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# De-coding the possibilities of spatial assemblages: a design methodology of topologizing architectural morphology

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## ABSTRACT

The objective of this research is to reconceptualize space and the built environment as a dynamical landscape of potentialities where its tendencies and capacities emerge from within fields of organizational relations and material connectedness. Also, advocate for intensity, transformation, and change as other modalities of spatial relations and structural dynamics. In this framework, the research establishes a code for space, as a conceptual approach for further understanding of how and why space changes at different levels and in different ways. Also, how its capacity for change can be further enhanced or suspended to allow for its adaptability and reversibility. The material agency of this productive process that constantly informs itself is twofold including a "convergent phase of selection" and a "divergent phase of design". The first one points to organizational space and establishes space's relationality and dimensionality. The latter points to space's material reality and articulates its affective modalities and material contingencies. The code provides a set of working concepts for thinking and conceptually experiencing the recursive process of the actualization of space.

*Keywords: A-signs, Affect Theory, Code, Design Methodology, Design Patterns.*

## INTRODUCTION

While the continuous flow of events - within the assemblage, complexity, and dynamic systems theory - seems to be a given, we still cannot perceive or design ***space that is organized*** and has the capacity to ***reorganize itself*** so as to cope with major changes. The research is a mode of articulation for intensity, transformation, and change as other modalities of spatial relations and dynamics of structure (Lury, Parisi, Terranova 2012: 4 i). It is a conceptual approach that focuses on further understanding of how and why space changes at different levels and in different ways, especially pertinent at the present time. The research aims at **rendering and refining space as constituted in relations** rather than having some essential properties, values, and norms. Also, advocate for **space as being intensive** rather than extensive, that is spaces being defined by their production processes

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and possibilities for change. Finally, understand **spatial change as affirmative and immanent** rather than negative and externally defined. In this framework, it is possible to render visible capacities for spatial change, to mobilize them and monitor their possible effects. Also, evaluate spatial configurations and the built environment on the basis of their qualitative and relational properties, tendencies, and capacities.

Answering complex questions regarding **spatial resilience, performance, and adaptability**, architecture and other fields in the built environment are put in a critical position (Hensel 2012: 2 i). This research points to reconceptualizing the built environment as living continua in continuous variation, mapping "objects that come into being, as they emerge from continuous fields of media-material and then dissolve again into those fields" (Sha, Plotnitsky 2013: 90). Thus, allowing for space to be understood, visualized, and designed in an integrated way. Within the scope of this presentation, two main aspects of space are elaborated: **the organizational space** where design trajectories are being established, and the **materialized space** where design becomes affective and experienced. While many more such aspects affect the becomings of space - both their production processes and their possibilities for change - such as social, political, economical, and potentially more, they are purposefully omitted for the scope of the current articulation, along with their respective interdependencies and relations.

In this framework, the research aims to establish ***a code*** for space as a semantic system that monitors its sociospatial metabolism and is directly connected to its material reality. In setting the general schema for its ontology, the research disregards the difference between the observable and the non-observable as well as the anthropocentrism this distinction implies (DeLanda 2013: xii). In this context, space is composed of both the ***actual*** and the ***virtual*,** "space as is" and "space as it could be", respectively. As they both inform and enhance its identity, form-production is to be explained through a ***process ontology*** *format*.

Space, spatial structures and configurations are here theorized as ***assemblages*** composed of heterogeneous elements - themselves being parts of larger assemblages - that enter into relations with one another while their components' ability to engage is contingent. In this framework, the research attempts to establish a ***design methodology aiming at a generative system for architecture***. To elaborate on the "space as it could be" on the one hand, is to speculate on the city's tendencies and capacities not yet manifested or exhibited, both a philosophical and mathematical task. To that end, the concept **of *the structure of possibility spaces*** is introduced to architecture, a philosophical concept equivalent to or close to a mathematical ***manifold*** (DeLanda 2013: 3). On the other hand, to conceive of space

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as being able to self-reproduce itself is to postulate on its organization as a system able to differentiate over time according to a set of rules (Spuybroek 2008: 190).

As this information is both actual and virtual, the concept of a ***code*** is introduced as a processing schema. Chapter 01 deals with the ***theoretical framework*** needed to think about a code for the city, one that uses the reconstruction of Deleuze's world by Manuel DeLanda as a discursive tool to illuminate the subject of architecture while at the same time drawing from assemblage theory and a-signifying semiotics to set the framework for approaching material contingency. Chapter 02 explores the ***"convergent phase of selection"*** and introduces Christopher Alexander's 253 Design Patterns (Alexander et al. 1977) as the code's elementary units. It explores the ***code's organization*** and focuses on the intensive processes and intensive differences that produce architecture's spaces of possibilities. It sorts Design Patterns into four intensive areas pointing them as space's ***four dimensions*** and further explores each dimensional area's intensive structure. Chapter 03 explores the ***"divergent phase of design"*** and focuses on the spatial assemblages' ability to affect and to be affected as a precondition to their material contingency. It elaborates on the ***code's structure*** where its elements transform to become formative and dimensional areas acquire their affective capacity. A ***substitution of Design Patterns by their a-signs counterparts*** - mechanisms able to increase spatial assemblages' material contingency - takes place. Chapter 04 concludes and discusses the potential value of such an approach.

