

# DESIGN THINKING: WAYS TO REVIEW THE PROJECT PROCESS FOR THE BUILT ENVIRONMENT (BE)

## INTRODUCTION

The lack of conceptualization and design activities aimed at problem setting and the exploration of “possibles” result in part from the persistence of the logic-positivistic framework of science and methodological paradigms that characterize project behavior and in which practice is embedded. Project behavior or more appropriately referred to as “*conduite de projet*” (Boutinet, 1990), could also translate into project conduct, but in order to convey a more embodied meaning, behavior is preferred as it wants to include all aspects of the actual unfolding of a project. The notion therefore, not only wants to consider the programmed project, but as it is described here, all other aspects related to the influence and effects of the *dynamic of actors*, namely their personal, professional and ethical evolving roles and intentions within the project. Therefore a revision of traditional organizational and design theory is initiated by Hatchuel (2001) and subsequently articulated (de Blois, 2007) within the study of the design process through *project behavior*, and highlights the characteristics of the organizing project, which will eventually be termed the *cohering project*. The procedure proposes a set of tools borrowed from fields and disciplines as diverse as social science, systems thinking, cognitive psychology, philosophy and management. The base of the proposed concept and procedures stands on the reassessment of traditional design theories that occurred during the seventies. It refutes the traditional and linear “analysis-synthesis-evaluation” models (Gedenryd, 1998).

Design process models are widely used in project management. Unfortunately, they do not take into account the iterative nature of the “design activity” in prescribing models for its management. The linear process of project management tools does not permit the full potential for the design activity to produce its best results, as information necessary for the development of concepts and details will be come available only at a future stage (Austin, Baldwin, Baizhan & Waskett, 2000; Austin, Newton, Steele & Waskett, 2002; Austin, Steele, Macmillan, Kirby & Spence, 2001)(Austin, Newton, Steele & Waskett, 2002; Austin, Steele, Macmillan, Kirby & Spence, 2001).

By “approach by design”, we mean that the tools for conducting the projects are molded over problem setting mode rather than solution driven (Rittel & Webber, 1973; Rittel & Webber, 1984), that it does not necessarily wish for the optimal solution but a satisficing one (Simon, 1969), that these solutions are derived from variables that take into account “qualitative” as much as quantitative data (Owen, 2007). Design thinking and therefore an approach *by design* wishes to complement the traditional scientific thinking: the whole versus the parts, the process versus the content, the issues versus the solutions, etc. Design(ing) serves the purpose of establishing and conceiving the problem space while keeping it open to welcome potential emerging solutions. Since decisions are highly context dependant, and context is closely linked to space and time, it is difficult to plan for every possible alternative (scenarios) in advance as many variables will have changed by then.

These concepts are briefly presented to inform the reader. Design thinking refers to the multifaceted nature of the design activity (Boland & Collopy, 2004; Cross, Christiaans & Dorst, 1996; Gedenryd, 1998; Lawson, 1980; Owen, 2007; Rowe, 1987): iterative, solution driven, systemic vision, synthesis versus analytic, human-centered, adaptability, ability to visualize and visual communication, etc. Design management refers to the still emerging discipline that focuses on the management of the design activity, seen as a function variable/service within the project process. Management by design introduces the design thinking approach to project management as an alternative to information processing decision making, thus introducing a 'solution driven' approach instead of a 'problem solving' one. The organized project refers to the mechanist, structured, planned, and linear nature of traditional project management models. Finally, the project as an organizing process refers to a more complex concept based on Boutinet's (2004) project theory, as well as Le Moigne's (1984; , 1999) general systems theory and Morin's (1977; , 1996; Morin & Lemoigne, 1999) complexity theory. We establish here that the project, as much as it can be planned, organized, and structured prior to its actual initiation and realization, is also submitted to a dynamic self-structuring process. This process is driven by the actors and stakeholders (AS) actions, as well as by intangible context specific variables and uncertainty situations.

The literature on design process and theory is abundant but also contradictory (Alexander, 1964; Alexander, 1971; Archer, 1965; Broadbent & Ward, 1969; Broadbent, 2002; Chan, 1990; Cross, 1984; Cross, 2006; Cross, Christiaans & Dorst, 1996; Dechow, 2004; Dorst & Dijkhuis, 1995; Gedenryd, 1998; Jones, 1970; Jones, 2003; Kruger & Cross, 2006; Lawson, 1980; Liedtka, 2004; Macmillan, Steele, Kirby, Spence & Austin, 2002; Newsome, Spillers & Finger, 1988; Popovic, 1996; Rehman & Yan, 2007; Rittel, Grant & Protzen, 1984; Rowe, 1987). It offers a wide variety of models based on the analysis-synthesis linear rational thinking as well as the iterative loop models. No consensus has been reached and so far the linear option prevails for project management.

