Transformation of Theory and Practice: Shaping Strategies of Contemporary Architecture

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Abstract

The paper is a result of the broader research of doctoral thesis which attempts to define relation between culture, theory and design as a prerequisite for understanding how ideologies inscribe within the architectural objects. In line with this major goal, the paper presents transformation of contemporary theory and practice as forces that shape the body of architecture through philosophy, theories and methods. Firstly the paper discusses existing conceptions of architectural theory and then relates them to the process of the designing while distinguishing contemporary strategies of architecture. An attempt is put forward clarifying some notions regarding methods and strategies of designing while distinguishing the analogical thought and the narrative as important "tools" that can be used for "transforming the masse of architectural body". Through the analyses of the recent work of Arata Isozaki the paper presents hybrid strategy that effects the transformation of "initial ideas" that can be considered paradigmatic, theoretical and methodical. As the boarder of the three notions is not hermetically sealed, a reflectance on architectural body is suggested in order to understand and interpret the trans-formal state of architectural strategies. The paper suggests that in order to understand how architecture comes into being it is important focusing on the differences and similarities of architectural discourses, understanding how the creative mind of an architect works (methods applied) as well as paradigm indebtedness.

1. Introduction

The research is a part of a broader research project that argues that the prerequisite for understanding the fine ways how ideologies inscribe within the architectural objects is to understand the complex relation the relation between culture, theory and practice, at the time when there are plural understandings of architecture, the variety of theories of architecture and different strategies of designing. Actually, this state is a continuum of modernity and the cultural debate on architecture that started about 60 years ago, at the time when the modern orthodoxy was criticized and questioned a lot. The questions were raised with different approaches started with "Complexity and Contradiction", which terms still remain as topics of the day questioning architectures meaning and understanding. Different approaches appeared partly as a result of the special gift of architecture as an art and as a science. The first raising the ontological questions of aesthetics and more broadly the questions of being and meaning, and the latter in the search of the theoretical frameworks in order of explaining problems in a scientific way.

Still, beside the theoretical paradigms and theoretical frameworks of the cultural and scientific debates, architecture is present with its physical manifestations as architecture of iconic buildings or as architecture of the everyday life. Still, what is obvious is that "the study of architecture …. has been tackled in the way that is closer to reflection and critical discourse than to a desire to elaborate a systematic theory" [1, p2]. At the time of rapid changes of globalization the pathway of architectural transformation is designed by interdisciplinary interactions of architecture with other disciplines and changes that happen within discipline and practice. The first version of this paper presented Transformation as an overall strategy of contemporary architecture [2], focusing more on the design Process, while in this research the notions of transformation is more extended within the contemporary analyses and

understandings of architectural theory and emerging strategies of contemporary architecture, as two realms that architectural body consists of.

Transformation [3] as a notion defined in the dictionary refers to a "complete or major change in someone's or something's appearance, form, etc." or "the act, process, or instance of transforming or being transformed". In such terms the architecture of the contemporary has changed its appearance due to the advances in technology but this actually had an impact in the design process also. Actually, Transformation at the World Festival of Barcelona 2010 meant many things as Transforming culture, image and meaning, form and space, land and site, practice, etc.

The word **strategy** is frequently used in architectural circles also. As defined by dictionary the word strategy [4] means "a careful plan or method for achieving a particular goal usually over a long period of time" or "the skill of making or carrying out plans to achieve a goal". As many researchers have realized, architectural design, as other fields of design, lacks a rigorous theoretical basis. Complexity and the richness of the design problems have extended the search to the present day, but there is no agreement on the demonstrated effectiveness of any given method. This is why, the notion "strategy" within architectural circles is used as defined by Roozenburg and Eekels (1991) "as a broad outline of the way in which people aim to achieve a particular goal, without laying down the method of working in any detail" [5, p.124] or as used by Moneo as "mechanisms, procedures, paradigms and formal devices that recur in the work of the architects – the tools with which that they give shape to their constructions" [1, p.2]. This means that strategy is shaped by a set of beliefs, values, attitudes and motivation. These ideas can be seen as a set of guiding principles which are likely to grow and change as a designer develops.

Arata Isozaki is an architect whose work made increasing use of eclectic architectural quotation both from Western and Eastern Sources. As he writes "the architecture that is now deemed legendary is in fact a text which allows multivalent interpretations, and that the style of buildings consists of interpretation, selection and quotation from various early texts…" [6, p.128]. The statement reveals Arata Isozaki's own manner of design for contemporary society which he calls maniera. His maniera, his methodological preference allows him to create the same equidistance for two types of architecture from two different places (spatiality) and times (temporality).

In line with the major goal of doctoral thesis (that aims at showing the understanding of the relation between culture, theory and practice is the prerequisite for understanding how ideologies carve within the architectural objects) the aim of this research is not to question Isozaki's theory and work, but rather to show that the strategy (maniera) is shaped through philosophy, theories and methods, that enable the initial thought, ideas, concepts to transform in time and space.

Having in mind that the changing variables in architecture are emplaced within the realm of knowledge – discipline and within the realms of practice of architecture, the first part of the research will question the Contemporary understanding of theory of architecture and the relation it has with practice.

Within the second part the research will elaborate the discourse on methodologies and will reflect on the emerging strategies of contemporary architecture as the result of transformation. It will introduce some concepts about the principles that guide the designers and distinguish the analogical method as based on generic qualities of creative thinking.

Thirdly, in order to understand the transformable state of architecture (as discipline and practice) Arata Isozaki's maniera will be elaborated on the case of his the three recent projects. His work has been chosen because of his long period of professional activity and because of the diversity of ideologies, and multiple portrayals and meanings that his work transmits.

2. Reviewing the contemporary understandings of theory of architecture

Within the Greek usage, the word *theory* originally involved the idea of a spectator *contemplation* of the event. This stance as the spectator still affects the idea of the theory viewing or constructing matters as from outside or beyond a discipline ore set of practices [7] and then the term *theory* is contrasted with the Greek praxis, which has to do with *activity.* This creates a contrast between the speculative quality of *theoria* – in which we stand apart from the object and *praxis* – in which we are engaged actively with the object [8, p.110]. Sometimes theory is understood as synonymous of philosophy in the sense that theories are made in order to explain the world around us and theories develop out of the need to make sense out of life [9] or as Kate Nesbit puts it if physical questions are solved tectonically, conceptual or intellectual questions are problematized in the manner of philosophy by which she means theoretically [10].

