From ‘design’ to ‘designing’ approaches in complex systems: The case of a cultural district

DRAFT VERSION[1]

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ABSTRACT

In this paper we will focus on organizational design approaches in complex systems. We believe that the design of a complex system cannot be conceived as a process of design completely defined a priori in a linear fashion. On the contrary, it is something dynamic and constantly evolving (designing), which allows the pursuit of pragmatic implementations and, at the same time, creative experimentation and contextual learning. In our knowledge, in literature there aren't previous studies that explore the ‘tension’ that can arise between an overly rational and deterministic design approach and the actual process of design ‘in action’, especially in large, complex and dynamic projects where the social dimension is very relevant. In order to open a debate and trying to highlight this tension, we exploit a participatory action research that exploits our experience as 'insiders' in the design process of a cultural district. A proposition and research questions for further studies are proposed.

KEYWORDS: organizational design approaches, complex systems, organizational emergence, organizational designing

1. INTRODUCTION

In this paper we will focus on organizational design approaches in complex systems. In a complex system the interaction among constituents of the system, and the interaction between the system and its environment, are of such a nature that the system as a whole cannot be fully understood simply by analyzing its components (Cilliers, 1998). According to Astley & Van de Ven (1983) classification of schools of organizational thought, we privilege the Collective-Action View (CAV). Instead of conceiving organizations as subjects to an environmentally determined evolution, as for contingency theories, it is possible to conceive them as guided and constructed by collective purpose and choice.

[1] Please note this is an early stage working paper. If you have any criticism or suggestion please contact us.

The CAV focuses on networks of symbiotically interdependent, yet semiautonomous organizations that interact to construct or modify their collective environment, working rules, and options. The manager plays an interactive role and transacts with others through collective bargaining, negotiation, compromise, political maneuver, and so on. Movements toward solutions are guided by norms, customs, and laws, which are the working rules of collective action (Astley & Van de Ven, 1983).

Starting from these premises we find ourselves uncomfortable in conceiving the design of a complex system as a full rational and deterministic process or, in other words, a design completely defined a priori in a linear fashion. On the contrary, we are more at ease with recent literature on organizational design for which the process of design might involve pragmatic implementations, creative experimentation and contextual learning at the same time (e.g. Romme, 2003; Dunbar and Starbuck, 2006). The process of design is seen as essentially problematic and non-deterministic, it is conceived as an iterative process which often starts from 'open' and 'incomplete' goals (Dunbar & Starbuck, 2006). The design efforts become persistent and designing and actions are strictly linked with one another (Dunbar & Starbuck, 2006). Because designers nearly always misunderstand to some degree, their efforts become experiments that might not turn out as predicted, and careful attention is placed on the outcomes of these experiments (Dunbar & Starbuck, 2006). Otherwise, the risk is to ignore the emerging aspects and to focus on 'a priori' and crystallized sets of goals and actions.

In our knowledge, in literature there aren't previous studies that explore the 'tension' that can arise between an overly rational and deterministic design approach and the actual process of design 'in action', especially in large, complex and dynamic projects where the social dimension is very relevant. This tension may arise, for example, between the perspective adopted by influential actors such as funders, sponsors or auditors of a project and the approach actually emerging by practice of design. Therefore, in order to open a debate and trying to highlight this tension, we exploit a participatory action research and thus our experience as 'insiders' in the design process of a cultural district. Therefore we must first define what is meant by 'a cultural district' (CD).

A CD is a model of local development centered around the valorization of cultural assets (e.g. Brooks &. Kushner, 2001; Valentino, 2007; Santagata, 2002; Lazzeretti et al., 2010; Francesconi & Cioccarelli, 2013). Some authors conceive the CD as a mere post-industrial adaptation of the industrial district model, e.g. in terms of vertical integration of value chains of local cultural, creative, and tourist industries (Scott, 2001). Cheng (2006) emphasizes the parallelism between the industrial atmosphere (Marhsall, 1919) and the cultural atmosphere. Lloyd (2006) argues that the social dimension is even more evident and pervasive in a CD. Nevertheless, according to recent interpretations, some scholars (e.g. Sacco, 2003; Lazzeretti, 2012; Francesconi & Cioccarelli, 2013) emphasize a major substantial change: whereas the industrial district is mainly based upon the vertical integration of organizations within the same value chain, the CD is conceived as a system with a

