Bringing design back in

Managing as designing revisited

Stang Våland, Marianne; Georg, Susse

Bringing design back in: managing as designing revisited

Marianne Stang Våland and Susse Georg

18.10.12

Abstract

There is a growing interest in exploring what a design approach might imply for management. Using the "Managing as Designing" debate initiated by Boland and Collopy in 2004 as a backdrop, this paper examines the interplay between architectural and organizational design; paying particular attention to the materiality of architecture, and its implications for organizational development. Although the importance of organizational space is well recognized, much of this research takes an abstract philosophical approach. Instead, the paper attends to the empirical details of a "double design process" – the interplay between creation of organizational space through architectural design and formalized end user participation and the changes in organizational design that this enables. Informed by actor network theory, we examine a case study of a merger between two local government agencies as an exemplar of concurrent architectural and organizational design processes. Our findings highlight how the double design process decenters the manager and how the materiality of these design processes enables the involved users to see their work and organization in new ways. In addition, the study emphasizes the incompleteness of such design processes. Design is an ongoing process that oscillates between a temporarily stabilized form – a design – on the one hand, and the continuous usage in which redesigning takes place, on the other. Following from this, we suggest that the dichotomy between design as a noun or a verb needs reconsidering.

Keywords: Design, user participation, materiality, organizational change

Introduction

The issue of design has a long history within organizational studies (Thompson 1967, Galbraith 1973). Over the last decade, there has been a renewed interest in design thinking. Taking their cue from the seminal work of Herbert Simon (1969/1996), many authors are making a case for 'bringing design back in'[1] into e.g. studies of organizational practice (Romme 2003), management (Boland and Collopy 2004, Yoo et al. 2006, Boland et al. 2008), organizational development and change management (Bate et al. 2007), and to organizational theory in general (Jelinek et al. 2008, Greenwood and Miller 2010). Parallel to this is another debate regarding the role of space in organizations. Although there are notable exceptions (e.g. Yanow 1995,1998, Halford, 2004, Ewenstein and Whyte 2007a, 2007b, van Marrewijk and Yanow 2011), much of this literature focuses on the spatial aspects of organizations from a rather philosophical or abstract perspective. Key themes in this debate are the symbolic,

---

[1] Colloquial reference to Barley and Kunda's article "Bringing work back in" (2001) and later Clegg and Kornberger's "Bringing space back in" (2004).

processual, generative and ambivalent role that organizational space can play (Gagliardi 1991, Hernes 2004, Clegg and Kornberger 2004 and 2006, Dale and Burell 2011).

In light of the suggested links between design and organizational performance and the emphasis given to managerial control in much of the organizational design literature, it would seem that each domain (management and organization on the one hand, design and space on the other) has something to offer the other and that a more thorough exploration of the relationship may enhance our understanding of how space may contribute to management practice. In what follows, we seek to bridge these debates. We do so by expanding on the notion of Managing as Designing (Boland and Collopy 2004), and by drawing upon insights from an ethnographic study of a concurrent architectural and organizational design process in which organizational members were actively engaged in informing both designs (Stang Våland 2010, 2011). Particular attention is placed on how material artifacts and the materiality of architecture can influence and inspire organizational design work and vice versa; an aspect surprisingly absent in much of the debate.[2] This provides a context through which the relationship between space, organization and management – as captured in the Managing as Designing debate – can be further theorized.

The paper is structured as follows: First we briefly recount some of the main arguments in the Managing as Designing debate. We then report on the ethnographic case study, describing how the construction of a new town hall was used as an organizing device for merging two government agencies (Stang Våland 2010). Apart from describing the methodological approach and presenting the context of our study, we use two empirical vignettes to attend to the details of the co-evolvement of the architectural and the organizational design process in a "double design process". The discussion that follows addresses four issues. First, design processes do not start from scratch – they have a history and involve actors that in different ways influence the emergence of the design. Furthermore, and as it is demonstrated in the case, they can turn matters of fact into matters of concern (Latour 2004, Ripley et al 2009). Second, material objects and visualizations allow for the embodiment of such double design processes and provide affordances for 'resolving' some of these concerns. Third, we expand upon one of the central concepts proposed in the Managing as Designing initiative; Suchman's "decentering the manager/designer" (Suchman 2004), particularly focusing on how artifacts and material objects affect the process of designing. Fourth, we argue that design processes are ongoing and incomplete – they are not over when they are over and in fact less stable than commonly assumed. We close the paper by suggesting that double design processes can be influential in shaping how organizational members use their resources in support of, or in opposition to, organizational objectives.

The main tenets of Managing as Designing

Managing as Designing (2004), edited by Richard Boland and Fred Collopy, draws upon descriptions of how architect Frank O. Gehry developed the Peter B. Lewis Building at Case Western University. Many of the authors use Gehry's project and his design methods as a means to explore the ways in which design thinking could inform management practices. The merit of this volume notwithstanding, there

---

[2] Some exceptions include: Orlikowski (2007), Van Marrewijk and Yanov (20xx), and Tryggestad and Georg (2010).

is, however, an intriguing gap between the metaphor and theoretical arguments suggested, on the one hand, and their empirical grounding, on the other. Even though Gehry's design practices figure prominently, there are few empirical details as to what this more specifically entails and how managing can become an exercise in designing, inspired by Gehry's practice. Considering the importance of attending to details that design thinking implies (Latour 2009: 3), this lack of empirical detail seems rather ironic. There are many interesting aspects of the work done by Gehry and his firm, Gehry Partners, both with regard to the architectural product and to the process of designing. Both involve multiple players in a complex project organization, characterized by a high level of collaboration. Yet, the description of Gehry's way of working is very much in keeping with the traditional image of the architect as artist (Kostof 1977, Saint 1983, Cuff 1991, Fisher 2000, 2001) – the "starchitect" (Jencks 2002) who acts as the keeper of the design solution. Gehry's designs materialize through an "architectural vision" (Yoo et al. 2006:217) that he describes in the following way:

> The point is you strive for certain excellence. You have a sort of model in your head of what it is you are going to do and you stick to it. I stick to it because I can't do the other. And, when I have to do the other – whatever the other is – to get the job or to do anything, my body doesn't do it. It's not constructed in that way, it doesn't allow me to. I've developed ways of working where I can talk openly with my clients and they are all happy with the process we follow and how we work with them. And they would say I have listened to them (Gehry 2004:32).

It is Gehry's architectural vision and his adherence to this "dream image" (Yoo et al. 2006:218) that remains the nucleus, through which the design is negotiated and materialized. While many aspects of the design may go through numerous motions in the course of such process, the overall design idea is kept in shape.[3] Although realizing Gehry's design ambitions may involve many actors, there is no doubt as to who the central designer is. In light of this, we find the emphasis given to Gehry's approach curious as empirical context for exploring the notion of the manager as designer.

