Designing the Edge
An Inquiry into the Psychospatial Nature of Meaning in the Architecture of the Urban Waterfront

KONSTANTINOS IOANNIDIS
Designing the Edge:
An Inquiry into the Psychospatial Nature of Meaning in the Architecture of the Urban Waterfront
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...since in this study I wanted to limit myself to essentially psychological remarks on material imagination, I have decided to draw from mythological narratives only those examples that can be reawakened in natural and living reveries today. Only examples from an endlessly inventive imagination, as far as possible removed from the routines of our memory, can explain this aptitude for providing these material images, which go beyond forms and reach matter itself.

(Bachelard, 1999:151)
image 0.00: between land and water, a winter morning at the edge of Thessaloniki.

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Abstract

The initial goal of this effort is to develop a discussion on urban design process and thinking that acknowledges the needs of places with meaning in the design of the urban waterfront. The thesis addresses the fact that the problematic of the coastal formulation is intricate, comprising not only aspects related to the spatial organization and design of its domain but also shared properties originated by the presence and movement of the perceiving subject in the area. In this framework, the research attempts to provide an understanding of the main relationships that the subject cultivates inside the coastal space and to offer a broader spatial reading of its narrative function.

On the hypothesis that this function is susceptible of interpretation, the thesis develops an interest in examining the effects of the psychospatial nature of meaning on the design and experience of the urban edge, for to interpret a narrative spatial construct is to specify its meaning. To explore this, the thesis holds that four key issues underlie the possible formulative reasoning of these places and intermediate between the interpretative description of the spatial relationships and the meanings conveyed within them: the issues of meaning, the meaningful, narration, and the aftermaths of space.

In these four issues lies the initial intention to explore the Bachelardian concept of interpreting rhetorical ideas materially as applied to the potency of the waterfront design process and thinking. Led by his essay Water and Dreams, the research conceives the coastal space as a field of mediated parameters that pertain to three crucial operational premises: the symbolic function of the urban space near the water, the meaning behind the coastal form, and the engagement of the perceiving subject in the conscious or reflexive appropriation of the waterfront setting. These premises, traced as psychophysiological spaces, determine the intermediary, the integrative, and the expressive discourses for the development of places with meaning near the water. Through them, the thesis attempts a reading of the coastal domain based upon the material interpretation of the meanings and messages associated with the immediate experience of the onset of water-born notions, concepts, and images. By employing these three discourses, it explores their spatial accommodation in two stages: first in the formulative logic of the design process related to the non-material preconditions of the form, and second in the recognizable representation of the composition. In order to reproduce the ideas conceived in the discourses and explore their conceptualization and theoretical construction, the research employs some design examples to examine a variety of different intentioned relationships and their meanings.

Writing about the dialectics between the psychospatial inquiry and the spatial experience of the edge, this thesis suggests that, contrary to the established preconception, the psychology of human-edge relations submits the perceiving
subject to the conception of the coastal form and shape. This view is central to the question *what this book is about*. Psychospatial inscriptions generated by the water-born formulative logic, which make themselves known to the psychic apparatus by means of signs, symbols, and notations, are so architecturally and spatially interrogated as to lose their self-rhetoric and open up ways for the narrative representation of the coastal space. The study reveals that the occurrence of *places with meaning* along the edge of the city takes its position in the negotiation of the subject with the coastal domain as a link of definite importance.

Notational interplay between the three discourses is, I believe, a prerequisite for the final aim of the thesis which is to shed some light and make a small contribution towards the disclosure of a rather haunted architectonic premise, and set the general scene in which the *material fantasy* of the water can play an active role in the compositional strategies and enact from within coastal places that speak of the subject.

*Keywords:* Urban design and theory, spatial psychology, spatial meaning, compositional strategies, formulative logic, waterfront design and spatial organization, psychospatial reading, transformational relations, design of the edge.
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Parts of this effort were developed during my M.Phil. research at the Panteion University of Social and Political Sciences, Athens. Therefore I would also wish to thank the people who, so faithfully to the study of the subject in the urban space, set up all the preconditions and prepared the ground on which this psychospatial effort could be built. I am indebted to Professor Stephanos Rozanis for initiating me in the Lacanian reading of spatial organization and his remarks on the issues of the symbol, signification, and meaning. My colleagues at the University of Thessaly deserve the outmost recognition for their support and patience and it is they to whom, to a large extent, I am indebted for the encouragement to finalize this work. I also want to acknowledge the support of the Dean of the Architecture School, Professor Zisis Kotionis, and Associate Professor Vaso Trova, who prompted me to reach at this point.

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An Inquiry into the *Place with Meaning*

This thesis considers the relation between urban design and compositional strategies for the creation of "places" with meaning along the edge of the waterfront city. Through the reading of coastal architecture and urban space around water, this thesis examines the parallels and interdependencies between the design process and the theoretical premises of urban and environmental psychology, encompassing issues of perception, awareness, experience, and identity.

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1 According to the humanistic geographer Edward Relph, “a place is not just the where of something; it is location plus everything that occupies that location seen as an integrated meaningful phenomenon” (Relph, 1976:3).

2 *Environmental psychology* investigates the influence of the physical context of the built environment on society and human behavior. This field has traditionally studied placemaking processes and their impacts on human cognition and perception. In recent years, the questions asked by ecopsychologists have become a little more central to environmental psychology (Reser, 1995). In this sense, ecopsychology can be seen as a formulative part of architectural and spatial psychology as well.
The purpose of the research is to demonstrate the issue of coastal *places with meaning* as it refers to the domain of notional creation inside the waterfront urban design process and thinking, and as an interpretative construct during the spatial experience. The thesis employs this term to explore the way in which the perceiving subjects, during their everyday interplays with coastal urban space, create a sense of appropriation in a signifying chain that necessitates the trace of place. The position developed in this research acknowledges the psychospatial characteristics of this trace, and thus regards “place” as a unit of *environmental experiences* (Canter, 1986). In this general position, the relationships between spatial features (form), conceptions, and actions that, according to environmental psychologist David Canter, generate “place” entail the psychospatial nature of this unit [image 0.02].

The thesis relocates this theoretical position in the field of the creation of waterfront *places with meaning*, placing further attention to the way in which this trace submits the perceiving subject in the conception of their interpretative and narrative function. Taken together, these two functions describe much of the psychospatial consequence of a coastal place that communicates, if contrasted to the background urban context, the sense of spatial deviation and significance. The underlying impetus of this research is, therefore, the investigation of the communication evoked by the interaction of the city with the water, and to find out in which ways a waterfront place can engage the perceiving subjects “actively in an emotional experience orchestrated and organized to communicate purpose and story” (Sircus, 2001:32).

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3 In this thesis, the *waterfront place* is understood as the “synthesis of natural and man-made objects, activities and functions and meanings given by intentions. Out of these components the identity of a particular place is molded, but they do not define this identity – it is a special quality of insideness and the experience of being inside that sets places apart in space” (Relph, 1976:141).
The conceptual framework employed here is in direct relation to the potency of coastal space in terms of favoring meaning ascription by invoking a formulative logic that intermediates between divergent readings of the waterfront setting. The purpose of the study is to explore the importance of this meaning ascription and conveyance both in theoretical premises of urban design as well as in the initial intentions and design strategies of the architectural practice. The method to achieve this involves an in-depth reading of the coastal environment in relation to psychospatial theory that studies how the understanding of form and spatial stimuli are translated into psychological experiences.

Establishing linkages between space and psychospatial research is not a new way of approaching the cityscape. There is published research on these linkages from 1955, when Guy Debord suggests in the “Introduction to a Critique of Urban Geography” that “one or more persons during a certain period drop their usual motives for movement and action, their relations, their work and their activities, and let themselves be drawn to the attractions of the terrain and the encounters they find there” (Knabb, 2007:62). In this work, Debord investigates the psychospatial effects of urban space, whether consciously organized or not, on the emotions and responses the perceiving subjects develop during the spatial experience. In this viewpoint, the concept of “psychospatial effects” implies that the perceiving subject acts so as to form symbolic representations of the visual world with a mapping of the spatial meaning of that world - that is, certain aspects of the environment that communicate meaning and sense to him/her onto elements in the brain. Since this issue introduces some crucial keywords for our problematic, it will, therefore, be further explored in the following section.

Spatial Meaning and the Meaningful Range of Place

The study builds upon the position that the general notion of “spatial meaning” links the mental (understanding) and the physical strata (spatial features) of a place within the perceiving subject. Defined by Peponis et al. (2003:10) as “the structure of entailment between patterns of relationships” that “constitute the embodied experience, perception and understanding of space as a consequence of inhabiting the object,” meaning has aspects that refer to both spatial and cognitive dimensions. The thesis thus argues that it pertains to the conscious allocation of the perceiving subject to a specific place through identity, awareness, and response induction.

Having set forth this general schema, the representation of meaning inside place acquires both a psychic and spatial substance and portrays Peponis’s term as being intermediate between the notional and visual engagements of the subject with its

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4 Proshansky et al. observe that the subject is engaged with the identity of a place as “developed by thinking and speaking about places through a process of distancing which allows for reflection and appreciation of places” (1983:61).
surroundings. In *The Fate of Place*, philosopher Edward Casey (1998) discusses the relationships traced inside the first substance, relocating the operation of the term in the Bachelardian psychic spatiality of place that is not “merely diffuse or formless” (1998:292) but absorbs material properties. Following Casey’s line of thought, that the spatial extensions of the psychic place situate the subject in the conception of the meaning conveyed by them, we can say that spatial meaning has the advantage of regulating the meaningful range of a place. In fact, the consequences of inhabiting a place, like the after-effects of the experience and the understanding, are first and foremost works of a psychophysiological space (Panofsky, 1997:30) defined by John Hendrix as “a haptic space of immediate sensations, preserving the primordial imaginary experience prior to language” (2006:197). The thesis argues that this sort of space emerges in-between the psychic and spatial properties of a place, and is what I call meaningful space.

For urban design strategies to resurface through the generality of the term “spatial meaning,” this research develops an interest in clarifying the notional and material preconditions of this meaningful space. While for Cresswell (2004) a meaningful location is defined as place, and place for the humanistic geographer Yi-Fu Tuan (1977) signifies the center of meaning constructed with experience, this thesis frames and supports that a “meaningful space” is that space where one encounters constant negotiation and re-negotiation of meanings and significances with the mediation of interpretations generated by the architectural formations, spatial entities, or actions allocated within this space.

In this perspective, those spaces of constructed meanings are linked to an extraordinary opening and a pervasive creativity, converging at Edward Soja’s *Thirdspace* “for critical exchange and creative radical responses” (Soja, 1997:111). The relocation of the inquiry of these spaces must be seen as the outcome of Soja’s intention to introduce a different dimension in the conception of space that enables various positions to emerge. Referring always to Lefebvre, he moves attention to an account that encourages the subject to “think differently about the meanings and significance of space and those related concepts that compose and comprise the inherent spatiality of human life” (Soja, 1997:1). Soja’s interpretation of the meaningful range of place contributed to the understanding, pivotal for this thesis, that the lived, perceived, and conceived spatialities have associated mentalities that complement the production of spatial knowledge. Trying thus to straighten out the concept of meaningful space (or the semantic relation of agents to space as Netto (2003:95) prefers to define it) within the present research, the thesis considers that it is a space where formulative principles interact with the conscious or unconscious states of the perceiving subjects in ways that can be anticipated or cultivated.

In order to outline and assign these anticipations and cultivations to the issue of “meaningful space”, I will try to present them in the following exemplary order:
Research claims that environments are typically neutral (Canter, 1977; Bonnes and Secchiaroli, 1995). When someone approaches an unfamiliar setting, a feeling of uncertain awareness emerges. This is rather expected since an unfamiliar space possesses formulative and organizational rules that cannot be properly understood at first sight. While place-specific awareness of the space’s characteristics “occurs when a change is introduced or when an unfamiliar setting is encountered” (Bonnes and Secchiaroli, 1995:161), the space tends to become meaningful when it starts to enact as an evocation formed by particulars (messages, signs, significations, relationships, etc.) by the reflection of constant negotiations. This occurs when it starts to affect an observer’s state in a conscious or reflexive way. A high level of awareness, pleasure, likeness, emotional products and associated images from past experiences can be some of the first responses to this unfamiliar reality (Gifford, 1987). But space is not yet meaningful. There is a second stage during which a space’s affections (without acquiring any broader significance) convey signs and messages as actual parts of its inner organization and structural deployment. In this phase, the perceiving subject is invited to share these identified *embodiments* and spatial *extensions* that revolve around him/her as “organizing factors” (Casey, 1998:260), and that finally generate sets of sensuous effects of certain anticipated or cultivated mental impacts. Therefore, space is transformed into a territory of *meaningful* potentiality. Alongside this, the evocation of the possibility of a space of meanings to which this process pertains and assembles tends to detach the architectural evaluation from purely subjective positions and

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5 At another point we will refer to the issue of subjectivity and the variety of interpretations of space by different users. Since the thesis is heavily based on environmental and
attach it to intended products of initial design intentions by means of a place-creation process that speaks of the subject’s conscious or reflexive participation.

For the conceptual clarifications and the operational definition of the above process, the framework to inquire the range of the meaningful space of the urban edge is explored by focusing on the psychospatial layout of three crucial spatial territories, which form the respective chapters of this effort. The thesis relocates the notion of “places with meaning” on three fundamental areas in which architectural and urban design are considered determinant of the spatial understanding, preference, and action within the perceiving subject. Considering the field of coastal architecture as its main thematic (a broad inquiring case study), which embraces several subareas of the issue, the three key chapters of the thesis are built upon four research-by-design proposals in order to examine the domains of negotiating the meaning behind the symbol, the image of the shape, and the organization of the coastal environment. Approaching the material imagination of this kind of space from within the insights of Gaston Bachelard and his Water and Dreams (1999), and considering his discourse as the backbone that links water with space and experience, this research draws knowledge from various fields that deal with the issue of the use and design of the polis (city).

The study of the first property, the symbol, involves the pursuit of Gutman’s (1972) distinction of levels in symbolic meaning in architecture, channeling within it at the same time fundamental works on the theory of signs (Broadbent et al, 1980; Cassirer, 1957; Lagopoulos, 1975; Lasswell, 1979; Morris, 1955; Sebeok, 1975). Since most of these works are highly codified, focusing attention on buildings and architects, the thesis will instead explore, as Knox (1987) observes, the sets of shared relations that surround the production and meaning of symbolic spatial formations.

The same exploration applies to the second concept of the image of the shape. From the now remote Image of the City of 1960 to the significantly titled book A Theory of Good City Form of 1981, Kevin Lynch’s work extended the empirical research on how people perceive and navigate the urban landscape. For this reason, it will occupy a key position in the thinking of coastal urban imagery, reflecting the architectural psychology, it goes without further explanation that many of the concepts brought in its premise invade the entirety of the human psyche and thus cannot acquire specific deductions or definitions. This psychical content is present through the whole of this research. Bennett illustrates this subjective parameter within research as follows: “Hues near the red end of the visible spectrum – reds, oranges, yellows- are ‘warm’ colors and those near the purple end –purples, blues, greens- are ‘cool’ colors. This hypothesis, which might be called ‘the hue-heat hypothesis’, predicts people’s reactions or behavior in response to an element of design. People will somehow feel warmer or cooler depending on the color of the space. If you ask a lot of people whether this is true, practically everyone would agree. Is it true? Maybe, depending on what is meant by ‘warm’ and ‘cool’. “ (1977:140).
body of theory from the interdisciplinary field of environmental perception and more specifically indicated by authors such as David Canter (1977, 1986), James Gibson (1966, 1972, 1979), and Amos Rapoport (1969, 1977, 1990). The approaches presented in this literature review pertain to a group of studies with an interest in the issue of experiential processes associated with the urban environment (Appleyard, 1969, 1972; Blessing, 1960; Powers, 1973).

The third concept conceives coastal space as favoring distinct social organizations. The psycho-social dimension of the urban waterfront – that is, the entailment of relationships between coastal space and the social/human organization around it – is explored from within the insights of Henry Lefebvre’s *Production of Space* (1991) and reflects the work of scholars who focus on the interaction between human behavior and social processes in urban environments (Blumer, 1962; Dutton and Mann, 1996; Netto, 2003; Radley, 1995, 1996; Windley and Weisman, 1977; Bonnes and Secchiarioli, 1995).

These three areas of interest are attended to the Intermediary, Integrative, and Expressive discourses of this effort and initially correspond to Lefebvre’s three “fields” of space: the mental (space of formal abstractions), the physical (space of natural elements), and the social (space of human interactions). As I will try to demonstrate with this thesis, the re-capture of these three domains is not solely a notional construct, but also a product of the architectural and urban design process that imputes legitimation and recognizable formulative logic to the composition. However, and since the aforementioned prevailing and underpinning concepts of “meaning” and the “meaningful” denote the crucial constituents of coastal places with meaning, they will be further analyzed in the Key Terms and Concepts section.

### ii. notes on waterfront approaches

By studying examples that favor the construction of “places with meaning,” the thesis attempts to draw a distinction between waterfront space conceived as purely one-sided optical phenomenon (neutral) and as a place constructed by internal relations for psychospatial engagement (*pregnant with meaning*).6

To put this thesis’s position towards this distinction in another way, I could say that the unified application method of designing the edge of the city by using the same schemas as in any other part of the urban terrain seems to operate within an *a priori* and fixed method that is also and always in full antithesis to the sense of place. Following Casey’s insights on the issue of “place,” the thesis defines this sense as a sense of “finite locatedness” (Casey, 1998:34), considering the latter as a

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6 The term pertains to the writings of Roland Barthes and his *Pleasure of Text* (1989).
unique, mutable, ever-changing sense based upon the negotiation and renegotiation of a mixture of cultural, aesthetic, environmental, and urban meanings. In this framework, the city’s image upon water cannot escape from the material imagination generated by the characteristics of its setting, which seem to dissolve, at least conceptually, almost all other objective substances.

This thesis exposes a tendency to approach the urban waterfront as an assembly of unique phenomena generated by the act of living by water rather than as a frontier that solely manifests political, economic, and real estate interests. While waterfront areas have been the topic of academic and professional interest since the 1960s (Marshall, 2001), the effort to bind spatial experience and development on the urban edge continues its own path in urban design discourse after the end of 1970s, when coastal cities begun reclaiming underutilized sea frontages (Breen and Rigby, 1994) made available by the removal of industrial uses from their centers. Despite the inextricable connection between human activity and water, most architectural and urban design attempts to shape and formulate the disused and deindustrialized land/water urban edge did not promote the meaningful connection between city and its frontage, but merely reduced the issue to the one-sided aspect of the economic transformation of the city.

Trancik (1986) discusses the issues of lost space and the notion of edge inside the cityscape. The waterfront, as such a misplaced urban part, reveals a “major gap [that] disrupts the overall continuity of the city form” (Trancik, 1986:2) Seen as terrains vagues,” “no man’s land,” or “ghost wards” (Marshall, 2001), the description of the interstitial space between city and water reflects, in fact, the perplexity of the re-facing of the city to its water and the return of the left-over empty edge to its citizens. However, the “lost space defined” implies the intention to understand the phenomenon of the urban waterfront and to devise a key urban strategy for its development.

From the 1980s until the early 1990s, much of the literature on the design of the urban waterfront was concerned with describing the changes that occurred in its formulation and redevelopment processes after the abandonment of old harbor areas (Breen and Rigby, 1994), the re-establishment of a city/water relation based on secured planning gains from commercial property interests, and the exploration of economic and spatial frameworks for the city’s vitality and enduring redevelopment (Brownill, 1990; Buchanan, 1989; Edwards, 1993; Hall, 1991; Hayuth, 1988). Rinio Bruttomesso (1993), Director of the International Centre Cities on Water, draws
attention to a more composite understanding of waterfront places in city life that extends its functional dimension to include strategies of planning power.

More detailed studies and writings from the mid and late 1990s that were inspired by major coastal transformations, like the London Docklands or Battery Park City in lower Manhattan, offered for consideration another form of relationship between the city and its edge upon water (Gordon, 1998; Ferreira, 1998; Lebesque, 1999; Meyer, 1999; Toussaint, 1998). As founded on the notion that the invasion of the edge’s complex-reality in design and planning processes marks the beginning of a “New Era” for the urban waterfront, these studies promote the idea that coastal settings in urban environments can be seen as public, open space resources for a city’s future development. This view is suggested by Breen and Rigby (1996) in their book *The New Waterfront: a Worldwide Urban Success Story*, while the success of these new waterfronts is mixed. Leaving the urban waterfronts of the 1990s and moving towards experiential sceneries on the edge, Kim Dovey (2005), while writing about Melbourne’s frontage, he inspires the understanding of a crucial turn by revealing the waterfront as a “place” produced by flows of global capital - a turn that gave impulse to the importance of the edge as a social and physical space for a city’s life:

The image of the city became increasingly important in strategies to capture these flows; conservative barriers to avant garde architecture melted and the waterfront became a frontier where new forces for change were thrown into sharp relief. This frontier mentality also produced flexibility in urban planning as traditional practices of urban regulation and rational action were dissolved. Everywhere boundaries were eroded (Dovey, 2005:3).

One of the key changes after the New Era approach is what I call “coastal recognition.” This occurs when the space of the edge promotes experiences that invite users to locate notions associated with the coastal realm and thus give meaning to what is being perceived there. However, the discovery of the urban edge as a dynamic and challenging setting that is generally endowed with meaning – from social and communal to symbolic and representative – is not simply a response to the outcome of the waterfront researches and studies of the 1990s. The edge of the city as a “place with meaning” is not tied to the post-modern attempts (Powel, 2000) at remedying the view of this setting as an attractor of both harbor activity and investment, but rather can be considered a need for engagement in public space (Carr et al., 1992). Marshall (2001) claims that indeed the issue of reinvesting meaning into various aspects of the coastal life seems to appear in early 2000s as a desire for the user’s active engagement in seaside space. The question he poses at the beginning of his book of how urban designers can accommodate multiple meanings in the design of the edge suggests that this issue is on the stage now.
Whether one embraces his question or not, Marshall connects the “place” of the edge to its meaningful context on both spatial and human-centered urban levels. In his view, meaning seems to affect in a reciprocating relationship the waterfront image, the space-making of the edge, and its historic dimensions. If Breen and Rigby (1994, 1996) demonstrate waterfront urban transformation based on a balance of urban marketing, commercial and institutional development, and Hoyle et al. (1998) show how the processes, analysis, and planning issues of the 1980s and early 1990s reacted to the opportunities of waterfront revitalization, Marshall follows another path for urban design practice and argues that waterfront of the 2000s has become the stage

...upon which the most important pieces are set. In doing so, the waterfront is an expression of what we are as a culture. The urban waterfront provided possibilities to create pieces of city...that enrich life, offer decency and hope as well as functionality, and can give some notion of the urban ways of living celebrated by Baudelaire and Benjamin, Oscar Wilde and Otto Wagner. In these possibilities, we remember that urban development is not just for profit, or personal aggrandizement, but for the benefit of humanity and the planet as well. It is on the urban waterfront that these visions of the city are finding form (Marshall, 2001:4).

The notion of “possibilities” brings to mind the ties that link architectural thought and intention with the material, imaginary, and unique realm of the coastal reality. These kinds of ties are endless and can generate “innovative mechanisms for [the waterfront’s] consolidation” (Marshall, 2001:5). Marshall convincingly argues that the idea of “providing opportunities” for cities to reconnect with their water’s edge is far from the sole preoccupation of functional frameworks and property interest. He reveals the symbolic, physical, cultural, and psychological connections that exist in every coastal city with its frontage upon water, meta-relationships between users and the spatial experience of the edge. Attracting people back to deserted downtowns, he adds, reflects the people’s response to the discipline of the waterfront generated from the tendency to recreate the image of the city upon water. Thus in early 2000s we trace the need for a greater understanding of the human response to the coastal environment and its stimuli, and the embodiment of this stance into urban design practice. According to Bruttomesso (2004), this phenomenon takes on a double meaning. There is

...on the one hand, a physical and functional change in a part of the city, the waterfront, and on the other, a change in the relationship that joins these parts to the whole. The key to success is certainly the presence of water which, in its different expression, at times becomes the object of the work rather than the primary and essential instrument of its accomplishment (Bruttomesso, 2004:128).
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This new (or rather rediscovered) design of the edge turns attention to the concept of “a language of the imaginary” for the city’s frontage, which may stretch from mediating aspects in the user’s conscious or unconscious states to cultivated or anticipated behavioral patterns and activities. Along this line of thought, Dovey’s (2005) interest in the “language” of a Fluid City is in the exploration of “mediating desires” (Dovey, 2005:248) to create and defend the urban character of “bayscapes,” asserting that mediating aspects can strengthen a user’s engagement to the seaside place and public interest in general. Hence, any notion of public interest, he argues, is also a confluence of flows - of opinions, desires, meanings, tactics, strategies, visions, and decisions (Dovey, 2005:4). He sees the waterfront therefore as a stage demarcated by the existence of a notional space of coastal sensations upon which the human component enacts its life and develops psychospatial linkages (Ioannidis, 2009b). This space has existence as an after-effect since it provides meta-relationships with the coastal place and its spatial arrangements.

Beyond the general or episodic view adopted by architectural research in considering the role of meta-relationships in the transformations of the urban concept, these after-effects primarily feed and enrich the debate around the idea of the metacity (metapolis). Papadopoulos et al. (2006) discuss the heretical conviction of historian Ruggiero Romano, advocated by the philosopher Massimo Cacciari, that the “Aegean archipelago is a city” and reads the coastal space in relation to the metacity that emerges from “the radical changes in the urban landscape, the main architectural formulations, the dwelling model and finally the very concept of urbanism” (2006:13). They focus on the concepts of the coastal city that redefines human geography and the meta-relationships that motivate...

...contemporary intellectuals to seek the components of the urban, beyond the static types and forms that have been used for more than two centuries now to codify urban space...The discussion about the metacity is evolving within the gloomy prospect of globalization... [and that] alienated desires generate new landscapes of consumption that are dislocated in time and space, where the semiology of continuity of the city’s place and time is dismantled (Papadopoulos et al., 2006:13).

Through the difficult debate on the coastal metacity, these concepts offer the contradictory yet real example of a waterfront space “that demands to be seen as a space of desire, because the charm it exerts is not drawn from the reserves of nostalgia, but from the durability of a dwelling structure which contains the promise of a different metacity” (Papadopoulos et al., 2006:15). We will consider this type of thinking, examining its main theoretical contributions which seem to have most directly influenced the design attempts that are removed from the glamor of waterfront revitalization (Marshall, 2001) and born out from the opportunity to discuss the architecture of the waterfront “as a kind of theoretical, symbolic aspect” (Bourlier and Orillard, 2003:136). This aspect is manifested in the design approaches of
the mid and late 2000s (Bruttomesso, 2004; Papadopoulos, 2004) in which the urban water

...is showing a force for innovation and a potential for transformation at the heart of historical, well-established centers, along with an extraordinary drive to characterize new building areas. It has become the preferred theme of many projects, the element around which the aims of the work are defined and articulated (Bruttomesso, 2004:128).

Beyond the various meanings and psychospatial perspectives applied to the term “urban water” by different architects and urban designers from 2000s and onwards, like for example Lang’s position that the effects from the surrounded by water land pertain to the transformation of urban space into a type of clear entity (Lang, 2005), the symbolic return to it can be primarily considered as

...the degree to which architecture contributes to the face of the city, the emblematic appearance of the city. [This] also leads to the idea, also very strong illustrated, perhaps by default, of architecture not being contextual, but always generating context (Bourlier and Orillard, 2003:136).

In this thesis, the era of the “New Waterfront” (Breen and Rigby, 1996) is questioned in terms of its ability to provide coastal spaces for people, or the material existence of places to be in, and in terms of its ability to develop a theory and practice consistent with the surrounding liquid setting and able to nourish the imagination and thought of the perceiving subject. Evidence for this questioning can be traced to its preoccupation with the political and economic status of coastal development as the basis for the planning and construction of the edge. In recent years, the impacts from the image produced by British, German, and Dutch attempts (Powel, 2000) at waterfront redevelopment (the image of a mass of building volumes standing at the water’s edge, which later has been associated with the idea of cityness) are already being realized.

Projects like in Lisbon (1998), Hamburg (2000) [images 0.05-0.07], and Thessaloniki (2008) are indicative examples of the need for meaning and user engagement with the coastal space, as well as of the forces that planning departments accept in order to handle similar projects differently. They are also examples of not excluding the psychological dimensions and the symbolic qualities of place, which influence, according to psychologist Stephanie Taylor (2009), the formation of the spatial narrative of a setting, from the planning process in favor of those of land use and resource development. Berleant’s position of a few years earlier foresees a more meaningful practice
...of creating an urban environment that is a dynamic synthesis of the practical and the aesthetic, where need and awareness are equally fulfilled, that function is both most complete and most humane, and where enlightened aesthetic judgment can become a social instrument toward a moral goal... (Berleant, 1992:81).

Architectural and urban practices hold that a city’s design around water, in material terms, belongs to their jurisdiction. However, spatial meaning and the meaningfulness of urban space involve various aspects beyond its materiality since they encapsulate cultural, social, and mental constructs. Urban space lives, in this way, inside the meaning of its disengagement from matter: it experiences the world with the meaning of freedom rendering the world as a disengaged world inside the world of materiality. But this meaningful dissociation from materiality, instead of cancelling the city’s material substance, forms another kind of materiality - one that is truly lost in experienced space, announcing the engagement of the perceiving subject inside various patterns of “sociocommunicative activities unfolding within richly material settings” (Taylor, 2009:28) and spatial events. The lost materiality of the city returns and revives inside the meaningfulness and the narrative function of its substance. There and only there it is accommodated and emerges. There and only there acquires its image, resistance, memories, experiences, and thoughts from which it is constituted as material existence and hypostasis. The lived experience of urban things and their materiality passes necessarily through meaningfulness and the consumed spatial meaning.

The present introduction is not completely exempted from the contemporary expositive approach. This because it systematically refers to a need for meaning that is conditioned, in one way or another, by contemporary practice, architectural programs, or people’s expectations for the future image of their cities upon water. The pragmatic interest in the functional dimensions of waterfront space-production processes remains central in most political, technocratic, and cultural decision-making centers such as city planning departments, city councils, and various institutions.

I hope, however, that the relative exchange of viewpoints and thoughts, something this thesis also aims at, provides inspirational encouragement and strategic tools to designers and alternative perspectives on places with meaning for an extended readership.
iii. the problem: motivations and impetuses

A psychoanalysis of water images is necessary, since these images are seemingly self-dispersing. Still certain forms born of water have more attraction, more compelling force, more consistency. That is because more material and profound reveries intervene, because our inner being is more deeply engaged. Then the poetic power, which was imperceptible in a poetry of reflections, appears suddenly. And it is then that materializing reverie, finally builds on water and develops a more profound and intense feeling for it (Bachelard, 1999:20).

The essential problem identified by this effort is the need, so far, of an interpretative approach to the design process of the urban waterfront and the space between the land/water edge. As a result, the question of “why waterfronts?” emerges, and we ought to broach it here even in a broad outline. Waterfront locations provide a distinctive premise that stresses the relationships between a significant urban scheme (the edge of the city), the spatial features of this scheme (coastal form), the natural setting (water) and its narrative interpretation. All of the present psychospatial inquiry revolves around the problem of the relationships, or negotiations, between the subject, the waterfront setting and the double concept of its narrative, which is, according to Taylor (2009), both a construction and a resource.

How is it possible for waterside locations to carry meaning? What is the function or even necessity for this communicational process? How does this process occur and what are the ramifications for design process and thinking? These general questions, because they are not so common in mainstream waterfront urban design practice, tend to slip the mind and attention of the architect, but they form a series of motivations and impetuses for this research. During the New Waterfront era (Breen and Rigby: 1996), inaugurated by the London Docklands redevelopment of the 80s and followed by major harbor transformations of many port cities like Amsterdam or Marseille in the same influential period, we notice that urban design conceives the space of the city near water as a territory of arranged commodities, money, and capital. It tends to approach the elements of which it is made (sub-areas, objects, formations, spatial features, etc.) as parts of an overall space that demands globalized mathematical solutions that disregard crucial issues such as cultural and social dimensions, and the narrative possibility of the seaside place - a place that almost by definition implies the “finite locatedness” (Casey, 1998:34) of water.

From a cultural perspective, what is often neglected is the potential of space to operate as a vehicle for shared and collective inscriptions: memories, habits, traces
of human relationships, activities, desires, and even spatial storytellings are often embedded within the community and the city, bridging the human existence to a specific place. From a social perspective, the intrinsic cognitive and behavioral ability of locals to come together, interact, and allocate their activities is often missing from design agendas. Meanwhile, contemporary projects for coastal redevelopments are often indifferent to the pursuit of a recognizable logic for the edge of the city. They usually neglect to explore the way in which architectural thought can gain or conceive the dynamics of narrative patterns in terms of encouraging users not only to observe the new development but, more importantly, to interpret its divergences from the familiar cityscape.

However, these compound entities and their environments do have some meaning. A coastal sidewalk, for example, means a moving corridor; a floating platform means a challenge for one’s bodily placement; and a specific landscape design inside a park may transmit appeal or repulsion. In the same sense, entities’ size, volume, or properties are also important in the structuring of meaning. What many propose as the unified totality of the waterfront space is in fact the spatial arrangement of existing seaside signifiers – thing that leads to a spatial process that facilitates the understanding of the place’s geometrical, formulative, morphological, or natural attributes as elements “pregnant with meaning” (to use Roland Barthes’s (1989) expression) and its users as components prone to their exchanges and interplays. This thesis attempts to investigate the exchanges between the human component and this complex signifier by reading into the three main discourses mentioned above and with which it expresses itself through research proposals that respond to the issue of meaning in a rather specific manner, namely by the interchanges between space and sensory perceptions - in other words, between the identification of space making and its formulation.

The concept of “places with meaning” as a methodological tool for meaningful design on the edge recognizes Knox and Ozolins’s (2000:4) distinction between the meaning of the built environment as intended by the designers, and its perceived meaning as interpreted by others. While the intended and perceived meanings often coincide, this thesis argues that these places are structured around an interest in the users’ exchanges and physical/mental negotiations with coastal architecture. They imply a composite background thought in which each part of them is somehow supplemented by the whole to which it belongs. The “complex thought” that places with meaning undermine is thus a new form of thought (Morin, 2005); it is used by the perceiving subject to acquire more detailed information of what participates in the spatial experience. The architectural space of such a place is not an ordinary space, but one that frames the exchanges between users and their negotiations with patterns of the environment that, according to Lang, “carry meaning based on learned associations” (Lang, 2005:17).
“Places with meaning” intervene between the habitual everyday environment and the temperamental world of personal readings, image creation, and mental constructs. They render the architectural proposal comprehensible and fruitful for the user to consciously participate in its creation and in the experience of it. They project the place of reference inside urban settings and provide the spatial base for thinking and active presence. They can also form elements of quest and desire within the often homogenous mass of our cityscapes. This thesis relates to coastal space production,

...but in so far as the mental image is concerned, the signified of denotation does not belong solely to the urbanistic functional level, or to the functional level generally, but may also belong to other levels, such as the social level generally, the economic level, the chronological level, and others” (Lagopoulos, 1975:206).

Before we enter into formulative discourses, this thesis needs to explore the theoretical territories that enable the reader to trace the beginnings of this effort and the basic concepts which will frequently emerge. To allow the term “places with meaning” to indicate essential aspects of both a space’s representation and its reference, I have extended its notional sphere. Four individual characteristics have been decisive: the cultivation and identification of the spatial meaning in its premises; the meaningful milieu as an assembly of constructs within it; that narration nurtures the active engagement and negotiation of the perceiving subject with such places; and that its manner of preserving itself in people’s memory is linked with the aftermaths of space through meaning transfer. The next sections discuss the use of these key concepts in this effort and how the city’s edge on water relates to their theoretical domains.

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8 Lynch (1960) introduced the concept of the city’s legibility for the “textual” description of urban settings that can be read. He argues that the morphological quality of a city or an architectural formation within it can be more effectively recognized and organized according to a schema when attached to the creation of a strong image in the user’s mind. In his Spatial Architectonics, Lefebvre (1992) draws attention to the texture instead of the text and argues that “a spatial work -monument or architectural project- attains a complexity fundamentally different from the complexity of the text... What we are concerned with here is not texts but texture...made up of a usually rather large space covered by networks or webs” (Lefebvre, 1992:222).
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Key terms and concepts

A number of observations mentioned so far in the literature of urban space comment on how psychospatial engagements, with reference to the concept of meaning, cultivate effects on the perceiving subject related to the spatial experience of the edge. For this thesis it seems necessary to focus on four pivotal terms and key concepts that play a crucial role in the establishment of such engagements between the subject and the spatio-physical components of the coastal setting, and which the following sections will briefly delineate.
While this thesis acknowledges the body of work that has been recorded and/or comprehensively analyzed in the vast bibliography on urban waterways over the last thirty years, its intention is to contribute a different interpretation of the already known aspects of the design of the urban edge. And while the thesis is not engaged in the history or sociology of urban design, it touches some crucial philosophical and/or psychological positions and arguments that have been meticulously developed in comprehensive works on meaning. In this effort, the ambition is to investigate \textit{what notional reflections trigger the interpretation of spatial meaning along the urban edge}. An attempt to unfold “meaning” within the framework of “interpretation” may relate the \textit{share} of meaning in the design of the edge studied through a chain of psychospatial relationships.

It is interesting to see how Taylor points to the issue of interpretation as regulating the individual notional reflections of a place. She admits that any place, ...named or unnamed, has multiple meanings and associations attached to it, and, potentially, multiple identities, for example, because of the activities associated with it, its social history and the personal experience of a particular participant. This multiplicity makes it possible for people to construct places selectively in the ways they talk about them (Taylor, 2009:10).

Beyond the formal works on meaning in architecture and spatial organization that recognize the varied multiple of human engagement, in my view there remains an undefined but crucial area inside which the notion of \textit{spatial meaning} escapes from the borders of its multiplicity, and becomes a precedent for the design process, the sense-making and the \textit{share} of understanding space’s formulative logic. When the hypothesis that meaning recovers the psychospatial dimensions of the setting that pertain to the cognitive processes of interpretation is reorganized in this way, the central research problem, then, is to pinpoint that the immediate experience becomes an object of reflection. In these precedents, a rather resumed but explorative venture emerges. A scheme comes into view that rethinks the issue beyond insistences on approaching the spatial meaning as a complementary, participatory dimension by which the urban design demarcates place in contemporary cities.

From the knowledge base of the 1970s and 80s when the emphasis lay on urban semantics (Eco, 1977), the spatial construction of meaning (Bonta, 1973; Jencks, 1981), and the psychoanalytic study of the built environment (Canter 1977, 1986), this demarcation is developed to enable specific psycho-spatial assignations to respond to the design and organization of space. The aim was to allow the architect to combine its conceptualization with a mode of operating \textit{with meaning} - an
intelligible process that characterizes the psychospatial engagement of the perceiving subject with place-making actions. What follows is a brief reference to this base in order to provide an understanding of how meaning controls the conceptual systems of thinking and designing the built environment and affects the ways individuals respond, perceive, understand, contemplate, and remember urban space.

For various forms of rhetorical assignations and products of culture such as language, scientific knowledge, myth, or art, Ernst Cassirer in his well-known book *The Philosophy of Symbolic Forms* \(^9\) says they

...become parts of a single great problem-complex: they become multiple efforts, all directed towards the one goal of transforming the passive world of mere impressions, in which the spirit seems at first imprisoned, into a world that is pure expression of the human spirit (Cassirer, 1957:80).

In the same text, a bit earlier, he argues that the human mind is indeed constituted in such a way as to ascribe meaning to a given input, with human consciousness tending to give “form” to “whatever is given to it.” Cassirer, in fact, does call for an inherent process of our mind that depicts images from the surrounding environment - and this inevitably includes both architectural and natural elements - in order to provide them with meaning associated with their symbolic function. This, in its turn, implies that every structural element, every image, and every architectonic formation is “pregnant with meaning.”

Along the same line of thought, Bachelard (1999), addresses a physical element, the water, as the ultimately inherent symbolic element found in the world which comprises not only signifying values projected upon the reality but also the relationships that tie these significations to the fantasy of its matter in general - that is, upon the imaginary source of all the symbolic images evoked by water. As such, the meaning of these images is not a final product that dwells in the imaginary, but is instead developed gradually through a process of transforming the passive projections of water-signs \(^{10}\) into symbolic devices for reshaping the

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\(^9\) *The Philosophy of Symbolic Forms* was published in four parts: *Part I Language* (1953), *Part II Mythical Thought* (1955), *Part III Phenomenology of Knowledge* (1957), and *Part IV Metaphysics* (published in 1996 from Cassirer’s manuscript).

\(^{10}\) The thesis defines “water-signs” as links between coastal images and notions. They are thus identified from the attention to the phenomenal properties of the transformation of the coastal imaginary - through different spatial arrangements - into material substances. They are creative tools for shaping the edge and for shifting the user’s perception of the waterfront space. A water-sign can be transmitted by the physical setting as well by a water-based function or by a notion related to lived experiences near water. It can be a gazing point and a spot on the edge that facilitates the negotiations of the perceiving subject as...
surrounding environment. Bachelard lay the groundwork to “see the matter beneath the object” (Bachelard, 1999:12), leading to the psychospatial reading of space during which the imaginary exists before the construction of symbolic order. Thus his insights were employed in later studies of the urban “image” (Lynch, 1960; Relph, 1976; Tuan, 1974; Norberg-Schulz, 1966, 1975). In terms of meaning ascription, Cassirer’s and Bachelard’s writings, being at variance and dealing with quite different objects of study, produce a sort of affirmation one inside the other, letting each one’s way of thinking affirming the other. For the purposes of this thesis, this introduction grows out of my effort to allow this to occur not in a philosophical or rhetoric sense, but rather in the spatial and representational way we try to explore and exemplify.

Best addressed by humanities rather than sciences, the notion of meaning applies to a broad field of human activities. Each discipline related to meaning ascribes different set of values and focuses on aspects that often not only differ from discipline to discipline, but may even question each other. Each one approaches the issue from its own perspective, for example from the viewpoint of ethology (Sebeok, 1975), semiology (Barthes, 1970, 1989), sociology and culture (Lefebvre, 1991; Rapoport, 1990), or environmental psychology (Lynch, 1960; Seamon, 1982; Bonnes and Secchiarioli, 1995). And all of them offer something positive to the understanding of subject’s bodily position in space, while their interchanges provide even more holistic approaches.

For the purposes of this research, I use meaning as one of the three main structural axes of this psychospatial reading to emphasize the main scope of the effort: the nature of spatial meaning, the role of the perceiving subject in its conveyance, and the central position of its construction in urban design practice. Even a straightforward interpretation of the term explicitly addressed to architectural and urban discourse seems inadequate since the embodiment of the human component in its field of study renders this effort difficult for an architect. However, it appears more useful to approach its spatial interpretation as a driving force not only for the liberation of architectural discourse and its linkage to other fields of thought, but mostly for the supplementation and enhancement from cultivated meaning to design process itself.

Before we consider the implications of meaning in architectural and urban design, it is necessary to define the most basic levels of its expression. From the time of Peirce, we often hold that the notion of “meaning” is not exclusively dependable as a sign and a referent, but also as an interpretant: a construct, that is to say, that in well. In our problematic, water-signs are sharply separated from the connotations of the inner city and are always tied to the context of the edge.
fact regulates the relation between sign and referent. According to this distinction, the interpretant anchors meaning to the behavior of a sign-using organism and it is always dependent upon a “language” of private syntaxes and grammars. It functions, in this sense, according to the user’s ability to possess such a language and his/her capacity to use its system as an interpretant of sign and referent. For Kelly, such personal constructs emerge from the theoretical opposition of similarity versus contrast (Lagopoulos, 1992), and he asserts that the user ascribes meaning by locating the similarities of an event, “choosing a construct in respect to which he considers two phenomena as similar and a third phenomenon as contrasting to the first two” (Lagopoulos, 1992:29). His theory seriously considers the gradual structuring of the personal interpretant in stages but focuses on the bipolarity, something not previously encountered. Both Pierce’s and Kelly’s theories were transferred to the study of the urban environment in terms of the effects on human behavior, and partly affirmed the linkages between urban image and behavior (Harrisson and Sarre, 1971, 1975).

One of the most inspiring transfers in architectural discourse is the work of Osgood, Suci, and Tannenbaum (1964) on *The Measurement of Meaning*. It became the reference point for many researchers in dealing with the importance of meaning in human thought and condition. But their influence was so strong that it saturated many scientific fields and disciplines, including that of architecture and urbanism. This work bridges the American schools of thought for semantic theories (Peirce, Morris, etc.) with behavioral psychology, something that was very indulging and inspiring for people working with the relation between space and user. What Osgood and his partners really did was a systematic analysis of meaning by embodying the theory of sign with the now-traditional model of *stimulus-reaction*.

More precisely, they proposed a two-stage model with separate and distinctive phases: the one is the phase of encoding messages and the other of decoding. Both of them explore the above-mentioned *stimulus-reaction* model. According to their definition, the first stage, encoding, pertains to the correlation of signs with their mediators while the second stage, decoding, is the implication of the aroused excitation with the obvious effects, which play an organic role - that is the personal construct of interpretant. Briefly, the thesis argues that architecture and urban design is closely associated with Osgood’s approach in the sense that *meaning-making* is related to the design process itself, while *meaning-reaction* corresponds to the spatial experience and evaluation of its products.

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11 The interpretant is a cognitive symbolic schema formed between sign and reality. It exists in a higher layer than that of image perception; it belongs to the domain of conscious reason. See Peirce, C. S., (1960), *Collected Papers of Charles Sanders Peirce*, Harvard University Press, Cambridge.
Meanwhile, their most significant contribution to the study of environments was the technical grading of the semantic load of meanings in space. They recognize that grading of meanings “can force an individual to use some other dimensions which otherwise would not have used them” (Osgood et al., 1964: 328) without, however, providing a specific methodological solution to prove this sentence correct. So other researchers moved towards a different approach, asserting that it may be more useful to measure meaning through different types of reactions from humans (reactions that meanings cultivated in them), while people use specific meanings in their effort to interpret reality.

The authors of *The Measurement of Meaning* make serious considerations of this semantic differential and they attempt to re-define meaning through a series of three parameters: *evaluation, intenseness*, and *activity*, considering them as three major factors that underlie all judgments in human thought in general. But the reason that Osgood and his colleagues introduced the term “semantic grading” was in fact to take a first step in schematically defining the *space of meanings*. The work of Osgood, Suci, and Tannenbaum forms a concrete and serious base for further exploration of spatial meaning. Combining the above, it becomes apparent that from the systematic analysis of meaning as presented by Osgood we deal with a valuable space, overloaded with meanings, formed by the constant negotiations between the perceiving subject and his/her environment.

It seems to be well established, then, that physical space (that is, in Lefebvre’s (1991:27) terms, the realm of *practico-sensory activity* that engages the perception of *nature*) entails an interpretant constructed by meanings that are deployed within it. However, the overload of meanings gives rise to a number of classification types of this deployment. Egan (1994) suggests that architectural space speaks through three different types (or layers) of meaning: the *structure*, the *enclosure*, and the *surface articulation*. Structure, he argues, shapes the environment in the way genetic memory shapes meaning: subtly, below the level of consciousness. And if structure is the rhythm of architecture, he continues, enclosure becomes the melody and may mimic the volume of structure; but it can also deny it, reject it, expand it or interpret it. The final layer is the articulation that led Roman builders, for example, to dress the powerful volumes of baths in Rome with rich patterns of columns, arches, and statues in order to evoke the classical Greek humanism they so admired.

In fact, Egan’s work presents a well-illustrated and rather concise discussion of the key layers of the meaning-making process that was based on Robert Hershberger’s much more complex organization for architectural meaning conceived during the 70s through a theory of mediating conditions. Hershberger’s (Hershberger, 1974:148) whole conception of meaning is developed through two basic steps, from representational image (for example, the image of a café floating on the water) to human reaction (the tendency to visit it). He also identifies layers, five in number,
that represent the way architecture moves us: by recalling memories of culture, by constructing subjective meanings as buildings are associated with events in our lives, or by touching our deepest emotional core.

The first, the representational meaning, involves the perception of shape. The second, the referential, is related to symbolism and to the notions associated with a specific object. What follow is the effective and evaluative meanings, which judge whether an environment is good or bad, while the fifth, the prescriptive meaning, is the one that saturates the design strategy and influences the design desiderata – that is, what Peponis et al. (2003) define as the programmatic design parameters. From the above, perhaps it is easier, as Muller (2003) suggests, to assume that in the construction of spatial meaning, form follows neither the function nor the structure, but instead follows the strategy. Such an assumption reveals the central role of meaning in the decision-making process as a constant linkage between possible relations (Porras, 2003) developed in each one of the above layers.

Under these conceptions, what constitutes a “place with meaning” appears to be a rather subjective issue for any research, although sensibilities developed within it, messages communicated, and meanings interpreted are often shared components. Such places are experienced differently in terms of their meaning-occurrences since they depend heavily on the sense of place transmitted - so much so that a single place of certain meanings can convey a different sense to two different users. The following chapters extend the issue of meaning beyond the boundaries of the individual consciousness, exploring its commonly shared effects to legitimize design practice and encapsulate basic aspects of human functioning within initial design desiderata, and finally investigating the qualities that facilitate urban design experiences.

Involving Edward Relph’s work on the identity of places, the thesis tries to re-locate “on the urban edge” the central role of meaning not only for the sense of place but also for human functioning: “The meanings of places may be rooted in the physical setting and objects and activities, but they are not property of them – rather they are a property of human intentions and experiences” (Relph, 1976:59). Drawing on Relph’s ideas, this research implies that a major feature of spatial meaning is the fact that human intention is what makes a place meaningful, and as such a feature will be studied in the next section.
When American philosopher Susanne Langer argued back in the 1950s that the users are experiencing a meaningful space when they have “certain aspects of the so-called ‘inner life’ -physical or mental - which have formal properties similar to those of music -patterns of rest, of tension and release, of agreement and disagreement, preparation, fulfillment, excitation, sudden change” (Langer, 1957:228), she enacted the dialectic of meaning with the meaningful. Urban space becomes meaningful only when it is a reflection of the psychospatial makeup of the user, since in this way it involves both form, as perceived in various ways, and the conscious or reflexive understanding of meaning behind the form (for example, the acknowledgment of the organization of form, which corresponds to functional necessity or conscious reason).

In this sense, what is defined as meaningful space of the edge in this study is the assembly of constructs (symbols, images, notions, memories, values, mental negotiations, etc.) that are connected by association to water within in a related set of spatial expression. In this sense, it stands separate from the dualism of the negativeness or positiveness of meaning itself, while the focal point of the thesis is chained on the definition of the “meaningful space of the Edge” as the space of constructed meanings in conscious and unconscious thought.

For the need to differentiate the “meaningful” place from the “meaningless” one, which for American psychologist James Gibson coincides with the concept of the empty stimulus (1960), the thesis traces the main psychospatial characteristic which renders this differentiation crucial for the deployment of places with meaning. In this regard, considering the argument of Bonnes and Secchiaroli (1995), the hypothesis of this research on the issue claims that the evocation of the “meaningful” is not solely grounded on physical criteria but is instead assessable through

...the most general consideration of human territorial behavior as behavior towards ‘meaningful objects’; that is, towards objects people develop an attachment to because of the symbolic-evocative function they perform both in relation to particular individual biographies and to the most shared socio-cultural frame of reference (Bonnes and Secchiaroli, 1995:91).

Since the “meaningful” entails from the act of the perceiving subject to develop attachments through a process of interpreting the intermediary parameters of the place which, in their turn, and according to Peponis (1997), can be presented as spatial relationships and formations, the thesis supports the authors’ position about the intermediary influence of specific conceptions on both the psychospatial and the shared nature of subject’s ascription of the “meaningful” dimension.
The perspective outlined provides a particularly interesting set of concepts that generate the main discourses of this book and is thus further explored. In particular, the proposal of environmental psychologist Edward Proshansky and his colleagues (1983) related to “meaningful environments” notes that one of the main aspects traced within this term is the consideration of “the symbolic and affective associations between the individual and the various parts of the physical environment.” These mediate associations are “culturally transmitted and integrated into the place identity of the individual through his or her own experiences in the physical world” (Proshansky et al., 1983:68). This thesis holds that what is implied in the above remark is precisely the common activity of sharing the meanings and the negotiations that transform a place into a meaningful construct.

As a link between the “share of meaning” and the “lived space,” the meaningful is both a projection (Pellegrino, 2006) and an after-effect – a dialectic staged in the process of living in the city. The participation of the human component as an image or body in the experience of the urban space yields a novel conception of a subject’s coexistence with the city, its objects and shapes. This participation is what generates the development of a place’s meaningfulness and depends on the intrinsic capacity of space to ascribe meaning to the process of inhabiting. It generates after-effects only when a negotiable ideology for the habitat emerges in user’s mind through personal engagements and handlings of the spatial shapes in general. This leads to the development of an interpretant that renders the signifying attributes or principles of the spatial objects and shapes to enrich the level of “meaningfulness” during the experience. The result is that the shapes, as they emerge from this interpretative rendering,

...create a grammar - a phenomenon that is analogous to identifying a sequence of phonetic units in the more or less continuous stream of sounds that constitute spoken language. That the observer can reconstruct the presence of a syntax and a grammar is dependent upon the manner in which the logic of construction of the object interacts with the spatial experience generated by the object (Peponis, Karadima and Bafna, 2003:14).

In this sense, it seems that the meaningful keeps step with Goodman’s position for a reality remade. It can be seen then as a mediated form (Bafna, 2004:269); a symbolic system that disengages space from its materiality in order to construct and re-construct new realities and new experiential possibilities. It then provides further readings and interpretations of its physical space based upon a sum of communicative messages. I will use once more the organizational role Goodman attributes to symbolic systems to draw the thesis’s distinction between meaningful and meaningless: this space of meanings exists when and only when an organizational force is structured within it from an underlying or connotative

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dimension that is absent within the habitual space of everyday experiences. The meaningful space, contrasting to the meaningless, creates a network of interconnected interpretations and readings of built reality that mediates the understanding and explanation of its production. It therefore embodies three central dimensions that meaningless cannot possess almost by definition: surface of alternative readings, network of mental negotiations, and comprehension of an endogenous\textsuperscript{13} organizational logic.

The suggestions offered by Peponis in a paper published in 1996 under the title \textit{The Spatial Construction of Architectural Meaning}, provide a general framework for research on these dimensions. Adopting Peponis’s perspective, the thesis argues that the principal components of the meaningful for the structuring of urban space become a kind of mediating aspects for a project’s indigenous character. Sternberg (2000), writing in reaction to postmodern attempts that focused on impersonal forms and replicated urban patterns without regard to locality and context, argues that Norbert-Schulz (1984) was possibly the most influential writer who emphasized the significance of the design process for indigenous meaningfulness and users’ active engagement in networks of negotiations with place. However, he acknowledges that for Norbert-Schulz identity and local spirit of place give rise to mythologies through which space becomes meaningful. For Sternberg, the multifarious origins of urban meaningfulness point up a quest for the integrity of meaning across properties, and without imposing indigenous correctness

...the result should not be a homogenization of meaning. Working with boundaries, transitions, reflections, gradations, contrasts, complements and interruptions, planners can set out to create coherent interrelationships among urban objects, without requiring that they conform to supposed indigenous origins (Sternberg, 2000:267).

Working with the term’s multifarious character, there is an interest in the meaningful that is crucially attached to issues of semantic dimensions. In fact, the thesis interprets “the meaningful space of the edge” similarly to Professor at Aristotle University of Thessaloniki, Konstantinos Spiridonidis (2002), when he tries to identify “meaning” in waterfront settings. When the city is called to redefine its crucial relation to the sea, he argues, it is an even more difficult task than a spatial arrangement of a utilitarian nature. It has to redefine its meaningful space on water, which for Spiridonidis is a twofold parameter made up of concepts (social values, memories, ideologies, mythologies, etc.) and signifying images, both associated to physical entities. Without the concepts, he says, the city’s image on water would remain meaningless and its semantic dimension would be cancelled

\textsuperscript{13} From Greek \textit{ενδογενή} (\textit{ενδο}/inner + \textit{γενός}/genesis), produced from within an inner structure, an inner organism or cell. The opposite is external (exogenous) production, but we will prefer to use from now on the more spatial characterization of “representational.”
out. The characteristic of this approach is, as previously mentioned, that the construction of the interpretant is included almost by definition in the edge’s meaningful space.

More specifically, Spiridonidis argues that a crucial achievement when designing the coastal zone should be the semantic dimension. That is,

…the re-design not only of the physical space of the shoreline, but also the re-structuring of its meaningful space. In other words, the restructuring of the space of meanings, which citizens tend to attribute to the waterfront space of their cities as a result of the intermediary of their consciousness during the experiential (biomatic) interaction with the physical space” (Spiridonidis, 2002:23). [the translation from Greek is mine]

Here, in fact, Spiridonidis invokes the notion that waterfront spaces are stages on which “everyday interactions and behaviors are played out” (Hubbard, 2002:166). In considering this view, Spiridonidis emphasizes the importance of the users’ consciousness, which is affected in the coastal setting/stage. Thus if meaning is prior to space and indicative of certain products of thoughts as mental constructs, the meaningful is its equivalent to that which is exterior to thought, since it entails experiential interaction with space. Following this discrepancy, the edge’s sparse meanings/messages tend to sustain conceptualization and interpretation (both from architects and users) in order to assemble components into meaningful entities and form a kind of “narrated space.” In other words, this process bears resemblance to harvesting: things that grow sparsely in the field are gathered together and after a series of processes are transformed into useful entities like bread and beer (Ioannidis, 2003a, p.188).

In this perspective, the meaningful as a method for evaluating urban space appears to implicate that which is subsequent to meaning and the figuration of sign. And this is because the meaningful groundedness has to do

…with our critical attitudes and ideas about architecture, rather than with our immediate feelings and emotions towards it. Therefore we might look at a building, be excited and even pleased by our representation of it, and, yet, on reflection conclude that it is really a boring and unpleasant building….Values, criteria, standards, or attitudes which we possess through previous experience are brought to focus on our representations; and considering them we conclude that the building is pleasant, unpleasant, beautiful, ugly, novel, common, or whatever. Here our purposes and values are central (Herschberger, 1969:40).

Herschberger’s explanation of the critical attitude delineates a rather interrogative outlook on the concept of “places with meaning.” For him, the meaningful signifies
two underlying preconditions for the space of constructed meanings. First, it is developed as an after-effect from the reflection of what one grasps during the experience. Second, the term “meaningful” signifies the base that links messages on the edge in a narrative chain through the mediacy of the formulative logic of space.

0.1.3 narration

On account of the distinction we just drew, the spatial aim of meaning and the meaningful appears to converge at that point at which urban space disengages from its materiality and acquires significance and purport of further structural capacity. The thesis argues that the meaningful image of the urban facade on the water is not to be found in the collection of inputs (through perception) from its physical appearance but in the gradual structuring of spatial expectations or extensions and mental constructs based on the conclusions made during a user’s experience of space. In this section, the narrative function will escalate the debate on meaning and meaningful by shifting the above-mentioned psychospatial questions to an experiential level.

Whereas Sternberg and Spiridonidis explore the urban meaningfulness from the perspective of semantic dressing, Rudolf Arnheim is preeminent among those who have a more constructivist concept of “places with meaning.” In The Dynamics of Architectural Form (1978), Arnheim argues that perception, interpretation, and comprehension of meaning and, finally, the spatial experience of space are all aspects that subjects achieve in successive stages. For urban designers of the decades following modernism who took active interest in the quality of the built environment around water, the edge was mostly a one-dimensional problematic—a case of the seen and the real, a built reality simply to be discovered. In reaction, at the heart of Arnheim’s argument is the idea that if space as a gradual construct of several stages is set aside, then the mediation of the imagined, the potential of a narration, and the quest for the less obvious cannot be serious possibilities for the urban design process. This section provides a brief overview of the mediating aspects of narration to meaning-ascription as such a stage for the process, which bears resemblance to the successive building of floors.

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14 The Swiss psychologist Jean Piaget introduced this process of gradual construction of conclusions to explain the way a child perceives the built environment. In his Child’s Construction of Reality (1955), he argues that this process is an intrinsic learning mechanism and strongly opposes the dominant view of his day that a child’s mind is programmed to learn and comprehend.
Paul Ricoeur puts this process on the map, holding that narration builds constructs in a way that facilitates the naming and classing of phases during the conveyance of meaning. He argues that during this process a narration describes a series of actions and experienced events on subjects, existing or imagined. Subjects are presented within changing conditions to which they respond and therefore they favor the creation of new conditions. In their turn, these new “realities” reveal unknown aspects that demand contemplation, thinking, action, or all of these. The reaction to these new conditions leads narration to its mediate operation (Ricoeur, 1981:277). Now let us consider for a moment our problematic: a given coastal space that narrates the formulative logic and the characteristics of the place. Such a space employs a narrative context to provoke reactions, negotiations, and finally to cultivate new conditions (associated to the non-material preconditions of the setting).

