AND CULTURAL PRODUCTION
OF OUR LIVING ENVIRONMENT

3.1 The symbolic and conventional representation of our environment

The symbolic and conventional representation of our environment serves the following purposes:

- Just as language helps us by abstraction to make the economy of enacting or materializing what the constituents of the expression of our thoughts are, a symbolic representation is a very efficient shortcut that allows us by representing a figure of what is not present to convey very complex messages in a very short space, within a very short time, in a flow controlled by a conventional syntax and grammar.

- Geographic or environmental mapping is crucial for our orientation.

A map is a conventionalized representation of spatial phenomena on a plane surface (Columbia Encyclopedia, 2001). As a selective medium, a map displays different qualitative and quantitative facts: limits, physical artifacts, circulations, patterns and

---

distributions. The points and figures on a map correspond to a geographical position in conformity with a specified scale.

Ancient artifacts of mapmaking are found in cultures of antiquity: ancient Egyptians, Chinese and Babylonians were using maps for the management of land. Maps help to rationalize the use of land. A map is an excellent conceptual tool; a substitutive device for the act of presentation; the map compensates for the absence of the actual object by substituting geometric, physical or symbolic attributes of the object with a figure.

As a compositional tool, a map offers an abstract and yet accurate control of the relationship between the elements of a composition. The conception of an environment is characterized by the merged considerations of technical requirements and aesthetical statement.

The relevance of an environment’s design to a cultural context lies on the “visible” features of the project. Aesthetical properties are interrelated with structure and the systems of envelope, limits and equipments.

*Computerization has made assembly lines faster and more accurate and has given them more flexibility. Through computerized instructions, the design and manufacture of many mass-produced products can easily be modified to suit the needs of the individual customer.* (Columbia Encyclopedia, 2001)

A map or plan is a good systematic tool of production of space. Planning involves the representation of large spatial entities (city, county, region, country, etc.) in correlation with smaller constitutive parts, presenting finer levels of details in relationship to the human scale.
Figure 2: The correlation between a subway map, a gene map of chromosome 21, and Le Corbusier’s Modulor
The conceptualization of modularity plays with geometry and proportions to elaborate an entity dividable in architectonic parts. Mass production relies on the fabrication and assembly of standardized parts with the most convenient usability factors:

- ease of production,
- ease of assembly,
- ease of use,
- ease of maintenance,
- ease of customization,
- energy efficiency (environmental factors: recycling, emissions, material degradability)

3.2 The invention of the symbolic environment

"When Violet threw out the birds, it left her not only without the canaries' company and the parrot's confession, but also minus the routine of covering their cages, a habit that had become one of those necessary things for the night." Jazz (Morrison, 1992)

Our environment carries the sign of the rituals of our everyday life. Although not necessarily religious in nature our everyday life routines have a certain sacredness (not to be challenged) because of the compelling necessity to accomplish them in order get the calm and rest we think we deserve in the comfort of our domestic environment.
The way functionalism designates rooms by the association of a single object or function is based on the convenience of an additive approach whereby the heterogeneity of the parts—individualized by their name/function—allows compositional effects based on a programmatic hierarchy optimizing operational utility.

Without rejecting functionalism and its predicates based on austerity and economy, I would base the invention of meaning or symbolic content of a projected environment on a kinetic and cinematic conception of spatiality.

The proximity of “events” in the domestic environment characterizes the articulation of the kinetic and cinematic properties of space: those unique attributes we are not paying attention to in the flow or our daily activities but that are revealed in the quietness of contemplation or nostalgia (in the retrospective look at photographs or objects for example.)

- The horizontal plan (floor) engages the kinetic energy of the body, as the occupant traverses the horizontal quantity defined by the floor.
- The energy animating the occupant is engaged to the psycho kinetic energy deployed to apprehend the surroundings on a vertical plane. The cinematic illusion deriving is very engaging.

This dual description of a cognitive process is evidently not sequential in its phenomenological manifestation. The process is blended in the structure of an intention (intention, target, path, anticipated outcome) so much that it escapes the awareness of the subject.
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Table 1: Cinematic and kinetic component of experience matrix
The management of distances of “events”, rather than the mere ratio of distances between spaces, should inform the invention of the “décor” of everyday life. By event, I consider Violet the character in Toni Morisson’s *Jazz*: the grievous consequence of the disruption of her daily routine put in perspective (in retrospect) the eventfulness of the ritual of covering the bird’s cage.

3.2.1 Elements of boundary articulation: the fabrication of the domestic environment. (furniture/walls) (social/signs/status/values...)

Our constructed environment can be defined as the sophisticated agglomeration of objects, components and particles. Our surroundings can also be characterized as the association of insular boundaries within space: the properties of each boundary pertaining simultaneously to the object/unit it belongs as well as to the surrounding spatial context contain the object/unit.

From the outside to the inside, the following enumeration lists the spatial entities constitutive of the constructive syntax in the fabrication of our environment:

1. Global scale

Geological entities: Continents, Seas, major rivers.

2. Geographical scale

Geo-political entities: Countries’ borders,

Invisible boundaries: Radars, Satellites

Casual boundaries: Cities’ light, Culture

Administrative boundaries: Region, county, Transportation network
Figure 3: The articulation of different levels of spatial organization
3. Domestic scale: Institutional buildings, monuments, parks and shops, housing units, envelope, structure, walls/openings, furniture, objects and images.

Global and local interests regulate the articulation of these different scales. On a local level for examples, cities have regulations policing the envelopes of buildings. Some of the requirements are based on aesthetic/cultural value promoted for the sake of landscape or streetscape consistency, or for cultural preservation of a typical expression of a locality.

It is at the domestic scale, apprehensible without the mediation of any device, that we can experience the variations in the spatial continuum limited by the contiguity of the aforementioned entities. The fabrication of our environment should creatively articulate the various entities of our environment to achieve an innovative insight on the quality of our daily life experience. Nevertheless, visionary perspectives face the opposition of nostalgia.

3.2.2 The tension between nostalgia and novelty

The romanticized past as described by Gaston Bachelard in *La Poétique de l’espace* (1957) appeals to our nostalgic reflexes of conservation. Nostalgia nurtures the reproduction of an established model (in our collective or individual memory.) The drawback of such a fetishistic reproductive attitude lies in considerable reduction of
novelty and surprise, as the traditional or neo-traditional artifact often obey to a cohesive and yet predictable typology.

To further illustrate my reserve towards uncreative nostalgia, I would cite the cognitive model developed by Kaplan S. and Kaplan R\(^7\). (1989) for prognosticating people’s preferences for one environment over another. Their theory is that our election for our preference for certain environments is an “atavism” of an earlier period of our evolution, when humans were hunter-gatherers. The foundation of the Kaplans’ thesis is that human behavior depends on finding and processing useful information. Indeed, according to the Kaplans cited by Ungar (1999):

*People are disposed to seek out or move into environment which can be understood easily; and which seem likely to provide more information relevant to them, e.g. information about orientation, food sources etc.*

Based on the results of studies involving the observation and rating of photographic environmental scenes by participants, Kaplan and Kaplan have identified four key factors that determine the preference for environments:

- Coherence: the orderliness or level of organization of a scene
- Legibility: the ease of processing or categorizing elements of a scene
- Complexity: the diversity of elements in the scene
- Mystery: the potential of a scene to yield new information

---

The Kaplans’ (1989) preference matrix (fig.-) associates the human needs for “understanding” and for “exploration” on two levels of cognition: at the “immediate” level information is explicit and promptly available, while at the “inferred” or “predicted” level, useful information is “hidden” not available to direct perception. The effortful cognitive task of accessing the camouflaged information might require metacognition.

Unger also cites Berlyne’s study that has identified in a similar experiment four factors or “collative properties” of an environment (the factors on the basis of which we compare one environment with another):

- Coherence: diversity of elements in the environment
- Novelty: presence of novel elements
- Incongruity: extent of any apparent “mis-match” between elements
- “Surprisingness”: presence of unexpected elements

Novelty, surprise, mystery and complexity are attributes pertaining to an ever-evolving dynamic environment. As the Kaplans’ study demonstrates, novelty and surprise contribute to the blooming of human psyche.

3.3 Technology and the mutation of values with the integration of new media in everyday life

The ecology of communication in the domestic environment has mainly evolved around the introduction of mass media and new information technology. Communication
rituals once defined by the gathering of the household around the TV set for the news broadcast or televised events has evolved to more complex and individualized patterns with the introduction of new information technology—characterized by decentralization—in the settings of daily consumption.

The technology of communication with the progress in transportation of the 20th century allowed us to interact not only from different settings, by transgressing distance, but also by overstepping the limits of time. With global consciousness, the Universal Time is the common denominator that yields the emergence of a locus that is can only be represented at the geographical or regional scale.