Nowadays almost every discipline has its own definitions for theory, which definitions fit particularly within the discipline. The question of the *"theory of Architecture"* was not the exception as the late 20th century as Bill Hillier notes, posed a number of questions for theory of Architecture that were questions of about architecture itself [11, p.39]. The question as "does Architecture really need theories?" or "what are they alike?" were

questions that a number of architectural thinkers were dealing about, and this part of the paper will try to comprehensively analyse the contemporary position.

2.1. The relation of theory and practice

Within the contrast of theory/completion vs. praxis/action [8, p. 110], implicitly we understand that theory is something that precedes praxis, in the sense that theory informs practice. This means that if we have theory we know how to actively engage in practise. In the other hand through practice we gain new insides for following theories. So, things become more complex when we understand that theory and praxis are not in sequent relation but instead they are in cyclical relation.

Paul Alan Johnson while elaborating of the issue between Architecture and Design mentions that only few writers that presented comprehensive view of the field of Architectural Theory mentioned the difficulties they might have with the concept of theory governing. This because they believed it does, or because they adopted a softer view of theory than Stanley Fish in Doing What Comes Naturally in (1989) and his proposal of theory as politicizing "theory talk". For Johnson, beneath almost any writing there is a quest for some construct of the world that will guide and be reflected in architecture and there "is a belief that socially, politically, and culturally, architecture makes, has made, or will make a difference. Once formulated, the Grand Theory will align architects with inexorable universal forces and make them fit to govern their newly founded world by design…. the Grand Theory is of course misguided."[7, pp. xvii-xviiii].

Theory as merely Design-Talk, becomes a theory not apart from practice but theory as "the talk" of practice. It is something that practicing architects consult if they wish to perform "correctly", while the terms correctness meaning to perform independently of their "preconceptions, biases, or personal preferences".

The dichotomy between theory and practice is not insignificant since it has been a belief for a long time that architecture has two realms practice and discipline that are accompanying: application through solution defines practice and theory as a guide defines disciplines. The relation between both of them is ill understood nowadays as it ever was. As Johnson states discipline is seen as "hidden client" to practice – its conscience and prescience, saying that:

"every principle of architecture inhabits discipline is unexceptionable, but it is dramatic step saying that theory as set of principles of architecture guides and informs practice or that it has practical consequences, without firstly justifying separation and then demonstrating how any interaction works."
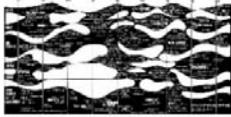
2.2. Categorisation and existing conceptions of architectural theory

The contemporary strategy adopts the notions of negotiation and mediation related to Architectural Theory. This strategy alludes that it is the process of negotiation a primary task, as architectural theory deals with relation between discourse and practice, and how it negotiates or manages the irrational and rational, it inhabits the realm that Hays calls "mediation".

For Johnson, both negotiation and mediation rely on talk, and continuing transaction is a process; therefore theory is a discursive process. He asserts that it is misunderstanding considering theory as something tangible, and as a result is misleading to declare certain notions as the core of architecture without which it ceases to exist or have vitality, value or meaning. He mentions Bruno Zevi's "space", Siegfried Giedion's "space/time", Reyner Banham's "technic" and Louis Sullivan's "functionalism" an all its variants, as frames of reference within which several generations of architects have struggled to think, write and design. He distinguishes two types of theories. The first type are the theories that Influence because they inform about methods or provide short hand cannons that aid implementation. These theories are described as frequently uncritical, mostly affirmative, often populist, usually entrepreneurial, and beg questions about methods, the state of architecture and progress. The other ones are theories that generate ideas as the basis of comprehension if not application and these theories some consider "true" theories because they are mostly critical, radical, etc, Still, because attitudes may be individualistic, incapable of generalization or because there is no common agreement what theory is Johnsons states that neither approach is not satisfying deeply in conceptual level.

These two types mentioned by Johnson [7] are obviously inspired by Jon Lang (1987) who by incorporating behavioural sciences into architecture prompted two stances. One deals with the world as it is, and the other points out the world as it might be. The first stance are *Positive theories (descriptive)* – statements and assentation for describing reality and capable of extension of prediction to future reality. Due to these theories is that to enable people to derive a large number of descriptive statements from a single explanatory statement and this framework creates the base for normative. *Normative theory* – involves prescriptions for actions through standards and norms, manifestos, design principles and philosophies steaming from an ideological position of what should prevail in the world. Normative theories are built within the frames of positive ones.

Table 1: The palette of categorization of architectural theory [7] and approaches in designing

	1948 Bruno Zevi	1971 Charles Jencks	1980 Kenneth Frampton	1987 Peter Rowe
Ways of constructing architectural theory as indication of "ideological set" and the governing principles	Political		Five *isms*	
	Philosophical-religious	Unselfconscious		
	Scientific	Conscious	Neo-Productivism (technical)	Functionalist
	Economic-social	Self-conscious	Neo-Rationalism (formal)	Populist
	Materialist	Activist	Structuralism (anthropological)	Conventionalist
	Technical	Intuitive	Populism (Contextual)	Formalist
	Physio-psychological	Logical	Regionalism	
	Formalist	Idealist traditions		
	Spatial			

So, depending on how we understand the worlds there are multiple pathways to project theories from any view points as Johnson analyses shows. The viewpoints offered by epistemology, philosophy, sociology, psychiatry or psychology and combining with various "architectural approaches the palette of notions becomes more complex" as shown in Table 1, starting with nine ways of constructing architectural theory, to the four normative positions of Peter Rowe.

The various normative positions and the different ways of constructing theory are accepted nowadays. Architectural Theory understood as a "design talk" for Johnson (1994) is actually what Linda Groat and David Wang (2013) describe as Polemical Theories of Design – theories that are related to design activity but that tend to take a polemical stance that set normative guidelines of what to do. Furthermore they categorize theory within three clusters that are not hermetically sealed and they are: Explanatory (beyond positive and postpositive) theory, Normative Theory and Design Polemical theory (that divides what Lang referred to deontological normative theory).

Finally, the three anthologies published in last twenty years defined theory of architecture as a discourse [10] and a "practice of mediation" [12]. They presented a vast number of writings, different theoretical stances structured through multiple thematic debates according the primary paradigms that shaped architectural theory as phenomenology, aesthetics, linguistic theory (semiotics, structuralism, poststructuralism and deconstruction), Marxism and feminism.