'variable geometry' and even more complex and dynamic horizontal or transversal integrations among organizations and actors which belong to different value chains and different industries, either cultural and non-cutural (Francesconi & Cioccarelli, 2013, p. 60). This system aims at generating synergies, complementarities and opportunities for a local socio-economic development in a dynamic way. Culture, research, education and all other fields are intended to work in a more integrated and synergistic way. It follows an high complexity of the system due to reciprocal and dynamic interdependencies among a multitude of actors and stakeholders, such as public administrators, entrepreneurs, educators, scientists and researchers, cultural agents and the whole civil society (Sacco, 2003; 2006). Indeed, unlike the industrial district, the CD does not seem to arise spontaneously but it seems to require an explicit intervention and support (a 'trigger') from public and/or private actors (e.g. Sacco, 2003; Leardini & Rossi, 2010)[2]. Many authors argue that the process of development of a CD should start from an in-depth analysis of the territory, of its tangible and intangible assets, both cultural and non-cultural (e.g. Sacco, 2003; Valentino, 2003; Amari, 2006), in order to efficiently exploit the specificities of the local cultural heritage. They assume that the stage of design process of a CD must follow a detailed analysis of all the specific characteristics of the territory involved (mainly in terms of resources, and also in terms of competences, relationships and so forth). In a recent study and conceptualization, Francesconi & Cioccarelli (2013) propose an integrative framework that conceives the design of a CD as an iterative process that integrates local resources, knowledge, competences, skills and the system of social relations that imbue the area. The proposed framework is conceived both as a support for analysis and design at the same time. This is because the authors believe the design of a CD could not be conceived as a process of design completely defined a priori in a linear fashion (i.e. depth analysis, design, and implementation). They argue the development of a CD cannot be merely imposed in a top-down way although it can be triggered by explicit interventions and support by public and/or private actors.

Based on these argumentations, we aim at highlighting the issue of the 'tension' we have perceived by participating in the design process of a CD in Northern Italy.

In Italy the major banking foundations have been playing a crucial role in supporting the development of CDs (Leardini & Rossi, 2010), providing the necessary funds and clear guidelines on how the

[2] Frequently the public actors play a crucial role in the CD creation process, such as for the CD of 'Val de Loire' (Loire Valley). The governance is based on a lean organization, "Mission Val de Loire", entirely controlled by public actors. The French CD is a good example of how the public actor can effectively support culture-driven local development, fostering entrepreneurship and integrating traditional cultural sectors with other sectors such as food, wine and tourism (Donato & Badia, 2008). Other times the private actors play a more strategic role, such as in Litz case (Sacco & Pedrini, 2003). Litz has become one of the most important centers in the world in the field of multimedia and new technologies applied to culture. The creation of the CD is strictly linked to Ars Electronica[2] and to an high number of private cultural institutions in the area. These institutions, with a high propensity towards new technologies, are often supported by government grants. This complexity seems to characterize also the process of design of a CD.

design process of a CD should be done. Foundations often require a rigorous vision of projects to be financed from the earliest stages in terms of: budget; general aims as well as specific operating objectives; actions to be implemented; organizational structures, coordinating and control mechanisms to be designed; partnerships to be pursued; and so forth. This is quite understandable due to the high amount of financial resources involved, the need for reporting and control, and the identification of specific responsibilities. This approach follows a sequential design process based on anticipation and completeness. Nevertheless, we argue such an approach might be inappropriate in a context of dynamism and organizational emergence (Truex et al., 1999), where the completeness desired by traditional approach to organizational design could be inadequate.

The rest of the paper is structured as follows: Section 2 provides some theoretical hints by reviewing representative literature on new ways of organizational design. Section 3 outlines the case study methodology and the context of analysis. Section 4 describes main findings about the comparison between the 'rational/formal' approach and the actual approach adopted in our case. The final paragraph draws conclusions and highlights some limitations of the work as well as possible further researches.