The cultural imagery of global consciousness is nourished by the images provided by satellite observation “above” Earth. It is also the cultural metissage that has taken place ever since human groups gathered in agro-pastoral communities. The urban context is the privileged site of cultural complexity. As such, the city is a system, a productive technology that fabricates, customs, values, desire and consumption. Digital technology intensifies, and augments to a certain extent the exogenous manifestations of the centrality of the city whose bits of signs and expressions are echoed by interpretative (distant) receivers.

**Music: mix, remix**

The upbeat pulse of techno or Hip-Hop music is the façade of an aesthetic of assembly, and blending of genres. Afro-pop is danced in Paris, sushi is a delicacy served in New York. The Indian cithara meets the urban beat in a fashion that alienates any
exoticizing conceptions\(^8\) whereby the otherness of a cultural item would be emphasized by means of contrast for example.

<table>
<thead>
<tr>
<th>Understanding</th>
<th>Exploration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td>Coherence</td>
</tr>
<tr>
<td>Inferred, Predicted</td>
<td>Legibility</td>
</tr>
<tr>
<td></td>
<td>Complexity</td>
</tr>
<tr>
<td></td>
<td>Mystery</td>
</tr>
</tbody>
</table>

Table 2: The Kaplans’ (1989) Preference Matrix

![Diagram]

Figure 4: Berlyne’s model of aesthetic response to the environment

\(^8\) Missy Elliot, “Get Ur Freak On”, Miss E...So Addictive, Wea/Elektra Entertainment, 2001
The ecology of communication in contemporary culture is characterized by its mutation from a centralized fairly predictable system to a highly flexible and relativist structure. Kwinter and Fabricius\(^9\) (2001) emphasize that: *The main transformation concerns the destruction of the artificial structures of collective experience and culture, of the formation of ‘mass’ subjectivity and of the ‘historical sense’ which are traditionally fostered by centrally organized and shared artifacts embedded within processes themselves within experience. Serendipity, miscellaneity, and lack of authoritarian unity of social existence are the new orders of the day, and these mixed values are rapidly dismantling the familiar consensual structures of what once constituted an epoch, an age, or even an ‘event.’*

3.4 Example: The poetics of communication in William Gibson’s *Idoru* and *Mona Lisa Overdrive*

The exchange of thoughts, messages, or information, by speech, signals, writing, or behavior happens in Gibsons’ novels with various tonalities. The dramatic intensity deriving from the tension between reality and the events taking place in the virtual world is emphasized by their continuity in the realm of consciousness. Thus, the modes of communication identified in the novel are often ambivalently narrated between the poles of the virtual and the real. The poetical attribute of the exchange will vary according to:

- The actors (conscious or switched on) and their motivations.

\(^9\) Sanford Kwinter and Daniela Fabricius, The American City, in *Mutations*, Actar, 2001
• Events
• Time, space and movement

Communication in the two novels is based on necessary and contingent interaction between human and machine systems. An instrumental reduction would relate these actors to interfaces of inter-action (social and technical); in the two novels the site of significations is dominated by the wandered or escaped social reality.

“Nomadism” and Interiority

“‘Angela’ the house said, its voice quiet but compelling [...]”

‘Change your tone’ she said” (Mona Lisa Overdrive, p.49)

This anecdotic short exchange in which Angela and Continuity—the house—are antagonizing each other introduces the ambivalence between the virtual and the real. Although the house is subordinated to the performance of an assigned function, (getting phone calls or transmitting information), its linguistic and processing performance make it a protective and reliable companion. It’s exteriority and extra-territoriality as an object to the conscious personality of Angela is even blurred by the house’s name, Continuity, which suggests an uninterrupted cognitive companionship.

“I wasn’t aware of your having been away, until you activated me a moment ago” (Mona Lisa Overdrive, p.196)
The Maas-Neotek unit offers in addition to attributes of personality linked to information processing and presence, transportability. The nomadism of the unit intervenes in the story to provide help and advisory to its owner. It stages a stable romantic relationship to technology that avoids conflicts\(^\text{10}\) and is only interrupted by mechanical incidents or by turning off the machine.

The paradox of technology as part of a global vulnerable informational network and by contrast its occurrence as a specialized, individualized and indispensable machine, warns us against monumentalizing of technology: giving technology a central status in the paradoxically emancipated era

Similarly, in Idoru, the Sandbenders offers portability, suitable to the “nomadism”\(^\text{11}\) of Chia, who uses her unit in transit from USA to Japan. The individualistic component of technology manifests itself in a more hybrid and denser way. The intensity and quality of the “dream glasses” experience on plane, motivated by the exploration of pleasurable virtual territoriability blurs the heterotopic nature of the site framing her visual promenade. The prosthetic, attribute of the Sandbenders almost vanishes under the experiential domination of sensation.

The relativity of this type of interaction with technology is also displayed in the spiritual reverence Kumiko’s father has towards high-tech cubes containing the “ghost”

---

\(^\text{10}\) The fact that the Maas-Neotek unit is only visible to its owner minimizes interferences and thus conflicts. Privacy is a warrant of security in this instance.

\(^\text{11}\) Chia’s “nomadism” is noticeably mental and physical.
personnelities of respected predecessors (Mona Lisa Overdrive, pp.165, 166). The technoge-
ghost exemplifies communication as a construct rooted in the interiority of spirituality.

"Chia wasn't really listening to Maryalice now; it was sometime at night and the jet
lag was too weird and they were on this big bridge that seemed to be made out of neon"
(Mona Lisa Overdrive, p.85)

There is an aspect of communication that is characterized by interiority:
Contemplation. Though interiority is a constant component of consciousness, the
substantive operation it exerts on meaning through mental exploration, or mental
subjugation is more obvious in trans-mediated communication whereby perceived
occurrences or objects are exceeding their conventional meaning to fit in the realm of
thought and in the mood of the observer; Chia's vision of the bridge as seeming to be
made out of neon is followed by a comparison of the little cars in the traffic lane to
"strings of bright beads".

"Writing jumping around" and faces smiling on screens are expression of the
distance--enhanced by Chia's mood--between her and the cityscape. Then what appears
to be an event in her contemplation opens expectations in the narrative: a woman's face.
Rei Toci.

Events
In the hyper-technologized world of Gibson's novels, events operate by a seizure of attention; If, as I demonstrated earlier, the subject can "escape" from the prescriptive appeal of advertisement (whereby the subject's perception and interpretation falls under the mercantile spell of the image) through contemplation, there is an instance in which the power of subjugation of media technology overwhelms peoples desires and motivations by its seductive manifestation.

![Image](image-url)

Figure 5: A picture from the 1999 movie The Matrix (Warner Bros.), partially inspired by Gibsons' science fiction novels in which human and machines are symbiotically merged.
Although the eccentricity of the attitude of those succumbing to the seduction of virtual manifestations seems not to be abhorred in the social world of the novels, what primes is the convergence of means to achieve individual goals.

Rei Toei as well as Lo Rez, is a virtual manifestation of a system of confection of mass-popularity. Communication media amplifies the constructed image they project. Lo Rez as well as Rei Toei is the communicational interface to the system managing his lucrative artistic activity. Lo Rez’ subjugation to Rei Toei’s aura and manifestation put into question, the notion of authenticity in the projected future of digital age progress.

The binary geographic modes of manifestations of Rei Toei, here and there (in the physical, and in the virtual Wall City) would exceed Lo Rez’ permanent residence “there”: The abandoned body in the physical world, would no more be augmented by experience in the virtual world. Even as a digital construction, Rei Toei’s manifestation navigates between, physical and virtual boundaries. The relativity in the physical world, offers a critical distanciation (a there) helpful in the evaluation of authenticity: corporeality challenged by distance, time\textsuperscript{12}, and movement.

\textbf{Psychoactive assistants and mental “nomadism”}

\textsuperscript{12} Biological, Chronological
“‘Just go with it’, she thought, the wiz giving her a sweet second boot that tripped her into the river of pretty people without even having to think about it.” (Mona Lisa Overdrive, p.92)

The transfiguration of reality that follows the ingestion of psychoactive substances seems to be inscribed in an identifiable anamorphic visual culture, marked by instability and perpetual change. The short lasting effect of well-being provided by the physico-mental trip threatens the integrity of the subject in many ways. Beyond the physiological risk of intoxication, there is the risk of acting at the margin of civility: A consequence of such action might be the isolation from the network of social interaction. The subjection of self to the virtual world should always integrate anchors to ensure equilibrium between enjoyment and civic responsibility.

Serendipity

“[…] a chief result of browsing is serendipity, which Webster’s Second International Dictionary defines as “an apparent aptitude for making fortunate discoveries accidentally.” […] Serendipity involves an attitude that is real, not merely “apparent.” The aptitude is multifaceted, but basically it is curiosity.” (Fredin, 1997)\(^\text{13}\)

Laney’s pathological hyperfocus (Idoru, p.30) has made him an “intuitive fisher of patterns of information.” The cognitive accidental fortunes of Laney are based on agency

\(^{13}\text{Rethinking the news story for the Internet: Hyperstory Prototype and a Model of the User, Journalism and Mass Communication Monographs, Eric Fredin, 1997}\)
of information. Laney explains later that there are "nodal points" which he compares on a phenomenological level to "seeing things in clouds" (Idoru, p.193).