In this context Kate Nesbit (1996) defines theory as a discourse "that describes the practice and production of architecture and identifies challenges to it" [10, p.16]. For her theory offers alternative solutions based on observations of the current state of the discipline, or offers new thought paradigms for approaching the issues. It has speculative, anticipatory and catalytic nature, operating at different levels of abstraction, evaluating architectural profession, its intentions and its cultural relevance at large. As she states it deals with architecture's aspirations as much as it's accomplishments. Nesbit characterizes theory as *prescriptive* (which offers new or revived solutions for specific problem, by establishing new norms for practice), *prospective theory* (which differs in that the standards state what is to be avoided in design), *affirmative theory* and *critical theory* that evaluates the build world and its relationship to the society it serves. Even though Nesbit, at mid-90s distinguishes three themes of critical theory (that were feminism and the problem of the body, the aesthetics of contemporary sublime and environmental ethic), she notes that a survey on architectural theory finds a multiplicity of issues, with a lack of dominance of single issue and a paradigm.

Instead, Michael Hays (1998) feels that in mid of this pluralism one particular strain of architectural theory did tend to dominate others, which he describes as "the coupling of Marxian critical theory and post-structuralism with readings of architectural modernism". [12, p. xiv n.1]. He sees contemporary architectural Theory as illuminating the preconceptions, socio-historical aspects, authorities and values within which architecture is embedded. First and foremost for him, architecture theory is a practice of mediation. In its strongest form mediation is the production of relationships between formal analyses of a work of architecture and its social ground or context (however nonsynchronous these sometimes may be), but in such a way as to show the work of architecture as having

some autonomous force with which it could also be seen as negating, distorting, repressing, compensating for, and even producing, as well as reproducing, that context." [12]. He states that "from Marxism and semiotics to psychoanalysis and rhizomatics, architecture theory has freely and contentiously set about opening up architecture to what is thinkable and sayable in other codes". For him while any theory, that talks about architecture only—that does not relate architecture to the larger social, material field—is practically useless, at the same time any theory that does not articulate the concrete specificity and semi-autonomy of architecture's codes and operations misses a major medium of social practice.

A. Krista Sykes (2010) defines theory as a code or framework for architectural thought that existed for centuries, but then asserts that Nesbit and Hays relate to the specific moment that began in the 1960s and looked for the reconstitution of architectural discipline through the mediatory concepts that came from other fields as philosophy, linguistics, psychology that connected architecture with other realms but also attempted for architectures unique territory. As such architectural theory overlaps many conflicting tendencies (as semiotic, structuralism and phenomenology) and as she states "which in turn have given rise to more historical and deconstructivist camps". At mid-2009, in regard of Architectural theory, Sykes finds most helpful a coupling of Hays's assertion of dominance with Nesbitt's definition of critical theory [13].

So, although during the period spanning the mid-1960 and mid-1990, there did exist a prevailing discourse that sought to reformulate the discipline, as Sykes notes at the end of the 2009 a transition happened to what a critical architectural theory was called. The late 90s presented a more pro practice movement oriented, which actually is not total denial of theory, but a focus within of the realities of architecture and building. An interest has been shifting to the possible intersections of architecture with pragmatism and "the person most responsible person for this strategy was Rem Koolhass" and his office OMA [14]. While referring to architecture as "diagram of everything" and creating his think tank "AMO", we can think that this pragmatic thinking in Koolhass view was not an attack to critical theory, but more a redefinition of theory in post-critical fashion. As Harry Francis Mallgrave and David Goodman say "it is a turn toward speculating about the world- as- found rather than speculating about architecture through the coded systems of philosophy, linguistics, or social sciences".

2.3. From critical theory to the diagrammatic writing

In her anthology Krista Sykes declares that for thirty years 1960 through 1990s, in all it different manifestations theory of architecture led the way and since then "architecture itself has changed, in part due to various transformations in technology, means of productions and fabrication, and the realities of cultural and political landscape" that become a reason why architectural theory has shifted from the leading role. As Michael Hays asserts the ideal project of 70s and 80s (although departed from the world of ordinary objects and individuals around it) exercised critical vocation in a mode reserved for writing alone while favouring autonomy of architecture which depended on linguistics and its discursive formulation. The new paradigm is tied to digital technologies and programs that coordinate the multiple parameters into smooth frictional flows. If the 70s and 80s saw architecture algebraic, the new paradigm is topological – a conditions of the field rather than object, continuity rather than closure, of blur rather than calibration [13, p. 475].

What is important to note is that whatever transformations we will achieve in the form of our buildings, they will not be secure until it has been accompanied by a whole collective re-education which as Hays asserts can develop through writings that proceed reading habits, thought process, and practices. These transformations will be safe only when a new consciousness will be constructed capable for matching new situations. This new writing for Hays is much more imperative which he calls the diagramming. The diagram in architecture is understood as a "spatialisation of a selective abstraction and/or reduction of a concept or phenomenon" [15, p.18]. To write diagrammatically, means to make visible the connections of architecture to other practices and modes of thought, scanning for its preconditions and operative assumptions and scanning for its power centres and its movement. Diagrammatic writing emphasises connection, choice and change within a specific moment of time.

3. The design process and contemporary strategies

As mentioned before, despite the theory that was concerned with architecture related to culture, it's socio political context, there has been also an attempt to focus within the design process, methods and methodologies. It is important to note that that are different understandings about Theory of Architecture and Theory of Design, and there is a blurred boundary between the notions also. For example, Fill Hearn while asserting that a theory of architecture is everybody's

business [16] says that "[a] theory of architecture resides in any notion of what a building ought to be like. The form a building takes presupposes a theory of design… And the procedure followed to arrive at the design presupposes a theory of design method". From here we understand that architectural theory consists by theories of design and theories of design methods. In the other hand for others as Leif E. Östman [17] *design theory* is a universal term for the reflections on matters shared among different design fields as he was apt to think that it could be substituted with *design philosophy* or *the science of the artificial as* Simon elaborate 1969. Here the interesting distinguishing is that of *Theory of architecture*, as dealing with the objects, and *Design theory*, as dealing mainly with design processes, which is actually the understanding of this research also.