The theoretical backdrop for the Managing as Designing initiative (Boland and Collopy 2004) is a re-introduction of Herbert Simon's argument from *The Sciences of the Artifical* that: "Engineering, medicine, business, architecture, and painting are concerned not with the necessary but with the contingent – not how things are but how they might be – in short, with design" (Simon 1996, p. xii, quoted Boland and Collopy 2004:8). Design thinking is seen as a way to improve management (Boland et al. 2008, Jelinek 2008), and the connotation of design as either something to decide upon or something to undertake that is being labeled "the decision- and the design attitude", respectively (Boland and Collopy 2004). While the first represents a strong tradition within management, in which the managerial challenge is to choose amongst a variety of 'known' solutions to an organizational problem, the latter addresses problem solving as an opportunity to do something in new ways. By questioning existing organizational design practices and the tendency within management to look for one best solution, the aim of the book is rather for managers to develop design alternatives that may "leave the world a better place than we found it" (Boland and Collopy 2004:9). In keeping with this perspective, a good design solution is not necessarily one that is known from the on-set. It is more likely to emerge through multiple iterations. The implication for management is to facilitate these

---

[3] The perhaps most distinguished characteristic of Gehry's architectural expression is his handwritten "doodle", which represents a reflection of "the model in his head" that he describes in the abovementioned statement.

processes so that the beliefs, expectations, practices, etc. of the people involved are respected while also seeking to change things for the better. Using descriptions of Frank Gehry's design practices as a pivotal source of inspiration, the Managing as Designing initiative (Boland and Collopy 2004) aims to explore what management can learn from the ways in which design professionals work. In doing so, the authors offer a number of conceptual ideas that warrant closer attention and a stronger empirical grounding. In the following, we point to a few of these, one of which we attempt to expand on in the course of this paper.

First, and of paramount importance, it is suggested that managers adopt the abovementioned "design attitude". The design attitude entails questioning, monitoring and facilitating the ways in which people make sense of their situation, and not succumbing to the more widespread decision making attitude that emphasizes making choices between known alternatives. Weick considers the design attitude as an important and necessary approach for managers, who attempt to handle complex organizational processes of change and collaboration, because it allows for the airing of different points of view and for moving towards some kind of reconciliation through the "making do, improvisation, and cobbling together a bricolage" (Weick, 2004:38). His overall concern is to attend to the myriads of exchanges in organizational practice and how these are handled, negotiated, refined and continuously adjusted. Accordingly, the challenge for management is to keep problem solving and the managing processes open. With reference to Gehry, it is proposed that more attention is given to the 'liquid' state, where aspects of the design may continue to change and the design solution may take new directions, rather than to the 'crystallized' design solution, where basic structures and form have fallen into place; the materials and technologies have been decided upon and the malleability of the design is reduced (Boland and Collopy 2004:269).

It is, however, well known from architecture or industrial design that this transition between the liquid and crystallized design solution can be hard to decipher (Lawson 1997). Against this backdrop, we find the recommendation of developing a design attitude loosely metaphoric. It does not go into detail on how the issues of openness or liquidity are addressed in practice – by either architects or managers. Rather, it seems that the Gehry example glosses over obvious challenges confronting both professional groups. Take, for instance, the opening description of Gehry's design attitude: As a part of the design process, Gehry's team solicited inputs from the coming users of the Peter B. Lewis Building. Floor plans were drawn and redrawn until all the necessary elements were in place, only to throw the results of the users' endeavor in the trash bin with the argument that "we proved we could do it, now we can think about how we *want* to do it" (Boland and Collopy 2004:5, emphasis in the original, see also Weick 2003). Although we might say that such an encounter kept the design process fluid, it is difficult to discern from this description how Gehry's team in fact grappled with the diverging interests and ideas provided by the users. The acknowledgement and integration of new inputs to design processes as well as the balancing of conflicting concerns and considerations is as pertinent a challenge in architecture as it is in management. More detailed studies of what this entails can provide a less idealized and more informed approach to fostering a design attitude.

Second, Boland and Collopy (2004, 2008) point to the need for developing a design vocabulary. Although they do not label it as such, they take a performative stance when stating that "our language shapes the problem space we deal with by naming them" (Boland and Collopy, 2004: 265, see also Boland 2004: 106-107 and Orlikowski 2004: 90). The ways in which one's language frames things enables and constrains one's thinking about a situation and how this situation may or may not be

addressed. Accordingly, they suggest developing a "design vocabulary for management" that can help increase management reflexivity. By paying attention to the characteristics and qualities of their language and how it fits with the situations in which they are involved, managers will be more likely to act as good designers. Key elements of this vocabulary are a mixture of nouns and verbs such as artifacts, balancing, collaboration, crystallizing, drawing, experimentation, improvisation, modeling, playing, and thrownness (Boland and Collopy, 2004: 267-76). The lack of empirical examples as to what these elements entail makes it difficult to see how they may contribute in managerial contexts.

Third, the Managing as Designing approach suggests that the designing manager is a team-player and that the design process is a collaborative endeavor. This implies a closer, more interactive relationship between the manager and the other actors involved than commonly associated with the manager as the decision maker. These processes are for example described as "interaction design" (Buchanan 2004), "cooperative design" (Suchman 2004) and "collaborative" (Czarniawska 2004). But there is little or no attempt in the book to empirically explore what these processes might entail. Suchman does, however, discuss how managers and designers share the task of being dependent on a great number of others in their work, hence her notion of "decentralizing" the manager (ibid.). She challenges the traditional conception of the manager/designer as the natural keeper of defining design value, and suggests not only involving the forthcoming users in the design process, but also, on this basis, that the subsequent developments affecting the design should be considered a part of the design itself. Her point is that the inevitable re-workings of a design need not be thought of as design failures or user resistance, but rather as the realizations of the design (Suchman 2004: 170). Users are considered an important source of inspiration in this process. But instead of the traditional approach to treating user needs as something latent, waiting to be uncovered and articulated, Suchman suggests that user needs and potential solutions are mutually enacted and emergent. They co-evolve with the design and development process.

Fourth, Suchman also suggests that we accept material objects as influential in the development of a design and, thus, in decentering the manager/designer. Moreover, management is considered as ongoing "circulations of ideas and objects" (Suchman 2004: 170), a point also made by Czarniawska (2004). In different ways, and seemingly drawing on basic concepts of actor-network theory, both authors indicate that material objects do not in themselves hold a clear meaning or content, but rather materialize through the context/relationships in which they appear. However, the question of how artifacts may contribute in supporting the development of a new organizational design is not given much attention in the Managing as Designing initiative. So even though there has been – and still is –a growing number of organizational scholars interested in this question in the years after Boland and Collopy's volume was published (e.g. Orlikowski 2007, Ewenstein and Whyte 2007a, 2007b, Warren 2008, Tryggestad and Georg 2010), Managing as Designing does not appear as a reference in the various attempts to establish a closer relationship between organizing and materiality.

We find the initial outline for the Managing as Designing initiative a productive point of departure to further develop the relationship between space, materiality and architecture on the one hand, and management and organization, on the other. In the following, we do so by grounding our discussion in an analysis of the idea of "a double design process" that involved both architectural and organizational changes and in which the manager was "decentred" and material artifacts played a significant role. First, we outline our methodological approach and contextualize our empirical story, and then we present two vignettes that describe the interplay between organizational and architectural design.

