Design, Thrownness and the Call for Innovation

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Abstract
The rapidly technological development and growing global competition increase the need for building adaptive and innovative businesses with the capability to survive and resist disruption. Since the Second World War, the research field of innovation management has expanded. Today, numerous approaches to innovation management co-exist side by side. Yet, a relatively new field has emerged that is said to contribute to companies’ competitive advantage as a response to this global innovation agenda: design thinking. However, design researchers find it difficult to agree on a common definition of this concept, which derives from design practice and design management. In addition, design researchers call for contributions from organizational scholars to enlighten the relationship between design thinking, innovation and management. In this paper, I accept this invitation and explore how we can understand design thinking in relation to management’s challenges regarding change and innovation by reviewing the literature on disruption and design thinking from a management perspective. Next, I draw in Karl Weick’s contribution to managing as designing and find what I call Weick’s unarticulated contributions to managing as designing. I arrive at a concept of ‘toollessness’ as an important managerial capability that managers can learn from design education and practice when the task is to increase the organization’s change and innovation capability. In my review of Weick’s theories I draw up a Dynamic Change and Innovation Model that supports my analysis and understanding of the literature. In closing, I discuss the insights outlined in the article and make suggestions for further research.

Keywords
Innovation management, disruption, design thinking, managing as designing, sensemaking, tool dropping, toollessness, the magic.
Introduction

Even if it is a bit of a cliché, innovation is intensely needed today as an answer to the global competition and the constant technological advances. Popular business literature and newspapers bring stories about the need for innovation and case stories about companies whose marketplace success can be traced back to their ability to innovate (for instance the giant toy company Lego and the pharmaceutical company Novo Nordisk). Conversely, we also read stories about companies being closed or bought up by competitors due to their limited capacity to handling innovation (Christensen, 2000; Christensen & Rosenbloom, 1995; Henderson, 2006; Sandström, 2010; Sull, 1999). Recently, the concept of disruption has appeared in the business and daily press in reference to the near disappearance of companies such as Kodak, Nokia and Blockbuster after years of great financial success and global dominance.

Numerous approaches to innovation co-exist side by side. Hobday et al. provide an overview of innovation studies, which emerged as research field after the Second World War (Hobday, Boddington, & Grantham, 2011). They describe how the fields of economics and engineering became dominant within this area of research and practice. Today, however, the field has expanded, and Hobday et al. point at ‘dozens of scholarly journals’ and the fact that an unknown number of social scientists work on many different innovation perspectives beyond technology, e.g. organizational innovation, innovation of business strategies, and policy development. In a later paper, the authors point to another direction for innovation studies, namely the field of design thinking. They argue that ‘[f]ar too often, the rational, process-based, machine metaphor is the “default” position of innovation and technology management studies. Design thinking can lead to a major reorientation of innovation theory, research, and teaching, thereby moving towards a view of the firm as a creative, solutions-generating, social, and flexible organization’ (Hobday, Boddington, & Grantham, 2012, p. 41). Since the beginning
of the new millennium, the concept of design thinking has been promoted in the business literature as the solution for executive teams striving to increase and sustain their organization’s innovation capability. Design thinking will produce a so-called ‘competitive advantage’ (Brown, 2008, 2009; Brown & Martin, 2015; Dunne & Martin, 2006; Kolko, 2015; Martin, 2009, 2011) and, in addition, offer a more suitable curriculum for business challenges as well as for management education (Boland & Collopy, 2004b; Kimbell, 2011a).

However, several challenges emerge with regard to the understanding of the concept and its application in practice. Carlgren and colleagues find that despite ‘growing importance, there is little coherence around the concept among scholars’ (Carlgren, Rauth, & Elmquist, 2016, p. 39), while Johansson-Sköldberg et al argue that there isn’t any ‘sustained development of the concept’ (Johansson-Sköldberg & Woodilla J., Cetinkaya, 2013, p. 121). Moreover, design thinking is stated ‘undertheorized and understudied’ (Kimbell, 2011, p. 301). Furthermore, contemporary research on the topic calls for organizational scholarly contributions (Cooper & Junginger, 2011; Hobday et al., 2011; Johansson-Sköldberg & Woodilla J., Cetinkaya, 2013).

The present paper aims at contributing to design thinking from an organization and management perspective, and will draw specifically on the work of organizational scholar, Karl Weick for three reasons: first, he has contributed to designing related to management and organization studies (Weick, 2004a, 2004b)\(^1\) and has as such met the call for organizational scholarly contribution to the field; second, he paved the way for the concept of sensemaking in organizations (Weick, 1995, 2001, 2009), also a widely used term within design research focusing on innovation (Jahnke, 2013; Öberg, 2015; Verganti, 2009; Verganti & Öberg, 2013)\(^2\); and third, although being articulated as processes leading to catastrophes (Weick, 1993, 2009)\(^3\), I find that they too describes processes leading to disruption, which was one of the key
concerns of my empirics during the field study. Thus, I suggest a new theoretical understanding of design thinking (which I later in the paper term ‘designing’) related to the managerial capacity to increase organizations’ innovation capability for strategic purposes. More specifically, I point to Weick’s concept of tool-dropping as a meta tool for managing and leading innovation and as an overlooked topic within the design thinking literature.