3.1.   The discourse on methodologies

Regarding the design process, the 60s and 70s were the years of the design methodology movement and were characterised by a tendency to look for common features in the design process or at least to classify design strategies. The start (1962) and the end (1984) of this the period was marked by the first and the last British conference on design methods. After this the debate on design methodology took something of a back seat. Despite the many architectural studies on ideas about architecture, design strategies and typology as a design method, there is no "correct method" of designing as there in not one route through the process. Some attempts of systematization of design methods are given according different authors in table 2. As we can see, in parallelism of the wide palette of categorization of architectural theory presented at table1, depending on the view of the design process there are different ways of categorization of design methods also as presented at Table 2.

What becomes evident is that designers have a set of beliefs, values, attitudes and their own motivation which ideas can be seen as a set of guiding principles. As the principles are likely to grow and change as a designer develops, sometimes they may be defended considerably and become highly personal territory as guided through the principles of morality, decomposition, integration, the future, content, client, user, practical, radical, formal, symbolic etc. [5]. For example the linguistic theories had an obvious impact in Frank Ghery's architecture guided by set of beliefs and critical attitude toward the principles of modern architectural compositions, but eventually the principles of decomposition evolved to highly personal territory defined as a own strategy. Or ecological issues involved within academic research of Kenneth Yeang, eventually over the years of practice evolved in the guiding principles.

Table 2: Classification of design methods

T. J. M van der Voordt and H.B.R van Wegen, (2005) [5]	K. Yormakka , O. Schürer and Dörte Kuhlmann (2007) [18]	
ANALYTICAL METHODS 　　The three step Methods 　　Hierarchal Decomposition 　　Functional Analyses 　　Analyses of interconnected decision areas	**Nature and geometry as authorities** Biomorphic architecture Quadrature and triangulation	**Precedent** Typology Transformation of specific Model
CREATIVE DESIGN 　　Combination 　　Mutation 　　Analogy 　　First Principle	**Music and mathematics as models** Musical analogies Higher dimensions Proportions	**Responses to site** Regionalism Contextualism
TYPOLOGY AS A DESIGN METHOD 　　Typology and design 　　Criticism and resurrection 　　Function and form 　　Use of precedents in education	**Accident and the unconscious as sources** Heterotopias Surrealist devices **Rationalist Approaches** Performance form Design Research	**Generative processes** Superposition and scaling Morphing, folding and animate form Datascape Diagrams Parametric Design

So, if we are in a field of different definitions and interpretation, then why do we need methodological reflection on design methods and theories? The answer might be that this will contribute to the proficiency of designers within three main moments of design process that according to Richard Foqué are a structuring moment, a creative moment and communicative moment [19, p.54]. It is his believe that design methods should have the effect on "deepening one's understanding (process analysis and problem analysis), stimulating participation (information and communication) and …on the design environment (design and building)" [5, p.124].

As mentioned before, there is no reason to argue on "correct method" of designing, but is worth of considering one of the ambitious programmes of design methods specifically for use in architecture, Geoffrey Broadbent methods (1973) which have many generic qualities. In reality Broadbent's method probably does not hold together as a total method but relies upon four distinct ways of generating design form which he called, "pragmatic", "iconic"', "analogical" and "canonic" methods. Even thought, there is no evidence that designers exactly work like this, the methods are worth of study as additions to the tactics for controlling design thought [20, p.203].

Pragmatic design is simply the use of available materials methods of construction, generally without innovation, as if selecting from a catalogue. Iconic design is even more conservative in that it effectively calls for the designer to copy existing solutions. Canonic design relies on the use of rules such as planning grids, proportioning systems, orders etc. The distinguished method in terms of this research could be considered the Analogical Design. There are clear examples of significant use of analogical thought as for example the use of organic forms in architecture offers ways of generating beautiful and also efficient structures, as the analogies may be used to give integrity to ways of constructing parts of design solutions.

This method results from the designer using analogies with other fields or contexts to create a new way of structuring the problem. This is based on generic techniques for creative thinking and it's intellectually realized due to a cognitive process that transfers information or meaning from a particular subject (the source) to another particular subject (the target).

"An analogical Architecture" as put by Kate Nesbitt was also an explication of Aldo Rossi's design method [10, pp.345-356], which relies on the "logical-formal operation" of analogy defined by Carl Young as follows:

"logical" thought is what is expressed in words directed to the outside world in the form of discourse. "Analogical" thought is sensed yet unreal, imagined yet silent; it is not a discourse but rather mediation on the themes of the past, an interior monologue.

Although "analogical thoughts" may silently shape the formal qualities of the buildings, what becomes evident for the contemporary design strategies are the rhetorical intents? The paper will not discuss how the theories and manifestos are written, but rather use the narrative to describe concepts that might be considered new for the discipline of architecture but still transmitted as a continuum of its history. For example, the computational paradigm that brought the new situation in architecture, advocates the possibility that by using computational methods the architect would become a master builder again. Arata Isozaki finds foundation in Gaudi's "analog optimization" of form for "legitimating" computationally designed structure.

3.2. Emerging strategies of contemporary architecture

In regard of computation and after some crises that architectural theory has went through, multiple overlapping things emerged. Technological advances have presented architecture with a plethora of opportunities and challenges, implicating architectural aspects of design as a process, fabrication and representation. So it was not only the theory of critical architecture that went through the transformation, but the architectural practice also.

Computer Aided Design has evolved due to the digital technologies and has been manifested with formal qualities of the buildings. While some use technologies to render forms buildable by guiding material fabrication and construction (The Guggenheim Museum in Bilbao) the others as Charles Jencks puts it in the new paradigms in architecture "are conceived in the belly of the computer" (as Yokohama Terminal).

The digital modelling software in architectural design provided a departure from Euclidian Geometry and made present continuous curves and surfaces of contemporary architecture. As architectural conceptions move from Cartesian dimensions of space, other dimensions of space and other formal conceptions space begin to open new possibilities. This was made possible by computation or computing, a term used to denote the act of mathematical calculation or a computation. [21] Complexity of architectural forms are generated by several concepts such as topological space (topological architecture), isomorphic surfaces (isomorphic architecture), motion kinematics and dynamics (animate architecture), keyshape animation (metamorphic architecture), parametric design (parametric architecture), and genetic algorithms (evolutionary architecture) as briefly described below [22].