## **THE PROJECT APPROACH**

Even though we have witnessed a significant paradigm shift in most major sciences, the built environment disciplines are still, in many instances, driven by management and engineering philosophy, consequently following their modes of practice for project management and conduct in general (Boland & Collopy, 2004). It is posited that by only approaching projects from a management stance serves limited objectives, therefore neglecting important and sensitive intangible objectives into which design practice is called to play an important role. (Boland & Collopy, 2004; Claveranne, Larrasquet & Jayaratna, 1996; Cockshaw, 2001; Cooper & Press, 1994; Hedges, Hanby & Murray, 2000; Jos P. Van Leeuwen, 2004; Lam, Wong & Chan, 2006; Lockwood, 2004; Mintzberg, 2005; Nelson & Stolterman, 2003; Sebastian, 2005; Weick, 1998)

The design-construction process (Bibby, 2003; Pot, 2005) taken as an example of the complexity of the ASP dynamic (as much within organizations than in the project itself) demonstrates clearly that the "actor-stakeholder" is not considered a "project variable" or asset, if not, that would constitute an input, aside from the professional (human) resource point of view. In the traditional view, stakeholders refer to the beneficiaries and other actors

that have specific “stakes” in the project, and are often not involved in the “execution” phase. Actors on the other hand, are the ones directly involved in all the phases of the project (concept to delivery and operation). The position endorsed here and discussed later focuses on a combined view of the “actor as stakeholder” and vice-versa. This view is provided through an approach *by design* (Boland & Collopy, 2004) which taps into design practice as a tool for project management. It provides a window on the project by appropriating and redistributing the actor’s and stockholder’s stakes – which are carried by their intentions – throughout the project process. That process in turn, is better understood as a “behavior” that operates as well *by design*. (Findeli & Bousbaci, 2005; Nelson & Stolterman, 2003)

The comprehension of phenomena, theories and practices surrounding project practice, through the description of the elements that comprise it and the subsequent analysis of the interrelations among these, reveals that there are significant shortcomings in the way in which design is understood and managed within the building industry. (Austin, Newton, Steele et al., 2002; Austin, Steele, Macmillan et al., 2001; Bibby, 2003; Choo, Hammond, Tommelein, Austin & Ballard, 2004; Cockshaw, 2001; Cornick, 1991; Koskela, Ballard & Tanhuanpää, 1997; Lafford *et al.*, 1998) How traditional and dominant disciplines (engineering, architecture, accounting, law) conceive project behavior, in practice, appear to still be positioned within the classic Cartesian analysis approach. (Le Moigne, 1999; Morin, 1977) It perpetuates practices that favour the separation of disciplines and the fragmentation of approaches, resulting in the emergence of a host of problems related, as much to the realization, as to the final product. These problems, which are confronted, caused and maintained by systems that are increasingly complex, are recurrent. They are not anticipated, but treated, with the help of methods partially obsolete. The *problem setting* activity phase, which aims at continuously redefining the situation, problems and stakes under a complex and systemic view, seems often ignored and is more referred to as the feasibility phase. (Macmillan, Steele, Austin, Kirby & Robin, 2001) Let us emphasize that design problems are mostly referred to as *wicked problems*. (Rittel & Webber, 1973; Rittel, Grant & Protzen, 1984) Designers are often confronted with *given* problems instead of being involved in the critical problem-setting process phase. Engineering design “*assumes that the ‘problem’ to be solved is comprehensively and precisely described, preferably in the form of a requirements specification. The mission ... is to find a solution.*” (Löwgren, 1995 in Vetting Wolf, 2006, p. 521) Projects are planned without necessarily being understood holistically. The essence of a project often remains elusive. Is it project management or a management project? In this effect, this main question is imposed: Is project behavior, including project management, a design activity? If so, devising ways of managing the design process in the same way we manage production may be misleading.

An articulation of the main issues of project behavior – intention, organization, and finality – carried out using theories and concepts that comprise this conduct, helps to highlight the role of the stakeholder, on the one hand, and the organizational concepts with relation to the project on the other. The built environment project is considered here as an amalgamation of organizational groups and development projects; all of which are animated by a dynamic of stakeholders.