One of the fundamental characteristics of utilizing a place’s narration to convey spatial meaning is the handling of the influences of its storytelling properties on architecture (both physical and notional), in that the design process passes through the understanding of their semiosis (Finnegan, 1998; Hayden, 1995) and their embeddedness in the formulative strategy and logic. The thesis will propose to use this operation to proceed from that premise of verbal narration to concretized images that can guide people to individual “shaping” and “understanding” of what makes sense during the spatial experience of a given coastal area.

The research is thus focused on the interpretation of patterns of verbal cues that indicate an association of psychospatial ideas with sequential or consequential aspects during the design process. While the problem of interpretation is also discussed in the “Narratives of Identity and Place” by Taylor (2009), the thesis studies the incorporation of psychospatial ideas in order to explore how (materially interpreted) patterns of motion, perception, sensation or segregation, associated with the architecture of the edge, are related to language, beliefs, values, myths, and other cultural cues. For this, we are not only in the beginning of an exciting phase for the orchestration of the edge’s undermined spatial meaning but also of exploring the possibilities of the mysterious interaction between space (edge) and langue. With reference to Nelson Goodman’s theory of notation, which is evoked to explore a legitimate description of the design process as a symbolic construct, the field of langue and rhetorical inscriptions will provide the theoretical grounding for strategies of sense-making and their assessment throughout all three core chapters. The linguistic field will often generate diagrammatic systems able to generate forms for our anticipated experiences - forms that stand for another imaginary, like the ones for Riga’s proposal studied in the Intermediary discourse.

For the thesis, waterfront features become meaningful to users through their capacity to express sensory referents, whether these are associated with cultural, textual, topological, or historical signifying cues. Because of this capacity, Potteiger
and Purinton (1998) argue that developments and operationality of narrative theory have prominently figured not only in literary theory, but across a range of disciplines including anthropology, geography, history, art, cultural studies, design, and of course architecture and urban design. In their book, a strange problematic of evolving thought within spatial experience is elaborated only to confront design practice with the metaphors of written *logos*. From within the structural function (signified) of a *textual space* that generates form (signifier) according to the interpretational position of this thesis, and from which aspects like the building program and regulations are entirely absent, we can proceed towards

...re-describing narrative and landscape as cultural systems of signification, recognizing the importance of context, and expanding the notion of text and the role of readers in the production of meaning (Potteiger & Purinton, 1998:32).

Narrative studies in psychology (Taylor, 2009), with the support of the “psychosocial field” (Bonnes and Secchiaroli, 1995), provide the conceptual model for a structural consideration of a mediating narrative space as a refined and re-formulated reading of the signifying spatio-physical aspects of the environment. In most representational acts, emphasis is mostly placed on visual water-signs, like physical phenomena attributed to the liquid element and so forth, that in turn form the basis for the underlying morphic language of the project. The meaning of the term “morphic language” occupies a central position in architectural theory of rather recent development, such as the syntactical conception of space, but I adopt it here from the starting point of Bafna’s theoretical work “in the sense that it recognizes that architectural activity is rule-bound” (Bafna, 2004:269).

In contrast, during a narrative construct the architectural program is often “replaced” by a body of rhetoric text that is interpreted as formulative and organizational logic. From this viewpoint, the interpretation or transfer of meaning from the textual form to the representational act of design is seen as a synthetic combination of sensuous response and its conscious thought. This difficulty is overcome with reference to what the authors of *Landscape Narratives* say about the consistency to use the design process as a tool for re-forming culture, narration and landscape. They argue that

...the commonsense recognition that narratives cross realms of experience and appear in a great variety of forms, including landscape, requires that we re-conceive narrative as a cultural system of signification. Essentially, narratives construct meaning, or signify, much like the cultural system of language. By combining events in sequences to tell a story, narrative is homologous to the combining of words to construct intelligible sentences. This idea of linguistic system provides a framework for understanding how information, ideas, and experience are transposed from one medium to
another. Just as language can be communicated in hand gestures, glyphs, or other means besides verbal signs, narratives can be told in almost any means including landscape (Potteiger & Purinton, 1998:32).

In the same line of thought, Paul Ricoeur sees cultural facts and figures as providers of the logic behind narrational structures, holding that this logic favors the interweaving of sequences in order to form a narration (Ricoeur, 1981:287). Considering narrative form as a cultural system of signification for meaning ascription, central to this thesis is the concept of “reading” the edge as a meaning-specific cultural setting. On a schematic level, reading of experienced spatial formations along the edge extends the production of spatial meaning between designer, perceiving subject, and landscape as a symbol-mediator for interpreting coastal areas and for influencing human behavior and conscious states like the sense of personalization, way-finding, environmental perception, or territoriality (Eberhard, 2009) in waterfront areas.

Henceforth, there would be some kinds of tropes to achieve this reading, by which the perceiving subject allocates an intermediary space and constructs meanings related to the spatial correlations of the structures with the water, their narrative function, and the sense of place. A number of concepts are involved in them and will be presented in the following discourses. In this sense, the act of reading the coastal space as a text is a trope used...

...to present difficult and complex ideas in terms of an equally complex but more familiar practice. This ability of tropes to shuttle back and forth from representations in one medium to those in another is especially relevant for transposition between the verbal and visual, temporal and spatial, narrative and landscape. The etymology of trope, which comes from ancient Greek for “turn,” “way,” or “manner,” suggests this relational process (Potteiger & Purinton, 1998:34).

The function of relating one thing to another, the process of reading the city’s waterfront edge as a narrational story, opens up a conductible path paved with various tropes, something that presupposes a certain regard for rhetorical means like Cassirer’s philosophy and Langer’s symbolic logic. The path is certainly elusive, elliptical, and abstract; but doesn’t lack the potential to lead this thesis to its aim—the design attitude of constructing space’s meaningfulness.

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15 From the Greek τροπή, which means change, replacement, and removal from original place. Here it is used to designate the metaphor, the transfer of meaning, or rather the figure of speech through which a notion is expressed not literally but from within a sort of comparison or parable. In other cases, trope stands for allegory and even symbolism.
In the 1942 essay “Water and Dreams,” French philosopher Gaston Bachelard applies to water-matter a concept belonging to the system of langue, and uses the term “metapoetry”\(^\text{16}\) \((\text{Bachelard, 1999})\) as a reference to the metaphor (from the Greek \textit{meta-phora} in terms of meaning transfer) of poetic inspiration. This type of transfer (metaphor) is an aftermath. It is evoked, according to Bachelard, when a particular meaning originated by the \textit{water-matter}\(^\text{17}\) is projected upon other rather rhetorical means, which are then enriched with another or new meaning (the new ascription is an after-effect, since it follows and comes \textit{after, meta}).

For the thesis, this term is offered as a candidate to describe the consequential relationships of the sense-\textit{after} that follows the understanding of the formulative logic of the design process and from experiencing the meaningful effects. In this sense, it is spatially translated into the reverberations of the meaningful space, into the aftermaths of space. I define here the meaning of “aftermath of a perceived image or object” as the situation \textit{after} a subject’s negotiation and re-negotiation with it, and the situation \textit{after} its conscious contemplation. It seems therefore necessary to briefly sketch its philosophic descendant, and elaborate on this last key concept under the direction of the retroactive anticipation of \textit{spatial meaning}.

This research refers to two disparate yet internally linked aspects of meaning. First, the inspirations of the concept derived or inferred from specific meaningful occurrences and, second, the after-effect in the human consciousness as a meta-activity. In this framework, according to Varkki \(\text{(1997)}\), meta-activities are those “that involve the recursive application of an activity: for example, meta-analysis is the analysis of other analyses, it is ‘analysis of analyses’” \((\text{Varkki, 1997:147})\). Hence, the aforementioned Bachelardian \textit{metapoetry} can be understood to mean “inspiration of inspirations” or “the meaning of meanings” \textit{after} a user’s conscious contemplation. In that sense, the term is clearly metaphorical, since it entails the transfer (\textit{metaphora}) of meaning from a primary matter-source to a spatial representation.

Gaston Bachelard, resurfacing ideological aspects that almost by definition cannot be established, in his \textit{Water and Dreams: An Essay on the Imagination of Matter}, applies an analysis of a physical matter to the structuring of the unconscious thought in linguistic terms. He argues that “only after studying forms and attributing each to its proper matter will it be possible to visualize a complete

\(^{16}\) From the Greek \textit{μετά} which means to offer a transcending sense of “the beyond” and of “the encompassing” to \textit{ποίησις}, poetry.

\(^{17}\) The term of “water-matter” is often used in this research as to mean the material substance constituting the mass of the specific natural element. For this thesis, water has mass, volume and occupies space; therefore it is addressed as \textit{water-matter}.
doctrine on human imagination. Then one can appreciate the fact that an image is a plant which needs earth and sky, substance and form” (Bachelard, 1999:2-3). In this sense, the visual function of the signifying image is somehow less important from the meta-relationships in the aftermath activity - that is, the inner, interpretative mechanisms with which that image is structured and the endogenous and dominant element that mentally characterizes the image is retroactively anticipated.

Following Bachelard’s line of thought, the predominant matter takes the role of meaning regulator in both conscious and unconscious thought, something that of course depends on the symbolic role of the image perceived. This sort of invocations to something so principal to image construction can find application to different space conceptions. Back in 2003, in an article (Ioannidis, 2003a) I presented at the “Creating Communicational Spaces” international conference, I looked into the idea of meta-relationships integrating the complexity of the meaningful space of the edge (a complexity made of the dominant natural matter along with physical attributes, rhetorical conceptions, and imaginary properties) in the urban texture and its metaphor within the holistic spatial experience of the seaside area. If for Bachelard space around water acquires an ideological character, I argued that this is neither its only nor its essential interpretation.

The effort was then concentrated to the architectural representation (as syntactical relations) of the messages of place’s intimate immensity already decoded by Gaston Bachelard (1999) and to the search for a kind of spatiality for his term “metapoetics of water.” In fact, my aim was to investigate the possibility for the spatial translation of this term’s metaphor, which, in Nelson Goodman’s view, is in fact a reassignment of labels (denotations) between the matters (Goodman, 1969) - a reassignment (or transfer of meaning) that for this thesis implies the retroactive attribution of significance to the constitutive parts of space.

In that earlier attempt, I argued that such messages are saturated with several intrinsic properties, like those of enclosure and continuity. In contrast with the rhetoric background of the Bachelardian theoretical precedents, I proposed that for urban design this may represent a case where projects influenced by water’s “poetic fantasy” can make reference and direct attention to something beyond themselves, to an element of unity attached to reality, to a form of familiar codes of signs, for example, that help human orientation and bodily position on the edge. The spatial translation of the term would therefore appear not as a poetic image, but as a real given carrying the destiny of the architecture of the edge as a concrete spatial tool that gives coherence to projects and generates internal representational schemata (Ioannidis, 2003a).

Of particular concern to this thesis is the approach to the mediacy of water-matter inspiration, which, as Bachelard claims, can transfer meaning and restore the
crucial role of material cause into our sensibilities and therefore re-attribute the shape of the urban edge to its proper matter. Is what we experience along the city’s edge a fixed condition, a given reality, or is it always relational to a personal interpretant? Is coastal space in the end an area of techniques, plans, and programs or, as Goodman (1984) would have posed it, a spatial construct? The idea of a retroactive anticipation from the aftermaths of space, which emerges from the engagement of the perceiving subject, a concept that entails components of material essence in order to be fully grasped and to gradually construct the experienced reality, is indeed a difficult concept. By finding Bachelard’s philosophy on the subject convincing for sense-making, I (architecturally) re-approach it to fulfill the initial aim of this thesis: to re-discover intrinsic, inherent, or natural imaginative powers not only in the design process itself but especially during the spatial experience and understanding of the end product.

These materialistic extensions evoked by the rhetorical figure, as the enactment of the “material waters” (Bachelard), are to be particularized on respective water-based ideas and notions serving the initial inquiry of this thesis. In this way, the research employs properties that generate “a sense of space-knowing” in order to explore the imposition of water over urban matter, and to form a knowledge of the role of the liquid element when it is integrated and receives traces of the spatial dialectics between the perceiving subject and the setting. The materialistic extensions construct the very basis for the comprehension of this particular imposition and their influence can be directed or expressed through design: they are often concepts with spatial possibilities to which design practices can respond. They are in design effect since they describe the coastal environment in terms of its possibility to operate as a system of messages and symbols. They are thus, as defined by Ricoeur (2004), nothing but symbols in a fundamental level, that is systems of relationships that relate the elements of the coastal reality - intermediary concepts that cultivate the “make sense” with the edge’s shape and mediate for its understanding.

The way in which the aftermaths of water operate, as the thesis uses the concept, leads, however, to more questions here - questions that we have to pose from a spatial perspective. Bachelard does not explicitly examine the spatial status of the materialized thoughts people generate for an object, even if these thoughts are characterized by the presence of a fundamental element. Nor does he examine the possibility of a concrete embodiment of this materiality into everyday life, which, in our field, has at least begun to resemble a sort of spatiality. Its resemblance to spatiality is closer than the poetic fidelity he proposes. And for design practice, this

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18 If architecturally explored, this idea breeds my initial belief that the integrative discourse is the core of the edge’s meaningful space, and the most formulative power among its three compound “spaces,” specifically exploring the concepts of matters’ embodiment and the edge’s dissociation from purely functional practices.
resemblance is necessary in order to operate and produce fruitful products. Therefore, is it useless to insist on the spatial extensions of *water’s reverberations* as meaning transfer? Can one, as Calvino\(^{19}\) argues, understand the reality of urban life near the edge as formed not so much by that which is imposed by the pragmatic or directly visible condition along the shoreline but, on the contrary, by the invisible domain of water-meanings when the latter are integrated inside the former? Can one conceive of the design process as giving a shape to the contemporary urban waterfront under the Bachelardian concept of interpreting rhetoric ideas materially? This would represent the victory of the “making sense” and the constitution of spatial meaning over the pragmatic and policy-related issues of space formulation – a trend Gutman (1985) links to the rise of postmodernism.

The last question implies that we must interpret the rhetoric nature of the aftermaths\(^{20}\) of water-matter against its rhetoric in order to proceed from one medium to another (from the rhetorical sphere to the spatial one). Or rather, we must interpret one layer of Bachelard’s work through another, a spatial one. The term is therefore entirely examined from within our need to have full access to the path that leads from human subjectivity to meaningful spatial experience. Since the aspirations that the perceiving subject develops for the appreciation of the urban coastline are often concentrated around the area’s dominant material element (the water), it is understandable that such a matter should be effectively linked to a method of designing the edge’s form and shape as to govern, in Peponis’s terms, the formation of spatially sustained human relationships (Peponis, 1996). This method aims at supplementing the human senses, users’ spatial interest, the sequences of images from the waterfront setting, and the entire process of what we call “living by water.” To integrate this natural source of stimuli into the urban structure means to let it speak of its aesthetic, its mood creation on people, its meta-relationships, and its effect on human psychology, thought, and sensation.

The rhetorical and spatial application of water’s integration condenses all these parameters. Thus, the thesis opens up a way of materially interpreting the inherent and intimate thoughts generated along the coastal setting. Far from the technical waterfront, the *make sense* of the thesis comes to answer what Michael Taussig tensely asks, “What sort of sense is constitutive of the everydayness?” (Taussig, 1992:141).

\(^{19}\) Italo Calvino’s book *Invisible Cities*, which was published in 1972 and translated into English in 1974, became a source for inspiration for many architects and urban designers as well as a point of reference for explaining unseen urban conditions.

\(^{20}\) For this effort, the act of composing urban images originated from the spatial interpretation of the water-matter finds its way into an “after contemplation” (meta-contemplation) of what stands in front, and it is in this sense that I use the term “aftermaths” here.
The goal of this effort is to further the development of a psychospatial investigation for contemporary urban design processes near water by exploring the range of its "meaningful space" and to inquire the possibility of relocating urban design away from the attitude fleshed out by the conflicts of the New Waterfront era between commodities, market, and capital. To that end, the thesis makes an attempt to develop a rather holistic appreciation of the processes by which meaningful urban design may be achieved, being determining or even categorical, since the fact is that the problematic of the coastal formulation is intricate, comprising not only aspects related to the spatial organization and design of its domain but also shared properties originated by the presence and movement of the perceiving subject in the area. Issues not only complex, but in a state that demands interconnection, interplay, and sometimes overlap.

This position situates the thesis in a satellite to the traditional concept of functional urban design (Lang, 1994), which addresses the “why” and “how” of the spatial meaning-conveyance. Nelson Goodman’s notational studies are already mentioned as a starting point for the dialectic of symbolic and signifying in the urban context, but to proceed, research on the development of the discourse of “meaningful space” near water draws on and combines knowledge from several fields, including urban sociology and cultural studies, environmental design, and architectural and spatial psychology.

The introduction of this thesis is an attempt to criticize the tendency in New Waterfront urban design to give up the formulative capacity of space to carry meaning and replace its development with an attitude that disregards the understanding of the human need for more places with meaning in urban environments. Therefore I feel that we should return with a proposal that, by considering the above central concepts, would spatially clarify the way with which urban communicational processes may influence and constrain urban designers in their decision-making. If seaside meanings and their inherent spatiality are foundational for the meaningful space of the edge, so is the necessity for an operational frame within which meaningful design desiderata need to take place.

The operational framework we are looking for is better seen as a metaphorical, connotative, and suggestive method used to communicate meaning through spatial form. There is a lucid explanation for this: the proposed position is rather conceived not as a set of logical deductions (conclusions drawn from syntactical rules) but instead as an exercise in the effects of meaning’s notation and narration as syntactical structure. Otherwise, if it were to present itself as a normative scenario, then it would run the danger of attaching this effort in predetermined design models, which in turn would produce a certain set of proposals, something which would cancel out almost by definition the nature of meaning creation.
Instead, an implicative attitude characterizes the thesis’s ambition to enable a transition from the rhetorical domain of meaning to its spatial accommodation. The meaningful, through the study of meaning-creation examples presented in the next chapters, “becomes identified with the conceptual process of the perceiving subject” (Hendrix, 2006:78) and is finally attached to the process of habitat.

Insofar as my primary concern is to favor the investigation of a formulative logic for the edge with poetic evocation, the construction of a space with non-material preconditions out of an underlying structural language does not mean that the end-product would not be described by architectural, spatial, and urban terms or elements. The hub of the question implied by the above-mentioned examples is, in fact, how a designer distinguishes the “spatial” from that which is “of potential spatiality,” and how he/she then associates it by means of the design process itself. The demarcation underlying such metaphoric terms is for many practitioners not without its difficulties. At this point, I simply note that urban designers with an interest in the dialectics between the retroactive effects of the coastal images in conscious thought and the characteristics of the waterfront place may refocus the expression of a formulative logic for the edge with poetic evocation away from purely rhetorical grounds and onto the form making process. For cues that are potentially spatial, signals of meanings and messages exist and will always exist inside the coastal environment. The potential spatiality, however, exists from within what lies beneath, from a layer beneath the immediately grasped.

In this sense, I believe that a design position that is influenced by a poetic evocation is a generative process for possible spaces that claim and establish their self-legitimation, meaning communication, and reasoning from something that works from the inside (and from the distinction between “spatial” and “of potential spatiality”). This is an operational frame for places with meaning, a framework connotative and suggestive of the undermined interiority of space. When we say that “places with meaning” are formulated by a necessary underlying structural language that bridges the gap between rhetoric and urban design, we keep in mind that it is not about a construct made from zero or an obstinacy to constantly move outside architectural premises (as the misunderstanding of the term “poetic evocation” may imply). The materiality of this construct is rhetoric-urbanistic: it is of spatial essence, since it is mainly informed by meanings whose interrelation is based more on experience and spatial rules than on simple intuition.

The question about whether such an odd term could offer a way for the “Architecture of the Edge” to continue its development leaves open the issue of whether or not one actually accepts the existence of its meaningful space. The inquiry of crucial transformational relations identified in its domain is a method which might allow the interpretative reading of this thesis to inform the physical environment of the urban waterfront.
0.3 method and thesis outline

This thesis embarks on its tasks by asking a straightforward question: *Can the use of psychological and notional cues*\(^{21}\) *stemming from the water-matter itself and inclusive of specific references, senses, behaviors, preferences, or even feelings have any relevance to a material practice such as urban design?* The discussion holds that there is no absolute starting point to explore the interpretative process, the reasoning, and the legitimized logic of coastal urban design. There is no single approach to follow in this effort to explore the influential logic of the “meaning” or “sense-creation” discourse for the waterfront composition. However, the outline of the thesis starts by approaching the organization of space near water as formed by a field of mediated parameters. It then continues by inquiring the formulation of inspiring statements that can possibly influence its design desiderata.

Two sets of tasks, formulated in overlapping phases, comprise the central methodological approach of the research: the theoretical background and conceptualization (research-by-theory) and the design investigation related to the inquiry of the implications of the analyzed concepts on the coastal spatial configuration (research-by-design). Supplemented by the present introduction and a reflective section, the thesis is structured in three main chapters/discourses dealing with the *share of meaning* in relation to design reasoning, form, and

\(^{21}\) Cities, as dwelling environments, offer their citizens various psychological and notional engagements with the perceptual and cognitive reality (Maslow, 1943). In spatial psychology however, a psychological cue pertains to the response-producing stimulus: that is a motivation (or a pattern of factors that provoke interest), often not consciously perceived, that produces a specific learned behavioral response.
socialization of the edge, examining how the meaningful enhancements of space can be applied to compositional strategies in urban design.

At the beginning of each chapter, a design proposal, as an inquiring example, is analyzed by focusing on crucial concepts of the problematic. Through its elaboration, a theoretical basis unfolds to discuss the production of meaning and its implication to the architectural representation of the design of the edge. The three chapter/discourses are entitled Intermediary Space, Integrative Space, and Expressive Space, using these terms to embrace as many of the compound parts of the aforementioned complexity as possible. With regard to method, these three terms propose the need to face the problem of the design of the edge in a combined way, indicating the reason for bringing somewhat disparate theoretical positions on meaning into three different discourses: while the premises of the meaning, the meaningful, the narration and the aftermaths of space are the raw materials for these three chapters, their elementary structural concepts are always in direct relation to the meaning emerging from the psychospatial engagements of the perceiving subject with the coastal setting. The subordination of the three main chapters to such engagements forms the generative methodological attitude of the thesis.

In this sense, the first chapter, the Intermediary discourse, employs a main empirical design proposal to reconcile the symbolic figure of the water-matter with the formulative logic in urban design. Focusing on the narrative function of the waterfront setting with concerns for the issue of meaning transfer between different symbolic means, the coastal area of Kipsala in Riga, Latvia, is studied to exemplify psychological and notional values in a design competition situation. The elaboration of this case unfolds a discussion that is developed on the Cassirerian concept of the perceiving subject as a symbolic animal with a mind structured to perceive in a symbolic way. The Intermediary Space of the Edge is not a philosophical discourse to which the architecture of the urban waterfront pathologically responds. It is rather a fundamental requirement of the latter to
maximize its efficiency in actively using the symbolic signs originated by the liquid
environment and fusing together urban information in order to materially interpret
them into physical forms for more intense transmission of architectural messages
and psychological experiences. Thus, the Intermediary discourse is evoked by the
first chapter as a tool to examine the symbolic figure of the notion of water in
relation to architecture and the way it can be communicated by the form and the
*meaning behind the form* (Ioannidis, 2003a, 2009b). The concept of symbolic
communication is further divided into individual sub-concepts and sub-sections to
be explored as a context in which the meaningful architecture of the edge can be
addressed. Works by Cassirer, Bachelard, and Langer are used as an underlying
theoretical structure upon which the research attempts to withdraw any possible
rhetorical figure identified and project various water-based symbolic concepts
inside the urban design process. Finally, and from within the study of another
design example, that of Punta in Attica, in which the formulative logic and the
narrative presentation of space coincide, the reader will come to a greater
understanding of how the *semiosis* and *notation* of the water-matter may
configure the coastal composition.

The second chapter, the *Integrative* discourse, continues the psychospatial reading
of the urban edge and presents a research-by-design inquiring example pertaining
to the operations of developing the shape of the edge of the waterfront city. This
issue in fact interprets the urban design process as a conceptual, configurational,
and meaningful tension. The relation between the water-matter as a *configured*
and *configuring* element for the urban composition is analyzed, and in particular
how these elements are related in the interpretation of the Bachelardian material
imagination. The issue discussed in this chapter doesn’t fall into the
misunderstanding typical of design practices that conceive the formulation of the
master plan as a linear, monotonous, and repetitive outline lacking patterns of
expectation, challenge, and experience. Instead, the framework of the water-
integration introduced, which governs the image formation of the coastal plan,
marks the passage and the common feature between the urban context, the liquid
element, and the perceiving subject. The syntactic frameworks of the Integrative
gestures are certainly “individualistic” in terms of expressing the sense of “finite
locatedness” (Casey, 1998:34) of place, and pursue a shape of exploration, flexibility,
and interest; but it is an “individualism” charged with the impositions and
aspirations of the local (place). It tends to acknowledge, in Kerckhove’s (2001) term,
an *objective imaginary* on the city’s edge - places with meaning in which “people
can share experiences that are real but neither really material nor truly mental”

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22 *Semiosis*, from the Greek σημειϊ, to mark, is used in this research as pertaining to “any
form of activity, conduct, or process that involves signs, including the production of meaning”
(definition from Wikipedia). In 1907, Charles Peirce defined the act of *semiosis* as follows:
“By ‘semiosis’ I mean . . . an action, or influence, which is, or involves, a cooperation of three
subjects, such as a sign, its object, and its interpretant, this tri-relative influence not being in
any way resolvable into actions between pairs” (Peirce, 1998:411).
introduction

(Kerckhove, 2001:48). If Kerckhove’s note makes the concept of the “objective imaginary” rather tangible, in the second chapter the focus of the thesis shifts to a study of the possible that aims at reassigning the coastline of the city in its tensions with the liquid element. To render these tensions spatially, the chapter illustrates a design example, the formulation of the Triestexpo proposal, and considers its reading of the manipulation of the syntactic relationships between water and the moving subject which are “both representational and constitutive of order and structure” (Peponis, 1996:77).

The third chapter, the Expressive discourse, looks into the possibility of an architectural interpretation of the space structured by the psychological mediations between human behavior, action and evaluation. Having set out the psychospatial frame for the emergence of places with meaning by examining the formulative logic of the coastal form and shape relying on the theoretical understandings of the previous two chapters, a design proposal is employed to further explore the specifics of the conscious engagement and the social allocation of the perceiving subject along the shoreline. Through the Green Rooms proposal, the interest of the thesis is focused on an exploration of place making in the coastal realm considering the issues of the common presence, sight exchanges, and the relations with space and others. The analysis of this chapter is used to bring up the practical aspects of social organization near water and to illustrate possible passages on how to model emotional phenomena by practicing imagination and narration in urban design. As such an analysis, it offers not only practical implications for improving the performance of human life on the edge as an everyday living environment but also the spatial accommodation of some crucial behavioral meanings. For this reason, the chapter develops from the recognition that the physical design of the public domain expressed on the waterfront as “an organic, colorful, human-scale, attractive” and meaningful environment “is the overriding task” of the coastal urban design (Tibbalds, 1992:2). The chapter also examines Tuan’s concept of topophilia when seen in relation to the set of place-specific meanings, actions, and responses to the coastal domain. Issues of sensory design and the role of emotion in the development of experiential patterns are discussed as applied to waterfront design.

In these three psychophysiological frameworks, the Intermediary, the Integrative, and the Expressive, the issues of spatial meaning and meaningfulness as formulative parameters for the urban design process near water appear to imply not only the interiority of the coastal identity but also an internal logic of a “born and bred narrative” (Taylor, 2009) that is prior to the disposition of the forms. They

An Integrative Space, more notional and psychophysiological, brings together the imaginary and the bodily, and brings the worlds of urban planning and shaping the shoreline together with the dreamscapes of artistic and experiential vision. This osmosis is necessary as a hopeful next step in our struggle to integrate the complex and confusing contradictions represented by Intermediary and Expressive Spaces.
also imply a conscious (or unconscious) meaningful space that is *prior* to the signification of the place. At this point, it seems appropriate, and definitely most consistent with my personal believes, in closing this section and introducing the first premise of the Intermediary Space, to quote from Edward Relph and his study *On the Identity of Places*:

Physical appearance, activities, and meanings are the raw material of the identity of places, and the dialectical links between them are the elementary structural relations of that identity (Relph, 1976:60).
INTRODUCTION
introduction
Introduction

The first discourse investigates the notion of space within which the intermediary function of narrative architectural processes takes place. It discusses the interplay between meaning, reference, and design formulation. While Norberg-Schulz goes so far as to stress meaning in relation to references to history, myth, and nature in buildings and landscapes (Sternberg, 2000:272), in this chapter spatial meaning rather emerges from the examination of architectural space in terms of its reference to something beyond itself - to mental constructs such as design intentions, thoughts and narrated plots. The chapter explores the way meaningful refers to the set of significances which overlay the physical coastal space, making use of the symbolic schematizations and the spatial relations established within its objects. This leads to a formal designation of the intermediary function, that the coastal space is itself a symbol that intermediates between perception and experience. The architecture of the urban waterfront, in this sense, can comprise not only the spatial interpretation and the geometrical construction of different symbolic means, but also a “whole process of symbolization” (Knox, 1987:369). It will be argued that the meaningful image of the urban space near water is to be found in the interplays between the physical appearance, the anticipated or cultivated relationships between the perceiving subject and space, and the mental constructs associated with the formulative logic of its design.
1.1 a design proposal: *Udens Mate*\textsuperscript{24}

*Project:* Redevelopment of part of the waterfront on Kipsala Island in Riga, Latvia  
*Type:* European Urban Design Competition, 2003  
*Theme:* Suburban challenge (experimental proposal for the research-by-design module)  
*Client:* Municipality of Riga, Latvia  
*Study area:* 110 ha  
*Site area:* 20 ha  
*Study period:* February-May 2003  
*Architectural and urban design:* Konstantinos Ioannidis

\textsuperscript{24} *Udens Mate* in Latvian means “the Mother of the Waters.” She is not as important to locals as *Juras Mate* but she rather represents water as a whole.
The objective of the study is to develop a new spatial language and experiential patterns on the island by guiding possible developmental forces in order to attract a large variety of mixed-group users to the vicinity of the water. The position of the research-by-design project of this chapter engages the pursuit of Ronald Barthes’s (1964, 1970) conception of the urban environment as a written language whose readings intermediate between the Imaginary and the Symbolic, between perception and consciousness. This chapter begins by employing the Udens Mate design proposal to inquire the narrative spatiality of the myth as an attainment of the act of “meaning transfer” from one symbolic means (the text) to another (the design proposal), when both are understood as territories of a formulative logic in which are embedded the human mind and the material imagination of its parts.

Location and context

The area of Kipsala in Riga, the capital of Latvia, was formed in the 18th century when the Zagaru Island merged with the island of Burkanu, along with several other small pieces of land enclosed by water. Its new name was adopted from one of the island’s inhabitant, whose surname was Kipa. The riverbank was reinforced along the east coast of the island in order to preserve the coastline from erosion. The island was enlarged after the construction of the embankment. Kipsala was initially populated by fishermen and most of its areas were natural landscape until
the Intermediary Space

the end of the 19th century. The present image of Kipsala starts to grow from the beginning of the 20th century. Different developments on the island made its parts quite disparate in character, each one satisfying various urban and functional uses. At the moment of the competition, there were about a hundred single-family homes, but in several places new construction was also going on. The Vanshu Bridge radically changed the building structure and the historical building concept of Kipsala Island. Its spatial structure was substantially changed by the traffic layout along the coast, which blocked the south part of the island both visually and functionally from the once-integrated land across the river.

The site of the design proposal is not far from downtown Riga. It is on the northern end of Kipsala, located on the left bank of the river Daugava. The island’s length is 2.7 km, its width is 0.5 km, and its total area is approximately 1.1 km². The highest point on the island is the Balasta embankment at 3-5 meters above the river’s level, protecting the island from floods. The lowest point, 1.9 meters, is found at the historic low-rise wooden housing district, which nevertheless has excellent views towards the old city of Riga, the harbor area and picturesque aspects of the Daugava River towards the sea. The other side of Kipsala looks towards the channel and the industrial cityscape across the edge; this image is about to change significantly in the future. In this context, the site of study is to be redeveloped in the language of contemporary architecture but with respect to the historical, small-scale urban environment in its vicinity.

image 1.03: Udens Mate proposal. General Masterplan of the experimental design example. The narrative function of the myth influences the design desiderata in a form regulating way to project the syntactic relationships and the experiential patterns on site.
It is necessary to acknowledge that myths are descriptive narratives born in the imaginary order and sliding over the symbolic by using images in order to present an underlying logic as an agency to evoke thought. The English novelist David Lawrence (1978) sharply clarifies this myth-making activity of the human mind:

...the myth is an attempt to narrate a whole human experience, of which the purpose is too deep, going too deep in the blood and soul, for mental explanation or description (Lawrence, 1978:296).

The gist of Lawrence’s message is that the images of the myth are symbols that necessitate the negotiation of human emotions, beliefs, feelings, habits, and traditional ways of acting to narrate an experience. These significances, messages, and meanings about a place or a state are difficult to gather as isolated data, but can more easily be transferred through centuries by means of a myth and its narration. For the island of Kipsala, these symbols of coastal life as units of the locals’ consciousness were embedded in the myth of Jurasmat. It took a great effort for the folklorist writer Krisjanis Barons (1835-1923) to collect the oral story of Jurasmat, goddess of the Baltic, and to systematize the images that in the course of generations have become symbols of the local coastal life and existence near

25 Krisjanis Barons was the collector of Latvian folk songs called “dainas.” He was also active in other fields, including linguistics, especially in introducing foreign words. He introduced such terms as geography, mathematics, physics, biology, and other terms of science. He walked all over Latvia on foot and authored the first book of geography in Latvian, The Description of our Fatherland. The work of Krisjanis Barons is connected with all Latvian regions and various fields of science as well (Baister and Patrick, 1995).
water. Barons portrayed the mythical beauty and power of Jurasmat, who lived in a palace of amber under the sea, and narrates her story, depicting her emotional experiences underwater as symbols.

According to the story, one day a young fisherman named Kastytis broke one of Jurasmat’s laws, but the kind goddess forgave him. She fell in love with the fisherman, courageously defying custom and law, and swimming to shore to meet him every evening. The unhappy ending of the story tells how the god of lightning and thunder, Percun (who loved Jurasmat), flew into a rage because Jurasmat, too, had broken a law: those magical beings married only among themselves. Percun destroyed her palace with his thunderbolts and killed Jurasmat. In the end of Barons’s version, Percun chained Kastytis to a rock at the bottom of the sea and placed Jurasmat’s body beside him, so that he had to look at it and suffer forever... Now when there is a storm on the sea, locals hear a cry -they say it is the voice of the poor fisherman- and waves throw bits of amber on the shore -they are parts of the castle that belonged to Jurasmat, ruler of the Baltic Sea. In other versions of the tale, Jurasmat’s passion was so great that she assumed a human form, giving up her immortality for the love of her fisherman (Conroyd, 2003).
image 1.08: *Udens Mate*. Volumetric aerial view.
1.2 the intermediary function of the narration

The intermediary condition is that between perception and consciousness, between the mnemic residues of architectural objects...and the interiority of architecture, which are formed prior to consciousness as given by language and perception in vision, as formed in the mirror stage.

J. Hendrix (2006:196)

For the urban designers of the decades that followed modernism and took active interest in the quality of the built environment around water, the edge was mostly a one-dimensional problematic: a case of the seen and the real stemming from the conflicts between commodities, market, and capital. Experience-based theories for the study of the perception of space, such as Piaget’s (1956) developmental schemata and the cognitive processes evoked by the imagined, the potential, and the indirect dimensions, were not serious possibilities. By the late 1980s, after the London Docklands’ disputed effort to sustain the immaterial public realm near water, that is the space between buildings and water “rather than the buildings themselves” (Tibbalds, 1992:2), it was clear that the architectural challenge of notions like “meaning” and “experience” would surface once again in the research community. People’s active participation in collective actions concerning the redevelopment of their cities moved the architectural attention towards the possibility of an urban space able to unfold its own stories, narrating its own inner structural substance from within its own experience.

This brings us very close to the thesis’s argument that the dynamics of symbolic logic, which will be spatially studied in this chapter, appear to have the intrinsic ability to activate the intermediary formulative function of space by making symbolic use of its objects. The symbolic operations of space situate the appropriation of this function within the framework of the representational space

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26 This thesis holds that London docklands consists a misfire for the image of the contemporary urban riverfront, not only because the production mechanisms followed market’s commodities and altered dramatically the character of the region, but mostly because the postmodern attitude produced an acontextual downtown (Loukaitou and Banerjee, 1998). The absence of a deep architectural concept led to a morphology that didn’t respect the micro scales of London. It is said that the project managers wanted to imitate the Battery Park City of New York by giving in this way an intense “urban texture”. But their postmodern efforts were not “attentive to the current realities and particularities or to the local history and culture of their context. As a result, [their practices] do not carry any particular meaning... [it was] a recreation of an idealized past or present, a nostalgic selection of the safe and likable attributes, and an attempt to erase all the troubling elements. Spaces are created simply to impress their users. This attempt of postmodern urban design...often results in deriding and trivializing meanings” (Loukaitou and Banerjee, 1998:294).
that sees society as an ensemble of symbolic systems. This chapter inherits the concept of the “representational space” from Henri Lefebvre, who defines it as the “space as directly lived through its associated images and symbols” (Goonewardena et al, 2008: 52), thus distinguishing it from “representations of space” in that it is made up of inhabitants’ imaginations and the experiences of the perceiving subjects. Lefebvre argues that this sort of space is the prominent one, which the imagination seeks to appropriate. This viewpoint suggests the intermediary function in that representational space tends to place importance on its overlaying relations to physical space by using the objects-signifiers to determine the signified meaning. Henri Lefebvre is one of those who, though he doesn’t call it intermediary, admits the existence of a mediating mixed space in The Production of Space (1991). The position of this thesis interrogates the intermediary function of spatially constructed meanings and symbolic forms in service to notional pre-structured ideas, values, signs, or messages by virtue of space and of the interplay of reflections and mirages within it, a possibility intrinsic to lived experience itself (Lefebvre, 1991: 184).

The representational space also implies conceiving the physical space of spatial practices within a narrative function in its own right. In this sense, an arrangement of events or spatial episodes along a land/water edge can initiate narratives of spatial discovery, interpretation of folklore beliefs, mythological metaphors, or stories of human allocation inside the coastal landscape. The choices that we have to make in order to go along with the proposed logic of inscribing such desires and sequences into the more tangible form of the built reality might place the thesis on the edge of architecture, where one must disturb or even reject the typical methods and figures of space production and build one’s own structural logic. One must prone to a logic of poetic evocation, inspired by the liquid element, its Bachelardian reflections and its spatial movements - sufficient enough to give the impression that the city continues smoothly to the water and that its architecture is not an altered urban form that leans in an awkward and neglected way, disguised in a fictitious luxury, but, on the contrary, is offered with narrative possibilities.

Gibson and the origins of the intermediate field

Scholars with interest in the perception of the built environment (Canter, 1977, 1986; Seamon, 1982; Bonnes and Secchiaroli, 1995; Proshansky, 1970) argue that spatial formations and events enacted in physical space become perceptible to humans throughout processes of categorization, mental associations, unconscious inferences and conformation of their perceptual structure with the inner representations of common objects. This position, in turn, sketches out the

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27 Spatial discovery and exploration is a human need and a crucial reason for people’s presence in urban cityscapes, and Lynch (1960) argues that it represents the desire for stimulation.
possibility of a psychophysiological space (Panofsky, 1997:30), alternative to the constructed space of perception, which intermediates the human perception. Casey further supports this view and adds that “place and space are presumed to cohabit an undefined, or rather ill-defined, intermediate realm where each is the other’s virtual likeness” (Casey, 1998:127).

In 1979, the American psychologist James Gibson revealed in his Ecological Approach to Visual Perception the intermediate field of space by drawing out the distinction between direct and intermediate perception. The definition we find in the ninth chapter of his book is connected to the clear suggestion for the existence of the intermediary discourse and not to the legitimation of his approach on the issue. He writes:

Direct perception is what one gets from seeing Niagara Falls, say, as distinguished from seeing a picture of it. The latter kind of perception is mediated ... by retinal pictures, neural pictures or mental pictures (Gibson, 1979:147).

Gibson borrows the definition of this distinction from studies that supported the view that perception and spatial knowledge are strictly based on psycho-notional representations. However, through the distinction he developed an interesting proposition on the role of symbolic systems in the processes of spatial perception and cognition (Gibson, 1966, 1972, 1979, 1986). By embodying his ecological stance on the study of symbolic systems such as langue and images, he sets the issue of perception between the direct grasp of information and the grasp intermediated by language, image, or other systems of recording information. This second kind of perception is named indirect or intermediated. In his Senses Considered as Perceptual Systems (1966), he writes about the distinction between perceptual knowledge, or knowledge of the environment, and intermediate symbolic knowledge, or knowledge that refers to environment:

...the former depends on the laws of physics and biology, that is, on the ecology of stimulation. The latter depends on a linguistic community, which is a unique invention of the human species (Gibson, 1966:91).

According to Gibson, while most animals perceive their environment directly, social animals, and especially humans, need an intermediary spatial field in order to acquire a holistic and complete perceptual knowledge of the sensible world. This field functions in a rather indirect way, through the use of various kinds of representations such as spoken and written words. This intermediated perception embodies a variety of ways that all lead the perceiving subjects to develop different interpretations for their environment according to the expressive medium that communicates the environmental information.
In the first chapter of *The Savage Mind*, entitled The Science of the Concrete, structuralist anthropologist Claude Levi-Strauss pinpoints crucial aspects beyond the imaginary of mythological metaphors, and explains how such verbal formations treat the relation between *mythical* and *reality* as being itself sensible. He argues that myths are

...far from being, as has often been held, the product of man’s “myth-making faculty,” turning its back on reality. Their principal value is indeed to preserve until the present time the remains of methods of observation and reflection which were (and no doubt still are) precisely adapted to discoveries of a certain type: those which nature authorized from the starting point of a speculative organization and exploitation of the sensible world in sensible terms (Levi-Strauss, 1974:16).

I wish to dwell a little on this syllogism in order to shed some light on its spatial dimensions. This chapter begins its attempt at the intermediary discourse by holding that the spatiality of verbal language - of a story or a myth, for example - is neither more different nor more rhetorical than the spatiality of dance movements and space occupancy from children playing a game. By proposing that, we can come to understand why Levi-Strauss conceived space as a stage of constructed “social and mental processes through objective and crystallized external projections of them” (Netto, 2003:49) and a way of rationalizing narrative spaces. He argues that

...this science of the concrete was necessarily restricted by its essence to results other than those destined to be achieved by the exact natural sciences but it was no less scientific and its results no less genuine. They were secured ten thousand years earlier and still remain at the basis of our civilization (Levi-Strauss, 1974:16).

Social and mental processes are not simple tags that can simply accompany urban design projects. Nor can it be argued that there are one or two established ways of exploring and spatially interpreting such constructs. Indeed, this thesis takes into serious account the various expressions of their productive features that meaningful spaces bring into play when approaching their narrational function as cognitive products of symbolic content attached to coastal physical form. Staying with the codifying approach of the seaside stage of constructed processes, we must, in order to classify the edge’s intermediary representations, grasp the way in which the symbolic code of the source of inspiration (text, for example) can be identified and processed.
First, the spatiality of the plot - that is, the intermediary of its narration - involves a peculiar identification of matter-related signs from within it. In our case, a particular identification and manipulation of the notion of water-matter as expressed through various compound elements of the plot's structural unity and in various rhetorical forms (words, sentences, syntaxes, beliefs, images, etc.). This identification and manipulation process is a crucial step in making narrative intermediaries. During this process, a scanning of the textual body occurs that aims at determining notions able to be materially interpreted and constitute the background of their projection in space. The definition of notional elements is based on their signified capacity and can be

...whatever word or words are constantly reverted and are of great significance for the specific text; a basic recurrent or emphasized theme within various contextual enunciations; or some stylistic particularities in accordance, of course, with the kind of text and with what the reader considers as crucial for identification or exploration. That's why such determination must occur after the first reading or the process of the textual material under analysis (Martinidis, 1990:43) [the translation from Greek is mine].

The spatial study of the Intermediary Space of the urban edge definitely suggests various points that are almost impossible to be fully explored within this chapter. However, some of them will be presented in the following sections to help us see why an architect can be inclined to think of myths both as “systems of abstract relations and as objects of aesthetic contemplation” (Levi-Strauss, 1968:25). Architecturally speaking, any story or myth, no matter how simple or complex, is more than just a scattered series of water-related events and concepts; it is a sequential notation of these events, characters, processes, episodes, incidents, and sub-spaces into a dance or “orchestration” of meaningful configurations (objects) that seek their spatial accommodation. For Bakhtin, such events, meanings, or acts not only structure the logic of the site in three-dimensional terms, but also become central symbols in the narrative space (Bakhtin, 1981:250).

Embracing the benefits of Bakhtin’s remark on the crucial role of symbols in the narrative function of space, we can say that the features proposed by a design project governed by the logic of a piece of verbal language reflect, in fact, the interconnection of spatial and cultural processes, while at the same time identify and manipulate its signs as symbolic constructs. According to Roland Barthes (1972), mythologies are ideological constructions that emanate from as much as they recreate and perpetuate social practices.

It is also important to be clear that the manipulation of matter-related notions sequences and, at the same time, configures spatial experience along the edge into meaningful spatial relationships, and therefore releases (and also is released by)
the intermediary function of myth. It does so by offering ways of knowing, understanding, and shaping the coastal setting not as it is typically acknowledged by conventional urban design projects, or even by merely formal urbanistic concerns of the design process. Ways of knowing begin from the architectural idea (concept) and from information hidden within the overall arrangements; they continue with the narrative’s representation and end up in the process of concealing and revealing spatial meanings (such as an edge’s identity, a place’s information, etc.). Lefebvre argues that these concealed parts of space are in fact the internal portions of things and things outside the field of perception (Lefebvre, 1991:183).

Hidden information and concealing/revealing processes facilitate the development of spatial relationships along the shoreline - relations established between the plot and the compound objects of space, objects and water, user and space. In this sense, hidden information, like representational acts of no direct reference, imply that a water-sign or value may have already been identified by the designer but yet is deliberately concealed for various purposes. These range from lengthening the user’s perception through systems of expectations, challenging the public realm or developing specific emotional products to creating enjoyable tension, ways of communicating the employed symbol-system, and revealing parts of the inspirational source (i.e. the water-related plot of the myth). Thus, the user can be actively engaged in the intermediary narrative to uncover, decode, understand, or reject the hidden information. The project goes back and forth in front of the user’s eyes to open up the paradoxical space created by a rhetorical source between what is seen at first sight and what is hidden and therefore requests an interpretation. The concealed and revealed meaning aims at offering more complex coastal images while allowing people to inquire about the image, the represented matter, and what lies beneath it.

Finally, the double operation of identifying and manipulating which enables the architect to choose the water-signs most useful for his narrative attempt and helps him/her to transform, or rather translate, them into material substance, is, to some degree, reflected in space’s specific cultural context – in these lived experiences

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28 In Human Aspects of Urban Form Amos Rapoport presents an extensive overview of the psycho-spatial and behavioral literature on symbolism projected upon city’s morphology claiming that the urban environment is inevitably a symbol-system itself giving “concrete expression to concepts of values, meanings and the like” (Rapoport, 1977:192). The intermediary dimension of this system has practical applications in the design strategy pertaining to questions like “Can architecture deliver up a meaning?” or “Can urban design conciliate symbolic signs with its peculiar urbanistic issues?” Questions whose answers are not useful to be presented dogmatically here, but at least must be implied by the structural technique of the Intermediary Space itself. For this reason, the function of the symbol-system in urban design process will be further studied later on in a separate section of this chapter.
which the signifying matter (the morphology of the urban edge) is called to accommodate. The use of narrative, grounded in lived experiences along the shoreline, seems to offer an alternative reading of the urban setting. Yet even the simplest story to be narrated raises fundamental issues regarding subjectivity, common acceptance of the expressed values, adjustment of old issues to contemporary ways of life, representation of forgotten or neglected signs, and shared imaginary.

Before the double operation, then, it is important for us to ask: Whose story is to be told along the edge of this specific port city and why? What is the position of this story in the mind, psyche, or memory of the local citizens? What sort of values and signs are being expressed through this story and why is it important to reawaken and enact them on the new stage near water? How will this approach eventually make the most well-conveyed difference from other common practices in favor of a sensitive human-centered design? A discussion about Umberto Eco’s insights on space-readings reflects some answers on these questions.

Eco on narrative’s mental function

While Levi-Strauss holds that myths, as both verbal and social structures, introduce a sort of organization for space because their ramifications extend to territorial and geographical basis, Italian semioticians Umberto Eco, on the contrary, starts from the perception of narrative space as mental function. In this sense, he actually examines the narrative function as a linear process of induction,

...that is to infer a general rule from individual cases; abduction, that is to test both old and new codes by a way of hypothesis; and deduction, that is to check whether what has been grasped on one level [myth’s events] can determine on another, and so on (Eco, 1977:275).

Eco’s perception of the spatial territories identified in mythical constructs demands a constant semiotic judgment on behalf of the interpreter. This judgment holds all the above modes of inference at work. “Like a large labyrinthine garden... [the narration of a myth] permits one to take many different routes, whose number is increased by the criss-cross of its paths” (Eco, 1977:275). The spatial practice of this inference addresses the fact that insofar as the plot of a myth aims at being detected, conceived, understood and interpreted by observers who experience space and thereby engage them in a constant process of raising their perceptual capacity into mental function, the architect of the representational act may focus his attention on the user’s possible reactions towards the specific built environment that narrates a story. Thus, urban design practice and the intermediary function of a myth can both be encapsulated into a network of communicational spatial meanings eliciting behavioral, psychological, emotional, and physical responses.
As we shall see in the research-by-design example for the edge of Riga in the next section of this chapter, the narrative coastal setting tends to be conceived primarily in terms of a literal storytelling. The corresponding urban master plan relies on signified forms, iconic representations, and other explicit references to supplement overall spatial experience with the essence of a myth’s locale. Using the architectonic language for organizing and formulating space, this project aims at both a passive and active engagement of the perceiving subject with the setting. The first encounter could lead to a sense of enjoyment, contemplation, and mental negotiations with the setting that derive from interpreting the spatial experience. The second encounter represents the sum of direct experiences with the setting, which includes social gatherings in open spaces, the use of the promenades, isolated spots for readers, or other actions, etc. In this way, the project intends to establish pragmatic relations and cultivate reactions between all compound parts of our problematic - that is, between the design process, the user, the landscape, and the associated notional constructs. The spatial arrangement produced overlays physical space, advancing the symbolic use of its objects.

If the Intermediary of a Narration comes as a response to what past design examples may have misread as necessary and adequate for space-production, this is exactly because the comprehension of what story is narrated from within the master plan is based on the users’ fundamental reactions regarding their ability to decode, accept, and evaluate the architect’s codification of the myth made, along with their own interpretations. This entails acceptance or rejection of specific values and messages, because the perceiving subject does not really have knowledge of the designer’s initial rule of identifying and manipulating mythical signs; the user tries therefore to (re)construct a rule from the already deconstructed one, taking into consideration all the visual data provided from the surroundings, including notional extensions from spatial arrangements found in space. For an experiential project near water that has something to tell us, the act of inducing presents myth’s intermediary - it is an attempt to illuminate an essence of the human-centered design that has yet to develop.

Despite the fact that a description of what a myth says exactly is rarely preserved until the end product, this general rule, being a product of personal interpretations and passages, is necessary to cultivate mental linkages between the perceiving subject, design process, and built environment, and to structure a symbolic representation of a local story, or even to model cultural memory. Therefore, the intermediary space is not actually produced, but rather induced from within the set or system generated according to the narrational rules of the plot (like its phases, events, etc.). Using Lefebvre’s position, we could say that it is in fact constitutive of that set or system (Lefebvre, 1991:372). In other words, the act of inducing situates the user within a narrative design attempt, and at the same time marks the beginning of the narrative as well.
Another parallel of Eco’s insights in this chapter’s approach is *abduction*, which survives and is being conserved, nevertheless, as a form of a user’s engagement inside the orchestration of spatial meaning; and as a kind of conscious, unconscious, or even reflexive response to a space’s overall understanding that should also be taken under serious consideration during the design process. Abduction here comes to withdraw the unpredictability and indeterminacy of people’s experiences within the narrative space, since a user may believe that he/she is “correctly interpreting what ... [the designer and myth] meant, or he may decide to test new interpretive possibilities.... But in so doing, he never wants to completely betray the designer’s intentions” (Eco, 1977:276). While Lefebvre would argue that space remains always ambiguous for the potential observer, to test codes by way of hypothesis also implies a desire to draw excitement from this very ambiguity that messages of the spatial application of a myth finally entail.

Thus, the semiotic definition of the *intermediary function* of the edge as a narration has two objectives. One purpose is to portray the course of the coastal symbolic logic communicated by an experience that “takes place and can neither be reduced to a definite formula nor foreseen in all of its possible outcomes.” The other purpose is, at the same time, to put in perspective a rather “open” experience, “which is made possible by something which should have (and indeed has) a structure at all levels. Thus the semiotic definition... [of such Intermediary Space] gives the structures model for an unstructured process of communicative interplay” (Eco, 1977:276). In other words, reading a narrative edge anticipates a mental deduction from the user: that is, to check, judge, or evaluate whether a process of communicative interplay is well established between various perceptual levels. In everyday life inside a narrative urban setting, interplays between compound parts are caught up in behavioral responses, mental constructs *during*, and emotional products *after* the end of the experience. People may go through many stages of filling up semantic gaps to reduce or even complicate the communicative interplay, acquiring suitable codes in one context/level and changing them in another, re-reading what space has to narrate again and again in different ways depending on the mood and time dedicated for the specific experience. But these responses will be further studied in the third chapter.

This thesis holds that a water-based myth can serve as a source of mediated signs that in turn can be presented as *spatial relationships and formations* (Peponis, 1997) in the seaside composition. In the process of spatial narratives, the myth becomes a rich multivalent sign, bearing the traces of ordinary Cassirerian representational acts but being a totally open development as well. In the next section, we see such a development unfold along the waterfront of Riga, Latvia [images 1.01 – 1.08], uniting the story of Jurasmata, 29 princess and/or mother of the Waters, with an

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29 Juras mate, or Jurasmata, (“sea mother”) is the goddess of the sea. She is one of the numerous mothers (see: Mates). She is said to be worshipped by fishermen and sailors, plays
architectural program for the area’s redesign. While many may still believe that it is impossible to reproduce a narrative of Latvian Mates (mothers) verbatim in coastal morphology, this experimental project explores a possible way in which something like that can be spatially anticipated or cultivated through references, associations, analogies, and symbolic representations. Along the shoreline of Kipsala Island in Riga, the scenes, characters, and events of the myth generate spatial arrangements, architectural forms, and places with meaning.

1.3 space, myth and plot: the case of Kipsala

The previous section suggests that the symbolic concepts identified in the textual body of myths can translate ideological constructs (Barthes, 1972) into specific forms. This requires certain mental operations in order to explore if (spatial) reading can produce meaning - if not out from a large amount, at least out of some crucial signs. Eco points out the importance of personal passages/interpretations in the meaning-creation process:

Even when there are no well-trodden paths in a wood, everyone can trace his or her own path, deciding to go to the left or to the right of a certain tree and making a choice at every tree encountered. In a narrative text, the reader is forced to make choices all the time (Eco, 1994:6).

Eco’s critical bearings move in the direction of a disposition that seeks for possible personal and interpretative passages in a myth’s approach. Maybe here the problem of our venture is not to find a large amount or a few crucial water-signs, if crucialness is the only safe way to pass from the stage of identification to manipulation. The problem is rather to find a semiotic unifying content, which is rather different from one dealing purely with cues from the visual-optical phenomenon of the sensible realm, but which is, nevertheless, able to withdraw the obstacles for the narrative’s architectural translation, offering spaces that cultivate in the user, as Eco notes, the ability of making choices all the time.

design attitude of poetic evocation

This research-by-design example ventures into Riga’s complex of component parts in its waterfront-image -its locale, which includes past folklore beliefs, myths, stories, and songs about the strong and timeless relation of the city. Barons’s an important role in healing by magic, especially in stopping bleeding. She is an obscure goddess and rarely mentioned in song texts. Still, she is among the mothers mentioned in 17th-century texts (Putelis, Aldis, www.pantheon.org).
textual source of the local myth, as narrated by Conroyd in his *Push Not the River* (2003), becomes the architectural basis for spatially constructing layers of exposed underlying structures. This exposition suggests that the process of understanding the influence of the land/water edge properties on architecture passes from the translation of different symbolic coastal imaginaries. This argument is further developed by exploring various water-related signs as projected in local beliefs and “shared values” (Costonis, 1987), identifying in the plot of the myth spatial insights for engaging meaningful design processes in this translation. Through this approach, a rather consistent design alternative to waterfront *redescription* is outlined for taking into consideration the symbolic nature of the subject/edge relations.

Thus in what follows we shall proceed from the premise of the narration of the myth that speaks of the imaginary found *in* waters (i.e. in the symbolic or emotional meanings attributed by subjects to the characteristics of the coastal environment) to concretized images that can guide people to individual readings and interpretations of what makes sense during a spatial experience of the given coastal area. The research is therefore focused on the *interpretation of a myth as design paradigm* in order to explore how (materially interpreted) patterns of motion, perception, activity, or stimuli that are associated with the architecture of the edge are related to langue, folklore beliefs, myths, and cultural cues.

We are not only in the beginning of an interpretative attempt for the orchestration of the *spatial meaning of the edge*, but also of exploring the possibilities of the complex interaction between space and language. For this, the spatiology of myth is treated as a *diagram* able to generate forms for anticipated experiences -forms that stand for another imaginary.
The aim of the research-by-design proposal for Kipsala is to assess how closely and in what ways shared meanings encapsulated inside the textual body of a myth – including cultural information like beliefs, views, stereotypes, or shared imaginaries of locals that pass from generation to generation – can become involved in the formulative logic of spatial organization and urban design. At the same time, research will attempt to determine in what ways and to what extent narrative structures can and do influence the communicational capacity of urban design in coastal settings.

In essence, the project seeks to inquire the uncertainty of treating parts of the textual space identified in the narration of the myth as a possibility for spatial development and holistic appreciation of its design process. To conceive the form of a narrational distribution across a coastal setting means to arrange what could possibly be identified (by the specific research-by-design project) as meaningful with a logic that can strengthen the mnemonic imprints of space for future recollection by its users - from material entities carrying meanings to visual images able to provoke emotional products. One reason to explore such a possibility and design approach is that it employs coded information in order to re-activate neglected parameters of human function, like mnemonic associations with space, and “provide access to experience, knowledge, the contingencies of time, and other aspects of landscapes not available through other means” (Potteiger & Purinton, 1998:23). In turn, structuring a legitimate organizational scaffold to guide the formulation of its architectural program offers the potential for spaces of constructed meanings: places manifesting relationships through “spatial stories, continuous narratives, or the anchoring of memories and history to site.” Thus the edge can join “with a very human capacity and penchant for telling stories” (Potteiger & Purinton, 1998:23).

In other words, in this section the question is the reading of a specific cultural setting and all the accompanying objects that run parallel to the conception of the
myth as narrated by Conroyd in his *Push Not the River* (2003). In this way the design process extends the production of spatial meaning between the designer and the user as a symbol-mediator for interpreting coastal areas and favors anticipated or cultivated human behaviors in public spaces as forms of cultural production. Certainly the real site is in Riga, but the cultural beliefs about liquid element form the implicit site of this project. The function of relating coded information from one medium (the text) to another (the design), and the process of reading the waterfront as a mythical story, opens up a conducting path paved with various tropes or figures. Research identifies three kinds of tropes that can prove useful to this effort: the symbol, the synecdoche, and the irony. Thus our spatial interrogation will be focused on them - despite the fact that others can also be identified.

i. the spatiality of symbol

*Symbol* derives from the Greek word *symbolon* (συμβολον), meaning an *object*, an *idea*, or a *sign* that signifies and implies other specific associated notions, objects, or events. To use a *symbolon* means to carry over aspects from one object to another so as to be perceived, conceived, or understood as if it was the first. In our case, it best operates on the goddess Jurasmat’s inherent water attributes as a princess of the sea, and transfers them by means of similarity, analogy, or substitution.