One of the first examples of *Topological approaches in Architecture* was presented in Greg Lynn's essay (1993) on "architectural curvilinearity" that moved away from the then dominant deconstructivist "logic of conflict and contradiction" to develop a "more fluid logic of connectivity," manifested by continuous, highly curvilinear surfaces. In topological space geometry is presented by parametric functions.

In *Parametric Design*, it is the parameters of a particular design that are declared, not its shape. By assigning different values to the parameters, different objects or configurations can be easily created. They are extremely useful for modelling the geometry of complex buildings form. Composite assemblages constructed by mutually inflecting parametric objects with internal forces of mass and attraction, create Isomorphic surfaces sometimes refereed as blobs.

Greg Lynn was one of the first architects to utilize animation software not as a medium of representation, but of form generation. By Lynn *Animate Design* "is defined by the co-presence of motion and force at the moment of formal conception." Force, as an initial condition, becomes "the cause of both motion and particular inflections of a form." and "while motion implies movement and action, animation implies evolution of a form and its shaping forces." [22.p.3] *Metamorphic architecture* includes several techniques such as key shape and animation path. With the key shape animation the models are deformed by bounding box, a spline curve etc., while changes in the geometry are recorded as key frames (key shapes) and path animation which deforms an object while moving a selected path. In deformations of the modelling space, object is shaped conform to the changes in geometry of the modelling space. *Evolutionary Architecture* applies generative concepts of biological growth and form. Architectural concepts can be expressed as set of generative rules, and their evolution and development can be digitally encoded, but also the emergent forms can often be unexpected. The key concept by this approach is that *Genetic Algorithm*, where the task of the architect is to define common source of form, "the genetic coding" for a large family of similar objects, in which variety is achieved through different processes of reproduction.

Environmental domain is another reality of architecture that "concerns the environment and the part that architecture can play in arresting, and perhaps even correcting, the ecological damage inflicted by modern society". [13, p. 22] This turn to more pragmatic concerns was not only a response to the abstractions to a poststructural theory but was a kind of professional response to a number of social and cultural issues. So, the 21st century is witnessing reappearance of environmental concerns and the demand of consuming

the efficient energy, since this issue never completely disappeared since entering into mainstream in the 60s. Many governments, particularly In Europe and America, initiated a series of codes that little by little altered the practice of design.

The first it was "Earth Summit" in 1992, the Conference on Environment and Development produced a far reaching document known as Agenda 21. A number of other summits followed as Kyoto Summit 1997, the Johannesburg Summit of 2002, and the Bali Conference of 2007. Also there was an expending network of national and local building codes that are directed to the green architecture and planning starting with Energy Performance of Buildings Directive (EPBD) in 2003 that led to Green Building Program. The efforts were developed in many other countries as in England (Bream), Australia (Green Star), Japan(CASBEE) and United States (LEED). These codes obviously have been affective in raising questions about building's environmental impact [14].

Environmental Ethics as Kate Nesbit states became an political agenda represented by the "green architecture movement" as a theory that aims at developing a less antagonistic relationship with nature by resisting sprawl through high density development, through the use of non-polluting and recycling materials [10, p.62].

One of the architects, that intensively articulates ecological issues has been William McDonough. The "Hanover Principles" in 1992, "Declaration of Interdependences" in 1996 argue that the ethical implication of architectural work includes acknowledging the right of future generations and other species to a healthy environment. Like McDonough, Ken Yeang advocates the ideas of sustainability since 1970. He also argues for the symbiotic relationship between the natural and build environment, which is not necessarily through the novel technology, but instead through the passive or "bioclimatic means". So, the way architects engage within the environmental concerns vary greatly. In one hand we have architects that employ advanced technologies in order to produce environmentally responsible buildings (as Norman Foster, Richard Rogers) while in the other hand other rely on combinations of local materials, geographical and regional solutions that create green buildings.

3.3. Transformable state of architectural design process

Contemporary architectural design is using digital media not as a representational tool for visualization but also as a generative tool for the derivation of form and its transformation. The prediction of the relationship between the design and representation are replaced with computationally- generated complexities. As Kolarević states "the plan no longer "generates" the

design and sections attain a purely analytical role. Grids, repetitions and symmetries lose their past raison d'être, as infinite variability becomes as feasible as modularity" [23, p.13]. This statement represents a radical departure in the design process, because instead of modelling an external form, an internal generative logic is articulated by the chosen generative computational method. Within an automatic fashion, a range of possibilities is produced, from which than the designer could choose the desired formal proposition for further development. Also, it is worth mentioning that the discourse of the digital era turns around architectural process and its representation not due to a final product but reveals the whole procedure from its conceptualization to production.

Next chapter will elaborate three projects of Arata Isozaki showing how the design strategy (maniera) is shaped through philosophy, theories and methods that enable the initial thought, ideas, concepts to transform in time and space. It will attempt to clarify how does analogical thought and narrative "transform the mass of architectural body".

4. Diagramming the recent work of Arata Isozaki

The concept of Transformations at the World Festival of Barcelona meant many things as Transforming culture, image and meaning, form and space, land and site,

practice, etc. There, at November 2010 as a keynote speaker Arata Isozaki presented his search for the real essence of architecture [24]. His work extends in time and space, from the concepts of Modern Language of Architecture, through the linguistic theories of Postmodernism, to the paradigm of the computational design of the 21st century [25]. Cases that follow present the work as hybrid of architectural theories. The work may be understood as his own strategy of making architecture, presenting his maniera of transformation of architectural paradigm from structuralist to computational, transformation of a theory of architecture that is readable as a text to a very contextual building and transformation of an artistic method to the architectural composition.