It is relevant, not only to review this stance of the building industry project, but also to try to understand what specific elements articulate the poles of the project as described by Boutinet (2004). From these elements, what is missing? What are the means required to re-establish a “sought after” balance which will integrate the proposed values and intentions of the project? To this end, the systems approach is the privileged tool for the comprehension and modeling

of this complex set which is essentially the “project system”. This approach is based on the soft-systems methodology (SSM) developed by Checkland & Scholes (1999) through an effort of modeling from multiple perspectives. SSM serves as a means for establishing a sequence of iterations of models that can view the entire project through a specific angle, and that can contribute to its comprehension as well as to its problematization. The resulting *rich picture* (Wilson, 2001) enables the modeling of AS’s intentions and roles, in a dynamic context of design activities. The focus of the study, the object, is therefore the project; the project formalized by the dynamic organization of actors-stakeholders – built on collective action. Consequently, by adopting this position, it is possible to establish a fundamental distinction between the “project organization” and the “organizing project”. To achieve this, project development and determinism, the intentions and purposes, all serve as arguments for the proposed questioning.

*“The organization is nevertheless always and fundamentally a human artefact that, in orienting the behaviours of stakeholders and in circumscribing their freedom and their capacity for action, allows the development of collective enterprises of humans, but at the same time, profoundly conditions their results”.* (loose translation, Crozier & Friedberg, 1977, p. 16)

To clarify this organizational component, a comparison of the comprehension of organizations and projects is conducted using the two approaches, that of Crozier and Friedberg (1977) and that of Mintzberg (1979). The two approaches have a viewpoint of structure and function, but through different angles: on the one side, the structure and the communication, on the other, the stakeholders and their behaviors. According to Crozier and Friedberg (1977), projects are in fact, constructs of collective action. The structuralization of the fields they establish are inevitable mediations between the ends we seek, on the one hand, and the human “means” that we are obliged to employ to attain such ends, on the other. In this end, an important place is reserved for the management of uncertainty and non-predictability. The necessity to confront certain antagonisms – individual projects, organizational projects – leaves much room for exploring that which is overlooked or ignored.

The apprehension of uncertainty is in opposition with the management of risk which is addressed by the more traditional sciences of management and probabilities. This *uncertainty* can also be anticipated, rather than strictly planned and managed. Alternative scenarios, although essential, need to be highly flexible to allow for the inclusion of future unknowns. It implies that flexible *spaces* need to be programmed within the project. These spaces should be problematized and made adaptable for unplanned situated action. Attempts that aim to identify the *unknown spaces* do not limit the exploration of future potential “possibles”, and in fact, facilitate the proposal of solutions to problems that are neither known nor contextualized. The designer should therefore be able to cope with the immediate context with which his action is inserted. Unfortunately, his role is limited and his contribution mostly restricted to the conceptual phase. In this end Gray and Hughes (2001) confirm that the complexity of the design-construction process, coupled with the uncertainty regarding the nature of the iterative design activity necessitates significant efforts of management for the success of projects. This is why an important part of this context is represented by the organizational and procedural structures, which limit the scope of the designer. This rigid context is ill-suited to design activity; an activity that is hardly yet understood. (Kharu & Lahdenpera, 1999)

Also, despite the increasingly numerous arguments in favor for the strategic role that design plays or can play in project behavior, it is still too often perceived and considered as a simple organizational function (on the same level as accounting, marketing, production, etc.). As a result, design continues to remain a simple tool required for achieving traditional organizational objectives, including those related to performance. So, if the control of the project is, in fact, a design activity, why is the project, in practice, still mainly perceived as a management activity, when it could be involved at the strategic level?

## **DESIGN THINKING AND THE ORGANIZING PROJECT**

This argument aims to establish the potential strategic role of design, as a first step, and then to situate design practice, to finally, clarify design's untapped potential role within the context of the building industry project practice. This proposal is supported by a discussion of organizational structures of building industry projects and the model of project management illustrated by the 'Process Protocol' (Kagioglou, Cooper & Et Al., 1998). Design practice and project behavior are studied from the viewpoint of the respective positions of the actors-stakeholders – disciplinary positions, intentions and roles – on the one hand, and the organizational concepts and structures of the project on the other. Also, to allow the evolution from a posture of *action of design* towards a *thinking by design* in the building industry project context, a reversal from “design management” towards “management by design” should take place. (Boland & Collopy, 2004) The goal is not to explore methodologies aimed at improving the design process or, by extension-reduction, design management; rather the contrary. It is more a confrontation of the traditional sequential approach of project management by exploring the real foundations that drive and maintain the momentum of change driven through projects, such as: the AS and their intentions; thinking, doing and acting (“*penser*”, “*faire*”, “*agir*”); the quest and the project.