The significance of Jurasmat in the role of protagonist lies exactly in this ability to relate the unfamiliar water attributes to be found beneath the sea surface to the familiar of the built reality above surface. The symbol of the water deity,
characterized as *permeable* since it belongs to the mythical and intangible sphere, which retains no trace of rational verification, would be the primary perceptual trope, regarding the direct spatial correspondences between the *represented notions* carried by it and the final *representing matter*. Jurasmat’s representation will generate new spatial relationships between elements of the proposal and it will also mask qualities of the architectural entities with those of the liquid element.

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**ii. the spatial synecdoche**

This figure is focused on the relationships between the part and the whole – essentially, the associations between them – and it concentrates on the processes of understanding a particular object as representing the whole system to which it belongs. *Synecdoche* is therefore...

...the use of a part of something to represent the whole, or of the whole to stand for a part. “Indicator species,” for instance, point to the health of a whole ecosystem. Because of this association between part and whole, synecdoche is sometimes confused with or considered a subset of metonymy. White, however, contrasts the sometimes literal or reductive nature of metonymy with synecdoche, which moves towards relating particular phenomena into a more integral whole. For this reason synecdoche is a favored trope of organicist systems which seek to understand the particular as a microcosm of a macrocosmic totality (Potteiger & Purinton, 1998:37).

In essence, *synecdoche* is an effective narrative/spatial tool for the intermediary function of the myth because it can conjure the whole complex of Jurasmat’s love story with the human Kastytis by using pieces or fragments from the story’s syntactic relationships, which are finally projected upon the site. Also synecdoche is a way of representing the complex system of the protagonists’ movements, which at first sight seem vast and hard to grasp. Thus it enters the process of
“understanding architecture” once the marks of human and water deity (the courses of their movement-patterns), signified by the representation of the grid inside the triangular areas, are positioned on the site in order to reveal the mythopoetic play.

The research entails the literature review of the myth as depicted in Conroyd’s *Push Not the River* (2003) and the formulation of a shortlist of associations between textual information and spatial attributes. A common vocabulary is therefore produced in which the common area of these two separate worlds, representing the meeting points of Jurasmata and Kastytis, mediates between the two particular desires instituted in the story by their experiences [images 1.02, 1.12]: a fantasy matter that tries to crawl up on land and be embodied with something less fantastic, and a rational matter which tries to reach water and acquire something of the offered immortality. The first speaks of the power and extent of water’s attributes; the second recalls ground reality and the territory of space that embraces water, while both are related to myth’s integral whole. The design logic that follows the implications from these relationships interprets the textual “desire” into a spatial “desire for the particularity of place” (Casey, 1998:xiii).

#### iii. Irony as interpretative source

The notion of irony derives from εἰρωνεία (eronia), which is a character in Greek plays

...who is caught in a conflict between an unrecognized true identity and a mask that is mistaken for truth…. Something is ironic when it presents an incongruity or ambiguity between expectations and reality, nature and artifice, revealing and concealing, and so on ... the position of irony is in the in-betweeness of things. It is an affirmation of both/and, as well as neither completely this nor that (Potteiger & Purinton, 1998:38).

Unlike the previous two tropes, which in fact work to convince us that Jurasmata has something to offer to reality above water and may succeed in projecting some of her qualities on the morphology of the edge, this last possession of her, as a trope, has a sense of detachment from the strict narration of events in the myth, including demystification of some events themselves.

From the point of view of design principles, the project’s adopted syntax -that is, “relations that are consciously, if not reflexively, used to create a design” (Peponis et al, 2003:2) - stems from the combination of the first two tropes, and every possible movement on the site that gives reasons of a legitimized existence to every urban object [images 1.02, 1.12]. However, in some cases when the architect considers that it favors the narration process and its communication, irony is used as a trope to demystify complicated incidents. Such an incident is the scattered palace from Percun’s anger, or the crucial moment when “Jurasmata, too, broke a law” (Conroyd,
2003) (what we call the apotheosis of the story and at the end product receives the requested city-landmark – such poles of attraction will be linked to form the cognitive/topological map of the project).

In this intermediary function, as the signifier of irony is a favored mode that introduces the water-signs in a myth’s language, it is that by which “non-existence is instituted into existence” (Hendrix, 2006:183): in the form-regulating way of the design logic sustained by language, it juxtaposes the formal imagination of the story with the material imagination of the design proposal. In this sense, the interaction between the two desires offers guidelines of possible interpretations in order to create architectural containers for the cultivated experiences.

1.4 narration as meaningful structuring framework

The property of verbal symbolism is known as discursiveness; by reason of it, only thoughts which can be arranged in this peculiar order can be spoken at all; any idea which does not lend itself to this “projection” is ineffable, incommunicable by means of words. That is why the laws of reasoning, our clearest formulation of exact expression, are sometimes known as the “laws of discursive thought” (Langer, 1957:81-82).

The space in Kipsala is conceived as a semantic construct. It aims at the creation of the coastal reality as a place of indigenous meaningfulness (Sternberg, 2000), and at determining the nature of language’s projection (Jurasmat’s myth) in comparison and contrast with a succession of acts and its transformation to objects (see Langer, 1957). Thoughts, reasons, and arguments concerning the development of this experimental venture and presented so far in the previous sections may, in a way, be considered as an attempt to investigate the influence of the symbolic logic in the development of the Intermediary Space of the edge.

Let’s accept, according to what we have supported until this point, that this type of representational urban design process may, at first, be compared to those structures of spatial morphology that resemble written speech: that is, formulation of shapes that speak of narrated events, and a spatial organization that shows an analogy or a likeness with the structure of the myth. Bafna (2004) supports this position and is also critical of the spatial morphology, in the sense of recognizing it as a morphology of language and not as a morphology of objects. In this perspective, if we argue for such comparisons, then we can treat these parameters
...not only as objects of an abstract scientific thought, but as matter of an art that concretizes, condenses, and activates the apperception of form. Our aim is not to verify the difference between science, language, and art, but to show how these two aspects of human conscious complement each other, at least in terms of spatial morphology (Peponis, 1997: 204) [the translation from Greek is mine].

In other words, the model of water-signifiers in our story, identified in the literature review, must be inscribed in common spatial elements along the coastline, after first suppressing the spoken chain of the narrative. Far from being neglected or having a secondary use, elements of the story change their purpose and status - they acquire a double meaning, that is, along with their primary rhetorical nature, they acquire an architectural one that can be expressed spatially. Now, we may be able to represent words with objects, relations with arrangements of constructions, and feelings with emotional products generated by the overall experience. They can also be situated in various meaningful ways, surrounded by the natural element of water, opening a dialogue with it and narrating their connection with the plot to people. They can be invested as these properties that will offer the proposal’s uniqueness, adequate expression of the sense of place, and unfold parts of locals’ “shared values” (Costonis, 1987). They figure in architectural terms much as diagrams do in Eisenman’s work (see Eisenman, 1999), those picto-symbolic combinations in which myth’s textual substance is secondary and not central in the construction of the meaningful space.

For these reasons, shared aspects like the folklore beliefs about water and its deities, hidden fears, expectations, admirations or mythical powers, are short-listed and examined in terms of the possibilities for spatial structure. In a further step, significance is attributed to abstract themes of the story such as the sea level, the amber palace, the chained young men on the sea bottom, Perkunas’s belief that water will be impure if Jurasmat goes with a human, and the movements of “the story’s objects” – that is, the deities, the desires, and the water. The overall writing of water signs in the story exceeds parameters dedicated to other aspects of indigenous Latvian ways of dealing with water’s inescapable presence and puts the shared imaginary of the coastal setting inside a form-formulative framework. As in many mythical stories, “voices of water” are mixed into people’s everyday life, social structures, and cultural cues, and inhabit the border between reality and fiction. We don’t know how many of these ideas were products of real fears, for example, of the local fishermen towards the anger of the sea, or imaginative creations developed to feed the curiosity of the mind or even to scare the children. Whatever the case, they are being treated as elements of the spirit of topos (Norberg-Schultz, 1984) and this time I am referring to another aspect of the multifaceted entity Schultz calls “topos”: the conscious state of living by water with all the psychic and spatial consequences such a relation may entail.
From the very beginning of the story, as narrated in Conroyd’s book *Push Not the River*, we face the aspect that, against the myth, the “desire for place,” for land and for meeting, is caught in the dialectic of the *imaginary* and the *symbolic object*. The mechanism of the “desire for place” in the signifying chain of the story necessitates the trace of the concept as *symbolic object*. Without the trace of the symbolic evocation, “neither the desire nor the process of signification would exist” (Hendrix, 2006:44). The symbolic-representative aspects of the “desire” generate, for the purposes of the design logic, three-dimensional entities that are necessary constituents of the design process. These are positioned vertically to the shoreline, suggesting an experience of space that is less determined by the direct, static projection of the “desire” on the form but instead by the interpretative and dynamic designation of its *movement*. This compositional strategy speaks of the activity from purity towards mortality; that’s why the “desires” arise from water. In this sense, the activity patterns or movements evoked by the deity and the human are represented inside the formulative logic as two accounts of the same symbolic object in two different languages: the narrative and the spatial. Thus we can say that, in this interpretative design approach, the *formulative logic and the narrational representation of space coincide* (Peponis, 1997).

For the myth, the sea surface, on the other hand, separates the real world from the world of dreams. The design logic holds that it acts as a mirror between the conscious and unconscious activities of the human mind. Therefore, it explores this function and expresses it by means of a pictographic diagram [images 1.02, 1.04], the properties of which are transposed individually into architecturally translated ideas. The sea surface is no longer a combination of two words, nor a projected stable image and figurative plane that is meshed with Kipsala’s material substance. It is a plane ready to be overloaded not only with the simple, conscious objects of the first perception but also with more complex ones that belong to notional spheres carrying the creative properties of the imaginary and making the second reading, the second rendering of “correspondences between internal representations and the actual physical world” (Eberhard, 2009:59), almost a necessary obligation. If we attempt to read the sea surface according to its symbolic relation with our story, we should clearly lead our practice into a symbol system whose content is then indeed a signifying chain of form production, reasons for existing, and a form of *writing within speech* along with the *act of structuring within space*.

The ideas evoked by approaching the sea surface as the border between the real world and the world of dreams were addressed in a simultaneous abstraction and condensation of the proposal’s endogenous meaning - a meaning that realizes the various interpretative possibilities of being concretized and stabilized into symbolic form, of useful representational meaning. I have not yet tried to separate endogenous structures, such as movement and sea surface, from the process of transforming them into the edge’s *semantic dress*, neither have I attempted to precisely clarify them within the Intermediary Space’s structural framework;
something like that would have totally derailed this effort from translating spatially into representing matter (form) the concepts identified in the myth. If the Intermediary of a narration is pregnant with endogenous meaning, then, this will be born out of architectural representational acts and beyond underlying dilemmas and paradoxes across the disjunction between the imaginary and the symbolic.

Insofar, as such a dilemma is the representation of the experiences and desires between Jurasmatt and Kastytis, can these experiences be seen as *configurational conditions* for the design logic? Can they bridge the gap between the *urban object* and the *interiority* of the urban design process by becoming properties of design intentions (architect) and the psychical and mental strata (perceiving subject) of the proposed space as well?

In the ordinary sense of the architectural program, strictly speaking, there are bits and pieces of an underlying morphic language of potential spatiality, remnants of a rhetorical background. One of the more important of these has to do with the pattern of *movement on water and land*. We started this research-by-design project by acknowledging such boundaries as having a signifying role in the narration, so placing future users at the crucial point where they grasp this difference, has not been seriously realized so far.

The difference also separates Jurasmatt’s love story from the ordinary context and opens up a possible spatial study of the story. It could perhaps be said that the whole spatial conceptualization of a tale, which so far is systematic with the development of Intermediary Space, is designed to allow that which makes this conceptualization possible to enter the domain of architecture and urban design - the *verbal signs* that mark the opening and closing of Jurasmatt’s love story, the identified *gestural signs* about locals’ everyday life near water as described in Barons’s songs (proximity to water, acts during their work with the liquid element, etc.) and the *spatial signs* (traces of the past found on the site from previous urban developments, existing axes and paths, historical signs, etc.).

The story raises the question of whether the surface allows the *mirage of identity in reflection* (Hendrix, 2006:163), between her identities “above” and “below.” Is water crucial for her identity in signification? Jurasmatt does indeed offer a seductive proximity to Kastytis: she invites him into the water. In my proposal for Kipsala Island, the juxtaposition of the man’s stable, temporary character and goddess’s timeless, flexible, pure identity is structured by the division formed between the two triangular spatial territories that represent respectively Kastytis and Jurasmatt and are presented as the symbol system of the project, studied this time not only with diagrams but also with a three-dimensional model (identities and their
interrelations are better exemplified by the first abstract model of the work; see image 1.01).

The first triangle, met in its wider base, has numerous references to human stability, imperfection and formal image. The second, introduced by its obtuse angle, represents the symbol of the water goddess with all her accompanying attributes, such as flexibility, instability, and perfection and is representative of the natural element that initiates our story. The intersection that these two triangles form concretizes not only the most crucial moments and events of the plot, but also the very space that will constitute the proposal’s most important area, representing the opposition between the human and the deity that is important in the language of the myth. Since this latter triangle includes the majority of Kipsala’s shoreline, its shores will inevitably display the major primordial acts of the embodiment of desire: emergence from water and creation of new structures. In other words, it will offer the manifestation of the representing matter as the embodiment of solid structures with glass and other transparent materials, of the concrete with the flexible and of the “amber fragment” with the “glass tear” [image 1:04].

Therefore the emphasis must be placed on the crucial points that the narration intervenes to offer the desired consequences within users’ experiential process, since such interventions are fundamental aspects for Riga’s spatial morphology and for the meaningful space of its urban edge in general. It is not only about the act of sense-making of the proposal that the morphology of its contained objects is (inevitably) linked with the spatial arrangement imposed by the series of events of the plot. It is foremost about the active participation of the human consciousness during the experience, which places individuals in the role of the viewer and audience of a narrative space. The state of this consciousness forms the basic difference of this last representational act, which led us to study it separately here. In this state we can seek the root of the meaningful coastal typology, of the sense of “finite locatedness” (Casey, 1998:34) of place, and their linkages with the aesthetics of water’s schematization.

The relationship of the adopted morphology of the edge (rising from waters, embodying two different aspects of architecture: the transparent and solid) emerges from the depth of the project’s background. Without it, without the deep analysis of verbal signs identified in the text of the myth, the spatial features (forms) would have been the arbitrary surrogate of the design logic. To understand the disappearance of arbitrariness on the basis of a consistency to the plot, and what it really expresses in terms of locals’ lives and beliefs, to the extent that this consistency can lead us to a system of symbols and then to forms, is to find structural elements in Jurasmat -including the proximity to the edge, the purity of water, the separation of the goddess from her liquid substance - but also to find in Kastytis’s perceptual “structuralization” his relation to the proximity of water (here, “proximity” also refers to one of Terra Incognita’s syntactic steps, but since this
issue will be studied more extensively later on, I shall leave it open at this point mostly for reasons of simplicity). Therefore, representing matter of the intersectional triangle henceforth will move towards a thought of mutual proximity-synecdoches of the proximity of both desire and land/water.

It is in the nature of the narrative edge, at its moments of intervention to mind and perception, to move along this identity establishment, progressing by deep readings and analysis of a text that indigenously characterizes the specific place and by the already analyzed water signs it conveys. Its proper course of action is not just to say “translation of this identified sign in material terms and we are over,” but to deal with it as “the identification of this and that and the other and the less obvious from all the signifying elements of the story.” Therefore we do not stop at Jurasmat’s proximity. We want to offer complex conditions to challenge the public realm, and thus we need more and different signs to insert into the proposal’s system. In this sense, the amber palace becomes a sign of segregation: water forms different groups of objects from the ones prevailing on land while the significance that Jurasmat’s palace was finally shattered is less obvious. The rules of the liquid purity are spread all over the land and our site: they appear distorted by the sea surface which makes understanding the issue of identity in relation to the horizontal plane of the water surface even more difficult.

The embodiment of different states of movement and desire are evoked by reference to all three compound parts/discourses of this thesis, since they describe water’s spatiality in architectural terms. For instance, the secondary triangle formed by the intersection of the two major ones [image 1.12], which represents the different substances of deity and human and depicts the moments of their common fate, will acquire many characteristics of an Expressive Space, an aspect of the design of the edge that encapsulates people’s performances on the waterfront stage. At the central axis of this space there will be many structures made of two different forms, one solid and one transparent, based on the moments when goddess and mortal came together. Here the most lively, busy, and pleasant leisure part of the proposal will be accommodated. Even the shape of the seaside platforms is of that kind, pointing towards the moment, the nodal point of prominence (i.e. a landmark), and combines associations with the tragic end of our story.

The aim of this research-by-design project was to explore the relation of narration to space formulation. The following section will examine the crucial aspects encountered during the Kipsala project and the issues of symbolization and schematization of signs from different viewpoints. The thesis will deal explicitly with the intermediary function of symbols in mental processes and their spatial exploration. Ernst Cassirer argues in The Philosophy of Symbolic Forms that built reality is a universe of symbolic forms, and people actively employ their symbolic meaning as a means of perceptual awareness; Langer’s theory of the symbol as a
communicative vehicle holds that the symbolic function mediates between form, feeling, and sense making; while Goodman’s notational theory prescribes the symbol system for representational acts of intermediary function.

_Cassirer and structural symbolic meaning_

Structural symbolic meaning is a mediated component of the experience for indicating the affecting associations between the formulative notion or message and the recognition of the logic for the representation of the form. By means of this concept, the aim is to explore a formulative logic that will incorporate symbolic meanings presented as spatial relationships and formations as regulators of the subject’s understanding and negotiation with the undermined form or shape (Eberhard, 2009; Bonnes and Secchiaroli, 1995). However, it is important for the purpose of my inquiry and argument to point out that in terms of the _water’s semiosis_ as applied to architecture, and later to urban design, the research will follow the critical remarks of Ernst Cassirer on the issue of symbolic meaning. The thesis inserts his work at this point in order to explore the components for the appreciation of symbolism in urban studies. Thus I will let his writings support the above argument, which is related to the representational aspects of Intermediary Space.

Cassirer’s work fills almost all the three main aspects of symbolism, distinguishable aspects identified by Gutman (1972) and employed by Intermediary Space as form-generative steps: the _syntactic symbolism_, in the sense “an element of form or style acquires by virtue of its location in a chain of form or style elements”; the _semantic symbolism_ in the sense of the “meaning ... [an object] acquires because of the norm, idea or attitude that it represents or designates”; and the _pragmatic aspect_ “or the meaning that is to be understood in relation to the architect, client, or social group that invents or interest the building’s form or style” (Gutman, 1972:299).

The horizon for the structure of the intermediary framework is the Cassirerian reading, for it evokes the view that “analogical expression gives way to purely symbolical expression, which, precisely in and by virtue of its otherness, becomes the vehicle of a new and deeper spiritual content” (Cassirer, 1953:197). This reading redirects morphological attention—for this research—to an embodiment of strong aesthetic impulses, approaching the design project as an artwork for the urban

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30 Semiosis (from the Greek: σημείωσις, a derivation of the verb σημειώ, “to mark”) is any form of activity, conduct, or process that involves signs, including the production of meaning. Briefly, semiosis is sign process. The term was introduced by Charles Sanders Peirce to describe a process that interprets signs as referring to their objects, as described in his theory of sign relations, or semiotics (source: wikipedia.com). Similarly, I use the term here to draw attention to the process during which something (an image, a notion, a sound, a view, etc.) originated by water functions as a sign or manifestation of a potential spatial substance (what I have called elsewhere “material interpretation”).
the Intermediary Space

waterfront. The focus, however, is placed upon the symbolic space of the edge within such an embodiment. What moved Cassirer to describe schemata, in general, as *symbolic forms* throws some light on what is at stake here, providing the space for exploring how the required representation fits in with the design of the edge. In particular, placing this required representation as the source of a meaningful interpretational process is under interrogation for the Intermediary Space.

This will be carried out by examining the nature of a *water-notion* within architectural symbolism in order to determine to what extent the space communicates not only the sense of *place* but also cultural products. The question is whether or not certain forms of practice can be more clearly symbolic, representative of the liquid setting to which they are addressed, and more narrative to their purposes.

The interpretation of the edge, quite as much as being a threat, it might be said, is a common symbolic objective among a plethora of mixed-use projects as well as recreational and ecological proposals during the last decades. For instance, in coastal preservations (like the waterfront of Venice, for example) there are recovered symbolisms, restoration of meanings from some particular time of the city’s long history, that bring old and new representations of the coastal domain into a modern and continuous narrative dialogue. Interestingly, practices of a stricter ecological stance near the shoreline (eco-parks, green areas, unspoiled/intact edge), and even more non-urban waterfronts, are in the same position: open to metaphor, symbolism, signification in order to communicate certain ecological aspects to users and thus merge their intricacies with the sphere of the social. Other times they just use them to construct meanings of a possible return to origins or of a spatial perception of a more careful design approach in the future that will avoid destroying the natural setting.

Yet architects are usually reluctant to go out and search for theoretical backgrounds for their design strategies, avoiding sources that pertain to humanistic and cultural issues of representation, like Cassirer’s works. It is indeed difficult for designers to find a model that can mix their own environmental sensibilities and concerns for the perceiving subject itself with those of making urban space, and thus the gap between their research and the evolution of thought on the subject is still to be bridged. In our case, this may also happen because we cannot yet understand, for example, why people have certain symbolic tendencies while perceiving sensitive settings, like the edge of their cities, and ascribe meanings to them. Part of the answer may lie in basic *shared values* (Costonis, 1987) and physical

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31 Lasswell argues that it is possible for spatial formations to communicate various messages: “buildings communicate messages that are both intended and inadvertent. These messages portray a group’s feelings about itself and the way it wants to be estimated by the environment... a message may simply assert that the initiating group has a distinct identity... groups often make a deliberately effort to project an identifying symbol” (Lasswell, 1979:89).
experiences with mental correspondences, but such aspects will be discussed more extensively later in the chapter on Expressive Space.

Whatever the cause or causes, we do experience coastal areas in terms of their meanings and a large amount of symbolic signs originated by the liquid element standing aside, without which the built environment would be greatly impoverished. The morphology and structure of the architecture that encompasses those areas must thus “satisfy the cultural demands for symbolism” (Otero-Pailos, 2010: xxv). The architecture of the urban waterfront owes to respond, and needs a space for that—a *psychophysiological space* (Panofsky, 1997) inside which the perceiving subject will become motivated by the architectural sign and meaning, and for which the Intermediary Space is an agent.

A necessary space for the signs’ symbolic perception and active spatial experience, something that may indeed sound poetic, can be explored in accordance with aesthetic judgment. For Cassirer, architecture is a subset of art, and whenever he explicitly speaks about artistic symbolic forms it is understood that he also implicitly speaks about architectural symbolic forms. So architecture itself has not been alone in this respect: many of its structural elements, like urban space, morphology, and spatiality can also be seen through the scope of his philosophical inquires and his social, aesthetic, and psychoanalytic approaches. Meanwhile, according to Thompson, a symbolic space is often created by the designers…

...if they set out to make their landscapes carry meaning. In such designs the cultural associations are as important as, and may indeed override, any effects at the instinctive level….the idea that designed landscapes can carry symbolic meanings is closely related to the idea that they can be works of art… (Thompson, 2000: 35).

Thompson’s approach marks a turning point in the interpretative treatment of space, and in that it necessitates a psychospatial agent to transfer these meanings. Consistently to this, we can hold that it is the intermediary function of space that acts as a mediator or an agent between the perceiving subject and the physical appearance of the edge, and foremost between the evoked notions and their conscious or reflexive understanding by the human mind. Thus, whatever can be said of water’s symbolic power as a context can be said of its spatial negotiator. This is what distinguishes the implication of Cassirer’s and Bachelard’s points of view in this thesis from a purely theoretical development of ideas without spatial application.

In fact, the symbolic space in architectural language evokes not so much images as moods or atmospheres, and notions associated with it. These associations are the
real structures that form the system of Intermediary Space, which is a psychophysiological (Panofsky, 1997) product in first place. We say of a building that it “resembles the waves of the sea.” A user who fails to conceive the sense of place as a product of the “finite locatedness” (Casey, 1998:34) of the nearby water, being adequately convinced for the existence of its three main spatial territories, may well find the parallelism nonsensical. Put a wave next to a building, and where is the resemblance? A wave looks like a blue, anarchic or flexible mass, an ephemeral and intangible natural structure/phenomenon dedicated to “splash and die,” rather than a concrete, artificial and more permanent construction with all the characteristics that its architecture offers; and yet residents of waterfront areas have no trouble understanding, if not consciously at least reflexively, that symbolic representation.

People who have dedicated most of their lives to living and working near the coast tend to be more synesthetic about similar coastal symbols and signs of this sensitive environment than other inhabitants of the inner city or of the inland suburbs. An advantage of this propensity is that, by making coastal typology vivid and more memorable, subjects find it easier to gain confidence and orient themselves in the urban context and reality of the contemporary waterfront. As we move deeper inside the urban fabric, leaving behind the land/water edge, we find people who depend less on similar functions of synesthesia offered by a symbolic space and more on the intense rhythms of the city center. It can be said, therefore, that Intermediary Space accounts for these propensities through the construction of an “urban mediator” that focuses on a user’s meaningful experience of the edge and the liquid environment’s symbolic representations of an ongoing design strategy.

However, at this point we have to admit that the spatial translation of the insights on symbolic space found in Cassirer’s and Bachelard’s writings works also as a correspondence of conscious reason (the intervention of the urban mediator is such a motive) to abstract notions. This correspondence is given by the underlying psychospatial structure of the thesis’s formulative logic for the waterfront design. This constitutes an outcome that is difficult to understand, though it is not expected.

In stressing the importance of the mediator as an underlying syntactical structure, the research hypothesizes that the Intermediary discourse, as an urban mediator, delineates “laws of distribution and disposition of clusters of concepts” (Sallis,

32 Synesthetic is a condition in which one type of stimulation evokes the sensation of another, as when hearing a sound produces the visualization of a color, or when the sight of a specific built form produces the association with an idea in the mind. It is used at this point to exemplify the spatial meaning created in the user’s mind as a result of an external symbolic stimulus applied in front of his/her eyes, and not merely as a referred association (source: www.dictionary.com).
1987:5). In other words, it attempts to confront urban design with the idea of the water as a form-regulating force in the process of morphogenesis. This demands that the mediator first be understood in terms of its spatial application in human perception and spatial experience, which presupposes that both the architect and the perceiving subject can distinguish the endogenous from the representational meaning of a symbolic form (eidos). Thus, to engage both the architect and the perceiving subject in the process of being convinced by the distinction and by the forever irreducible plurality of the symbolic meanings and their material interpretation. This is something that is never achieved, never found, never grasped in monotonous and constantly repeated superficial symbolic acts to which designers usually resort. Examples include the patterns of a wave, a ship, a rock, etc., symbols that are redundant kitsch because their intermediary function is often stressed to the near exclusion of the other two formulative aspects—the integrative and the expressive.

The Intermediary Space brought forth for exploration is concerned with these two distinctive forms of spatial meaning, and with the recognition of both their function and their relevance in an enduring experiential process of the edge. An interpretative semiosis of the liquid environment in design drawings, though clearly the product of formulative logic, seems (if it is good) not an invention at all, but rather an anticipated encounter—an attempt of the city’s broader anticipation to finally “re-define its image, re-define a structural relation for that image: its relation with water” (Spiridonidis, 2002:4). In this sense, we would be talking about the creation of a space for images of matter, or as Bachelard (1999) skillfully put it, for the metapoetics of water. It might, therefore, seem to be appropriate for an architectural practice informed by this attempt to respond to the demand for an interpretative semiosis—or representation, to use Cassirer’s term—by subjecting the notion of “water’s semiosis” to examination, indicating its different senses as obvious and hidden. Indeed certain signs are widely shared, others individually revealed after personal passages.

The spectrum of meaningful urban waterfront proposals around Europe includes many designs that incorporate similar symbolic references and form-generating principles, but in a rather piecemeal way: examples include allegorical symbols engraved on individual “wave-like” buildings, constructions metaphorically imitating the shape of the natural shoreline, floating island-like structures inside

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33 See footnote 13.
34 The dialectical relation between cognitive and subjective understanding of the edge’s sense—that is, one’s knowing and liking the built environment around water—demands separate analysis of the spatial meanings that each understanding generates. For this reason we must demarcate two different aspects of the same thing, of the overall meaning that stems from a coastal representational act: the endogenous and the representational meaning of a project. Once they are distinguished one from the other, the above-mentioned relation is transformed, through perception, into an active mental function.
water, and others. However, allegory is not the only aspect of the symbolic space, of course, that can participate in the communication of the representation. Colors, too, seem to have widespread symbolic uses in seaside architecture. Blue, for instance, appears to have a universal meaning based on synesthesia or common experience of the waterfront area, since it has direct reference to the water and evokes a series of thoughts, feelings, and moods. Other colors convey different meanings that carry separate symbolizations depending on the culture by which they are used: white, in this sense, can be said to correspond to the low-rise, calm, and interconnected volumes of houses near the shorelines of the Greek Islands, for example; but the same color seems to be loaded with negative connotations, especially in Northern countries, since it is associated with cold (ice, snow, etc.). Still others carry different meanings depending on context or use of the specific building.

Nevertheless, we will fail completely to recognize how far signs of the water-matter appear to influence the design process at all levels, and actively participate in the construction of the meaningful space of the urban edge if we continue to see them only with their rhetoric and poetic dimension, disregarding their pragmatic application—that is, if we do not attempt to assimilate them into concrete urban design proposals. A broader range of their influence on a contemporary urban condition will be presented in the next section and from within CHORA’s proposal for Aarhus’s waterfront.

water signs as urban prototypes: a design proposal

At this point, and before moving further to representational acts and the symbolic logic of the edge, we must explain a rather elusive concept and clarify what the water sign stands for in this thesis. The water sign is the intermediary agent between waterfront images and architectural concept. It can always be defined in the way introduced by De Saussure in the case of linguistic signs—that is, as a link between images and concepts—but, as language itself, within a specific cultural context. In the proximity thus brought about, waterfront image and architectural concept take on for us “the roles of the signifying-signified respectively” (Levi-Strauss, 1968:18).

The referential aspect of this image/concept duality has been put forward by Levi-Strauss in The Savage Mind, where he holds that the referential function is inherent in the structure of the sign and hence it consists of an intrinsic

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35 Saussure defined linguistic signs as having two aspects: that of signifier and that of the signified. For us the first aspect refers to the representing matter (i.e. form), the second to the represented notion (i.e. water signs included in the architectural plot/concept), and this definition will prove very useful for the study of our design paradigms later in this chapter.
resemblance. This is closer in principle to the thesis’s notion of water signs: except of (possibly) evoking emotional products, they

...resemble images in being concrete entities but they resemble concepts in their powers of reference. Neither concept nor signs relate exclusively to themselves; either may be substituted for something else. Concepts, however, have an unlimited capacity in this respect, while signs have not (Levi-Strauss, 1968:18).

The example of CHORA’s project, third prize winner in the Aarhus Harbor urban renewal competition [images 1.13-1.15], helps to bring out the difficulty with Levi-Strauss’s view on the image/concept duality, and provides a clearer illustration of the thesis’s position when it refers to water signs and the way such structures influenced by poetic evocation can find spatial allocation in a design project. Moreover, here architects act as narrators of what the edge may symbolize or represent, disclosing its signs as “urban prototypes.” By inquiring the language of a modern urban waterfront and its dynamic master plan, the designers explore modes for signs’ spatial construction in both a project’s notional background (questioning tools of representation) and its spatial organization (questioning the programmatic level of the project).

The initial decision for CHORA’s project is the creation of a new horizon for Aarhus: a line, a threshold, a clear mark dividing city and harbor, city and sea. The simplicity of this line is a new symbol for Aarhus, an invitation to reorganize its exchange with the sea, to create a perspectival vision of future dynamics.

As threshold, the horizon links marine life, a strong water-sign with a myriad of others interwoven like sea trade, oceans, vastness, with close-knit communities, domesticity, the dense mass of buildings of a city, land and agriculture. As a cut it separates more clearly the city from harbor (Cook, 2001:19).

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36 London-based Dutch architect Raoul Bunschoten is Founding Director of CHORA, an internationally known laboratory for new forms of architectural and urban design. Throughout autumn 2002, he chaired a workshop on Copenhagen’s development. The workshop served as an occasion to present his working method, developed through Bunschoten’s many workshops in cities worldwide and presented in his manifesto Urban Flotsam, a major outline of the CHORA methodology (2001). Bunschoten is a guest professor at the Berlage Institute, Rotterdam and has taught at the Aarhus School of Architecture, the Architectural Association in London, Columbia University in New York City, and other schools. His publications include Public Spaces and Stirring the City as well as contributions to magazines such as Architectural Design, Techniques et Architecture and Daidalos.
Hence, the first easily identified practical step of this work is rather a retrospective one: the designers of the Aarhus Horizon, in order to define and establish the proximity of the representational image to the symbolic concept associated, have resorted to an analysis of the existent composite identity of the site (Aarhus’s harbor in its cultural context), which is made of several signs, most of them water-related. What the proposal really does at this stage is to identify all these diverse motivational messages that are a necessary part of the content of environmental perception (Bonnes and Secchiaroli, 1995:136). Later, it specifies what each of them can signify (symbols, metaphors, analogical or direct connections with any sort of notion and function), while the Urban Gallery does not yet find any kind of spatial application, except for offering a new, meaningful hierarchy of these signifying parts that comprise the composite identity of the edge. To use their words, “the Horizon as an instrument is played by inserting elements from the Urban Gallery. This consists of a collection of programs, actions, events and objects [serving the role of our signs] that are grouped in a taxonomy of four layers: Branding, Earth, Flow and Incorporation” (Cook, 2001:19).

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37 It should be noted that what I here call “composite identity” is transformed by them into an “Urban Gallery” and is made of all these signs that, after consideration, are proved to be meaningful. That is, they are of certain spatial importance and able to establish connective links not only between the form and the representation of space but mostly between the questions set by the problematic in the first place and the answers designers want to provide.

38 Branding contains conditions of naming, marketing, creating identity, cultural production, memory, remembrance, creating values, and the communication of these values, images and imaginary conditions, narration, and scripting. Earth contains conditions of the land, waters, air, natural processes, ecological issues, and biodiversity, but also land and landownership, territory, and rights concerning the surface of the earth, as well as spatial organization. Flow is about money, traffic, and the displacement of people, goods, information, mobility, waste, and sewage—the economy of the site. Flow contains all processes that create flows through the Urban Gallery. Incorporation includes political
The water signs from Aarhus Harbor that the CHORA team identifies, collects, and uses are already loaded with meanings and various symbolizations, mostly emerged from the long history of the city's connection with its coastline. By this I mean that they are drawn directly from other kinds of languages—historical, cultural (like the Aarhus Festival notion), or other—that inevitably impose different rules and inscribe different characteristics on their constitutive nature from the ones necessary for the creation of a dynamic master plan of the area. The fact that they are not urbanistic signs in the exact sense of the word, but are instead blurred with rhetorical inscriptions, various messages, and social values sets a limit to their freedom to generate spatial forms. Moreover, there are no clear rules for decoding them, for playing this game of the Urban Gallery: there is no law to forbid designers to accommodate one sign in a specific spot of a specific layer instead of another. There is no straight handling of organizing the structure amongst the four layers of Branding, Earth, Flow, and Incorporation. This problem is instead addressed by the concept of “Engines of Change.”

Since water signs are decoded in different ways by various users who might prefer to read their properties through completely different organizational frameworks,
they sustain changes. Although the program or function of each sign on a specific layer can occupy the coastline independently, if combined with others, it creates

...new possibilities, engines of changes. The Horizon is a single path, a park, a traffic machine, a viewing terrace, a transferium, a new city Edge. These engines rely upon industrial expansion and development, the success of the Aarhus Festival, other developments such as new forms of urban transport, ecological awareness, the place of sport and outdoor leisure in city culture, reforms in education and new technologies, such as information processing and sewage treatment (Cook, 2001:19).

Symbol schematization and symbol semiosis

One overriding insight from CHORA’s research for coastal urban design proposals is that unless we read the entire issue of the need for meaning from the viewpoint of a poetic evocation, the Intermediary Space is operating with a fairly clear distinction of the system of meanings. Open to subjective interpretation, this distinction is made between, first, that which signifies (image, representation) and, second, that which is signified (thought, notion, mental association). If one accepts this ability of architecture and urban space to stimulate “emotional products” in the perceiving subject by facilitating the understanding of the represented symbolic sign and its formulative logic, while cultivating a state of synesthesia through its multisensory experience, then indeed there must be a psychophysiological space (Panofsky, 1997:30) that receives, creates and supports these states, feelings or moods while communicating the sign-symbol between the designer and the subject, between subjects themselves.

It is for this reason, therefore, that the Intermediary Space reaches backward into synesthetic tendency and forward into symbol: in one direction it becomes the user’s psychological and behavioral response (as we will see later in the Expressive Space chapter); in the other, it becomes a product of the semiosis of water and active imagination. This distinction is not really the affirmation of a paradoxical supplementation of the spatiality of Intermediary Space, but the spatial configuration of water symbolism as concrete evidence of the capacity of the user to let one thing stand for another in his experience of a design project.

This issue requires further consideration in and of itself. Is water’s schematization a rational schematization? Or is it, in another sense, a necessary, even sensible, starting point for a more pragmatic urban design proposal? These questions are meaningful for Intermediary Space that takes the forms of water signs as active parts of morphogenesis. For its premises, such a schematization can be inspirational for architects in two broad ways, the direct and the synthesized.

40 For more on this, see the relevant section in the later chapter on the Expressive Space.
The inspirational benefits of the first occur through literal interpretations of seaside motifs in the end product. So, for example, the designer can make a direct visual interpretation\(^{41}\) of a “liquid form” (the wave-building, for instance) projected upon a building’s form. In the same direct way, a designer can make a dynamic interpretation, in terms of communicating, always by means of the form, just the essence of the sign, the spatial ambiance that is transmitted by what he/she finds meaningful. The second and most complicated possibility for the use of water’s schematization, the synthesized one, occurs when the architect, influenced by a variety of rhetorical means (poetry, literature, cinema, photography, etc.) that usually project the timeless relationship of the city with its edge, is motivated to narrate his/her own approach on the rhetoric of place aiming at an intelligible design proposal for the specific site. In this clearly personal passage, the designer first writes the architectural language employed, articulated by his/her own skills, faculties, and beliefs, before transforming it into a three-dimensional image. This (pre)design process, as a communicative vehicle for an experimental and creative design practice, is beneficial not only for the spatial knowledge of the sense of place, but mostly for understanding it.

Both the direct and synthesized inspirational ways are being used to show the next and more rational aspect of the problematic. Contrary to the notion that the practitioner who first “writes” his architecture is not a practitioner at all, the fact is that both ways are capable of showing, for example, how water schemata can assist the production of architectural elements, and at the same time can be linked with aesthetic strategies and judgments, and therefore bring rhetoric closer to praxis, showing that, by neutralizing the demands for a pragmatic production of space, we can project their almost metaphysical essence onto the built environment and challenge human perceptions.

Moreover, the position of enriching the urban edge with the poetry and the after-effects of its signs supports the designer with a set of meaningful rules in order to handle an intricate thinking procedure for the edge. Thus, the thematic purposes of these schemata should lead at this point to a certain categorization and a more certain rehabilitation of their spatial meaning inside the urban design process. It is only for these reasons that I am tempted to proceed with a brief sketch of “water’s schematization” in terms of the psychic experience of the produced image and sort the following ways of seeing it:

\(^{41}\) Studies of this kind of visual communication from sign through built form to user cover an area extending from Peirce and Morris’s iconic representation to Eco, Metz, and Volli’s exploration of space’s semiotic power. However, following the last developments, this research moves beyond Peirce’s iconography and recognizes more complex series of signs identified as existing on the edge, like symbols or notations. Thus, it comes to the visual study of the architecture of the edge through various kinds of representational acts, each one expressing the sign differently and with a different degree of communication to people.
i. **the semiosis of water as a dynamic imposition**: this category presents constructions on the edge that, in architects’ efforts to impose a clear architectural identity, dominate the area with their size and strong symbolization of a water notion. Once considered clearly postmodern gestures bordering on direct depiction, today they acquire a more flexible form (*eidos*) apart from the symmetrical patterns or strict rules of order and balance presented as sculptured large-scale buildings near the shoreline. This approach usually elevates the cultural beliefs for a symbol above the logic of the urban synthesis, making sometimes the specific object emblematic and a landmark for the city. One can think of the shipbuilding in Valencia [image 1.16] as an imposition of a direct depiction, the new opera house in Oslo by Snøhetta [image 1.17] as an analogic depiction of the idea of “iceberg,” and many others.


ii. **the semiosis of water stabilized into an urban image**: this approach finds transcendental elements in the creation of the *picturesque* near the coastline. If we want to turn to those positions that prescribed and supported this “picture making” attitude, which was followed by many architects especially during the 80s, we must refer to Edmund Burke’s (1999) investigation of aesthetic qualities and his writings for A *Philosophical Enquiry into the Origin of Our Ideas of the Sublime and the Beautiful*. What is interesting in Burke’s psychology for our research is that he overlooks all these sensible qualities that are useful to the user for aesthetic pleasure and focuses on the physiological or psychological
mechanisms needed for these qualities to achieve their effects. Design approaches that fall in this category can better be described as artistic gestures and do not gain much by adopting and following an architectural plot. Thus they do not favor any specific narrative function and the edge is rather decorated with artistic and superficial rearrangements of coastal characteristics. The overall composition aims at the creation of a static urban image without setting narrational encounters and with no significant effects on the notional engagements between the perceiving subject and the arranged objects in space. Examples of this category include the Mazzorbo waterfront and the port of Genoa.

iii. the semiosis of water as a symbol of place’s inner life: Langer’s theory can be invoked here to explain why the meaning of the seaside “form” from these approaches is stretched beyond its common connotation of shape. Projects that fall into this category, in fact, recognize a wider sense of the word form than the geometric sense of the physical shape. This reading introduces the idea of the “design language” as a pattern that orchestrates the coastal objects of the proposal as obeying the same formulative logic and as being always pregnant.

42 Except for Burke’s Philosophical Enquiry (1999). Readers who want to see more on the Neo-Platonist approach to the picturesque can refer to W. Hogarth’s The Analysis of Beauty: Written with a View of Fixing the Fluctuating Ideas of Taste, 1971, Scolar Press, Menston. Both authors deal mostly with landscape architecture and for this reason I just mention them in footnote.

43 This classification is taken from Langer’s essay “The Importance of Form,” which forms an opening chapter in her book An Introduction to Symbolic Logic (1937).
with meaning. In this way, these proposals respond more harmoniously to the provided settings and are considered to employ a signifying chain of coastal characteristics that transmit meaning and sense. However, their push towards symbolic intermediaries has to be negotiated against the premise of the isolated object. Only unifying proposals that make use of patterns like interchanges in medium, scale, states of space occupancy, or experiences can indicate this chain sufficiently. Examples of projects that are “pregnant with meaning” include Morphosis’s competition for Berlin-Spreebogen [image 1.22] and Seine’s riverfront [image 1.23], or the research-by-design work for Riga studied at the beginning of this chapter [images 1.01-1.08].

iv. the semiosis of water as pragmatic achievement: In the most well-known waterfront projects in Europe, such as in Hamburg [images 0.05-0.07] or Amsterdam, it is common practice to focus on the technical dimension and manifestation of the project as achievements of the new age. This accounts for impressive structures that are indicative of the modern high-tech ways of building near water with less interest in the architectural thought communicated, the sense creation, the psychological effects, or the aesthetic judgment. What saves this category from the passivity of the everyday experience is the symbolic content it carries and the established links that tie the user with the employed activity patterns. For this, the schematization of water can bypass the prevailing definition of “technical approaches” and ascribe
meaning to them. But above all, it is capable of throwing into relief the contradictory characteristics—technical/poetic—that haunt most of the pragmatic proposals. We can include in this category projects such as the Aarhus Horizon [images 1.13-1.15], BIG’s proposal for Slussen in Stockholm [image 1.24], or the design for the Ruoholahti area in Helsinki [image 1.25].

v. the semiosis of water as emotion creator: Despite the fact that this issue is more extensively studied in Chapter Three, Expressive Space, it doesn’t lose its effects on morphological aspects and chance to constitute a category by itself. Here we deal with proposals (or parts of proposals) that are designed in such a way as to employ the water-notion, when projected upon the form, to develop after-effects and emotional products to the perceiving subject. Designers are more interested in the communication of these feelings than the integration of the structures with the setting and most times they argue that without these feelings design can be dead. Most of these proposals are purposeful thematizations (Sternberg, 1999; Gottdiener, 1997) for parks, floating structures and participatory events in the urban waterfront area intended to challenge the public realm, they preserve a rationale behind them (e.g. the functional dimension). Their design processes offer the necessary clues for moving attention from the pragmatic way of producing coastal space to the interpretation of the emotional “design for meaning rooted in indigenous character” (Sternberg, 1999). The urban edge can provide a medium for such emotional states as seen in Gehry’s work [image 1.26] or the Blur building project [image 1.27].
All of the groups considered thus far have taken abstract and intangible, rhetorical and poetic, sentimental and imaginative water-based ideas as their starting point. But it is clear that the proposals contained within these groups are not equal in the predominance of a rhetorical line of thinking against their pragmatic application and vice versa, or in the opportunities contained in them for spatially constructed meanings. Comparative analysis between various proposals of all representative kinds is part of this research’s methodology, but this “superimposition” also serves the extraction of design guidelines well overall. It is this belief in the efficacy not only of the development of Intermediary Space but also of the other two types that will generate what follows in this chapter and effort in general. So, after these thoughts, and in what will follow, more techniques and technologies of similar architectural representations will be developed, but I urge the reader to see them only as possible guidelines, as design recommendations and not as fixed, deductive attestations of solutions.

To go back to our methodology, the critical issue in the Intermediary discourse is, thus, why this research needs to transform the edge into a symbol (or sign) or into a representation of something that has and has not a certain spatiality. What type of forfeiture of architectural rights and what loss or gain does such a transformation entail, and on what grounds can it be legitimized or pragmatically authorized? Regardless of the meaningful/meaningless dichotomy or the self-legitimated/unjustified dilemmas of the traditional urbanistic approaches for these areas, the issue here is how can a structure or a formulative logic be made to stand for a notion, or sign or message originated be water’s presence? How is the
symbolic space of the edge possible as a pragmatic experiential structure rather than a rhetorical aspect condemned to a mere textual expression?

It may be claimed that the thesis has sketched possible responses to these questions by the formulation of the schematization categories. However, it is not clear whether these ways can generate tools for the evaluation of the meaningful space of the edge. In light of the discussion above, the thesis must ask the following question: is it not the transformation of water’s semiosis into city’s morphogenetic logic that is at stake here, and hence the creative possibility of such adjustment that the Intermediary Space must address? Of course there are endless answers to this open question, so I have to make the task more manageable by looking for a design strategy that has the potential to organize the derived spatiality from this force and that seems in itself to be an experimental process of inquiring the nature of meaning in the architecture of the urban waterfront.

Langer’s theory of symbol as communicative vehicle

If this thesis argues that we are at the threshold of the expression of the spatial meaning of the symbolic order in urban design, and in order for the reader to understand from the connection presented above the direct consequences of Susanne Langer’s theory of art, which is based precisely on the notion of symbolic communication, it seems now appropriate (if not necessary) to refer to her discourses on symbol and form throughout her major works, *Feeling and Form* (Langer, 1953) and *Philosophy in a New Key* (Langer, 1957). Due to the oscillations between a technocratic way of dealing with things and one more closely attached to the creation of meaning, and Langer’s insistence upon what is called “symbol as communicative vehicle which gives form,” an argument is needed to legitimize the projection of the psychospatial notions—an argument that will render the design process as an active attitude of allowing the water symbols to intermediate within the perceiving subject towards various aspect of the consciousness.

Langer offers to the architecture entrapped in the conceptualization phase the liberty of a possible spatial accommodation in a three-dimensional space as she raises works of art (including architectonic forms) into a representational symbolic expression, in the sense that architecture somehow captures and represents (or articulates) some aspects of our experience that cannot be expressed in words. She

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44 Here I use the term “pragmatic” in the Morrian sense (and I will keep doing so) since I am referring to the way the symbol-as-sign influences users’ perceptual process. In his book *Foundations of the Theory of Signs* (Chicago, 1938), C. Morris uses the term pragmatics to refer to the relations between the sign and those who use it, relations that inevitably incorporate psychological and sociological factors within intentions and reached goals.

45 It is my strong belief that, even implicitly, in Langer’s writings the perception of architecture is raised to the most immediate and expressive symbolic forms of art, and thus of all representational forms.
designates, in a schema of an analogy with music, her sophisticated ideas for the object (as perceptual stimulus) to perform a symbolic function: for this, one must not disassociate the shared meanings behind the features (forms)—architectural, geometric, urbanistic, etc.—from the logic of their symbolic structure. Like music, the logical form of an object, she argues, is the way in which this object is constructed, the way it is put together. In this viewpoint, if the Intermediary Space is questioned here under the prism of its ability to cultivate meanings and offer a recognizable form to the seaside structures, it is only because, analogically transferred, the perceiving subject is supported by shared “aspects of the so-called ‘inner life’—physical or mental—which have formal properties similar to those of music—patterns of rest, of tension and release, of agreement and disagreement, preparation, fulfillment, excitation, sudden change” (Langer, 1957:228).

One already foresees the unease to which a theory about music, addressed to describe intangible properties, is eventually transformed into a theory applicable to arts and architecture—that is, finds a kind of spatial accommodation. Langer, however, following a logical series of explanations and analogies between various rhetorical means, manages to do so. For her, art may be “the creation of forms symbolic of human feeling”46 (Langer, 1953:40), but it is architecture that is the science mostly concerned with the symbolic expression of human life and “the image of life which is created in buildings” (Langer, 1953:99). One foresees too the difficulties of the progression from music to art to architecture to urban design, which finally leads to the creation of legitimized and recognizable forms in strong relation to the identity of place. For legitimized and recognizable design practice and the sense of place heretofore have many times been the targets of dispute, mostly from people expressing the common and orthodox urbanistic approaches against water’s rhetoric. On the contrary, Langer’s theory will be used here for the rejection of all these precautions, objections, and disputes. Here of course I have to stand up and declare that I have conceived water as a communicative vehicle for the design of the edge. And I am going to do so following the footprints of Susanne Langer, with whose philosophy of symbolic logic I find I can go almost all the way.

In 1953, Langer explored how feelings can be expressed symbolically by various forms of art, but without mentioning anything about a specific application of her theory on architecture and urban design. Feeling and Form was published and her ideas about “symbolic communication” started to spread. From this thesis’s perspective, even if she never clearly talked about urban space, her arguments fit well in the production of space (and especially one near a source of signs as the

46 In order reader to have the context in which this creation refers to (talking for Art in general), I quote from her book: “…A work of art ... is more than an ‘arrangement’ of given things—even qualitative things. Something emerges from the arrangement...which was not there before, and this, rather than the arranged material, is the symbol of sentience” (Langer, 1953:40).
water itself), having as their only support the fact that she indeed recognized the powerful impacts of a symbolic landscape in general on human emotional states. For this reason she quotes Otto Baensch in the beginning of her book:

...The mood of a landscape appears to us to be objectively given with it as one of its attributes, belonging to it just like any other attribute we perceive it to have...We never think of regarding the landscape as a sentient being whose outward aspect ‘expresses’ the mood that it contains subjectively. The landscape does not express the mood, but has it: the mood surrounds, fills and permeates it, like the light that illumines it, or the odour it exhales, the mood belongs to our total impression of the landscape and can only be distinguished as one of its components by a process of abstraction...(Baensch, O. in: Langer, 1953:19).

In these words exists a confession of a form-making dynamic and an aspiration to reveal the hidden mood from within symbolism’s spatial meaning. Thus if we consider as sources of possible design recommendations the works Feeling and Form (1953) and Philosophy in a New key (1957), it is not only because of the fruitful grounds they offer us for the further development of the Intermediary Space of the edge, nor even because Langer’s thoughts weigh heavily inside the field of symbolism. It is above all because these studies support my argument of the potential for human perception and feeling to be guided and expressed symbolically by the coastal built environment.

In order to follow this movement/progression in the texts of Langer, let us choose as a starting point (among others that can possibly be adopted) the difficulty that is presented in the first place and was traced in the introduction of this thesis: inevitably, different people will have different feelings when confronted with the same form of the urban synthesis near water. This can be as true of an actual urban setting as it is of a painting of a waterfront or a theatrical play. Despite all its disguises, this difficulty is inherent to all kinds of architectural expression: from interior to urban and landscape design. To overtake the subjective obstacle, I will adopt the position found in the work of the American philosopher John Searle\textsuperscript{47} and his theory of reference, trying at the same time to interpret his argument.

Adopting Searle’s view based on the theory of descriptions, we can say that in the urban context, a morphological description is linked with an indefinite range of definitive descriptions and not with just a single one. The form of the urban landscape functions as “a hanger” onto which the descriptions from the perceiving subjects are constantly suspended. Like Searle, urban designers can avoid the above-mentioned difficulty of the subjective obstacle, since users can have their

own different ranges of descriptions for architectural objects, being at the same
time in the position of recognizing the morphological descriptions and thus able to
refer to the same urban context, layout, or setting.

However, another way of resolving this difficulty is to use Langer’s way out of this
labyrinth and adopt her position that the urban forms we are talking about and
want to construct must only be seen as “unconsummated symbols” that
communicate something about the morphology of a notion but do not have deter-
minate and fixed meaning, being themselves objects of personal interpretation. By
this I mean that because they belong to the meaningful (notional) territory of
space, as this is structured by the Intermediary Space along with the other two
spatial domains, and since such a space always entails personal negotiations,
difficulties may be overcome. Inversely, that which regulates subjectivity of feelings
(for example, the liking in people) and therefore is capable of varying from one
setting to another, from one culture to another, belongs to the message
communicated by the form itself.

Now from the outset of Langer’s research presented in these books, we
simultaneously accept this difficulty, experience it, and utilize it for this
communication. It is in this sense that we extend Langer’s theory to cover urban
design near water to produce unconsummated symbols and provoke emotional
reactions in those who experience such projects—without forgetting that usually
these are different reactions from different individuals or even in different settings.

Thus one may speak of relating the whole matter firmly to people, of the user’s
individual interpretation or of a participant’s perception that precedes the idea of
the used architectural language in general. Truthfully, there may be two crucial
viewpoints for conceiving the Intermediary Space of the edge. The first is expressed
in a rather imperative way (coastal morphology should be like this, and that…and
that)—a seductive view that many contemporary trends, such as pragmatism, try
to impose and particularly aim at. In the second, more hidden, viewpoint, the
meaningful human perception is fostered and strongly maintained, including the
perception of water’s representation. In this second viewpoint, symbolism,
rhetoric, notion, and human emotion are de facto and de jure tied with the
tendency to comprehend objects arranged along the shoreline as artistic creations
(and again I am using this word in the most broad sense possible). Langer’s theory
acknowledges this remark: “when forms symbolic of human feeling are created,
then we have something which we recognize as art” (Langer, 1953:153).

In what follows, the interpretative reading of the above belief will translate
Langer’s position in the function of the symbol as a communicative vehicle and will
spatially translate it under the rubric of the coastal symbol’s schematization.
In the previous section, *Feeling and Form* was traced as the source of an exploratory symbolic attempt to tie the design of waterfront settings with actions intended to communicate intentions (gestures). For the development of the coastal image, the structural genesis of the Intermediary Space is developed approximately following in Langer’s footsteps and her work, or at least at those traces that express morphology as a representational theme. *Symbolic Edge* states its explanations of how to employ a water sign so that morphology can favor a better understanding and a clearer perception from users of the notion under representation.

This time, morphology is to be seen from the scope of its own “formulative logic” by means of the architect’s acts of “liquid representations.” The spatial representation of a symbol’s semantic facts was brought into functional relation with the experience of urban space by theorists like M. Gottdiener (1983, 1997), M. Krampen (1979), and A. Lagopoulos (1975, 1992). And yet, Lagopoulos rather supports this view and argues that the semiological aspect of this act can adopt two types of approaches:

...one of which explores the mechanisms of the creation of the physical space. This creation sets out from a set of values (ideological level), which, if we isolate the functional level generally, define a set of functions. The latter, which belong to the signifiers of the signified values, are translated into forms. These forms, in turn, become signifiers of the signified function. One part of urbanistic and architectural design falls under semiology” (Lagopoulos, 1975:207).

Hereafter, following the prospect of Intermediary Space, the act of performing water representations, being rather manifold in its nature, belongs to this latter aspect. And despite my attempt to clarify some of them, I will persist in thinking, like many theoreticians, that despite its pragmatic application to urban design, the act of “water schematization” avoids neither criticism nor subjectivism. After all, the use of water as communicative vehicle, a rather popular and conceptual device (as a signifier), can be included in three fundamental gestures:

1. **gestures that aim at transferring meaning or reference from one major and characteristic compound object of the problematic** (the water-matter in its

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48 The formations of these “gestures” now tend to look like categories of representational acts, despite the author’s initial effort to keep these as flexible and free as possible. However, a categorization quite necessarily needs at this point to “index” and present them in a more communicative manner.
conceptual or material form) to another. This reduces the conceptual dominance of the first object to a notion communicated all around the composition (in a piecemeal way or even individually), and it ends by confusing the description of the endogenous and representational spatial meaning.

By this I mean that the adopted notion is first to be transformed into an architectural design concept that holistically regulates the production of the form (*eidos*) with exclusively inner formulative rules, and afterwards to take the form of a representational image with strong impacts on the subject’s perception. Endogenous meaning or the tendency of the object to carry endogenous meaning is missed in its necessity as soon as one attempts, as gestures of the New Waterfront Era (Breen and Rigby, 1996) have done in recent decades, to account for it from an external, detached point of the sense of place – that is, from within contexts alien to a place’s atmosphere and unique identity. This specific meaning (i.e. the endogenous) is the requirement for a meaningful and sensible representation.

The Stevedores Ship Information Center in Valencia [image 1.16] offers a simple example. It is about a single coastal object that induces the direct transfer of reference to the perceiving subject, since in water’s schematization it finds a seductive attempt for a distinguished architectural morphology—a literal representation. The architects in effect employ the ship notion as a communicative vehicle to create a static, concrete image: here the act of understanding the coastal form which the designers eventually choose to offer for consumption, promotes a single and dominant route of interpretation to be followed by the human mind. To comprehend the structure of a ship building,
the form of a water-related idea, is to move from it towards its spatial accommodation without losing any of its compounding meanings but rather stabilizing them into images and finally into a building with a very specific function and an emblematic position along the shoreline.

ii. gestures that aim at misleading the observer and make him conceive a compound object of the urban synthesis (a structure in its conceptual or material form) as if it were a major and characteristic compound object of the problematic (the water-matter in its conceptual or material form). To the main two aspects of meaning (endogenous and representational) into which the morphology governed by Intermediary Space is separated when perceived and interpreted, this second approach now adds the intervention of an “as if” parameter represented by analogical connection with the natural element.

That is to say that the alliance between characteristic visual images (of the waterfront area) and the endogenous meaning gives rise to a certain image that establishes itself as one belonging to the coastal place, projecting itself upon the form of a building. Only through the analogical connection, in which water’s schematization is envisaged in material terms, and its linkage with the representation of an image does a water-notion function as communicative vehicle. Therefore aesthetic judgment cannot detach itself from that construction of spatial meaning that encapsulates the sign, the transmition, and the representation all together. Some indicative projects of this category could be the research-by-design proposal for Pounta Peninsula [images 1.33-1.40] and Wetland [images 1.28-1.32].

Pertaining to the coastal landscape, Wetland: An Urban Solution to Living with Water illustrates this second category of approaching a composition designed “as if” it were something else—a water-related theorem in that case. In the third section of Agua-Water (edited by Herrero & Munoz, 2001), which deals with the transfer of water notions to architecture and urban design, the editors include a project that demonstrates how thoroughly an architect can structure intermediaries, at least on the level of the employed skills and sensibilities during the design process. Turning to the concept of analogical connections, in Wetland one discovers that it is “by analogy that one thing can represent another which does not resemble it” (Langer, 1967:30).