4.1. From the change of techniques to the transformation of paradigms

The 2002 was the first time that Isozaki's worked with algorithms and it was for the project of a "Florence Railway station". The whole structure was 500 m long, where 100 m spines were supported with two points on the ground. According Isozaki, it was not his own design but a computer generated design from where the form "grows and comes up". As he admitted, since he never saw that kind of structure, it was normal asking if it was
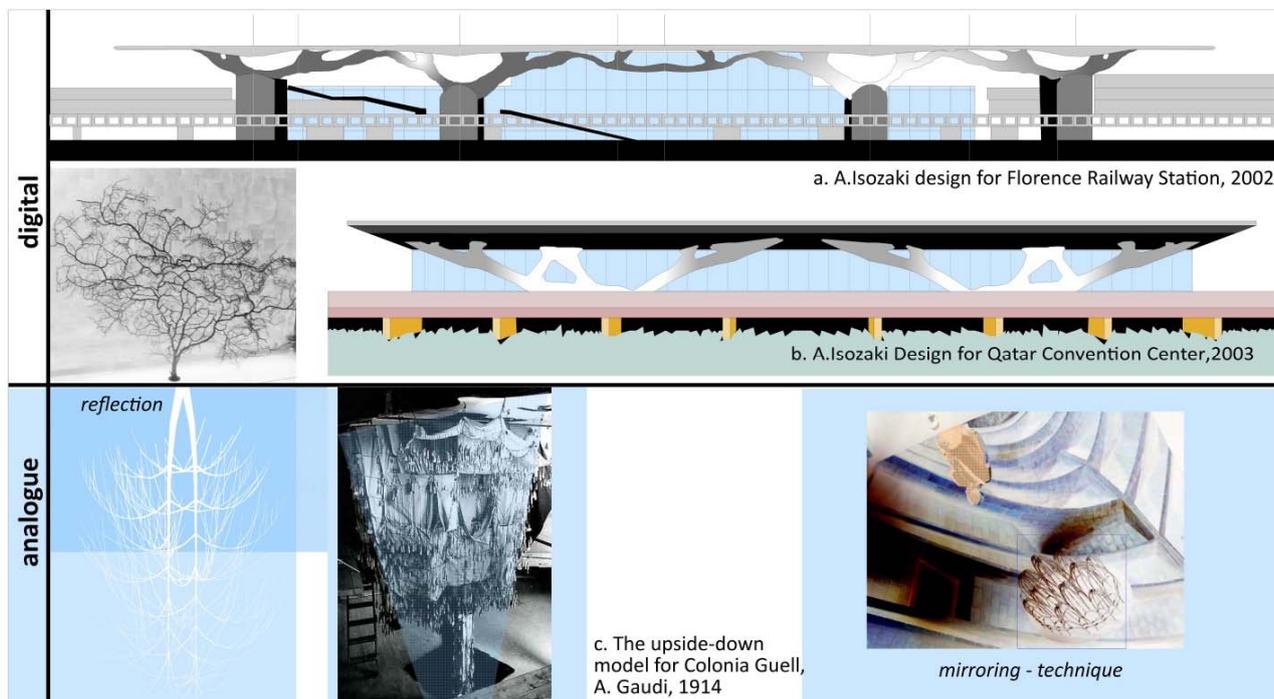

Figure 1. The digital vs analogue way at looking at the structure. a – Second prize design for Florence Railway station; b – Design for Qatar Convention Center; c – The upside down model of Colonia Guell [26]
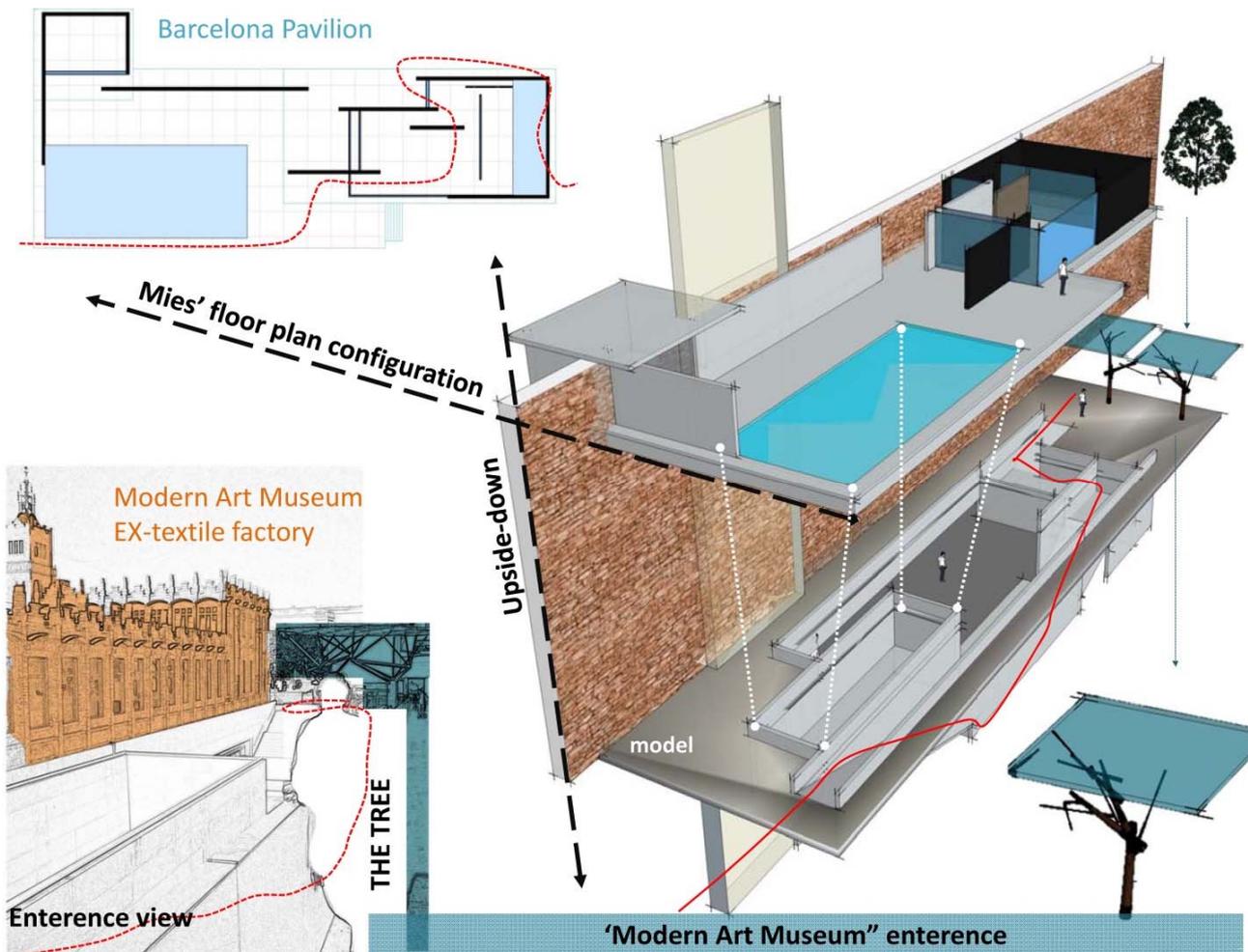(Diagram and drawings by A. Xhambazi)

Figure 2. Generation of spatial configuration of Caixa Forum Entrance in Barcelona, using Barcelona Pavilion floor plan and Gaudi's upside-down technique (Diagram by A. Xhambazi)

"beautiful form or not?" Even though at the time the answer was negative, the aesthetic questions of architecture where left aside and the form was accepted since it was designed by computer and used ultimately as optimised form.