Methodological approach

Methodologically, the paper is based on the first writer's longitudinal, ethnographic study of formalized end user participation in the architectural design process of the town hall project (Stang Våland 2010).[4] Using a study of a more mundane architectural design project, in which the interplay between the design practices and the organizational change processes can be followed at closer range than in more celebrated architectural projects, our aspiration has been to provide a richer account of what these processes can entail. Data was collected over a three year period (2005–2008) and involved ethnographic fieldwork (Van Maanen 1988, Emerson et al. 2001, Baszanger and Dodier 2004), document analysis (Smith 2001, Prior 2003, 2004, Atkinson and Coffey 2004), and semi-structured interviews (Kvale 1997, Gubrium and Holstein 2002, Holstein and Gubrium 2004, Järvinen 2005).

The fieldwork included observations of the majority of the user-participation activities included in the project: 6 full day interactive workshops or "summits" with approx. 50 participants and 2 three-hour plenary meetings, to which the case organization's 500 staff was invited. The study also involved observations of 8 preparation- and development meetings between the parties in the project: gatherings between the client's top management team and the architects, who organized the user participation, as well as meetings between client representatives, architects, engineers and constructors. In addition, the fieldwork involved 3 months of full time engagement in the architectural firm, responsible for the user participation in the project. The planning and preparation of the user activities were studied at close range.

The data material also includes a substantial amount of documents regarding the construction of a new town hall and organizational activities involved: project descriptions and proceedings; minutes from coordination meetings and summits; presentation material for the user-participation activities; material and results from the architectural competition; architectural sketches and diagrams in various versions that represented the winning proposal. Additionally, 21 semi-structured interviews were conducted, with representatives from the client organization (managing director, department managers and staff members) and the architects. An additional interview was conducted in the course of writing this paper. The vignettes have been chosen as illustrations of the "double design process"; of how user participation and the conscious use of material objects can form fruitful connections between architectural and organizational design.

The town hall project – using architecture to design an organization (and vice versa)

The backdrop for our study is the "Structural Reform" of the Danish public sector in 2007, which altered the tasks and responsibilities of local government and reduced the number of municipalities (from 271 to 98).[5] Our study focuses on the merger of two adjacent municipalities into one larger middle-sized municipality. Apart from the 'usual' organizational challenges associated with mergers,

---

[4] In what follows, this is mostly referred to simply as 'user participation'.

[5] The rationale for this political-administrative reform was an economic one, i.e. seeking to ensure the benefits of scale and specialization in municipal (welfare) service provision (Strukturkommissionen, 2004).

i.e. adjusting existing work processes and developing a new, common culture, this merger also entailed physically relocating both municipalities' administrative offices to a new town hall that at the time of the merger had yet to be built.

One of the obvious advantages of establishing a new town hall was that it would enable the municipality to house services and activities that hitherto had been localized in five different sites in one place. However, for the managing director of the new municipality, there were also other advantages. It provided him (and his administrative staff) with an opportunity to discuss and reconsider the daily work practices of the municipality's various departments. Informed by an on-going discourse regarding the need for knowledge sharing and cross-professional collaboration in public organizations (e.g. Indenrigs- og Sundhedsministeriet 2005, Regeringen, KL og Danske Regioner 2007), and inspired by work on "new ways of working" (Bjerrum and Bødker 2003, Duffy and Worthington 2004) and the adjoining "new office" concept (Duffy 2007), the managing director saw the building project as an opportunity to develop workspaces that could support these organizational design ambitions. He also wanted to explore how these organizational changes could inform the architectural design so as to create a new organization and a new building in one, concurrent movement. The organizational and architectural design processes were considered as reciprocal resources from which both could benefit. According to the managing director:

> I don't think there are many people, who have yet experienced that you can actually make a **double design process.** And one of the tasks in orchestrating the change processes is to ensure some kind of interplay or synergy between them [the architectural and organizational design processes]. I have become aware of how vital it in fact is, not to freeze for instance the organizational development as a given precondition and then subsequently discuss space, but to continue to ensure an interaction [between the two processes] (Interview with managing director 2007, *emphasis added*).

He indicates that organizational and architectural design processes are traditionally seen as separate and sequential. The sequentiality of this process is illustrated in figure 1.
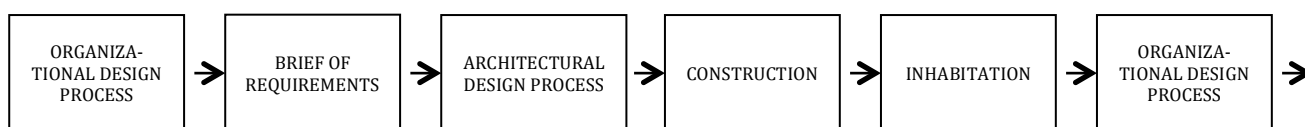

Figure 1. The development of the traditional design process over time.

The client organization specifies their needs and requirements in the design brief, which the architects then use in the detailed programming of the building. Once the building is completed and the client organization moves in, the daily works practices are 'fitted' into the new space. A characteristic feature of this traditional approach to architectural designing is that the initial dialogue between architect and client regarding the project's basic financial and function conditions hardly involves the users of the building (Gutman 1988, Cuff 1991, Larson 1993). Hence, the architects develop the design solution in a process isolated from the end users and their multiple viewpoints. The premise of the town hall

project was different as it was based on extensive and formalized end user participation.[6, 7] The managing director explained this:

> [U]ser participation was brought in from the start, where we pointed out that it is especially the social workers and their colleagues, who know how work is being done here: on screen, on paper, with regards to the cases and all the rest of it. This is why a broad number of staff was invited to participate. It was an open dialogue from the start. (Interview with managing director, 2007)

The employees were involved in providing input to the brief that, in turn, structured the architectural competition. Moreover, once the winning design had been chosen, the employees continued to have exchanges with the designers as they were developing the design and, to a lesser extent, during the construction process. The key issue for the users throughout these processes was the implications that the spatial design would have for their work. For the managing director, the transformative effect of this was quite clear:

> Many people see the process of moving as something that just involves the physical location of their desk. But by discussing these things in the workshops, they realized that a physical change also affects the work itself and the perception of what work, in fact, is. […] Consciously as well as unconsciously, the work affects and is affected by the physical workspace. Distance and accessibility influence culture and work processes. These things change our perception of work. (Interview with managing director, 2007)

This is the "double design process" referred to in first mentioned quote. As illustrated in figure 2, formalized end user participation was used to inform both design processes (Stang Våland 2010).
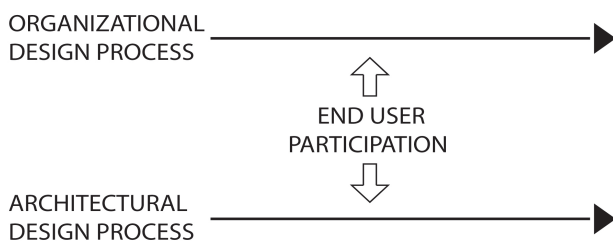

Figure 2. User participation was applied as a means for enabling the double design process. [Change wording in figure to formalized end user participation]

For the managing director, the building project was:

> [….] a gift to the merger. [In the new building], everyone can seize the new organization, more or less free of the past, the 'them vs. us' boundaries and all the rest of it. […] Our focus is on collaboration across professional boundaries; to obtain a stronger coherence in the service by supporting cross disciplinarity – to support that the many strong professions, we represent,

---

[6] In this study, the endusers refer to municipal employees – not e.g. citizens or politicians.