This operational plane is explored by the Intermediary Space, and this was partly the main reason for (re)awakening this specific conceptual part of the meaningful space of the edge. And here, for Wetland, it delimits the function of the “water symbol”: that is the symbolic function of what Archimedes’s theorem signifies for the designers as a form generative device. In this sense, his proposal that a certain quantity of water can be replaced by an object of the
same weight acts as having symbolic power on the formulation of the architectural thought, since it strongly reflects the water notion in it. Wetland design process must be seen as functioning in the symbolic order, delimiting the “water symbol” with greater efficiency than it does at the Stevedores Ship Information Center [image 1.16] since the latter is limited to a piecemeal attempt at a direct projection.

iii. gestures that aim at (mutually) displacing meaning or concept from one major and characteristic compound object of the problematic (liquid element or urban structure) to another. Thus, after discussing the symbolic acts of the first and second category, which are considered under the act of “reference transfer” and “analogical connection” (issues clearly distinct from the “comparison process” presented here), we proceed now with this last and most difficult to be transformed into a “mode” of representation approach. Here, by tackling comparison between different characteristics of the problematic, an attitude connected with the concept of association, the process of morphogenesis places a separation with what the symbolic sign expresses by itself. Instead, it inquires a mutual exchange of meanings (comparison or extension) in order for the perceiving subject to interpret the coastal composition in a different, representative, way.

Therefore, in order to avoid the direct reference to symbol, the architect can choose to follow a comparative path towards the creative bridging of various intangible symbolic notions (such as a concept, a human condition, or even a particular urban/water quality or value like a cultural belief that pertains to water enclosure, proximity, or relativity for instance) and various tangible ones (such as a visual harbor image, a material object like a house as a boat). This conciliation takes place through purely comparative acts during which the intangible/conceptual and the tangible/visual may overlap as impulses for the initial design intentions and each one detects and holds only the virtues, structural principles, and qualities of the symbol signs of the other. Take, for example, the form of a natural peninsula or an artificial dock: both are longitudinal structures in the water, and both project the characteristics of segregation, proximity, and enclosure from the water around.

This last attitude is based on a peculiar function of human perception (Eberhard, 2009; Hendrix, 2006) that unites and synthesizes the experiences derived from different meanings and different sources of formulation, thus creating new data in the form of symbols. This displacement of a concept is illustrated by the Blur Building [image 1.27] designed to equip the lakefront of Yverdon-les-Bains in Switzerland for the Expo 2002 world exposition. The experiential approach
adopted by architects Diller and Scofidio for the specific waterfront site is considered one of the most published examples of the representational attempts. In fact, and from the scope of the Intermediary Space’s development, it seems to create a broader general view of the specific third and most complicated category of symbolic acts that corresponds to an *extension of the notion of the water’s birth*—that is, to the cloud.

In this *communicative approach* to the edge, inspired by Langer’s own approach to symbolic logic and developed by means of three categories that partly had to remain sketched and not precisely defined, Intermediary Space cannot be reduced to a mere perception of naive and simplistic projections like the ship building, for instance. On the contrary, it aims to provide a position that can value the overall experience of the edge, and a conceptual enhancement for the understanding of its formulative logic. *Water’s schematization* is the object in which the designing subject, as an architect who models his/her own faculties and sensibilities for the future of the coastal area, becomes the builder of those sensibilities in accordance with the spatial meaning(s) that each time recalls at the specific area. Thus, it is a schematization interwoven with the designer’s own skills, faculties and creative insights on the spatial notation and the ideas projected on the symbolic form.

A different sort of case arises when the issue of water’s schematization evokes a signifying system made of a group of intentioned relationships (*schema*) and the set of objects (*realm*) that this group regulates. The following design proposal for the spatial organization and design of the peninsula of Punta in Attica is construed as exploring a notational logic in order to point up the formulative implication of the *schematization* and the *signification* of the water sign within the recognizable logic of the composition.

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49 Their architecture, in general, can be primarily described as a poetic and prolific one while giving priority to the spatial representations of symbols and metaphors as means of architectural creation. Although some of their buildings come across as literal interpretations, the point of departure of their creative endeavors is usually purely rhetorical.
1.5 a design proposal: the Punta Peninsula

Project name: Urban Network of Seaside Currents: The Punta.
Type: Research study. Spatial organization and urban design for Punta Peninsula, Attica, Greece.
Client: Marko Co., Greece.
Study period: September 2000 - February 2001
Architectural and urban design: Konstantinos Ioannidis, Ageliki Kolia.

Total area of the peninsula: 105,030 m²
Total area of the blocks: 28,970 m²
Public uses: 76,050 m²
Squares and pedestrian zones: 42,630 m²
Natural landscape: 33,426 m²
Housing data: 26 square blocks, total area 17,180 m²
Communal uses data: 8 square blocks, total area 5,690 m²
Harbor facilities data: 3 square blocks, total area 6,100 m²
The study area of this project is the Punta Peninsula in the region of eastern Attica (Greece), located between two bays populated with residential units. The site has no formal urban planning and design but possesses a rather significant historic background.

*background and context*

images 1.34, 1.35: Aerial photo of Punta Peninsula in Attica and the view near the northeast edge.

image 1.36: *Punta proposal.* Spatial organization of the study area.
The spatial uses around the site are mostly residential, while the commercial harbor of the area is located at the borders of the peninsula, giving its name to the whole region. During the 1960s and 70s, and in a relatively short time, the site was transformed from an active region to a place of rather marginal value inside the core of a protective historic area. With the exception of some historical remnants close to the western edge of the study area, and some of the harbor building to be preserved, the material traces of the past no longer impose any clear ideological message to be received or enriched.

The same applies to the surrounding urban landscape. Generally, the man-made environment of the area is not considered particularly informative or influential in any way because its character is rather peculiar and simultaneously neutral: it is constituted by individual residences without any morphological connection, resulting from a non-principled, unorganized, and unverifiable building process, generated from the accidental and the unpredictable to the extent that repetition and differentiation are not foreseeable. The project is a call to explore how these transformations can co-exist with the natural element of water and propose ways to acknowledge the water as a design tool for the future organization of Punta, but also to acknowledge these factors as active determinants for the construction of spatial knowledge. The interconnected schemes propose an examination of a possibility in response to the concept of “meaningful space” that is dependent on the notion of the edge of the Edge, that is the “line of the coast.”
image 1.38: Punta proposal. Master plan.
images 1.39, 1.40: *Punta proposal*. (From top to bottom) Plan of a residential neighborhood and model with seven housing units.
1.6 theory of notation and the projection of the sign

Space may be the projection of the extension of the psychical apparatus
Edward Casey (1998:457)

The question remains, how can the aforementioned categories of a symbol’s schematization be concretized in material terms related to form? What formulative modes and processes make this concretization possible? Let us speak now of any possible concreteness in the creation of “places with meaning” along the urban edge and let us use quotation marks to serve as a precaution, since I do not really want to expose water’s rhetoric to the full danger of a strict pragmatic application. A conceptual background should be retained to the end. What would this “concreteness” look like then? Without wish to prejudice the following sections, the morphology of the architecture of the edge that pertains to the spatial translation of the term “concreteness,” would be that of the spatial study of the meaningful in the form of projecting semiotics on geometry, architectonic arrangements, space, and image-creation—that is, a form mirror that would fully reflect the ultimate element located just in front of it.

These questions on concretization lead into the conditions of structuring places with meaning. There are epistemological claims from the “theory of notation” (Goodman, 1976, 1992; Fisher, 2000) that are related to what the user often perceives and makes sense of while experiencing a space. This latter view is the central topic of this subsection, which aims at providing theoretical grounding for some strategies of sense-making and their assessment. It mainly focuses on the architect’s representational strategies for the coastline with a special emphasis on a place’s notations. In fact, Nelson Goodman’s theory of notation is evoked to give a meaningful description of the design project as a symbolic construct.

Goodman on the system of signification

This section builds upon the work of Nelson Goodman, whose work is considered representative of one branch of symbolic space studies that focuses on How Buildings Mean (Goodman, 1992) and on intermediary factors of form-perception interrelations. Goodman proclaimed the necessity for a conceptual background in design projects that is able to generate the forms and allow the perceiving subject to read the architectural morphology from another frame of reference—that is, from a denotation and exemplification process that identifies, following Goodman, a container called schema and its contained items called realm. These are predicates that are rarely approached in isolation but instead form a system of signification. In other words, the system is established when the family of rules that sort the items is submitted to the realm itself (Goodman, 1976:72). Inquiring sign-supportive environments is, according to Goodman, a crucial issue that
demonstrates how such systems set the conditions for the generation of a formulative logic, which in turn produces all the contained objects of the composition.

This possibility gets off the ground after making a distinction between a design practice mostly informed by precedent, habit, or convention, and one that is aimed at the exploration, or creation, of new prospects. In *Languages of Art* (Goodman, 1976), Goodman situates all symbolic operations inside the general framework of the referential function during which a symbol refers to something. This stance differs in terms of investigating the forces that affect types of artistic forms: he emphasizes that how a sign-supportive work refers—whether it denotes or exemplifies, what it denotes or which of its features it exemplifies, whether it does so directly or indirectly, literally or metaphorically—depends on the system of *signification* of which the work is made. Furthermore, signs differ from one another according to their different syntactic and semantic rules.

If this is so, the entire issue of a sign-supportive environment introduced at the beginning of this chapter must be defined on the basis of what is to be portrayed in an urban design project. At this point we need knowledge of water’s representation itself. Goodman gives the simplest view of representation: “A represents B if and only if A appreciably resembles B” or “A represents B to the extent A resembles B” (Goodman, 1976:3). Similarly, according to Palmer, “a representation is, first and foremost, something that stands for something else” (Palmer, 1978:262). In both definitions, the description for our case implies the existence of two functionally separate poles: the *represented water sign* and the *representing matter* (spatial feature). Henceforth, it becomes necessary to think both of *signs* and *forms* that somehow govern the desire for a formulative logic in the development of any coastal structure or spatial formation.

In this sense, the task of the representing matter (form) is to reflect some aspects of the represented sign—in some fashion—to exemplify the interpretive function of the *place with meaning*, which this thesis discusses from the beginning. No matter what aspects of the represented matter (sign) are to be modeled through the process of morphogenesis, or what aspects of the representing matter (form) are going to do the modeling, there must be some correspondence if the urban folder is to denote the water sign. To understand this and assess the potential implications of their interpretive operation for the spatial understanding of these places, therefore, we have to let categorization enter the problematic in order to specify the relation between the production of the form and the messages it denotes. It would be tempting—and to a certain extent legitimating—to clear out what is to be portrayed in a sign-supportive design that may offer a framework to proceed. Here, Goodman offers critical steps with his concepts on the referential function. On these points, and to investigate how sign-supportive factors affect the
the Intermediary Space

design process, the concept of water’s representation is further broken down into five layers.

First, what the represented sign really is. This is the keystone for the formulation of the logic that generates the contained objects (realm) and evokes the main design concept of the schema (set of alternatives) that organizes them; it thus characterizes the whole system of the representation. Second, what the representing morphology might be. This conceives of the employed morphology in terms of creating forms that designate the inner structure of the logic instead of promoting a specific fashion (or –ism) to impress the eyes without the possibility of heightening the user’s perception. Third, what aspects of the represented water sign are being modeled. Such aspects can be seen as the scaffold of the intermediary function, since their perceptual properties will also condition the spatial experience and the conveyance of the symbol stimulus. Fourth, what aspects of the external manifestation are going to do the modeling, in terms of the materials, colors, and other visual characteristics such as the overall geometry, combination of volumes, etc. And finally, what are the correspondences between the two poles (i.e. sign and matter). This latter issue is the most intangible one and consists of the cohesive combination of the other four determinants in the design process. The inherent difficulty of the communication of meaning in sign-supportive locations departs thus from this last aspect.

Analyzing these aforementioned layers of representation, it is clear that if they are transferred so as to refer to the design practice, and if an object represents another object, then it “must be a symbol for it, stand for it, refer to it; and that no degree of resemblance is sufficient to establish the requisite relationship of reference. Nor is resemblance necessary for reference” (Goodman, 1976:45). Nevertheless, this ground is exactly what Intermediary Space provides for. In this regard, as Goodman has claimed, we may say that “Blur Building [image 1.27] represents a cloud” is the same as saying “Blur Building denotes water’s birth,” but not as “Blur Building resembles water’s birth.” “Denotation is the core of representation and is independent of resemblance,” he argues a bit later on. But, as a sign-supportive project, the sign of water’s birth is only present in the end product, where it can be represented in different ways.

Such representations, through denotation, are of limited communicative strength, as most people either do not understand or are not aware of the architectural thought incorporated. The problem seems analogous to the reading of a diagram or a musical score where the creator tries to represent a mental structure in a symbolic medium. In this sense, the architects of the Blur Building try to represent a possible spatialization of a part of the coastal imaginary by inserting architectural and spatial tools such as the symbolic morphology and the cultivation of specific spatial relationships between the perceiving subjects and the object of representation (for instance patterns of movement, experiences, facilities, actions,
etc.). Since “nothing is ever represented either shorn of or in the fullness of its properties” (Goodman, 1976:49), the Blur Building cannot represent everything about the water sign of the cloud, unless the Blur Building is the copy of the *cloud* itself (in this way, the Blur Building is no longer an interpretative representation but an over-simplified and direct spatial projection of a natural element without the possibility of cultivating imaginative negotiations in the subject’s mind). In the Intermediary reading, however, the *Blur Building* never represents merely a *cloud*, but rather water’s birth as cloud.

At this point, I will not elaborate further on the issues of the *denotation* and *resemblance* of the coastal morphology as a discussion influenced by Goodman’s line of thinking. Instead, I will simply note the following in order to avoid making the Intermediary Space too much a “conceptually/notionally perceived” issue: the profound difference of this dipole is diffracted along, without being scattered around, a certain spatial route. Given a sign-supportive waterfront area with specific representational projections like these of fluidity, reflection, wavy formations, enclosureness, etc., there must be a corresponding and representing ideal morphology with some architectonic elements such as disordered volumes, glass surfaces, floating objects, island-like formations etc. to represent respectively the given fluidity, reflection, wavy formation, and enclosureness.

The term “matter represents sign” actually means that the arranged disordered volumes represent the sign of fluidity originated by water itself, the extensive use of glass surfaces may represent the reflection attribute of water’s surface (extension of this sign may also include the concept of mirroring and lots of others),
a floating building may make reference to the notion of resting on the surface of the liquid element, and a surface encircled/surrounded by water may refer to enclosure/segregation. In this case, the last aspect and the correspondences between the two poles (i.e. sign and matter) find the desired concreteness since many perceptual variables (sensory modalities like color, materials, scale, light, shade, sound, kinesthetic, and even the temperature of the environment) are used by the end product to achieve meanings and their effective communication [images 1.41, 1.42].

According to Goodman, a useful way to discover what is supportive in a meaningful design project (artistic, pictorial, architectural, diagrammatic, gestural, etc.) is by the analysis of its symbol systems. As sign-supportive coastal locations demand personal interpretation, the concluding remark is that personal negotiations are important for the perceiving subject to analyze, reconceive, and reactivate the emergence of correspondences between the sign and the image creation. In a sense, this spatial route continues to consider coastal morphology as made of both objects and images, but also introduces the stance of approaching the “sign-supportiveness” as a design strategy. From what follows, the design proposal of Punta is used to illustrate how Goodman’s theory is invited to allow the perceiving subject to read certain relationships between the form and the notions it represents on the basis of the water signs and their effects on the objects (realm).

The role of a symbol system in the design strategy

To expose the range of the symbol system as an expedient design strategy for places with meaning focused on a research-by-design example, this section reviews my first major work for a meaningful edge in the Punta area of Attica [images 1.33-1.40]. It is also an early effort to subvert the water’s notation as the source-authority of recognizable representations for the edge.

This project comes to contribute to the development of the Intermediary Space in a way that is closer to the use of analogy (the second category in a symbol’s schematization) and to exemplify the relationships established between the need for meaning, the need to transmit symbolic concepts as part of the urban design process, and the recognizable logic behind these concepts. In the design proposal for Punta, places with meaning are examined as both a new notational and urban language, water’s schematization alters the essence of concepts from rhetorical, poetic, and abstract to analogous ones. In this sense, the architectural thought, the symbolic notions, the tangible and intangible hints or cues are neither excessive nor irrelevant but essential ingredients of the narrative function and the orchestration of meaningful spatial features (forms) along the shoreline.

The project for a Mediterranean sunny coastline of a small peninsula, as a response to changing ideas, values and definitions of the “spatiality of water,” is an
The investigation of how the symbolic spatial logic is constructed. There is an exploration of a three-dimensional generative system through an architectural work of poetic evocation concerned with the interpretation of the Bachelardian material waters. The context that frames the development of the following ideas is interwoven with “absolute proximity” between the waterfront image and its formulative logic. In fact it raises it to another level, that of a composition of insular experiential contexts related with the topology of the site, its geography, and the idea of living by water in general.

This level was rather inevitably evolved and emerged as we started to investigate systems of representation able to contribute to the construction of forms of spatial temporal knowledge. Pure design strategies for reading and rendering the sense of place, or at least the pretension to pure reading and rendering, are achieved by the system as soon as one attempts to account for them from within a determined set of spatial tools associating aspects like water’s perspective, iconographic projection, and mapping of messages originated mostly by the coastline itself—that is, from within spatial tools that employ the Intermediary function to describe the mediation of the water symbols between forms and concepts, between perception and ideas, or between the signifier and the signified.

Such tools allow us to initially connect abstract, water-related ideas to the spatial properties of the site. Then we proceed with the development of the system of representation that will cultivate frameworks of temporal knowledge, raising the following questions: How can the design mark the site respectfully? Can these marks have other functions relevant to the creation of our frameworks? Should the peninsula make reference to them? The attempt to answer these questions infers on a system that favors another kind of knowledge that guides the perceiving subject to acquire a spatial understanding of the formulative logic. The definite parameters that organize this process in focus are not exclusive; they overlap in the field of investigation between the urban form, the transmitted meaning, and the design process. However, they can be sketched out in the following two steps:

1. Frameworks from reading the coastline:
   In order to study the impact of the edge (its shape and formulation) on the development of the generative logic of this project, this step begins by considering the meaningful properties of the site. By simply defining “site” as the product of a combination of its spatial features and its physical entity, or as the physical context for the human activities, we run the danger of ignoring the fact that “site,” on the one hand, “belongs to a larger family in the sense of hierarchical order of land system (macro scale); and, on the other, is itself composed of a variety of elements (micro scale)” (Li, 1993:21). Considering the above statement along with our problematic, which deals with a piece of land surrounded/encircled by the
water, we can reveal some general but crucial issues related to the phenomenon of the site, the dominant feature of which is the shape of its coastline.

Reading this phenomenon, we can say that, first, a waterfront site inevitably and almost inherently involves an integration of the natural element of water. Its relation with it is rather uncovered and determined by the physiology of the land—linear, curved, low, accessible, rocky, sandy, aggressive, smooth, etc. These variants are unique for each site and contribute to the spatial aesthetics of place and the essence that derives from the first contact with it. In other words, every edge is a unique entity. This issue, if explored carefully, can offer an architecture that is well adapted to the specific coastal setting.

Second, the reading acknowledges that site has meaning. Especially a peninsula near a historical area can claim meanings from various layers projected upon the intellectual and bodily experience—geographical, cultural, representational, symbolic, etc. (Li, 1993). This is further supported by Li’s remark that “as soon as places have been chosen as sites for a certain purpose of human activity, they are characterized by the beliefs of man” (Li, 1993:23). Therefore, it becomes possible to determine our site as a system of beliefs-values-meanings—a system of spatially re-marked dimensions articulating, except of the grounds for the development of the Intermediary Space, the pre-logical possibilities of the overall space of meanings along the coast.

And third, the site communicates with the human mind. Scholars argue that several mental habits are connected with the narrative properties of the site, in terms of latter’s ability and power to activate, strengthen, or relax some of our mental activities (Gibson, 1966, 1972, 1986; Li, 1993; Lang, 1987, 1994). Water, again, plays a dominant role to this ability for the work of contemplation it offers. There is a work of place-holding, a work that is facilitated by means of the coastal signs, and a remedy that provides a supplement for the mnemonics of the perceiving subject. If design can cultivate in people an appreciation of this communicative function, a whole range of new pleasures and experiences can open up, one of which would be the search for spatial meaning.

In the Punta project [images 1.33-1.40], the concept of designing the urban condition on a peninsula as if it were the extension of the edge (an analogy based on the second category of representational acts) is exemplified by a conceptual framework for the design practice. The properties and characteristics identified from reading the shape of the coastline establish the starting point for the spatial organization of the site.
Moreover, the effort was focused on linking the sense of the place with the matter—that is to say, materializing many aspects of what we felt, we thought, and we imagined, being at the same time consistent in the representation of their signification. By inquiring these aspects in terms of the rhythm, repetition, scale, and order they possess, the design process and the proposed architecture is further guided and structured.

As the number and significance of the issues to be analyzed was increasing, it was of extreme interest to see the active employment of the formulation of the coastal edge within the spatial logic of the project and the morphogenetic possibilities, something that in turn demanded the engagement of other concepts for the final representation of the new condition. However, we realized that the use of analogy in this case couldn’t be directly translated into design. It had to remain as an underlying, still rhetorical but form-generating, substratum to foster the design strategy without being literally transformed—or at least in the way one might have expected if bearing in mind, for instance, the direct analogy of the “boat building.”

By this decision, we didn’t allow the analogical connections between the shape of the edge and the form of the composition to set any limitation on the design arguments that appeared on the table. At the same time, we extended the act of representing a notion through design development beyond the analogy itself. Although it is used to enable a common understanding of how we let water participate actively in the design process, once the concept had developed, a new architectural language emerged that in the end could sustain the meaning conveyance of its logic.

This design strategy does not aspire to offer a fixed solution for planning this small peninsula, but instead illustrates a creative idea of how a framework of temporal knowledge could be transformed into spatial understanding and completeness. At the same time, it exemplifies one (more) different way of reading and rendering the site by interpreting and translating the material imagination of its environment. In other words, it is all about an attempt to conceptualize and reflect some hidden issues regarding the peninsula, its edges, and its spatial features and to explore how the broader spatial reading of these issues can intermediate towards aspects of the conscious engagement of the perceiving subject with the form of the composition.

This exploration opens the way for the following step.
ii. **The symbol system:**

I have intentionally left for the end the role of the system of symbols we used in the Punta proposal since this concept, which arises from an interpretation of Norberg-Schulz’s theory on the system of expectations, is considered necessary for the intermediary function of the design logic. If one accepts this necessity, then the meaningful symbolic edge responds to a much broader range of the intellectual and bodily experience of the coastal space than is often considered under the pressures of a strictly pragmatic and solely functional planning approach. Norberg-Schulz’s interpretation of frameworks for temporal knowledge is crucial for this thesis’s theoretical construction, and is therefore mentioned repetitively.

Along with Norberg-Schulz’s insights, if the frameworks of temporal knowledge employed within the representational space can operate and allow for the understanding of meaning, it follows that the postulation of the “symbolic act” as a real given must itself derive from within the interpretation of the transformation of the shape of the edge. In the design example of Punta, the symbol system adopts the above remarks on the characteristics of the “site” by translating them into organizational rules.

Norberg-Schulz (1966) investigates how frameworks of temporal knowledge can foster the meaningfulness of a place and emphasizes that the sign is of fundamental importance because it overlooks minor differences. Through its fixed meaning, the sign makes that communication possible, something that is a prerequisite for any differentiated interaction. He thus contributes to the understanding that “the signs are characterized by being common and ready for use; they are not invented anew within the individual interaction” (Norberg-Schulz, 1966:38). At this point, his concept fulfills the representational demand of the Intermediary Space to be not merely general, but specific as well. That is, if water signs serve to make general superficial remarks that can hardly influence the design process, their value is severely limited. For this reason, Norberg-Schulz accepts that all signs together that possess a form-making capacity constitute sign complexes, or what he calls “symbol systems.”

**Symbol systems** are of dominant importance since they enhance the interiority of the design process and at the same time link the formulative logic of the composition with the “perceptual categorization formed by the images sent to the visual cortex” (Eberhard, 2009:31). For the purposes of the research, it is important to distinguish the individual or conventional water signs (we have already met some in previous projects, like the boat, the cloud, the wave, the water surface, etc.) from the symbol system itself, whose main purpose is, while communicating the intellectual and bodily
experiences of the intermediary function of the project, to “make us grasp objects far beyond our individual potentialities” (Norberg-Schulz, 1966:38). Norberg-Schulz adds that:

...when a sign is presented to us, or when we use it ourselves, we expect particular consequences. We may say that we have attained a “system of expectations.” Communication, therefore, is based upon common symbol systems which are attached to common behavioral patterns or forms of life (Norberg-Schulz, 1966:60).

In the Punta project, the site of the proposal is not inside an organized urban texture with edges and borders formed by buildings or streets. Instead, the natural element of water is considered as a wider matrix that encompasses the peninsula, like an embryo that is to be reborn. The matrix is the element that generates the edges of the peninsula and the opportunities to give form to something imaginative, inspiring, and new for the site. But what if this water matrix is seen, in all senses of the word, as a spatial language? What if the land/water edge is a symbol system itself? [image 1.37] Then it would permit design to submit the formulative logic to a conception of how water can be schematized and how it can create a symbol milieu; myriad symbolic spots, different each one from the others like the ever-changing perspective of the perceiving subject who moves along the characteristic geometry of the coastline.
The position of the thesis is that the system that generates coastal *places with meaning* can be assessed. This position pertains to the writings of Norberg-Schulz (1966) and is reflected in the system that is structured in such a way as to adapt itself “to regions of the object world” (Norberg-Schulz, 1966:57). Norberg-Schulz convincingly argues that “this adaptation is possible by means of a common logical form. Symbolization, therefore, means a representation of a state of affairs in another medium by means of structural similarity” (Norberg-Schulz, 1966:57). Peponis (1997) accepts Schulz’s concerns and insights about the relation of the symbolization with acts of structural similarity, yet modifies them in the light of the understanding of the form through the possibility of symbolic comparisons.

Symbolic comparisons, according to Peponis, allow us to initially define the properties and the characteristics of the form, connecting them to abstract notions/concepts. Then, he argues, we can proceed with the description of the rules and relationships that govern and regulate the production of the form, of its physical restrictions and the morphogenetic possibilities we can read through the comparison of the forms (Peponis, 1997). The symbol system provides a pattern upon which these comparisons can take place.

Turning back to our design example, and as seen from the master plan [image 1.38], the Schulzian adaption elicits a design strategy. Its target is now materially given as the allowance of the coastline to be analogically projected upon the morphology of the objects (the residences, for example). Thus the intention is a representation by means of objects’ structural similarity (and not repetition) and the symbolic comparison with the shape of the edge. The other modality of material domination in this system, the “accidental” of the shoreline, calls for explorative strategies of spatial organization.

During the design process, we studied the logical construction of the symbol system without taking into consideration the possibility of its strict semiotic language and rhetorical weight to be directly translated in material terms. We were instead concerned with the analogical translation for the development of the system’s logic and how the proposed urban synthesis is seen as if it were something else. Thus we started to actively use the coastline and transfer (offset) its properties on the terrain of the peninsula. The line employed is not insubstantial or imagined; it is the actual shoreline itself that is examined for its multidimensional and various symbolic attributes. Nor is it an accidental line, since it symbolizes the union of the land with the sea and hence acquires their attributes, and at the same time is literally the edge/border of the site. As a possible symbol system, it involves a stronger integration of spatial properties, of extreme significance for the study, and therefore
is not only confronted as programmatic but as actual conditions for the residential units resembling spatial incidents. The final aim is, through the study of the relations between points of the coastline, to deconstruct its premise, respecting at the same time its natural condition. In other words, this line, as a system, is split out in the points of its existence—that is, the constitutive points in which the sea meets the land. Scattered along the whole length of the Punta Peninsula, it formulates the residential units and makes them resemble spatial events. In this way, the objects imply some analogical connections and symbolic comparisons to the accidental of the wave.

In the urban design proposal for Punta, the system is a compilation of the sum of identifiable water symbols: the accidental of the wave, the broken masses of the rocks, the eroded and elusive characteristics of the coastline. To be more precise, these abstract notions/concepts stem from the correspondence to initially defined physical attributes and aspects of the specific coastal setting, like the fact that the area is located near a very strong point that is overloaded with messages and full of spatial energy: the historic commercial harbor of Mesogaia. As such, and from its own structural nature, it expresses the idea of transportation, eternal and interminable movement (as the one of the water currents), notions that do not easily obey rules set out by limits and borders, since on the water surface any movement has a rather accidental character as well. This “network of movements” is adopted by the symbol system and enters the act of planning the area. If the design approach were an ordinary one that had to follow, for example, the rationality of a typological attempt, such metonymic elements would have been identified haphazardly and used even more randomly. Instead, the symbol system employed includes strong semantic relationships and finally an architectural concept/plot with a symbolic structure able to promote the development of cohesive and interrelated frameworks of temporal knowledge to be “consumed” during the spatial experience.

Such a conception of frameworks of temporal knowledge can be seen in the use of the strategy for the design reasoning in the Punta project, where the system affects both the forms (by the analogical projection of the signs of the coastal shape on the formulation of the objects) and the perceiving subject (by heightening the perceptual stimuli generated by the narrative function of the employed patterns). In fact, the proposed architectural morphology is conditioned by a set of two interwoven arguments of design-reasoning: a “geographic” reading of the shape of the edge (which projects its traces on every structure) and an “internal organizational rule” made of spatial elements that help in the creation of the architectonic entities.
Issues to consider before the representation of Intermediary Space

The purpose of the Punta design proposal was to investigate the use of the symbol system in the perspective of creating forms of temporal spatial knowledge in order to facilitate the spatial understanding and thought. In contemporary urban design studies, however, it is necessary to start thinking of the symbol system in terms of its intermediary dimension: how it can be conceived in the form of a design strategy, how a set of signifying substances can come into play, and how they function in each specific case.

This is the point where the Intermediary Space enters the general problematic of “What shall we design on the edge?” in order to cultivate meaningful hints and initial intentions. It is the moment when, even if born out from the rhetorical sphere formulated by Cassirer’s and Langer’s theories of symbolic logic, it ends up sketching recommendations for the design practice. The design examples in Riga and Punta analyzed so far illustrate that the space of the edge can benefit from a symbol system that “can mediate ethical and aesthetic contents” to teach us that the architectural language “may be used in several basically different ways which all fulfill important functions within the process of interaction” (Norberg-Schulz, 1966:63).

When this mediation occurs and how it is organized form the object of the following categorization or summary of principles summarized from all the above. These recommendations are part of “water’s schematization” within the premises of the Intermediary Space, which the previous projects tried to sketch out. Nevertheless, if we want to start filing some ideas, as general guidelines, and to recall the “hows” and the “whens,” we must start the classification from the symbol system and claim that:

i. First, the symbol system must be chosen in such a way as to ensure an adequate expression and conveyance of the water notion (in whatever domain this may belong, from a very poetic one, like the cloud in the Blur Building, to a strictly pragmatic one, like those used in Aarhus Horizon’s Urban Gallery) to the cognizance of the perceiving subject.

ii. Second, the symbol system, unless structured with a clear conception of the differences between the signs that describe and express the spatial meaning during the production of the representational act, may disorient the design practice and act against the achievement of the prescribed goals. If the differences are well defined from the beginning, the symbolic function of the signifying elements will take an important part in the development of frameworks of temporal knowledge and eventually will make the communication of the signs more effective.
Third, the symbol system of the edge, from the viewpoint of the design process, must satisfy two important aspects of its representational value. On the one hand, it must serve some sensory purpose, employing a sensory “language” to experiences “as the ordering logic behind both the intellectual and aesthetic realms” (Otero-Pailos, 2010:11). On the other hand, it must play a clear instrumental role (an inquiring design tool). And finally, the symbol system must be translatable and produce spatial symbols. In this regard, the principal concern is to prevent the inherent rhetorical or poetic nature of the water sign from dominating over the system, and from either totally disappearing under the weight of the functional demands or attempting representations that are too utopic to be materialized.

Actually, the systems studied so far, like the one for the Punta Peninsula, show remarkable endurance in determining their appropriate level of challenging materiality. But there is likely to be a problem that may prevent the architect from achieving his/her objective: the construction phase of the project. Considering the high degree of complexity of the urban design process, the system may not have an “uncontrolled” influence on the development of the proposed morphology since something like that would probably prove harmful for the structural feasibility of the proposal. This does not destroy, as it might appear, the importance of a system in our design practice, since as Norberg-Schulz implies, controlling its access at the pragmatic level—the level of producing objects—doesn’t necessarily mean that we might come to a dead end with the adopted design strategy. It just indicates the point at which the system should step back and allow the description of the rules and the relationships that regulate the production of form to take over.

In conclusion, we can state that the symbol system appears to be a crucial component of the design strategy for places with meaning. At this point, we have to mention that, as an initial investigation into the concept of combining Cassirer’s representational power with the urban design process, this chapter of course leaves many issues unexplored. For example, what precisely were Langer’s notions of the inner life and of the image of life that is created in buildings? I believe that these concepts, being relevant to the psychospatial subject of this study, are at the same time too intangible to be handled by an effort that employs rhetoric only against rhetoric; and so they have been left untouched to merit additional research.

However, similar psychophysiological notions—and here I am speaking of the intelligible content of the architecture of the urban waterfront, which really does not come to pass in practice as such—will be examined and spatially translated into form by means of an ideographic spatial syntax that has a share in the development of coastal places with meaning. In the next chapter and in the sections on Terra Incognita, some crucial syntactic relations are introduced and
explored in terms of their ability to submit the perceiving subject to the psychospatial engagement with the urban shape near water. Therefore, the following chapter will elaborate further on the issue of the immediate experience of psychophysiological concepts—an issue that will also form the relative integrative basis to support the undefined spatial boundaries the present chapter left behind.
the Intermediary Space
Introduction

The second chapter brings together the main user/edge relations this thesis holds as crucial for the spatial construction of meaning near the water into a single discourse: the Integrative Space interprets the narrative deliverance of the edge of the city from traditional shapes as the product of a conceptual, configurational, and meaningful tension. The chapter contradicts the orthodoxy of the typified design attitude that came to the fore due to the New Waterfront era (Breen and Rigby, 1996) and is driven by the criterion of approaching the seaside area as always subordinated to the dominance of the existential institutions of a city’s local economy, trade, and market. The second part of this thesis pertains to the hypothesis for the intellectual independence of the waterfront space based upon the complex urban system entwining seaside architecture with aspects concerning the human component, its psychology and mental well-being that merge therein. Thus, the Integrative Space chapter discusses the possibility of a human-centered development for the shape of the urban edge that marks a response to the functional, technocratic, and meaningless approaches of the New Waterfront era. Therefore, this chapter shall make explicit what in urban design practice could relate to the experiential form and the psychospatial representation of the edge in ways that allow for the active contemplation of the perceiving subject.
2.1 a design proposal: Triestexpo

Project name: The ephemeral as a new urban language. 
Redevelopment of the Old Port area in Trieste, Italy.

Type: International ideas competition in architecture and 
urban design, 2002. 
(Experimental proposal for the research-by-design 
module.)

Client: City of Trieste, Italy.
Study period: March-June 2002
Architectural 
and urban design: Konstantinos Ioannidis.

Total area: 260,500 m²
Floating surfaces: 27,320 m²
Green zones: 58,950 m²
Total area of the axes: 13,560 m²
In Trieste, Italy, part of the historic Old Port (Porto Vecchio) was chosen to accommodate the new urban “showcase” for the city on water—a *display stage* capable of creating an innovative urban facade providing a locus of coastal identity *on water*. The *raison d’être* of this research-by-design proposal is to explore a redefinition of the seaside image by integrating land and water within three crucial domains: spatial features (form), ownership, and accessibility. The urban design process starts by exploring two conceptual elements.

First, it depicts, in general terms, the *idea of the land*, approaching it as the ultimate “permanent” element that will continue to exist, deciphering at the same time signifying underlying sub-concepts. Second, it inquires the concept of *ephemerality*, which derives from the exposition event but also from the viewpoint that the image of the city is also an ephemeral one, in the sense that it is under perpetual change, refreshing people’s minds and memories with coastal images in a continuum.
The site is located near a uniform urban landscape and since the 70s has gradually lost its function as a harbor. The aim of the project is to read the context of the area and propose a new district within the city “dressed’ with the meanings of the past (functioning as an active port) and the future (hosting the ephemeral event of the exposition). Focusing on reading and interpreting these cues, the project denies the backstage homogeneity while it manifests an interest in the social organization of life in the local culture. The need for small squares and open-air spaces along the coastal pedestrian streets, common to the social life of the locals, generates initial design intentions for a network of pathways and squares that will run along and throughout the whole project, unifying the proposed urban events. The materials for this network are associated with the character of the place and contribute to a smooth approach of the urban mass towards the land/water edge, while the shoreline remains untouched along the whole project, preserving its natural properties.

Another asymmetrical network made up of fragmented green spaces enters the formulative logic as a boundary that is at once both closed and open. Its function is rather broad, from creating a noise barrier for the motorway above the site to forming green islands in the center of the waterfront area. At the same time, there is a signifying element that offers continuity and cohesion to the proposal: the green landscape participates in the proposed urban context by creating places for exploration and mental engagement between the perceiving subject and the seaside space, such as the floating gardens in front of the residential area.

A characteristic formulative property of the project lies in the flux that gives the sculptural buildings their inherent complexity, a design gesture that pertains to the meaning of constant change and instability. The new structures respect the scale of the place and employ heights similar to the existing buildings. All the new construction contrasts with the historic buildings by using different materials (glass and metal for the architecture of the three main axes), while the warehouses are restored—the important buildings of the site remain unaltered in their external
facades in order to retain the industrial architecture of the Porto Vecchio. New permanent uses are planned for their interior spaces, ranging from hotels and restaurants to indoor shopping complexes capable of reviving the old harbor shells and increase the time spent daily in the seaside area.
image 2.06: Diagram I: the integrative shape of the proposal. Diagram II: the network of the public pedestrian zones with routes, pathways and squares. Diagram III: the “green islands” and park-noise barriers.

image 2.07: Triestexpo proposal. Schematic detail of the Axis of Memory. Plan and elevation of the arranged spatial incidents inside the organizational territory of the axis.
2.1 city-water integration: possibility and desire

In treating shapes as...composites made up of standardised elements, we are in effect treating a shape as a graph, that is, as a purely relational complex of some kind in which we temporarily ignore other attributes of the elements and their relations.

Bill Hillier (1996: 100).

If the Intermediary function of water’s schematization can be read and captured in the formulative logic of the coastal object (form), then the Integrative function of the water-matter delineates an interpretative reading of its signifying presence in the horizontal outline of the edge that grounds these objects. In this respect, the above suggestion derives from Casey’s position that the horizontal plane gives rise to the difference between the matters that we designate (Casey, 1998) and therefore this section will attempt to outline the psychological advantages of integrating one kind of matter into the other as projected upon the shape of the urban edge. The ambition of this chapter is strictly addressed to study the horizontal plane of the shape of the city on water.

Imagine now that you are inside the context of an urban waterfront. You have just finished your work somewhere in the city center and have decided to return home by walking through the seaside area. Leaving behind the dense urban setting, you arrive exactly at the land/water edge and you are enjoying your stroll near the coastline and along seaside promenade. You still trouble your mind with the problems of your work, but the view of the calm water surface affects your thoughts and brings you to a more relaxed mood. Therefore, you try to keep constant visual contact with the sea, something that makes you more relaxed and helps your inner thoughts.

Suddenly, your linear track is about to change: you are approaching a formation of the shape of the edge where the water begins to break the continuous linearity you had taken for granted and enters into your field (in you motional pattern and conscious relations). It crosses your path first by passing under some nearby buildings and making some of the coastal structures appear to float on the open sea. Your first puzzlement comes when this peculiar canal-like formation, which dynamically distinguishes itself from its surroundings, is about to be described in your mind in terms of its relativity to the previously static shape and, moreover, the syntactic position of your body. You stop and your mind’s interactions with this spatial feature immediately justify the existence of this event and its contribution to the coastal identity.
This occurs since you recognize that, as such a formation, it could only be found and experienced here, near the edge, and not in a mountain village or the backstage suburbia. The sensual properties of this feature, such as the impacts of the view of water that blocks the course of your thoughts and the exact location of the water within the existing shifted spatio-temporal framework, are not raised until you allow the water-matter to reconfigure its embodiment to the structure of the city. These properties can be identified now from the aftermaths of space, that is the after-effects of the canal, and are different in terms of unveiling and unfolding the inner connections between known aspects of the space (such retroactively anticipated aspects can be, for instance, the challenging relationships between the position of your body and the presence of the water-matter). This means that the different world that emerges in front of you offers possibilities for an increased cognition (Eberhard, 2009). In addition, you see that the organization imposed by the integration of the water is able to change both your mental (your mind is, at least for a moment, distracted from your problems) and physical status (you are about to change track or even level of movement—in case you have to cross a bridge or pass over a floating platform).

With this, I am at pains to point out that something different, more important and meaningful, has happened in your way back home, and has happened in total agreement with your choice to pass through the waterfront zone. The aforementioned description tries to reveal that the meaning of the coastal experience conveyed from this water-recess cannot be subsumed under any apparent typical function. In fact, it is constructed as an integration of various hidden psychological properties activated by the presence and bodily proximity to water. From Bachelard to Osgood and Gibson, the theory of space’s underlying meaning is mostly concerned with the exposure of such hidden layers in the process of perceiving, understanding, and experiencing the urban artifact. This section will attempt to outline the transformational relations of the horizontal shape as the point at which, based on Hendrix’s proposal, the perceiving subject enters into waterfront architecture (Hendrix, 2006:46). I will therefore argue that this point relates to the exposure of psychospatial relations postulated by the integration of water in the urban terrain, and I will develop the integrative discourse relying on the aforementioned design example of the Triestexpo.

In the previous chapter we explored the possibility of water’s intermediary power—the force of mediating in human perception in order to give or give itself as a form or image applicable to a general symbolic conception under which it is likely to be finally presented in the mind of the perceiving subject. The possibility of its desire for integration in the structure of the city and the ability to orientate respective behaviors towards shape’s legitimised identification is the objective of the present

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chapter and prefigures this second spatial discourse. That desire is often confused with what we usually call *waterfront development*.

Starting at least thirty years ago, the demarcation of the meaningful territory of space has grown into various design attitudes, specialties or modes of urban illustration, opposing at most times the inspiring and creative design to the pragmatic and functional discourse to which innumerable architects, urban designers, and planners have been devoting themselves. Referring to many port cities throughout Europe, like Lisbon or Hamburg (images 0.05-0.07), this possibility and desire started to characterize the urban design projects for their shorelines as architectonic *quests* for an additional integrative (between land and water) character scarcely two decades ago.

Determining also the transition from the industrial to the post-industrial era, this quest was also supplied from the functional decline of the traditional nineteenth-century harbor areas and their relocation outside the confines of the city. This removal revealed vast unused and empty sites inside city centers in direct physical contact with their most characteristic element: the water. That led architectural practices towards the unfolding of a series of design attitudes marking at the same time the “differential” space of the urban edge that, in terms of Lefebvre’s (1991) distinction from “abstract space,” is formed as an organic and living product of encounters and desires. Rinio Bruttomesso, Director of the International Centre Cities on Water (Centro Internazionale Città d’Acqua), argues that, after the shift from the industrial to the post-industrial era, these new practices brought coastal cities to sustain further radical changes:

> These often affect less structured areas, which have lost their original function or seen this weaken and are afflicted by dangerous processes of environmental decay. In this context, many cities that are in close contact with water have become extraordinary laboratories of interesting experiments and innovative solutions to recover a higher quality of urban life: a rediscovery of the water in many projects in various parts of the world (Bruttomesso, 2004:128).

This chapter addresses this rediscovery, and ends with a review of the crucial psychospatial relations that the methodology of the thesis applies.
In the years that followed the London Docklands redevelopment, the design of vacant harbor areas became one of the most popular exponents of unfolding identities in space. Local values, civic and environmental identities, and cultural factors were addressed to reassemble the spatial and functional shape and structure of the urban waterfront focused on persons and the ways they perceive human-environmental settings on the edge. The relocation of large industrial harbor areas to other parts of the metropolis, far away from its center, and in particular the emergence of completely new alternative, experiential, and narrative design approaches gave an additional impulse to the quest for a space able to actively integrate the natural element of water not only into the geometrical formulation of the urban outline but also with meaningful spatial experience and movement along the edge.

The spatial features of major transformations—such as the Parque das Nações in Lisbon [images 2.08, 2.37-2.38] for the demands of the Expo ’98 world’s fair, the lakefront in Bregenz, the seafront of Barcelona, or Thessaloniki [images 2.09-2.11]—are design products not only of the formal imagination (to use Bachelard’s term) of the built reality (representations whose formulative logic is difficult to interpret into bodily experience for the recognition of the forms), but also of water’s material imagination, a constitutive element of what I call the internal form of space. I define this space as the one that releases the conscious and unconscious yearnings of the seaside experience and internalizes the whole coastal locale.
The thesis attempts to investigate the possibility and desire in this sort of imagination in a series of stages. It deploys Integrative Space in order to determine the special character of a given setting and to develop a narrative, inspiring and interesting, fresh and fruitful, *water-oriented shape* at the crucial point where the city touches the natural element. In this framework, the Integrative discourse inquires specific syntactic relations that allow the perceiving subject to engage with the logic and geometry of the city’s shape on water. Moreover, much of the spatial relationships to be studied in this chapter affect the quality of seaside public spaces, the streets and squares matching the local use and at the same time challenging the activities and the significance of the course of movement near the shoreline. In the end, the outline (shape) of the city’s edge must adapt to what lies in front of it if it is to cultivate “waterfront places with meaning”.

This attempt is the same as to explore how to modify the two-dimensional image of the port city (and here I mean the one derived from the actual movement on its horizontal plane or from the study of a master plan)—how to furnish it with occasions for re-focusing itself on the water and reconsidering its shape as a complex spatial artifact. Thus, the problem of the deployment of Integrative Space is simply the general problem of re-defining the structural relation of the city’s shape with this physical element that characterizes and defines its substance and existence.

Following Stiny’s definition of shape, we can move one step further and say that the way we deal with cities’ shapes on water in this research resembles “rhetorical” shapes, which can “combine basic elements…these shapes may be an arrangement of zero-dimensional points or they may be made up of one-dimensional lines or two-dimensional planes. And shapes [on water] may contain basic elements [what we shall later on call steps of *terra incognita’s syntax*] of several kinds…. Shapes are moving targets. They are not defined in terms of components that are given in advance, at least as components are normally conceived as combinatorial units, fixed primitives, or permanent parts. Components are free to vary in any way whatsoever as computations unfold. They are never determined once and for all” (Stiny, 1999:7-8).
I acknowledge that “the internal form of space” is too rhetorical a concept for urban design orientations dealing with coastal development. Integrating water into the urban fabric is, on the other hand, an inspiring issue of reshaping the general urban layout, taking into active consideration aspects often neglected or considered senseless. Such can be, for instance, the psychological significances to the individual experience stemming from the interpretation of the complex activities an integrative shape may adopt, or the constantly changing perspectives of the open horizon in one direction and views of the city in the other. In this thesis, such aspects are not only composite urbanistic issues that surpass and transcend their rhetorical backgrounds but also issues that interact with dimensions born out of the other two spatial discourses. Therefore, it is not even possible to completely separate them for the purposes of the present chapter. However, the exploration of possibilities for such integration marks the return of the city back to being on the water.

In this part of the research, my aim is to bring the stages of this return into a single theoretical framework that spatially interprets the internal form of the urban edge as a series of integrative relations between the human, city, and water. The research assumes that the contemporary demand for rediscovering the city’s water frontage (Bruttomesso, 2004) underlies the psychospatial effects the latter offers during the spatial experience, and that re-stitching the relationship between water and the urban fabric passes through characteristic concepts of a shape’s formulation, such as the perspective, the pathways, and the points of proximity, enclosure, or segregation by water. These pivotal terms and concepts, I try here to prove, form the unseen in the act of seeing the waterfront outline, or as Deleuze put it, “the unthought [that] is...not external to thought but lies at its very heart” (Deleuze, 1988:97).

Within the Integrative Space, these concepts are organized, ordered, and open criteria for the integration of both land and water elements even though they often, like some concepts discussed in the Intermediary section, lack clarity of definition and a high degree of spatial concreteness. Therefore it seems proper to examine the dynamic of Integrative Space to mix shape with sensations, images, thoughts, or even moods and concepts generated by water itself after undertaking a research-by-design case study that illustrates the unexpected mixture.

*Triestexpo proposal and the integrative dialectics*

In posing the question of whether a meaningful shape can sustain a series of syntactic relations that pertain to water’s integration, I found myself dealing with an international competition that in a way posed the same question to the competitors. A brief description of the theme and design approach of this research-by-design effort [images 2.01-2.07] is necessary not only for the present discussion of Integrative Space but also for its further development, since the Trieste case study
will continue to attract the attention of this chapter. In this proposal, I must note, the shape of the edge suggests in fact a type of linkage between the urban design process and the imaginative depth of the water-matter that acts in an ultimately aftermath way: issues of proximity, relativity, enclosure, segregation, divergence, and their spatiality may serve as guidelines for a human-centered design for the edge.

In 2002, the City of Trieste reclaimed its being on the water and its vital connection with the sea, trying to emerge from a period of economic stagnation by using the powerful strategic decision to host an international exposition. This kind of ephemeral event in fact fragments the urban design process into three spatial subdomains, which Lang (2005) refers as a crucial triad: the spatial features of space (the indoor and outdoor formations of the exposition), ownership (issues of public and private areas in the chosen site), and accessibility (access for all or controlled access for visitors of the event, patterns of movement, etc.). With this decision, the city reclaimed its waterfront and conceived Expo as an opportunity for an urbanistic innovation capable of bringing the citizens once again near water, as well as a developmental tool that entails the revaluation of the relationship of the city with the sea. In what follows the emergence of the inspiring linkage between city and its edge, water serves to make the city’s frontage image a synthetic combination of sensuous immediacy and thought -and thus to offer cultivated or anticipated activity patterns that can generate conscious and unconscious coastal experiences.

In a second reading, the research tries to investigate the rhetorical underpinning of the proposal. From Bachelard (1999) we learn that water images are also ephemeral, subjects of an eternal movement, but become meaningful when people associate their coastal milieu with their everyday activities and life near the edge. And from the urban scholar Kevin Lynch and his review article “Reconsidering the Image of the City” (1984), we lay out the debate that meaning always crept in, in every spatial experience and pattern exploration. The tie of this proposal to the above-mentioned references is rather striking, offering a way to see that the difference between the meaning of an ephemeral event (like the Expo) and the historic, permanent character of the area, is also a matter of time. Such a significant event, when it concludes, must not leave behind buildings that are empty shells with little importance. For the temporal aspects of the spatial meaning of the place, Expo must be established as a memorable urban structure with a clear embodiment of the memory of the event after it ends. The theoretical positions suggested by Bachelard and Lynch, the conceptualization and modeling of water’s spatiality, are tested in this experimental project.

We find a common point of reference between these thoughts, I believe, as “we study the substantial images of water and create this psychology of ‘material imagination’ for an element” more spatial and more urbanistic than one may think
at first sight, a “more constant one which symbolizes human powers that are more hidden, simple, and simplifying” (Bachelard, 1999:5). Water, as a both ephemeral and permanent element, with an odd simplicity, with a temporary, fluid image that continuously changes and is at the same time a compound part of a permanent place, is acknowledged as an element of urban design that regulates the way the project deals with it as a “border,” an “edge,” or a line and how it shapes and acts in the urban environment. Under this framework, water’s after-effects (aftermaths) and the coastal space of Trieste are explored as spatial parameters and as tools for spatial organization, for morphological transformations and architectural concepts. The ephemeral and urban realities associated with the project are understood as components of the city: the dipole of ephemerality and concreteness is seen as a conceptual architectural proposition and the ephemeral as a new urban language. The project conceives the city of Trieste as structure open to the water, a theatrical stage with the water and the Expo its protagonists. The whole design attempt is an arrangement of events that will control the narrative function of the ephemeral event of the Expo—not a collection of isolated objects, but an interwoven system of spatial episodes within a continuum that will unfold psychospatial associations and engagements (Eberhard, 2009; Hendrix, 2006) between user and place. The project, by means of sequential experiences, attempts a place-making story with associative meanings in which “sequences are experienced in multiple ways, from different directions and different points of view. There may not be a classic beginning, middle and end, or plot points. It is an interactive story” (Sircus, 2001:32). In this sense, the research-by-design study tries to establish a plot based on a system of dedicating acts—the idea of the city as a theatrical stage—towards the maintenance and operation of these structures. Ephemeral qualities help to accentuate demarcations of place and space, and are recognized in contrast to permanent architecture. The new city image contemplated in the waters aims to appear as the contour of a new internal watery character, and the project as a tool to strengthen the city’s architectural past, contributing in its maintenance while at the same time revitalizing its existence, providing a new definition to its “liquid frontage”.

Topology plays an important role in this project, and a topographic study provides a survey and geographical delineation of the place: configurations, elevations, and positions are analyzed in the first phase of the work. This “anatomy” of place

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52 “Consistent with Hillier, ‘configuration’ is defined as relations that take into account other relations. In the wonderful example offered by Hillier, the relation of two spaces, ‘a’ and ‘b’ is differentially qualified as being either symmetric or asymmetric, depending of whether both, or only one of them are also related to the outside. If only either ‘a’ or ‘b’ is related to the outside but not both, then one of the original spaces controls access to the other. Hence the asymmetric nature of the relation ‘a’ to ‘b’. If both are related to the outside, their direct relation is symmetrical” (Peponis, Karadima and Bafna, 2003:2)
reveals the geometrical and physical attributes of the site and helps to provide a base for transforming spatial design into “a highly plastic, flexible art in which buildings continuously evolve throughout motion and transformation” (Liu, 2002:208). The way activities are allocated and organized along Trieste’s edge in a course that is linear but at the same time disturbed by the integrated waters is crucial for these demarcations. Design supports the bodily position of the subjects in a labyrinth of various fragmented and distorted shapes and by this it aims to provoke their sensuous values (Peponis, Karadima and Bafna, 2003) and to cultivate readings of the architecture as a sense-making composition.

In the general description of the Triestexpo research-by-design example [images 2.01-2.07] at the beginning of this chapter, the background of the project is presented and an effort is made to accommodate and express new conditions and coastal sensibilities derived from the design process. Of course, there are parts along the proposed coastline in which the design process and the creation and maintenance of subject’s responsiveness to human-environmental setting cooperate; in others, it is rather more difficult to establish an effective linkage, though this does not necessarily mean the overall shape loses its signifying relation between the form and the underlying conceptual structure.

The following section will divide the theoretical endeavors that bind the concepts of the ephemeral and the integrated waters with spatial features into two formulative dimensions, each considering the reasons in the existence of the objects and holding a distinct perspective for this project: the architectural design reasoning and thought. One of the major differences between these dimensions is their underlying aim: the first aspires to legitimize and generate the architectural entities according to an internal systematic structure (hopefully this will provide the waterfront’s internal form); the second opts to offer the conceptual background that supports and nourishes the design process in urban coastal space.

During the New Waterfront era, the use of common and typified patterns for the production of urban space in several European waterfront redevelopments employed approaches closely related to a technique of construction, to a method that usually led to a predictable functional organization or style and a secure investment environment for all property holders. In other words, the result was mostly repetitive architecture that contributes to a monotonous and meaningless built environment conceived as the command post of a global economy (Abbott, 1993). Images from contemporary cities, like the London Docklands, the Port of Marseille, or parts of Amsterdam’s edges, verify this remark. Reviewing the postmodern urban form of the 1980s, Loukaitou and Banerjee (1998) express skepticism over the acontextual downtown environments that treated the issue of meaning as a trivial parameter. As a result, projects miss “connections, linkages and
continuity in space and time” (Loukaitou and Banerjee, 1998: 292), being usually not dialectically substantiated in terms of restricting thinking as a means of cognitive enhancement in the ambiguity of metaphorical interpretation.

Attempts to adopt the spatiality of writing, reasoning, and thinking were not often on the agenda. It seems, then, that design reasoning and thought stem from the need to explore urban design’s intellectual side, and inevitably they run parallel to the above-mentioned set of concepts in for the Trieste project: the dipolar relation between the ephemeral flow of water and the concrete identity imposition of the historic harbor buildings (ephemerality versus permanence) is ascribed to reasoning and thought in terms of their narrative function and methodology. For this research, they employ a background narrative syllogism as a plastic rendering of the way space and time will be organized in the area of the Old Port, while the dipole ephemeral/permanent is seen as the trace of time. The spatial accommodation of this syllogism and dipole reveals not only a new built reality for Trieste’s edge, but also that the watery material imagination established within both of them must provide a crucial role to the whole spatial experience and orchestration of the coastal objects, shapes, and formations.

In this narrative function, the proposed architecture is conceived as a sequence of scenes/acts in the megalopolis that adopts a shared and common language: enclosed parts, segregated areas, new relativities, artistic events, topological proximities, and other scenes between the ephemeral event and the long-lasting entities. This function presents a stable urbanity that emerges from the unstable in order to add flexibility and relativity to an experience based on linear exploration. Three existing elements are identified as significant parts of the sense of “finite locatedness” (Casey, 1998:34): the road network surrounding the area, the imposing warehouses with their simple lines, and the complex geometry (shape) of the seashore. Underlying these is the project’s attempt to decode and interpret a connection and utilization between the two elements (land and water) and between the coastal environment and its architecture. With three main axes, the interaction and interrelation of patterns of activity generate the consciousness that regulates and reconfigures the human actions (Eberhard, 2009) in those axes affected by the proposed architectural environment/language.

Territories of activity patterns and expectations emerge from the master plan [images 2.01, 2.04-2.05], dividing the space with three types of territorial axes as follows:

i. the Axis of Permanence is the space that unveils and unfolds the inner connections between permanent and existing notions, constructions, and uses. The development of the image of a fixed condition for the urban frontage of the city is central to this axis. It is the way to read and explore the structure of the restored warehouses, and to be guided and oriented in an area where the dominant
characteristic is this of a long-lasting condition: features like hotels, commercial uses, and museums are to be found in this area.

**ii.** the **Axis of Memory** is filled with all the characteristics that can turn it into a *memorable* place, a locus for citizens and visitors, emotions, and the memory of the Expo after its end. Moving on this axis, one will be guided through an arrangement of both ephemeral and permanent situations, things initially designed for the needs of the Expo and then transformed into something more permanent, but always embedded with the memory of the original event.

**iii.** the **Axis of Ephemerality**, thrust through the center of the project, has a clear ephemeral character and presents a fragmented architectural identity as a result of the integration of the organizational background layers. This axis favors different readings of the space with no hierarchical order. Open-air museums, pathways for contemplation and recreation, and opportunities to explore the new buildings of the area are to be found along this axis.

The operation of these axes attempts to construct a conscious scene in the spatial experience that aims to be thought of as a “remembered present” (Eberhard, 2009). However, the new distinctive image that is addressed to break the barriers of linearity and let the observer escape from common technical/functional readings is designated by means of spatial features like the divergent vectorial locations of the Axis of Ephemerality (and its contained objects), the floating multilevel corridors that introduce to the bodily position of the user a new condition relative to the land, the curved formations, and the main elongated buildings of the Expo. In this phase, design reasoning generates various types of distorted features as architectural gestures encountered and experienced, such as space enclosure or segregation by water. Yet this project seeks to demonstrate that the most fundamental of these psychospatial attitudes is that of *spatial divergence*—in this case the clear separation of the conscious states of moving on land and on water by means of spatial formations.

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The conception of *spatial divergence* is a ubiquitous property of waterfront designs and results from the understanding that land and water usually designate different and separated spatial arrangements. For this research, the first term, the *spatial*, refers to the physical entities or patterns arranged or laid out in space. The second, the *divergence*, represents the motivations

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Pertaining to the motivation of the signifier - in this case, the spatial divergence. The deviation from the typical urban pattern and the process of following different courses near the edge (on land and on water) is a motivated behavior connected to aspects of the context in which divergence takes place. According to Hendrix (2006), while the “unmotivated sign”
states of these entities or patterns, which always have something to do with the demarcation of the two matters (the division of the physical strata of the edge into land and water). In this research-by-design project, the crucial experiment performed in the design process involves the cultivation of specific spatial relationships able to move the perceiving subject towards the motivation of the horizontal plane by means of matters’ divergence, and afterwards to sort out the possible psychological advantages of this movement.