This seems to suggest that serendipity operates by patterns of recognition beyond the identification of objects.

Laney’s aptitude can be also recognized as a symptomatic attribute of web browsing. The educated eye incidentally recognizes the paths leading to its expectations, reaches to knowledge through the cumulus of information (data).
CHAPTER 4
UNDERSTANDING THE DIGITAL LIFESTYLE

4.1 Structure of digital socialization

To understand the implication of new information technology on social life, we focused on a practice that is becoming part of people’s daily routine: chat rooms, instant messaging are forms of socialization based on the electronic medium. When Computer Mediated Communication (CMC) entered the sphere of public consumption, some critics envisioned the death of community on a local level. New Information technology was accused of alienating the local while reaching for the global. The dystopian opinions about the effects of CMC on society were usually speculative extrapolations without an in-depth look on the practices of digital socialization. The critical review of two studies of CMC will give us a closer insight on the motivations animating users online.

4.2 Critical review: Online interaction

This critical review compares the research findings recently published by Herring (1998) and Kollock and Smith (1997). Their article addresses the issues of online interaction from the standpoints of linguistics and sociology, so as to identify the patterns
mostly encountered in Computer Mediated Communication, with an evaluation of their functionality.

Herring (1998) examines the functionality of computer-mediated interaction, in text-based communication. Her results reveal a high degree of disrupted adjacency—(the loss of order in emission and reception)—overlapping textual exchanges as well as a high rate of topic decay (Herring, 1998); elements which would a priori lead to underrate the usability of CMC. Herring proposes two hypotheses to explain the popularity of CMC, in spite of its dysfunction: the adaptability offered to the user by the medium, and the language play it allows.

Kollock and Smith (1997) propose a more sociological approach. The authors describe and analyze patterns of online social interaction. Their discussion explores the sites of social interaction in relation to identity, social order and community dynamics, rather than the actual interface features.

While we take account of the preliminary study proposed by Kollock and Smith to explain behavioral patterns in computer mediated social interaction, we find the useful and interesting study of Herring more promising in helping to understand the emerging forms of socialization we find on the Internet.
4.3 Evaluation

4.3.1 Understanding the problematic features of CMC

The first criterion we use to evaluate these studies is their contribution to understanding the problematic features of CMC.

Herring identifies three problems inherent to CMC platforms:

- the lack of simultaneous feedback,
- the disorganization of turn adjacency,
- and the rapid decay of topic during conversation;

"Disruptions of extended sequences are also common" (Herring). In comparison to the "real world" and its social life features, Kollock and Smith would add the poverty in signal that would help the users to identify their online counterpart. The looseness of the system makes computer-mediated sites of social interaction relatively uncontrollable and unreliable to the users. As Kollock and Smith argue, "online interaction strips away many of the cues and signs that are part of the face to face situation". Though, "This poverty of signal is both a limitation and a resource"

While the linguistic approach of Herring does not draw pessimistic conclusions regarding the usability of CMC textual features, it opens the question of the popularity of the system, where textual interaction is often deconstructed to an uncomfortable extent.

Herring's study clearly identifies the dysfunction of the system but does not interrogate the perception of the user. In absence of that qualitative information, she relies on the reported popularity of CMC for social interaction (Baym, 1996; Cherny, 1999) to later support the argument that the dysfunction of CMC interface is part of
CMC's attractive attribute. This opinion would have been refined if a preliminary study had measured how users perceive social interaction through CMC in terms of comfort.

Kollock and Smith are less able with their more discursive approach to identify the problematic structural features of CMC in terms of functionality, although they are more convincing in their sociological approach. One is easily drawn to adhere to their social analysis because it is rooted in "real life". The ambivalence of the problematic features they have identified in CMC social interaction is supported by the relativity that pertains to the conception of community. It is based on a user-centered perspective that capitalizes on the unpredictability of the user's desires. For example, the poverty in signal available in text based computer mediated social interaction is a negative function that also happens to offer advantages in terms of identity play. Nevertheless, by centering

```
Distance (in number of steps) from original topic
Msg 0 ... 3 4 5 6 7 8 9 10 11 12 13 14
no1  (blow-up dolls for sale)
14  P. hair on blow-up doll
15  T snicker
16  P. hair optional
17  T cool!
18
19
20
21
22
23
24
25
26
27
28
(etc.)
```

Figure 6: Illustration of topic decay during a computer mediated communication in a chat room (Herring, 1999)
their investigation on the unpredictability of users the authors are rather formulating
generalities—such as “Text Chat is based on the model of CB radio”—regarding the
functionality of CMC which are not significant in explaining the structural problem of
CMC that they have accurately identified on a social level.

4.3.2 Critical evaluation

The second criterion used in my evaluation of these articles is their usefulness to
understanding the overall popularity of CMC despite its dysfunction.

Herring hypothesizes that the popularity of CMC is mainly based on the benefits the
users get from using technology. Firstly, CMC offers users a potentially more intense
range of social interaction, which would be “functionally” impossible in a real life
situation. Secondly, the problematic features of the system require an adaptation process
from the users: This accommodation process is creative in its nature. Thirdly, language
play is favored by the cognitive structure of writing perception that is more reflective
than spoken language perception, where words vanish immediately. Herring arguably
cites the research findings of Cazden demonstrating that the predilection towards meta-
humor and meta-play in CMC can be attributed in part to the fact that CMC persists as
text on a screen and is subject to conscious reflection in ways that spoken language is
not, thereby facilitating a heightened meta-linguistic awareness.

In contrast to the content based attributes defined by Herring, Kollock and Smith
hypothesis is more socially focused. Users playing their social-self beyond the binary
barriers of social sexual identity, age group, and economic status explore the social attributes of identity...

While Kollock and Smith's study draws an unusual conclusion regarding the explanation of the popularity of computer mediated social interaction, with a qualitative insight on online social life, it does not always provide the reader with a significant reference source. This could be attributed to the inquiry approach designed to obtain qualitative information. This is in opposition to the highly informed study of Herring that works with an easily quantifiable object. Herring's study seems to hold more promise in the understanding and development of social interaction over the computer medium. The seminal nature of language in our social interaction is based on the fact that it carries the meanings we want to express.

A user-centered perspective on CMC social interaction should focus on identifying the cognitive attributes relevant to the edification of self, identified as the ultimate decision-making center in the online community. This perspective is better acknowledged by a thorough study of online social interaction content from the standpoint of the user. Herring usefully attains this purpose, whereas Kollock and Smith's limited evidence jeopardize their qualitative insight.
CHAPTER 5
BOUNDARY ARTICULATION:
URBAN PERSPECTIVE

5.1 The emerging metropolis

"Where once the opening of the city gates announced the alternating of days and nights, now we awaken to the opening of shutters and television."

Paul Virilio, The Lost Dimension, The overexposed city, p. 30

The circumscribed medieval city exerted an appeal as intense as the most composed and richest economic and cultural center of our time. Moreover it helps to characterize modernity by complementary contrasts in terms of the operational patterns of seduction and control.

The appeal of the circumscribed was enhanced by its high walls, which marked clearly identifiable territorial, entities and relationships. (Inside/Outside, Far/Close)

This geography was dominated by a hierarchy, which emphasized limits even in the social apparatus and decorum. As Hilberseimer points out in his article–Cities and Defense–the foundation of the medieval city relies, as for most early human settlements, on geo-strategic choices. The better the natural protection, the less necessary were human
processed ones. Later we will observe that as the city is becoming more powerful, the
defensive model acquires offensive attributes of power.

The gates of the medieval city played the role of the policy, in the sense of
administration and control—as related to *policy* [Latin *politia*: course of action adopted by
a government, business, individual, etc.]. The gates were helping to filter the flux of goods
and people entering in the city.

The modern city virtually has no limits. The modern city promises are about the
fulfillment of people desires, for anonymity, leisure, security, and employment. The
dense market place operates a constant seduction over people, which in advertisement
take the form of services, attached to promises of better living, happiness, fun, and
youthfulness…

In the virtually unlimited horizon of the city, information plays a crucial role in the
indexing and control of the territory. The modern rhetoric of zoning applied to urbanism
participate to the map (locate)/ collect (record)/process (interpretation for action)
mechanism part of our industrial society which is saturated by the competition of signs
and values. The large boulevards and rectilinear grid plans of the modern city are part of
the system designed to optimize the aforementioned process of information gathering. If
was system is useful in helping the police to repress riots, or giving the wanderer the
comfort and security of not getting lost, it also offered a sequential perception of the city
to the planner. The best example is the “Plan d’embelissement de Paris” embellishment
plan for the city of Paris. It is a long-term urban project that was functional in providing
the city with infrastructures, such as water reserves and sewers, and esthetical by the strict regulations that organized all building facades. Some of these regulations led to cosmetic competition between the bourgeois owners of buildings engaged in a race over which building would have the most distinguished presence. The superficiality of the approach would lead to artificial and sometimes absurd occurrences, such as corner towers that are not having specific functions, and which are defying the standards of comfort.