2. THEORETICAL HINTS

For many years a large part of organizational studies have been addressing the issue of organizational design, often conceived as a "deliberate process of configuring structures, processes, reward systems and people practices to create an effective organization capable of achieving the business strategy" (Galbraith, Downey, Kates, 2002: p.1). Most accepted academic theories of organizational design rely on contingency research conducted in the 1950s, 1960s. Most of these studies have started by assuming that organization designers understand well the design contexts and what designs should achieve, rather than perceiving design goals as in any way problematic (Dunbar & Starbuck, 2006). The organization design is fixed in time and space and modified only to accommodate exogenous environmental changes. The demarcation between designer and user is conceived as clear and unambiguous. For such an approach to design, there needs also to be a clear and stable boundary between the entity being designed and the context for which it is being designed. Such a boundary makes it possible to fix the purpose of a design based on a stable set of user preferences and performance expectations. In brief, the design is based on clear boundaries, stable preferences and fixed goals and actions (Simon, 1996). In such a context design activities can be focused on what components to include in designs and how to evaluate design performance. The assumption is that if a design includes the appropriate components, if the relationships between these components are

logically consistent, and if they are congruent with organization goals, then the design will perform well. Therefore, the focus is on 'alignment', 'fit', and 'congruence' among design components.

Recently, many authors have started to experiment increasing problems in applying the contingency principles of organization design in an increasing number of situations. The 'rational' design theories attributable to the contingency approach have evolved in more complete and complex approaches such as (Cicchetti, 2004):

- Multivariate contingency approaches, that overcome the limits connected to the focus on bivariate interactions between pairs of context and structure variables.

- Configurational approaches, a specific evolution of multivariate approaches that mainly focus on the search for typical configurations based on the verification of the internal consistency among multiple structural variables and between them and the multiple dimensions of context (external consistency). These approaches admit the possibility that more than one combination of organizational traits might be effective under the same circumstances, stressing the concept of equifinality.

- Complementarity-based approaches: organizational 'components' are conceived as 'practices' (e.g. packages of techniques, typically including structure, routinized action and know-how, teamwork and incentive pay, flexible job assignment and knowledge management, process and project organization, horizontal integration, de-layering, outsourcing, and alliances, and so forth). 'Complementarity' is conceived as the relation between components-practices whereby applying one practice raises the value of employing another practice (Milgrom and Roberts 1995). In these approaches there is a change from an 'interaction fit' between pairs of context and structure variables to a 'systemic fit' and complementarity among many organizational components.

- Combinative approaches: the organization emerges from the combination of basic elements (e.g. organizational routines, resources, competencies, artifacts, knowledge, etc.). Organizational elements play a role analogous to that of chemical elements in composing a variety of substances (Grandori & Furnari, 2008). The combination of these elements leads to infinite organizational forms (and not limited such as those of traditional contingency approaches – e.g. Functional, Multi-Divisional, etc.). The design variables need to be complementary rather than mutually coherent (consistent): e.g. a strong professionalization of staff may be compatible with high levels of formalization of work procedures (e.g. in medical laboratory work).

As Dunbar & Starbuck (2006) have pointed out, the search of a fit among variables simply says whether these variables have reached a stable end-state. However, it does not indicate whether this end-state is a good one and it does not provide useful information about how to go about achieving a good end-state. The theory and practice of organization design offers little help to organizations that need to create novel and unique solutions (Davies and Brady 2000). Alternative organization designs have been suggested, including: front-back hybrid supported through matrix (Galbraith, 2002), flexible form (Volberda, 1996), ambidextrous organization (Tushman & O'Reilly 1999), and network-based structure (Nohria & Eccles, 1992). However, these designs will not create novel solutions in response to the unanticipated needs (Yoo et al, 2006). Instead, there is a need to go beyond selecting an organization design and develop the designer ability to create new organizational forms and conceptualizing organization designing as an ongoing activity. Therefore, many authors prefer more 'emergent' approaches to organizational design. This suggests a shift in the meaning of the word 'design' itself, from 'noun' to 'verb'. In traditional settings, these two meanings of design have been separated from one another. 'Design' as a 'noun' conceives organizational design as an 'artifact' (e.g. the organizational structure or the architecture) chosen to solve the 'organizational problem' (e.g. the differentiation/division and coordination of work). 'Design' as a 'verb' conceives organizational design as a 'process' of organizing to achieve goals. One would engage in a process of design (the verb) so as to emerge with a design (the noun) for a specific context. Yoo et al. (2006), adopting a process view to design (design as a verb), have suggested a shift from 'organization design' to 'organization design*ing*' in knowledge- and experience-based economy and have proposed three main characteristics of organization designing:

- *Focus on form giving*. Organization designing is about reaching out into an uncharted territory and creating new possibilities. It is a form-giving process based on projecting a design identity into the world through ongoing designing activity.
- *Relations to the environment.* Organization designing challenges the beliefs that designers (managers?) need to adapt to or interpret uncertain environments, which sets constraints for their goal seeking. For organization designing, the environment is co-created and reconceived by projecting the design gestalt into a new, partially malleable world. In organization designing, actors become designers through a decentralized, prospective agency with a dynamic, situated interplay of local and global logics.
- *Temporality of Designing.* Temporally, organization designing emphasizes the *here* and *now*, in which organizational actors experience being embedded in the present: "Organization designing emphasizes the existential moment of action where the past and the future meet" (p. 228).