The design idea for the "Qatar Convention Centre" in 2003, revived the concept of "Florence Railway Station" (Figure 1b). This time the structure was 150m long and 35 m wide, supported on two grounding points. The form itself was optimized using concrete for the structure and steel for the box cover, probably because of the aesthetic question mentioned before.

For Isozaki, the picture of the model of Antonio Gaudi for the small chapel at Colonia Guell is the most important theoretical idea more than 100 years old that jumped in the 21st century. As Gaudi studied on finding the structure of the chapel, he searched for the most optimal (rational) form from a "model of upside – down" (Figure 1c [26]) at the time when no mathematical model could do so. (Figure 1) .As Isozaki states the importance of the "upside – down model" (Figure 1c

[26]) is based on that it could be considered the analogue way of looking for a structure, while contemporary architecture uses digital systems and calculation techniques. If we compare these two models with the distance of "100 years", presented in figure 1 it could be argued that they use different technique, different methodology but actually coming to the same space in essence.

Despite, the analogy of "analogue and digital" computation that Isozaki offers while referring to a tactic or a method of design process, having in mind the his belief that the building should be readable as the text (that come from structuralist thought and set of beliefs), embracement of the computational driven processes means a paradigm shift in Isozaki's work.

4.2. Transformation of theory

Despite Isozaki's theory that the maniera is supposed to be anti-contextualist and to generate the discord with the settings, still his strategy allows transformation of

the doctrine or a theory. His project for the entrance of the "Modern Art Museum – Caixa Forum" in Barcelona finished in 2002, coexists with the textile factory designed by Puig I Cadafalx in 1910 and stands "invisible" in front of Barcelona Pavilion.

The concept was generated by using the floor plan of Barcelona Pavilion designed by Mies Van der Rohe. By using the mirroring technique of Antonio Gaudi, a reflection of the floor plan of Barcelona Pavilion rendered the space for the entering of the Modern Art Museum in Barcelona. (Figure 2) This strategy, or Isozaki's maniera used the floor plan of Mies Pavilion and Gaudi's method of upside-down model in order to create the "invisible" but still powerful underground spatial configuration in the given context.

The theory that supposed to be an anti-contextualist, in the case of the entrance of the "Modern Art Museum – Caixa Forum" in Barcelona becomes contextual more than ever.

4.3. From the transformation of techniques to the use of different languages

For the project "Himalaya's art centre" 2004 in Shanghai, Isozaki by using architectural composition found a way of transforming Kanji (Chinese letter) to the Architectural Project (Figure 3). Kanji are the Logographic Traditional Chinese Characters created from "finding" cracks on the bone from where the letters are developed. This makes Isozaki calling Kanji "letters that have algorithms".

The diagram in Figure 3 shows the transformation of "Kanji" on the "Cathay" cover book of Ezra Pound [24]

(major figure in early modernist movement in poetry) by using the method of Calligraphy artist Xu Bing [28]. The interesting thing about "Cathay" is that it wasn't exact translation of Chinese poems nor it was original poetry. In the other hand Xu Bing organizes letters into the structure that resemble Chinese characters, creating forms that look that have a meaning.

Coupling these forces with poetics of creation of Chinese letters, Isozaki transforms further toward articulation of "Himalaya's art centre". The letters of Ezra Pound were changed a little and broken in the lower part using the artist's calligraphy method (Figure 4 on the left).

The building has a hybrid program consisting of the Conventional Hall and Museum, Hotel, Design Centre and Shopping Mall. This Contemporary Building has an area of 150 000 square meters and 100 meters of high. The design constitutes are many huge big screens, contemporary lighting, computationally generated architectural form and Chinese letters. The analyses in Figure 4 presents the concept generation, spatial configuration of building that divides and merges the hybrid program into the parts and the whole, and the architecture of Himalaya's art centre in Shanghai that communicates the meaning of the eastern and the western world.

The Building presents a state of mediation between architectural theories. The upper part communicates the platonic Cubes of the Western World using the abstraction of modern language, and the down part using "algorithms" generates computational forms and "Chinese letters" communicating literally the meaning of the eastern.
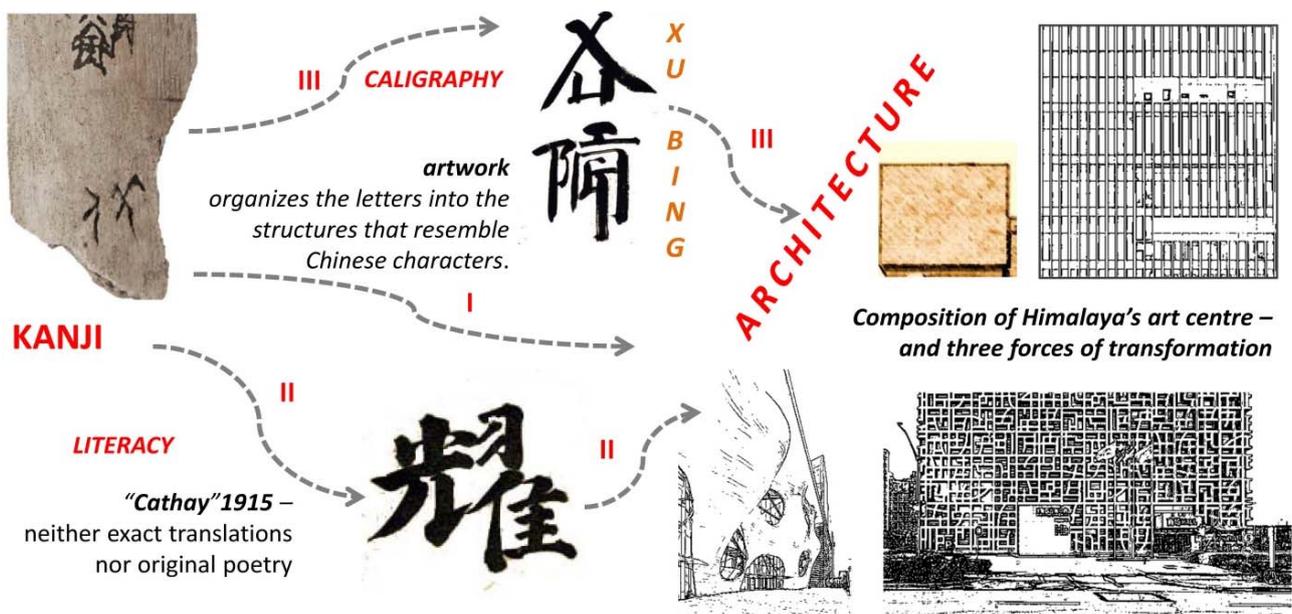