## 1. THEORETICAL FRAMEWORK

Over time, the history of ontologies maps the dominant relationships between the *abstract* and its ***concrete actuality***, or in Deleuzian terms between the ***virtual*** and the ***actual***. Moving from one level to the other requires some kind of abstraction as the two are not homologous (Spuybroek 2008: 190). The history of explanatory schemes notes the shift regarding the ***type of abstraction*** and the ***nature of form***: abstraction evolves from reductive to generative while at the same time form moves from rigid models to more elastic ones. According to Lars Spuybroek (2008) 'There have been four ontological abstractions - idea, schema, diagram, and code - that match their concrete actualities - respectively, form, reality, assemblage, and being.' (p.190). The first two ontological abstractions, Plato's and Kant's allow only for the replication of form and not for its generation, therefore implying a metaphysical connection between the abstract and the real. Within the generative theories that follow, Deleuzian ontology accepts a ***physical relation between the abstract and the real***, their coexistence within the same continuum, a continuum within the real itself. The

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last abstraction of code and being is considered to be mapping the ultimate ***biologizing of design***.

To better grasp what spaces inhabit the virtual and the actual we draw from Deleuze's distinction between ***intensive spaces*** on one hand, and ***extensive and qualitative spaces*** on the other (DeLanda 2013: 63). The virtual is inhabited by the former while the actual is composed by the latter yet both informing objective entities equally. Extensive and qualitative spaces are bounded by natural and artificial extensive boundaries that extend in space up to a limit marked by a frontier. Intensive spaces or zones of intensity are less familiar but equally well-defined spaces. They are bounded by ***critical points of change***, whether in temperature, pressure, gravity, density, tension, connectivity, and more and define abrupt transitions for the state of natural and artificial objects that inhabit them. "The intensive, the extensive and the qualitative are intricately related: ***zones of intensity*** are the site of processes which yield as products the great diversity of extensive and qualitative spaces" (Buchanan and Lambert 2005: 81).

The material agency of this productive process, a key to this ontology, is described as a twofold process that constantly informs itself, including a "***convergent phase of selection***" and a "***divergent phase of design***" (Spuybroek 2008: 189). For the convergent phase, one to inhabit the virtual domain, a system is organized by gathering information that is relevant and providing its topological structure, one that concentrates on the relations instead of the components. In this phase, a code is established including both the procedure and the rules necessary for the information to be processed over time. In the divergent phase, the actualization takes place as the code germinates and transforms into actual spatial structures with geometric and qualitative properties. According to Lars Spuybroek, both phases should be machines in themselves able to connect to one another while their division better describes how an organization turns into a structure. These spatial structures are expected to process information over time and produce variations of oneself as to better adapt to changes. To do that they need to remain structurally open **beyond the point of their actualization** (Spuybroek 2008: 189).

To define spatial structures as open systems able to reorganize themselves, the research draws from assemblage theory, an approach to dynamic systems analysis that emphasizes fluidity, mutability, and interchangeability of their constituent components, producing evolving systems that interact between each other. This theory moves away from conceptualizing systems as seamless wholes, and provides "the possibility of analyzing both the contingent interactions between parts as well as the emergent properties of the complex

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whole" (DeLanda 2006: 10). In assemblage theory, a component may be detached from an assemblage and plugged into another where it forms different interactions. Within this framework, while spatial assemblages may seem to be specific entities that have been produced in a specific timeframe with set operative capacities, they are nonetheless only contingently obligated to operate as initially prescribed.

## 2. THE CONVERGENT PHASE

### 2.1. A machine of Design Patterns

In this framework, within the convergent phase, Christopher Alexander's 253[1] Design Patterns are introduced as the code's ***basic units of information*** and are rearranged into a new 'table' of spatial relationships, through a population **-** thinking process (DeLanda 2013: 52). Design Patterns are **relational frameworks** that both explain and shape recurring processes and relationships all the same giving rise to actual material structures (Closkey&Vandersys 2017: 7i). They have associative properties, in that they are made of multiple entities, able to be further analyzed into their constituent parts. Patterns shift the focus away from entities towards their relationality and connectivity. Each Design Pattern, according to Alexander, is a **generative system**: a kit of parts with rules about the way these parts may be combined (Alexander 1968: 605). To articulate space in a perpetual state of becoming as to enable deformation or change, Design Patterns present a valuable reservoir. They are immanent in the physical world, that is they are internal and normal. They are constituted in relations rather than being categorial and at the same time, they allow us to tap into the intensive dimension of space while remaining closely affiliated to the extensive world. Design Patterns are in this way defined by their **production processes and possibilities for change.** Being formal, material, or temporal recurrences, Design Patterns are given the modal status of the possible. Before delving into establishing the code's spaces of possibilities, we shall elaborate further on Design Patterns pointing to their ontological status and their relevance as the code's elements. To elaborate on that, we postulate that through Design Patterns the code is able to simulate ***the processes of representation and self-organization***, necessary for processing information over time.