The results of design efforts depend not only on relations among components, but also on the processes used to arrange components, the motivations of people who are participating, and on how all of these evolve over time. A focus on emergent fits, in contrast to traditional fit of contingency approaches, seeks to understand how designs develop and respond to evolving situations. As design situations evolve, designers need to create new and contextually relevant responses rather than to adhere to their predictions and plans (Dunbar & Starbuck, 2006). Moreover, even if designers could effectively know or can find out how to achieve desired outcomes, other people in their environments may not understand what the designers are trying to do or how they expect to achieve their goals.

A lack of shared understanding among design project participants or outside in the broader environment can escalate into serious resistance that threatens the success. Because designers nearly always misunderstand to some degree, they should view their efforts as experiments that might not turn out as predicted, and they should pay careful attention to the outcomes of these experiments.

Successful development depends on being able to analyze these outcomes, learning where design should be bounded, how and why people or artifacts resist or help, and where needed resources are located (Dunbar & Starbuck, 2006). Because earlier efforts alter design situations, later efforts have to depend on and to take account of what has happened. An implication is that earlier efforts may create options that did not exist initially.

This view is coherent with the concept of 'incompleteness' by Garud et al. (2013). In managerial literature, completeness, as extolled by the traditional approaches to design, allows for the pre-specification of a problem, the identification of pre-existing alternatives and the choice of the most optimal solution (Romme, 2003). Consequently, boundaries and preferences could be specified and stabilized. But when system boundaries are unclear and user preferences are both heterogeneous and evolving, the goals and purpose of the design are likely to remain a continually moving target (Rindova & Kotha, 2001).When problems are ill-defined, the boundaries between the object of the design preferences are fluid and solutions emerge in action, completeness forecloses future options (Garud et al., 2013). Garud et al. (2013) propose a pragmatic approach to design in which incompleteness is harnessed in a generative manner. The design simultaneously embraces both process and outcome, i.e. design should be viewed as being simultaneously noun and verb. Design must be iterative, design efforts must be persistent, and designing and taking actions are intimately bound up with one another (Dunbar & Starbuck, 2006).

We argue that in complex systems such as in the design of a CD the new approaches to organization design, based on 'emergent' organization design processes and on the principles of design thinking, could be more suitable than 'traditional' approaches to design.

In brief, we argue in the design of a CD problems may be ill-defined, the boundaries between the objects of the design are not clear, preferences are fluid and solutions emerge in action. The design process involves a network of heterogeneous actors linked through a 'variable geometry' of dynamic horizontal or transversal integrations among organizations which belong to different value chains and different industries, either cultural and non-cultural (Francesconi & Cioccarelli, 2013, p. 60). In this conditions incompleteness of the design, e.g. in terms of goals, actors, resources and competencies involved, might act also as a trigger for generative engagement by co-designers (e.g. local stakeholders).

3. DATA AND METHODOLOGY

The authors have been involved for about three years in a project aimed at designing a CD. This project is part of a larger intervention financed by a major Italian Banking Foundation to create six CDs in Northern Italy through a total investment of about 20 million euro. This intervention has been developed in four main phases:

1. An overall pre-feasibility study to identify potentially suitable areas for the development of the CDs (2005-2006).
2. The publication of a tender notice and the selection of 11 areas suitable for full feasibility studies (2007-2008).
3. The development of 11 full feasibility studies (2008-2010).
4. The selection of 6 projects to be financed for the realization of the CDs and the beginning of their development (2010 →).

The foundation has given technical support through a committee of experts, detailed guidelines, and meetings. In particular, we have been involved in phase 2 and 3 for research, technical support and training of local project leader. During these phases, we have made many interviews to key local players and to project partners, we have attended many meetings (both formal and informal) with local project members and we have developed a document analysis (on more than 5,000 pages) on previous local projects, potentially related to the development of the CD [e.g. integrated local development projects (PISL), integrated territorial projects (PTI), all previous cultural projects and cultural interventions already completed or work in progress in the territory]. Therefore, the access to the context, as research environment, has been opportunistic (e.g. Weick, 1990; Weick, 1993).