(Superficial: of, affecting, or being on or near the surface.)

The superficiality of the compositional aspect of urbanity carries the spirit of modernity, which is about the sublimation of function into style (or fashion). Industrialization and the progress in mechanization, and communication have extended the spatio-temporal perspective in the early and 19th century. If Modernity as a project (Twentieth century) was conceptually framed around mass media and its consequence over ideas such as originality or uniqueness, soon, architects embraced visions in stylistic explorations, which were meant to be paradigmatic in their expression either to be reproduced stylistically or identically. The charm of the modern city lies in the kaleidoscopic range of experience it offers: the old and the new, the cosmopolitan, the mythic, the mysterious, the exotic.

This tension between conservatism and modernization seems to be out of temporality on the Information Highways. While some critics welcome the advent of information technology as a federative and creative factor, others are more reserved and concerned about the implications of digital technology.
5.2 Privacy: in situ

"What They Do Know Can Hurt You" (Simson Garfinkel, 2000)\textsuperscript{14}

Information in the digital age is strategic because of its marketable value. Moreover, demographics, nominally coupled to what you read or buy can invasively be used to monitor, peoples' desires and activity. The intrusiveness communication technology makes Beatriz Colomina arguably state that:

The traditional sense of privacy is now not only scarce but endangered, under attack. It is better protected legally than with walls.\textsuperscript{15}

The disruption of the traditional sense of privacy can be related to a disruption of the sense of place, which Heyden\textsuperscript{16} interrogates under the light of one its symptom: the ease with which we relocate or the transitiveness of the quality of our experiences...

Privacy: freedom from intrusion or public attention

There is a shift in the definition of privacy that Garfinkel identifies as a qualitative extension of the concept that involves people’s contextual choice.

The problem with this word "privacy" is that it falls short of conveying the really big picture. Privacy isn't just about hiding things. It's about self-possession, autonomy and

\begin{footnotes}
\end{footnotes}
integrity. As we move into the computerized world of the twenty-first century, privacy will be one of our most important civil rights. But this right of privacy isn’t the right of people to close their doors and pull down their window shades—perhaps because they want to engage in some sort of illicit or illegal activity. It’s the right of people to control what details about their lives stay inside their own houses and what leaks to the outside.\footnote{Privacy and the New Technology: What They Do Know Can Hurt You By Simson Garfinkel, http://britannica.com/bcom/original/article/0,5744,6693,00.html, available, Feb. 2000}

Even though the limited visibility of electronic activity is minimal, comparing to the performance of walking in the décor of city’s streets, the qualitative extension of privacy mentioned above, is rooted in the unstable and unpredictable component of everyday life. Ambiguity becomes an attractive value, as it is able to federate contradictory, if not complementary desires: privacy/publicity.

If applied to domesticity on a phenomenological level, the stance of opened control extends dwelling as an activity:

---Dynamic.

The most conspicuous of which are linked the iterative nature of functions operated in that environment. Their sequential nature creates a certain level of predictability that can be exceeded with technology (hardware: the house/ and software.) For example, at night, the illuminated window of room gives an indication of the presence of a person.

---Qualitative

On a functional level, at-home work is an example of how dwelling can be distracted from its main attributions. On a social statutory level, value and appearance play a major
role, as technology and mass-customization allow people to compose their own identity. (by the environment) These values are the subject of experience.

---Experiential

Dwelling is a sequence of planned and unplanned, designed and un-designed, occurrences, a conjugation of sublime and banal events. Experience, is the ultimate site of privacy as the subjective participation to reality.

In the next part of our essay, the concept of Hyperfunctionalism proposes design principles for the mediation of the eventfulness of the users’ presence

5.3 Hyperfunctionalism

Hyper-functionalism is a neologism I created in 1998 while I was working on a housing project in the Graduate School of Architecture of Lyon. This term refers to Functionalism as formulated by eminent modernist theorists such as Ludwig Mies Van der Rohe and Le Corbusier:

- Technical/Economic/Architectural for the former and
- Economy/Sociology/Aesthetics\(^{18}\) for the later.

The prefix Hyper- [meaning over, beyond, too] was associated to the idea of functionalism to signify over-exaggeration applied to that concept. Hyper- here is more theatrical and deals with compositional talent, the achievement of effects by taking advantage of all contextual elements in a federative and integrative movement. The misperception of this association would first give a reading that narrowly represents

---

Functionalism as only being concerned with economy. Thus, putting aside the aesthetics considerations formulated in the movement’s statement. “Hyper-functionalism” articulates the plural concerns of the modern movement by adding a deeper quest for totality in the formulation of solution; For example, giving meta-functions to the wall (behind or beyond the common acceptation) will intentionally enhance its basic function of separation. That same wall would be a color/handrail/separation: This happens in the spatial continuum as functional shift occurs between (and in-between) the environment’s elements. These categories should be displayed without betraying the formal minimalism associated with modern style.

Hyperfunctionalism offers the opportunity to merge the concepts of hard and soft technology with flexible sets of attributes, which address the convergent importance of aesthetic, behavioral, and comfort related concerns. The ideas that have generated the design of the housing project were based on the theatricalization of density and of the relationship of the building to the sky. The presence of the building had to call the sense of contemplation, without unnecessarily monumentalizing the domestic character of the building in the city’s landscape. Beside the sophisticated arrangement of the programmatic elements (apartments, circulation, facilities), I have created a federative element that poetically combines the connoted gravity of density with the lightness of the sky. The element is an industrial metal roofing; A kinetic observation of this element consecutively reveals different functions, whose importance for some of them would be anecdotic from a common sense perspective, but which acquire by their intricate
connection with highly poetically connoted features (the landscape, the light, the sky.), a second level of meaning. A linear narrative consecutively displays, a parapet that is converted into a handrail; the later runs over the void to delimitate a frame of the sky (an overhead window); a vertical window accommodates the accessible platform from which people can look down the skylight. The platform is connected to the living room of a 3 story apartment by a handrail that runs on the entire length of the room; a vertical frame—proportioned to meet the scale of a facing square – is linked the horizontal order expressed by the later handrail.

This housing project has allowed me to demonstrate the effectiveness of a design based on a kinetic and cinematic narrative, that takes advantage of a minimalist configuration of effects: The subtle manipulation of programmatic contingencies—directed toward the creation of effects highly appealing to affects. The perspective of developing digital technology in architecture should not loose the contemplative component of the esthetic status pertaining to our environment. A monumentalized application of technology exposes the architectural artifact to the short-term temporality that especially characterizes electronic technology artifacts. The major concern not being the obsolescence of their formal features but the potential limitation of the operative functions of a given system, supplanted by a more performing and yet incompatible system.
Hyperfuctionalism sets a conceptual frame that allows conjugating various functions and attributes within a phenomenological user-centered perspective. Its generative attribute is inclusive:

1. There is no hierarchy of value between the constitutive elements of the projected environment. The hierarchy only emerges in the linearity of the narrative that is built with rhetorical figures such as paradox and irony.

2. The phenomenological presence of the built environment should exceed the established repertory of reference used to identify it by broadening the (poetical) horizon of usage and function. The extent to which the designer can achieve this goal is through prospective fiction, whose formulation informed by people desires aspire to appeal their investment.

3. Fiction is explorative, informed by the broad scope of our contemporary imagery, which ranges from the dark ends of the universe, to the landscapes of nanoscale.

4. Architectural effects are merely mediating the eventfulness of the user’s presence. The immersive attributes of the architectural object symbolically connect it to the elected vision one culture has of time and location.
Figure 7: Hyperfunctionalism conceptual diagram
6.1 Introduction

The cover provided by *domus*, shapes an environment, a perimeter of action dedicated to the edification of the self as a distant subject in the community. The once stable indivisibility of self traditionally associated with *locus* (the scene of any event or action) is disrupted by the revolution in transportation communication and telecommunication. The effects of these changes are visible on a geopolitical and on cultural level. The emergence of a society of network, driven by information technology prognosticated by Castells would significantly redefine *habitus* and our living experience in the domestic environment.