It is also of some interest to stress the failure of “design methods” which were repudiated by the same authors that devised them (Alexander, 1971; Broadbent, 1969; Jones, 1970; Lawson, 1980 in Gedenryd, 1998, p. 59) and raise questions about their adoption by the management sciences who use it as a tool frame aimed at understanding and devising complex structures and processes to better “manage the project process”. Understanding and managing the design process based on management principles that rely on inadequate design methodologies seems in that matter contradictory. “*The usual difficulty is that of losing control of the design situation once one is committed to a systematic procedure which seems to fit the problem less and less as designing proceeds.* (Jones, 1970, p.27 in Gedenryd, 1998, p.60) Nevertheless, design management takes that route and seems not to consider some basic component of the challenge that understanding design poses: “*In studying design as a process, one is looking at the process-component of largely content-based decisions. This severely limits the power of a process-oriented methodology to understand what is going on in the design activity.*” (Dorst & Dijkhuis, 1995, p.265)

Most practitioners and researchers agree on the fact that an expanded cooperation is needed between disciplines. The multidisciplinary approach is required to move towards a transdisciplinary approach, but few stakeholders can agree on a definition of what constitutes a global vision, similarly, few practitioners understand the mechanisms that favor the emergence initiated by this transdisciplinary posture. (De Coninck, 1996)

In contrast to the rigid and fragmented processes of project management, the thinking *by design* postulates that the conception of design spaces allows for an approach that is both global and specific for the project and its components, its intentions and its purposes, of the role of stakeholders and organizations. To that end, it is assumed that the iterative characteristics, the approach from the whole and the parts, the premise of the complexity of the problem, the mechanisms for decision making, are all essential elements as much to the project control as to the design process. Consequently, the two processes share noticeable similarities. However, these similarities are not always reflected in practice. Although accepted by the design community it is not so much acknowledged in the management and engineering communities. It is therefore possible to offer alternatives to current methods of problem-solving by a reversal towards *problem-setting*?

The comprehension and the description of multi-level project behavior systems are essential. These are usually described with specific procedural models that do not allow for the grasp of the whole complexity of the issues. Design can play a decisive role by strategically embedding itself within organizations and projects, while suggesting a new comprehension-conception of the forces in action, the processes and standards with which to risk so that the pertinent projects may be brought to term. (Borja De Mozota, 2003; Cooper & Press, 1994; Oakley, Borja De Mozota & Clipson, 1990) It is important to question this approach and to suggest the contribution of several models that, once combined through Soft System Methodology (SSM) (Checkland, 1981; Checkland & Scholes, 1999; Wilson, 2001), allow a new perspective on the project. Just as Boutinet (1990, p. 153, loose translation) suggests, "it is no longer about analyzing a system, but to design it better".

It is through such findings of deficiencies, or "perverse effects", that the need to rethink certain processes, mainly problem setting that governs project practice emerges. It is therefore appropriate to reintroduce within the process this reflexive thinking – reflection in action (Schön, 1983) – to enhance upstream conception, throughout, as well as downstream the project (Findeli & Bousbaci, 2005), through the consideration of dimensions left behind in a standard process.

The cause of identifiable failures in project management might originate from the divergence between the theories of design and organizational theories that thinking *by design* might be able to address. A pronounced aversion, regarding the uncertainty generated by any process of complex problem resolution, tends to lead to an over-fragmentation of the phases of the project process, and in so doing denaturalize it, generating considerable consequences towards project behavior in its entirety. It is therefore appropriate to verify if the "schools" that advocate an approach of the project through management methods alone are misled. Boland and Collopy (2004) are suggesting this novel approach that focuses on design thinking and problem setting.

The field of project management, and more specifically, that of design-management in a context of the built environment project, is used to confirm the arguments that support the following preconditions. The first argues that lack of knowledge with the design process in this area is real and is a source of major concern to those involved in the project. The second supports the need to reintroduce "in" and "by" the process of resolving the problem and the problematisation, better suited non-quantitative approaches to complex situations and an approach of thinking *by design*. The third emphasizes the arguments that point toward the need to introduce these qualitative components, highlighted by the problematisation, in the processes of elaboration and project behavior.