We have exploited our experience 'on the field' as researchers and 'insiders' to develop this case study (Yin, 1994), and to juxtapose what we have seen and lived and what was 'suggested' by foundation through its tender notice, guidelines and formal documents. We have chosen to combine pieces of direct observation and participation, document analysis and research to support our

argumentations. In sum, we exploit a participatory action research (PAR) (Rahman, 2008; Chevalier and Buckles, 2013) for our argumentations. Thus, our reflections come from the interweaving of practice and reflexivity. Nevertheless, the concrete realization of the CD in its earliest stages. Thus, any consideration regarding effectiveness and performance, especially in terms of impacts on the local development of the territory, is premature.

In brief, being more interested in reflections around the process of design(ing), we try to compare the design process as seem 'suggested' by the Foundation to what we have experienced during the early stages of design (phases 2 and 3 above mentioned) and what is hinted by the literature mentioned above.

4. FINDINGS AND DISCUSSION

In 2007, the Foundation published its guidelines, stating the minimum requirements for a feasibility study to be included in the assessment process. As analytically explained in these guidelines, an operational feasibility study for a CD had to be articulated in different sections, summarized as follow (fig. 1):

- **Section 1 - Presentation of the potential CD**: in this section the study had to include an assessment of the local context, highlighting the strengths and weaknesses of the area as a potential CD. The section had to highlight socio-economic and cultural peculiarities of the area as well the system of relationship among key-stakeholders.
- **Section 2 - Definition of the strategic objectives**: the section had to include the precise definition of the strategic objectives of the project and the related system of actions to be taken for the economic development of the territory. Moreover, the section had to include the strategic plan of the territorial integration as well as firms, industries and partners to be involved.
- **Section 3 - Definition of actions**: the section had to contain a detailed description of the interventions on both tangible and intangible assets. Moreover, the section had to define a detailed communication plan for internal and external stakeholders. The communication plan had to satisfy detailed guidelines (e.g. tools and methods to manage the communication within each CD and with the Foundation, providing also specific rules to implement video footage or photographs and to reproduce correctly the logo of the project). This excerpt from the guidelines for the communication plan is emblematic (pag. 2):

> "The communication of the CD project is articulated into *actions planned directly* by the Foundation and into actions planned autonomously by individual CDs. All communication activities *must* meet the criteria of coherence and consistency [defined by the Foundation], and must be [jointly] designed or implemented in a participatory way *only where necessary*" (emphasis added).

- **Section 4 - Definition of management ways:** the section had to analytically describe the governance model, the management plan and the reasons underlying those choices.
- **Section 5 - Definition of the financial plan:** the feasibility study had to provide specific indications about the model of financial analysis, the budget and a cost-benefit analysis. The economic analysis had to be able to assess all the investments and the direct and indirect economic impacts on the territory through simulations (scenario analysis).
- **Section 6 - Definition of the time schedule of CD development:** the feasibility study had to detail time schedule for the implementation of the defined actions.