[7] End user participation in design processes has a long history, an in a Scandinavian context it is often associated with research regarding 'Participatory Design' that was established in academia in the 1960ies and 70ies. Although initially focused on how the design of computers and computer systems could enhance workplace practices and collaborations (Greenbaum and Kyng 1993, Schuler and Namioka 1993) and closely linked to areas such as Computer Supported Collaborative Work (Schmidt 2011) and Human Computer Interaction (Anderson 1994, Dourish 2006), it also relates more broadly to ethnography, as a way to include users in design work (Blomberg 1993, Forsythe 1999).

become able to work together. To do that, we need to look at how the physical space can help or hinder this collaboration. (Interview with managing director, 2007)

To him, "the double design process" was a way through which managers and employees could address and accommodate many of the organizational challenges associated with the merger, and user participation was an important means to this end. It involved a variety of activities: a survey, in which the staff's use of their former spatial facilities was analyzed; a range of workshops within and across departments; two plenary meetings, where the architects presented the building to the staff, who could then make direct inquires about the new workspace conditions; and a staff party. A few of the events were planned and held prior to the architectural competition, and the insights that these provided were included in the competition's brief. The majority of the events, however, took place after the winner of the competition had been selected and during the period when the design solution was being developed.

Although the Managing as Designing initiative argues that spatial organization, architectural design and materialities can support organizational change and development, little attention is offered to the details of how this can take place. Based on the above description of the empirical context and the central activities constituting "the double design process", the next section expands upon how the architectural and organizational design processes were woven together in the town hall project. We present two empirical vignettes in which user participation figures prominently. The first focuses on how the material artifacts used in these processes helped to ease some of the users' concerns regarding the pending organizational and spatial changes, while the second attends to the continual redesign of a particular material artifact and illustrates how this process allows for reflections regarding changes in the organization. The vignettes illustrate how the material objects used in these orchestrated interactive processes contribute to modify the organizational members' sense of work (vignette 1) and organization identity (vignette 2).

Vignette 1: Engaging with material objects - adjusting conceptions of work

Most people usually take their physical workspace for granted and treat it as a given, within which they 'get things done'. It is only when some kind of change is introduced that issues regarding the spatial design can surface as "matters of concern" (Latour 2004). This is exactly what happened in the town hall project. Not only did it entail moving into a new building, it also entailed moving into "open offices;" an idea which was not well-received amongst the employees. User participation was seen by management as a way of attending to the employees concerns, while at the same time soliciting their input to inform the both the architectural and organizational design process.

The first vignette is about Ursula, a middle manager at the 'Center for Families and Health', who had participated in the different workshops, the content and effect of which will be highlighted in the following. Her department provides counseling and supervision for families and children with special needs and requirements, and she was particularly worried about having to work in an open space rather than in the confines of one's own office. One of the reasons for this was:

> It's no secret that we, the staff, have been really, really worried, because we think our
> work is very well suited for small offices, where we can sit with the clients and discuss

things, etc. Keep our work to ourselves and talk on the phone, etc. (Interview with Ursula, 2008)

Even though Ursula remained critical of the open office layout throughout the design phase and at the time of moving into the building, interacting with her colleagues in the user participation activities did have a moderating effect on her skepticism. There were three primary types of workshops that were particularly influential: one in which small groups of participants from different departments discussed how best to localize the various departments so as to strengthen cross-departmental collaboration; another in which small groups of participants from the same department discussed issues regarding the spatial organization of their daily work; and a third workshop dedicated to physically experimenting with the office layout of each department. While the first two workshops were organized around different game boards (propped with photos, drawings, diagrams, etc.) illustrating the layout of the building and offices, respectively, the third workshop involved using foam blocks to build a mockup of the office.

The photos below are illustrative of the two first types of workshops. Photo A (on the left) shows a group of employees engaged in localizing particular functions/offices on different floors of the new building, whereas in the other photo (B), the employees use a game board with cards and tacks to discuss how they would position themselves in the open layout.

Photo A: Discussing the location of the different departments. Photo B: Discussing the spatial organization of a particular department.

The third type of workshop took place in a large empty storage facility, in which the contour of each department's designated office space was chalked up on the floor, thus, providing the participants with a physical representation of the department (see Photo C). Inspired by the Danish filmmaker Lars von Trier's unorthodox set design in the film Dogville (2003), the idea was to simulate the size of the department's with the chalk marks. And in order to make the simulation more vivid, foam bricks of various dimensions were used to represent the furniture (desks, archive, soft furniture, lamps).

Photo C: Designing the department in a Dogville-like set with chalk marks.

This workshop involved two central exercises. One, called "A day on the job," in which the staff members were asked to consider how they would situate themselves when conducting various general administrative tasks around their workstation. According to Ursula:

> [W]e were given some postcards that said: "You are in a meeting with NN". Or: "You talk on the phone". Or: "You do administrative desk work" and so on. So you were given a work function and based on that you were supposed to physically locate yourself. […]The point was to give people the experience of mobility; that you can move around. [Solving tasks] is not bound to only one particular place. And [the idea] was also to expose that when we have different kinds of tasks to solve, it means that a lot of the workstations are free most of the time (Interview, 2008)

In this statement Ursula points to the participants' embodied experience of the floor space ratio and how office space is being used – or not used – in the daily practice. When asked about the effect of the exercise, Ursula replied:

> I think the exercise was ok after all. Although it left people a bit confused and they didn't get as much out of it [as they expected], I think at least they got the feeling that 'when I'm doing this work, my desk is not the only place where the stuff can be done'. […]So I think the point was to provoke people's habits. They were supposed to experience that they in fact have opportunities. And to some extent, I think that succeeded. (Interview, 2008)

In the second exercise the department members were confronted more directly with the spatial outline of their office and were asked to come up with a plan for the office layout. Some of the issues that Ursula said that they had to contend with included:

> [T]hen we were to move around with these white foam bricks – move in and move out – to arrange our own departmental area. What did we prioritize? How did we organize it? Were the tables in a line or in a circle? How much personal space? How much archive and stuff like that? […]People were actually quite absorbed. (Interview, 2008)

The different material devices – game boards, photos, drawings, foam blocks and chalk marks on the floor - used in the workshops played an important role in influencing the staff's opinions and concerns. According to Ursula:

> You have to make it visible. In that way it was quite an enjoyable process. I think it was good that the last [third] series of workshops took place. If it hadn't, I think it had left me frustrated. [...]Then we got a [design] proposal [return from the designers] and responded to that, and then we got to the last negotiation. It became a good process. [...]We got to influence it, and you probably can't prevent that some of the [design] conditions changed underway. After all, we don't build town halls every year. These are things we realized on the way. (Interview, 2008)

The workshops allowed for the embodiment of the department's future workspace. Through discussions and negotiations and, then, through the physical instantiations made by foam blocks, the participants created the spatial contours of their future work processes. The realism of this was experienced so strongly by some of the participants that they felt like designers, and they were taken aback when their suggestions were changed after the workshop. As one staff member remarks:

> As soon as you get a precise area [location in the house], you get attached to it pretty soon. You feel that 'this is my space'! And then you suddenly get the message that you [the department] have been moved to another location of the same size. [This puzzle] referred to the general logistics in the house at large. But my feeling was: why was I moved? (Interview with staff member, 2008)

The architectural designers also noted that the high level of tangibility in these workshops had the potential disadvantage of being too detailed and life-like, creating strong expectations. According to one designer:

> It is a little bit difficult, because when you [as user representative] are in the situation, and you're told that this foam block is a table, then you begin to do table-like things with it. You begin to think solution-oriented, almost automatically.[A]nd some were of the opinion that what they had seen at the workshop was the way they were going to be seated. It was the foam blocks they had placed that established their physical location. This might have been a mistake because we made it too concrete....Even though we said it was an experimentarium, where they could try things out I felt it was very difficult to move them [the blocks] once they had been put in place.