The articulation of these assumptions may not be effected without an exploration of the context, in which the projects evolve; that of the organizations and the stakeholders who run them. These two components are founded on the concept of organizing project. The concept of organizing project is articulated by the notion of thinking *by design*, which essentially rests on the systemic approach and the assumption of complexity. This approach leads to a management *by design* and also allows situating other concepts that animate the practice of the development project, such as; the contextualization, the multi-disciplinarity, and the emergence of knowledge in the situation of a project.

### **The Notions of Organisation in the Project: structure vs. process**

The organizing phenomenon, and to some extent, the structuring process, are addressed through the bias of a systemic and complex approach, under a general theoretical aspect applicable to all types of organizations. Another concern about the organization regards the aspects that “condition” or “shape” of our everyday existence. As Mintzberg (1989, p. 338) claims, “society is an organization and all that is produced in society is produced in a context of organizations”. Based on this author, organizations have a tendency to ‘kill’ the organization by their obsession of stability – as much structural as functional – as they act counter to the principles of variety and evolution of systems. This fact equally applies to project behavior.

The organizations therefore condition our lives. We are confronted by these manifestations that, on the most part, are highly “structured, standardized and rational”. Also, it is desirable to adapt organizations to the needs of projects, rather than adapt the projects to organizations. If unable to act on organization typologies (Mintzberg, 1979; 1989), it becomes pertinent then to know how to deal with them in a minimal way. The articulation of organizational “forms and forces” (Mintzberg, 1990, p. 171, 372) represent, in this sense, a potential point of departure regarding the knowledge of the functioning of organizations and their organization.

*“Among the full range of possible structures of a field of action, organization is, in effect, the most visible and formalized form (...). It can therefore provide us with a somewhat experimental system model (...): that of cooperation and interdependence between stakeholders pursuing divergent interests if not contradictory”.* (loose translation, Crozier & Friedberg, 1977, p. 21)

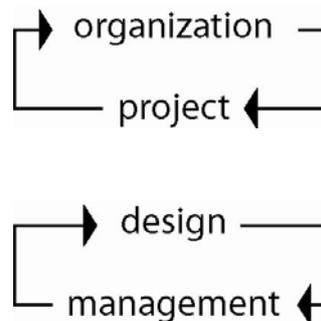
The organizing phenomenon refers to the concept of organization elaborated by Edgar Morin (1977). The structuring process refers to activities that address an “ordered” arrangement of the components and processes with the perspective of achieving specific objectives; whereas, the structural entity refers to the organizational entity, the enterprise. The organization makes reference to natural and dynamic processes of arrangement and interactions. It also refers to the will of imposing an order to things and to our actions in a project situation. Finally, the organization embodies this virtual grid that is rigid and binding in which individuals are deployed in a “rational” arrangement of the processes and the decision making power structure (at least the intended decision power structure). Consequently it is appropriate to consider these two aspects; the structuring-organization and the organizing-function. *“Modeling a system, a complex system, is primarily the modeling of a system of actions”.* (Le Moigne, 1999, p.65)

The organization concept is therefore a key property of all systems. (Le Moigne, 1990; Morin, 1977) Without organization there is only chaos (a situation of high entropy). The

organization (structure) manifests itself by the fact that all systems “can” be decomposed in a certain number of sub-systems; in modules and levels. The organizational approach of Mintzberg (1979, pp. 35-64) aptly demonstrates the variety of these sub-systems – formal and informal communications systems, systems of authority, of games of actors-stakeholders, of production – present within organizations. These sub-systems are, subsequently partially transposed within the system, just as projects form systems of systems.