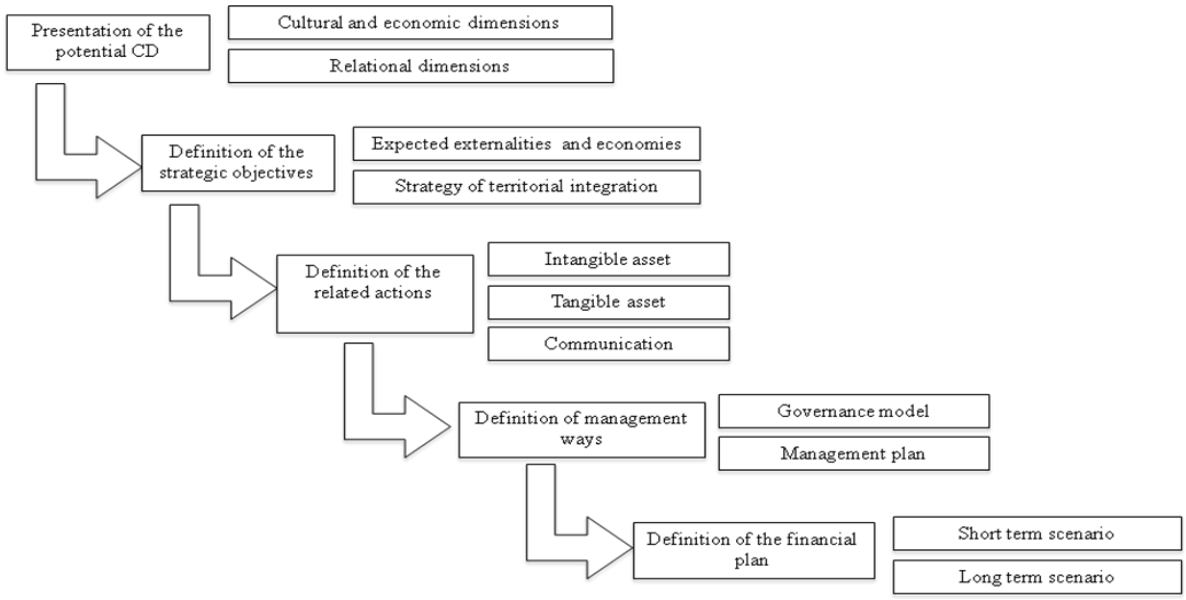

Fig. 1. The stages of analysis and project development. Source: Foundation's Guidelines.

Therefore, the Foundation required a clear vision of projects to be financed from the earliest stages in terms of budgeting and co-financing needs, general and strategic aims, specific operating objectives and actions to be implemented for the socio-economic development of the territory, organizational structures and coordinating mechanisms to be designed and actors/stakeholders to be involved, and so forth. This excerpt from the section "definition of the strategic objectives" is emblematic too (pag. 8):

> "The feasibility study *must clearly present* the project objectives in terms of:
> - Externalities of the system, coming from the new cultural ties that will be established among cultural assets involved in the project and among these and other cultural and non cultural assets of the territory.
> - Consumption externalities, resulting from expected increases in terms of demand for cultural offer.
> - Economies of scale and/or economies of scope, arising from potential economic benefits coming from the integration of functions and activities related to the processes of conservation and enhancement of cultural heritage of the area" (*emphasis added).*

The requests in the Foundation's guidelines depict a process that extols the virtues of anticipation and completeness as extolled also by 'traditional' approaches to organization design. During a meeting in

2009 (third phase above mentioned), faced with several requests for clarification by many work-groups involved in the CDs' feasibility studies, the Foundation declared that "the guidelines indicate the minimum information requirements that the operational feasibility studies must meet at the end" and that guidelines "are not a standard for contents, are not a process standard, do not require a methodological standard". However, the basic idea of the design (see Fig. 1) often reminded all of us a 'waterfall model' used in 'old-school' software development.

We often found the metaphor of the 'waterfall model' as useful to interpret (and criticize) what desired by the Foundation, at least at level of project documentation. At the same time, we felt somehow compelled to objectify and reify the CD as something concrete emerging from the 'folds of the project documentation'.

What did not convince us?

The waterfall model is a sequential design process based on anticipation and completeness in which progress is seen as flowing steadily downwards (like a waterfall) through phases such as (1) conception, (2) initiation, (3) analysis, (4) design, (5) construction, (6) testing, (7) production/implementation, and (8) maintenance[3], and where it is possible and likely that designers will be able to fully predict problem areas of the system and produce a correct design before implementation is started. Critics of waterfall model (and of similar overly structured approaches) argue it is very difficult, where not impossible, such an approach. And this is even more true in a context of dynamism and organizational emergence (Truex et al., 1999) because many of the software system's details become known only during the system's implementation and this process of 'learning by doing' can invalidate the initial design assumptions as a matter of fact.