In terms of the ***process of representation***, the code has to be able to gather and store information about the environment. 'The structure of the system cannot consist of a random collection of elements; they must have some meaning. In traditional philosophical terms, the system must somehow 'represent' the information important to its existence' (Cilliers 1998: 11). In that context, Design Patterns as a collection of pre-structured elements describing

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space have the capacity to be incorporated in the coding scheme. At the same time, their diagrammatic, rule-based structure is important in terms of their topological plasticity, increasing their capacity for transformation. For the ***process of self-organization***, the code is expected to develop an organized structure and adapt it to cope with the changing environment. To do that, its elements have to be 'fairly unstructured' (Cilliers 1998: 12) so that the relationships between the distributed elements of the system - under the influence of the environment and the history of the system - can be reevaluated in terms of their patterns of communication. As Design Patterns are assemblages themselves of both rules and spatial configurations, we expect their communicational plasticity to be further enhanced through the communicational capacity of their component parts.

We have by now postulated that the 253 Design Patterns will be the code's basic units of information while at the same time their patterns of communication are assumed to be operative at two distinct spaces. The first space is where the 253 Design Patterns exhibit their interconnections' possibilities as they communicate with other units, with the units' history, and with their environment. The second space relates to each Pattern's internal structure where communications between its parts and rules take place, resulting in the Pattern's actualization (Deleuze 1993: 100). In that respect, Design Patterns are introduced into ***a plane*** attributed solely to their ***communicational possibilities***. For the purpose of this presentation, 65 invariant Design Patterns have been sampled from Alexander's initial archive. Within the initial archive, they are marked with two asterisks pointing to their invariant character in shaping the environment.

## 2.2. The code's organization

In Deleuzian ontology, a species is defined by the morphogenetic process that gave rise to it instead of its essential traits (DeLanda 2013: 2), a principle guiding the first part of the population process. Drawing from dynamical systems theory, we propose a ***shift*** from 'morphogenetic processes which generate material objects and kinds' (DeLanda 2013: 5) to sociospatial production processes that generate space's material reality. Within the same shift, the dimensions of the manifold are used to represent the relevant ways space may change pointing them as its ***intensity zones***, the site where ***intensive processes*** take place. At the same time, the manifold itself becomes the space of possible states that space can have. To better define and topologically measure space's intensity zones, we map patterns of communication within the full archive of 253 Design Patterns by means of networks of interconnected nodes. Each node is used to represent a Design Pattern while a connection between any two such nodes represents some function related to their communication.

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These networks are controlled by ***communication protocols*** and set the rules for the ***code's organization***. (Passia 2016: 35)

These intensive spaces along with the intensive gradients responsible for their generation are defined in the following six Design Patterns 36, 66, 98, 127, 142, 193. They differ from all other Design Patterns in terms of their gradient-like structure as their diagram is ***a scale*** that maps a spatial relationship defined by a pair of polar terms [opposite in meaning] with specific ***scale positions***. These six Design Patterns document the kinds of productive differences that incite form-production processes in the city. Specifically, Design Patterns 66 and 127 define an intensity zone of spatial relations ranging from ***exteriority to interiority*** in regard to what is public. Patterns 142 and 193 set the intensive boundary within the scale of ***integration and separation***. At the same time, pattern 36 sets the limits for what appears to be a zone fostering relations of ***decentralization and concentration***. Finally, pattern 98 delimitates an intensive space of spatial configurations aiming at generating circumstances of either ***differentiation or similarity***. When placed on the manifold's surface, the six gradients start attracting Design Patterns relating to their respective intensity zones while four discrete spaces of possibilities are being generated, four semantic categories [Figure 1]:

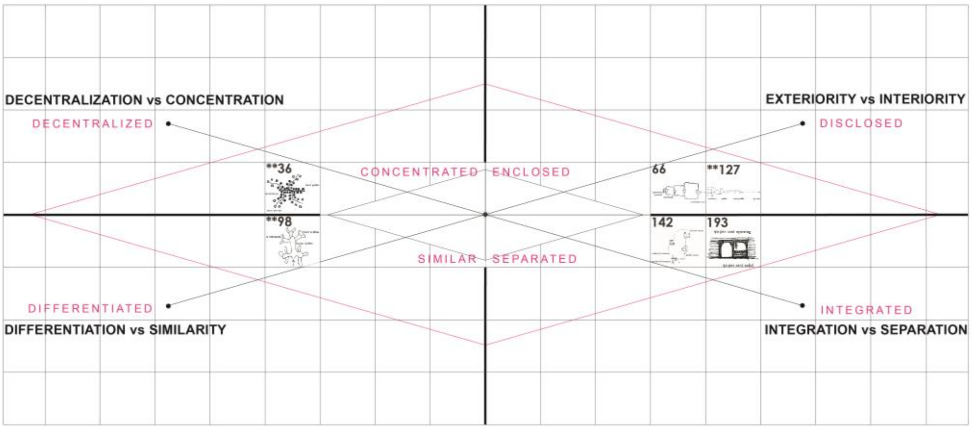


**Figure 1. 4 semantic categories with 6 gradients**

1. exteriority Vs interiority
2. integration Vs separation
3. decentralization Vs concentration
4. differentiation Vs similarity

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In the first part of the population process, a list of ***communication protocols*** between Design Patterns is gradually being established while at the same time the respective topological networks emerge. The intensive spaces of the manifold representing space's four dimensions are the result of each Design Pattern being individuated in terms of the processes responsible for its actualization: the social or spatial relationships it engages in, the design problem it articulates, the context within which it is produced.

### 2.2.1. Communication protocols_4 and 12-protocols list

Thus, four recurring key concepts within the Design Patterns' archive constitute an initial 4-protocols list: ***privacy, dispersion, heterogeneity, spatial separation*** [Figure 2]. These concepts produce four interconnected networks of communication while at the same time four key patterns (Design Patterns 100, 8, 9, 98) take their place on the manifold' s respective areas. Their behavior is that of magnets as they attract new relevant patterns around them, each populating some of the sub-areas of the manifold. The 4-protocols list is enhanced by another 8 new protocols that further broaden the informational substratum of the manifold and better describe the boundaries of their intensive spaces [Figure 3].

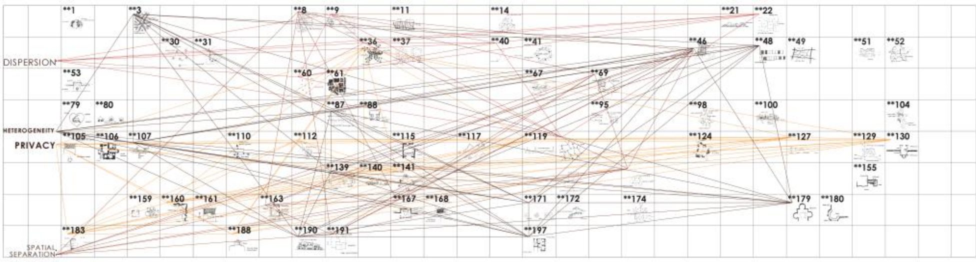


**Figure 2. 4 communication protocols**

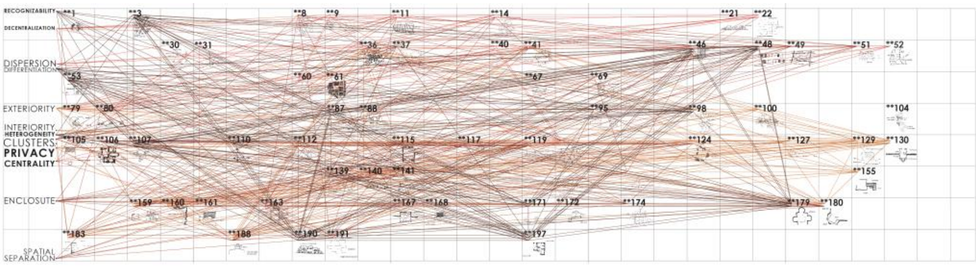


**Figure 3. 12 communication protocols**

This growing list of protocols organizes new interconnected networks of communication, while at the same time, more significant Design Patterns energize the manifold (Design

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Patterns 37, 31, 95, 168). Then, the protocol of dispersion appears to be adjacent to those of ***decentralization*** but also of ***centrality***, while heterogeneity seems to be close to both ***differentiation*** and ***recognizability***. The same stands for the protocol of privacy that meets with those of ***exteriority*** and ***interiority***, or the protocol of spatial separation that is closely related to those of ***clusters*** and ***enclosure***. The new 12-protocols list is populated by concepts both relating and opposing to the initial four, that are also recurrent within the archive and manifest themselves through their respective Design Patterns. These networks, now populating the manifold's space of possibilities are the communicational maps for each dimension. The population process is complete after having assigned all 65 Design Patterns into zones of intensity, space's four dimensions **of *Exteriority*, *Decentralization*, *Integration***, and ***Differentiation*** [Figure 4].