## THE ORGANIZING PROJECT

The emerging concept of "organizing project" leads to an experimentation of various approaches to its modeling. Starting from the paradigm of complexity and systemic concepts that contribute to the comprehension of object-project, interaction, globality, and organization, (Morin, 1977; Morin & Lemoigne, 1999) it is possible to elaborate modeling scenarios. Whether we look at the project from a structured process that is organized to form a structure; or from a perspective that the *project* (Boutinet, 2004) is in fact the “organizing” process which evolves and takes form around problem-setting with ASP, we face a specific design situation of *organized action* (organisa(c)tion). (Le Moigne, 1999, p. 75)



**Figure 1:** *The organization of a project – the organizing project*  
(Source: De Blois, 2007, p.74)

The models that serve as the basis for this understanding are anticipated for the articulation of the prospective project. These models support the elaboration and exploration of ‘possibles’; to understand the games of stakeholders and their insertion within the organization of a project and finally to model the competing organizational structures. (Levy, 1988) Once this is established it is possible to evaluate the impacts of such an approach on the project in general, and on project management in particular. “*The organization is not an object, an invariant thing independent of its observer. “ It expresses, at the same time, inseparably, the action, the stakeholder, and the temporal transformation of the stakeholder”.* (loose translation, Le Moigne, 1990, p. 76)

This trilogy, action, stakeholder, and transformation could just as easily define the project, in fact, the iterative process of design as well. “*The complexity of the organization can not be identified by the interweaving of machinery or components of a structure (...) [but by] the presumed intelligible interlocking of multiple actions it ensures, transitive and recursive, over time (idem).* It is pertinent to insist on the necessity to identify and understand these “organizing” and “finalizing” actions, those that are found in both, the act of conception and in the organizing project as well. Therefore conceiving the project and the organization constitutes the two sides of the same concept. A project organizes itself and it organizes; the organization *projects* and *projects* itself. The project links the ideas, the intentions, the aims,

the AS. It produces the project and the objects and maintains itself in its fulfillment; just as the organization that operates this intelligible conjunction of stakeholders and action.

## CONCLUSION

The parallelization of the organizational theories of Mintzberg and those of Crozier and Friedberg, on the dynamics of stakeholders, can bring out, on an underlying canvas of a theory of the project (Boutinet, 1990), the absence of the stakeholder as an individual driver of a project in the study of the project behavior of the building industry. It is also clear that organizations are still perceived, analyzed and studied in isolation, as autonomous and isolated entities, even though they are referred to as multi-organization. The interactions between the various types of organizations within projects of the building industry are not often addressed or even considered, unless this is done using diagrams which say little about the complexity of the system and its dynamic interactions. It turns out that the modeling of the role of the stakeholder – referring to the dynamic aspect – is very complex and that conventional methodologies and models currently employed for project behavior by the dominant disciplines, do not only exclude the stakeholders, but do not permit them either. In order to consider the increasingly numerous and complex issues that shape and inspire project behavior, it is essential to use mixed approaches which are not limited to the achievement of the virtuous triangle. To that end, the soft systems approach enables the conciliation of multiple approaches by proposing a framework for the conception of the problem space, which can be done using an approach by design, in action (Schön, 1983) through transdisciplinary knowledge building workshops. It assembles a methodology of participatory action research within case study scenario (or project-grounded research) followed by qualitative analysis of design protocol. It is an indispensable tool for the problematization and fits well in the soft systems approach. These approaches are essential in capturing the concept of organizing-project and were tested during the AAP project (Art, Architecture et Paysage). (Coste, Findeli, Guillot, Joliveau & Keravel, 2008)

The concept of “organizing-project” remains embryonic and could only be clarified by addressing subjects that can be described as “wicked problems” (Simon, 1947; Rittel & Webber, 1973). The most obvious include the following. A better comprehension of the role of the AS (a, a’ and a’”), driver of individual multi-level projects, must be sought and inserted in the process. This comprehension requires a more “realistic” modeling of the intra-and inter-organizational dynamics. A better use of organizational typologies using concepts such as “forces and forms” that are not limited to structure considerations, are essential for the design of more effective multi-organisations. This is possible through the elaboration of a protocol for problem-setting, with the formulation of an approach by design. By implementing the models presented, including those who advocate an approach by the whole. (Boutinet, 2005; Checkland & Scholes, 1999; Nelson & Stolterman, 2003) the process offers a perspective for *managing by design*. In doing so it defines a vision, and an interdisciplinary conduct, that is be rooted in the *praxis* of the project. This balancing of decision-making powers and the inclusion of disciplines not traditionally included within the contained decision-making process, ultimately lead towards the convergence of organizational and design theories (Hatchuel, 2001). Of course, a substantial condition confronts the opportunity to address these issues and problematics. This regards the ability to be open-minded. Underlying this program, which anticipates the reconciliation between management and design, it becomes necessary to envision a reformulation of the “syntax” of management in terms of project management and of design management (Boland & Collopy, 2004), and

conversely, that of design for management, and where this is impossible without an interdisciplinary posture.

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