To dwell, or *habiter* (French) denotes a practice framed around repetitive, permanent and transitive patterns of occurrence: sleeping, waking up, reading, watching the news, dinning... The elected sphere of privacy, the domestic environment nowadays is the site of re-invention of everyday life. The ordinary experience of being here and now (bodily situated) is augmented by the possibility to transgress the boundaries of time and space.
through the extra-ordinary mediated manifestation of our selves. The prefix extra marks the extraterritoriality of the phenomenon (outside, beyond the body): The recording media transgresses the boundary of time as much as of space by the manifestation of attributes of meaning fitting in the narrative of the receptor. In the age of digital replication the scope of action of self is increased to an extent that actually negates the territory. Indeed, when considering the new fields of interaction opened by New Information Technology (NIT), the geography of their manifestation is essentially two-dimensional (the virtual bar is an image. Even immersive environments are projected). This functional reduction simplifies representation, allowing tangencies, super-position or subtraction.

_Habitus_ in the age of digital replication is redefined by the amplification of our horizon of action. The transitive nature of activity in the dense network of exchange of cyberspace, is paradoxically stabilized in a mental drift operated by seizure of attention. On a cultural level, the vulgarization of satellite observation imagery, has established a global sense of consciousness, a cosmic perspective to mental representation.

The analogy made by Mc Luhan referring to domestic environments as _"those extensions of body and skin that we call houses"_19 was conceptualized by Constant in a formulation for _cybernetic architecture_ that conjugated _"architectonics," "climatology"_
and “psychology” with the five senses. Sadler explains that the importance placed by cybernetics on the function of information was especially appealing to the avant-garde Situationist movement.

“Cybernetics identified the feedback of information as the determinant for correcting or controlling the future behavior of the system. The extreme refinement of the control systems of New Babylon would permit a symbiotic, ever-evolving relationship between people and architecture.” (Sadler, 1998) The word cybernetics (from the Greek for “steersman”) in this perspective refers to steersmanship by all rather than dictatorship by a few.

- How do the domestic environment and its occupants benefit from the extension of their horizon of manifestation, or action?
- What attributes should the domestic environment possess in order to accommodate the enhanced multi-sensorial, trans-cultural experience of its visitors?
- How does the transgression of distance by NIT affect everyday life in our environment?
- What is the emerging dynamic of territoriality in our living environment?

6.2 The new structure of the ordinary

To answer to these questions lets consider how the Modern movement in Architecture has redefined subjectivity and sight by the contagion of mass media.

\[20\] see Locher, New Babylon, p.58

52
Just as film has extended our scope of perception, NIT is redefining the spatiality of our environment: The foundation of the hygienist and populist rhetoric developed by the Modern Movement lies on conventions and rules associating a lifestyle program with physiological, and quantitative rules}\(^{21}\) (Quay, 1996)

Quay lists conventions of comfort as:

- **Aesthesis** or the ability to feel or experience through the senses
- **Habitable**: made up by functionality; the equipments (furniture, objects, technology); **space** and spatio-temporal configurations.
- **Imagery**: the perception of spaces, the relationship between the inside and the outside (the garden, the balcony, the window, etc.); **intimacy** and **limits**.

Comfort defined as the conditions in which somebody feels physically relaxed, is under the empire of perception. Indeed, apart from the psychological context it is the subject’s sense of aesthesis and imagery that help to evaluate the condition of his or her presence (locus and domus.)

Habitability is informed by culture, it is the context of the subject’s presence in the environment or *domus*. Imagery is the psychological field in which the horizon vanishes. Habitability and imagery are combined to define the psychogeographic matrix of subjectivity in any given environment. Thus, in order to observe the mutations operated

\(^{21}\) “Les éléments du confort” — Symposium by Jean Yves Quay, 1996
School of Architecture of Lyon
Quantitative rules apply to physiological exigencies such as the purity of air, insulation, acoustic correction... and to dimensional engineering and ecology.
on our environment by NIT, one has to consider its main attributes: **instantaneity**, **ubiquity** and **a-territoriality**.

To illustrate this point of view, I will use the example of the window and its redefinition in the modern movement in relationship with a conceptual (cultural) shift influenced by the emergence of the mass media in the early 20th century. In “Modern Architecture as Mass Media”, Colomina compares the windows of modern architecture to picture windows. She explains:

“**The picture window works two ways: It turns the outside world into an image to be consumed by those inside the house, but it also displays the image of the interior to that outside world.**”  

As the author argues, “**we have all become ‘experts’ on our own representation.**” Here perception is eminently transient. Imagery involved in the perception and sense of privacy and space navigates between two antagonistic and yet complementary modes: observing and being observed. While in the first mode the window frame is equivalent to the border of a painting and the subject acts as an observer, in the second mode, the subject / object arranges things in order to complete an effect. Although the strategic valorization of space and its occupation for representational purposes is not specific to the modern era, what is groundbreaking in that period is the total integration of form and function in a fashion that cultivates visual effects, and their corollary affects. The traditional function of the window, ventilation and light, is dominated by a new necessity.

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22 Privacy and Publicity: Modern Architecture as Mass Media, by Beatriz Colomina, MIT Press, 1996
framing a view. The “horizontal window” illustrates the cinematic component of architectural composition in modern architecture.

The re-appropriation of photography (mass media) by Le Corbusier is emblematic of mass media culture influence on modern architecture in the early 20th century. The selectivity of the photograph establishes an out-of-the-frame field that exceeds the actual picture. It offers the possibility to use a kaleidoscopic vocabulary of fragmentation that takes advantages of collisions, contrasts, and superimpositions.

In conclusion, the uninterrupted solicitation of aesthetics by mass media has informed and “educated” the production of an architectural environment in a cybernetic relationship with the human body. Though not extensive in its application in the early development of the 20th century, the symbiotic connection between the subject and its environment is based on the instrumental objectification of domus as a two-way observational machine. However, the zoning strategies laid out in the late fifties during the CIAM congress will undermine the integrative intentions of modernist ideals.
Figure 9: House in Bordeaux and Villa Dall'Ava by Rem Koolhaas display a dramatic and yet poetic play between the interior and the exterior separated by a glass curtain.
6.3 Cybernetics of self and the living environment

Now lets define the cybernetics of the self and the living environment in the digital age. As I mentioned in the introduction to this essay, the digital age is characterized by the disruption of the indivisibility of the couple domus/locus. The subject's situation in the environment does not necessarily bind the perimeter of action centered on the individual.

In the digital age, the perimeter of action is beyond voice reach. Places a stone throw away, are now at the margins of our perimeter of action. This is because there are two components to locus in the digital age: a global locus and a local locus. The global locus is a-territorial. Satellites provide the imagery corresponding to this sense of locus. From distance the territory is minimized to smaller and smaller perceptual manifestation. For example, cities look like dots from a cosmic point of observation. These dots are the constitutive units of the global network. From a cosmic standpoint, any given events happening on two distant continents are perceived as happening on a landscape. NIT brings into everyday life the option to transgress the geographic space via interconnected electronic terminals (phones, wireless computers, tele-video.)

The fact that those terminals are not necessarily attached to a location destabilizes the couple domus/locus on a second level. Indeed, the nomadic attribute of these technology conferred by their transportability often suspends the representational clues necessary for the sense of location. It is not by coincidence that the first question usually asked to an
interlocutor with a portable communicational device is “where are you?” replacing the usual “How are you?”

6.4 Socializing at Mobilesdisco.com

My experience as a user in the bar at Mobilesdisco.com helps to illustrate the process of decentralization of locus in the digital age. Socialization is an activity traditionally associated with a local sphere of interaction. In cyberspace, my area of influence is extended to a planetary level. As I log in to mobilesdisco.com my presence is instantly distributed and manifested in the form of an avatar to the $n$ people apparently present in the shared environment. It is extra-ordinary that I have the ability to share a virtual environment with people from all over the world in real-time. This is possible by the distribution of our respective avatar to each other’s terminals.

My unity as self in my living room (domus) is replicated $n$ times, and manifested as a materialization of colored light describing an animated human figure or lines of texts, following the command input users perform via their keyboard. The exercise of my influence in that extended field of interaction happens as I come across a conversation between two individuals and change the course of their exchange by drifting the conversation on a new direction. Interestingly at Mobilesdisco.com, the geometric boundary of the shared environment provides for a locus with a unity that stabilizes the narratives developed by the crowd. Each avatar’s position is quantifiable in geometric coordinates in the virtual environment, while the ordinary subject’s geographic position is in suspension: it is strategic information for identity play in the virtual world.
While from my shelter’s window I occasionally get a glimpse of those magic moments when trees leaves color the sunlight, my computer window frames a digital landscape whose refraction reveals transient states of manifestation. The digital landscape is constantly *morphing*. From work to entertainment, from culture to socialization, it is a space in which the subject’s contextual decisions are contiguous in an active way. Cyberspace amplifies mental nomadism. The digital landscape has surrealistic qualities.

It *distorts* reality into a land offered to exploration. It is a space of events in which the emergence of information from the flow of data often activates new inquiries. Cyberspace is also a space of competition to get the attention of the virtual wanderers. It is a marketplace opened twenty-four hours a day.