His comment suggests that it cannot but lead to disappointment if the design is changed for reasons not apparent or acceptable to the participants. As in many other complex building projects, this was also the case in the town hall project, leading to some of the participants' frustration.

Our observations from these workshops are suggestive of the important role that material artifacts play, not only in representing the future layout of the town hall and its departments (e.g. on the game boards), but also in providing the staff with a tangible sense of their future workplace (e.g. the foam blocks). The exercises gave the participants an embodied experience of the office layout – a feeling of size, distance, proximity, and a distinct idea of the department's spatial organization. The exercises also enabled them, albeit briefly and to varying degrees, to become designers, thus, blurring the distinction between users and designers. Although some enjoyed this role to the point where they could see their ideas being realized, others found that their role as designers was undermined by subsequent management decisions to do things differently. The sense of disappointment introduced another managerial challenge into the merger process and is indicative of the unpredictability that extended user participation implies. It may enable the resolution of some concerns, but it is also likely

to produce new ones when expectations are not met. Thus, even though the double design process is a managerial intervention, it is unlikely that it will proceed according to plan in a straightforward manner. The approach reflects the design attitude, in which ambiguity, conflict, negotiation and the production of (design) alternatives are the central premise.

Vignette 2: Engaging with architectural sketches - bridging organizational and architectural design processes

This vignette focuses on the design and subsequent re-designing of a particular part of the building – the reception counter in the town hall lobby, the design of which had been subject to some contention from the start. The competition brief had called for developing a design that was among other things "open" and "welcoming". Identifying what this more precisely entailed was, however, not a straightforward endeavor. In the original proposal, the architectural designers had, for example, not envisioned it as a counter at all. Instead, they…

> … saw it [the counter] as a serpentine – as a winding line that ran through the underworld of this town hall; a multifunctional piece of furniture that represented everything from being something you could sit on, something you could get brochures from, where you could talk with people from each side. And at some places it [the serpentine] was completely wiped out to avoid signaling this unfortunate phenomenon where you have a partition between one side and the other. (Interview with architect, 2008)

But the assessment committee, consisting of various experts, the top management team and several staff representatives, considered this design as too open. Because of previous experience with unfortunate instances of client violence, they asked the architects to design something "more closed" to offer the employees more protection. The serpentine and the revised design are depicted in the two diagrams on the left in figure 3. Charlotte, manager of the 'Citizen Service Center' and whose staff would be 'manning' the counter, was, however, not impressed by the revised design. According to Charlotte, the design did not reflect the employees' aspirations and expectations for the new building that had evolved in the course of the user participation activities:

> I didn't like the entrance counter. It was a desk of the worst kind. We would be very much separated from the citizens. […] I think, when we build a town hall that in all other ways are supposed to signal openness and a sense of belonging, I don't think we can leave the citizens at such a substantial counter, with 15 of our people behind it. (Interview with Charlotte, 2008)

Based on her interpretation of the architects' sketches, she initiated a series of meetings to renegotiate the design. She met with her group of closest colleagues; with the administration's top manager; with the unit within the administration responsible for the town hall project – and with the architectural designers. She discussed work processes and identity with her fellow workers; image and economy with the top manager; time schedules and process with the project management; and form and function with the architectural designers, with whom she also worked alongside in re-doing the sketches. Drawing on these insights and the ones she gained through the user participation, Charlotte

developed a modified design in collaboration with the architects, approved by management. This is illustrated in the rightmost diagram in figure 3, where the grey figures in figure 3 represent employees in the 'Citizen Service Centre' while the black figures represent the clients.
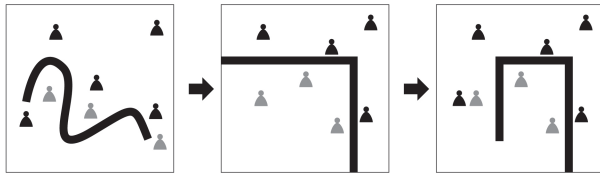

Figure 3: Tracing the design of the entrance counter from the architects' initial design to top management's redesign and the users' redesign. [All diagrams to be made in black/greyscale]

Charlotte described the users' redesign in the following way:

> What we have done now is to tip it in […] so the staff doesn't stand on the opposite side [of the client] looking out. In this way, we terminated the petty official image we unfortunately struggle with. (Interview with Charlotte, 2008)

With these architectural adjustments, clients and citizens visiting the town hall could move freely around the entrance counter and get substantially closer to the Citizen Service Center staff. While the design suggested by top management physically separates the staff and the clients, Charlotte's suggestion allows them to literally walk around the counter. From Charlotte's viewpoint, this design signaled less distance to the client, a gesture she found more appropriate with reference to the municipality's overall vision for the town hall project and also more in keeping with the results of the user participation activities.

Once the town hall was completed and the 'Citizen Service Centre' had been functioning for a couple of months, the design of the entrance counter was, again on Charlotte's initiative, subject of intense debate. This time she found the counter too open! The reception area provided too little privacy for staff and clients alike, and on this basis she initiated yet another process of re-designing. Less than 2 months after occupancy, she noted that:

> [We have] already modified the layout of the reception area and made an agreement that […] the conversation bar between the expedition area and the department [of the Citizen Service center] should be moved 80 cm, in order to create [space for more] discretion for the citizens. (Email from Charlotte, 2008) See figure 4.
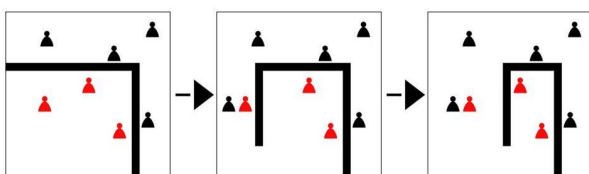
Figure 4. The next iteration of the design of the entrance counter. [Bring in all four diagrams/iterations in this figure?]

In the fourth iteration of the counter's design it was modified so as to reduce the width of the space behind the counter. However, just as the counter's physical layout was to be changed according to Charlotte's revised plan, the municipality ran into a massive expenditure cuts due to the economic ramifications of the financial crisis, which put the development of the counter on hold. The financial crisis also had other implications, among them the layoff of many employees and a succession of managing directors.