The 'completeness' required by the Foundation in terms of 'project documentation', as well as the anticipation of detailed results and solutions, implicitly depicts an ideal process of design driven by an 'absolute rationality'. Completeness allows for the pre-specification of a problem, the identification of pre-existing alternatives and the choice of the most optimal solution (Garud et al., 2008). As previously said, for such an approach to work, there needs to be a clear and stable boundary between the entity being designed and the context for which it is being designed. Such a boundary makes it possible to fix the purpose of a design based on a stable set of user preferences and performance expectations (Garud et al., 2008). On the contrary, we have experienced a high degree of complexity within the CD project wherein we have participated, due to the relevant number of actors involved (17

[3] In the Foundation's guidelines for the feasibility study the conception and initiation phases of the waterfall model mainly coincide to the presentation of the CD (fig. 1). The analysis phase, that starts from the presentation of the cultural district, lead to the definition of the strategic objectives of the CD. Finally, the last sections of the project documentation (definition of related actions, of management ways, of the financial plan, and of the time schedule of CD development), might be compared to the design phase of the waterfall model.

partners, both public and private actors[4]), the geographic extension of the area (4 municipalities with about 153,000 inhabitants), the huge financial investments of Foundation and local co-financers (for a total amount of 8 million Euros), the heterogeneity of sectors (both cultural and non) to be potentially involved, the challenging and intrinsic aims of a CD and the high number of interventions on both tangible and intangible assets.

Is a CD development a trivial project in a stable environment with clear and stable boundary between the entity being designed and the context?
We do not think so, especially if we consider the 'core' of a CD quite different from a tangible output (e.g. an automobile). A CD is firstly a system of relations, rules, cultural resources (not only tangible but mostly intangible) with many social actions involved in such a development and the need for the integration of physical, human and social capital.

In our experience, though limited to early stages, we have lived and perceived a tension between the 'deterministic' perspective, which seems embedded into Foundation's guidelines and documentation and driven by 'anticipation and completeness', and the actual process of design 'in action'. The latter has been full of power and political negotiations among key participants, learning by doing and by interacting, conflicts, misunderstandings, ongoing reviews of problems and possible solutions, and so forth.
As consultants for the local project leader we have experienced many problems in applying the design approach 'suggested' by the Foundation, though our argumentation can be made only for the feasibility study.
In sum we have experienced a tension between the deterministic and formal approach 'instilled' within Foundation's documentation and guidelines – for which is emblematic the project representation by Foundation in Fig. 1 – and the actual process of design 'in action' experienced on the field (fig. 2). The feasibility study itself, as depicted in the figure, appears quite similar to the steps of 'conception, initiation, analysis and design' in a waterfall model of software development.
Though we have experienced only the early stage of the process of a CD design, our experience lead us to criticize the design process of a CD as a complex system following such a deterministic approach. In other words, the creation of a CD is too complex to be crystallized into early steps affected by an overly rationalistic approach. The design process of a CD should be something dynamic and in constant change. We argue that designers should adopt an approach that shifts 'from design to designing' (Dunbar & Starbuck, 2006).

[4] The partners are: the Province, 4 Municipalities, 3 Mountain Communities, a University, an Association and 2 Local Consortia for the valorization and protection of local products, 2 Banks, a Multi-utility in the electric and environmental sector, a Ski-lift maker, and a Software Company.