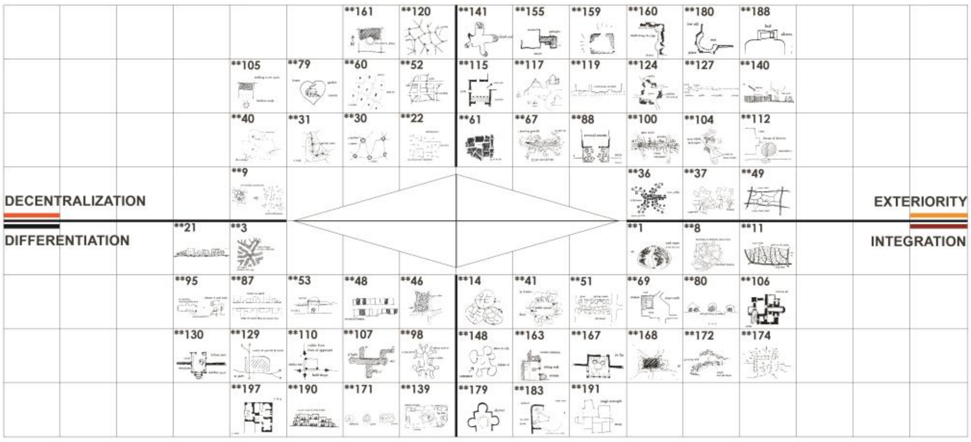


**Figure 4. 4 dimensions**

### 2.2.2. Intensive differences as space's critical points of change

In the second part of the population process, we will take a closer look at each dimensional space and their polarity character trying to establish their internal communicational structure. The notions of ***intensive differences*** (DeLanda 2013: 29) resurface as the guidelines for this process's second part. As opposing Design Patterns are placed on the same areas on the manifold, each area seems to be mapping two extremes of the same spatial relationship e.g. *Integration Vs Separation* ***as the dimensional minima and maxima*** for the dimension of Integration. Each area of the manifold representing a space of possibilities for the architectural form is then organized on the basis of continuity between opposites; the space of productive differences that yielded specific Design Patterns as their products. The same guiding principles organize the other three areas of the manifold on the basis of their binary spatial relationships; *Exteriority Vs Interiority, Decentralization Vs Concentration,*

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*Differentiation Vs Similarity,* for the remaining dimensions of Exteriority, Decentralization, and Differentiation, respectively. The informational substratum of each dimension is composed of two contrasting "*demes*" of Design Patterns resulting in two discrete interconnected networks, each setting ***the dimension's minima and maxima in the scale of its semantic differentiation***. These polar patterns are assumed to inhabit two discrete and intensive sub-areas close to the respective poles of each dimension: one towards the origin of space and one towards the periphery inhabited by minima and maxima Design Patterns, respectively. In the city's manifold, each dimension is composed of polar relationships as exhibited by its Design Patterns that map their full gradient. To map each dimension's intensive differences, we postulate there is a semantic scale defined by the dimension's polar patterns with scale positions representing **its *critical points of change*** [Figure 5]. Through this two-part process, we have assigned four dimensions to our manifold as the code's degrees of freedom and we have established the relevant ways each dimension may change through a set of protocols.

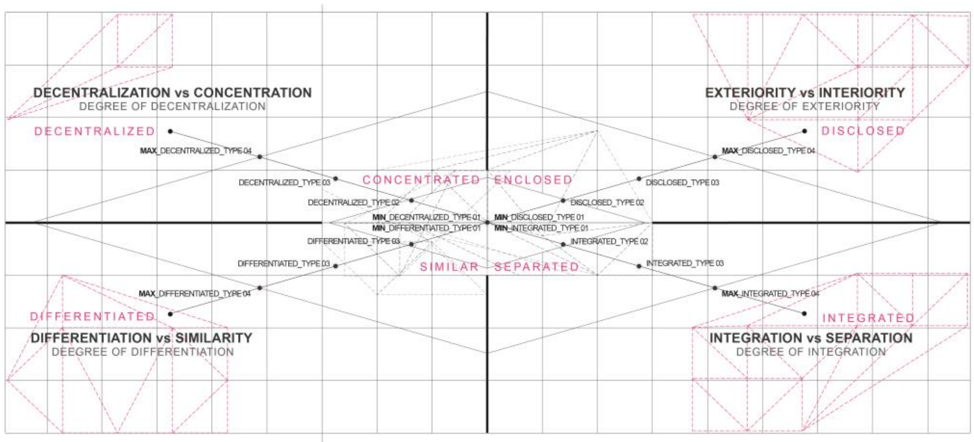


**Figure 5. dimensional degrees**

## 3. THE DIVERGENT PHASE

### 3.1. A machine of a-signs

During the convergent phase, Design Patterns have been organized into a ***system***, a network of acting and interacting agents that through interaction result in larger-scale patterning effects (Lars Spuybroek: 193). Furthermore, the system can differentiate over time according to ***a set of rules***, the agents' communication protocols that continuously organize their dimensions and dimensional degrees. Entering the ***divergent phase*** and while the code maintains in full its topological organization, it transforms its structure to become formative