When we returned to the site three years later, a number of organizational changes had been introduced, including the integration of another section into the Citizen Service Center. And as can be seen in figure 5, the entrance counter was once again about to be modified – to a design identical to the one suggested by management three years earlier. Management had, however, in the meantime changed substantially.
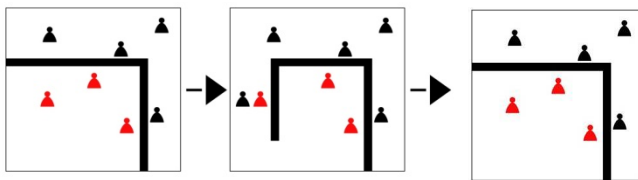

Figure 5. Back to square one. [Bring in all diagrams/iterations in this figure?]

Charlotte had, by this time, left the municipality, but the design challenge of ensuring both openness and protection she had emphasized, had not been resolved. Commenting on the design changes that had taken place in the course of the three years, another middle manager described the situation as follows:

> When we moved into the building, the reception area was widely used, but that's not the case anymore. […] I think it has become a more quiet organization. I don't think it is as dynamic as it was before. I think it is a bad development. It's not progressive – neither with regards to work processes nor the signals it sends. […] We are some who feel we're almost back to where we were in the old days. When Charlotte was here, we were in a process where we thought 'we can do this and this and this'. (Interview with middle manager, 2011)

The quote suggests two things: First, the way in which the counter was redesigned is seen as a reflection of the changes in the organization. Also, in changing the counter's shape back to the more conventional form, the ways in which people interact in the building entrance changed as well. It had become a less lively place. It represents the materialization of changes in the municipality's organizational identity.

Our observations of the 'the life' of the entrance counter are illustrative of how a design can be reworked as it is taken into use. In this sense, the design (and the subsequent redesigns) is an effect of the everyday practices and experiences of the users; the staff and the various visitors. The latest redesign will afford management, Center staff and citizens new possibilities for using the town hall entrance. We might thus say that as an artifact, the counter is like a building "simultaneously made and capable of making" (Thrift in Gieryn, 2002:37).

Discussion

In the empirical descriptions above, we have focused on unfolding what a double design process can entail. These findings highlight four important and interdependent points that may characterize organizational and architectural design processes, and the links between them. In the following, we discuss how these empirical insights may contribute to strengthening the conceptual idea of Managing as Designing and thus serve as inspiration for informing management practice.

First, the case illustrates that design processes do not start from scratch. There is, as Latour (2009:4) notes: "always something that exists first as a given, as an issue, as a problem." Both organizational and architectural design processes have a history. As a part of the Managing as Designing initiative, Weick refers to this as "thrownness," in which the designers are thrown into "... a world that is already interpreted and where people are already acting" (2004:76). In our case, the managing director and the architectural designers were thrown into a situation, where the merger between two adjacent municipalities and the decision to build a new town hall had already been made. Among other challenges, they had to contend with the employees, who had numerous concerns as to what the merger, the new building and the idea of the open office layout would mean for their future workplace and the organization of their future work processes. Hence, the design processes unfolded in an organization teething with issues. For management, the architectural design processes associated with building a new town hall provided an excellent opportunity for also grappling with the organizational changes that were associated with the merger. In this way, the emergent architectural and organizational designs were outcomes of the actors' complex interactions, under specific political-economic and socio-material circumstances.

Management's conscious use of the architectural design process could, of course, be written off as a use of space as a means of managerial control. To do so, however, would presumably provide a rather limited account of what such double design processes can offer in terms of organizational development. Although there are many instances in our case in which a decision attitude is required, e.g. in connection with the architectural competition and tendering procedures, the introduction of formalized end user participation, as well as many of the existing managerial modes of control that characterizes public organizations, the way in which the double design process was organized in the project provided management with an opportunity to take on a design attitude. User participation was an important vehicle in this regard. It opened the design processes to a host of other actors and allowed for exploration and experimentation as to how the designs would emerge.

By engaging users in design processes several things can happen: Both designers and users can learn more about the needs and concerns of the organization's everyday practice, and the users may also become involved in developing possible solutions to the issues at hand. In our case, the staff was engaged in producing design alternatives regarding their workspace; contributions that made way for design ideas that had both organizational and architectural implications. Moreover, through these user-designer interactions, users may also have become less worried and, perhaps, more willing to accept developments they might not have previously accepted. Although this can be seen as co-optation, in which case user participation may be considered as a means to legitimize management decisions, such an approach can overlook the gradual development of new organizational practices that are also likely to evolve.

The vignettes point to the "heterogeneous ordering" (Law, 1994) involved in processes of design. It was heterogeneous in the sense that a great number of both people and material artifacts were enrolled and aligned in bringing the architectural and organizational design processes forward. It allowed for an ordering, in which the staff's concerns regarding the layout of their workspace and the organization of their work were enacted through the use of the material artifacts. The interplay between organizational and architectural changes was demonstrated in vignette 2. It unfolds Charlotte's aspiration to change the shape of the entrance counter to better reflect what she considered to be the municipality's new identity; a conception that evolved in the course of the double design process. Moreover, her encounter with the architectural sketches, and later with the counter itself, further catalyzed her negotiations with the involved parties (her colleagues, the managing director, the architects, and more) towards a desired design. The different responses produced in these negotiations were worked into the (perhaps not so) final design of the counter. Similarly, the network of people and material artifacts involved in the process of settling the layout of the building as a work environment (vignette 1), allowed for improvisation and experimentation. For the manager to take on a design attitude, a more conscious acknowledgment of the heterogeneity of such networks and the many directions they can take, seems important. Moreover, attending to the ways in which such networks emerge, stabilize and adjust are important for understanding how such design processes can evolve.

Second, the case highlights the importance of material artifacts as mediators in organizational and architectural design processes. In the empirical vignettes we have shown how materiality paved way for the staff to both see and sense not only their work, but also their organization in new ways. Even though the user participation and the material artifacts involved in these activities did not eradicate the staff's concerns as to what consequences the new workspace would have on their work and the relationship to their clients, it gave the participants an embodied experience (Ewenstein and Whyte 2007a, 2007b, Warren 2008). In keeping with Ewenstein and Whyte's work on the importance of visualizations (2007a, 2007b), our findings highlight how visual aspects can play a role not only in the work of professional designers but also when people with different backgrounds join forces in design processes. Drawings, sketches and photographs can be powerful "artifacts of knowing" for the latter (Ewenstein and Whyte 2007b), since they can communicate meaning visually and may support a sense of progression in the design process. The foam bricks in the Dogville-workshop were both visual and tactile mediators. The physical experience of moving the bricks and reshuffling them in alternative layouts gave the participants a sense of how their professional activities could be organized and prioritized. In this double design process we may say that the material artifacts mobilized talk about work and workspace; daily routines and professional relationships; proximity and distance; acoustics; atmosphere, and more; allowing functional, spatial and emotional considerations to come together. As sensemaking devices, the material artifacts allowed the users to move beyond the status quo.