![Habbo Hotel](image)

*Figure 10: Habbo hotel is a distributed environment in which people can socialize by the mediate presence of their avatar.*
6.5 Mapping the world as a cultural phenomenon: shopping a la carte from home

The competition of signs in our environment precedes the contest that is taking place in the virtual space. Writing as low technology has provided a mean for the commodification of the “world.” Writing allows with language (grammar) and naming to conjoin in the contiguous space of the piece of paper realities that would otherwise be distant in their manifestation. Writing helps to make the economy of physicality; textual information can manifest weight, lightness, emotions and quantities with enough conviction to generate and inspire decisive action. Thus, the distance that I need to cover to place an order in the cyberspace is counted in clicks: a ridiculously unimportant unit of measure regarding the performance accomplished by the electronic store. Indeed, sophisticated search engines and tracking devices, coupled with the performance of a catalog listing categorized items help to define a field of action that empowers me as I eventually hesitate or get distracted from my original task.
Figure 11: Identity Play: Users have several options to choose their appearance. This menu offers different hairstyles, skin tones and clothing.
7.1 Definition

Robert Kronemburg uses the following typology to define the Movable Building:

- Portable buildings:

  They are transportable as a whole and intact, and they optionally integrate their method of transportation within their structure. They can be towed or carried. Here the distinction between building and vehicle is not clear.

- Relocatable buildings:

  They are transportable in parts. Usually assembled at the site in a very short interval of time into their usable constructed form. They are always carried, and may also integrate their transportation system into their structure. Their advantage stems from their ability to provide space as quick as portable buildings, without the restriction of in size related to transportation requirements.
Demountable buildings:

They are transportable in parts for assembly on site. They are more flexible in size and layout. They can be transported in a compact space because of their optimized dimensions.

The extensive site operations limit the instant availability of the structure, depending on the size of the project. This stems from the complexity and originality of the system.

Kronenburg adds subcategories to his typology of Movable Architecture: these structures can be organized according to their mode of deployment:

- Module
- Flat Pack
- Tensile
- Pneumatic and Combined System

There are also different sources that help to organize the different building types: their source. The following sources derive from socio economic, cultural and functional needs:

- Vernacular and traditional architecture
- Building industry
- Architectural design
- Transportation and vehicle production
- Prefabricated and pre-manufactured buildings
Function

Above their type, these building have to perform the basic accommodating functions expected from a built environment. The author defines in general terms the function of a Movable building as an inhabitable construction subject to environmental modification. Kronenburg adds that they should lend themselves to the purpose of the activities carried out within their enclosure.

The status of contemporary movable buildings

Because they are conceived without any cultural and aesthetic commitment, movable buildings have a very functional connotation associated with cheapness, and to a certain extent bad quality. Paradoxically the culture of consumption is dominated by mass produced phenomena. The commodification of our daily lives reaches all aspects of human existence. Proposal meeting the highest standard of design and technical innovation have not been widespread in the sector of prefabricated residential buildings. Despite the very transitional current cultural context, (a new century, fast paced development in science and technology, etc.) Movable Architecture fails by its poor quality design. A historical review will show how the pioneers of Movable Architecture have contributed with groundbreaking ideas to the promotion of alternative environments.
7.2 Historical perspective: from the industrial revolution to present

7.2.1 The Industrial revolution

The shift from home-based hand manufacturing to large-scale production in factories, favored by the increased mechanization of system of production, characterizes the industrial revolution that happened in England and which expanded throughout Europe in the late 18th century. The urban population considerably increased as factory cities were drawing a large population of workers. The foundation of modern mass production processes traces back to functional constructions: bridges. Transportation was also revolutionized by the invention of the steam engine by Richard Trevithick. The first locomotive powered by a steam engine was first operated in Wales. The following list includes a boat with bridges, which suggest that there was an emerging transportation (on land, on water) industry at that time.

1779 Abraham Darby III (1750-91), an Iron founder, built the first cast bridge in Coalbrookdale (Derbyshire, England). All parts of the bridge are prefabricated and joined on site with fixing parts such as nuts and bolts.

1807 The Coalbrookdale Company ships 50.8 tones of metallic components to Jamaica to build a bridge.

1821 The first iron boat is built by Horseley Iron Works for the Oxford canal. The boat was transported in components to its destination at the Surrey canal docks in London.
Figure 12: Darby III bridge in Derbyshire

The aforementioned examples inspired the application of prefabricated metal in building construction. Kronenburg notes that the requirements of prefabrication that allowed the ability to make iterative and dimensionally coordinated part was made achievable with little difficulty. The early application of mass production was in services directly linked to the economical expansion of the industrial revolution period. The eight to nine floors multistory prefabricated buildings of the mill industry are a good illustration of the practicality required from constructions at that time.

**Greenhouse structures**

Joseph Paxton (1803-1865), an English architect, who started his career as a gardener and estate manager, by building two greenhouses. The great conservatory (1836-40) at Chatsworth, Derbyshire and a building conceived to cover the Victoria Regia water lily. The greenhouse projects inspired the conception of the Crystal Palace, whose admiration and popularity earned Paxton a title of noblesse.
The Crystal Palace is considered to be one of the most significant examples of early modern architecture, because of its challenging design—made of glass, iron and laminated wood—defying gravity and the traditional constructive process. The feasibility of the Crystal Palace relied on the opportunity offered by the development of cast iron supports after 1800 (introduced by Darby). The introduction of wrought and cast iron beams offered an alternative to masonry and thus introduced a new aesthetic characterized by lightness.

1851 The Crystal palace, designed for the 1851 Great Exhibition in London, was built in six months. Based on a 7 meters module, the construction included:

- 3300 iron columns,
- 215 iron girders,
- 372 roof beams,
- 38.6 km of gutter,
- 402 km of sash bar,
- 293635 glass panels

The glass covering of the roof was accomplished by a worker navigating in a special trolley on a railway-like track running in the grooves of the glazing bars. The innovative application of a component system mode of construction based on pre-manufacture and site assembly has permitted rapid construction, dismantling and reassembly.

The Crystal Palace was dismantled in 1852, from its Hyde Park site, and reassembled on the new site of Sydenham, London.
Figure 13: The assembly of the Crystal Palace trusses. An interior view of the palace

1889  Completion of the Eiffel tower for the Paris International Exposition

Designed by the French engineer Gustave Eiffel, the tower was the subject of vibrant controversy: the steel construction was the tallest building in the world in 1889. The 300m (938 ft.) tower was celebrated and loathed in equal fervor. The Eiffel tower embodies Paris identity with its 12,000 steel girders held together by 2,500,000 rivets, and three floors opened to the public.
Figure 14: An 1889 photograph of the Eiffel Tower.(L.P.)
7.2.2 The twentieth century innovations

The previous section has illustrated how modern architecture has evolved from the development of steel and iron-system in the mid 19th century. In the 20th century, the use of reinforced concrete and the development of textile and geodesic structure have redefined cityscapes around the world.

Buckminster Fuller, 1895–1983, an American architect and engineer was devoted to designing environmental structures and high tech houses, by borrowing technologies and processes from other fields. From 1917 to 1919, Fuller served in the US navy. At that time there was a technical revolution in the army characterized by the introduction of radio aids and airplane. His involvement with the stockade building system for five years has motivated his interest for the exploration of technological transfers in the building industry. Fuller patented the Dymaxion house in 1928. The house was not actually built until 1945. The Dymaxion house was Fuller’s solution for the need of an energy-efficient, trans-portable and mass-produced affordable house. The house is constructed of aluminum. The newest metal alloy at the time with its lightness and strength complied with the transportability, resistance to elements and hygienic requirements Fuller wanted for the Dymaxion. The aircraft industry was already using aluminum in its assembly lines before World War II.

A Dymaxion house was designed to cost approximately the price of a high-end car in the 40’s: $6500. The two-bedroom unit was most suitable for a single family with no more than four people. There have not been any people actually living in a Dymaxion house, because the project didn’t enter the mass-production phase. The only prototype to
Figure 15: A cut away model of the Dymaxion house. The rooms are pie-shaped. A central mast to cut material and construction cost supports the structure.
ever been occupied was owned by the Graham family. Fuller’s prototype was attached as a satellite the Graham’s ranch. There is no account for the usability of the Dymaxion for that reason.  

The house featured innovations such as:

- the O-Volving shelves,
- a revolving shoe and clothes rack, tie and hat rack,
- optional folding stairs to the balcony,
- a Dymaxion bathroom and
- accordion doors.

It is interesting to note how the originality of the name used to describe the new features— or artifacts that would otherwise have had a generic designation— helps to emphasize the newness of Fuller solution. The name excites curiosity and establishes a parallel between the novelty of the house as a referent and the lexical emergence of a new territory of experience.