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by replacing its elementary units. To enter the phase of materialization we turn to material structures in order to extract specific ***mechanisms*** able to interrelate spatial components and thus formulate spatial assemblages. Through Design Patterns we have defined relations between spatial elements through a set of protocols pointing to the dimensional areas they are mostly attracted to as well as their polarity character. We now point to the ***affective capacity*** these spatial elements and configurations have in order to better define their capacity to assemble and reassemble anew thus allowing for their material contingency. In short, while spatial relations have been defined through communication protocols described by Design Patterns, we now point to the affective capacity of spatial assemblages. This capacity lies in an ***excess*,** a latent potentiality they contain, not transcendental but immanent in their ***pre-subjective*** aesthetic power.

In order to analyze and produce spatial assemblages of that kind, we point to their more stable characteristic, their ***ability to affect and to be affected***, referred to as ***affects*** (Deleuze & Guattari 1987: xvi). Affects are the relations we create with temporary worlds, and by which at the same time we are being created. In mapping the assemblages' affective ability, spatial objects are analyzed in ***two axes****.* The first axis focuses on the role that the assemblage's components play in order to enter the assemblage, either material or expressive. The second axis records the processes known as ***a-signifying signs or a-signs***, (Guattari 1995: 54) which are the triggering mechanisms able to stabilize or destabilize the assemblage and thus allow for its components to assemble anew. These mechanisms are introduced in the spatial object as ***intensities*** that transform it beyond meaning, beyond fixed or known cognitive procedures. They belong to a molecular level that is populated by modulations, movements, speeds, rhythms, and spasms (Lazzarato & Melitopoulos 2012: 240). As a-signs cannot be isolated from matter, we thus point to ***affects*** as the result of the a-signs' capacity to trigger the materialization of one spatial assemblage among many. Theorizing spatial objects as open systems in continual transformation and exchange between its components, affects seems to depict this transformation through "qualities ... as the real world is always a world of effect (events), not quantities" (Kwinter 1998: 60).

A-signs are in this framework the ***mechanisms*** inherent in spatial objects that allow for the constituent material and expressive parts to perpetually enter into new assemblages. As we have previously mentioned, those spatial structures are theorized as assemblages, that is systems composed of interacting parts. And since all assemblages are parts of larger *assemblages*, their components' ability to engage is ***contingent*** (Meillassoux 2012:10). To measure material structures' affective capacity, an ***affective mechanisms' index*** is created.

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The index is a map of the affective capacity of spatial configurations at different scales, from design objects to buildings and urban configurations.

## 3.2. The code's structure

The ***affective mechanisms' index*** is composed of approximately 100 a-signs, documented via the analysis of numerous contemporary spatial objects of various scales, including works of art and installations (Roupas 2016: 63-65). The heuristic mining techniques that were used in order to extract the mechanisms and create this index include but are not limited to the analysis of their descriptive texts, critiques, and formal analysis. A-signs are categorized in terms of their aesthetic power to affect and to be affected, themselves material techniques that point directly to the affective capacity of the final design object. Through the index, each a-sign is now connected to specific affects, the material elements it has the capacity to intensify, and finally the techniques it uses to that end. In order to extract the a-signs from the analysis of various paradigms, a template for each a-sign is created [Figure 6] where the list of affects is noted, along with associated paradigms that use the specific a-sign and an indicative photo of the most characteristic project.