Material artifacts can, however, also black box (Latour 1987) or conceal aspects of a design. Once a design is taken for granted and no longer questioned, then the interests imbued in it are likely not to be visible. This may, perhaps, turn out to be the case with the entrance counter. Although the middle-manager we interviewed several years after the double design process had started was critical of the decision to revert to a more conventional design, there may be staff members for whom the counter is simply serving its purpose – facilitating their interactions with the citizens. They will presumably not see it as a materialization of the organizational changes that our informant saw the re-version to a conventional counter as symbolizing. This is because material artifacts mean different things to

different people. In organizational change processes such as the one described in our case, many of the material artifacts will not necessarily hold a clear or fixed meaning for the people involved. Rather, they will inscribe different meanings into the artifacts through the context in which they appear (Akrich 1997). As the manager cannot know how the artifacts may be inscribed and what directions the inscriptions might take, this introduces an element of uncertainty into these processes. The sequence of action may thus take unexpected turns. Although changes in the spatial organization may attempt to structure patterns of human interaction, it is unlikely that it will determine how the interaction takes place. After all, these changes also afford new possibilities for action and interaction (Kreiner, 2010). For the manager as designer, the important lesson is that a conscious use of material objects and visual representations may support the handling and facilitation of organizational change processes, while accepting that there is indeterminacy to this.

Third, the way user participation was invoked in the case might be indicative of a "decentering" of management. Not only in terms of the managing director but also, in certain instances, with regards to the architectural designers. Rather than accepting the users' initial descriptions of their needs at face value (when asked about their needs for a future workspace users are likely to describe their current conditions in disguise (Weick 2003: 94)), the managing director paved way for "the *circulation* of ideas and objects" (Suchman 2004: 170 italics in the original) through the initiation of the double design process. This process triggered the development of a variety of suggestions as to how to organize the building, offices and work processes. By providing management with these ideas and alternatives, the process worked to reduce the distance between manager/designer and those being managed. Moreover, it also carried with it staff support of the organizational developments.

Suchman suggests developing more collaborative approaches to managing life in organizations; approaches based on user participation and the reciprocal exchanges between management and staff. User participation should, however, not be limited to the disclosure of information regarding user needs. Rather, it should be invoked with opposite aspirations, i.e. with the purpose of establishing designing as a practice that produces continuous input, based on user/manager interaction. By organizing the user participation through different "in situ configurations" (2004: XXX) – e.g. in the 'Dogville' setting in vignette 1 – that allow for close interactions between users and designer, the position as organizational designer can, perhaps, be shared. Input produced in such participation activities represent design alternatives that can – if the manager/designer is interested – be used as a source of inspiration for further development. The point is, however, that the collaborative approach affords a more or less continuous production of such input, supporting the idea that design processes are necessarily iterative and subject to redesign. Suchman describes this type of manager/designer in the following way: "For the designer, the question is always reiteratively: What have we got at this point, and what can we say about it and do with it, vis-á-vis the circumstances at hand? This is not to say that there is no constancy to the artifact. Rather, it is the reiteration of these questions and the construction of satisfactory answers to them that create the continuity" (2004: 171). For the manager as designer it represents an openness towards, and an ability to handle or leverage, the continuous production of design input that is important in order to conveying a sense of stability. To the "decentered" manager, users are not only considered as a source of inspiration. Moreover, user needs are not considered as something latent, waiting to be uncovered and articulated through, for example the use of models and/or prototyping. Rather, user needs and potential design solutions are mutually enacted and emergent. They co-evolve with the design.

Fourth, and following from the above, the case reminds us that design is not over when it's over. To the manager as designer, iteration can be considered as given; a precondition to be consciously integrated as part of the management practice. The empirical vignettes demonstrate that both the organizational and architectural designs continue to morph as the staff engages with various material artifacts and with the materiality of the building – and as new organizational concerns surface. This relationship between the "crystallized" and the "liquid" state of a design, as proposed in the Managing as Designing initiative (Boland and Collopy 2004: 265-277), is not explored at great lengths but it points to the malleability of design and the movements between design and designing. The managerial challenge is striking the balance between the liquid and the crystallized – between an openness and responsiveness to new ideas (designs), without succumbing complete fluidity that may create anxiety for the involved employees.

As the empirical vignettes demonstrate, grappling with this is a challenge, not only for the managing director and the users, but also for the involved architectural designers. For the manager it entails questioning, monitoring and facilitating the ways in which people make sense of their situation, and considering this input as means to inform continuous problem solving. At the same time, this implies a temporality to many decisions. For the users, participation can produce new interests and expectations. The first vignette illustrates how some of the participants considered the outcome of the workshops as complete – as a finished "design" rather than as input to the further process of designing. They translated the results of their efforts in the Dogville workshop into the final design solution, and when they realized that the design was still subject to change – liquid – they got quite annoyed. Finally for the architects, there can be stakes in these processes that make them more likely to push for establishing a design solution, e.g. having to 'get on with the job' and produce the required documentation.

In the second vignette the way in which Charlotte engaged with the architectural drawings to enroll her colleagues in making a case for yet another redesign of the entrance counter surprised the architects; in part, because she confronted them with the drawings and, in part, because of the material implications that her actions had. The entrance counter was a permanent fixture and the process of redesigning it would entail demolishing the previous (concrete) structure and cast molding a new one. The role that Charlotte played in the design process was significantly different than the role that the end user representatives usually have within architectural design processes. In this situation we might say that the design was kept liquid so as to be more in keeping with the development in the organization. Clearly, all actors engaged in such design processes are not on equal footing due to differences in formal authority, expertise and the ability to enroll, enlist and persuade others about the superiority of their design ideas. Charlotte's position as middle manager might, for example, be part of the answer to her success.

One implication of the fact that the design is not over when it is over is that the managers as designer will have to be able not only live with the malleability of the (organizational and architectural) design, they will also have to be able to accommodate or foster it so as to elicit possible alternative courses of action. In this way, each process of designing is a process of redesigning that does not start from scratch. This brings us to an important implication; that the distinction between design as an outcome (noun) and a process (verb) is more transient (Garud et al., 2008: 367) than often inferred from the commonplace usage of these words. That designs are less stable and more open to redesign than commonly assumed.

Conclusion

This paper has explored the interplay between organizational and architectural design processes in the context of a merger between two municipalities. In such situations where matters of fact – the existing organizational structures and practices – are changed and can give rise to matters of concern amongst organizational members, user participation appears to be one way forward. How this can work will depend on the mindset of management, how user participation is introduced and is allowed to take place. It holds the potential of allowing users to air their concerns as well as for them to engage in developing organizational space and new organizational practices. Certainly, user participation is not the panacea for all forms of organizational change, but it does seem apt in situations where management's course of action is not a straightforward matter of choice between well-proven alternatives.

Moreover, as managerial, architectural and user intentions and aspirations are given form and enacted through a variety of material artifacts – sketches, drawings, foam blocks and physical structures such as the entrance counter – it becomes possible to make sense of what the future might bring in terms of spatial and organizational changes. Hence, the materialization of these changes is an important aspect of the development process, in part because it can decenter the manager/designer. It not only enlists or enrolls allies; it also affords them other courses of action.

In such double design projects and for the sake of expediency and economic reasons, architects might seek consensus rapidly so as to get on with the project. Users, on the other hand, are likely, because of their concerns, to opt for longer deliberations. For the manager this calls for a design attitude, i.e. for balancing between closure (crystallization) on the design solution and keeping things floating (liquid), while also providing a sense of direction. However, as the case showed, designing is not over, when it is over. Existing designs can be challenged and be subject to re-design.