For Bonnes and Secchiaroli (1995) spatial meanings are perceived from the formations of the environment in relation to the properties of motivational invariance which the formations themselves present. The position of strong relational nature proposed by them relates the view that each spatial relation has a projection onto the matter that surrounds it and aims to make the user conscious of the necessity of the employed formation. For example, the relative location of the elongated floating multilevel platforms inside the water may not only influence an observer’s state of space occupancy, but also convey the understanding of being enclosed by, separated from, or proximate to the natural element at any point. In the Triestexpo project, the main floating element runs parallel to the linear unfolding of the overall project, while the secondary element is placed vertically. The spatial divergence of these two elements notates that to move along the coastline of the urban frontage is to devote one’s mind and sense on the panorama of the city as it unfolds, while to move vertically in relation to it has a different psychological effect since one leaving the city behind enters inside the sea with all the emotional products such a course of movement may entail.

Spatial divergence, this crucial conscious and affirmative syntactic relation of the project, creates the sense that objects’ (structures, axes, paths, etc.) different vectorial location is regulated by urban design in the power to affect and be affected. In Unsaid Emotions (2004), French psychiatrist Claude Olievenstein has argued that this dual influence is the inevitable result of the fact that whatever enters the human mind or is grasped by one’s sensibilities depends outright on what happens in the surrounding environment (both built and natural). The project acknowledges that the way in which the subject may interpret it depends on his/her personality and emotional load at the specific moment. Therefore, what gives this interpretation its significance is the fact that it is an acquired and experiential objective, dependent on the user’s personal contemplation. However, before they detect the psychospatial effects of space’s tendency towards environmental divergence, most subjects will simply perceive a floating level arranged vertically to another, both of them in different relative location to the
land and its coastline and always separated from it. Gibson adds on the issue of individual contemplation that:

...there is a different optic array for each point of observation and that different observers must occupy different points at any time. But observers move, and the same path may be traveled by any observer. If a set of observers move around, the same invariants under optical transformations and occlusions will be available to all. To the extent that the invariants are detected, all observers will perceive the same world. Each will also be aware that his or her place in the world is different here and now from that of any other (Gibson, 1986:200).

The waterfront layout as perceived from the position of two different observers (one moving on land and one on the water alongside the floating platforms) may lead to different understanding of the environmental data and therefore will generate different response, action and experience. In short, the responsiveness to the proposed shape is an aspect that must be seen in a chain of correspondences between the vectorial characteristics of the course of movement and the effects from the interpretative reading of the bodily position from the specific subject. This chain, in turn, marks the progression from the subjective sensation (Edelman and Tononi, 2000) to the objective perception (Hendrix, 2006; Gibson, 1986). Gibson proposes an approach that seems to me to be the most complete development of a theory of how our rich experience of the subjective sensation arises from the perception of common physical events:

...to adopt the point of view of another person is not an advanced achievement of conceptual thought. It means, “I can perceive surfaces hidden at my point of view but unhidden at yours.” This means, “I can perceive a surface that is behind another.” And if so, “we can both perceive the same world (Gibson, 1986:200).

As with other spatial relations, divergence requires two meaningful reference points for an adequate and conveyable transformation of the sensory to sense-stimulation: one always located on the land/water edge associated with the meaning of the coexistence of the two matters. The second can be a set of two, three, or more vectorial locations or directions mediated, for example, by meanings of geometrical or architectural attributes: convergence, deflection, intersection, or asymmetry. For instance, an organizational convergence of the spatial form with the edge can employ both the beginning and the end of a track in such a way as to merge both matters within the experience of the coastal space (in this sense the beginning of a path can be located on the land and the end in the water).

54 Tuan (1977) argues that place is subjectively defined and man does not live in Euclidean configurations but in a world of subjective feelings, emotions, moods, and sensations.
Because relationships like spatial divergence are free of typological approaches or types finite in number, design reasoning needs additional concepts to operate within Integrative Space. And this may constitute its own peculiarity: the capacity of the concepts’ selective employment in shape’s formulation. And maybe the full content of Integrative Space defeats me here, since it is of no point in fully foreseeing or analyzing more water attributes and how shape can transfer its aftermaths to the perceiving subject. Even if something like that were possible, it wouldn’t necessarily mean that we would be in a position to formulate the shape in such a dynamic, sense-stimulating and definite way as to remove it from its failure to mean. An attempt to unify these concepts will be given in the next section through the general idea of the Soft Edge.

2.2 the Soft Edge

The possibility of an urban design process influenced by people’s aspirations and desires for their cities started some years after Bachelard’s investigation of the imaginative force of the water-matter was announced. It was discreetly schematized in Jonathan Raban’s Soft City of Jonathan Raban. In London, in 1974, an inspiring work was developed as a response to the dominance of the functional approach with its glamorized urban grid, coastal zoning, waterfront shopping malls and office parks, the unconnected architectural styles and the broad consumption of morphologies along the coastal edge of the city, all of which have been the subject of critical writings in recent years (Banerjee, 2001; Garreau, 1991; Hannigan, 1998; Kunstler, 1993).

Raban’s Soft City (1974) was in fact an alternative response to the general tendency of typical approaches in urban design: he recognized strategies by which narrow rationality produces functional spaces but argued that through these tactics design can’t offer much for subject’s emotional and social development. Thus, it was a theory alarmed for functional rationality’s loose connection with the human component and the experience of the sense of place, showing the awareness that has been reached in the respect of the systematic considerations on the immediate experience of urban space as an object of reflection. In fact, Raban put on the map the failure of functional formal structures to sustain urban life by adopting rational planning models and revealed many crucial aspects for human development that Bachelard would later on designate in his studies. He presented a different way of dealing with urban design. According to Raban, the “soft city” should prevail against the “hard city,” the formal and rational one:

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55 The term Soft Edge is derived from the title of Raban’s book, since here I want to particularize some general issues related to the problematic of research discussed by Raban.
the city as we imagine it, the soft city of illusion, myth, aspiration, nightmare, is a real, maybe more real, than the hard city one can locate in maps and statistics, in monographs on urban sociology and demography and architecture (Raban, 1974:10).

Though characterizations of the soft city as a sensuous escape from the meaningless environments of commercialized practices are idealistic, they do employ a virtue: they entail, according to Durrschmidt, the “multiplicity of individual and social practices of urban everyday life” (Durrschmidt, 2000:117). The escape suggests a world of reappropriation of urban space as a creative play of urban living:

For better or worse, it [the city] invites you to remake it, to consolidate it into a shape you can live in ... In this sense, it seems to me that living in cities is an art, and we need the vocabulary of art, of style, to describe the peculiar relationship between man and material that exists in the continual creative play of urban living (Raban, 1974:10).

At this level, the crucial points we can extract from Raban’s theory in order to associate them with Bachelard’s designation for a metapoetic essence of the water-matter remain scattered and are not of a piece. But the Soft City inserts an essential distinction about this creative play. Soft space as an artifact has tight connections with the human component, but its development can be seen as a construct. Raban dives into his approach exactly on this interstice.

*Soft spaces as constructs*

For the scope of this thesis, it would not be useful just to confront the “functional edge” with the “soft edge” and draw a distinction reflecting the opposition between a formal typified shape for the urban waterfront, on one hand, and a recognizable coastal formation of “finite locatedness” (Casey, 1998:34) on the other. The difference is sharp and easily revealed from the strand of writings ascribed to the interpretations of the dynamics of place such as those of Yi-Fu Tuan (1974, 1977), Edward Relph (1976), and Kevin Lynch (1960, 1976, 1981). The *raison d'être* of the “soft edge” as a starting point for this section rests upon its implications with the intermediate and expressive values of urban space near water. The departure of the thesis’s design position from the water’s after-effects within the formulative logic is difficult to conceive if such a starting point is to be seen independently from the other two spatial discourses, which together favor the deployment of the meaningful space. This departure, discreetly schematized in the framework set at the very beginning of this research, can only be supportable at the overall end of this effort.
Through a semantic exposition of the representational capacities of this consequential influence over morphological features, the idea is now structured as follows: the notion discussed in the previous sections of coastal places with meaning, places that integrate water with the urban terrain to help keep the coastal environment vivid and meaningful, is primarily a construct of human sensation that organizes all the sensory data (Canter, 1977; Eberhard, 2009; Hendrix, 2006) coming from the view and the spatial experience of water while moving along the urban edge. For example, the constant succession of water’s dominance over the land (spatial arrangements with obvious recesses filled with water) or changes of perspective, moving levels, or even states of space occupancy can potentially produce more complex and meaningful sensory inputs. This results in a sensory-mental construct for the comprehension of the setting that may not have physical existence but is both generated by and generates spatial dimensions, the first in terms of the network of movements followed in the coastal space, and the second in terms of cultivating future movements, habits, behaviors, and stances.

This issue was also examined with great interest in the research-by-design project for the waterfront of Riga [images 1.01-1.08], since it forms an essential basis on which the development of the other two spatial elements would also stand. The comparison of Raban’s and Bachelard’s points of view here on the complexity of the human component, which cannot be captured by rational approaches, offered conclusions and directions for the development of the shape for Riga’s edge. For instance, the multiple encounters of different moving levels (as in the sub-areas of the multi-level moving squares on the north side of the project and the entertainment platforms to the south), the distribution of various water events around the peninsula, as well as other spatial arrangements which translate in
material terms the importance of the view and the spatial experience of moving near the natural element of water, are participatory features for a soft space as a psychospatial construct. As seen from the master plan, the generating attribute of such a construct that sets the specific shape apart from others is its appeal to “invite water inside”—to treat water as a spatial object in order to integrate one matter into the other.

It is difficult to overlook Raban’s insistence on setting aside rational models for the capture of civic life. It is the main argument of the Integrative Space for merging the re-developing the waterfront with the human component that provides support for Raban’s position. Following my previous argument, I suggest that this response to the rational and functional models (of the hard edge) provides reasons to consider the aftermaths of the water as a spatial object for urban transformation.

In Water and Dreams (1999), such an argument is clearly implied, but corresponds only to a purely notional and rhetorical level, while its interplays and interactions with space as a form regulator are definitely not the objective. In this section, my research will try to relocate this conception according to coastal urban design intentions. More specifically, the thesis proposes that:

i. the water’s surface, when integrated with the land, can be seen as a spatial feature (form) for urban design organization;
ii. when integrated into the structure of the shape of the edge, it can also form a property, a point of reference, that enables the perceiving subject through active contemplation to organize the incoming sensory inputs of the waterfront setting;

iii. when integrated inside the urban texture, it can influence the formulative logic and representation of new structures and provide users with powerful experiential advantages. These are issues which can be addressed through psychospatial research; and

iv. that the organizational deployment that is influenced when the water integrates inside the city depends, of course, on several simple or complex urbanistic issues but should not in any case be canceled out by their pragmatic significance.

By this I mean that it is possible not only for the power of the aftermaths of water to acquire a psychospatial application (in terms, for instance, of the psychological and emotional impacts on the perceiving subject), but also for crucial urbanistic aspects (such as orientation, accessibility and movement near the edge) to acquire something from water’s material fantasy and receive a more human-centered approach. Invoked by the insights of Raban and Bachelard, this research explores an interpretative way of approaching the design and organization of the urban waterfront, something that prepares the ground for the assessment of meaning in waterfront experience.

In the current discourse on the Soft Edge, the terms “urbanism” and “water’s aftermaths” are probably confused with two absolutely oppositional poles, issues difficult to meet themselves in practice and without seriously taking into consideration the existence of an Integrative Space. The idea that there is a direct or at least shorter distance than many practitioners believe between urbanism and the aftermaths of water is explored as pertaining to the reflections on the Soft Edge’s spatiality.

For Raban, the urban encyclopedia with its hidden layers of meanings illuminates the reality of urban space as “a dynamic process of players and elements, which is, above all, extremely varied and which derives its significance from being so” (Meyer, 1999:19). But how does this process affect design itself? Raban explored some meaningful criteria for the city that respond to the previous functional criteria. However he sketches this out only in a philosophical fashion. His writings do not provide spatial tools or design guidelines, but a rhetorical way of relocating our thinking and aspirations for the urban environment. This thesis identifies in his
work the idea that the design strategy of a soft urban space is heavily regulated by lived experience, meanings, and human sensibility.

The design attempts that refer to the creative and unusual bond between waterfront dynamics and the human component, such as the settings of the Parque das Nações in Lisbon [images 2.37-2.38] or the Green Rooms in Thessaloniki, after Raban’s insights on this possibility, can be placed under the sign of “personal attachment”, a notion also confronted by scholars such as Relph (1976), Tuan (1974, 1977) and Proshansky et al. (1983). In 1977, in proposing a psychoanalytic concept for this attachment, Professor at the Yale School of Architecture, Dimitris Porphyrios has described the urban setting which obeys to the rules of such a process, and which is not utopian but rather oneiric, as “a Freudian tableau of contemporary urban memory” (Porphyrios, 1977:357). With a foothold in considering the user a player, the idea of the Freudian tableau and its traces also survives in the Integrative Space as a realization of the “cultural quality” in old harbor areas. In a sense, it designates for us a design process that aims to provide meaning and sensibility for the Soft Edge and to plunge the designer and the subject straight into Bachelard’s ideology of the water-matter in order for the edge of the city to comprise an inventory of today’s urban encyclopedia and episodes.

One of the chief consequences for Integrative Space’s development from the argument advanced here is that the nature of the Soft Edge is due to the properties of the “spatialized” society that is structured all around the integrated elements, and not about the gesture of the integration itself. Here I mean that the reason we consider the insertion of water in urban fabric necessary for the construction of a meaningful space along the edge is not the illustrative impression derived by viewing a master plan that merges water masses in its formations but rather the anticipated opportunities a designer may find to use these masses as a locus of reference for activities and means to support bodily life near the shoreline. In the next chapter, Expressive Space, I will discuss several of these “social” properties and suggest how they can orchestrate a city’s new image near the edge. However, at this point of the research, I am interested only in exploring how the discontinuity, disturbance, or interruption created by inserting the one matter over the other, as seen in the waterfront outline, can be conjoined with Meyer’s dynamic process and Porphyrios’ Freudian tableau.

We may find that Raban, after the Water and Dreams, is quite attentive to most of Bachelard’s study on water’s substantial images searching for a constant, meaningful, and uniform element that symbolizes hidden and simple powers of the sense of place. In a chapter devoted to human mentality (Raban, 1990), it is acknowledged that the poetic sources of water can stimulate mental detachments or attachments with the areas associated with it—that is, the port cities, since only there does the mass of water embrace the whole urban structure. At the same time, views of the water surface can arouse curiosity, interest, and desire for new
experiences while challenging human mentality. Therefore, we can say that the apparent power of the Bachelardian theory to conceive the element of water as a real substance for people’s reveries if combined with spatial properties supports Raban and provides him with strong arguments for his views for the soft city of illusion, myth and aspiration.

The previous section argued that the soft edge emerges in particular as facilitating the structuring of meaningful relations between the waterfront shape and the perceiving subject. This structuring might equally well or better be configured by the spatial implications of water-related concepts in the design process. While this argument clearly punctures the functional and rational theories on the redevelopment of the harbors, which assert that a water mind-set cannot in any case have serious urbanistic and spatial implications during the design process, it leaves even more puzzling the origins of these spatial implications. If Integrative Space is governed by the imaginary of water, whence does this spatiality of the shape of the edge and the legitimized formulation of its outline arise?

2.3 water as configured and configuring

On the present view, much (if not all) of the properties of the spatial discourses presented in this research for the design of the waterfront is bound up with the psychology of the “material imagination,” to (mis)use Bachelard’s term, and its projection over the design process, reasoning, and thought—the effects of meaning, or what we have called the Soft Edge. The literature chosen so far focuses largely on this projection and was investigated to unfold the effects of the meaningful approach. Let us further note that with Lefebvre’s Production of Space we have the understanding of how space is actually experienced in its depths, a position that guarantees the placement of the effects of meaning in the thesis’s psychospatial discourse. It considers these depths as duplications, echoes and reverberations, redundancies and doublings-up that engender—and are engendered by—the strangest of contrasts (Lefebvre, 1991:184).

For the Integrative discourse, to be persuaded of this phenomenon it would suffice to briefly explain it like this: in order to sense the effects of the proximity of water, two component processes must be active at the same time. First, the conscious knowledge that the physical element configures and regulates the identity of the harbor areas (Dovey, 2005); and second, that it constructs in the user’s mind significant causal relationships between land and water. These relations pertain to the environment “as cause or rather as result of the psychological phenomena/processes studied” (Bonnes and Secchiaroli, 1995:64-65). For this to happen one must experience a shape within which the integrated water to be experienced (as a type of perceptual structuralization) is identified as one of the
spatio-temporal formations that compose it and part of the causal relationships amongst the formations delineated.

One important factor in the development of this sense of proximity is the ability of the designer to adjust the spatial distance between formations made of water (such as recesses, odd shapes, and strange ledges) over which important movement and instances may occur. From simple observation, the closer and better interrelated these formations are, the more the chances they have to elevate the user’s movement from the singular (walking across a monotonous linearity\textsuperscript{56}) to the multiple (choosing among ways, levels of movement, and distances). It is one of the main positions of the present chapter that confronting observers with interesting points on the shape, with choice-making possibilities from the \textit{in-between} stimulus and response (in terms of letting the user choose the track to follow that is most convenient to his/her mood) and with spatial intervals charged with similar content, are properties of the psychology of the “material imagination” that characterizes the Integrative Space and that may at best mirror real space at the depths of water’s substance.

\textit{Bachelard and the material imagination}

The phenomenon of water’s proximity exists in and characterizes two spheres, the spatial reality (as metric distance) \textit{and} the material imagination (as a configured input formed in the Imaginary order and spurred by the motivated signs of the presence of water). The research attempts here to juxtapose and confront the spatial properties of the second sphere.

In the introduction of his book \textit{Water and Dreams} (1999), Bachelard, speaking philosophically from the outset, distinguishes two sorts of imagination:

\begin{quote}
one that gives life to the formal cause and one that gives life to the material cause – or, more succinctly, a formal imagination and a material imagination...yet besides the images of form, so often evoked by psychologists of the imagination, that are...images of matter, images that stem directly from matter. The eye assigns them names, but only the hand truly knows them. A dynamic joy touches, moulds, and refines them. When forms, mere perishable forms and vain images – perpetual change of surfaces- are put aside these images of matter are dreamt substantially and intimately. They have weight; they constitute a heart (Bachelard, 1999:1).
\end{quote}

\textsuperscript{56} Later on, the Expressive Space will demonstrate how inadequate the common linear pathway is to offer challenging spatio-temporal frameworks to accommodate people’s behavioral patterns.
According to this perspective, the topic of the material imagination of water can be primarily approached as “a special type of imagination” (Bachelard, 1999:6). Starting from a consideration of the formulative influences in the design process as the expression of the ways the architect mentally organizes the spatial information of this type of imagination, the use of the term classifies the understanding that “water is also a type of destiny that is no longer simply the vain destiny of fleeting images and a never-ending dream but an essential destiny that endlessly changes the substance of the being” (Bachelard, 1999:6). The concept of the material imagination is so interpretative for the desiring subject (architect and user) that allows space for psychospatial processes or for a hypothesis linking design process, spatial experience and thinking.

In the attempt to understand how these two powerful kinds of imagination mold the coastal realm, consider once more the description presented in the beginning of this chapter. Beneath the imagination of the coastal forms, you may have sensed the “opening up of an imagination of substances” (Bachelard, 1999:6). Spatially speaking, designing a shape for the edge of the city in order to maximize the successions of information related to the water/land relationships (perceptual data from experienced aspects of distance, proximity, relativity, proportion, order-disorder, etc.) increases the possibilities the aftermaths of water have to influence the thoughts of the perceiving subject, the emotional tonality within it or the material imagination emerged from the composition.

In other words, there has been an abrupt form of water integration and therefore interruption, a move from the ordinary static track to the dynamics of occurrences: the properties attributed to the “liquid occurrence” that shape and its associated objects suddenly sustained reveal far more meanings stored at the Soft Edge—meanings of ephemerality, of the unfinished, the sudden, the diffused or destroyed by the waves; meanings stemming from the asymmetry of the coastal line as an extension of “progressively deeper and more tenacious” (Bachelard, 1999:5) water/land images and the relation that allows the perceiving subject to develop a feeling of this diffusion/integration in his/her own contemplations.

If the meaning of water’s “material imagination” has always been determined by a rhetorical theory, similar to Bachelardian philosophy, then the question of its spatial psychology posed here on the basis of the spatial experience of the edge’s shape is the first attempt to suggest that the Soft Edge is the after-sense that surrounds shape’s spatial formations, paths of movement, and space occupancy. And it is a retroactively anticipated sense of the natural element’s proximity that can be cultivated during the water occurrences. From the conscious realization of this sense, a consistency is given to the self that allows for a meaningful response to the functional’s “bare sensation – or raw, crude sensory impression” (Gibson, 1960:699). Moreover, the Soft Edge tries to narrate the semantic dialect of this meaning along with the syntactic one, a precondition for further understanding of
the spatial psychology that is woven into the experience of the urban edge. Although this chapter forms a link between Intermediary and Expressive Spaces, between water’s representation and its power to spatialize society around it, I shall argue that the remaining in-between space, the Integrative, has clear implications for our understanding of the water-matter in the Soft Edge as configured spatially and configuring spatiality.

Returning to the previous example of you returning home from work, passing through the coastal zone, we are now in a position to answer some of the questions posed elsewhere. What sort of spatial experience is heightened and what kind of spatiality is interrupted by water’s integration to your once linear pathway? Does the semantic dimension break apart or supplement the syntactic one? At first sight, one could briefly answer that only the physical position of an observer’s body and its space-occupancy states are issues to be interrupted. The linear space on the shape of land/water edge is also obviously split up. But a more careful approach to the problem would also argue that a series of semantic dimensions that participate in the sense and identity of place is also disturbed, such as the immediate experience of water as the signifier/signified matter, as a configured/configuring spatiality, along with the observer’s position, movement of perceptual field, thoughts, shifts in emotional tonality, etc.

The research’s aim is not to create a comprehensive collection of such ambiguous senses scattered throughout the coastal expanse, but rather to explore an inquiry into shape’s signifying dimension relative to the Bachelardian effects produced within/by it. Such an investigation sheds light on the preceding (ostensibly “ambiguous”) identification of spatial relationships, knowing it can alter because of its context and its implication to physical design.

Bonta and the space of ambiguity

The root of the problem is also faced by Bonta (1973). Bonta wanted to show that space is constituted not only by physical form but also by a signifying dimension, characterized respectively by polysemy and ambiguity. The reality of space and the spatiality of its constituted elements were defined for him, at least in part, by the capacity to refer to specific meanings or to produce meaning by themselves, while the meaning generated contains a relativity assigned by values, attitudes, and beliefs about the physical world in more general terms. If it was not possible for the emerged meaning of the spatial element (and for us water is such, since we are interpreting its substance materially and spatially) to influence human modes of existence and sensation, then the thesis’s key concepts of a logic that explains the semantic dimension of water’s integration could not be studied and employed in the design process. Moreover, Bonta accepts them as autonomous entities that can be analyzed separately from the syntactic dimension, since he takes for granted that the latter should obey the former (Kotsiopoulos, 1994:125).
In the above example, we can imagine a situation in which water can be considered a configured spatial entity with an articulated meaning of integrating the two characteristic material entities on either side of the edge (land and water)—a configured space that I suggest is a rather creative construct since it has the potential to stimulate sense and spatial thought, to receive uses and be transformed into an active urban space with new recognizable forms. Under these circumstances, many properties of that diffusive gesture are spatially configured. For example, the timeless affinity between every port city and its water certainly cannot be calculated or presupposed, but its desire can be anticipated or cultivated by means of spatial constructions that allow, for instance, water to configure new “spaces” or to separate and reunite the objects of the waterfront composition.

Once recognized by the initial design intentions, however, the creative integration can offer a dynamic spatiality to both the semantic and syntactic aspect of the area, raising in fact the duality of the configured/configuring into the development of new forms of spatial knowing (enacting\textsuperscript{57}) that allow space to operate, as Lynch argues, with reenacting patterns of behavior associated with particular recognizable settings (Lynch, 1972). Integrative Space, as in Bonta’s theory, uses this possibility to argue that any architectural space configured by a logic external to it receives a series of characteristics that belong to this logic as a “creative” and therefore interesting base for the production of spatial meaning constructed within it. Thus, if an urban designer orients his/her practice towards the expression of the common and typical characteristics of the urban terrain with no respect to its context, the end product would probably lack coherence and recognized identity.

But we can also imagine the situation otherwise. Water can also be considered as configuring the urban space around it, interacting at a particular time and place with the existing conditions, offering a coastal identity. This version is also creative, in the sense of offering the narrational function to the shape of the city to communicate with the human component, keeping away its image from the previous devastating stability of the functional and formal attempts. Part of this effect is achieved through what Knox and Ozolins (2000) call “the built environment in context.” It is manifested, if we are convinced by Bonta’s theory, by means of a superimposition of the two matters with “multiple relations between their physical characteristics and values” (Kotsiopoulos, 1994:126) [the translation from Greek is mine].

\textsuperscript{57} This term is used here to introduce the reader to the “experiential process,” extensively discussed in the next chapter. However, enacting is a convenient term for us at this level to pinpoint the process through which the user is embodied in the coastal environment (mentally and physically), explores space, is stimulated by it, and finally reacts with various behavioral and expressive patterns. All this bears resemblance to “acting” on a huge floating stage attached to the urban frontage where one can perform his/her life.
Bonta relates this narrational function with the *articulation* and *context*.\(^{58}\) In this case, articulation becomes a paradigm, or rather

...an ideal organizational principle that may configure space from the beginning but is not always applicable to the reading of a structural shape. However, when it is indeed applicable, then spatial reading through articulation\(^{59}\) is preferable to other reading possibilities (Kotsiopoulos, 1994:126) [the translation from Greek is mine].

Such hidden variables act on configuring space as a new entity and a soft space by changing, as Lang argues, “the three-dimensional partitioning of space, and/or the nature of the partitions” as well as “the symbolic attributes of spatial configurations, materials, objects, and/or the position of these elements within the setting” (Lang, 1994:165). This thesis holds that if such a change is regulated by the concept of “water as a spatial object” then it constitutes an influence of one matter over the other, or of one imagination over the other. At certain points, the influences of water-matter on the design process would be greater if one sees in this second version of “configuring space” a philosophy of approaching the surrounding substances, an exploratory philosophy of understanding creative change on the edge.

Faced with Bonta’s views, it appears that only the prospect of an *integrative* and simultaneously *semantic* design for the edge’s shape, which the semantic analysis of “water configured/configuring” ideates, can save the notion of “sense-stimulation” from the formal approaches. Regardless of how we conceive the issue—that is, whether as city inside water or water inside the city—design should not ignore the dynamics of the deep semantic structure of integrating one matter inside the other. Since one of the primary properties of producing direct and specific effects on the subject that can be identified and studied is the shifting in states of space occupancy, to introduce interruptions/occurrences that are semantically loaded pertains to the correspondence between the characteristics of the shape and the values of its meaning. This is supported by both Bonta and Raban, though only the first really acknowledges the architectural significance of this correspondence. This correspondence is the paradigmatic example of

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\(^{58}\) On this issue, see also Eco’s theory (1973) in *Function and Sign: The Semiotics of Architecture in Signs, Symbols and Architecture*, (1980) ed. by Broadbent, G., Bunt, R., Jencks, C., Wiley and his remarks on the relations between the physical characteristics and values of a spatially constructed meaning.

\(^{59}\) Kotsiopoulos (1994:126) adds on this issue that articulation, “which is determined by the degree of articulation and is closely related with the intended significant richness of a designed shape, depends, according to Bonta, on the designer’s sensibilities to conceive diversifications of elements in his plan and moreover to constantly introduce new bases for such diversifications.”
constructing meaningful space, a vivid illustration of the law of space’s incorporated poetic elements, like water in our case.

This issue follows Bonta and Raban in giving the design process an organic nature of materialized images: in its attempt to construct spatial meanings, conscious interest in how one should move and occupy the shoreline in fact offers a semantic and experiential (and on another level, psychological) primacy—along with spatial extensions—over the edge’s shape. Bachelard has argued that some of these interests, such as the intimate proximity we feel when approaching the water-matter, could be identified from our childhood reveries. He writes that “these first material images are dynamic, active; they are linked to simple, surprisingly primitive wants.... One thing is certain, in any case, and that is that the child’s reverie is a materialistic reverie. The child is a born materialist. His first dreams are dreams of organic substances” (Bachelard, 1999:8-9).

These are primarily the clear tendency to expand the potential of sense and significations. In addition, experiencing the city’s shape is to disclose an Integrative Space, which in turn reveals the organic nature of materialized images and consequently entails several parts of sensory sources of seeing, perceiving, understanding, enacting, moving, and feeling. Many of these parts present material preconditions (they can physically exist); others belong to the notional part of the Integrative Space in which “parts” are not objects but are located in a framework with reference to a sensory idea—for example, water as a transitory element between real objects, since for the materializing imagination water has infinite transitory capacity. Some of these notional frameworks, thought they can cultivate spatial meaning, appear to have reference only to water. It is the reference with the city’s existence that I will seek later on to associate them.

In what follows, these parts establish a basis for further researching new hypotheses, preferably the study of interpreting water-imagination materially, in the sense of offering useful design guidelines, and, more specifically, the issue of their spatial function on the design of city’s shape on water, aspects that are outside the scope of Bonta’s study. Some suggestions for that are presented in the next section on the Terra Incognita framework. The fundamental idea of this research’s conclusion appears valid, namely that all these parts possess the operation I argued previously, that the meaningful space of the edge has all the components to enable its architectural and spatial function while producing sense and meaning.

Psychospatial relations from a water-configuring space do take part in the construction of meaning. The relations studied next not only support the main hypothesis of the research, but also lay the ground for new hypotheses that pertain to the Expressive domain and are yet to come. In the next section I will shed light on these relations.
2.4 formulative attributes of meaningful places: *terra incognita*\(^{60}\)

*A pure sensual perception of physical relations is impossible; a conceptual structure is always already present in the perception of the sensual and formal world.*

J. Hendrix (2006:19)

This section presents the conceptual structure of some crucial relations through which the design process can capture the psychospatial meaning of the integrative gesture in bodily experience. Its objective is twofold: first, it attempts an in-depth investigation on water’s dynamic force to produce sense when integrated into the urban structure of the edge. This viewpoint, although based on the aforementioned Bachelardian theoretical perspectives, is fused in a different combination that rests upon spatial interpretations. Second, the set of “terra incognita” relations endeavors to sketch a design approach for the research-by-design projects as presented in the main three chapters and to act as a spatial framework of immediate coastal experiences.

This section starts from the psychospatial reading of Bachelard’s insights on the issue of associating water with mental patterns and the experience with the material imagination. Following Bachelard, Otero-Pailos’s critical essay on Charles Moore’s methodology for an “experiential immediacy” from the spatial features with poetic origin in various water-born images argues that there is a quality that makes the “architectural composition affect the consciousness of the onlooker in such a way as to ... expose his or her imagination directly to the ‘original’ poetic image” (Otero-Pailos, 2010:107). The gist of these theoretical precedents is adopted by this research to pose, at this point, the following hypothesis: Otero-Pailos contends that the investigation of water as a stimulant for the material imagination is evidence that the psychospatial nature of the meaning behind these associated poetic images is involved in the process of creating, developing and maintaining the sensory information from the immediate experience. When such information is represented, spatially constructed, or architecturally modified during one’s experience of space, the edge unfolds the map of a *terra incognita* in the unconscious and conscious thought, which extends its premises somewhere between the grasped with the sense and the grasped with the eyes.

Marking out the borders of this “land” (*terra*) is neither easy nor definite. From one point of view, its confines with the qualities of the coastal place are not hermetic: there are indeed many fluidic passages between them reaching an interdisciplinary level of approaching and studying them. From another point of view, its

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\(^{60}\) *Terra incognita* = unknown land
dissociation from what many times can really be built varies in terms of the architect’s ability to grasp the meaningful space of the edge and orient the perceiving subject towards its spatial understanding. As a response, the map of terra incognita provides the perceiving subject with a representation centered on Otero-Pailos’s aforementioned quality, enriched with other qualities pertaining to the specifics of the coastal place, such as its identity (Lynch, 1960; Relph, 1976), its collection of endogenous ideas (Tuan, 1974), associated notions or objects with poetic origin in various water-born images. As a result, it locates and orients the user to the suitable and desirable setting along the “collection of spectacles” (Loukaitou and Banerjee, 1998) found on the edge.

Likewise, during the immediate experience of the seaside built environment, piecemeal or cohesive configurations of the coastal space, individual places, sub-areas, and formations are often associated with the production of specific senses and therefore are labeled in people’s mind (Eco, 1977) for future use (according to the environmental psychologist David Canter (1977), whether we return to the same place or avoid it may depend on whether the sense is pleasant or stressful). These forms and spatial entities can subsequently become objects of desire - meeting points to be later retrieved, encounter or converse with others, spots for rest and thinking, places for sensory imagination, etc. All these, according to Deleuze (1990), are not things to be found but to be produced.

This thesis recognizes that the components of the spatial framework for the immediate sensory experience comprise sets of concepts from the psychospatial field that frames the contemplation of the perceiving subject. This research aims to explore some crucial aspects of both perceptual and affective meaning related to the individual’s relationships with the coastal environment. In the following sections, thus, the implications of Eco and Canter’s perspective regarding “formations and their mental associations” are generally concentrated around terra incognita’s syntactical inquiry into the following five concepts or attributes:

**topological proximity**
The emergence of places with meaning near water is substantially demarcated by “the functions that the spatial dimension can carry out in defining positions of relational proximity/distance” (Bonnes and Secchiaroli, 1995:83) between the perceiving subject and the two matters (land and water). Subsequently, meaningful territories of cultivated relationships emerge within waterfront areas where the subject’s syntactical position is dictated by the topological distance from the “liquid stimuli.”

**water enclosure / space segregation**
The emergence of places with meaning near water is facilitated by the surrounding physical presence of the water, indicating that the lack of enclosure and the
immediate experience of real or symbolic barriers “can induce the anxiety of placelessness” (Casey, 1998:348).

**relativity**

Succeeding the first attribute of topological proximity, this concept pertains to the effects from the bodily allocation of the perceiving subject as it moves on the edge of the edge. It studies the “relativity of position as essential to place” (Casey, 1998:246) and to the perception of the coastal space (direction), considering certain aspects of the setting to the bodily position.

**asymmetry**

For the coastal place, the emergence of meaning is strengthened from a reading of the asymmetrical state of the composition – a reading that identifies asymmetry as the regulator of some non-hierarchical and unstable patterns and that in turn challenges the gestalt body image of the perceiving subject (Hendrix, 2006:121). In this sense, asymmetry breaks away the conception of the coastal shape from the original and functional linear structure that is traditionally essential to coastal architecture.

**permeability / connectivity**

The emergence of places with meaning near water is regulated by the occurrence of opportunities for the perceiving subject to approach the source of the “material imagination” (water) of the composition. In proposing a psychospatial syntax for the shape of the edge, permeability
highlights another psychic aspect emerging from the syntactic approach and point of sensory contact with the water. Similarly, *connectivity* refers to the points of physical connection of subject’s course of movement to and from water.

These crucial concepts or attributes constrain the meaningful formulation of the waterfront shape, and can be considered properties for the evocation and communication of meaning during the coastal spatial experience. The thesis argues that this shape operates in the same way as *demarcating* water images and being *demarcated* by them. In this view, the more one delves into the above attributes’ accounts dealing with the general concept of an interpretative, integrative relation between the city and its shape, the clearer it becomes that the dialectic between the spatial formulation and the visual perception, or between the syntactic relations and the spatial meaning, is to be understood through a chain of psychospatial concepts. Scholars such as Gibson, Rapoport, and Goodman have employed such chains of intermediary notions in dealing with, among other issues, space as a “perceptual system,” the theory of “direct visual perception,” the emphasis on meaning through the interaction between perception and action, and even the concept of the “affordances” of the environment.

I cannot cover all of these associated concepts and relations here; I will...
concentrate on five main concepts, as these will suffice to show the ability of coastal space to contain psychospatial information, and investigate “the need for concepts able to grasp space as a practically and symbolically pre-structured fabric” (Netto, 2003:81). Out of these, a study of transformational relations for the development of the integrative shape will support the psychospatial reading of the thesis.

\[ i. \text{topological proximity:} \]
\[ \text{the profile of water occurrences} \]

The following sub-sections attempt to disclose and spatially interpret some crucial concepts associated with the *morphic perceptual totalities* (Otero-Pailos, 2010:157) of the built environment as they are founded in a number of theoretical traditions (Gibson 1966, 1972, 1979; Proshansky 1970; Lynch 1960, 1981; Norberg-Schulz, 1966, 1975, 1984). Although their extraction was based on the initial purposes of this thesis and on the ability of the psychospatial concepts to prove themselves architecturally fertile, their employment here is useful in order to envisage the Integrative Space of the edge as another psychophysical space in which its constitutive parts bridge the *occupational sense* of the space with its *identificational* and *circumstantial* senses. I suggest, then, that one such linkage might be achieved by exploring the issue of the topological proximity between the two matters, and therefore I will try to develop this notion further.

This section is a development of Norberg-Schultz’s idea of the visual description of topologies. Leaning on his theorization of topology as the origin of architectural space, such an idea is meaningful for the design of the edge. Otero-Pailos (2010) argues that the visual description of topologies was interpreted by Norberg-Schultz as a “scientific site analysis which aimed to reveal them as the original site or the grounding source of architecture” (Otero-Pailos, 2010:158). In this framework, the basic idea that I address here and try to embody inside the syntactic language of the Integrative Space is that materially interpreting the after-effects of the presence of water on a site already presupposes a close physical relation between the urban texture and the natural element.

It also presupposes an efficient distance, which may cultivate in the mind of the perceiving subject the chance for the water’s substance to work upon his/her senses, and, moreover to work upon the geometry of the shape of the city. In many ways, the profile of matter’s occurrences consists of design approaches of encountering intersections of water-events. These can affect the spatial experience by offering a selection\(^{61}\) of topological proximity relations, from structures and

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\(^{61}\) Proximity data average will, of course, not be offered in the Integrative Space or by this research in general since this effort aims at investigating what an axis of materializing the aftermaths of the coastal space is for the urban design process, and does not intend to offer
arrangements that stand a bit aside, respecting the minimum distance from water and producing fleeting and facile images, to people in terms of feeling the sense of place, to formations literally built inside the water that mark the transition from singular to several effects exhibited in subject’s psychic condition. Effects which integrative gestures seek to incorporate in the formulation of edge’s outline.

When the perceiving subject is “invited” to enter inside the natural element, then for him/her

...water is not only a group of images revealed in wandering contemplation, a series of broken, momentary reveries; it is a mainstay for images, a mainstay that quickly becomes a contributor of images, a founding contributor for images. Thus, little by little, in the course of ever more profound contemplation, water becomes an element of materializing imagination (Bachelard, 1999:11).

Before moving further on the issue of producing “materialized imagination” from the shape’s readings, it can be helpful if I elaborate on some of the details of the first step (schema62) mentioned already, that of matter’s topological proximity. In Integrative Space’s basic idea, shape’s intersections between subject’s patterns of movement and water-events are identified, first by their spatial relationships to water and second by the relations amongst them, with proximity being the most important of all water occurrences. This rather metric variable is also identified by O’Keefe (1999) as belonging to the three main variables of spatial relationships between entities: the place, the direction, and the distance.

The suggestion that the property of objects’ distance from the “source of sense-stimulation” and the distance of water from the urban fabric also govern the level of challenge, meaningfulness, and interest within the coastal shape is further reinforced by the effects of retracting the edge’s linearity on the formulation of objects themselves. The research argues that the most obvious effect of breaking the linearity is to be found on structures generated by the notion of water’s presence itself, and I am referring again to floating or anchored constructions inside the natural element. And let me emphasize again that by allocating urban extensions inside the iridescent surface, the designer is inevitably called to face with the value of the water-matter intersections, to identify its associated principles (such as the cohesion and consistency from its presence) that make the

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62 From here on I will refer frequently to each spatial relation studied as forming an individual “step” within the structuring of terra incognita’s syntax. However, it may sound more accurate if I use Stiny’s term here and say that such steps are in fact “schemata [that] define families of rules under new transformations” (Stiny, 1999:10).
design proposal recognizable in the surrounding setting, and to transmit the produced image for sense and thought production in the mind of the user.

I have previously suggested, following Deleuze’s assertion that sense is not a principle but a product, that “inviting” people to enact their lives in efficient proximity to water or even in it takes on a symbolism easy to spatially psychoanalyze. Now I want to add that for this research Deleuze’s product is the constituent of an Integrative Space where proximity—seen thus far from within the Bachelardian insights—finds its geometrical configuration, since it can now be associated with a metric module: level zero represents the effects produced by a straight solid shoreline and refers to spatial formations that exist on both matters. Then scale varies towards both directions in terms of receiving negative signs when formations demonstrate a distance from water (the greater the distance, the weaker the proximity is in order to produce sense and thought), but also positive signs when they enter inside water, standing separated and enclosed by it.

Here, we have to mention that the metric module I am talking about is an elusive thing: it derives from various sources, some physical and others notional. To give an example, if there is a strong referential signal, characterized by the “infinite locatedness” (Casey, 1998:34) of place, or made of environmental data, this signal may as well consist the “point zero,” and proximity may therefore be acknowledged and estimated in reference to this signal instead of the land/water edge. Whatever the case, for topological proximity studies the distance between objects or formations and the source is always a subject of serious research on behalf of the urban designer and can be determined by several different dimensions, such as the cultural conditions found around the edge (signaling whether life in the city is desirable or not, the pleasure derived from its view, the value and significance of the coastal life, etc.).

O’Keefe and the issue of path

At any point in the shape of the urban edge, the distance between the formulation (subarea) and the source (water) projects effects exhibited by matter’s proximity. Distance regulates possible psychological effects from the presence of water, thus promoting possible spatial relationships on the edge that engage the human component in the coastal space.

Geometrical relations evoked by object/water proximities in a waterfront environment can be coded and understood by the users if the design associates

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63 Starting with the intuitive concept of proximity as a binary spatial relation between the coastal objects and the water, we can define and use the properties of their proximities to establish a formal relationship between the “topological” concepts of the coastal areas and their continuous counterparts in metric variables. Of special interest are the continuous spatial senses that emerge from such proximate spaces. These properties, and the fact that a
them with the user’s movement along a pathway that intersects all the arranged events. In this sense, the user’s state of space occupancy also refers to the distance of the perceived object from the source. As the observer moves along the path, the surrounding environment continuously adds information that can affect his/her senses (Eberhard, 2009; Hendrix, 2006). For instance a building which looks like rising from the water, trying to crawl onto the land, can make an observer grasp the identity of the place with greater sensibility than a building that stands passively aside. This occurs because in the first design attitude of the “crawling” object, the formulative logic employs both the physical appearance (image) and the conceptions (associated thoughts) related to a concept of water-origin.

The closer the perceiving subject has to pass to this building along its path, which may even pass through it, the more likely it will be to conceive how the poetic identity (urban matter being born from the liquid matter) of an object fits, little by little, into a retroactively anticipated identity. Therefore, there is a correlation for the Integrative Space between edge as a shape and as a path/track. In the book *Language and Space* (1999), O’Keefe delineates the meaning and scope of the term “path” with an attempt to link it with the interpretation of vectorial data. He writes that we can approach a path/track as

...an ordered sequence of places [formulations] and the translation vectors [distances] between them. Paths can be identified by their end places or by

variety of nearness relations can be defined in a city’s shape, indicate that spatial relationships generated by the notation of the proximity to water are useful tools in the difficult task of the shape formulation and its understanding (consciously or even reflexive).
a distinct name. Conversely, places along the path can be identified and associated with the path. A path [coinciding with the movement of the perceiving subject along the edge of the Edge] may be marked by a continuous feature such as an odor trail or a road but needs not be (O’Keefe, 1999:280).

This definition shifts to the debate about the constitutional basis for the coastal path along the edge, showing that there are broader and narrower conceptions of what a coastal path is made of. Within this spatial framework of the ordered sequence of places and the translation vectors between them, we can now examine how topological proximity, that is the translation of objects’ and formulations’ proximities, in Coop Himmelblau’s project for Hamburg [images 2.20, 2.21] are specified and work.

The spatial relationships generated by proximities’ notations in this project are inscribed in a system of courses made up of several peripheral paths that define the distances of individual objects and formations—grouped in the three major units of the Skyline, the Hamburg building and the Media Arc—from the natural element. While studying the project from the master plan, it is useful to read the paths in a horizontal collection (when possible), because an essential feature of the edge—the linearity of its shape—is first dismantled and then reconstructed in a different logic, remaining alive even in the new situation.

This feature, even if offered in a way unlike most waterfront proposals do, allows the Integrative Space to retain the use of a continuous path/track, with water’s intervals and intersections strengthening this characteristic. Exceptions to this
ordered sequence of proximity to water formations are the unit of the Media Tower, which steps and frames the other side of the area, and the interrupted paths of the floating objects, which are structured in parallel with the coastline and present the greater degree of proximity. Judging from the architects’ documentation and presentation of the project, user movement and spatial experience may start from all sides of the proposal; however, the design cultivates the sense and effects from matter’s proximity only if one enters from the east via the waved shelter.

This is possible because the path starting from the east immediately and directly aims to introduce the user to the water, and bring him/her into its “sphere of influence.” This path, using the ordered sequence of places along its length and the translation vectors between the objects’ distances from water, gives the water a “dual existence” (Bachelard, 1999:12). By this I mean that the architects’ design intention to immerse the user and his/her experience in the water provides the opportunity for psychological and sensory ambivalence, and the project finds its poetic double, to use Bachelard’s term. One walking between the great proximities of these coastal formations may sense dualities of feelings, such as a desire to walk on water and a fear of the possible consequences, to sense the land and water with every step, the harmony between two opposite elements whose effects on the subject depend on personal readings and passages.

The study of this specific work by Coop Himmelblau [images 2.20, 2.21] provides us with a good example of the topological proximity necessary to the make sense of the edge’s shape. By the same spatial framework set examined above, we can identify other aspects of this “necessity.” For instance, the floating objects, with their great proximity and ability to change elevation according to the water level (rising and falling with the tides), are located in the middle of these paths in order to cross the user’s movement and signify a locus of importance when compared with other objects, which stand in “retreat,” leaving plenty of distance from the edge of the edge for public access.

At another point, a diagonal axis precedes the path system of the horizontal sub-paths. This axis, supporting the notational connection of the two edges that face

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64 In this thesis, the problem of the “objective reading” pertains to the presentation of waterfront projects made by various architects. Since I am speaking theoretically, I cannot notice or “objectively” interpret anything that might occur on a hypothetical site. In this research, the study of inspiring land/water spatial relationships that can possibly be cultivated along the edge cannot but lean on the intentions and presentations of others, like the designers of each project. However, we must acknowledge the shortcomings of such presentations, study them critically, and refrain from thinking that they represent reality. By crossing information, I intent to present at least one point of view that is considered conventional. Nevertheless, I believe that this is an issue that other similar research must face and cope with.
each other squarely across the water, forms a skyline and delineates various proximities and paths. A longitudinal structure is inserted on this axis to mark the transition from greater to lesser distance, since it steps with one foot on land and with the other in the water.

As seen from the master plan, the spatial relationships of these formations and their proximities initiate a new urban condition in which one matter integrates inside the other. Everyday life and activities, including provision for housing, offices, commercial uses, and leisure, are presented as a collection of spectacles inserted within narrow distances from the edge. The project seems to cultivate an abundance of water images that contribute to a type of syntax for the anticipated coastal reality: several different levels, combinations of paths, perspectives, views, and proximities.

Once more, the contribution of Bachelard in this reading is emblematic since he inserts a pivotal distinction about the concept of this syntax. This syntax refers to land-matter, but is also related to water-matter. He dives into his essay exactly on this interstice and says that

...by grouping images and dissolving substances, water helps the imagination in its task of de-objectifying and assimilating. It also contributes a type of syntax, a continual linking up and gentle movement of images that frees a reverie bound to objects (Bachelard, 1999:12).

It is thus this elemental water with its after-effects in Coop’s work that imparts a particular motion that frees conceptions following the path along the edge.

In what follows, the spatial relation of formations’ distances from water will be associated with other syntactic relations identified as crucial in the development of places with meaning along the city’s edge. As each step is built on the previous one, the next is structured according to simple urbanistic, architectural, and psychological considerations generated by water’s mediation of the above stage. Therefore, the following enclosure-segregation issue, along with all the rest, is designated as signifying the physical mediacy of water in our effort of schematizing the meaningful shape of the coastal place.

65 The reason this syntax has tremendous impacts on terra incognita’s map, as we will also explore later on, is its radical and subversive character. Since this syntax functions by the inversion of common or orthodox waterfront aspects, its evasions constitute at the same time a sort of attack—an attack against the credibility of the sense of place and the spatial and intellectual meanings this sense codes from within the land/water relation. An attack against the waterfront sense constitutes, however, an attack against the relationship within which this sense is being generated and grows up. Thus terra incognita’s syntax, undermining the unexceptional idea of the contemporary edge, undermines its formally or functionally rendered values.
To restrain the idea of the Soft Edge within the limits of the topological proximity study in order for the shape to acquire a more direct relation with its determinant element would indeed constitute a serious misconception. Integrative Space involves not only the city but also the water and the people near it; it is a creative psychophysical construct and a spatial tool that tries to unveil and unfold the inner connections between these three dimensions. There is no Soft Edge, no terra incognita, without a degree of spatial freedom from the necessity of approaching them from the perspective of pure standardization and market’s method of analysis. Let me repeat that as much as water’s material imagination prevails upon design reasoning, its freedom, its power to make sense, and its ideational poetic bonds apply to the design of the edge.

Until the mid-1980s, the image of the “urban wall” and the cityscape made of rows of buildings, standing at some distance from the edge leaving a pedestrian path, was considered to be a convenient if painful compromise between the front and back face of the city. Tibbalds (1992) says that this “urban wall” scheme of the past twenty or thirty years, product of the so-called comprehensive redevelopment, has tended to destroy the scale of the familiar and successful urban form of the traditional city, with largely unsatisfactory results. The idea of constructing a wall-like urban frontage, straight and monotonous in form leaving a small space mainly for promenade in front of the sea, was the result of a compact and tightly organized urban model based on the block layout (Tibbalds, 1992). Most times this
the Integrative Space

formal approach was in accordance with the general social context of the day and the pressure for quick and compact housing solutions.

However, the shifts in cities’ will to invest in their characteristics—the scale, activities, uses, or images of their locale—and the contemporary demands for freedom and flexibility, unstable or even ephemeral conditions have eliminated the static approaches of the past from the coastal stage, considering them damaging to their content. These demands opened up the path for a new, not accurately defined, re-establishment of the city’s image and the relation of its structures to water by offering opportunities and passages to integrate the two. For reasons of human sense-creation, they explored water’s flux and freedom as a matter to be expressed in a variety of informal forms.

The notation of water’s freedom, as in its ability to perpetually change its shape depending on the surroundings, is vague and indefinite in respect to its “interiority”—is water the matter occurring inside the city or vice versa? If it were intended as a precise copy of the urban wall, the shape of the urban edge would have cancelled out the Integrative Space and would look like the functional outline with its dominant linearity and lack of events, creativity, matters’ intersections and patterns of expectations, which it does not. Instead, the desire to welcome water inside (or to spread the city out) leads water to enclosure the urban structures and formations, segregating objects and forming groups—objects that belong to the coastal place, transmitting its identity and characteristics, and others that can be found in the inner parts of the city. Yet, the focus of the research on coastal outlines legitimized by concepts such as these of enclosing and enclosed,
segregating and segregated, appears useful to indicate that the waterfront zone, in fact, shares some of the water’s freedom and interiority with concepts’ influence in the formulative logic of the outlines.

The primary role of the enclosure/segregation dimension counts on the experience of the subjective parameter (Edelman and Tononi, 2000): it invents a possibility of the coastal life for the personal context, which according to Smith is nothing other than to make sense and to operate personal passages within the sense-stimulating context and so synthesize new differences (Smith, 1996). Therefore, in making sense of the shape of the edge, the urban conditions of the waterfront setting are transformed and “the possibility of another way of living” (Radley, 1996:569) is offered for consumption. In the Soft Edge, which this research tries to reveal, the segregated elements may be combined in certain meaningful ways to make other segregations and produce other possibilities.

One of the research’s basic premises is that enclosure/segregation instigates possibilities just as possibilities are caused by enclosure. An archetypal formation that seems to me to be a nice example for the development of a theory of how a user’s experience of places with meaning arises from water enclosure and space segregation is that of a spatial unit enclosed by water seen as a disjointed architectural arrangement. Take for example an island-like formation that design puts inside the water-matter, or any other simple gesture like a floating platform, a water square, etc. We know intuitively that our conscious experiences of the urban waterfront render it as a disjointed, fragmented, or episodic formation, since it offers no spatial relations associated with the grid of the city. We also know that in the opposite case it would have been rendered as a composite element, like the arrangement of incidents in Manhattan’s East Riverfront [images 2.22, 2.23], which attaches the compound spatial formations directly onto the frontage of the city.

From this we acknowledge that when a segregated shape is a matter of everyday experience, that is when someone uses the area quite often, he/she may develop a freedom in what is to be considered a product of disjointedness from the urban terrain based upon the way he/she has already formulated the rules of the elements’ combination. Impressions and thoughts from the first spatial experience and shape’s material imagination often give way to codes of interpreting each enclosure as an episodic incident or combination of more segregated elements. What was the effect from the primary sensory input and the first experience may not remain forever the agent that explains the rule of enclosure in the mind of the user; the user may approach the same formation in a totally different way and interpret its material fantasy, that is the wish-fulfillment (Hendrix, 2006:178) goals caused by the material extensions of the object, as a gesture within a general spatial framework of similar gestures. Thus the issue of enclosure/segregation can also be discussed in terms of a gesture’s material wish-fulfillment pretension, which each time is personally interpreted in the mind of the subject.
Let me clarify the spatiology of the idea of the enclosure of land surrounded by the boundary of water with an example: Enric Miralles’s proposal for Karabournaki Pier in Thessaloniki, Hellas [images 2.24, 2.25]. It is an interesting interpretation of both disjointed and composite coastal arrangements by means of water’s interiority (or rather the city’s interiority, since in this case it is the city that seems to enter in the sea) along with the meaning of being surrounded. The sensation stemming from the powerful imposition of the water when it encircles an urban use from all sides and segregates it from the land, keeping it inside its substance, and the effects caused by object’s participation in this game of enclosure coexists with (or is replaced by) the spatial experience of a ferry terminal located just there, inside the water-matter. In this example, the issue of water’s aftermaths, the after-effect it leaves when integrated with and subsequently incorporated into the proposed new possibility of another way of living by water, demands further attention.

In regard to the formulation of the city’s shape on water, the issue of excluding the object from the land, rises from the Bachelardian metapoetry. The architect seems to acknowledge its significance and claims that

...there exists the seaside; there still exists the changing rhythm of the sea breezes; there still exists the undefined contours; exists Thessaloniki’s bay; exists, in the distance, the silhouette of Mount Olympus; exists, and is real and justified in distrusting urban planning; the theme has to be the equivalent of an action, a reflexive praxis; to compromise the chora; from the darkness of the water mythological notions always appear; this is the way these Islands are, they get close to the approach of the vessel; the polis still does not exist (Lebesque, 1999:111).

The design strategy that the designer with these words tries to respond to reflects the specific water-semiosis that the architectural synthesis attempts to materially interpret. Water’s material fantasy seems to play a dominant role for him during all stages of the design process -from the initial intentions to the end product. He uses the appellation “water mythological notions” to delineate the narrative domain that offers the required self-legitimation to the formulation and existence of each structure separately. The material fantasy is here considered by Miralles a property not completely conscious, but mostly unconscious—something not useful to be offered for consumption literally, but mostly symbolically and imaginatively; something not dispassionate, but sensuously and emotionally engaged. This shift in the architect’s understanding of inventing new possibilities for coastal life is of great importance for Integrative Space’s development since it entails a

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66 Plato’s concept of Chora is that space which, in surrounding things, delimits and determines them.
corresponding shift in our understanding of what material fantasy can really produce and by what means. However, this rhetorical approach does not fully cover the issue of *disjointed and composite interiority* described above.

Since the shape of the edge is here formulated by the notation of water images—such as the ever-changing rhythm of the sea breezes, or the freedom of the sea currents that unexpectedly separate objects from their original position—it is not free of different interpretations. The *common-sense notion* of the users’ minds (Eberhard, 2009) cannot grasp in exactly the same way either the reasons for objects’ segregation from the land or the entailed spatial relationships within them. In addition, there might be a category of users who, after the first spatial experience of the complex, may tend to establish in their mind a fixed image of what is enclosed and what is not, making it almost impossible to think just anything about the rules of a complex’s composition. Another category may operate in exactly the opposite way and not allow the first impression to determine the rules, but instead, based upon habitual reactions, they may conceive it more ordinarily and “infer their own spatial relationships” (Eberhard, 2009:55) for finding their way.

Consequently, the game of what to consider a *disjointed part* and what a *composite of segregated entities* is rather elusive or controversial but needs more clarification in order to understand with what sort of autonomy this step of enclosure or segregation operates within the Integrative Space.

Miralles’s project cultivates a controversy that occurs in intervals: users may believe at the beginning that each of the three water-enclosed entities is a product of matter’s inner logic, without being absolutely sure about this belief, and
afterwards see them all as merely an extension of land inside or as an inevitable consequence of the previous step, that of topological proximity. Island-like structures appear to be surrounded by water islands but are not islands. There is no a priori, purely water-based rhetorical framework for a broadly accepted concept of enclosed urban areas in this case, and no urbanistic rule that gives specific rise to such coastal formations.

On the contrary, there is a constant freedom in the rules of enclosure. Hence we can say that the issue of enclosure/segmentation is more elusive, flexible and mobile than the previous one. It is the bridge between the imaginative power of water-matter to cut off parts from the land and people’s inhibition to materially interpret this power—it bridges the gap between image and desire. Therefore, the code of interpreting each enclosure as an isolated incident or as a combination of more segregated elements is more an individual than a collective approach. Contrary to proximity, which being based upon metric parameters can indeed have more common or broad acceptance, this very spatial relation studied here is mostly what we sense by ourselves. Even if it is the first or the habitual sensory input, the issue of water’s interiority cannot be communicated by metrics but must be experience by ourselves for ourselves.

There is perhaps much to be said for the reflection of the attributes of enclosure/segmentation and disjointed/composite parts within the present chapter. The psychic consequences from these spatial properties on the perceiving subject can speak of many aspects of the sensory information data concerning the natural element and, to a broader extent, can strengthen the ability of the shape to work on it and make sense. They even allow for the understanding of the spatial motivation for a topological proximity and the desire for a challenging relativity during movement along the shoreline. This is the issue to be studied next. But Miralles’s project for Karabournaki cannot adequately explore all these aspects in terms of the message communication and emotion creation, nor does this section aim at their full assimilation within the Integrative Space. It is my belief that the primary focus of this research should be to schematize them and present them as design guidelines or recommendations.

Moreover, I shall pay considerable attention to this step from now on and therefore I don’t want to emphasize it too much at this point. The spatial experience of being enclosed by water [image 2.26-2.28] is too important for the understanding of the edge’s meaningful space and the psychology of the coastal imaginary within an urban design project. In continuing to investigate the syntax of terra incognita and other spatial relationships that communicate the meaning of “integration,” water’s interiority will obviously become many times again the dominant substance and structural rule.
Continuing the psychospatial reading of the waterfront architectural discourse, the latter presents concerns for the effects of the human presence and movement in the design of space and, similarly, the effects of space on human position within it. This is a crucial aspect that architects address from the phase of the initial decisions; for urban designers it is even more critical, since it regulates the presence of others and therefore structures the social dimension of the proposal.

However, my aim here is not a review of gestalt theories of meaningful patterns (Sircus, 2001) and the exemplification of the forces that in fact set forth the negotiation and re-negotiation within a more or less habitual experience. My aim is instead to account for the fact that the sense-stimulation caused by the effects from the outline of the urban edge tends to ascribe meaningful characteristics to a user’s position relatively to water’s presence and vice versa. In this way we can realize how imposing a generator of images the liquid landscape can become when the user constantly changes his/her relative perspectives while moving along the edge. After all, “the unconscious that loves such great images is forever marked by them. They call forth endless reveries” (Bachelard, 1999:14).