Figure 3. Transformation of Chinese Letters to the architectural Composition of Himalaya's art centre
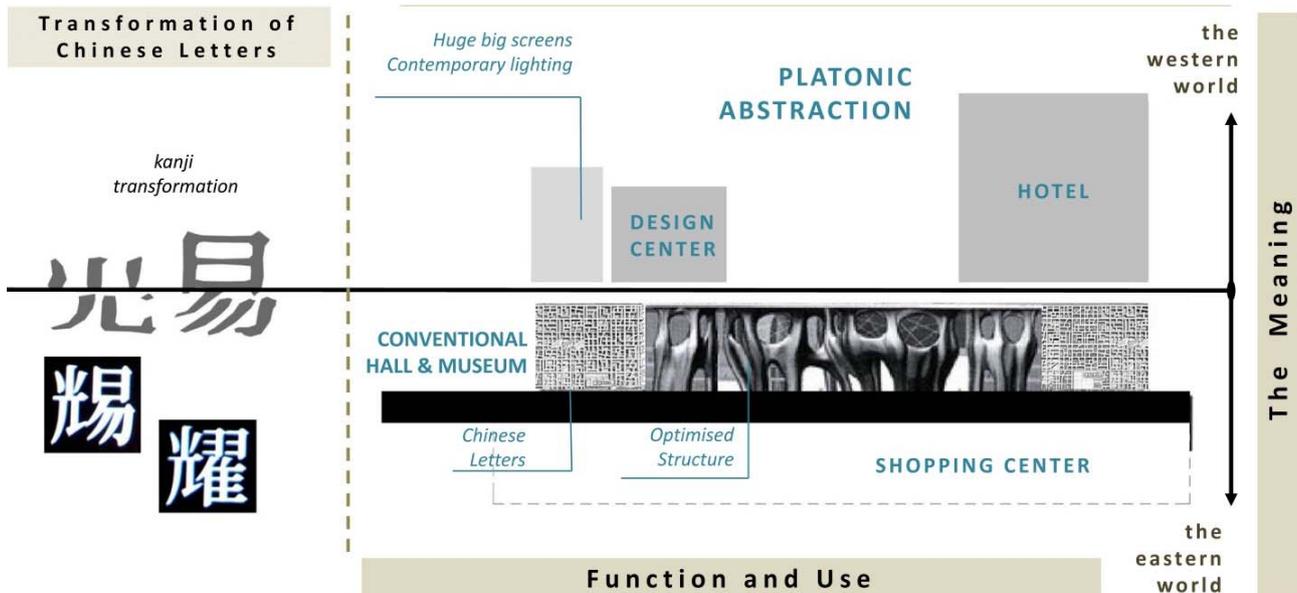(Diagram by A. Xhambazi)

Figure 4. Concept generation, hybrid program and meaning of Himalaya's art centre in Shanghai
(Diagram by A. Xhambazi)

What becomes evident is that Isozaki's technique transformation, results in a search for different sources for creating a complicated architectural program, considering that one single language is not enough for a single building advocating a hybrid of languages in architectural compositions.

5. Conclusion

The reflection on understandings of architectural theory makes visible that architecture is a cultural reaction to a situation in a moment of time rather that a stationary thing. Even the relation between the theory and practise as two realms of Architecture is ill understood as it ever was they both present forces that actually transform and shape architecture. In a moment in time the power centre for the further movement is in theory, and sometimes in practice. As for Bernard Tcshumi [29], concept and context are part of definition of Architecture and theory is a practice of concepts, while practice is a theory of context. The diagrammatic thinking and writing is an attempt to make visible the connections of architecture to other practices and modes of thought, scanning for its preconditions and operative assumptions by emphasising connections, choice and change within a specific moment of time.

At the mid of 2015 we can distinguish two pathways in contemporary architecture. Computer aided design that evolved due to the digital technologies and has been manifested with formal qualities of the buildings. In one hand technologies are used to render forms buildable by guiding material fabrication and construction; the

others to literally produce forms by the computer. The another paradigm considers environment an here also in one hand we have strategies that employ advanced technologies in order to produce environmentally responsible buildings while in the other hand other rely on combinations of local materials, geographical and regional solutions that create green buildings. Even there is no reason to argue on "correct method" of designing (since there is not one route through the process) this doesn't mean that strategic or methodological reflection is unnecessary. The understanding of design methods can actually affect the way designers' structure, create and communicate, and might help toward finding "the subtle ways in which ideology inscribes itself in the very forms of architecture".

The research presented transformation of theory and practice as forces that shaped strategies of contemporary. In the study cases presented the diagram was used to present the transformation of methods, theories and paradigms as forces that form new situations. The strategies discussed in the case studies reflect a hybrid way of composing different sources and bringing them in a new manner, which results in use of different methods, narrative of paradigms and mediation of theories. All these concepts adapt to the new contexts and in these new situations the ambiguity of physical appearance and interpretation still manifest the discursiveness of architecture.

The multiple portrayal of architecture becomes even more intriguing when we consider that it allows even intervening of two different philosophical stances as phenomenology and poststructuralism as it's the case of

Ignasi de Solà-Morales [30] while constructing the contemporary panorama of architecture. Therefore, in order to understand how architecture comes into being it is important to research on the differences and similarities of architectural discourses, understanding how the creative mind of an architect works (methods that are used) and the paradigm indebtedness. This is a promising pathway toward reaching the ability to reflect on architectural body (as composed of theory and praxis) as a prerequisite to understand and interpret the trans-formal state of architectural strategies.

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