Charles Eames has contributed with the 1949 Case Study House No. 8, to the development of a minimalist aesthetic of modular architecture. The rectilinear building takes advantage of color, and spatial effects defining the partitions of the construction. Critics from the time described the house in these terms:

“Factory-produced steel window and door units, as well as steel framing and roof decking, metal frames are filled with transparent or translucent glass and panels of

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23 Henry Ford Museum & Greenfield Village, online, http://www.hfmgv.org/dymaxion/faq.htm##6

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stucco painted with primary colors or white. The main part of the living area is two stories high. Bedrooms are on a mezzanine floor which opens into the living room; beneath the mezzanine is a small alcove with built-in seats and bookcases (Hitchcock and Drexler, 1952.)”

As Robert Kronenburg observes the Eames have opened a new perspective in architecture by favoring the use of diverse alternative technologies from different industries in architectural conception.

The Construction Industries

While the experiments with manufactured housing in the USA focus on the production of housing as an environmental appliance, in Europe, Le Corbusier, Walter Gropius and Jean Prouvé are more concerned with the application of standardized method of construction for the production of good and affordable housing for all.

In 1950, Jean Prouvé installs twenty-five house units designed for an experimental housing project commissioned by the French government in Meudon. Setting up a unit doesn’t require scaffolding: the jointed structure is made of folded steel beams with a flexible partition system.

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Utopian Projects

In the early Sixties London, continuing Buckminster Fuller’s faith in technological innovation, the architecture group Archigram with its extravagant aesthetic envisions a utopian city into which modular buildings accommodate interchangeable pods. Ron Herron’s Walking City, illustrates the effects of mass production with an expression that is paradoxically organic.

Figure 16: Walking City, Ron Herron, 1962

Figure 17: House in Meudon, Jean Prouvé, photo: Architecture/Industrie, Klient
California Gold Rush
First market for prefab housing

Sears and Roebuck Mail Order
Homes

The Aerocar

1920

Prairie Schooner
Average House Costs $1000.00
10 to 25% of Trailer Owners
Live in Them Year Round

1925

**Buckminster Fuller**
**Dymaxion House**

**The Great Depression**

1930

22 million cars
Trailers begin to be used as
fixed residences

1935

**The Airstream**
**The Trenton**
**Klesa Tourhome**
**Durham Home**

**Jean Prouve**
**Meudon Houses**

1940

Government purchases 1500
trailers for war workers
17’ Trailer
Committee trailer

1945

**The Sun Coach**
Edie Barnes
Prefab House
Spartan Manor

**Levittown Opens**

**Buckminster Fuller**
**Wichita House**

Figure 18: 1920s-1940s timeline of prefabricated housing (Harvard Graduate School of Design)
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>Ten Wide</td>
</tr>
<tr>
<td>1955</td>
<td>California Passes Mobiles Home Construction Standards Pacemaker</td>
</tr>
<tr>
<td>1960</td>
<td>The Mobile Home and Travel Trailer Industries officially split Marlette Homes ANSI Standards for Mobile Home Construction <strong>Archigram</strong> <strong>Plug In City</strong> <strong>Walking City</strong></td>
</tr>
<tr>
<td>1965</td>
<td>Moshe Safdie Habitat Housing Act of 1969 Assistance for financing mobile homes</td>
</tr>
<tr>
<td>1970</td>
<td>Geodesic Domes 45 States Adopt ANSI Standards Congress passes HUD Code</td>
</tr>
<tr>
<td>1975</td>
<td>Congress makes HUD Code Law</td>
</tr>
<tr>
<td>1980</td>
<td>HUD Code Changes Name</td>
</tr>
<tr>
<td>1985</td>
<td>HUD Code Revisions for Environmental Concerns</td>
</tr>
<tr>
<td>1990</td>
<td>Wes Jones Tech Cabins</td>
</tr>
</tbody>
</table>

Figure 19: 1950's-1990's timeline of prefabricated housing (from Harvard Graduate School of Design)
CHAPTER 8
PHENOMENOLOGICAL PERSPECTIVE

8.1 Introduction

The American Heritage Dictionary defines phenomenology as "a philosophy or method of inquiry based on the premise that reality consists of objects and events as they are perceived or understood in human consciousness and not of anything independent of human consciousness." A phenomenology of domesticity explores how the various things that constitute our daily life surroundings become an extension of our corporeity. The phenomenological method consists in realizing the presence of an object and elucidating its meaning through intuition.25

Allegra Fuller Snyder, Buckminster's daughter, reports in her essay, Experience and Experiencing26 the cognitive structure of intuition at the foundation of our experience as follow:

- Intuition is practically physical, the kind of supersensitivity that a child has.
- Imagination. Image-ination involves rearranging the "furniture" of remembered experience as retrieved from the brain bank.

26 http://www.thirteen.org/bucky/allegra.html
Fuller Snyder later reports how her father synthesizes the nature of experience in a movement that encompasses earth and the cosmos as follow:

- "Thinking is inherently exclusive. Experience, which comes before thinking, is inherently inclusive. Experience is complex consciousness of being, of self, co-existing with all the non-self.
- Re-experienced consciousness is re-cognition. Recognitions generate identifications. Re-cognition of within self rhythms, of heart beatings or other identities, generate a matrix continuum of time consciousness upon which, like blank music lines, are superimposed all the observances by self of the non-self occurrences.
- Experience is inherently discontinuous and islanded and each special experience represents a complex of generalized principles operative in special or limited size modulated realization.
- Experience is finite; it can be stored, studied, directed; it can be turned, with conscious effort to human advantage. (This means that) evolution pivots on the conscious, selective use of cumulative human experience.
- Universe is the coordinate integral of all experience."

A phenomenological perspective on domesticity helps to understand how we interact with our environment. Fuller introduces a holistic perspective to the idea of experience. As a “finite” phenomenon, Fuller aims at the direction (design) and storage of experience, which suggest the reproducibility of the phenomenon, if not its manufacture.
helped by the (good) intentions of the designer, the available technology and of course the receptivity of the subjects.

8.2 Discussion: A Phenomenology of Domesticity

"The diverse things that surround us in our daily life become virtual extensions of our corporeal life. As such, they provide an important mediating role in our relationship to our social and natural environment." (De Visscher, 1998)\(^{27}\)

De Visscher’s discussion on the place of things in our daily life examines in a passage of George Perec’s *Les Choses* the dynamics at play in between a young couple of the sixties and the objects in the apartment they idealize. The chest, the armchair, the useful things *exist only by virtue of their link with other things which are also there to be used* comments De Visscher. Objects are referents to the rituals and habits the couple is envisioning itself performing. Objects are actually referring to actions that are overlapping a network of activities in human existence. To illustrate the systemic connectivity linking objects in the domestic environment, De Visscher paraphrases Heidegger (1927) in these words:

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We do not encounter individual objects in a room as naked physical things, to which we subsequently assign function and then clothe with meaning. Nor do we encounter these objects as abstract locations on a mathematical grid bounded by four walls. Indeed, the “thingness” of objects exceeds its geometric and functional attributes when we first encounter individual objects. What stands out first is the domestic whole of which the individual household objects form a part. Most importantly, the domestic whole constitutes the frame within which the individual items emerge.

De Visscher emphasizes that because of the implication of household things in our intimate life in various ways, objects shape our practical experience of space and even of our own spatiality. The author concludes that as result, the house, household objects and the familiar spatial patterns formed by these all become physically and mentally inscribed in us.

De Visscher acknowledges the transient condition of contemporary life, but he vehemently criticizes modern architecture for dehumanizing our experience. His fear is of an increasingly objectivist architecture that is more centered on scientific quantities than on the things of daily life. By withdrawing from giving specific examples, the author fails by generalization and by the omission of the greater flexibility achieved in modern architecture. One can foresee De Visscher’s opinion as a reactionary preference for traditional architecture.

The author’s hope is that the studio apartments that are so well adapted (sic) to transient people (...) would still furnish a proper framework for human dreams and aspirations.
CHAPTER 9
PROPOSAL: AN ALTERNATIVE DOMESTIC ENVIRONMENT

9.1 Concept

This project answers to the lack of aesthetic and conceptual depth that characterizes the industrial and architectural production of manufactured housing. The theoretical premise of this project is based on the cultural shift that affects our perception of the sense of place. Mobility, characterizes the transient nature of our activities. Since the industrial revolution and the implementation of mass production processes, our culture of consumption was intensified by the availability of multiple choices, available in high quantities at convenient locations of purchase (mall, store, catalog, website.)

The culture of "optionality" that derives from the increasingly vast choices and decisions an individual has to face in daily life informs the shaping of our environment. With the new media of communication, the phenomenon of presence can be mediated with an electronic avatar. Movement, speech, proximity are performed or evaluated by the coordinately pressing a few digits. As the review of the study of Computer Mediated Communication by Herring, Kollock and Smith suggest, there is an intense occupation of space that takes places during electronic communication. The heightened intellectual
awareness based on writing that allows editing and revisions with a visual feedback when chatting by typing online, implies a commitment to our surroundings resulting from the distanciation or "alienation effect" that follows the brief subtraction from our localization, as we are transported in the realm of thoughts (reformulating our sentences for optimal effect, or deciphering the connotation of images.)