In the previous chapter, and in my research-by-design project for Riga [images 1.01-1.08], I have tried to show how these ever-changing images, impregnated with mythology, gave life to a process of morphogenesis similar to their flexibility. Now, moving backwards, I will try to show how similar images come into being in the first place, what makes them important for urban design, and what the role of shape is in their creation. Thus I argue that everyday feelings, sensations, and modes of experiencing places with meaning can be considered in relation to a user’s bodily position and his/her state of space occupancy on the land/water edge and among coastal objects. An experience, a point of stasis, a pathway of quick or slow movement, or a spot that cultivates an imagination attached to a particular relative position along the coastline readily ascribes value and significance to it.

For what has been argued in the previous sections, exploring the spatial relationships established between the observer’s body and the water’s existence both implies and is implied by the above-mentioned issues of proximity and enclosure. On the one hand, topological proximity may provide for an interdependent track/path along the new shoreline. On the other hand, an enclosed spatial arrangement may cultivate opportunities to invite people to move all around it and therefore offer a variety of perspectives and images. For example, imagine again the island-like shapes of Miralles: they are structurally organized so that a user’s movement relative to the geometry of the straight shoreline once considered functional is subordinated to the psychospatial effects from the specific design gesture.
However, relativity, as seen from this point of view, cannot pick up a definite metric substance; cannot be offered from this research as a ready-made recommendation for further development; it cannot even claim some of water’s physical attributes or values, as segregation and enclosure did above. It is a matter to be inherited by other spatial relationships, which, from one point of view, may be an inevitable result (to enclose parts of land with water inevitably entails a challenge to spatial relativity), and from another may consist their presupposition. I see it as a kind of necessity built from a designer’s personal “meditation on a fundamental substance,” to use Bachelard’s words. Relativity between the perceiving subject and the land/water edge considers the environmental perception dimension relative to a specific user-moving system that communicates some meaning, an aspect that is many times kept away from its spatial accommodation. It is more of sensory intuition people feel when approaching the waterfront zone. Research argues that when it finds its spatial expression it keeps by every means the static linearity to a silence while manifesting the useful sum of its ongoing relations that speaks to us when we constantly change views, perspectives, framed images, and moving directions.

In a shape that actively uses such a system to produce meaning, past linearity stemming from the technical and functional approaches is disturbed everywhere: no moving track can be determined as having only one rather than several directional senses, and no land/water edge exemplifies spatial meanings independently of spatial directions and the production of water images. As explored in my research-by-design project for Riga, the primary role of “spatial relativity,” which is manifested along the whole east coastline of the peninsula and which violates linearity, is to provide for the spatial relationships among a set of coastal directions, formations, and activities and to delineate meaningful perspectives and space-occupancy states in these relationships over the whole spatial experience.

These spatial relationships, as new signs of the basic element of the material imagination (i.e. the myth of Jurasmat), are represented by spatial formations (tracks, floating platforms and squares, anchored structures, piers, and buildings that rise from water) that coincide (in fact they actually correspond) with parts and events of the plot. The relativity of each direction and formation to the water within the notation of the myth is given by an individual triangular sub-shape that converges towards the point of prominence (landmark), and thus corresponds to a unique direction of specific distance from this very point. In this example, unfolding the Integrative Space involves the formulation of similar triangles that create the presuppositions not only for the relative positions of the users’ bodies but also for water to be integrated, to be proximate to urban structures, and to enclose compound objects of the synthesis.
These sub-areas were formulated by their significant impact on the issue of the body’s relativity and their ability to organize the function of the nearby objects (for example, the complex of the multi-level moving squares, which is addressed to challenge the observer’s relative position in both a vertical and horizontal level) or to frame significant views from the other side of the river.

Moving through linear space

The juxtaposition of the user’s position relative to the water raises the following question: If a natural edge can be coded by a system of spatial features (shapes) which derives from the connections between various directions, vectors, and points, is it possible to incorporate non-spatial properties together, like conceptions which people hold of that system, by proposing an interpretative urban condition? As a preliminary exploration of this question, I will argue that relativity can also be offered along a linear track by sharing the descriptions and behaviors associated with the topographic characteristics of the natural coastline. Even without the material imagination cultivated by rhetorical means, like a myth or a text, the spatial features of the edge (shape) can represent relative issues and cultivate a meaningful setting.

My primary concern in my research-by-design proposal for Trieste’s waterfront [images 2.01-2.07] was to set out inspiring relative conditions between the existing and the proposed formulation of the shoreline and the user’s movement along them, with a notation of moving inside the water-matter as the first step to materially interpret the concept of spatial divergence. As seen from the master plan, in this notation the relative location of each platform is given by the vectorial direction of the corresponding part of the natural coastline, transferred inside the sea and distorted towards specific points/locations (a point of interest, a main axis, a framed view, etc.) to produce meaning and create a variety of perspectives for the moving subject.

Much of the issue of relativity here involves the deformation of these platforms and their elongated axes according to an idea. In some parts (for example, the structures on the west side of the proposal, where the natural shape is more complicated, incorporating a variety of vectorial directions since it is curved), relativity is given by the combination of different directions within the same small territory, something that makes it easier for design to express complex formations and enables increasingly complex behaviors on behalf of the users (Eberhard, 2009), such as the sense of territoriality or way-finding. On the contrary, whereas the shoreline remains linear with a minimal degree of vectorial variety, platforms appear more static and stable, following the rules set by the reality standing beside them. In most cases, however, relativity is a product of interaction among coastal directions and the proposed urban structures: it needs to be formulated by the spatial relationships established between the land/water edge and the three main
axes of events—the axes of Ephemerality, Memory, and Permanence. These relationships specify the rules of deformation, disordered arrangement, and linkages between individual objects.

What is suggested in this project is that the understanding of relativity that cultivates integrative meaning is associated with the movement along the edge—on land or water. In another interpretation, it is associated with water and takes on the characteristic task of ascribing sense-stimulating relativistic positions to the user’s movement while rendering his/her experience from within a new locative system of paths. Thus, water in this project is given the psychological feature of a form of directing the human component. This understanding is a form of breaking apart the standardized approach (i.e. the static and continuous track, which most time is offered as a wide promenade) into a challenge for the human sense system of movement and space occupancy. Therefore, the concepts of relativity, deformed directions, and variety of locative positions are attuned according to the proposed shape of the edge, to water-related structures, and to the flux and reflux of an element that most times is considered incapable of having spatial properties.

If we are to take up this understanding of relativity as the precondition for (or result of) the previous two steps (i.e. the topological proximity and enclosure/segregation issues), a mode of interpretation is required to translate information from the proposed relative “floating stage” into instructions to human sensibilities. Referring to the project’s initial design intentions, the constant transition from one elongated structure to the other, the speed of changing the level and direction of movement, and the status of a user’s on-going sensory inputs, aim at involving the space’s mental description (issue that pertains to the cognitive map of that space) just as the perception of water’s enclosure involves a “material” work of the body. Additionally,

...the purity of such sensorial moments overemphasises the body as brute experience, a tendency that prioritises the physical and biological level of our experience, reifying the body into a problematic, uninscribed arbiter to an essential source of “truth” (Grosz, 1994:94).

The interpretational process required is the same as the one we identified in the previous chapter, where the symbolic and the representational were constantly superseded by the conceptual structure (Hendrix, 2006:19), which was present in the perception of the coastal spatial feature (form). In this process, at any moment there could be a new identification, interpretation, and contemplation. The difference distinguishing the Integrative discourse and the issue of relativity

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67 Deformation and disorder “attack coherence but do not eliminate it. So architecture is a struggle between a necessary coherence and its necessary displacement/disorderliness” (Eisenman, 2004:59).
standing or moving along the land/water edge from the rest is the aim of this section: while the perceiving subject formulates a base system of Integrative rules as a means to understand and possess the underlying relations in the logic of the shape of the waterfront area, he/she can only approach an “inherent relativity.”

By this I mean that the subject can only grasp it in its abstract form: it can decode the information transmitted and explore it only with the active role of the bodily position during the moving experience. By definition, it ceases to be inherent and becomes a structuring concept in this thesis’s notion of psychospatial syntax only when the position dependence of his/her track stimulates something inside his/her mind and thus, we might say, finds a sort of spatial expression.

From this viewpoint, it is possible to pursue a corporeal understanding of the shape of the edge alongside the formal one (the functional aspect, since the vast majority of waterfront projects focus on this dimension of understanding the coastal design), whereby both aspects can emerge in the design process as interdependent and mutually related to our problematic. And even if relativity can explain some of the deepest concepts of the interaction between water and user or user and coastal reality, what can, sufficiently, explain other environment - behavior concepts? What can explain, for example, human
sensibilities emerging as soon as one positions his/her body inside a *relative* spatial condition with the land/water edge?

The research’s premise is that the sensory inputs and experiences (Eberhard, 2009; Hendrix, 2006), which at first sight may appear interesting, challenging, joyful, or boring, and the sensibilities we develop during enactment of our lives on the waterfront’s stage, are products of the way our body differentiates and is differentiated by its encounters. In this sense, the play between relative positions is of utmost importance for the whole design process. Even a simple analysis based on strict urbanistic and spatial approaches to this issue seems, at this point, quite inadequate and incomplete, since we have reached the level where Integrative Space runs into the ability of architecture to offer “phenomenal scenes accompanied with feelings and emotions” (Eberhard, 2009:115) in the space where land meets with water. In my opinion, an extensive way to continue with the corporeal understanding of shape’s formation is through the exploration of more steps of greater spatial essence, and returning to the elusive relativity later, when we will explore behavioral and emotional patterns.

iv. the asymmetric state of space

This section of the Integrative discourse infers on the hypothesis what was surmised at the beginning of the attempt to unfold a syntax for waterfront’s *terra incognita*. Its objective emanates from the idea that when the user faces a heteromeric coastal space it is possible to incorporate various spatial relationships exclusively related to shape’s formulation (two-dimensionally and on the horizontal plane) into the semantic map of terra incognita.

The whole importance of the Integrative Space cannot be grasped if we limit the design practice to a reduced form of the aftermaths of space, in the sense of acknowledging it as a notional territory attached to a sum of concepts with minor implications in the urban design discourse. According to what I have pointed out at the beginning of this chapter, the effectiveness of the Integrative gesture as a conceptual framework for implicating the “finite locatedness” (Casey, 1998:34) of the coastal place in the design process should first consist in the opportunity it offers to study the share of meaning from specific waterfront phenomena/stimuli in the creation of settings made of patterns of behavior and responses. This shareness is inquired from within the steps of this syntax.

Parallel to the above-mentioned relations (directions, places, distances, proximity, etc.) there are remains of pure water-born nature—an inherent nature that gives a sense of locatedness’ dominance over the urban fabric and the shape of the city. I will restrict myself to mentioning only two of what “remain inside water”: the natural phenomenon of *truncation* while waves brake on the shore, and the phenomenon of the natural coastline’s *asymmetry*. My point here is that since the
form of the natural shoreline interacts with the sea (it is often truncated and transformed in an asymmetric, accidental way), we can, therefore, trace these inherent characteristics within a contemporary urban waterfront zone and interpret a sort of water’s *aftermaths* in space accommodated upon the shape of the edge.

The crucial reverberations of such remains within the design practice is not so much the sensing of a shape which resembles water-matter at the overall sense of *terra incognita* but the active sensing of *place’s* image itself. In what follows, I will argue that the *sensuous effects* (Hendrix, 2006) stemming from the material resemblance of notions or phenomena - in two-dimensional plane - require a conscious activity which rests on unique inherent characteristics, patterns, and ambiguous references (Eberhard, 2009) and that the *sense of place* is radically dependent upon this mental activity which generates consciousness between the perception of city’s shape and the individual spatial gesture which expresses that resemblance.

In the experimental work for the waterfront of Riga [images 1.01-1.08], something like the *sense of place* was hinted at (that is, the sense of a “finite locatedness,” in Casey’s terms, as projected from within the dialectic relation of the local culture to the folklore beliefs and stories about coastal life). There, I investigated the power of the truncated and asymmetrical coastline (see the east part of Kipsala Peninsula) to communicate how the water *initially* responds to the land and how this response can be embedded in the realm of the stimulated experience of moving along such a formation with certain psychological impulses. I also investigated a way to convey meanings of ephemerality, of “the unfinished” and of “the destroyed by waves.” I ascribed it, however, not to the flux of moving *in and out* all the time, crossing bridges and changing vectorial locations, levels, and directions in a series of interrelated spatial arrangements. Instead, it pertains to the inner tendency of the perceiving subject to apprehend the image of the city reflected in

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68 The idea of the “sense of place” was initially defined in the introduction, adopting Edward Casey’s critical insight on the issue of place. Later, it was inserted in the chapter on Intermediary Space related to what I called “symbolic edge” and “water’s inescapable presence.” The *sense of place* was said to be this intelligible context of the urban composition that employs water signs and representations of water-born messages in order to strengthen the spirit of the coastal place and exemplify a unique identity. This is contrasted sharply in the present chapter with the insistence on a two-dimensional shape able to promote the city’s image upon water. This small variation is not such that, if a spatial relationship doesn’t clearly manifest any water sign or message, it would cancel out the present effort. In effect, later on and in the next chapter, Expressive Space, the sense of place will be extended to include the social description of the area and the cultivation of emotional and behavioral patterns in order for the perceiving subject to grasp this sense. Therefore, the acquisition of this “topic sense” is widely applicable to all three spatial tools of the meaningful space of the edge.
the spatial accommodation of a natural attribute (or phenomenon), which inevitably saves the water from just existing in the site, activating its presence as an urban tool for spatial transformation and innovation.

At that point, I hadn’t really realized how truncation can affect the observer’s locomotion in waterfront settings by stimulating feelings or sensations, but I was very much aware of the paradox that all sensory data collected within this zigzag track can eventually be transformed into stimulating and long-lasting values. The asymmetry of the proposed edge, I realized, was a fact of the extension of the water/land relationships, including the previously mentioned issues (topological proximity, relativity, etc.). But I could only suppose that moving and experiencing this asymmetric line could simultaneously imply a more active grasp of a place’s formulative logic, identity, and sense; I didn’t entertain the more rhetorical hypothesis that the aftermaths of an element that often transforms its surrounding environment could be the very issue to be sensed, and the means by which the watery beauty can eventually be framed. There is a vast difference between the spatial expression of the notion of truncation and the after-effects of its “immediate experience” (Otero-Pailos, 2010), which revives this act in the urban texture.

Likewise, in the Trieste proposal [images 2.01-2.07] we explored how a space near water as an outcome of the idea of the water-born flux, involves the spatial expression of water-matter’s asymmetrical substance conjoined with other relations, and not in solo manifestation. But Trieste’s asymmetry in its coastal shape formation was concerned with my own consistency or even sympathy to water sights and images, arising out of what Gordon Cullen calls sense of identity or sympathy with the environment (Cullen, 1961) - and not with the project’s hybrid character in terms of its obstinacy to continuously keep the city’s image focused upon various water-born attributes. Subsequently, it showed that what I elsewhere called “the material imagination of water” could be illustrated by the supply of diverse and meaningful frames of sub-areas and points where the city engages both the water and the perceiving subject, and where all three of them are dialectically allocated upon a cohesive shape-line.

At this point, the development of the Integrative discourse might also suggest that both “truncation” and “asymmetry” have escaped the meaningful design notice in both architectural and urbanistic theories for the design of the edge. In truth, these notions are not really dimensions born in either of these two fields; they stem directly from the aftermaths of the coastal place and what this research explored beneath the surface. At the same time, it wouldn’t be correct to assert that the issue of the asymmetrical state admits no interpretative or narrative function at all.

The psychospatial exploration employs such notions for their ability to organize simultaneously the built and the non-built, the land and the water. And their
legitimation is the fact that they satisfy the intrinsic human desire to contemplate both matters. This attitude much resembles Bachelard’s ideas encompassing the desire, with its experience and negotiation through the mental processes it affects: “For contemplation also gives rise to a kind of will. Man wants to see. Seeing is a direct need. Curiosity sets the mind of man in motion” (Bachelard, 1999:27). Beyond whatever shape they may eventually create, powers of truncation and asymmetry along the edge exist as long as water exists around the frontage of the city.

On the other hand, they start to exist in the Euclidean sense when combined with close and reciprocal city/water relations. The shape being fixated by them in Trieste is not a meaningless patch of urban zone embedded between the city’s texture and the liquid element. The proposed formations conceived as products of the “will to contemplate” are not meaningless patches of architectonic gestures, for they have the capacity for what I call “the elucidation of meaning”: they elucidate the spatial meaning of the city/water relation in the creation of a smooth transition from city to sea. The “sense-stimulation” with the shape of the edge is not the same, therefore, as the supposedly dried of meaning sense that the spatial expression of a water attribute, like truncation or asymmetry, would have created if practice were solely guided by an analogous material representation of this power of altering its surrounding environment. The “sense-stimulation” from my point of view, as the encapsulation of spatial relations and water-born inputs in a city’s shape, which “contains within itself the means for contemplating” (Bachelard, 1999:27), to set it in its Bachelardian background, is also not the supposedly technical, functional or hard edge to affect human sensibilities, for it is a Soft product. But it might be called the association of ourselves as closely as possible with those waters and that city and those reciprocal relations “we have delegated to the contemplation of what exists” (Bachelard, 1999:28).

But is it the asymmetrical shape itself in its material manifestation or the mental representation of the notion of asymmetry which contemplates in user’s mind during the experience of a Soft Edge? A casual user who quickly crosses the waterfront zone, running to be on time to his job without a minute to wander or a desire to pause near the water, is likely to sense the surrounded asymmetry and the overall (de)composed environment and may thus notice spatial formations been truncated, deformed, or enclosed. However, an observer who has experiences of the area in several ways and from various conscious positions and has acquired different subjective experiences (Eberhard, 2009), whether they are stimulated by “primarily a sensation, an image, a thought or even a mood” (Eberhard, 2009:35), is prone to conceive the shape as gaining its form from the matters already perceived and as an indigenous product of a process of morphogenesis that really belongs there. Thus he/she may feel that through it, the conceptions associated with the water-matter and the waterfront zone in general are already contemplated, already represented. Sensing the shape of the edge as one lives within it, experiencing it in different moments and from different
positions and tracks, leads to the understanding of its formulation with all its incorporated spatial relations and features.

To understand the sources of the configuration of the city’s shape near water creates a mental ability to contemplate the awareness, visibility, exposure and encounter of both matters when the moving subject experiences partially and subsequently the waterfront setting. According to Peponis, the “mental coordination of those impressions leads us to retrieve descriptions of built shape as a single form that cannot be literally seen from any one point but is spatial, visual and abstract at the same time” (Peponis, 1996:70). In this perspective, each formation and structure, each new relative position and each construction of great proximity to water, each canal of integrated water and each heteromerous space along its bank, can belong to a notional space made of water-related ideas and concepts, and perceived as objects fully conjoined with the surrounding environment. The shape and its accompanying “sense-stimulation” is less a product of the geometrical distinctiveness that derives from the asymmetry, truncation, or enclosure themselves and more a mental construct of their representation inside the human component. This underlying notational “language,” which allows for such a mental construct, has emerged from the basic shared physical experiences with mental correspondences, as I have put it in the previous chapter on Intermediary Space. Continuing along these lines, the configuration of the edge, particularly its effects on the physical permeability and proximity to water, is important in generating meaning and sense.

According to McGlynn and Murrain (1994), permeability affects where people can go, stand, and move and where they cannot. It is a spatial quality that deals with “the spatial structure and use patterns of urban areas and has the most fundamental impact on opportunities for personal choice and equity of access” (McGlynn and Murrain, 1994:314). In what follows I want to explore how the spatial study of permeability forms the symbol for a particular syntactic position (close relation and physical contact with the water) organized by a particular matter (the water itself). This will lead Integrative Space into a closer focus of water-matter’s embodiment.

First, I want to address a detail of the terra incognita syntax. The allusions to enclosure-segregation and the reciprocity of proximities were rather schematic and general: they had to be, because I was trying to integrate into a general design

As some representative researches in the area of such spatial relations have pointed out, the term “permeability” was proposed as a differentiation of the concept of “connectivity” that refers solely to the amount of links (pathways) to and from a specific place. On the contrary, “permeability” refers to the capacity of the connections between two places to carry people (Marshall, 2005).
scheme some very basic notions and relations of the Bachelardian space readings. But the proposed syntax for shape’s formulation, quite apart from trying to emerge from within psychological impulses, is typically addressed as a design response to practical architectural intentions. It takes its material preconditions from the close contact with the particular, and preferably autonomous, steps/ formations. Afterwards, it reflects the water’s aftermaths upon the general aesthesis of the place it cultivates. The latter belongs, as I mentioned in the introduction, to the effects on the psyche of the perceiving subject.

Second, since I referred to some concepts of the *imaginary water* being schematic, involving constructed spatial relationships between human, land, and water, I should look in more detail at one aspect of these concepts: the issue of how syntax can allow for their embodiment and, more specifically, how the user and land can physically approach the water-matter so as to permit physical contact and permeate the formulation of transitional levels. Third and principally, I claim in developing the Integrative Space of the edge that one aspect a city’s shape on water can convey to a potential user from its own meaningfully inner-regulated structure and organization is that water, by means of its ability to enclose, cover up, fill and flood, diminishes distances, brakes barriers, “doubles the [coastal] world, doubles things. It also doubles the [user-dreamer], not simply as a vain image but through his involvement in a new oneiric experience” (Bachelard, 1999:48). The city’s shape on water can communicate developed sensibilities from approaching, touching, smelling, and feeling matter’s substance.

I want to pick up this thread now and explore how deeply beneath the concepts describing both the waterfront and subject’s behavior architects can think. In terms of the “sense-stimulation” with the user’s physical contact with both matters, I want to explore the challenge of the built reality to emerge from water—or to draw it inside—along with the sensuous experiences born from this close and intimate relation. I shall do this by addressing once more aspect from my research-by-design works; but before coming to that I must make clearer the pleasure in the visual and sensual effects of distributing patterns of movement, stasis, and access inside water. That’s all about permeability and connectivity [image 2.31].

There seems to be one main reason for making the *permeable* design attempt. An unimaginative and monotonous waterfront zone cannot sustain the public realm because the initial view is soon digested and becomes uninteresting (Cullen, 1961): as in all public spaces, the best design approach is to allow for many choices in the user’s bodily position and syntactic relations to space—in contrast to the modernist approach based on the scale of a moving vehicle (Tibbalds, 1992). If one supposes that the Soft Edge reflects not only the human-oriented design but also the accommodation of man’s psyché (its demands, desires, wills, aspirations, dreams), then water notions and their material interpretation will have some part in it. A Soft Edge incorporating the steps we deployed in this chapter, then, has no choice
but to demonstrate variety and plurality (Madanipour, 1997). However, it seems to me that if a concept is to be active in people’s minds then it should be firmly attached to some kind of spatial formation, and this is a basic rule not only in the Integrative Space, but in the two types of space as well.

If a designer is not simply going to ignore a concept’s attachment to a spatial formation as a response to the pragmatic way of seeing things, then the question is, can an architect move from the rhetorical level of a concept, from the vague sense of water’s permeability, towards something spatially useful, easily perceivable, sensually enjoyed, and meaningfully constructed? And does such an attempt bring in surface feelings of affinity and sensuous experiences when one tries to explore the offered plurality of choices for his/her own body allocation (relative always to water)?

Some formations partly express an inherent level of permeability. Examples include ledges near water where people can enjoy their evening coffee, sculpturally designed coastal steps, some raised or sunken amphitheaters for night performances, and floating restaurants or structures that “talk” to users and thus become preferred places for lunch. An observation I sometimes make about such formations is that most are decorative follies. They are arbitrarily placed, almost stubbornly stuck, along the land/water edge with no active participation in its formulative logic. It is hard to see where these formations come from, what sort of design gesture shaped them, and finally why, after all, they belong at the specific place and not somewhere else.
The answer is that they have no obvious belonging there. And I come to argue, first, that to relate points of great permeability with a shape’s organization and spatial logic, one has to understand, consciously or reflexively, their form-legitimation and existence in harmony with creative coastal reveries, projective waterfront meanings, and the conveyance of the sense of place. Second, permeability also demands a sort of in-depth contemplation in order for its “connectivity” links to and from water to become a conscious living experience. For these reasons, I shall make two limiting demands for the communication of “connectivity” that terra incognita’s syntax may pursue.

First, the idea of water contemplation invoked (as in previous steps) is not an immediate feeling from the perception of a transitional sub-area between land and water. The psychospatial effect from permeability/connectivity [image 2.31] is a derivative result, a deepened perspective of the feeling of living by water, of sensing the environment, and as such it must be carefully handled and evoked. This is the reason for my initial rejection of all these “points of proximity” as decorative follies to be found along many European edges—from steps to ledges and leveled banks. Instead, this research discerns the permeability of personal character as …

...in the presence of deep water, you choose your vision; you can see the unmoving bottom or the current, the bank or infinity, just as you wish; you have the ambiguous right to see or not to see; you have the right to live with the boatman or with a new race of fairies, laborious, tasteful, magnificent and fastidious (Bachelard, 1999:50).
The Soft Edge regulates the number of connections to and from the water, and this number in turn gives information to the perceiving subject of the qualitative characteristics of a point where he/she can come to physical contact with the source of contemplation (the water). Through the user’s personal passages in space these connections invite or keep him/her at a distance. A sub-area of great connectivity (many points of contact) offers a very promising integrative gesture for invitation and contemplation; while a coastal place of great permeability allows an amount of user groups to approach the natural element and encounter the other on the edge.

Secondly, I shall demand some design indication that these areas are real parts of the overall orchestration and syntax, and not meaningless strokes. In effect this means that the architect needs to (re)arrange the necessary approachness in accordance to the adopted plot: a symbiosis of images of great proximity with what space represents, narrates, symbolizes or mentally constructs—something quite hard to find in postmodern or pragmatic attempts. A designer who makes an effort to establish this ambiguous symbiosis in people’s understanding or subjective conscious experience (Eberhard, 2009) should be able to allow the meaningful space of the edge to find and accommodate these concepts by itself, in the sense of an internally regulated system that will make recognizable the meaning of each spatial relation and its most appropriate spatial accommodation. So the form of the second demand to which I shall put importance is: the X formation of great permeability (or, more generally speaking, the associated feelings, emotions, or behavioral reactions during X’s spatial experience) can be shown to reflect the overall architectural thought that produces unexpected images using the syntax of
the shape and can allow “one to understand that the [watery] imagination needs a constant dialectic” (Bachelard, 1999:51).

Bachelard, once more, contributes to the understanding that “for a thoroughly dualized imagination, concepts [of terra incognita’s map] are not centers of images which come together because of their resemblance to each other; concepts are the points where images intersect at incisive and decisive right angles” (Bachelard, 1999:51). His interpretation of the idea of concept was pivotal for this thesis and the development of terra incognita’s psychospatial syntax. Thus all the previous steps were formulated upon the crucial intersection of the images with origin in water-born ideas and the position of the perceiving subject as moving along the shape of the edge. It is, however, necessary to delineate this intersection in architectural terms and through implications on some design reflections.

**Design reflections**

According to the research theoretical proposal, *places with meaning* along the urban edge are defined by and constructed upon terra incognita’s properties: proximity, enclosure, relativity, asymmetry, and permeability. I decided to study these properties from within critical references to Bachelard and the spatial study of his *Essay on the Imagination of Matter* (1999) without, however, considering this passage the only and most accurate one. In order for this essay and its rhetorical insights to become potentially operational for the architectural and urban design process, some design recommendations should be extracted. By experience and by analogous transfers from the sphere of water to the sphere of space, this section leans considerably on terra incognita’s conclusions, while contributing to shape’s formulation in some ways:

1. Design may provide access to points with a multi-level sculptural treatment in the form of intersected surfaces, sunken edges, structures that invite people to be, or at least have the sense of being, inside the water. For choice and for different times of use, a variety should be offered, starting from open public spaces that are ready to receive social activities to floating structures and integrative design gestures. In this way, the user will have the chance to empirically explore not only connectivity but also the qualities of volumetric water that pertains to the mass of water integrated in the land. Moreover, he/she learns how to separate the perceived water from the felt sensation caused by the experienced water.

Another example with points of permeability where the Bachelardian sense of touching and seeing is smoothly combined within the pragmatic needs of a materialized waterfront project is the project for Torrevieja’s waterfront [images 2.32-2.36], which will also be studied in the next chapter. There, much
of the project’s successful features co-operate to make the shape approachable, anticipating and inviting: the variety of ways of standing and contemplating in front of the natural element, the variety of seating facilities, the natural area with its undisturbed view of the water’s mass and the open horizon, the relatively high level of environmental and sensory materials used as stimuli for coastal images (sand, rocks, or wood), and the provision to cultivate relations between user and water and/or to serve as a transitional graded area from the high-rise urban texture to the sea’s calm surface. If these sensory inputs were inconsistent, then the place would suffer (Sircus, 2001) a collapse from the meaningful realm. Indeed, there seems to be much more to Torrevieja’s work on the issue of redeveloping a coastal zone.

And one can identify that the allocation of some protected, closed, and introverted sub-areas of great permeability to be found and experienced here is what in fact catches the “qualities of surface and volume opposed— [water’s] volume, according to this astonishing formula, that it is an important consideration for the eyes of the [observer]” (Bachelard, 1999:53). If we turn back to the proposal’s master plan, it turns out that the function of specific formations that challenge a body’s relative position, like the overlook platforms (panorama of the “deep water”) or the wooden ledges (just before approaching “deepness”), falls into the premises of the sense-stimulation in places with meaning: connectivity/permeability suddenly appears as affecting the formulative logic of the shape’s syntax.

\[ ii_\] design may consider providing some form of spatial linkages between buildings and water. These belong to the volume of the building but can expand outside to include occasional outdoor events on the edge, when appropriate (in terms of climate conditions, for instance), and always in close physical relation to water. Even if very rudimentary, such space linkages offer an intimacy with what lies outside and declare themselves as distinct design attempts to connect the two matters of study and invite users to perceive the “volumetric water” in constant dialogue with the volumetric built environment beside it. A variety of surface levels should again be provided, starting from the building’s ground floor elevation, descending towards the water’s surface or even beneath it for stronger sensory stimuli (providing well-protected edges) and subjective experiences. Other spatial formations should be included, such as alternative seating positions for various waterfront user groups, whether these are shaped as ledges, inclined planted surfaces, actual benches, or amphitheatric steps.

This can be an attempt to move built reality a little too close to the natural element in order to cultivate experienced “connections between environmental factors and psychological processes governing individual
functioning” (Bonnes and Secchiaroli, 1995:102). If an architect is to claim that the shape of a Soft Edge is more water-oriented and more water-centric than the previous attempts of the New Waterfront, and that buildings should open a dialogue with the water, responding to what lies before them, then that architect should acknowledge that such a dialogue must be established in skillfully designed space linkages that serve this purpose.

Therefore, the designer may consider providing surfaces, elevations, and formulations that approach the water and also, if at all possible, provide access to urban functions from inside the water (like the floating restaurants in the Parque das Nações in Lisbon [images 2.37-2.38]). This could even be a space totally surrounded by water, like a dock, if the main waterfront line cannot be formulated with extensive use of integrative gestures and thus should remain linear.

The peculiar states of space occupancy studied so far challenge designers to look more carefully at all the spatial relationships with which space is structured by means of its nearness to water—between the physical aspects of the coastal settings and the user’s psyche and mind. If we accept that one’s state of space occupancy within the coastal shape is dynamic and involves discursive classification and provisional beliefs, like the sensibilities this research aspires to develop from sensing water only after a holistic spatial experience has preceded, then programmed stimulations, or points of meaningful semiotic character are possible and open to further investigation. By looking at the relationship between space occupancy and proximity in detail, it is evident that we may come to understand the dialectics with the water as semiotic products of immediate experience.
A respect for the edge’s meaningful space has showed itself in many different phases of the previous sections, especially in the way in which architects and users may approach the understanding of the coastal material imagination: “an imagination that can take hold of the material familiarity of the [coastal] world” (Bachelard, 1999:104), which emerges from a water-configured space and the union/integration between the two matters. This part of the chapter renders this concept, suggesting the exploration of an empirical condition. The thesis, therefore, adopts a design example to explore this configuration.

I have implied that at the end of the aforementioned syntax presentation I would take every opportunity to clarify the objective imaginary embedded inside the meaningful space of the edge, which I tried to define in the introduction. This term was also traced in the study of “places with meaning” that this research explores as a programmatic proposal for urban design process and thinking. I do not want to leave these steps of modeling on-shape the water-originated messages and relations without presenting at least one more waterfront proposal—one in which we can identify a formulative logic made of these water-born concepts. If Bachelard’s concepts imply an “a priori imaginary image” and a “metamorphosis to real,” in the final part of the Integrative Space it takes on the meaning of an urban design process and practice in which water is in fact present.

70 Kevin Lynch’s studies (1984) have shown that the built reality creates among a variety of user groups an objective imaginary of place and time. This is a kind of imaginary spaces, or structures in the form of mental maps, that citizens or observers of a specific setting share with other people. It is imaginary because it is a structure of something that is not real, but since it shares common values and properties in other people minds, it acquires a sort of objectivity.
On the whole, the steps and techniques described in the section on *terra incognita* can be very useful as instruments for the construction of images of “finite locatedness” (Casey, 1998:34) across the urban edge, not only because they are referring to some meanings by using identifiable shapes but mostly because they express something much more than simple stylistic choices. This is also true if they are used for reading an architect’s constructed meaningful space, including the idea of understanding his/her architecture as

...a visual language that communicates by the use of a vocabulary of shapes carrying conventional [or unconventional] knowable meaning, exactly as the words in conversational language are accompanied by conventionally recognized meanings not entailed in their vocal synthesis (Peponis, 1997:93), [the translation from Greek is mine].

In this framework, the *sensuous reading* of a coastal project can be done by identifying already elaborated simplified concepts to translate shape in terms of an arrangement of water-based formations that cultivate spatial meaning throughout their overall architectonic arrangement and relationships (and independently from the style or morphic language manifested). In doing so I shall focus on one of the most interesting Integrative Spaces found across the waterfront bibliography: the design proposal “Archipelago: Synchronizing the Edge” by Toyo Ito & Associates made for Thessaloniki’s urban frontage on water [images 2.39-2.42].
This project, part of a closed international competition, argues that water matters in the production of an integrative shape between the city and the sea. Busquets’s (2003) reflections on the theme of the competition imply that the projects submitted turn out to be perhaps the first clear explanation of how the form of Thessaloniki’s waterfront can become active in integrative gestures. He argues that the Organization for the Cultural Capital of Europe Thessaloniki 1997 has displayed a truly laudable initiative in taking under its wing the debate on the city’s waterfront. He writes that

If ever there was a project that needed proper sponsorship it is this one, for, given the characteristic cultural dimensions of this European city, it constitutes a real challenge. The enhancement and redesign of the city’s waterfront is as fundamental a matter for Thessaloniki as it is for many other large cities. We must never forget that Thessaloniki is a linear city, following the natural line of the gulf around which it was originally built. It is this geographical situation that renders so difficult any dialogue between the layout of the city and its major access and service infrastructures (Busquets, J., 2003).

The competition entries proposed innovative solutions for the future urban agglomeration around the Gulf of Thessaloniki, varying from floating houses to residential docks and urban blocs set at intervals along the waterfront. Toyo Ito’s project treated the waterfront “by designating certain model sections for the channeling of major longitudinal traffic flows. The proposal centers on the potential
use of ‘green belt camouflage’ both to meet the city’s need for green areas and to enclose heavy traffic stream” (Busquets, J., 2003).

Four key elements in the formations of Ito’s shape are closely related to the exemplification of the map of terra incognita along with many of its sensuous phases embodied in a clearly communicative Integrative Space: flexibility, asymmetry, fusion, and mutual permeation. Flexibility, with its notable watery essence (I have many times referred to it), generates relations of enclosure-segregation, de-centration and fluidity. Here, as Peponis argues, the visual language of flexibility “transfers an intense meaningful load without depending upon any familiar typified shape” (Peponis, 1997:93). Similarly, the asymmetrical state of the coastal space comes to make sense with its challenging relativity, synthetic (de)composition, ambiguity, projection of specific notations, and their occurrences along the whole length of the water/land edge. As a (temporal) opportunity for shape’s accidental formulation, ambiguity has a formulative and organizational importance comparable to that of Jurasmat’s desire in the constructed myth for Riga’s waterfront [images 1.01-1.08]. Spatial meaning continues to be communicated by means of matter’s fusion, its reciprocity of proximities and convergence that delimit the subareas of the proposal as messages that induce perceptual stimuli.

Peponis tries to draw out some of the ways in which spatial meaning figures in the strata of the violation of rules of typification. He writes that if spatial meaning…

...can be generated not only from within the repetition but also from the violation of rules of typification, then it depends on the identification and comparison of the metamorphoses of shape and not from ascribing conventional importance to the one or the other type. The recognition of an open morphological field leads us to seek the exceptional rules that regulate it (Peponis, 1997:93).

All four key elements work exactly on this violation and create a strong image with after-effects in the subject’s mind: violation of the city’s past structural rules, of common and well-repeated coastal built models, and lots of other aspects that even today are taken for granted and not to be discussed—let alone be disputed, rejected, or challenged. It is for this reason that every relation generated out of these four main concepts/plots concentrates on smoothing the demarcation between the land and water, synchronizing the edge. The concept of the “archipelagos” dismantles, defuses, and diversifies the attempt to think and plan in meaningless stylistic gestures. “Instead it suggests a versatile networking society where it is neither a single nor a center and districts that constitute the entity” (Hastaoglou, 1998:128), says Toyo Ito. He claims that
...the concept of the proposal does not follow the rules of conventional urban planning. It questions the relation between city and nature, and suggests an ecological relation as a system where no zoning for land use exists. The demarcation of sea and land is fused. Various zones of flexible surfaces—shifting in sequential phases from sea to land—create a new form of physiognomy like a following landscape.... It adds a new physiognomy as a layer on the city’s history. In between two layers, where the old and the new are superimposed, it might cast an image of a city that we hope will yield a new form of urbanism (Hastaoglou, 1998:128).

Every integrative attempt indicates, as the main title of the project does, a strong linkage between the city and water—between the sea and other associated parts of the area, like patterns of environmental stimuli, space’s mental representations in subject’s mind and even the interaction between the parts. This linkage is visualized as formations truncated by water in the middle of a series of arranged incidents, parts of a synthetic plot, representing in this way water’s force, and ability to communicate the messages of its locale.

Some peculiarities of terra’s map, like the enclosure, proximity and asymmetry are epitomized in the actual formation of Thessaloniki’s shape. Likewise, the initial sensuous effect that is expected to become immediately grasped is due to the conflicting water-born image that is created on one hand by the artificial islands and on the other by the contradictory image of the background urban mass. Since the main syntax for the formulation of the shape is essentially influenced by the substance of water-matter, other relations/irregularities, like the reciprocity of proximities between the two matters, find possible spatial accommodations and therefore are rather materially interpreted. The designer explains their interpretational passages in the story of the Archipelagos and their spatial accommodation:

The edges of sea and land are being incorporated. Various areas with ever-changing surface, giving and going in various phases from the sea towards the land, create a new form of physiognomy as a flowing landscape. Proposal does not correspond in a mere planning master plan for the area. There is no complete image for the growth of city’s activities. As time passes, “Archipelagos” change into a flow of a new physiognomy. What it was attempted to be portrayed here is more a timetable as a spatial system than a completed image. “Archipelagos” emerge in the flow of new physiognomy as swirls in the flow of water. The notional islands—shaping cores of human activities—exist in the sea, but also in the city. Some of them function as appliances for cleaning water and air, accommodation public open spaces of recreation and leisure for residents. Some others offer spaces for communication, with theatrical and athletic installations (Hastaoglou, 1998:129).
Reading Toyo Ito’s narrative space through Peponis’s *Chorographies* (Peponis, 1997) and his viewpoint on the violation of rules of typification, we may conclude that he would approve of a shape structured not as accidental disorder but as a recognizable form of order. Peponis adds a pivotal distinction about the story’s interpretational passage and the recognition of meaningful steps in the development of a shape’s form:

An arrangement [like terra’s map for instance] becomes cohesive when, and only when, we can detect the consequences of a relation in the formulation of another relation [the next step]; that is, when we can recognize that the arrangement has an inner logic. Cohesion is a demand, not only a question, because if it is not to be ascertained, we don’t come by the understanding of the arrangement, and therefore stops any further discussion on the issue (Peponis, 1997:190).

The above brings to mind ties that link such an affirmation with the logic behind the structuring of other relations: the proposal’s spatial totality depends upon a syntax for the edge onto which general families of rules are being projected. For the success of the Integrative Space, such rules should entail the “interrelation of matters.” More specifically, Ito’s shape projects the idea that in a dense urban mass that almost struggles with the waterfront zone, issues of flexibility, ambiguity, fusion, and mutual permeation (all four of them water-related issues) can give comparatively much contribution to separate formulative steps. And here I mean that by using these four “families of rules,” an architect can generate one spatial relation from the other, as in the chain I dreamed of in the beginning of this effort. At the same time, many phases retain their own clear identity, so that one cannot speak of “cheap imitation” among different design processes and projects, but of a mimesis true to type. By monitoring and directing the four key elements towards the main target of “sense creation,” shape legitimizes its own process of formation. Let’s see just one part of this process.

Once the waterfront zone in front of Thessaloniki’s frontage is seen as a source for matter’s integration (fusion), an embodiment that, at the same time, is an attachment to certain imaginary scenes in terms of users’ inherent desire71 to approach water, experience and become part of it, the urban texture expresses a desire to push further past any boundaries of its static linearity into the liquid matrix. There is the constantly expressed desire for a little bit of active urban space in close proximity to it, segregated or enclosed from it when possible—one which belongs both to the city and the water domain.

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71 My assertion here is not only based on Bachelard’s psychoanalytic studies and investigations, but also on contemporary studies of architecture and urban space’s understanding through mental constructs (Eberhard, 2009; Hendrix, 2006).
Thus, the basic principle for a flexible shape along the proposed edge appears, which also seems to “come from a struggle with material elements” (Bachelard, 1999:161). This may be more distinctly felt, while by studying the master plan one conceives characteristics of the two matters (both urban and watery entities) on the deconstructed island-like formation thrown inside the liquid element. The same shape also takes advantage of the family of rules set back in a step of “projective meanings.” In this sense, urban pieces/parts of a plot surrounded by water are much preferred for the “sense-stimulation” to those that are similar to dock-like extensions and pier-like artificial additions—precisely because they belong to both matters. This indicates Eberhard’s (2009) argument, at which I have hinted in some previous sections, that when, as in my Trieste research-by-design longitudinal floating structures or Coop Himmelblau’s Skyline, it is possible to employ urban functions as examples of the projection and symbolization of meanings, citizens tend to develop more intense emotional reactions and more lasting memories of past experiences, which may affect their perception of future experiences as well (Eberhard, 2009).

Although the total length of the proposed shape still has some rather linear sub-places, more deformed places are being accommodated at crucial spots of this track to offer people spots for contemplation on integrative details. About two-thirds of the coastal track incorporates architectonic and spatial patterns comprehended by means of water’s proximity (they exist only because it exists around them). In this sense, the naturalistic formation of the land/water edge is constantly regulated by three properties or qualities that pertain to every object or formation that participates in the Archipelagos plot. They define meaning as well as narration, providing their experiential denominators and the substrata for their communication. Convergence and meaningful perspectives represent that the project anticipates inviting observers who, while moving across the seaside path, will somehow constantly be forced to slightly change position and direction, and therefore accept different sensory data. Relativity represents the driving forces and motivations behind the structuring of the coastal zone in a way that responds to the existing monotonous, constant-width promenade zone, offering a variety of relative positions, mostly towards the sea. And matter’s reciprocity in relations represents that the asymmetrical track is a response to a desire for meaning-production and not to an illegitimate design gesture of just allowing water inside the urban coastline.

In general, Ito’s shape and Integrative Space are narrative spaces in which one can “find the vital, rigorous, real meaning of objective water-based notions” (Bachelard, 1999:160) by sensing the psychological factors of a water-centric organization, and of a syntax that offers a dynamic unity between the human component and the material imagination. It is the feeling of certain imaginary and not physical waterfront characteristics (like the notion of “island” itself) that exceeds conscious
reason in perception and makes the composition offer possibilities for the understanding of a place’s formulation that contrasts the backstage urban reality.

If all terra incognita’s interminable water-born notions of sensing, imagining, experiencing, and living with water, all the aftermaths of place and their effects on subject’s response and behavior, are so strongly attached to the design of the edge, then we should not hesitate to argue that for so many people waterfront sites are emotional spaces par excellence. Better yet, to borrow an expression from Spiridonidis (2002), waterfront is an urban stage/scene that constitutes an artifact totally and holistically wrought for the user. It is a theatrical stage that invites him/her to enact and express roles already set by this very stage/scene, or to consume, recycle, or appropriate there the ephemeral models of his/her life.

In the third chapter, we will delve into various theoretical approaches that relate to the waterfront and society duality, revolving around the public meetings and their coastal contexts. It will begin by presenting the motley interconnections binding these two disparate fields of study, emanating from the Green Rooms design example. The analysis will further delineate the spatial meaning behind an area’s geometric formation as well as behind the visual and motional choreography. Lastly, the analysis will explicate the position of the suggested meaningful construction, in relation to the aforementioned broader contexts that define the socialization of places with meaning near water.
the Integrative Space
the Integrative Space
Introduction

After the intermediary function of the symbolic meaning and the integrative gestures in the formulation of city’s edge on water, the question of the relation between human activity, coastal space, and urban design finds its significance within the broader context that defines the socialization of places with meaning near water. Is the space of the urban waterfront a container that accommodates users’ expressiveness, activities and behaviors and whose spatial formulation can be obtained by a design methodology? Or does this space have a structural relation with the expressive character of the activities it attracts, a relation that transforms the container into a mechanism for shaping its content? The two-way communication between space and society has been revealed in the work of scholars like Donald Appleyard (1969, 1972, 1981), Henri Lefebvre (1991) and Tribid Banerjee (1971, 2001). The “social spaces”—that is, places that support social interaction and structure meaningful activity and behavior patterns—are products of the relationships between the users and place’s locale. In this sense, this chapter relates to users’ appropriation and engagement with coastal places in the sense that the individual actively participates both in the formulation of its patterns as well as their allocation in space through movement, bodily apposition, existence, and attitude.
### 3.1 a design proposal: Green Rooms

| **Project name:** | Redevelopment of the new waterfront of Thessaloniki. |
| **Client:**       | Municipality of Thessaloniki, Greece. |
| **Study period:** | 2001-2005 |
| **Construction:** | (first phase) 2006-2008 |
| **Architectural and urban design:** | Prodromos Nikiforidis, Bernard Cuomo, Atelier R. Castro – S. Denissof. |
| **Design team:**  | Paraskevi Tarani, Efi Karioti. |
| **Contributors:** | H. Dova, E. Zografou, D. Paulopoulou, N. Karakosta, N. Mpiskos, S. Nikolakakis, G. Skiadopoulos. |
| **Cost:**         | €18,000,000 |
| **Total surface:**| 74,000 m² |
The design proposal for the *Green Rooms* is one of the most successful examples of contemporary public urban environments in Greece, honored in 2008 with the architectural prize from the Greek Institute of Architecture. Before exploring the design example in order to identify the underlying sets of psychospatial concepts that enable *places with meaning* to deploy their expressive dimension, it is necessary to briefly introduce to the reader the physical description of the project.
The project for the redevelopment of Thessaloniki’s waterfront attempts to break the spiral of the city’s decline and to unlock the hidden cultural and meaningful potential of its frontage upon water. The winning proposal by Nikiforidis, Cuomo and Atelier R. Castro, called “The Green Rooms,” aims at this silent displacement towards the essential (the life-giving natural element that embraces the city) by re-defining the city’s image upon water, restoring the vital relationship between city and sea, and tackling the problems of the neglected urban coastline by providing patterns of experiential conditions that stimulate citizens’ behavior and feelings. In the reading of a spatially constructed Expressive Space, the project finds itself bound to both edges of the spatial meaning and human expressiveness structured by the imaginative power of water meanings themselves.

The project attempts a human centered re-design for Thessaloniki’s waterfront. It expands from the area around the White Tower to the Music Hall, the so-called “New Strand” or “New Waterfront”—a product of massive urbanization during the last decades. The site is one of the city’s most important public spaces, and a linear zone of limited depth that contains all the characteristics of the
“frontage”: a narrow piece of land that lies between the sea and the city. The architects claim that from the beginning of the decision-making process, they called attention to the coexistence of the proposal with the adjacent natural element, the water (Nikiforidis and Castro, 2001). They defined the area of the study as a “linear topos (place)” jammed between the natural landscape and the man-made urban space of the coastal setting. A meaningful place contrasted with the poetic

background of the Gulf of Thessaloniki, which for them constitutes an astonishing setting where the ephemeral and the flexible are dominant elements, each creating different atmospheres. A line of defense is their argument that any intervention inside this linear space takes its color and exists only because this background exists. Design cannot compete with it; it “can only coexist with it and gain something of its unique atmosphere” (Nikiforidis and Castro, 2001:5)

It is within this context that the proposal aims at preserving the most seductive features of Thessaloniki’s waterfront: its linearity and the walk in front of the unbroken horizon. The proposal includes the redesign of the seaside site, incorporating the following parameters as formulative principles: the maintenance and reinforcement of the site’s linearity; the establishment of a uniform character along the whole length of the strand; the creation of an alley as an alternative shaded walk; the use of water in the design of points for resting and stasis, the “water events”; adequate illumination; and the development of fifteen Green Rooms as thematic gardens for interpersonal socialization with multiple leisure and social activities (Architectural Themes, 37/2003:121).

These fifteen Gardens, as spatial events, are the Garden of the White Tower, the Garden of Alexander, the Garden of the Evening Sun, the Garden of Sand, the Garden of Shade, the Garden of Seasons, the Garden of Odysseus Foka, the Garden of Roses, the Garden of Sculptures, the Garden inside the Sea, the Garden of Friends, the Garden of Sound, the Garden of Memory, the Garden of Water, and the Garden of Music.
With respect to the arrangement of these spatial episodes/gardens, the design attitude adds new rules in the territorial grammar of the coastal space for the creation of a self-referential narration. It even assigns the exact names of the gardens, implying for each the use of a specific concept to legitimize the logic of gardens’ creation from endogenous, internal, ways of production. However, the physical structure of the Green Rooms has an apparent simplicity: from distance it is not even obvious that it is about an arrangement of episodes; it looks like a widened sidewalk that provides a smooth transition from the urban texture to the calm surface of the sea. Basically, it is a series of fifteen spatial territories, each one having a more or less rectangular formation and receiving the vertical movement axes from the inner city. At the main promenade level, the created sub-areas are bordered on one side by the sea and on the other by a highway. Despite the existence of such clear and concrete borders, the area does not give the impression of an isolated piece but rather of an active ending of the city’s urban frontage with easy orientation and adequate access from the citizens.

In addition, the life qualities of the surroundings provide grounds for developing conditions that promote the waterfront character of the space, leaving enough opportunities for the construction of a semantic topos (place) rather than of another more urban district. Thus, the certainty of this structural simplicity, which is soon replaced by a complexity after insular exploration of each “cell,” is not obtained by a continuous projection of the rules of the nearby built environment onto the proposal. There is a discontinuity and a transition to another order imposed by the constructed meanings of the space of the edge, within which it gains the first impression.

From closer, the participants can observe a more elaborated structure with a series of social activities and idyllic, even poetic places for those activities. A variety of spatial relations unfold as participants are invited to explore the arranged events one by one or separately. Different states of enclosure, territoriality and possibilities for intimate contacts inside the Rooms or a more public exposure...
outside them condition the aroused emotional products and guide subjects’ behavior towards each spatial unit, but also towards other people.

In this sense, the meaning is not constructed by the psychical representation of each garden itself, but instead, according to Peponis (1997), by the subordination of their material form to intentioned narrative relationships that present recognizable dependences from each other. This crucial construction will be further explored in the next sections.
image 3.10: *Green Rooms*, Thessaloniki. View from inside a “public room” in the Garden of Sound.
3.2 psychospatial reading of the Green Rooms

The Expressive part of the thesis attempts to interpret the ramifications of the moving and acting subject within the architectural and spatial sphere. Before we begin to consider this human expressiveness as a design regulator, we need to consider the key concepts relevant for the configuration of meaningful experiential and behavioral patterns. These terms are schematized after the psychospatial reading of the Green Rooms design example (architects Nikiforidis P., Castro, R.: 2001, 2009), bearing in mind that this chapter focuses on the concept of modeling human behavior and collective actions along the shoreline—something essential for the completeness of the thesis’s initial presuppositions for approaching individuals as meaning-giving components.

The implication of the psycho-social (Seamon, 1982; Bonnes and Secchiaroli, 1995) dimensions in the places near water will be projected upon the Expressive discourse and in parallel with certain design intentions of poetic evocation that pertain to some crucial aspects studied by environmental psychologists. These aspects also pertain to the study of the “complex links which connect persons and territories in both the cognitive and emotional senses” (Bonnes and Secchiaroli, 1995:91). It is perhaps useful to elaborate more on these views and their spatial construction through the aforementioned design example of the Green Rooms to appreciate their value and develop another kind of interpretation for the edge—one based, again, upon the framework of their narrative power.

Regarding the engagement of the perceiving subject

In his Six Memos for the Next Millennium, Italo Calvino (1988) describes the city as a complex symbol able to express the general tension between a “geometric rationality” and the “entanglements of human lives.” However, the development of the city is primarily a material process—a complex structural process involving several intellectual and practical dimensions diachronically produced within multiple networks of transaction and infrastructure, identity and diversity, culture and co-existence.

What remains interesting in this built-up process of our cities is not so much the apparent (but significant) practical application of these networks on our lives. Instead, the thesis is more concerned with Calvino’s position and the meaning of these dualities, which moves human expressiveness and regulates the variance in the semantic judgment of our cityscapes. Therefore, what is appealing in such investigation is the conscious engagement of the perceiving subject in space. These psychospatial encounters appear to be important in maintaining the spatial understanding of space (Eberhard, 2009) since they are related to how connected people feel to their living environments and how much they think the setting can
influence their mental and bodily positions. To approach this linkage, we have to explore the possibility of reassigning the attention of urban design from the materiality of the urban image to the experience of it, allowing us to re-think urban space as the construction of spatial experiences instead (Bermudez, 1995).

At this point it is perhaps easier, as Bermudez suggests, to conceive the spatial experience as an organized, continuous series of dynamic perceptual data generated by specific events or episodes. In this sense, the spatial experience is revealed as a multi-sensory narration based upon visual, acoustic, sensual, or tactile inputs from the experienced event. It follows therefore that the meaning of the spatial experience emerges during the negotiations and re-negotiations of the narrational nature of space (Bermudez, 1995). Approaching the urban waterfront as a temporal, three-dimensional narration, we can examine its design process—and therefore its effects on the perceiving subject related to the spatial understanding—in such a way as to consider the participation of the intellectual and the practical dimensions, the social-psychological (Schutz and Wagner, 1999) and the functional applications, as co-equal parameters during the formulation of a coastal project.

In 2000, architects Nikiforidis and Cuomo attempted such a displacement in order to provide a meaningful expression of constructed spatial experiences along Thessaloniki’s edge. At the same time, the poetic attitude employed in their proposal forms its most significant quality. That is, the spatial wording of an urban narration that, apart from being desirable and functional, would also undergo a consistent regulation of the project’s own formulative principles. The dominant characteristic of the coastal space—a strong, undisturbed linearity (a product of constant earth fillings from the 1960s)—is given enhanced significance by being preserved and elevated in the new reality, conveying the meaning of an impermeable border between the city and the sea. Inspired by the timeless meaning of the city’s linear display upon water, the architects associated the idea of a narrational, introverted spatial condition that would run parallel to the city’s waterfront edge, forming two distinctive (and interconnected) worlds. The communication of narration’s formulative principles is achieved by means of a series of thematic events, a “collection of spectacles” (Loukaitou and Banerjee, 1998), in which introverted green spaces for leisure, human-centered design, and water events, along with the natural materials like wood, sand, and stone, construct an arranged set of allegorical representation of places whose meaning is gradually revealed, cultivated, and negotiated within the user’s mind.

Kevin Lynch (1960), in his analysis of the image of city, argues that the distinctive border formed between urban space and water (sea or lake) is always powerful as perceptual input. It is always connected with the ability to attribute powerful significances of functional, economic and cultural dimension to this distinctive edge/border.
The departure point of this chapter is the effects of the narrational nature of urban design upon human expressiveness and the socialization of coastal urban settings. This section refers to the practical application of concepts discussed in previous chapters and primarily on the entanglements of meaning and meaningful (see sections 0.3.1 and 0.3.2) in the decision-making process for the edge of Thessaloniki. What scholars like Sternberg (2000) and Gottdiener (1997) define as “purposeful thematization”—fifteen thoughtful, introverted, and delicate urban or green thematic rooms—manifest the scholastic achievements of poetic evocation adopted by the specific design proposal, which aspires to position itself in this category of projects where the tension between geometric rationality and the entanglements of human lives finds an appealing material expression.

We will explore this design example in order to identify the different sets of concepts that enable places with meaning to deploy their expressive dimension. But first it is necessary to introduce a discussion of its design intentions.

ii. main initial design intentions

As the route that the design intentions follow to construct an Expressive Space along the sea is neither direct nor univocal, I will sacrifice any further description and go straight to the issue of the easy reading of an edge space that from the beginning became the central intention for the architectural team. Around this, other concepts, such as the illustration of its characteristic elements and parameters that affect its identity, are being orchestrated to eventually form two main pathways that guide the whole design procedure. The first is the imaginative power of the path exactly on the edge of the Edge [image 0.01].

For this thesis the Expressive Space participates in the social assignment of meanings in the design process and exhibits, at the same time, itself from the result of such assignments on the subject. In this sense, it points out the existence and importance of their effects in relation to variables such as territorial behavior, composition of social activities, or communication of cultural beliefs (locals’ water-ideology and its sense-creation power). These variables define and constantly redefine meaning along the path. Walking and exploring the area alone or along with others, the spatial meaning emerges in reading the characteristic linearity of Thessaloniki’s Edge

with its continuity, the open and uninterrupted optical field, the sense of infinity from the water’s intense presence, the line of the horizon of the sea, which sometimes is projected intensely and clearly and other times completely vanishes, unifying the sky and sea with impressive results (Nikiforidis and Castro, 2001:6) [the translation from Greek is mine].
Reading these various features of the coastal space, it is clear that the initial design intentions of the designers are not functionally or technically delineated—not as problem-solving aspects and certainly not as products of typification. Otero-Pailos employs a crucial characterization that I adopt here in order to proceed with the psychospatial reading of this project. It delineates the design process as “the arrangement of images in experiential sequences” (Otero-Pailos, 2010:137). The thesis argues that these images are not personal products of the designers, but rather shared components that have their origins in the timeless relationship between the city and its waterfront.

I will begin this reading by saying that it depends on the relationships the Expressive Space of the proposal establishes with these images in sequence, that the response of the perceiving subject, eventually, guides the interpretation of their after-effects. By this I mean that the initial intentions employed promote the individual interpretation of the seaside images, letting it be influenced and conditioned by a series of social structures by means of which the exposed everyday life enacted near water is processed, filtered, and constituted into meanings.

The meaningful aspects of the linearity, the powerful continuity of the edge and the open horizon, along with their associated meanings, become central “points where [their] images intersect at incisive and decisive right angles” (Bachelard, 1999:51) for the re-design of the waterfront track. Therefore, it was decided to intensify and strengthen these characteristics during the design process. The coastal promenade was seen as the ideal place for walking, without interruptions, without harmful effects. The perceiving subject is thus exposed to the light,
positioned to specific points of open view in the visual experience, and to a continuous course of movement placed exactly on the most seductive site of the city: the Edge. It is also placed between other sorts of semantic differentials: between the stability of the compact ledge along the coastline and the instability and lucidity of the water itself.