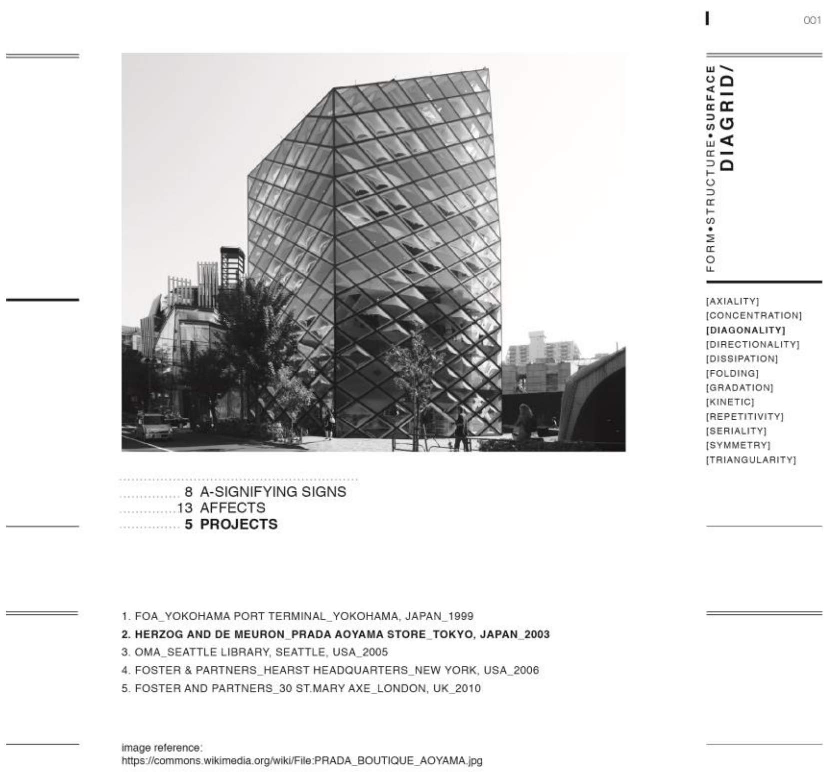


**Figure 6. A-signifying signs _ Index Template _ Diagrid**

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Each a-sign is thus connected - within the premises of this index - with a specific list of affects it triggers and which thoroughly defines it. And vice versa, the same affect is interrelated to the different a-signs that can trigger it. That said we believe that through these mechanisms - a-signs - and the resulting affects we are able to observe design objects as they are allowed to lie in a perpetual state of becoming. Through the affective mechanisms' index [Figure 07], we are now able to analyze and guide the design objects' final form while at the same time establishing the means to measure its contingency.

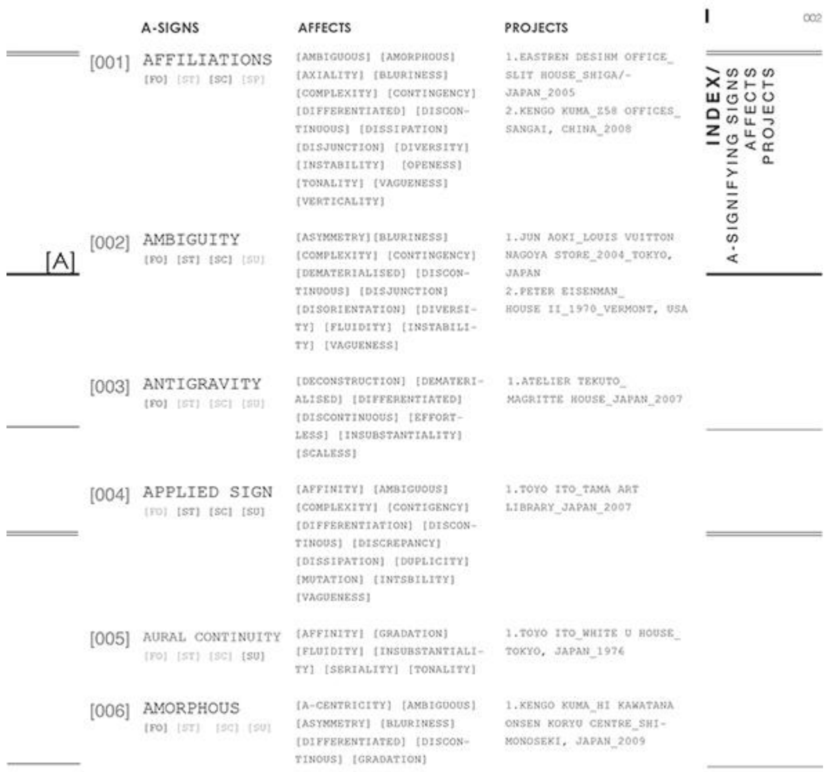


**Figure 7. Affective Mechanisms' Index _ Extract**

As a-signs take their place on the manifold to substitute Design Patterns, they start populating the respective dimensional areas. Using the general categories of *form, structure*, and *surface*, a-signs start to populate code's manifold, taking their place on the dimensional areas that best describe them. In this framework, the *dimension of Exteriority* attracts a-signs on the basis of whether spatial assemblages interact with their context. The a-signs of ***[001]_Affiliations [010]_Borrowed Landscapes, [036]_Faciality*** and ***[079]_Slit Openings*** inhabit this dimensional area. The same stands for the *dimension of Integration* composed of a-signs that focus on the materiality and expressiveness of physical boundaries, such as

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***[011]_Box-Within-Box, [005]_Aural Continuity, [021]_Dematerialization,*** or ***[100]_Zero Degree.*** In the *dimension of Decentralization*, a-signs point to how concentrated or decentralized a spatial assemblage's components are, an affect produced by the following a-signs: ***[004]_Applied Sign, [024]_Discontinuity, [026]_Disorientation***, and ***[037]_Transversality.*** Finally, within *the dimensional area of Differentiation*, a-signs aim at creating either homogeneous or heterogeneous spatial assemblages we have enlisted **[*013]_Cartesian Grid, [007]_Black Stuff, [015]_Clear Structure Strategy,*** and ***[022]_Diagrid.*** [Figure 8]