I envision home as a place to dream, to connect with the earth and the universe. The transient quality of our activities should be reflected in a design that has cinematic and kinetic attributes of both change and stability: the transportable structure should therefore be an extension of the physicality of earth, a shell that provides for the protection of intimacy and that belongs in the continuum of the public sphere by its noticeable presence.

The modularity of the house should help us to define surprise effects. Given the predictability that steams from the repetition of components, the design of spatial surprises will often be based on the introduction of a variation on a theme (structural, pictorial, or either functional.). Economic consideration also motivate the optimization of the conception of the components of the house, although not quantified in terms of cost, the design strategy takes advantage of the flexibility allowed by the computer to define a continuum of forms, proportions and color that are linked by subtle variations offered to the explorative eye in the environment. A poetic of everyday life that melds the glow of the electronic appliances with the theatrical mise-en-scene (setting) of the environment cast occupancy as an activity that creates and reinvents movements, rhythms, routines and quantities inherited from our society.
Program

A single-family house; two children;

– adaptable floor-plan

– expandable

– customizable rooms

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28 University of Puget Sound, ODONATA SPECIMENS, http://www.ups.edu/biology/museum/ODspecimens.html, Online
- a modular kitchen unit
- modular bath unit
- modular elements for an exterior space
- accommodation of sight and a close relation to the landscape, or the immediate surroundings

9.2 Project

The house is a translucent plastic shell floating above ground level. It artificially prolongs nature, earth, by its structural column. At night the warm glaze of the suspended envelope protects the privacy of its occupants at the same time that it radiates the precious attributes of the residence.

The structure's stability is emphasized by the symmetry of the façade. This simple axial composition nevertheless takes advantage of the distortion of perspective that has the faces of the object vanishing toward the horizon line according to the observer's point of view. Thus the concept of symmetry that is verifiable by Geometry with the help of abstract projections is reached in real life by mental intuition.

The cinematic quality of the building stems from its relationship with sight: the house is an observation device inviting its surroundings inside as an electronically morphed picture, with interfering colored filter occasionally blurring the field of observation.

An Iconic Object

The emotional appeal of the house steams from the lasting impression its shape make on the observer's memory. The ease with which a user would recollect (recognize) the
house also account for its appeal. Indeed, the iconicity of the A.D.E house lies in its
details as well as in its overall presence: thus, the anecdotic presence in the house's
details of the bold and curvy façade featuring dragonfly inspired mechanized sunscreens
ignites the curiosity of the observer, who enters the play of detecting and matching the
coincidental singularities of the structure’s design.

The sunscreen/ wings are gracefully matching the height of the lateral rooms at the
opposite side of the structure. There is a certain theatricality deriving from the functional
use of the sunscreen: as the brightest sun-rays are making their way inside the room, the
mechanically operated lid gently lowers its surface to cover the organically shaped
window.

Figure 21: A view of the house from street level, the window partitions are operated as in cars.
9.2.1 Structure

Figure 22: Dramatization of the building’s structure
Figure 23: Top view of the roof structural frame made of tubular steel beams.
Figure 24: The main platform structure made of perforated steel beams to ensure the passage of pipes used in the cool/heat system.
Figure 25: The floor is made of modular panels mirroring the geometry of the ceiling
9.2.2 Envelope

Figure 26: Façade panel made of twenty-six modules
Figure 27: Transversal envelope units.
9.2.3 Partition

Figure 29: 3D axonometric view
Figure 30: 3D axonometric view opposite face
Figure 31: Shaded top view
9.2.4 Graphics

Figure 32: Facade

Figure 33: Perspective view
Figure 34: Sequential articulation of the circle figure
9.2.5 Perspectives

Figure 35: View toward the elevator case

Figure 36: Detail showing the handrail's shape based on the window contour
Figure 37: Study interior view. The kitchen unit: half of the cylinder rotates to reveal a counter, shelves and other facilities

Figure 38: View toward the window, across the staircase
Figure 39: Front view

Figure 40: Site simulation
Figure 41: Study view of a side-room
9.2.6 Animation sequence: The closing lid

![Animation sequence of the "wing" sunscreen (frame 2)](image)

Figure 42: Animation sequence of the “wing” sunscreen (frame 2)

The lid can be programmed to ascend or descend according to atmospheric conditions. The lid has the function of a sunscreen, which imitates the gracious lightness of a dragonfly wings. When sunrays are getting lower, a motor situated on the roof level slowly lowers the lid which shadow’s position kinetically morphs onto the polycarbonate translucent body of the house. For security purposes, the lid does not make a total closure of the elongated cut out from which it originates.
9.2.7 Sections

Figure 43: Cut Out view - 1. Lid/screen; 2. Multifunction room; 3. Stairway; 4. Dressing area; 5. Water room; 6. Kitchen unit; 7. Lift; 8. Social bath; A. Side platform room one; B. Side platform two
Figure 44: Section through the convertible room

Figure 45: Section through the convertible room: the suspended closets A and B are facing each other opened. They are shown here in their closed status. The side A is on a rail track allowing accessibility to the closets.
Figure 46: Transversal section

Figure 47: 3D transversal section
9.2.8 Cool/Heat System

The heating and cooling system is based on Kazuyo Sejima and Ryue Nishizawa’s system for the Center for Contemporary Arts project competition in Rome (1998/1999). The adaptation of the system involves the.

The double plastic outer envelope is filled with a refrigerant. The outer envelope collects heat from sunrays as water circulates within the envelope and is stored in the tank; a heat pump at the water source absorbs the heat from the tank, the preheated makeup water can be for domestic hot water. The system reduces the roof’s cooling load

During summer nighttime, the outside air temperature is lower than that of indoor; water is circulated inside the outer envelope, and the floor embedded pipes. This has the effect of purging the heat accumulated during hotter time. Thus the temperature of the floor and walls is low in nighttime. This also helps to reduce cool load during daytime.

During sunny summer days, the double-layered outer envelope collects solar heat, with the help of anti freeze water circulation; the heat pump takes the heat accumulated to produce hot water for the floor heating system. The system’s energy efficiency is optimized by the use of solar energy in a way that reduces the cooling or heating load necessary to maintain a good level of comfort indoor during sunny summer days or sunny winter days.
Figure 48: Solar Heat Collection System (Sejima and Nishizawa)
CHAPTER 10
CONCLUSION

Our inquiry of domesticity along with the exploration of the socioeconomic parameters of production of our living environment in the digital age has helped us to pursue the formulation of a hypothesis embodying the conceptualization of a living environment with functional and aesthetic attributes reflecting the zeitgeist of the emerging digital culture. The network model dominates the emerging paradigm of space. The fluctuating representational and factual network destabilizes phenomenology and to a certain extent geography. Domesticity, the scale of our daily life routine emerges as an increasingly ambiguous phenomenon, which blurs the geographical boundaries of space within the mental redefinition of the status of overlapping a, in a disruption that is more creative than subversive. Cinematic and kinetic attributes of space are the main structural component of the spatial features of the digital age space. Movement and its cinematic illusion (herein thought as the basic observation of activity in a framed view) generate by the interconnection of banal and extraordinary events.

The idea of movement, change, flexibility also permeates the individual in the everyday life routines of online social interaction: Identity and language play are taking
advantage of the digital media to dynamically extend the horizon of thought and action, as demonstrated by Herring.

Hyperfunctionalism offers an integrative conceptual tool that helps to merge in a continuum, the morphing attributes of the environment. It is not the mere application of digital technology to the environment that helps us to define a product that reflecting the zeitgeist of the emerging digital age that evolves around nomadism, decentralization. If indeed new environmental may derive from the application of technology, it is from a critically informed perspective taking into account technological obsolescence that a new paradigm would emerge. By avoiding purposelessly monumentalizing technological features for the sake of technology, an inclusive approach learning from historical precedents defines a product that is genuinely rooted in people's desire.

The precedents in transportable building architecture are characterized by a lack of symbolic traits that would prolong the presence of the house/product in the realm of imagination. The desirability of the house lies not only on technology which significantly contribute to the edification of a viable and comfortable artifact but mainly on an ubiquitous sense of continuity that flows from the surroundings from the scale of details to the monumental contiguity of memory dynamics.

The Digital Age House project has helped us to get a better understanding of the articulation between the implementation of culture as the conjugation of symbolic and
technical properties. The establishment of an alternative paradigm of domesticity and occupancy should avoid the dependency on solutions that would be outdated by the time of their application. The focus on the definition of cinematic and kinetic properties in the built environment has helped me to define an alternative to the way we are dwelling.

A further exploration would require dimensional optimization for the elaboration of a built prototype. The modularity of the constructive elements would allow the construction of a demountable hypermodern house.
CHAPTER 11
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