The second pathway of design intentions is the one dealing with expressive uses that are able to challenge the public realm and attract citizens during most hours of the day and night. Green spaces with scattered uses of recreation and sports differentiate sub-areas from the space of the main promenade by incorporating elevated or sunken surfaces, shadowed spots, soft pavements, visual isolation or enclosure, and spatial variety in general. The acknowledgment of these characteristics contributes to restructuring the lost identity of Thessaloniki's waterfront, as conceived during people's every day contact with the shoreline. Thus effort was focused on strengthening the allocation of these parameters in the proposal, and combining them with specific architectonic elements to offer alternative experiences to visitors. Meanwhile the designers argue that their intention is indeed

the creation of a linear space with choices for entertainment, games, relaxation, education, and culture, the linking of different spaces with various qualities that will cover a wide spectrum of human expression and mood, but will maintain the characteristics of unity and continuity imposed by the character of the urban frontage itself (Nikiforidis and Castro, 2001:6).
And later they continue the description of the Rooms’ influence in the chain of signification of their design methodology, that is, the formulation of the so-called “episodes”:

The intention to maintain the linearity of the coastal frontage, its unity and continuity, and leave the horizon of water along with the main promenade uninterrupted by any sort of seaside construction, is basic. However, the need to find meaningful points of interest during the unfolding this coastal track led to the decision to create specific interventions, like “episodes” that thematically are always related to the notion of water. The episodes “lower” the scale of the urban fabric create points of rest, places to play; they signal specific points without destroying the linear unity of the track (Nikiforidis and Castro, 2001:9) [the translation from Greek is mine].

3.3 the meaning in visual and motional composition

The scope of this section is to reveal the relation, or rather the effects, generated by the intersection of the narrational structure of the Green Rooms with the movement of the eye or the bodily position of the perceiving subject during the interpretation of the spatial experience. The thesis argues that Nikiforidis and his team, by making use of a system of specifically designed tracks onto which people are called to enact their lives, construct a narrational choreography of moving bodies and crossing sights in their effort to develop an effective relation between the spatial construction of meaning in terms of the visual and motional arrangement and the spatial representation. The effect on moving and seeing from the narrative function of space is an important aspect of the coastal Expressive discourse. The thesis attempts to trace its origins in Paul Ricoeur’s phenomenological theory of the narrative act.

The reading of the proposal in this section pertains to the psychospatial effects of the linear semiology. It is necessary at this point to renounce the strong linearity of the proposal for the edge of Thessaloniki [images 0.01 and 3.01-3.14], a geometric formation that this research often criticizes as static, monotonous, or unvarying. This is because such a semiology cannot impose itself without the negotiation of a specific design approach (or intention) that manages to model something rather intangible: the meaningful presence of the user. The narration of a thematic construct that is about to be experienced becomes the means for the composition of this presence—the means for the appropriation of space and the visual occupancy through symbolic ascription and significance attribution to its representation. In this sense, the representation structures the narration itself: it is used as self-contained forming language that aims at the recomposition of the
images in sequence and the meanings from the spatial features (forms) into a unified meaningful and logical interpretation.

As mentioned in the introduction of this thesis, the main conceptual tool to approach the issue of how space is thematized in a narrative account is adopted from the theory of the hermeneutic interpretation of phenomenology and the general approach of the narrative logos as described in Paul Ricoeur’s *Narrative Function* (1981). The twofold dimension of narration, as approached by Ricoeur, allows the thesis to associate it with the spatial representation of the coastal space, in reference to the design of a visual and motional composition. The Green Rooms proposal, even if not yet fully completed, offers a unique opportunity to investigate this association: on the inner side of the linear track along Thessaloniki’s edge, fifteen spatial compartments structured as a succession of gardens/events, each signifying a different specific thematic character, narrate the spatial representation of a conceptual referent. At the same time, these successive representations extend and liberate the concept of the notion-referent as a constant signifier of messages of gathering and moving around. The intentions of the architectural team presuppose this liberation: the proposal is about

a succession of spaces that attempt to maintain the familiar atmosphere of the private, shaping at the same time the public space. It is not about big “parks,” but small intimate “rooms,” which bring to memory the residential gardens that used to exist in the area before the embankment—gardens that extended all the way to the waves and the natural seashore (Nikiforidis and Castro, 2001:11).

Of priority in this section is, first, the methodical inquiry into the liberation of the formulative concept related to the invitation-meanings of moving and observing inside each room. And second, the presentation of an operational frame into which this inquiry takes place. For the edge to be neither subjected to a solely poetic attitude nor abandoned to a technocratic way of producing unimaginative and neutral spaces along water, it needs to be governed according to the requirements of another (spatial) premise. I will at this point bring in again the notion of narration’s plot to define this operational frame.

According to Ricoeur (1981, 2004), plot is the phenomenology inherited in the act of observing a story. Plot is composed of two dimensions: a temporal and a non-temporal one. The temporal dimension relates to the episodes of the story, involving the concept of sequence and characterizing the story in terms of its composition from various events. The non-temporal dimension relates to the configurational dimension during which the plot, made of insular and scattered events, forms cohesive and meaningful units. Thus, the narrational function has a central synthetic ability and a capacity of operating upon the plot to join sequences and forms in various ways that make sense to an observer. If we accept that plot
structures the narration (and narration structures the representation), then following the previous thoughts it appears that the act of narration is not about the accumulation of episodes next to one another, but that it produces meaning from scattered entities. In spatial terms, I would rephrase and say that urban narration presupposes the user’s ability to extract a pattern from within a sequence. And space’s ability to narrate a plot means reflecting on experienced events in order to confine them in totalities (material or conceptual) that follow one after another.

In our design example, the research sentence implied above is that a garden’s narrativity and plot are correlated parameters (to use Ricoeur’s (1981) viewpoint). They are correlated so as to form spatial artifacts that compose the coastal reality. At the same time, they possess the principles of a symbolic system of shared local values and signs inherited within the plot. In this sense, the themes of the gardens and the spatial features employed doubtlessly must be sought within the recollection of memories from the past, pre-urbanization, condition of the place with the image created by the imposing neoclassic villas that do not exist anymore. But the contemporary definition of the spatial meaning orchestrated near water is to be found in the psyche of the citizens and on how these meanings work inside them. From the competition proposal, one sees that the designers seem to have developed a sort of urban gallery made of signs, memories, and thoughts and know “how desirable these features are to those who might inhabit them” (Raif, 2007:217).

This coastal re-design attempt for Thessaloniki not only ceases to support the undermined distance between the moment of the production of such meanings and the moment of their recognition from the perceiving subjects; not only regenerates meanings from the timeless relationship of the city with the sea; but it produces, within the requirements of the physical, cultural, and social spheres a system of meaning recognition controlled by the themes/plots of each room. In some examples of European urban waterfronts, the distance is minimum, as in the case of the meanings structured within the rooms of the Parque das Nações project in Lisbon [images 2.37-2.38] or along the edge of Torrevieja (cases meant to affect the understanding of the spatial meaning by shifting the space perception of the subject within the inserted storytelling features, thus favoring different contexts of interpretation). In other cases it is maximum, as in the development of the HafenCity [images 0.05-0.07] in Hamburg (cases meant to generate stable and recurring patterns without opportunities to contemplate and negotiate with the coastal space, undermining at the same time individual patterns of responses).

One can see a parallel between the operational frame of plot expressed above and the way that Nikiforidis and Cuomo employed such a medium to structure the coastal narration. In their project for Thessaloniki’s edge, plot is structured from within the sequence of the physical representation of each room. This sequence of spatial rooms/events that enable units of meanings to be extracted and the composition of totalities to be formed from scattered images and perceptual data
is achieved through their material representation. The architectural formulation becomes the means for the concrete manifestation of the plot as “a combination of the incidents of the [space’s] story” (Ricoeur, 2004:40), and not just its rhetorical reflection in the mind. The representation of the garden not only participates in the overall spatial experience but it constantly restructures the experience of the perceiving subject. Therefore, the pieces of communication between the users and rooms—produced at certain moments and under certain contextual conditions and within these rooms—create meaning at the same time as the experience occurs. In this way, the immediate experience is

transformed into a track with transient stages, where the ephemeral (change of seasons) and the variety (multi-centrality of the proposal) are raised in the dominant element of the synthetic process and extract different feelings from the visitor/user (Nikiforidis and Castro, 2001:11).

Meanings emerge during the whole length of the track near water, then are re-defined through the visual and motional contacts with space and with others, and cultivate restless expressive phenomena. Human expressiveness, that is activity and intervention, is transformed once more into physical signs and users succeed in identifying the essential architectonic concepts of the Rooms that are construed in a communicative way—for the pleasantness of the perceiving subjects and their emotional emanation. This narrative way of composing the urban landscape of the modern waterfront city aims

...in the creation of a space in motion, the public surprise, the variations that follow the change of seasons, the absence of one and only one preferential point. The main component elements of such a landscape have the intention to give a new dimension to the “picturesque” in which the intimate scale of a private garden can influence the spatial organization of public space (Nikiforidis and Castro, 2001:11).

It is not by chance that we spoke of the meaning of social activity structured along water. The architects appreciate that different components for the construction of the edge’s spatial meaning (such as the volume of the gardens, water enclosure, circulation, transparency in boundaries, spatial relations between user and space, seating and standing positions, etc.) can carry their own meaningful load. They incorporate such components in the proposal to unfold their meaningful opportunities along the track of the proposal, their history onto the waterfront stage, making their voices regulators of spatial order. In this way, the process of

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73 For the city, the waterfront area has always constituted the performance stage of its citizens. It is worth mentioning that during the first decades of the 20th century, the area was receiving mostly young people in a rather choreographic way (girls sitting timidly on benches and men “parading” in front of them), their only aim a successful marriage.
recognizing the meaning of each room, as well as the process of producing meaning from inside their architectural structure, presupposes inter-discursive relationships. Here I want to say that the narrational function of the public rooms in Thessaloniki’s social discourse network establishes a dialogical relationship with their users. So despite all appearances, and despite the characterization of the proposal from many as a superficial landscape treatment that avoids strong gestures, the social and meaningful formalization of the fifteen spatial compartments liberates the project from both the passivity and the often monodimensional way of conceiving the coastal space by successfully incorporating the entanglement of human life.

Of the frameworks for the meaning-creation opportunities that architects Nikiforidis and Cuomo employ in the narrative function of their project, the thesis will study two that are rather critical for the bodily existence of the perceiving subject inside these gardens: the visual and motional composition of the proposal in relation to the physical and narrative structure of the gardens.

i. physical structure

A view of the visual composition and how it may be understood during the urban design process is provided by Gordon Cullen (1961). He suggests that the faculty of sight has three components: one concerning “optics,” in the sense that the cityscape comes alive in the mind of the perceiving subject through a series of juxtapositions during the existing and the emerging view of space; a second component concerning “the place” and the user’s reactions to the position of his/her body in its environment; and a third component concerned with the “content,” that is with the fabric of the urban setting.

In the proposal of the Green Rooms, Nikiforidis and Cuomo maintain the linear semiology of the city upon water and consign over this linear space the faculty of sight for their proposal: a network of moving tracks along with a bodiless grid of visual contacts. It is the transparent boundaries and the visual transition from one room to another that allow the eye to catch the users crossing over this grid. But it is also aided by an additional network of vertical movements towards the secondary roads of the existing urban grid and leading to the edge. The effort of the architects to provide optical escapes while opening up the horizon of the sea to the city led them to map out the spatial organization of the gardens by following the traces of these vertical axes.

From the details of the inner structure of the gardens [images 3.02 - 3.09], it is possible to identify and understand the concept of the visual transition from one sub-area to the next. Nevertheless, and up to the degree I wish to mark out the faculty of sight (Cullen, 1961) in the proposal—or rather the concept hidden beneath the viewing opportunities and are cultivated or anticipated during its experience. It
renders the specific edge as a field of social meetings (visual and physical) that trace the dominance of what Hannah Arendt defines as the “space of appearance” to place emphasis in the existential conditions of the act of being among equals (Otero-Pailos, 2010:225). This rendering of the appearance unfolds across two very distinctive and systematic formulations [image 3.15]: a main track (1) and a secondary experiential path (2). The function of this transparency is to orient the perceiving subject, to balance and unify the fifteen individual parts and organize the socialization that occurs around or inside them. But more importantly the transparency creates two different (in terms of the meaning generation opportunities) pedestrian walks delimited by the physical structure of the proposal, which both acquire the scale of an intimate urban street while shaping a holistic and unified image for the urban frontage on the sea.

These two linear spaces addressed for the public flow and the private rest, meet at the central movement corridor, which is a sort of connective link between these two physical formulations. By cultivating a rather linear movement, the narrowness of this axis makes the interaction between the public and the private space of the rooms possible since it offers the image of a coordinated and organized collectiveness in an urban scale, which opens up a series of entrances to the rooms along with possibilities to meet the inner, most interesting part of them. Despite the fragmentation of the overall space into fifteen smaller sub-areas, the architects map out the possibility for the perceiving subjects to move from one garden to the

image 3.15: Green Rooms proposal. Geometrical and syntactical mapping of the Garden of Roses. The diagram reads the moving patterns of the garden: 1 main track. 2 experiential path. 3 the pedestrian on the edge of the edge. 4 network of vertical movements and links with the urban grid.
next by means of a second, this time *experiential*, path that vertically crosses them. The challenge of the “*experiential continuity*” of this track is a crucial issue that Bacon (1974) sets down in his *Design of Cities* supporting the view that “movement through space creates continuity of experience” (Bacon, 1974:34).

In terms of the *faculty of sight*, and concerning “place,” this play begins from the *Garden of Sand* and it differentiates depending on the spatial characteristics of every individual garden it crosses. The only common and unifying element of this path is the material of which it is made: manufactured from the same cast material as the main track along the edge, it is placed upon soft paving, allowing the growth of grass between its connections. With the existence of this second experiential track, visitors inside the rooms can set their own rules and differentiate the flow of their movements around the architectonic events of each room (in contrast to the rather linear and *strictly imposed* alignment of the main track). Cullen’s (1961) hypothesis is that such an experiential track, at the level of consciousness, “deals with a range of experience stemming from the major impacts of exposure and enclosure” (Cullen, 1961:12). This means that for those who are enclosed inside one of these “*private spaces*” on the city’s edge, the social visual encounter with others is just a matter of time. For those who prefer a faster way to move along the waterfront, and may thus choose to use the main and shorter track, movements of other users inside the rooms seem like specified exposure courses that are rather anticipated or cultivated by the design itself.

### ii. narrative structure

Where and how does the meaning in visual and motional choreography, the *socialization of water’s spatiality* to use Bachelard’s terms, start to operate? It would be somehow naïve to refer to a specific room or event that happens to better exemplify this operation. It is instead a part of the total intimate character of the proposal that facilitates the human contact and adds relations with the space.

But still Nikiforidis and Castro imply an underlying structure of the initial design intentions that have been followed to reach this goal. By means of face-to-face contact, impersonal coordination of human movements, expectation of a possible crossing with *others*, and the sense of unspecified deviating or converging presence of the *other user*, the Green Rooms proposal constitutes an entire choreography of the *social meeting*. All these opportunities and expectations to “run into someone else” of the same or different social group, and all consequences that follow such an interaction, are gathered in a kind of deliberately designed and meaningful track.

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74 I use the term *private spaces* for these public rooms to draw attention in the way these thematic rooms act on the edge of the city: they are, of course, public spaces open to all, but since they promote a room-like intimate character, they convey at the same time a strange private sense. Users of these rooms are inside intimate spaces; but at the same time they are inside an open public setting.
This track is unique for Thessaloniki’s Edge. It involves the gradual development and negotiations of the relations between human as signs (the appearance of the other), water signs and architectural signs. The architects believe that there is no sense in designing the city’s most enhanced collective and societal space without the spatial accommodation of these signs in order to produce and recognize the signs themselves.

The method of the reattaching heterogeneous grids for visual and bodily motion in order to develop a spatial totality along the edge contributes to the narrational structure of the project. Elements of visual framings, contacts, paths and tracks, architectural details, colors, and smells are detached from their initial frame and re-signified through the new relations developed within them. The meaning of these elements is displaced from their own qualities to the relations of similarity or contrast developed within them. Cullen (1961) argues on these relations:

The human mind reacts to a contrast, to the difference between things, and when two pictures … are in the mind at the same time, a vivid contrast is felt and the town becomes visible in a deeper sense. It comes alive through the drama of juxtaposition. Unless this happens the town will slip past us featureless and inert (Cullen, 1961:12).

Moreover, the structure of these elements is not at all accidental; instead it follows
the narrational frame of the synthetic process: the allocation of these elements of visual and motional contacts within a sequential network of fifteen separate units is designed to allow the user to extract not only meaning but also morphological and notional (of the concept employed in each theme) cohesion.

The experiential track that intersects the fifteen units does not aim at creating a sequence of sub-areas over the linear space of the edge, but at creating a course that will allow the extraction of the formulative parts from within the story/plot of the project. In parallel with Ricoeur’s (1981) narrative function, the storytelling of the green room is structured from within the apposition between the pictorial sequence (Bacon, 1974; Cullen, 1961) and the visual or motional grids. It is the design of the first that allows the emergence of the second. The one who crosses over the track has the chance to read the plot from the designed opportunities to see and be seen, to move through and stand.

In other words, the architects set the observer free to redeploy the coastal space and to restore units with meaning signified by the representation of each theme projected upon the dispersed elements of the garden. Let us take an example of this deployment and restoration. Users located inside spatial thematic subareas at the center of the proposal and moving along the two tracks or in vertical courses appear to others as signs of exposure or enclosure within the spaces of the rooms. They can gradually appear as courses of movement inside the voids between the rooms. But the rhythmical projection of users as signs and their expressions (activities, behaviors, motion, etc.) onto the canvas of the track-like movements along the edge acquires the character of a particular design attitude of some cultivated social logic (Hillier and Hanson, 1988). This occurs because the design logic attempts to describe the coastal realm in terms of its inherent spatiality (in-depth
reading of the allocation preferences and desires of various user groups found on the edge) and the coastal space in terms of its inherent sociality (*expressive* parameters interpreted into spatial features).

The relatively small scale of each room offers a rather personal character to these social meetings, whose occurrences are mostly organized around water signs, like ponds or frames of the open horizon beyond the sea. If we are about to outdistance the subjectivity of what exactly each person seeks to find here, there is a cultivated impression that regulates the whole project. Under the specific human-centered organization of the area, there is an anticipation or expectation hidden that more specific interaction is about to occur. The concept of the established relations amongst signs, in each of its aspects, has been determined here by the almost erotic handling of bringing people together and holding them up inside architectonic signs—the rooms. This concept lives only to supplement the gradual connection of the *visual* (seeing others) with the *motional* (meeting others) of the edge inside the process of constructing and experiencing the meaningful milieu of the waterfront.

### iii. space readings during the composition

Considering the above, we cannot do without the concept of sign relations, for we cannot give up the stereotyped conditions that characterize the public presence in spaces that aspire to become the local community’s new living rooms without also giving up the narrow and rational reading of the space around water—or without the risk of conceiving the presence of others, not as an obstacle in the sensual experience of the setting, but rather as a more direct communication with it.

There are two different ways of reading the contribution of these sign relations. The first consists in outlining the transformation of habitual behaviors for using the waterfront area (just to pass through and leave and not as a *place to be in*) into behaviors originated by the meaning of spatial deviation and differentiation of the plot. Based on this approach, the designers have submitted the fifteen subareas to the user’s thought and mental negotiations. And let’s not consider this as a set of *rules* sorted out by the architects in terms of what one should think or feel. Such a reading would be superficial and inconclusive. Instead, we should approach it as an intention to prescribe a meaningful space whose formulative principles are expected to interact with the user’s conscious or unconscious states in ways that can just be *anticipated or cultivated*. The architects seem to know this *limitation* well and make the most of it: since this submission cannot be precisely designed, and since it is born out of certain spatial syntaxes and grammars orchestrated around the water (around its enclosure for instance), a space aspires to turn into a *place to be in* when accompanied by anticipated meanings derived from the perception of that space.
The second way to read sign relations, which designates the systematic and mechanical way of designing the edge and is often used as an alternative to the first one, consists in approaching the public presence as a mass of people and not as user group occurrences or combinations of human images that seek opportunities to express themselves. This can also be extended to the coincidental character of the social meeting near water, in particular to the coordination of movements that arise from cultivated behavioral patterns. In the Green Rooms design proposal, the social activities organized around water-related thematic compartments become a functional pretext for spatially constructing an entire choreography of meanings and human signs related to the issue of viewing others. The architecture of the Edge comes in this case to contribute something at the same time more social and more powerful in terms of attracting people to it instead of forming simple correspondences with the functional planning of Thessaloniki’s waterfront.

And if, on the contrary, one understands sign relations to mean, in the realm of producing and recognizing them, the accidental and indifferent visual or motional patterns that lead to more accidental and indifferent social interaction, then the plot of water as context narrated within these fifteen rooms and the associated human actions are perhaps the least accidental of all. What the designers envisage in this plot (crucial for the city’s identity) is not a standardized attempt incapable of signs transmission, but a notion previous to any waterfront redevelopment that the site ever met. Observers moving inside the rooms as bodily signs projected on coastal space and the water offering its imaginative power to inspire their thematic unity, do not simply construct a spatial relation. They are signs projected in the whole process of influencing—facilitating, encouraging, inviting, but not determining—the social life near water and making this construction possible. The designers seem to have deliberately searched for them as the concrete expressive thought onto which the spatial components are finally submitted.

3.4 the meaning in geometric formation

The subversive effort to which this design example was initially submitted pertains to the structural meaning behind an easily read geometry for as long as the perceiving subject moves and experiences the whole composition. This sort of geometry is based on the garden method: since a garden, in principle, has no built volume, its understanding demands a different reading based upon the perception of the horizontal plane on which it is construed. However, if we seek a formal condensation of the way in which these rooms can support a planar interpretation and grasp the meaningful space of the edge as a composition of seaside forms, movements, acts of viewing the water and the others while sharing the same urban
space onto the horizontal plane of the rooms, then we have to return to the project [images 3.01-3.15] and analyze the meaning hidden behind the spatial organization, the geometry, and the proposed relations set up within these fifteen entities along the coastline. From the Garden of White Tower\textsuperscript{75} to the Garden of Music\textsuperscript{76}, the aim of this section is to demonstrate how the project acts as an arrangement of fifteen sub-places with meaning by using the concept of the recognizable geometric formation. The implementation of the interpretative reading is achieved by the analysis of the employed grids and the cultivated relations with the space and the others.

thinking the grid

mentioned in the previous section, here the designers are primarily concerned with organizing the horizontal plane and the composition of the grids onto which the perceiving subject is initially placed. In this sense and considering the planar grid, a garden is not a garden simply because it is located outdoors. The Green Rooms do not open up or become gardens simply because they are thematic parks outside the city center. Something more important is under focus. The participants are conceived as part of the composition of their horizontal planes, and the spaces are designed to be thoroughly grounded and possess dependences between their internal grids. Following these thoughts, the attempt to understand the idea of the more or less planar garden through the concept of its formulative grid makes it all the more important to understand its narration and plot, allowing the subject to read the after-effects of being indoors or outdoors in the open urban space.

\textsuperscript{75} Garden of White Tower: “Today, the surrounding space of the White Tower, with its dismantlement by the existing flowerbeds and the presence of kiosks in front of the most interesting point in the sea, does not allow the exhibition of the monument. A homogeneity of the space is therefore proposed, along with its spatial demarcation and a small decrease of the area level leading to the entrance of the White Tower. The spatial organization of the surrounding space follows two grids, one parallel to the old waterfront and the other parallel to Ethnikis Aminis Street. This is a spatial reference to the presence of the coastal and eastern city walls. In this parametrical construction, which establishes the area’s borders, a number of architectonic elements have been included, like the elevations, the proposed kiosks, and the existing statue of Admiral Votsi. Moreover, in the overall organization of the space, there is an effort to connect the White Tower with the Royal Theater as well as to maintain the existing trees, which are tall and impressive pines” (quotation from architects’ description, Nikiforidis and Castro, 2001:15).

\textsuperscript{76} Garden of Music: “The Garden is being allocated inside the triangular space near the Music Hall. It is planted with trees following the rules of a grid, over hard paving, leaving a triangular ‘glade.’ The space is intended for small open-air musical events. The rules to spatially define the Garden of Music take into account the curve of the urban waterfront at this point and its direct contact with the urban grid, giving the impetus for new synthetic intentions for the design of the space around the Music Hall and the continuation of the urban frontage” (quotation from architects’ description, Nikiforidis and Castro, 2001:30).
We have already mentioned that the overall arrangement comprises a main track, which is almost exclusively used for strolling or as a pedestrian through path for walking between the monument of the White Tower and the Music Hall, and a second exploratory path that crosses the *rooms-as-episodes*. This second path, along with the physical manifestation of the gardens, forms another space of appearances inside which one can linger or sit, can feel secluded, protected and cut off from the fast-passing *signs* of the people moving along the coastline or the vehicles moving along the upper side of the area. Through the spatial reading of this design example we may understand that the fifteen rooms are presented as a grid onto which the social interaction and the movements of the subjects are being woven into a *societal* product. Meanwhile, a second canvas is schematized in the paving of the gardens and by the lines formed by various materials and spatial features.

First, the geometrical size of the rooms is not a repeated feature, but varies with no apparent rhythm—a design gesture rather visibly contrasted to the sense of the strong repetition produced by the rows of trees or the nearby buildings. Second, certain inner architectonic elements and constructions, as well as some of the axes set by the paving materials, are presented to the observer with a clear angle of divergence from the basic rectangular system, and in this way they form another grid that is stretched in relation to the basic first one. The secondary experiential path, which at first sight appears to run quite parallel with the main track and crosses one room after another, can be interpreted as a course that intersects the two synthetic grids. Nikiforidis and Cuomo employ this divergence in order to present a different and more varying arrangement of the *societal* product—the patterns of activities, expressions, and movements—within some of the rooms. At the same time, the structural geometrical model of the two grids, which the societal design process invokes to accommodate activities and behavioral patterns that generate consciousness, remains persistently differentiated from the edge’s strong linearity as a system having purely internal rules.

The central element which signifies the contemplation and negotiation of the gardens’ plot, in order to embrace their meaning in successive units, is the relation between the spatial configurations of each room and the spatial configuration of intangible properties (Hillier and Hanson, 1988)—that is to say, between the understanding of a space’s physical formulation and the structure of the circulation and access patterns of the flexible system for human interactions (meeting points or moving corridors, etc.). Along with the *reference* to this spatial relation, the movement of the user among the fifteen territories appears at the very least to be part of an objective presence of each room in Nikiforidis and Cuomo’s narrational function. Simultaneously it makes the presence of the user part of the general public presence as a result of a series of seaside spatial constructions that, in most cases, utilize the water in order to justify their existence. The grid divergence can
better be demonstrated in the Gardens of Shade\textsuperscript{77} and Sound\textsuperscript{78} [images 3.02, 3.07, 3.16], where the spatial relation between grids becomes visually perceptible when contrasted with the basic axis of movement and the water’s linear existence in front of the area.

relations with space and others

Now, let us assume that the architects here intend to construct a new geometrical structure for the gardens’ representation that incorporates circulation and access to ascribe certain physical (movement of people) and social (resulted actions, gatherings, noises, etc.) meanings to the waterfront. Assuming, as at least appears to be the case, that they just intend to situate their work within the opposition to the linear seafront’s independence and individuality, then (on a more practical level) the geometrical structure of their design fulfills five communal objectives. First, it allows the axes’ divergence to build into the initial linear system of moving along the edge in order to ease the circulation. The axes on the ground function as influential elements here in terms of stimulating the public movement towards the rooms and to the experience of the secondary path by braking the monotonous, and default approach, of the straight, vertical, and repeated entrance.

Second, it shows that the narrowness of the main track, in order to receive the aligned movement of the public mass, on one hand obeys the rules set by edge’s linearity, but on the other is not at all restrictive for the meaning of social activity since it offers proximity to the gardens and their activities. Located at the busy intersection between water’s spatiality and space’s sociality, it enables the area not to appear empty when the rooms are not in use. Third, it shows that both grids,

\textsuperscript{77} Garden of Shade: “The space around Thessaloniki Palace is being transformed into the ‘garden of shade.’ It is being planted with tall trees over a strict and dense square canvas, creating an urban ‘forest’ with an enough transparency to allow the water’s silhouette to be projected in front of observer’s eyes. The Garden of Shadow will therefore constitute the most ‘shady’ Room of the seaside gardens. The shade and dew offered by the proposed Garden are far preferable to the artificial shade from tents, which is not as cool as the natural one. In order to accommodate the existing building of Thessaloniki Palace in the rules of the new setting, a new structure of slender wooden slats has been designed to dress it up without blocking the light and its view. A new ‘building’ has therefore been created to encapsulate the old one, being more friendly and well-adjusted to the new environment” (quotation from architects’ description, Nikiforidis and Castro, 2001:19).

\textsuperscript{78} Garden of Sound: “This Room is formed as a forest of tall trees, planted over a grid of soft materials; the aligned forest of the garden of Sound does not block the view of the water. It is organized along a water canal that is being constructed parallel to the Edge. The path, which crosses all the Rooms, also crosses the canal. The water inside it is always running and being replaced, while the reeds planted along the canal produce their characteristic sounds when interacting with wind. A path made of special elastic material runs between the trees and can be used for jogging and other athletic activities” (quotation from architects’ description, Nikiforidis and Castro, 2001:26).
placed upon strong and soft materials, obey a strong definition system structured by natural elements (mainly by water and plants) in order to make people aware of the plot’s constitutive parts like the ground, the water, the open horizon, etc. The Gardens make use of these grids to allow the user to become aware of the landscape attributes, a process that ultimately may affect their behavior and sense of preference. If the height of the building behind the site represents the practical dimension and the rooms the poetic one, then the grids’ definition system is a convergence in these two approaches that brings people closer to a reciprocal relationship between the architecture of the edge and the predominant water.

Forth, it illustrates why places with meaning may destroy space’s rationality, since they favor anticipated or cultivated contemplations during spatial experience: the variations on the proposed forms are subjugated in the rules of human awareness, both when the user sees the volumes’ dissimilarity from the outside and when he/she looks from the inside out. By tracing and destroying the homogeneity of space with a modification of fifteen spatial compartments, Thessaloniki’s edge is being accentuated and opened up to the waterfront through anticipated social activity and cultivated behavior patterns to accomplish the sense of awareness of place. And fifth, it reveals the presence of a strict geometrical order in the design for social patterns of activities, an aspect that confirms the psychological impacts left behind by the repetition of the grids that formulate the rooms. And this because it offers to visitors a conscious perception of the site’s inner structure and rules. It creates an atmosphere of an easily read geometrical foundation, not only of the individual parts but mostly of the plot communicated by the proposal.

Discourse, therefore, of the unpredictable flow of public life around the area, if it originally constitutes a rather intangible element for most architects, can indeed take a deep, cohesive, narrational, and well-ordered spatial form to the extent that it is not limited to purely non-sensory approaches or unimaginative design expressions. This is favored if we see the concept of public life as inseparable from the idea of a “socio-cultural public realm of people and activities” (Banerjee, 2001) and the notion of places with meaning for this immaterial realm. And it is predicated on several issues concerning human performance, experience, and awareness on the edge of Thessaloniki—vital to its success as a thriving public space.

The passages, which announce that there is something interesting to be found and explore inside can in part be conceived as geometrical generators of the social space they favor. They are at once moving corridors and socialized territories. Through displacement around the axes of these passages, the body of the thinking and acting subject is replaced by a social object (Lefebvre, 1991:194). We must therefore seek the generative principles of the social space and the constructed meanings that support its development.
3.5 Lefebvre’s position on social space

Familial space, linked to naturalness [air, water, green space] through genitality, is the guarantor of meaning as well as of social (spatial) practice.

H. Lefebvre (1991:232)

I have already ventured a few statements concerning the participation of the coastal landscape in the formulation of meaning in the representational space of the edge, and I have implied that a similar participation favors the development of the social space around water. The concept, however, of the socialization of space on the edge is still an abstract one. For this reason, I will set forth Henri Lefebvre’s position on social space which I intend to discuss further in this chapter in terms of its constitutive terms and conditions as well as its inferences in the general framework of places with meaning:

Empty space in the sense of a mental and social void which facilitates the socialization of a not-yet-social realm is actually merely a representation of space. Space is conceived of as being transformed into “lived experience” by a social “subject”, and is governed by determinants which may be practical (work, play) or biosocial (young people, children, women, active people) in character. This representation subtends the notion of a space in which the “interested parties”, individual or groups, supposedly dwell and have their being... it would be more accurate to say that it played a socializing role – by means of a multiplicity of networks- than that it was itself socialized (Lefebvre, 1992:190).

If we are to clarify the forces relating to the production of social space, we could say that in the above position, Lefebvre introduces a procedural viewpoint of both the social space and the embodiment of subject in its physical substance (that is the material milieu) However, without exploring the derivative territories and the spatial preconditions, this procedural reading remains essentially incomprehensible.

Sociologist Harvey Molotch, best known for his idea of the city as “a growth machine” (1976), quite properly remarks that the procedural viewpoint in Lefebvre’s position forms a characteristic example of a socio-spatial critique on space’s production. It is about, Molotch comments, the processes humans develop...

...to create the space in which they make their lives; it is a project shaped by interests of classes, experts, the grassroots, and other contending forces. Space is not simply inherited from nature, or passed on by the dead hand of the past, or autonomously determined by “laws” of spatial geometry as per conventional location theory. Space is produced and reproduced
through human intentions, even if unanticipated consequences also develop, and even as space constrains and influences those producing it (Molotch, 1993:887).

If I set out these two remarks, it is only to demonstrate that the locus inside Lefebvre’s position on social space borders the duality of its material and formal foundations. Without this crucial assumption, its procedural substance remains elusive for the spatial interpretation of this chapter. Thus, there are two critical dimensions in Lefebvre’s thought by means of which he tries to expose and decode the space of human interaction. The first dimension is the position that the social force that “becomes concentrated in a certain place, yet continues to act upon the sphere outside” (Lefebvre, 1991:192), and the second is the identification of the networks upon which this force operates. With a remarkable intuitional leap, Lefebvre attaches the social energy to the meaning of the experience of space in everyday life—that is, to the signification of certain relations that social space implies upon networks of named places. In this way, the socialization process delineates and is introduced as an interpretative action of the active subject that constantly moves between boundaries, territories, junction points, and named places in urban settings (Lefebvre, 1991). The networks upon which these interpretative energies operate by the mediation of the active subject itself accelerate the reversal of the sterile social conception of a pre-existing world and set aside the type of spatial perception as a map or plan that belongs to previous periods.

Hence, we could argue that Lefebvre’s position on the production of social space structures a meaningful combination of mental/notional and physical/experiential processes—which inevitably occur as soon as people are bodily placed in a given space—in the sense that the physical/experiential dimension stimulates the mental/notional sphere, while the mental/notional sphere opens up and gains meaningful content through a series of physical/experiential dimensions. However, and while one would argue that Lefebvre’s conception of the social space structures a schema for the embodiment of a culturally defined human expressiveness in physical space inside which the user operates with indicators invested with affected significance (this is his own definition of symbolic objects, issue studied at the first chapter of the Intermediary discourse) along with myths and stories attached to it (Lefebvre, 1991:192), the interpretation of his position prescribes a rather different role for the active subject. A different meaningful horizon appears in terms of the user’s bodily presence and syntactic position inside the social construct.

The procedural viewpoint of Lefebvre’s position, introducing the embodiment of the active subject in the development of the social space, saves this space from sterile and ordinary spatial interpretations. This is because by raising the bodily presence into a constitutive part of the social sphere, into a “spatial body,” the
social dimension ceases to appear as a mere sum of events, incidents, or occurrences. It is no longer a recurrent cycle over which spatial meetings are simply gathered. On the contrary, it renders *space as a product*, detached from its physical materiality and the aggregation of sensory data. He therefore argues that bodily presence can be conceived

...as produced and as the production of space, immediately subject to the determinants of space: symmetries, interactions and reciprocal actions, axes and planes, centers and peripheries, and concrete (spatiotemporal) oppositions. The materiality of this body is attributable neither to a consolidation of parts of space into an apparatus, nor to a nature unaffected by space which is yet somehow able to distribute itself through space and so occupy it. Rather, the spatial body’s material character derives from space, from the energy that is deployed and put to use there (Lefebvre, 1991:195).

In this way, the constant interaction implied between the user’s bodily presence and the networks of social energy becomes a precondition for Lefebvre’s procedural position. And this presence exists precisely at the level of the reciprocal movement between material and abstract products, such as memories, thoughts, and emotions (Lefebvre, 1991:203). Here, a spatial dimension is revealed and the position is interpreted conversely: from its procedural end to the beginning of the object-stimulus that directs users to anticipate motivational social networks and promote certain units of feelings inside their psyche—emotional products that the user will eventually take along after leaving the space experienced.

This reversed reading puts on the map again the meaning of the bodily presence and the lived experience. Possibly this hypothesis holds true under specific circumstances, and although the supporting literature for emotions on users inside urban waterfronts is poor, I will try to explore the appealing belief that a greater amount of social interaction is related with places that *talk to people*—that is, with spaces where the existence of an abstract and poetic tool, like the watery landscape, affects emotional states.
3.6 the role of emotion

If it is true, as I claimed earlier, that such an abstract tool can also accept resultants of urban essence, then the classification of the fundamental urbanistic considerations should relatively connect the arranged events found along the shoreline (constructions, buildings, social activities, events, networks of movements, etc.) with this tool. In order for the expressive meaning to continue its development with enough stability to produce concrete urban design insights, and in order for practice to avoid being superficially dressed with some meaningless rhetorical decorations, it should find its spatial configuration.

It was within this endeavor that I studied the green rooms’ proposal and its water-related architectural thought communicated along fifteen spatial compartments. It was within this discourse that I connected people’s primitive imagination stemming from watching, touching, or hearing the water with a permanent spatial knowledge, with experiential processes of conscious stability. And if this powerful imaginative power still maintains sources of design intentions derived from within it, it is because the translation of these intentions from design drawings can exhibit how psychological and behavioral human responses act and influence the organization of the space near water. This occurs quite often in such discourses: from the meaningful order imposed by the surrounding environment (social and physical), we can effectively legitimize our design practices. But only when we introduce to the design practice fundamental rhetorical notions—only when we attribute to the architectural thought the vital relation between the perceiving subject and the setting, between psyche and place.

While experience is clearly directed to the external material world, the human pathos for intentional esoteric reactions to the latter is more ambiguous. Paul Ricoeur writes in *Fallible Man* about this ambiguity:

> [Emotion is] without doubt intentional: it is a feeling of ‘something’ – the lovable, the hateful [for instance]. But it is a very strange intentionality which on the one hand designates qualities felt on things, on persons, on the world, and on the other hand manifests and reveals the way in which the self is inwardly affected. In emotion an intention and affection coincide in the same experience (Ricoeur, 1967:127).

Just as there is an implication of qualities felt on things, there is an implication of architecture that arranges these things. However, in more recent literature on waterfront redevelopments we find virtually nothing on the behavioral aspects of coastal spaces, let alone their psychological or symbolic impacts on human emotions. Without the latter, the edge remains a mere byproduct of space production, which reduces its constructions to sterile vessels of the meaningless.
It may not be possible to give a precise, quantitative definition of “emotion” to be embedded inside the experience of space. For Ricoeur the emotional is sensed “purely within the subject and is not related in any way whatsoever to anything outside the subject. Emotion is an affect which has only an inside, and not an outside” (Ricoeur, 2004:268). However, emotions and feelings are what subjectively activate behavior. They are aroused by our normal stimulus-seeking behavior (like looking, searching, gazing, exploring, etc.) and when they are externalized, they can be visible through behavior in space. Thus, in this section I wish to highlight an aspect of the socially expressive waterfront that is problematized through an emotional design process for the city and is based on a structure of feelings, which arises in response (Eberhard, 2009) to external spatial events. Through this problematization I intend to indicate the disruptive position occupied by emotion inside the space of the edge—and also in the thesis’s position of understanding the latter as a semantic topos (place).

It is because feelings usually introduce what it is excluded from the first glimpse of the visual perception that we continue our analysis of the Expressive Space’s elusive path. As it becomes apparent, such a path is necessary to demonstrate the way in which a designer learns to communicate with space: by involving emotions produced from water’s elicited signs when both the user and the designer approach the shoreline, the first physically and the second through design formulation and initial desiderata. Non-visual signs anticipated or cultivated by the design process are often transmitted to users and may evoke different emotional reactions. And in order for these signs to be spatially perceived and produce more intense reactions, architects must provide for specific places or subareas that favor possible spatial accommodations for them.

When the ambient environment of the edge promotes such accommodations, the perceiving subjects are favored to anticipate and cultivate certain emotional relationships with that specific environment depending on its quality. A high-quality environment—one loaded with messages and motives of interpretations—\(^{79}\) is able to cultivate images, thoughts, moods and memories, which also has effects on man’s well-being. Kevin Lynch sees patterns and motives of interpretation in urban settings as fundamental to any description of meaningful

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\(^{79}\) What I here call “motives of interpretations” is certain personal passages, certain semantic relationships (unique to every individual) between, on the one hand, what water signs the designer had perceived and tried to model into architecture and, on the other hand, the certain meaningful totality through which we think what the designer perceived (or what he is believed to have conceived or imagined) can be demonstrated on the Edge. The author understands that such personal passages can be discomforting for many practitioners because they call into question people’s own authority in making claims.
space, since the well-being of users “arises as they directly interact with their settings and not primarily from their role of passive observers” (Lynch, 1976:37).

The meaning of opening up here the full range of an emotional urban design is to explore how human feelings, critical to sensing the variations produced by experiences as Damasio (1994) defines them, are closely attached to meaningful experiences and the mental negotiations with the place of the edge. The question about emotions, as evoked by the built environment in a rather idiosyncratic way, can be addressed in the direction of the contained universal patterns that are to be identified in the underlying process of how these emotions are evoked. In this sense, a meaningful space can be defined as any space that evokes transcendent feelings in the user and establishes connections with the indigenous characteristics of that space. The effects of these connections can often be reflected (Canter, 1977; Eberhard, 2009; Hendrix, 2006) in users’ behavior. In some places they can hardly help feeling boredom, timidity, annoyance, or even disgust; in others amazement, surprise, sociability, or peacefulness. However, this is about psychological consequences that operate purely within the subject.

The analogy with musical composition is again useful to understand the process of the urban synthesis of signs along the edge and that this methodology doesn’t diminish the architectural process in any way. Exactly as in music, where the

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80 As mentioned in the first chapter, and since different people can develop different feelings towards the same setting, we can say, following Searle (1969), that the urban environment acts as a “hanger” onto which each user hangs his/her own description and emotion.
notation system is used by the composer to transmit to others, who are not present, his/her action (producing music) and his/her feelings (expressed by the chosen rhythm), this process enables us to share with the artist something that could not be transmitted without physical contact with him/her. Architecturally, the composition of signs on the shoreline (within the premises of Expressive Space) simply enables the designer to transmit notions related to water to users without them having physical contact with it.

By this I mean that if the arrangement of effects on our behavior produced by this environment is eloquent enough, then we will have a chance to share, communicate and preserve them within the urban design project and not only in the narrow zone where city meets water. Indeed, there are no technical terms to describe the exact process of composing or writing architecture for the Edge, but we can understand a big part of it if we start to observe the effects, as equivalent to musical notes, it has on our emotional states and our actions. However, this is only an analogy: music, as perceived with sounds, is an object of our senses among others. As such, it cannot be analyzed as illusion or oneiric state; it is a real element that our senses cannot disregard. On the contrary, the process of constructing the spatial meaning of the Edge, in this phase, relates the material properties of the psychological conditions.

Of course I do not forget that in clear psychological terms, emotional states are complex constructions and cannot be easily defined. Never before in the history of architecture have designers faced so many complex structures concerning the ethic of space, pressures, dilemmas, and indifferences as today. Therefore, how is it possible for urban design, a mental procedure aiming at solving urbanistic
problems, to generate emotions within a continuum? A tentative answer could be by activating users by means of public art or materials, colors, forms, etc. [images 3.18-3.22]. The degree of aroused feelings in which each one of us experience space varies. It can be almost insignificant (the above-mentioned example with the Edge occupied by factories where people couldn’t find reason to approach and their activation level\(^{81}\) on shoreline was near zero) or can reach an extreme level (the opportunities for interaction and experiences on the waterfront of Barcelona after the completion of the Olympic projects demonstrates therefore a high activation level). The problem designers who want to offer possibilities for arousing emotions face here is twofold: the level of arousal in response to external spatial events and the kind of arousal.

The first quantitative parameter is related to how intense the proposed activities are. It can also refer to periodicity: how often we meet water-based activities during our stroll on the Edge and how accessible they are. The second qualitative parameter is more intangible because it has to do with effects in our minds produced by external agents. By this I mean whether or not one feels comfortable experiencing a given arrangement of events. These effects must not be transient as a result of the disassociation of meaning from the stimulus that has already created “dead,” cruel spaces. Since we assemble these sensory and meaningful properties in our brains, we can transform them into long-lasting effects able to work deep inside us and affect not only our mood but also our images, thoughts, and memories—both conscious and subconscious—as derivative emotional products.

\(^{81}\) Activation level is a psychological notion explored extensively by Berlyne (1960) describing arousal and activation within a continuum.
Emotions, so subtle and elusive, are derived from a variety of sources and thus cannot obey rules. And when the notion of water as context intervenes, much more delicate and dynamic sensitivities are being interwoven with our experiences of space. The meaningful space of the Edge, in its totality or else the one we are looking for in the sense of experiences and meanings communicated, is not static. It is as impossible to represent in a “typified logic” with a series of commercial or residential blocks, facing water and leaving wide or narrow pedestrians for evening strolls, as it is to construct a harmonic symphony by using only one or two musical instruments. This almost unstated space, like a harmonic symphony, emerges from a meaningful order of feelings, materials, and conscious and subconscious manipulations of information from material influences—as well as from social pressures—that are all blended together. Without this necessary blend, urban design is seen as mere masses of buildings.

But the process doesn’t stop here. It is a continuous flow of exchanging semantic messages (some of them function inside the meaningful space but are impossible to define or even detect) between users and environment, balancing emotional experiences and relating human cognition with the architectonic understanding and semantic reasoning. If we shut down one or more channels of this environmental communication system approach\(^\text{82}\) (assuming that we could ever

\(^{82}\) Now that we have started to explore the premises of the Expressive Space, we assume that the above-mentioned blending relates to communication process, and that the process itself can be controlled. But Expressive Space—along with the other three types of space—
experience such a holistic space), then the edge loses again its multi-colored palette of life and is unable to generate meanings. This means that it can no longer reflect users’ needs or respond to societal changes.

It is not easy to probe into the structure of the emotional channels of this system, since they are as complicated as the human psyche—as complex as the Being itself. Nevertheless, before I mark out and define the crucial role of the user’s emotional states within the experience of the urban Edge, I will first attempt a displacement of its structure by identifying the feelings involved, their frequency and intensity, even though some of them have already been mentioned briefly. In this section they will be identified and registered as they emerge from within patterns of behavior along the Edge allocated across the study of the many waterfront projects that promote them. Sounds along the shoreline are not the only thing that can arouse human emotion to a more intense level than the view of the open sea alone. Smells, haptic contact with the material world, thermal conditions, as well as urban aesthetics and public art are all cues of the built environment that inform, indulge, satisfy, or disappoint people. In the midst of an environment rich in emotions, we have no trouble isolating each one of them and letting it work inside us. The lapping of waves on the seashore against the distant sighing of wind can be only one of the deeply felt emotions evoked by the surrounding water.

The psychoevolutionary theory of emotion of psychologist Robert Plutchik (1962) sheds light on the conceptualization of primary emotions, as he calls them, which can be involved in different patterns of human behavior. He structures them into four emotional differentials, or dyads of oppositional feelings: joy-sorrow, anger-fear, acceptance-rejection, and surprise-anticipation. Plutchik also attempts to model these emotions into a system of axes ranging from maximum arousal of emotions to minimum arousal (passive and nonspecific feelings). The previous diagram [image 3.23] adopts Plutchik’s primary emotions and intensity scale and illustrates his codification in a representative way to make them clear to the reader, since we will use them later to explain the edge’s environmental effects.

If Plutchik’s codification touches upon the difference between maximum arousal and the minimum of complete passivity, then feelings can be read in a waterfront projects depend on the spatial events the designer accommodates and the dominance of water in them. Usually artistic constructions, like participatory water fountains, in urban design proposals are designed in such a way as to arouse an emotional mixture based upon personal readings of space—various combinations of feelings that result in more intense experiences. Eberhard (2009) stresses does have some margins where this doesn’t happen. This became evident during the research-by-design part of the work. The reason I tested this system in practice was to explore what these margins are—stemming from the social construction of the Edge, which is open and dynamic.
attention to the fact that “even though the relations between the type of situation and an emotion are similar among individuals, a person’s unique, personal experience customizes the process” (Eberhard, 2009:94).

For example a sub-area designed as a children’s playground that incorporates water games can have double impacts on a child: surprise on the one hand and fear on the other. So the final sense would be a state of alarm, of awe on behalf of the child. In another case, the water events along Lisbon’s new waterfront [image 3.27-3.29], addressed to adults as well as children, have multiple effects on people depending on the group to which they belong. Teenagers, while participating and combining the nostalgic view and sounds of water, may feel acceptance from the whole spatial constructions in general but also sorrow or nostalgia. The same events when experienced by adults instead may provoke both joy and surprise and make them feel delight as well.

This “emotional product,” as I call it, results from mixtures of primary emotions at about medium intensity. It implies a notation of spatial knowledge of place and the mediacy of water’s spatial extensions. By this I mean that this product in silence traces the structure of experience, sketches a part of the Expressive Space, ventures to contrive “absolute intensity” with reference to the duration of the experience (the longer the duration, the bigger the mixture of primary emotions), and finally concretizes the relationship between psyche, experience, and space. If this relationship seems now clearer than in the begginng of this chapter, general rules are still difficult to be formulated.

Two factors confuse the issue of this relation. One is that experiencing the spatial meaning feeds on contrast. For example, an arrangement of meaningful events along the edge (let’s think again of the fifteen Green Rooms of Nikiforidis and Cuomo’s proposal for the waterfront of Thessaloniki) are compact and well-articulated situations that transmit very specific spatial information about the place and the history of the port city when compared with the lack of locatedness (Casey, 1998) of the background urban context or with the endless expanse of water standing just in front of them. From inside these rooms, the meaning of the expanding sea (as a material force with psychological effects on the human mind) seems broad and undefined; but at the same time, the water itself is a well-defined matter when considered along with the urban terrain before which it opens.

The second factor has already been mentioned: culture and experience strongly influence the interpretation of the notion of the water-matter and its spatiality. However, the research argues that the Expressive Space displays the inherent capacity of the psycho-social constructs (Bonnes and Secchiaroli, 1995) to store, process, and retrieve such spatial information scattered around the coastal space. This is the reason why Bonnes and Secchiaroli point out that this spatial information is produced by the material and non-material influences on meanings
and social beliefs, which “are always attributed to the physical environment both by those living in it and by those external to it” (Bonnes and Secchiaroli, 1995:189). We may all have experienced, at least to some extent, how the environment affects our psyche (effects related to sadness, happiness, fear, safety, etc.), and we may have also noticed the differentiation on the actions and responses of different user groups acting in different built environments.

The thesis suggests that such similarities and differences, as well as the spatial information attributed to the built environment of the edge—things rather irreconcilable even if we have experiences from many waterfront cities and reconcile them in comparison—share aspects that pertain to the field of environmental psychology. For my part, although I am developing the Expressive discourse in order to acknowledge and accentuate these parameters and define their irreducibility, I do believe that inhabiting coastal places is a complex activity that affects various aspects of the consciousness and cultivates people’s awareness and emotional bonding with components of place identity. But above all, it commits one’s whole being (imagination, sensation, perception, memory, and bodily position) to the emergence of a material form that captures the spatial meaning of the place. Once achieved, the waterfront is again a place to be in.

Influences over design process

How does the pathos of emotion then influence the design process? This time an analogy with language sheds light on the question. In linguistic terms, words contain and intensify emotions. Without words our feelings are not communicated, condemned to fade quickly and disappear. Perhaps the reason an animal’s feelings towards people cannot heighten is its inability to describe them in words and
therefore in language. The built environment of the Edge, like langue, has the power to affect our awareness, to arouse multiple moods and feelings inside us and leave its impacts on our senses. In addition, it can manipulate human consciousness towards an intense (or mild) activation during spatial experiences.

Based on such power, an architect starts to construct the spatial meaning and produce the “unstated space” of the Edge, offering spatial conditions that accentuate the difference in emotional temperature in a variety of users. But the meaning of these spatial conditions gains immeasurably in power and clarity when it can be directly derived from the active manipulation of the above-mentioned primary emotions, which “produce changes in our bodies over which we have little or no control” (Eberhard, 2009:92). By this I mean that, for example, in a case in which the construction of a meaningful sub-space near water intends to incorporate the spatial condition of water enclosure and its consequent relations, the design logic can employ the anticipated human responses and emotions, raising them to a great experiential level.

At this point, the thesis can let the interpretative reading be guided by the insights revealed from another design example that illustrates the arousal of specific emotions and their manipulation. The riverfront gesture sketched out by McGarry and Eanaigh [images 3.30, 3.31], architects at the Dublin City Planning Department, seems somehow to interrupt the process of constructing the spatial meaning and opens up another kind of inquiry relating the bodily experience of the local Dubliners to mental images that describe relationships with monotonous objects and neutral events. This section attempts to trace the psychical content and the expressive behavior, which are represented in the passive movement of the
everyday perceiving subjects along a riverfront route without the variety of visual, tactile, or experiential options studied in examples already mentioned.

The Liffey Boardwalk in Dublin, Ireland, is a 650-meter-long pedestrian route intended to reintroduce Dubliners to the river and provide relief from the area’s chaotic traffic. The existing granite quay wall has been left intact and a visually light structure has been suspended above it. This, by virtue of its material and tactile quality, would be read as distinct from the quay walls. The location has the enormous benefit of facing south and being in the open so that walking along the water in the sun is both enjoyable and memorable. The Boardwalk is both a continuous promenade and venue. The design therefore maintains its continuity where interrupted by the existing bridges. Three stalls provide refreshment and collapsible stalls have been designed for occasional market activity (Architectural Themes, 2003:118).

For the above-mentioned psychospatial readings and theoretical positions in emotional products, the project of Dublin’s Boardwalk, as the outline of the city by water, is devoid of many characteristics studied so far that can turn the riverfront space into a place with meaning. It does not gain a dominant role even as a riverfront route since it doesn’t seem to provide enough patterns able to mark the mental images of the subjects experiencing the linear formulation as interesting and originated by water-born associations. In this one-dimensional outlook for the riverfront promenade, the few stalls provided by the architectural team cannot be characterized as “events,” let alone as an arrangement of such or, to use Reiser and Umemoto’s term, as a “series of moments” to create a locus for people by the water. And it is the presence of such events along the waterfront experience that can sustain the development of anticipated emotions and feelings in order for the coastal place to achieve an extended consciousness (Eberhard, 2009:38) originated by the engagement of the perceiving subject with the coastal composition.

The adopted design strategy for the Liffey Boardwalk, based on the rather shallow idea of the necessity for a linear semiology along the edge, excludes both the quantitative and qualitative exploration of patterns of stimuli. This results in the cultivation of feelings of monotony and boredom, assigning the project to Plutchik’s primary emotion of rejection. In the experiential system, general boredom or fatigue—very close to Level Zero of Plutchik’s emotion intensity scale—may result from a minimum frequency of sensory inputs and of the user’s stable rate of motion along the riverfront, since meaningful events that determine (increase or decrease) the speed of walking rhythm are nonexistent. Plutchik (1962) indicates that he was interested in observing how memorable experiences deal with related spatial events. He studied the arousal of emotions during periods of perceptual activity, because the respective activity in memory is influenced by

83 For more, see www.reiser-umemoto.com
sensory and behavioral inputs during spatial experience. He argues that activity in the production of emotional constructs during spatial experience is a direct reflection of the residual influence of the experienced events and therefore is derived from underlying mechanisms of the experiential system.

Since the process of the Expressive Space is a chain of interrelated effects, this nonexistence leads in turn to sensory deprivation and dejection. Emotional differentials, which as we have already pointed out sustain a participant’s interest, are also absent and thus positive feelings of anticipation or expectancy cannot be experienced along the given path. Even though the reader cannot physically experience all the waterfronts presented in this research, perhaps we still can measure the experiential and emotional complexity of those designs (existing or proposed in architectural competitions that haven’t yet been materialized) by comparing the offered behavioral patterns. Thus we can say that projects like Morphosis’s Seine riverfront as well as Torrevieja’s and Barcelona’s seafronts are more inspiring and memorable than Dublin’s Boardwalk or London Docklands district.

After the above design reference, one very reasonably would still ask at this point why we should construct spatial meanings bonded with human emotions that (probably) will never be fully communicated. To begin we can answer that the reason such a construction is necessary is the pursuit of a conceptual term as the spatial meaning that allows us to reasonably organize the morphology of human movement and feeling in space and to establish more easily comprehended environments. In other words, it helps us to develop the cognitive and perceptive skills we need in order to move through space, to understand the contained objects, to respond with certain reactions—between people, constructions, and water—and define what sort of messages we can recall after we have experienced it, after we have left it. These objects may include structures for shelter or for intense experiences (music halls, concert venues), spaces for physical contact with water (docks, floating elements), commercial buildings, etc.

At another level of the same answer we can say that without the parameters set up by the Expressive Space, design is seen as a problem/solution process strongly attached to stereotypes and typological conventions. But to highlight the irreducible excess of language, we can say that the application of this method is based on the viewpoint that a design problem can be approached critically and consciously while some of its aspects that until now were taken for granted can be

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84 I am referring not only to the material sense of these objects but mainly to our perception of them after we come in contact with them.

85 The notion of this criticality is explored by Rapoport (1969) in the sense that a designer has to choose between the freedom to make personal decisions and the satisfaction of having firm constraints set by his environment.
challenged, producing *design for our senses*. More precisely, there is a place in this research for aspects like design intuitions that stem from every possible rhetorical means, with obvious spatial motifs or unseen forms of representation able to stimulate all the senses. A place inside the Expressive Space, which makes the Edge more understandable and more easily readable for users—especially for “intruders” such as tourists, who demand high-level orientation in order to explore an unfamiliar space—which restores the meaning of “living by the water” and, above all, reconstitutes architecture from a meaningless enterprise to a creative action that feeds our emotions.

*Sensory design*

It becomes apparent that the composition of spatial relationships between people and buildings can only be achieved if this spatial meaning, related to social pressures, is clearly enough constructed and offered to users by means of events (Lynch, 1972), episodes (Eberhard, 2009; Hendrix, 2006), or experiences (Bosselmann, 1998). The rest will come naturally: our spatial memory will permit us to live in a *space-synopsis* (Ioannidis, 2003b) where things state something more than themselves and transmit messages that go beyond the immediate grasp of our senses. And finally, a water notion will be considered as message through which it communicates and induces perceptions of a narrative construct.

After decades of being banished from residential areas, water becomes an increasingly significant feature in urban design that facilitates this composition. Whether it is the use of rainwater or the integration of natural watercourses into the built environment, designers incorporate water elements in urban areas for
mainly psychological purposes (Carr et al., 1992) or for the creation of oases of tranquility or drama. All these aspects are not only encountering a renewed interest among architects and urban planners for the meaningful space around the water, but they are also meeting with appreciation from the general public. In the next example, the aspect of water as an architectural element is considered as also having artistic potential. And up to now, we have been interested in the “meaning

genesis” problem of how to create emotional products outside the borders of pure symbolization and semantic dressing—products that stand apart from functional and useful urban areas. It is the radicalization of the presupposition set by water’s spatial meaning on human behavioral patterns that make the transition to the symbolic attitude necessary at this point.

Let us now catch up with the same problem in the field of symbolization (I have elaborated more on this attitude in the premise of Intermediary Space, but a reflection of its discourse here is also necessary), keeping in mind the Expressive Space’s socio-spatial character. For the experiential and exploratory water event on the waterfront of Lake Constance, Germany set up by Dreiseitl and Holste in 1991 [images 3.35-3.38], the meaningful unity of the words “construction of spatial relationships,” to which this thesis is so attentive, has been linked with pragmatic and experiential conditions: the feelings of people that have been separated, the effect of the melting snow on the other side of the lake that causes the water to rise, the memory of events acted elsewhere. The adopted design approach is that

86 Herbert Dreiseitl is a water artist and planner. Since opening an office in 1980 by Lake Constance he has set new standards with his projects in water design, landscaping, urban hydrology, and drainage systems.
of a formulative logic with *poetic evocation* that actively utilizes the place’s natural geography and topology. Moreover, the designed episode offers people ways to explore not only their feelings about water but also the projection of their spatial configuration upon a participatory experience.