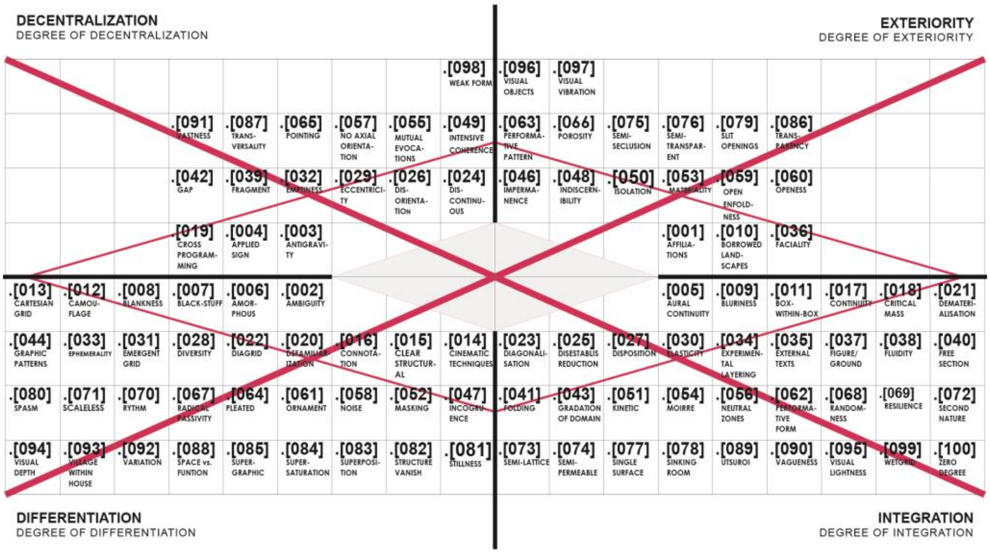


**Figure 8. Code with A-Signs**

By replacing Design Patterns with A-signs we introduce affects as material information that is immanent in the spatial object while at the same time they confer no meaning; they only convey some information without semantic content. The affects' ability to merge with the material world without mediation allows them to avoid the realm of representation. With this re-coding, we are able to control the final form of the design object while at the same time establishing the means to measure its continuous transformation as it ceaselessly enters into new assemblages.

## 4. CONCLUSIONS

Through this twofold process, we have defined a number of ***attractors*** for the code and architectural form: its ***four dimensions*** as the genera of exteriority, decentralization, integration, and differentiation, and also the ***affective boundaries of their material variation***. During the convergent phase, Design Patterns have been organized into a system,

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a network of acting and interacting agents that through interaction result in larger-scale patterning effects. During the divergent phase, Affects enhance and amplify space's material contingency through specific material and design configurations. Furthermore, the system can differentiate over time according to a set of rules, the agents' communication protocols that continuously organize dimensions into affective regimes. In the code we organize for architectural form, the two machines of Patterns and Affects process information through the mobilization of their topologically connected elements, connecting organizational and material potentialities. Traversing from the convergent to the divergent phase, spatial organizations gradually unfold into material structures that have the capacity to be stable but not static thus allowing for their contingency and reversibility to be theorized, perceived, and designed.

Nonetheless, the code is not introduced 'for the purpose of providing a truer model of reality or even perception but ***as a mode of articulation'*** (Sha, Plotnitsky 2013: p.182) for understanding space differently so as we may organize, inhabit, and structure our living environments differently. The code and its various machines offer a set of working concepts for thinking about the process of ***the actualization of space*** that has to do with possibilities rather than certainty. As the code makes typology-based approaches redundant, it enables the problematization of events in terms of the potential -both organizational and materialized- they offer for change. Through the ***code***, it is possible to explain how space changes in relation to networked patterns of communication between its elements, themselves variable entities. At the same time, articulate space as a field of connectedness composed of nested fields of connectedness where change can be perceived as immanent, and relational while space itself becomes intensive. Spaces on those fields -of both existing and possible entities- do not define spatial relations but rather enable the vast repertoire of their variability at different levels and moments of unfolding. In articulating design ecologies' (auto)generative dynamics and post-cybernetic logistics, control has been replaced by a "mobile milieu which anticipates itself in the prolepsis of its own common sense." (O'Sullivan, Zepke, 2009).

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## NOTES

This presentation focuses on a sample of Alexander's invariant Patterns, marked with two asterisks. The total number of invariant patterns in Alexander's archive is 83. For the purpose of this experiment, Patterns referring to construction -ranging from 205 to 253- have been left out. The sample selected contains the following 65 Patterns: 1,3,8,9,11,14,21,22,30,31,36,37,40,41,46,48,49,51,52,53,60,61,67,69,79,80,87,88,95,98,10,104,105,106,107,110,112,115,117,119,124,127,129,130,139,140,141,148,155,159,160,161,163,167,168,171,1 72,174,179,180,183,188,190,191,197.

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