References (needs update)

Akrich, M. (1997): The De-Scription of Technical Objects, in Bijker, W.E. and Law, J. (eds.): Shaping Technology/Building Society: Studies in Sociotechnical Change

Bjerrum, E. and Bødker, S. (2003): Knowledge sharing in the 'new office' - possibility or problem? In Dourish, P. and Schmidt, K. (eds.) ECSCW 2003: Proceedings of the Eighth European Conference on Computer Supported Cooperative Work, Kluwer Academic Publishers, Netherland

Boland, R. and Collopy, F. (eds.) (2004): *Managing as Designing*. Stanford: Stanford University Press

Buchanan, R. (2004): Management and Design: Interaction Pathways in Organizational Life. In Boland, R. and Collopy, F. (eds.) (2004): *Managing as Designing*. Stanford: Stanford University Press

Cuff, D. (1991): *Architecture: The Story of Practice.* MIT Press

Clegg, S. and Kornberger, M. (eds.) (2006): Space, Organizations and Management Theory, Copenhagen Business School Press

Czarniawska, B. (2004): Management as the Designing of an Action Net. In Boland, R. and Collopy, F. (eds.) (2004): *Managing as Designing*. Stanford: Stanford University Press

Dale, K. and G. Burrell (2008): The Spaces of Organization and the Organization of Space: Power, Identity and Materiality at Work, Basingstoke: Palgrave MacMillan

Duffy, F. and Worthington, J. (2004): Working without walls. An insight into the transforming government workplace, DEGW and Office of Government Commerce

Emerson, R., Fretz, R. and Shaw, L. (2001): Participant observation and fieldnotes, in Atkinson, P., Coffey, A., Delamont, S., Lofland, J. and Lofland, L. (eds.) Handbook of Ethnography, Sage

Ewenstein, B. and Whyte, J. (2007a): Beyond Words: Aesthetic Knowledge and Knowing in Organizations, in Organization Studies 28(05): 689-708

Ewenstein, B. and Whyte, J. (2007b): Visual representations as 'artifacts of knowing', in Building Research and Information, 35 (1): 81-89

Fisher, T. (2000): *In the scheme of things: Alternative thinking on the practice of architecture.* Minneapolis: University of Minnesota Press

Forsythe, D. (1999): 'It's Just a Matter of Common Sense': Ethnography as Invisible Work, in Computer Supported Cooperative Work, 8: 127-145

Gagliardi, P. (ed.) (1990): Symbols and Artifacts: views of the corporate landscape, de Gruyter

Garud, R., Jain, S. and Tuertscher, P. (2008): Incomplete by Design and Designing for Incompleteness. In Organization Studies, 29 (03): 351–371

Greenbaum, J. and Kyng, M. (1993): Design at work: Cooperative design of computer systems, Lawrence Erlbaum

Greenwood, R. and Miller, D. (2010): Tackling Design Anew: Getting Back to the Heart of Organizational Theory. In *Academy of Management Perspectives,* November 1020, pp: 78-89

Gubrium, J.F. and Holstein, J.A. (Eds.) (2002): From the individual interview to the interview society, in *Handbook of Interview Research. Context and Method*, Sage, Thousand Oaks, pp.3–32

Gutman, R. (1988): *Architectural Practice: A Critical View.* Princeton Architectural Press

Hallford, S. and Leonard, P. (2006): Place, Space and Time: Contextualizing Workplace Subjectivities. In Organization Studies 27 (5): 657-676

Järvinen, M. (2005): Interviews i en interaktionistisk begrebsramme. In Järvinen, M. and Mik-Meyer, N. (eds.): *Kvalitative metoder i et interaktionistisk perspektiv. Interview, observationer og documenter.* København: Hans Reitzels Forlag

Jelinek, M., Romme, A. G. L., Boland, R. J. (2008): Introduction to the special issue: Organization Studies as a science for design: creating collaborative artefacts and research. In Organization Studies, 29(3): 317-329

Jencks, C. (2002): The new paradigm in architecture in *Absolute Motion*, Datutop 22, Tampere

Kvale, S. (1997): InterView, Hans Reitzels Forlag

Larson, M.S. (1993): *Behind the Postmodern Facade: Architectural Change in Late Twentieth-century America*, University of California Press

Latour, B. (2004): Why has critique run out of steam? From matters of facts to matters of concern, in Critical Inquiry, 30 (2): 225-249

Latour, B. (2005): *Reassembling the Social*, Oxford University Press

Latour, B. and Yaneva, A. (2008): "Give me a gun and I will make all buildings move": An ant's view of architecture. In Geiser, Reto (ed.), Explorations in Architecture: Teaching, Design, Research, Basel: Birkhäuser, pp. 80-89

Latour, B. (2009): A cautious Prometheus? A few steps toward a philosophy of design (with special attention to Peter Sloterdijk), in Networks of Design, Proceedings of the Annual International Conference of the Design History Society (UK), University College Falmouth, 3-6 September 2008

Lawson, B. (1997): How designers think: the design process demystified, Elsevier, Architectural Press

Prior, L. (2003): *Using Documents in Social Research*, New Delhi: Sage

Prior, L. (2004): Doing things with documents, in Silverman, D. (ed.): Qualitative Research. Theory, Method and Practice, Sage

Ripley, C., Thün, G. and Velikov, K. (2009): Matters of Concern, in Journal of Architectural Education, 62 (4): 6-14

Romme, A.G.L. (2003): Making a difference: Organization as design, Organization Science 14 (5): 558–573

Saint, A. (1983): The Image of an Architect, Yale University Press

Schmidt, K. (2011). *Cooperative Work and Coordinative Practices. Contributions to the conceptual foundations of Computer-Supported Cooperative Work (CSCW).* London: Springer-Verlag

Schuler, D. and Namioka, A. (eds.) (1993): Participatory Design – Principles and Practices, Lawrence Erlbaum Association Publishers

Smith, D. (2001): Texts and the Ontology of Organizations and Institutions, in Studies in Cultures, Organization and Society 7: 159-198

Stang Våland, M. (2010): *What we talk about when we talk about space: End User Participation between Processes of Organizational and Architectural Design*. Copenhagen Business School, Ph.D. dissertation

Suchman, L. (2004): Decentering the Manager/Designer. In Boland, R. and Collopy, F. (eds.) (2004): *Managing as Designing*. Stanford: Stanford University Press

Suchman, L. (2005): Affiliative Objects. In Organization, Vol. 12 (3): 379-399

Taylor, S. and Spicer, A. (2007) 'Time for space: a narrative review of research on organizational spaces', *International Journal of Management Reviews*, Vol. 9, No. 4, pp.325–346.

Van Marrewijk, A and Yanow, D and (eds.) (2010): Organizational Spaces. Rematerializing the Workaday World, Oxford: Edward Elgar

Warren, S. (2008): Empirical Challenges in Organizational Aesthetics Research: Towards a Sensual Methodology. In Organization Studies, 29(04): 559–580

Weick, K.E. (2001): Making Sense of the Organization, Blackwell

Weick, K. (2003): Organizational Design and the Gehry Experience, in Journal of Management Inquiry, 12 (1): 93-97

Yaneva, A. (2005): Scaling Up and Down: Extraction Trials in Architectural Design, in Social Studies of Science 35 (6): 867–894, Sage

Yaneva, Albena (2009): *The making of a building: A pragmatist approach to Architecture.* Peter Lang AG, International Academic Publishers