Arrival and departure are moving moments in a person’s path through life. In this design paradigm, a town on a large lake makes coming home or going away most emotional, as one arrives or leaves by ship with deliberation, in the true sense of the word. And there is always a long distance before or behind somebody, in which only water can wash away the last traces. In Germany, Lake Constance in particular can give the experience of a reasonably long trip by boat. Numerous places on the German, Swiss, and Austrian shores receive and say farewell to their residents and visitors, but only a few of them have imposing symbolic landmarks to catch the eye. Since 1991 they have been taking a bearing on a landmark, meeting at a particular place or leaving the little town looking back at a sculpture that is meant to be unforgettable—a landmark on the landing pier made of stone, bronze, and water. A bronze figure 4.5 meters high grows up out of twelve upright stones. It faces south, and forms a sensitive point at which the forces of sun, water, and wind seem to be concentrated (Dreiseitl et al., 2002:46).

Its gesture is open to interpretation: water, falling and atomizing according to the strength of the wind, gives it a sense of lightness, and can transform rigid metal into a waving flag. It points to the sky, stands in the water, and mediates between the two. When the snow melts in summer, the lake floods parts of the fountain and people are reminded of things that are happening beyond the sculpture, in the far distance. Perhaps a boat is departing for that destination (Dreiseitl et al., 2002:46).

Returning to the basic premise of this research that the meaningful space of the edge rests upon the material imagination that pertains to the narrative parts and objects of its composition, the Bachelardian interpretation of the farewell at the edge of water seems necessary here to understand this specific act as

...the most heartrending and, at the same time, the most literary of all farewells. Its poetry makes use of an old wellspring of dreams and heroism. It awakens in us, no doubt, the most painful of echoes. One entire facet of our nocturnal soul can be explained by the myth of death conceived as a departure over water....This materialized departure takes us away from the earth’s matter (Bachelard, 1999:75).

An artistic, exploratory event-landmark loaded with manifold symbolizations to spatially express the Bachelardian idea of our detachment from *earth’s matter* is placed just on the shoreline, appearing and disappearing before the eyes depending on a water level that constantly rises and falls.
The image of the structure when mostly hidden beneath the surface of the water affects human emotion. At the same time, the space around it is active and social. It allows people to express themselves and respond to the environment. Parents often bring their children there to let them interact with this sculptural complex on the Edge, touch it, climb on it, play in it while they themselves can linger on its attractive and focal points, interpreting the meaning of living by water. For this, the almost theoretical import of the psychographic symbolization—that is, a symbolization relating to personal values, attitudes, interests and personality in general—of the moving water level projected upon this design example is refined, and more emotional products will eventually be devoted to it. It is with thoughts and memories still to come, rather than with a material construction dominated by rules of a rudimentary design approach, that the composition of spatial relationships in the surrounding social space primarily occurs.

But the unseen variables on the urban edge are not exclusively related to spaces constructed by thought. They are also related, as already discussed, with spaces shaped by feelings and emotional constructs. Thus it is at this point that such a duality of “feeling-thought” deliberately assumes the elsewhere-mentioned holistic function: that of the meaningful experience. For Dewey (1934), this function makes a distinction between of two types: “the general inchoate stream of experience” and “the singular coherent episode.” Nevertheless, both are necessary ways of knowing how environmental inputs can influence our lives, while the duality, which for Dewey is the basic component of experience (along with action), occurs continuously

...because the interaction of live creature and environing conditions [e.g. water] is involved in the very process of living. Under conditions of resistance and conflict, aspects and elements of the self and the world that are implicated in this interaction qualify experience with emotions and ideas so that conscious intent emerges. Oftentimes, however, the experience had is inchoate. Things are experienced but not in such a way that they are composed into an experience. There is distraction and dispersion; what we observe and what we think, what we desire and what we get, are at odds with each other (Dewey, 1934:98).

In brief, I have referred quite a lot to the importance of a signifying chain of arranged “episodes” along the edge as a network of recognizable meaningful places within a continuum, without interruptions and inconsistencies, in order to distinguish “episodes” from other events. For the edge, such chains can nourish and spur social and personal development depending on the filtering expressive process each individual will perform during the time he/she spends there, showing at the same time the active and constructive role of the subject in the perceptual activity.
3.6 Constructing the expressive spatial meaning

If we accept that the actions the urban design process uses to transform the urban edge into a sequence of places with meaning undermine a space of expressive responses that reflect the liveliness and viability of the waterfront setting, then we can say that this space indicates a psychophysical construct. The aim of this last section is to examine the crucial aspects that seem to interfere with this construct and the description of the coastal space in terms of its inherent sociality. This exploration will describe how the implementation of the dynamic nature of water signs is achieved within the place-making process across the representational mode of coastal architecture and urban design, and how design can affect the activity patterns and other expressive responses of the perceiving subjects.

**Topophilia as place-making**

To interpret a specific meaning of any particular part of this environment can indeed be difficult since, from individual to individual, meaning is constantly changing through time and space. But the spatiality with which water embraces our urban societies can be constructed and communicated. I maintain the view that structure and spatial organization is the strongest means of expression for spatial meaning. Take for example the archaeological site of Olympia in Hellas. The buildings, in their material form, no longer exist—the walls have fallen away, decoration has been destroyed. What remains is just an organizational structure of some sporadic stones and pillars scattered around the site. Nevertheless, this structure is so powerful that introduces us to the lost spatial experience of the building complexes characterized by “intrastructural tensions” (Seamon, 1982).

As we search for the space that will eventually accommodate the spatial meaning of the edge, it is useful to pay more attention to how this meaning is related to the expressive essence of the shoreline and to make a more detailed exploration from the realm of environmental psychology (Appleyard, 1969, 1977; Canter, 1977; Moore and Golledge, 1976; Seamon, 1982). This quest begins and ends with people and their everyday experiences of the urban waterfront—experiences that are stored in memory and help to organize its social content based on its relationships with the local culture and the built environment. The level of intensity and importance of these experiences provides a supporting base from which to investigate meaning as born from space\(^{87}\) (built and natural environment) and suggests, after all the

\(^{87}\) Motivating the emphasis on meaning as born from space in my research is the observation that despite its force upon human sensation, it may be impossible to create a universal index of design practices for the Edge because the tools used are not pan-cultural or pan-architectural. That is, the meaning derived from space depends on the “aroma of place,” the
above, that the space of the Edge is a collective experience consisting of many meaningful entities that “chain” or “bridge” its material substance with the social fabric.

Quality and quantity of these entities sustains a meaningful transition between the heavy urban mass and the tranquility of water. For better or worse, the effectiveness of this meaningful transition is handled by the design practices contemporary architects use. Moreover, my approach is concerned with the cultural act of place-making, which conceives of the design of the Edge as a product of collective cultural processes and depends very much on the process of reading urban waterfronts and the possibility that water may provide a framework for the accommodation of arranged events. For this reason, the Expressive Space traces and records the expressions and reactions of human spatial consciousness and behavior in large-scale projects with the aim of creating an attachment bond (Bonnes and Secchiaroli, 1995) between people and waterfronts—what Tuan (1974) calls topophilia.

In order to understand the issues surrounding the ontogenesis of water’s spatiality, it is useful to take some steps back and see the meaning through different perspectives. The issue of meaning as an element capable of transforming space (abstract form) into place (with all its intimate characteristics) isn’t new to either the field of architecture and urban design or to aesthetic theory, but never has it played as dominant a role in the process of urban synthesis as it does today. However, theoretical approaches (Knox, 1984, 1987; Rapoport, 1977, 1990; Sircus, 2001) about this role do not fully recognize meaning as a subtle action below the level of consciousness that provides a structure upon which all architectural aspects are placed during the design process. Amongst past theoretical approaches we can discover different levels of meaning. From a phenomenological point of view sense of locality. However, it is reasonable to research possibilities to influence design desiderata and maximize people’s potentiality for meaningful experiences.

From the Greek topos = place + philia = friendship. Tuan (1974) uses the term topophilia to emphasize the attachment to place that individuals develop as a result from affective responses to it and describe the elicited place dependence as a basic element on the process of developing strong emotional attachment to some parts of the city.

Canter (1977) in his Theory of Place separates space from place and defines the latter as a holistic unit comprising interrelated constituents of its physical form, the activities that go on there, and the elicited meanings of that place (meanings are shaped by the goals and purposes of individuals). Canter also developed the concept of environmental role, which is a particular set of associated behaviors and rules within a particular place that vary according to the relationship between an individual and that place. It is argued that people will have different relationships with places depending on their role within that particular place. For example, an athlete running across the Edge will have a different relationship to it from one reading a newspaper while seated on a bench. In this way, people have particular purposes with regard to place that shape their behavior and their conceptualizations of that place.
(Bachelard, 1994, 1999; Gibson, 1966, 1972; Norberg-Schulz, 1966, 1975, 1984; Seamon, 1982), for example, the basic methodological rule for handling meanings derived from urban things is to accept and describe these things and events as they present themselves to individuals and groups, but only within the experiential limits in which they present themselves.

Unlike Gibson and Norberg-Schulz, transactionalists like Taylor (1960) claimed that further interpretation is needed and thus such a perspective focuses on the objectives or goals of the individual and the way in which they are structured and organized by the social process in which that person participates (Amey, 1976). These processes give rise to a set of place-specific meanings, actions, and experiences. However, this narrow definition of the transaction process came under attack by an empirical approach to urban design focused on human needs. Lang (1994) holds that this attack is apparent in the writings of Christopher Alexander, particularly his early work and that of Alexander and his colleagues (1977, 1987) or the writings of Kevin Lynch (1981, 1984). While, as De Sola-Morales (1999) proclaims, in the field of psychological empiricism the development of Gestalt psychology replaced the Husserlian phenomenology and the notion of place replaced that of space, empirical approaches in architecture suggested that experience is irreducible. Thus, it can only be explained on its own terms—that is, locally—and therefore meaning cannot explain why the “specific of place” emerges, why it takes the form it does, and in whose interests it works. They simply accept things as they are, as meaningful by themselves, and suggest that the “local meaning” can be understood immediately—without the mediacy of conceptions—and in fact after the user has registered the structure of the message-vehicle form.

There is a need for a broader perspective in the field of architectural and environmental psychology, called upon by the fact that there is no proper treatment of the phenomenon we are studying and the system that is organized automatically around it, and therefore the above-mentioned positions do not help us to make clear the notional territory we are trying to reveal. They do not really offer a solution for the characteristics of this system, such as the controversy of water’s innate meanings and the ones constructed by the designer. For this reason, and in order to study the subject holistically, the above-mentioned theories do not

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90 Within the transactionalist perspective, places are in a constant state of flux and construction through social, cultural, and personal interaction. Therefore physical aspects of people’s conception of places in this model cannot be separated from their affective responses to those places. As for environmental psychology, this perspective suggests that “both person and environment dynamically define and transform each other over time as aspects of a unitary whole” (Bonnes and Secchiarioli, 1995:155).

91 At the same time, such theories emphasize the exaggeration of the specific and the concrete as a resistance to abstraction. This theory of materialism also argues that meaning is a particularity or singularity not explainable on the basis of underlying relations, denying essentially the existence of further levels of interpretation.
serve our interests. Meanwhile, the parts and notions that have proceeded so far belong to another perspective, which acknowledges two vital facets of Expressive Space’s interface: architectural psychology and water semiosis.

The exploration of the coastal topophilia begins with the semiotic dimension of the surrounding environment in which, to use Lynch’s words (1984), the technical analysis of meaning in language is applied to the meaning of the waterfront place. We tend to exalt the subject matter of water into a group of signs (as feelings, notions, images originated by water and projected upon our behavior), which are anything that stand for something else to somebody (Peirce, 1998). However, a focus on coastal signs implies a focus on meanings and their spatial construction. By examining within the above mentioned design paradigms how the perceiving subjects conceive, understand, and respond to these signs, the emphasis was neither on the phenomenological or transcendental interpretation of water’s semiosis nor on its empirical explanation. The phenomenon of the different water is studied in-between the premises of spatial psychology and urban semiotics (Broadbent et al., 1980; Gottdiener, 1983)—what I call “urban psychosemiotics” (Ioannidis, 2009b). This attitude acknowledges a dynamic sign process in context as opposed to the inner city’s relatively fixed and concentrated sign content.

I already mentioned that the associated water-sign process always occurs in given cultural settings of one kind or another (northern versus southern European countries, for example) or within constraints imposed by the society around the Edge. In other words, water meanings and their projection onto our activity patterns along the shoreline both shape and are shaped by the sociocultural and natural settings in which they occur. Further, by virtue of being situated, we focused on the fact that signs always incorporate embodiment of one spatial form or another and are externalized to other members of the groups by human expressions in space (movement, action, seating, standing, participation, or even facial expressions).

And if water semiosis seems quite apparent inside the premises of the Expressive Space, the psychological dimension triumphs à propos of users who come along with others at the edge. Broadly defined, the focus of this dimension was, from the beginning of this chapter, and still is, on processes of human expressiveness along the coast. By this I mean expressions including, for example, emotional, sociocultural, or even artistic influences on the water-sign process. When this broad view of expressiveness is taken together with an emphasis on the construction of spatial meanings and intentional actions, the urban psychosemiotic approach is much more closely aligned with cultural and environmental psychology than with causal psychology. Since I am an architect and not a psychologist or sociologist, water signs are studied in terms of their use in the built environment of the urban waterfront, and their pragmatic aspects become of paramount
importance in order to move from rhetoric to praxis. Thus they intend to generate design recommendations.

The study of water signs and their influences on human actions provides a compelling standpoint from which to understand human expressiveness in coastal architectural settings. However, psychosemiotic explanations of expressive phenomena differ in several fundamental respects from traditional psychological accounts. This is because they seek to understand behavior patterns by examining how humans use water notions to construct meanings within their ever-changing physical and cultural environments, including emotion, bodily awareness, and other ways of knowing. This form of inquiry emphasizes the dynamic nature of sign-making in waterfront areas (hence, meaning-making) within a variety of environmental and cultural constraints and across a full range of representational architectural modes (from building volumes to subtle floating platforms), and will come forth in the next case study. In this way, we approach human expressiveness on the Edge as an operation that includes bodily sensations and emotional products that often function beyond the range of conscious awareness. However, experience of such spatial meaning functions at the collective level and in ways of which we still know little.

Here we adopt the psychosemiotic stance because we consider meaning a sense stimulating force. Beyond visual delight in urban waterfront settings, space conveys environmental messages with this force, and users furnish them with meanings and memories (Buchanan, 1998). At the same time, meaning could also be a conduit by itself: it can be seen both as power (like electricity) and conductor (like wire). Nonetheless, we need both of them to communicate amongst ourselves about the built environment—what we see on the Edge, what we feel about it, what we do near water, what we do with water, what we know about it. Thus, here we understand the Expressive Space as the social and cultural tool of urban design in terms of the kinds of psycho-social (Bonnes and Secchiaroli, 1995) and socio-spatial messages inserts in the design process for the edge. In addition, the role of observing people and exploring what social expectations have for the coastal space is particularly important on the spatial construction of water’s expressive meaning. It is therefore very important to look more closely at the fact that any people, any action, and any behavior on the edge carries its own series of independent meanings (emotional, descriptive, or affective), which interact with other people’s meanings to compose the complex system we described.

This system is of major importance when designing the waterfront’s societal space and it is the one that reveals what people like and dislike. What remains is to identify as clearly as possible these progressively finer channels and reconstruct the social meaning (in terms of values, for example) into spatial forms and processes. The search for a structure that might support these forms and processes presents us with a unique opportunity to think about the sense and the meaning of every
single line constructed along the edge and their affiliation with others, or to think about the function of a socially organized urban design in general. On a structural level, rather than simply perfecting our ability to produce powerful images, this possibility may form the basis or a different interrelationship between the *what* of waterfront buildings (the power of visions and images) and the *how* (the expression of technique). This will lead us to a more complete idea about the *architecture of the edge*.

*Expressive dimensions in waterfront settings*

Unlike most Euclidean structures, the origin of this complex system, however, cannot be found within a “supreme space.” And I made this clear from the beginning. This type of space is typically x, y, z coordinated and absolutely empty, boundless, and dividable. Being empty doesn’t mean it cannot give birth to other sorts of spaces, like the Expressive Space, which is a space rather inherent to our lives in cities. In short, it is the very space in which we experience some spatial conditions that move us towards predictable and unpredictable expressions. This is our *performance*, to use Spiridonidis’ term (2002) once more, in daily life along the urban edge.

In this space, people sense water and seafront constructions combined along with their meanings, images, color, texture, sound, smell, etc. In daily life, we know how to use the Expressive dimension properly, since each one of us seeks different but specific behavior and activity patterns that are able to generate consciousness. For example, when someone moves from position A to position B inside the urban waterfront (with which he or she is familiar), this person moves and responds depending on specific sensory information and spatial messages that are meaningful for him/her, mainly visual, such as buildings, signs, water, costal line, structures, and streets, but also non-visual, such as social interaction processes, emotional states, imaginary spatial conditions, and so on.

The perceiving subject does not have to create a supreme space in order to follow the route from position A to position B in its head. It needs to interpret the Expressive space from setting’s inputs, and respond to its motivational characteristics. On the other hand, when the urban designer designs a complex structure for the Edge, he/she inevitably uses the supreme space as an underlying base to understand the locations and spatial relationships within the structure, which in turn will define other kinds of spaces. Some professionals are very familiar with this base space and less with the secondary ones. For example, many architects use construction drawings, physical models, and three-dimensional computer models to construct buildings. All of these methods are based on the notion of the supreme Euclidean space. In short, the Expressive space is an interpretative space of lived experiences and the supreme space is a standardized
one. As long as these types of space are identified properly, there is no confusion. However, sometimes an uncertainty appears over their interdependency.

For those designing with the intention to build, a way of thinking with a design process model as the Expressive Space has already been proposed in order to help them consider urban design as a process of clarifying decisions and setting in order intentions to facilitate the location of the cultivated other spaces. Addressing an isolated query in the supreme space of the Edge is a fairly straightforward and simple act. However, as I have already mentioned at the beginning of this chapter, to address the interdependency of these queries as a dynamic whole inside a series of “secondary” spaces is definitely a difficult matter. To provide a meaningful and conscious structure of thinking, this design process model reduces the complexity of today’s built environment along the edge to a few inner factors of order or structural components that are related in a logical sequence to challenge human expressions. In fact, they simultaneously articulate the building, the water notion, and the design process on a mental and physical level. In material terms, the components I can sort out at this point for meaningful coastal areas, like the role of volume in social exposure, the water enclosure, the transparent boundaries, circulation and access, and abstraction, as well as constructed metaphors, added relations, seating, and standing preferences, are all spatial formations that comprise the main issues of the morphogenetic process that gives rise to the making of waterfront constructions in general. Each one can be seen as having its own expressive spatial meaning controlled by its own set of rules.

The essence of my argument here is that urban design can articulate the way these sense-making components are to be put together, but without typifying their spatial translation into specific objects or design solutions. Thus, this sort of power or pre-comprehension of the fundamental components of the “finite locatedness” (Casey, 1998:34) and the meaning of the place near water signifies nothing less than an underlying conceptual design process. The mutual interdependency of these components can immediately be controlled by superimposing them on one another within a single urban design project. A number of sense-stimulating concepts have also been examined by the designers of the Thessaloniki proposal, where urban design proposes a meaning for the waterfront area that reveals the humanistic logic with which the Green Rooms project was designed. But beyond all, it reveals the designers’ intention to create superimposed articulated spatial territories made of meanings, messages, images, and memories of the city’s past down to the edge, forming neighborhood-like events that would delineate certain subareas reaching an area parted by a sidewalk—events joined in an internal experiential track passing through them and transforming these subareas into communal living spaces in constant dialogue with the water.

But if the resulting space can trigger emotions and various human expressions, it is exactly because the structure of thinking in the perceiving subject allows the
imaginary of all these water notions to be lived as a simulation and experience of
the coastal realm. That is, the project operates by exploring the spatial possibilities
of the water meanings lived as if they were real properties of the seaside domain.
From this framework, it seems that the Expressive discourse introduces
psychophysiological aspects (Panofsky, 1997) to the understanding of the coastal
realm and domain. Mentioned in the previous sections of this chapter, what
follows presents further clarification of two terms that refer to the *space of
appearance* on the edge—the coastal realm and domain.

**Coastal realm and coastal domain**

I have already mentioned that this research is born out of concern for the state of
the coastal realm and domain. Inspired by Tibbalds’s belief that urban design is
about “the physical design of public realm” (Tibbalds, 1988:12) and his view that its
objective has now become the space between buildings and not the buildings
themselves, this section responds to the above idea’s manifestation on the
land/water edge. Thinking similarly, in waterfront settings the focus has moved to
the *in-between* space, which is surrounded by water and thus defined by water’s
existence.

The interpretative interplays between elements of the coastal setting, such as the
geographical location of the edge, the character of the site, the buildings’
waterfront facades, and floating structures, are important for people’s
understanding of what the idea of “place” refers to (Seamon, 1982:130). Therefore
the in-between space becomes a domain of contemplation and acknowledgment.
An interpretation of such an interrelationship may be seen as a superimposition,
for example, of a structure anchored in the water and a non-anchored (floating)
one. This is not merely a separate technical dimension of the process of building
near water, but an aspect of the structure itself that belongs to the waterside
domain.

The coastal realm reflects the mental spatial qualities of these two structures as
well as the physical element that surrounds them. The water enclosure and the
building’s relation with the water surface form one basis to reflect this domain, and
vice versa. Once the perceiving subject understands the principles of generating
coastal structures that really belong to the *coastal place* from within a system of
internal rules, then it can re-approach their morphogenetic process from another
viewpoint: as a production of common, unexceptional structures on *their way to
becoming* coastal structures. This interpretation may reveal a different description
of the in-between space enclosing the waterfront structures, and with this
description can conceive the *architecture of the Edge* in a new light. It must be clear,
however, that this conception of coastal architecture, often developed before the
perceiving subject is consciously aware of all the meaningful components, is a
potential quality and cannot possibly serve as a resumed process. Therefore it is rather cultivated in the subject’s personal passages and not explicitly revealed.

Hillier and Hanson (1988) argue that the configuration of society appears to be a “very complex set of inter-related physical events in some unknown relation with the structures of the brains of individuals that appear to control events locally” (Hillier & Hanson, 1988:207). From this point of view, in the socio-spatial conditions around water, and during the transition from inside to outside, the coastal realm and domain may refer to the various conditions of these local events, such as the inner life of a building, the socialization of this transitory space, or the spatial meaning of the edge’s architecture as a collection of experiences (Seamon, 1982) in the minds of the individuals, etc. To give a more precise definition of how such references can work in the conception of spatial meaning, therefore, I can urge the designer to involve the selection of a particular enclosure system that is able to influence the way, for example, movement axes around the enclosed object ought to be placed and floating surfaces ought to be treated. The distinction between different attributes of materiality may also be used as other kinds of references in order to form dialectic associations that add depth to the experience (Lynch, 1972) of the domain, such as coastal materials (rocks, sand etc.) and urban materials (cement, asphalt etc.); objects standing inside water and others standing on land; or social activity with water and social activity without water.

Within this overall integration of the conceptual aspect of dialectic associations, however, we find a family of variations. In some design paradigms, like the proposals from Morphosis, we find a strong tendency to use water and other physical boundaries as the enclosure medium; in others, like the Mazzorbo or the Green Rooms, series of interconnected open spaces and networks of pedestrian walkways play a similar function, flowing all around the waterfront constructions rather than being constituted by them. Again, in other cases, we observe that these gestures lack strong treatment (Dublin’s Boardwalk) and thus cannot communicate any sort of meaning with their spatial and social organization. This can be briefly explained if we return to what I said in terms of each society’s internal laws of approaching the coastal domain and socializing water’s spatiality, which result in the production of behavioral patterns with many similarities as well as differences.

The following sub-sections will delineate the crucial spatial components that this thesis holds as necessary in order to apply the theoretical understanding of the process of meaning construction presented in the previous section. The implementation of the Expressive discourse is concluded by the study of the issues of volume, boundary, circulation, and access and their role in the description of the coastal space in terms of its inherent sociality. The overlay of these issues may give an idea as to what their spatial meaning (related to water), their architectural language, the overt socialization supported, and the rules of their interaction can be.
The *volume* is an ambiguous term that is seldom used to delineate the urban space itself with properties of shape and scale and with connection to other spaces. Trancik (1986) inserts a pivotal distinction about this term: “The exterior urban space, if conceived of as figural volume rather than structureless void, can reverse the unworkable ‘figure-ground’ relationships between buildings and open spaces of the city” (Trancik, 1986:18). While Trancik dives into his theory on this interstice, this section will attempt to outline the various associations that relate to this issue, and present them in some order, leaning on the thesis’s main objective for the psychospatial reading of the urban edge.

Like urban space, the mass of water has its own volume and can be characterized by the same principles and interstice. The psychospatial effects of both of them on the perceiving subject are strongly affected by their *internal place*, defined as spatial entity “measured by the amount of extended material body occupying that place” (Casey, 1998:171). This internal place, according to Casey, is equivalent to volume taken up “by a given material body and is thus determined by that body’s size (‘magnitude’) and shape (‘figure’)—that is, by two basic modes of extension” (Casey, 1998:157). He thus argues that the role of the volume, of the internal parameter, is to make effective the distinction between place and space.

In this sense, in whatever type of formation—whether natural or artificial formations such as buildings, floating squares, or even coastal gardens with their plantings—the internal place of its spatial volume as perceived by the subject from the land, and the water volume as perceived from standing on a floating and enclosed feature, are two possible ways to submit the user to the conception of the *shape* (Peponis, 1997) and the participation of the coastal object in the general composition. The simultaneous occurrences of these alternative perceptions are interrelated and each of them is related to a separate set of references.

Both ways of perceiving the *volume* of space for social exposure have reference to the plot of *water as context* discussed elsewhere, since it provides a residing area for these objects once they have been brought into being: it is a place for the objects to inhabit. Both conceptions utilize seaside context as a rich, variable, multi-dimensional, and exciting semantic place for human expression and performance, not simply as a physical location to be taken for granted. However, the embeddedness of spatial meaning within them is a core element in our explanation of *water as context* from the scope of the Expressive discourse. This “invented” place, therefore, has much to do with a multitude of superimposed concepts such as situation, character of the coastal setting, and sense of locality. It also sits in close relation to semantic ideas extensively studied previously in the Intermediary space, such as proximity, enclosure, segregation, and the notion of an object legitimizing its own existence. Since this deals with different systems of
analysis of water’s semiosis, the production of meaning is carried out in different ways.

Similar references incorporating the notion of water context can also be the interpretation of significance (of the waterfront in general, of the city’s history, or of an isolated meaningful event), contextualization, specific use, given functions, or space requirements. They may be differentiated by such attributes as use, circulation or societal subareas. Their aggregation may be formed by dialectic associations such as sea/city, public/private, sociofugal/sociopetal, extroverted/introverted, large/small, noisy/quiet, or floating/anchored, each contextually appropriate to better shape a place with meaning. More precisely, the building volumes can be a result of the spatial addition of water volume (e.g. the floating restaurants [images 3.41-3.44] in the Parque das Nações).

The water volume can be a result of the division of the building volume (e.g. the amount of water enclosed between the raised platforms in Morphosis’ project [images 1.22, 1.23]), or they can have a dialectic relationship so that the in-between space becomes important (Green Rooms [images 3.01-3.17]). There is also a final approach, where the user decodes the message of the volume but does not participate in the formation of its meaning and therefore his/her expressive responses are of marginal use. Here aesthetic and contextual aspects are relegated to second place while constructive and technical dimensions are valued. To this group belong those waterfronts that give rise to the greatest limitations of social programs by assuming a formal, piecemeal, or monofunctional character of the area (e.g. the London Docklands district).

In effect, the substitution of a conceptual retrieval principle for the description of the “meaningful waterfront volume” answers the twofold question about coastal structures—their legitimated existence and their spatial experience—with one and the same answer: “water as context” itself. The process of the spatial construction of its meaning starts from the user’s mind, which reads the volumes, reinvents them, and learns to think the architectonic language of the edge. This language contains a system of rules that characterizes other spatial features, like the boundaries found in the coastal composition.

ii. Transparent boundaries

In the deployment of Terra Incognita’s syntax of the previous chapter, research focused, among others, to the functions “that the spatial dimension can carry out in defining positions of relational proximity/distance” between the subject and the water and “the types of messages that are sent into the surrounding social environment through the exploration of the geographical boundaries of space” (Bonnes and Secchiarioli, 1995:83). This section explores further the significance in the transparency of these boundaries for the intensity of occurrences with the others.
Boundaries amongst waterside volumes, as part of the enclosure system, are physical elements critical to way-finding and help human behavior to respond and adjust to the spatial relationships established between the primary waterfront structures, such as residential blocks, offices, educational, and recreational buildings. Transparency pertains to the rough social structure of the edge—to thoughts about supporting activities which generate consciousness and functional patterns placed inside this sensitive zone. In terms of these concepts, and responding to the homogenization of meaning, Sternberg (2000) argues that...

...working with boundaries, transitions, reflections, gradations, contrasts, complements, and interruptions, planners can set out to create coherent interrelationships among urban objects, without requiring that they conform to supposed indigenous origins (Sternberg, 2000:271).

Through relationships between geometrical orders and the overall social organization, transparent boundaries have an expressive potential that affects many urban designers in terms of their design intentions. The essence of this transparency inside the orchestration of the expressive spatial meaning is to impose a strong and rather semantic control (that is related to the adjacent water) on the physical human movement along the urban waterfront, thus permitting it to remain pervasive in the vicinity of social activities held around (as well as outside and inside) of the coastal constructions. We saw in Mazzorbo that a public pedestrian axis penetrating a residential seaside can take advantage of this transparency and consider itself a deliberate design gesture that fosters a communal, social, or (if you will) participatory consciousness to the observer’s mind. On the contrary, the essence of solid boundaries has the reverse principles: it works by communicating the social meaning of separation, exclusion, or difference by building up a system of orders imposed by the massive urban materiality and addressed to the latter as well.

Unfortunately it happens too often the later essence to be the one that prevails: the whole waterfront complex loses its strength and unity because the final handling of the boundaries cannot provide what the supporting transparency promised. In terms of the adopted social organization, this is already a danger to human expressiveness, since the dense spatial aggregation of people on narrow and elongated sidewalks without meaningful spots tends behavior towards levels of stress (Eberhard, 2009), a discomfort and avoidance to accept the space of the edge as the community’s new living room. This also threatens the smooth blending between social groups. Following this line of argument, I should stress that the proposed organization only works well if there is a network of constant, easy, enjoyable and overflowing circulation of human masses from one event/episode to the next, while retaining the subtle sense of boundary and thus territoriality. The supporting transparency, which the Expressive Space proposes, determines
possible locations and sizes of seaside constructions and is therefore an important limitation for piecemeal approaches, ghettoization, and hard traffic circulation borders. The distinction between transparent and solid boundaries may serve as an attempt to solve the problem of spatial incoherencies and non-distributed human contacts along the edge.

iii. Circulation and access

When considered in relation to the arrangement of spatial events, patterns for circulation and access offer the possibility of providing a conceptual approach to movement along the edge. Whether focusing on specific networks of tracks and paths or the continuous linear allocation of the perceiving subject, the approach to movement addresses the issues of experience and narrative function of space in order to assemble and order information in view of telling specific stories. In studying the component of circulation and access within the space of appearance near the water, I have chosen to adopt Edmund Bacon’s view that “movement through space creates continuity of experience” (Bacon, 1967:34) in order to organize intellectual links between the act of moving and the necessary experiential continuity of the narrative coastal space.

In this framework, the act of the moving subject determines specific spatial relationships during the experience and between different waterfront features as well as between different areas of the composition. These pertain to the maintenance of the continuity of experience and to the understanding of the formulative logic when the subject moves from one coastal part to another. Returning back to the Green Rooms proposal analyzed at the beginning of this
chapter, we can consider the experiential path that traverses the fifteen spatial episodes/gardens as such a necessary pattern, maintaining the continuity and conveyance of the themes from each garden separately. Reading the inherent sociality of this occasion, we can say that the network of coastal paths “is transformed to urban room, a place not just for circulation but for being and belonging” (White, 1999:59). In this sense, circulation renders the coastal setting as formed by consequently parts of a storytelling: as a sequence of their narrative meanings (Parque das Nações) as well as places with their own identities that also carry independent meanings (Green Rooms).

Circulation, together with the transparency of boundaries and the water enclosure of seaside morphology, controls the spatial organization of the area through the vertical and horizontal connections of the city with its frontage by means of movement axes [images 3.39, 3.40], and therefore enhances or reduces the communication (physical, visual, tactile, or even notional) between various user groups. The development of a circulation system (infrastructural or addressed for the flow of people) strongly influences the construction of the spatial meaning, since it entails other sensual impacts, like sounds or tactile inputs for instance. Often, the sensory auditory modalities (Eberhard, 2009), including responses to sounds and vibrations of the urban cityscapes, affect some form of movement and vice versa. Both are sequential since they take place over time and affect dramatically the space of appearance on the edge.

Take for example the Torrevieja project [images 2.31-2.35]. Here the entire logic of moving (and standing) along the edge or accessing the water is based on remedying the inefficiency of the existing circulation patterns and the flow from
the vertical to the edge streets. The project aims at enhancing the communication, which is deterred when the vertical axes reach the urban frontage, since the city presents a fragmented network of pedestrian movement and each sub-area of the urban waterfront zone is set apart, appearing powerless for communication and sense creation. By cultivating a set of spatial relationships with the water, which is vital for the image of the city, and organizing communal linkages at the end of these vertical axes, the act of movement and accessing meaningful spots acquires its own logic having implications relevant both to the common presence and the intensity of the experience.

We may now come back to the same point of accessing the experiential continuity by a quite different route. In comparison with the waterfront of Torrevieja, the major infrastructural circulation system proposed by Reiser + Umemoto for Manhattan’s East Riverfront [images 2.22, 2.23] seems at first sight to cancel out both transparency and the effort to bring people back to the coastline. However, another societal organization is implied by this attempt. Urban design plays with the combination and arrangement of isolated clusters—with spaces created as parts of an overall spatial meaning that function as containers for specific activities. When the architects have conceived the way to construct spatial meanings (and here the designers seem to have done so) they utilize human circulation and access to make relations with other people, and with the built environment as well, that are essentially distributed along the whole area and not restricted to a sporadic allocation.

The proposed infrastructural formation for Manhattan is therefore a distribution of such relations, skillfully “trapped” between highways and pedestrians, between open spaces and floating structures, in that the adopted architectural plot incorporates circulation to guarantee the distribution. This sculpted handling demonstrates the general hypothesis that inspired a large part of this research. Moreover, the main contribution advanced by the masterplan is to point out that assurance of meanings communicated is a result of the transparency: the aspect represented by indicators such as ways of access that connect multiple subareas on the edge with the urban fabric reflects the distinctive psychospatial quality of the waterfront setting which is open to access by different user groups. In an opposite case with solid boundaries the circulation principles would have changed. People would not have the chance to develop relations in the entire three-fold interface (object-user, user-water, and object-water) and will have used the edge only for high-speed car transportation.

For this research, this last case is not on focus, since it is unfortunately commonplace for many urban waterfront cities in Europe, like in Trieste’s old harbor area or Piraeus’s waterfront. In Trieste, Italy for example, a solid boundary in the form of a high-speed road cuts off access to the shoreline, which until today remains unexploited, condemned to isolation.
It is easy to consider these components of the *expressive spatial meaning*, especially at low-level complexity, as technical skills or questions. However, the basis of designing the Expressive Space of the edge is formed through the judgment required to superimpose the needs of different aspects (the design desiderata necessary made to use a particular technique in relation to a particular water meaning that needs to be enhanced or experienced, an aesthetic consideration that needs to be revealed), and the resulting complexity of the end product.

The *Design of the Edge*, as we argued from the beginning, is not one aspect alone, or an emphasis on one above the others; it is achieved when they are in superimposition, specifically when one aspect can resolve a facet of the problem under consideration that has been thrown into relief by another aspect. It seems to suggest that to treat the *expressive meaning* as categories (volume, boundary, circulation, etc.), or to treat the relationships amongst *expressive meaning(s)* as relations to categories, implies a chain of mutual dependencies such that the end product (the whole waterfront synthesis) could be found where most aspects contribute both to the problem and the solution.

The determinations of the character we gave above to these components in effect presuppose the thought of the *expressive spatial meaning*. In addition, each one of the described categories for a possible spatial accommodation of the latter can be seen as having an existence on two different levels of operation: the *mental*, which precedes, and the *expressive* as the human response to the environment that results from the preceded mental procedure. On the mental level, Eberhard (2009) argues, one has to develop a notional pattern that “brings together, at about the same instant of time, the pattern of the object, the pattern of the self, and the pattern for the relationship between them” (Eberhard, 2009:37)—in other words, to associate the different elements (materials, spatial relationships, and the following notions) to the meaning of the components. In this personal negotiation with space, the interrelationships among the elements and among the components are important.

The observer of the waterfront is thus urged to operate with concepts, images, and schemes: this offers the possibility of converting specific rhetorical types of spaces into existing types of spaces and typical paths to experience them. The more people are aware of the interrelationship rules, the more meaning is extracted from their mental engagement with space. An example from my research-by-design paradigm for Riga’s waterfront may illustrate how possible relationships between meaning’s components and social organization can be shown so that readers may understand the complex unity of a waterfront project through the figurative demonstration of its disassembly.
Just as I implicitly had to inquire a rhetorical legitimization of the seaside typology against rhetoric, I must clarify at this point the definition of the rules of interaction among the components and their elements. Otherwise, what would the “spatial construction of Edge’s meaning” mean? Since no fixed technical knowledge governs, henceforth, the meaning of their interpretation, material interpretation can be re-interpreted against it. This has also been taken into consideration by the next illustration. What I want to say is that, indeed, on a physical level, the level of building near water in its technical dimension can also be revealed and understood in its entirety. At this level one operates with working drawings, specifications, cost estimations, architectural programs, and time constraints. Although this dimension may usually have a negative effect on creativity—because of its emphasis on the exposition of common and always-repeated solutions to problems—the rules of such technical aspects and their application are indeed important (but not at all dominant).

However, to reach an internal coherence from the experience of the end product, one has to be conscious about the initial association of each dimension. Too often this relationship disappears in practice because, as Madanipour (1997) argues, these associations fade under the ambiguities of the nature of the urban design process. At this point, the design process, by delving into the Expressive discourse, may offer the architects the ability to communicate their essential social concerns, so that the form-regulating design plot and its associated meanings can be translated into architectural drawings. By this, the coastal urban design becomes both an aesthetic-expressive and therefore subjective process while demonstrating an objective emphasis with its essential spatial transformation and social significance (Madanipour, 1997).
My research-by-design proposal for Riga [images 1.01-1.08] serves to demonstrate how the interrelationships among the different factors of order along the Edge can be materialized and used to clarify initial rhetorical architectural decisions that result in spaces for people to be expressed within them. The diagram of the societal spatial organization of the site is defined by the intersection of the two major triangles that represent the “movement of desires”: the open-air subareas for intimate social interaction are a series of “interrelated events” (what I elsewhere called the *arrangement of episodes*) forming a layer on the edge of the Edge, while commercial, working, and entertainment facilities, along with a main pedestrian path for passing straight through, form another less defined layer in the remaining space. The supporting structure of the societal edge is constituted by the addition of minor triangles that follow their own rules of existence (stemming from the plot analyzed in another chapter). Each one starts from water and ends in the center of the site, where the requested landmark was placed, congregated towards the specific spot and containing opportunities for challenging the public realm.

The *mythopoeia*[^92] of Jurasmat is therefore used to achieve this challenge: experiential patterns and elements for social interaction like the multi-level moving squares or the entertainment platforms equipped with specifically designed artistic gestures, participatory events or furniture around which people gather and socialize, are designed to offer a kind of playing board that sets out the rules of urban games for citizens, allowing them to meet with their culture through the incorporation of mythical water notions. Spaces and corridors between these secondary triangles are reserved to establish a network of *circulation and access*

[^92]: From the Greek μυθοποιία (μύθος + ποιώ, myth + construct). The term is used here to pinpoint once more that, from the beginning, the architectural program cultivated the spatial accommodation of a set of water-born images associated with a Latvian myth and addressed to give solutions to all phases of the urban design process, from the overall spatial organization of the master plan to the invention of expressive features that challenge the human responses with the environment.
patterns. Pedestrians meet with a number of minor paths, passing through buildings, through open air spaces, ending sometimes in water, other times inside buildings. The public space that defines the borders of the coastal volumes employs sensory partitions (for example, raised or sunken platforms surrounded by water and made of materials that convey the sense of finite locatedness—like sand, rock or wood) and connects the land/water edge with the social enactments along the coastline.

The spatial territories of the waterfront areas form an internal circulation pattern along the urban frontage. The spatial structure of the Expressive Space is a skeleton. Inside the primary intersected triangle of the “movement of desires,” quays, floating surfaces [images 3.41-3.44], and elevated movable platforms show their ability to connect the life on the Edge with the life inside the volumes. Totally permeable boundaries, by means of ground-floor passages that cut off buildings’ linearity, circulation axes that cross buildings’ volume and blend the public with the semi-public, multiple leisure activities hidden inside the “in-between” subareas, all maintain and reinforce the skeleton. Meanwhile, building volumes and sensory partitions form a strong embodiment, so the user sometimes mixes the sense of outside and inside under a smooth blending. As far as participants approach the end of the project’s narrated plot (the culmination which ends up in the city’s new landmark) partitions gradually narrow to show their independence from the remaining enclosure of the focal spot.

Since the complexity of the studies project is conjoined with the arousal of meaning, the two different approaches of building and water enclosure described above are reflected by the way the volumes and their relation to the water are treated. From outside one can read that the volumes are water-generated by the way they rise from water, crawl on land, and rise above the main pedestrian path. Their spatial placement and the way their facades are gradually disconnected from the ground offer the mental transition from water to building enclosure (and vice versa, depending on whether the user is coming or going to the shoreline).

To be more precise, the more calm organization of the inside part (especially the inside part of the partitions, defining as insideness in this case their area close to the center of the project), symbolized by the narrowing elevated surfaces, is associated with the rising volumes seen from outside and responds to the adopted architectural plot and the existing social demand of the city, which seeks a smooth transition from the tall buildings of its center to the calm surface of the water at its edge. This is most easily perceived by the panorama and skyline offered by the proposed waterfront if seen from distance, such as from the other side of the river or from an approaching boat. The facade oriented towards the main pedestrian path of the “meaningful Balasta Dam,” as a complex of superimposed volumes, reflects the stronger definition of the spaces behind, which belong to the remains of the triangular intersections and are dominated by more ordinary uses of living
the Expressive Space

and working by water. If the information is properly stored, we can show how the association of the different waterfront structures and therefore their treatment can be controlled separately, like the volume or the sensory partitions of the space enclosure.

Through mental and expressive processes that this discourse takes as its starting points for the sense-stimulation inside participants’ psyche, the user progressively realizes the imposition of the image of the “water as context” upon the structure of an urban waterfront project. I believe that by the emergence of the meaningful space of the edge, architects can offer a supplementary contribution to the immediate experience of the coastal place, and moreover to the facilitation of more spontaneous and expressive human behaviors that result in individual well-being in an abundance of urban life. As one may have seen from the above brief demonstration of Riga’s proposal from this viewpoint, any of the proposed meaning components and any of their levels may serve as a starting point for design process. Each one may serve as an analogy, a metaphor, or a filter for the reality, but above all as an anamnesis and narration of what stands in front of the site. All together, they constitute an inner structural relationship on a conceptual level—all essential interdependence of logos and praxis.

Without this, the idea of designing the edge would be incomplete, banal, or piecemeal. The associative systematic thinking that stands behind this design process and incorporates the imaginative power of water meanings also has a power of assimilation and unique expression, starting with the architect and extending to the individual user. Despite that, if such distinct artificial components are so strongly accreted inside an unconscious memory of a natural element, it is because a spatial cohesion already exists inside them that can only be projected upon human behavior. The cohesion is not rational, of course. It is not even real. In reality, we cannot see voices of people enjoying the edge being washed up from its waves. But mental and subsequently expressive processes necessary for a holistic spatial experience justify this cohesion.
the Expressive Space
In light of the previous inquiry into the three spatial discourses this thesis considers critical for the formulation and sharing of coastal meaning, the attempt to sum up the methodological insistence of this effort for the interpretative reading of the relative architectural thought and the spatial study of aspects dealing with the material waters, is at least complex. But it is necessary, for this thesis didn’t simply attempt to shift the one-sided outlook of the problematic of the edge into three main constitutive parts, but also formulated an argument that I feel that I must briefly recapitulate. If one attempts to define a notion or idea by which an urban waterfront proposal can approach the subject of correspondences between the design process, the psychospatial organization, and shared images of a place’s identity, that would be the notion of water as inspiration, which focuses on matter’s primary influence upon the design process. As long as the material interpretation of water’s existence remains mute within the design intentions and desiderata; as long as it positions itself at the margins of a rhetorical invocation or inquiry for the engagement of the human component with the coastal place, the architectural and urban design research cannot benefit from such a concept. Through the notion of water as inspiration, the three discourses of this thesis delve into the psychospatial inquiry of meaning communication (Knox and Ozolins, 2000) as intermediate, integrative, and expressive elements between the perceiving subject and the waterfront setting.
4.1 coastal places that speak of the subject

Architecture creates the subject in the experience of space, as it defines the experience of space for the subject. It is the architecture that speaks of the subject, rather than the subject which speaks of the architecture.

J. Hendrix (2006:47)

The introductory chapter of this effort suggested that the psychospatial meaning traced in the process and thought of the waterfront urban design could be, on one hand, classified under three non-conventional headings (Intermediary, Integrative, and Expressive). On the other hand, there is always the need to (re)emerge the underlying structural language that claims the reconstruction of the inherent spatiality of these aspects, defining the experience of the coastal edge for the subject (Hendrix, 2006:47). The theoretical explorations undertaken in the corresponding chapters have supported this view, while mapping aspects of the internal complexity of these spatial territories of water meanings.

This led to a significant temptation: to interpret the “psychology of waters” into a sort of general tactic design schema for waterfront settings. On the horizon of their spatial expression, there is the present research of bringing consciousness back to its binding context (Eberhard, 2009) for understanding how we experience the edge of the city as attached to a place’s meaning conditions, aspect considered as neglected or treated fragmentally by the New Waterfront tradition. Specifically interested in the underlying structural language for the urban waterfront, the main implications related to this possibility were revealed as an attempt of restoring consciousness to the messages, contents, and forms that bring these areas into meaningful being.

In Demetrios Porphyrios’s viewpoint, the architectural language speaks in the place of specificity or non-specificity of initial architectural intentions. In Pandora’s Box, published in 1977, he writes that

...architecture, like all discursive practices, is characterized by a set of elements, rules and norms which define its field of functioning, while delimiting its relative autonomy (its disciplinary autonomy). Whenever these boundaries (formal, conceptual, economic, ethical etc.) become ill-defined, we can speak of an ‘opening’ (non-specificity) of architectural language, while the more rigid and exclusivist they become, we can speak of a ‘closing’ of architectural language (specificity) (Porphyrios, 1977:361).

It has been noted that the initial hypothesis of this research was a consequence of the ill-defined boundaries underlying the engagement of the perceiving subject in
the design of the edge. In effect, the purpose of integrating the specificity of thought processes in the making of places that speak of the subject pertains to the spatial interpretation and the geometrical construction of the “psychology of waters” addressed to the urban design logic. According to the research theoretical proposal, this interpretation and construction corresponds to the inquiry of “the system of material and notional associations, terms, rules, possibilities, restrictions, constraints, actions and tools, in the framework of which the architectural object is designed and produced” (Sideris, 2006:140).

Studying these properties in the context of the coastal domain, this thesis argued that the issue of waterfront places with meaning is not one that can be fully grasped by the sensory information of its representation in space. Instead it demands a recomposition, renegotiation, and contemplation in the mind of the perceiving subject. This was presupposed from the introductory part of the thesis. When space begins to narrate a symbolic act, from understanding the meaning behind a form for instance, one cannot grasp at the same time the recognizable consequences this act may have to other spatial features, like the integrative gestures or the effects on the preferences of the users for this specific form. Instead, one has to move, stand, or gaze throughout and inside the composition in order to attempt a notional recomposition of the formulative logic and to establish personal engagements with the overall conception and experience of the space.

This recomposition sketches the broader reading of the meaningful space of the edge related to the form, shape, appearance, and activity near water to understand the way in which the design process can be linked with the psychospatial engagement (or allocation) of the subject inside the space and its formulative logic. Multiple sections were presented in this research in order to render this reading methodologically accessible. For instance, the syntactical reading proposed in the second chapter from within the section on *Terra Incognita* is an attempt to let the legitimized logic of the shape of the edge speak of the perceiving subject, reading its development as an active part of the process of decoding shared properties—crucial derivative meanings and relationships—originated by the presence and movement of the subject in the area. In this framework, the user can experience the proposed condition as its constitutive meaning declares to do and take control of the place as its meaningful function invites him/her to do.

In the light of the psychospatial reading presented related to the Bachelardian idea of the *material waters*, some interesting argumentations were made for the conception of the urban waterfront:

i. First, that the architectural space of meanings near the water is reflected upon the built environment of the edge, and from its image the perceiving subject can understand how to render and use the narrative format, how to be introduced to the unexpected, the significant, or the challenging,
and how to store the information from these occurrences with the space and respond to the setting.

ii. Second, that the perceiving subject has the opportunity of understanding the format of the city on water as one making explicit the spatial relationships of its composition and their meanings in the form of a synthetic language that explicates three basic operational premises: the *symbolic function*, the *meaning behind the form*, and the *human co-presence* on the edge.

iii. And third, that there are adequate, primarily psychospatial interpretative ways in which crucial, but different, spatial relations can be employed, as *shape rules* (Knight, 1994:37), to generate syntactical structures for coastal designs.

Most of the thesis is regulated by a common rule that applies to most design attempts for places that speak of the subject: the inquiry of a vast theoretical field populated by dense and complex conceptual products, which submits the subject to a chain of spatial retroactive effects related to the understanding of matter’s entailment inside the built reality in order to negotiate with the represented narration. This structure, in which certain spatial rules were presented at the beginning of each chapter from the exploration of design examples and which cultivate a kind of a psychospatial reading of the coastal architecture (such as the material flexibility of *water’s aftermaths*, either as the rhetoric of place, or as edge’s “spatial sense” (Peponis, Karadima and Bafna, 2003), which constitutes a characteristic aspect of our object of study), is conceived as a hypothesis for investigation and exemplification on real terms. It offers the signal for the dismantlement of the edge’s deeper substance and for various alternative renderings of some stabilized from the traditional urbanism issues. But above all it constitutes the diacritic characteristic of the main body for the emergence of places with meaning.

The rhetoric that the reader was faced with in the introductory chapter (and in some other individual sections of this research as well) and which is mostly based on the four central theoretical axes (the *meaning*, the *meaningful*, the *narration*, and the *aftermaths of space*), is not so much the concrete philosophical figure of a “psychic language” addressed to define, unfamiliar to architecture and urban design, fields of knowledge. It is instead the spatially explored rhetorical guidance that appeals to the construction of reasoning as both a point of departure and an end for the proposed design process and thinking. This endeavor becomes more architecturally interesting when, by using the identified spatial logic from this rhetorical substratum, a designer can attest the inherent qualities within it not just as rhetorical entities but as correspondences to the investigation of each hypothesis set at the beginning of each chapter.
If we were to re-position the proposed reading and the psychospatial inquiry of the thesis in an urbanistic dialogue, the form of the guidance I suggest could be schematically described as follows: the intention of the architect to raise the meanings/signs of the coastal environment in a way that can be adequately communicated by means of spatial features (forms) and arrangements to the mind of the perceiving subject, its consciousness and thought, passes throughout the three discourses that elaborate on the meaning of the edge—notions that are both rhetorical and spatial. Thus the constitutive parts of this thesis attempt to transform into spatial constructs and immediate experiences the water-born conditions and concepts abstracted from the coastal domain.

Although this thesis has, I hope, promoted the development of some design bridges, providing an overview of gestures for doing so, and formulated a schematic framework for structuring design attitudes interconnected with reasoning from these four underlying layers (i.e. the meaning, the meaningful, the narration, and the aftermaths of space), it is clear that this is only a possible interpretation of exemplifying this process. Each architect’s personal sensibilities and skills might interpret differently the waters’ voice. Therefore he/she can construct other generic and significant spatial relationships, consistent with the general rule of providing reasons in order for the emerging properties and qualities of the urban design near water to be retrospectively derivative from these layers and not arbitrarily conjoined by the accidental occurrence or market’s commodities. For this reason, the whole effort is woven around these aspects or modes of reasoning, from the intermediary function of the narration to the integrative and expressive characteristics of the coastal environment.

Additionally, I have demonstrated that the power of seaside design arises not only from the activation and transformation of underlying logical (with syntactical rules) structures and meanings generated from each discourse separately (i.e. Intermediary, Integrative, and Expressive), but also from the flow of ideas and interplays between them, and I have suggested that their narrative function heavily depends on this interrelation. Only through the spatial tools presented in this effort can the architecture of the urban waterfront achieve its own raison d’être: an architecture for the edge

...that comments, caresses details, enumerates and forecasts the secrets of the [coastal] metropolis is that oneiric architecture which, from the height of its phantasmagoria, has condemned professionalism... when one traverses the spaces of this architecture, when one allows for a moment the date of its realization to be a real finitude upon the basis of which we are, we think and we know: a finitude at once real and impossible is there before us to be conquered (Porphyrios, 1977:361).
The thesis proposed the questioning of notions like *meaning* and *meaningful* and their critical discussion, something that was coincided with the spatial study of respective aspects from the human complex substance: if *questioning* were only aspiring to epitomize the urbanistic views aggregated in these three discourses, it would have remained incomplete. But the almost imposed or pre-existing correspondences of the edge’s narration to aspects of human complexity (like perception, imagination, sensation, and behavior) comprise the constitutive values of a human-centered design approach. As a sustained effort to relate urban design process and thinking for waterfront settings to the summons and perplexity of that natural element which, in fact, embraces them, from its material fantasy to the spatial accommodation inside our experiences, the dismantlement of such deep structures (of both human and environmental substance) along with meaningful design attitudes composes a system of practice that assigns to traditional urban design theories of the New Waterfront (Breen and Rigby, 1996) the image of a constructed *otherness*.

What is in fact transformed from coastal notions to seaside object is neither the *abstract* nor the *apparent*. The main task remains: to erase the problematic opposition between abstraction and apparentness where only one of them could be engaged in the architectural process and used to cast its shadow over the other—and be replaced by another construct characterized by *abductive reasoning*, to use Peponis’s term (Peponis et al., 2001). However, and especially after the Integrative discourse, this interpretative construct can no longer be described through rhetorical and abstract figures, such as *watery notions, thought communicated, or exemplary plots*, let alone the *notion* of water sign itself to which we have indeed so often resorted. The attitude of moving with rhetoric against rhetoric, or more architecturally speaking, the spatial interrogation of the underlying relationships generated by the Bachelardian philosophy, are no longer textual extensions but potential spaces and percepts, at least in the broadest possible interpretation of the term. For this reason, Terra Incognita appealed to the abductive process from Bachelard’s analytic investigation on waters for matter’s material imagination in order to turn abstract notions into objects, images, arrangements, and effects.

These interpretative transformations of inputs from other disciplines (mostly psychology and theories of signs) are nothing other than creative and relational topological design gestures, which, in the urban synthesis orchestrated along the

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93 However, and from Terra’s general viewpoint of rhetorical figures, urban design of the Edge is “no longer elements but another grammatical counter, proposing an alternate reading of the idea of the site and object. In this sense, a rhetorical figure will be seen to be inherently contextual in that the site is treated as a deeply scored palimpsest” (Eisenman, 1993:56).
coastline, set up opportunities for the perceiving subject to approach the logic of
an abductive design reasoning by means of “immediate experience” (Otero-Pailos,
2010). In this sense, the “metapoetics of water” and the “aftermaths of space”
mentioned so often in the course of this effort, for example, are translations of the
Bachelardian notions that I decided to insert inside the design logic for the analysis
of the meaning-creation process and effects on the subject. I believe the insertion
operates simultaneously on two levels: “the level of underlying relationships and
the level of association between such underlying relationships and particular form”
(Peponis, et al., 2001). After the psychospatial presentation of the discourses, it has
been seen that, in turn, these two levels operate dependently of the concept that
they are supposedly attached to and the signification that they cultivate is located
in the form-making process of the architecture they produce.

The share of meaning and the conditions for the emergence of meaningful places
near water appears to be attested on these two levels. The three discourses show
rather clearly the path followed by the research to answer the question: what
makes creativity generated from within the *water-matter* itself reside in the
manner in which underlying spatial relationships are activated, transformed into
percept, sensed, experienced, and stored in memory; or more specifically, how
does Bachelardian psychology form our prerequisite so the urban “design synthesis
become charged with interest?” (Peponis, et al., 2001).

In three spatial territories, this question has been proven able to generate
interpretative attitudes that lead the *desiring subject* –architect and user-to
consider adequate or effective design gestures for the development of *places with
meaning* on the land/water edge. In this sense, the sequence “water-born meaning
/ material interpretation / architectural object” was conceived, for example, by the
Integrative Space as a process inaugurated by the architect for a user to step on,
interpret, and understand that the signs of the coastal locale that may have
influenced the architectural process and thinking were primarily identified in terms
of their meaning (associated to physical attributes, environmental values, or even
mythical power, metaphor, allegory, etc.) in terms of regulating logical spatial
relations (relation formed by syntactical rules). For this reason, the Integrative
Space started its theory development by confronting to that end an initial desire to
orchestrate the edge’s spatial meaning around water-matter. By this it attempts to
break the ordinary monotonous linearity of the edge’s outline, offering
differentiation of roles, positions, states of space occupancy, uses, and activities.
The motivational coastal urban space produced by this attempt underlies what
water signifies for the conversion of the meaningless one-dimensional old harbor
areas into multi-dimensional meaningful spaces.

Finally yet important, it may be claimed that the strategic plan that the integrative
discourse employs, contributing to broader theoretical inquiries over and above
the *psychology of waters*, is similar to the ones used by the intermediary and
expressive as well, all of them ending in exploratory and creative form of design recommendations. The last proposal, being the farthest development this research can generate at this stage, is that within these three discourses the thesis concludes that a constructed space of meanings near water, a psychospatial way of dealing with this vast natural matter embracing the urban fabric or even a theory of waters’ spatiality cannot find any sort of spatial accommodation or correspondence in design practice by remaining imprisoned inside its own inherited rhetorical borders. We need a non-rhetorical stance of poetic evocation, amongst many other necessary skills and sensibilities, in order to let it affect the way in which the perceiving subject tends to read the narration of the coastal composition. But mostly to approach the languages for its design which gain considerably from a semiotic codification of ideas and notion originating by the specific space and matter: the waterfront setting and the water itself. This pertains to an intelligible design attitude that evokes the semiosis of water. Thus, this thesis quested and identified underlying rhetorical entities that act against the inherited rhetoric of this narrative evocation.
Wherever possible, the English translation of Greek texts, articles or publications has been made in total consistency, word for word. Some exceptions, however, inevitably occurred; especially in cases where the Greek syntax was almost impossible to render word for word into English. In these cases, I have chosen to use my own, rather free, translation.

Since some points in my text might seem dense of meaning and demand further reading, most times relevant bibliography on the issue has been provided in the footnotes for the reader’s convenience. Especially when I discuss aspects of environmental, spatial, and architectural psychology, my points of view are based on the primary concern of outlining a general framework to include much of the literature on the specific issue, but from within a broad and general perspective, transferred and interpreted as to concern the problematic of the design of the edge.

My frequent use of some English words of Greek origin is the result of several different causes. Sometimes it is just the comfort I felt using familiar terms; other times the unique meaning complex I traced in them even after their Latin translation; till other times I was drawn to their rhetorical essence and their appropriateness for the purposes of this research. Again, for the reader’s convenience, I most times provide the exact etymology in the corresponding footnote. However, I must point out that some of these terms derived from Greek concepts do have different meaning in the English language: for example the Bachelardian term of “metapoetry” should not be misunderstood with the English references of the separate words “meta” and “poetry,” which rather correspond to some specific philosophical territories. The original Greek usage pertains to the after-effects from the submission of the subject to the experience of the poetic image and to the account of the evoked emotions. This limitation is mostly theoretical and, after all,

...with this Latin translation, the original meaning of the Greek word is destroyed, this is true not only of the Latin translation of this word but of all other Roman translations of the Greek philosophical language. What happened in this translation from the Greek into the Latin is not accidental and harmless; it marks the first stage in the process by which we cut ourselves off and alienated ourselves from the original essence of Greek philosophy... (Heidegger, 1974:213).

As a non-native speaker of English, I would like to take this occasion to thank, first, my English proofreader and my colleagues and friends for their critical reading and their helpful comments and suggestions for the most possible correct syntax, grammar, or orthography of this English-based text.
reflections
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