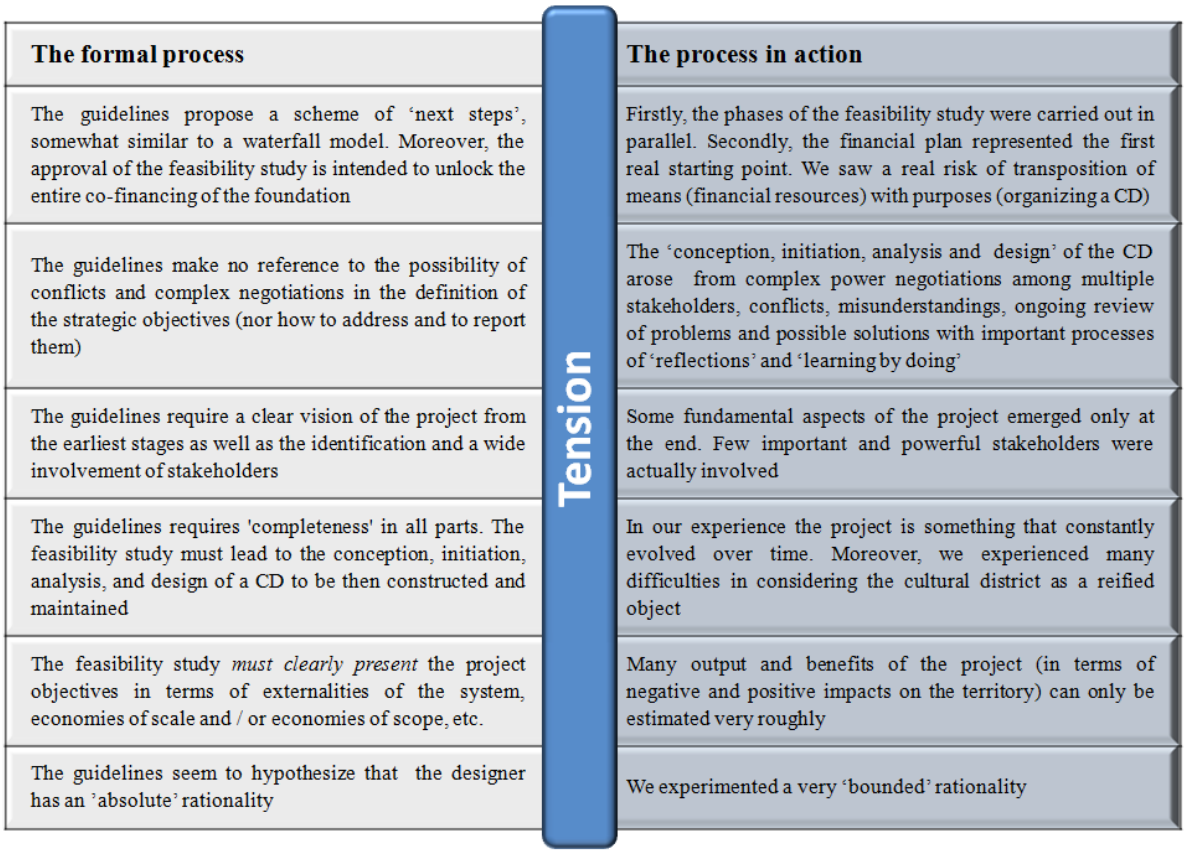

Fig. 2. The tension between the deterministic and formal approach 'instilled' within Foundation's documentation and guidelines and the actual process of design 'in action' experience on the field.

We argue the tension between the rational and deterministic process and the 'real' process might be reduced (if not removed at all) if we were able to develop an epistemology of practice which places problem-solving within a broader context of reflective inquiry, as suggested by Schön (1993) and if we were able to exploit the recent suggestions of organizational literature on 'designing'.

This tension is probably more relevant in complex systems such as the CD examined.

Exploiting our experience and taking a 'pragmatic' stance, we suggest that this tension could be recognized by all actors involved and then reduced through pragmatic implementations, creative experimentation and contextual learning: the design should privilege an experimentation approach that gives the possibility to adopt a 'learning by doing' perspective in defining the strategic objectives and the related actions.

Anyway, as Boland and Collopy (2004), Romme (2003) and others have suggested, the value of theorizing lies in the options that are generated rather than the uncertainties that are resolved. Therefore, trying to exploit our direct experience for further studies we define a research proposition.

Proposition. In non-trivial projects of cultural district development, the adoption of a 'designing' approach is more effective than the traditional 'design' approach.

CONCLUSIONS

In this paper we have focused on organizational design approaches in complex systems. We have argued that the design of a complex system cannot be conceived as a process of design completely defined a priori in a linear fashion. On the contrary, it is something dynamic and constantly evolving (designing). Trying to open this debate, we report some reflections derived by a participatory action research. Indeed, the authors have been involved in a feasibility study of an Italian CD. The project has been financed by a major Italian banking foundation and it is now in its early stage of development. We have compared the design process as emerging by Foundation's guidelines and our experience 'on the field' as insiders. According to the first approach, the 'planner' defines a goal, an expected state on the basis of available resources and allocates them on the basis of a 'rational optimizer schema' (through the simplification of reality and the myth of efficiency). This experience and the reading of organizational design literature have persuaded us that the complexity and the multidimensional nature of a CD require a shift from a 'design' to a 'designing' approach. On the basis of a different approach, the starting point is a vision outlined for large areas. This vision is continuously redefined through an incremental path, restructured in the course of work and characterized by uncertainty and by a need for flexibility.

We are aware of the limits of this contribution and we plan to overcome them in further researches. Moreover, we plan to analyze more case studies to strengthen our argumentations and to give empirical evidence to our research proposition. Finally, possible questions for further research could be: How can a 'designing' approach be instilled within the process of development of a CD? Which are the situational elements that mainly affect such a process of development (e.g. the way in which stakeholders are involved, the dialogue and discourses among actors, the role played by institutional and public actors, and so forth)?

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