After a brief introduction to the concept of disruption, I turn to the literature on design thinking in business and address the problems brought forward by design scholars. In the following, I take my point of departure with regard to Weick’s theories on sensemaking and tool-dropping in two papers published in the anthology ‘Managing as designing’, 2004. Next, I analyse Weick’s two examples of designing as an act of leadership and arrive at a model for leading and organizing incumbents’ innovation challenges. I develop the concept of ‘toollessness’ as a key individual capability that managers aiming at promoting innovation in their companies can learn from designers.

**Disruption and Resistance to the New**

Rapid changes in today’s market situation is often referred to as disruption, which is recognized as movements in a market that gradually destroys incumbents. The phenomenon has been described by a number of scholars, since Karl Marx and Friedrich Engels wrote about ‘creative destruction’ (1847) in their famous Manifesto of the Communist Party. A century later, the Austrian-American economist Joseph Schumpeter followed up on the concept, recognizing it as a natural activity within the national economy (Schumpeter, 1942). In the 1990s, Clayton Christensen studied the phenomenon through the lens of technological innovation and used the concept to describe what had going on historically when incumbents collapsed or were forced out of the market due to technological innovation (Christensen, 2000). Henderson and Clark
point to conservatism within the network in the surrounding environment of incumbents as barriers to their survival (Henderson & Clark, 1990), and Sull stresses management’s reaction to disruption as active inertia, suggesting that incumbents do what they normally do, just better, thus failing to act on the new conditions (Sull, 1999). They appear to believe that customers are loyal, and that their own products are unique and possess a high quality that meets customers’ demands. In a later paper on disruption and innovation, Henderson argues, with reference to Adner, 2002, that incumbents fail because old routines and competences prevent them from sensing and acting on changes in consumer demands combined with technological progression. In other words, they fail to respond to disruptive innovations because they lack market-related competences (Henderson, 2006).

However, the literature on organizational entrepreneurship points out that new ideas often face challenges from within and may be rejected or ignored by internal actors. Hjorth following Aldrich (1999) stresses that ‘Space for creation cannot be achieved against management as this will only generate stronger opposition,’ and simultaneously points to the ‘history of organizational entrepreneurship as incubation, after dark work, skunk-work’ as the kind of durable organizational entrepreneurship (Hjorth, 2012, p. 11). This focus on conservatism and management’s reactive behaviour to repress the new is supported by Sandström, who emphasizes the key role of conservatism in incumbents’ networks and the lack of business model renewal as well as internal competition for the same resources (Sandström, 2010). In addition, since organizational changes often imply a dislocation of power, innovation creates resistance. Furthermore, Sandström refers to Clayton Christensen, stating that ‘incumbents appear to be held captive by their investors and their most important customers. Therefore, resources are not allocated to initiatives that are initially less profitable’ (ibid., p. 10).
Hjorth, too, observes organizational rejection of the new – be it within the organization (Hjorth, 2012), as a consequence of the creation of heterotopias as isolated spaces for play (Hjorth, 2013) or as co-optation (Hjorth, 2016) – as a response that demands a certain amount of creativity from managers in the name of resistance. Today, it would seldom be an option for an organization to be explicit about choosing to exclude innovation. Thus, Hjorth argues, management has to resist the new through an increased degree of creativity in order to maintain their known business. To summarize, as a response to the call for innovation due to the challenges mentioned above, design thinking has been brought forward as a promising vehicle for building the innovative firm. In the following, I provide an introduction to the field of design thinking.

**The Concept of Design Thinking**

The concept of design thinking stems from design as a field of study in design schools, university engineering programmes etc. Over time, new design disciplines have developed, leading to the common understanding of design as the *extended concept of design* expressed in John Heskett’s oft-quoted sentence ‘Design is to design a design to produce a design’ (Heskett, 2002), in which the word ‘design’ four times: design as a general concept, as a process expressed through the verb (to design), and as the final immaterial or material artefact. Herbert Simon, too, has contributed to the extended concept of design. He approached design from his research on decision-making, problem-solving, psychology and cognition, which led him to articulate design as: ‘[e]veryone designs who devises courses of action aimed at changing existing situations into preferred ones’ (Simon, 1969, 1988). Another important contribution to this extension is Rittel and Webber’s perspective on wicked problems to which there exists no right but only best solutions (Rittel & Webber, 1973). Looking at the of concept design from the broader perspective, Richard Buchanan and John Heskett share the idea of design as a concept moving towards more abstract areas such as
systems and contexts, corresponding to the complexity of the age of post-industrialism (Buchanan, 1992; Heskett, 2002), can lead to design as a matter of concern for managers. This understanding of design provides an overall concept of the field, including methods and mindsets for managers to handle complexity in practice and, thus, also organizational issues. Cooper et al. put it as follows:

‘[t]he role of design is (…) broader and more comprehensive than the role it is assigned in traditional product development. Increasingly synonymous with thinking like a designer, thinking through design has the greatest potential to establish activities involved in designing as a core capability, one that goes beyond its traditional bounderies.’ (Cooper, Junginger, & Lockwood, 2009, p. 48).

while, Erichsen and Christensen state that:

‘the term design thinking (Clark & Schmith, 2008) emerges as a central concept within design management research, illustrating that design management research is trying to establish some generic roots of its own’ (Erichsen & Christensen, 2013, p. 115).

Recently, two contributions have provided an overview of the different conceptions of design thinking. Lucy Kimbell chategorizes design thinking into three different clasifications: first, design thinking as a cognitive style, second, design thinking as a general theory of design and third, design thinking as an organizational resource. The purpose of the two first is respectively ‘problem solving’ and ‘taming wicked problems’ while the third chategory is concerned with innovation (Kimbell, 2011, p. 297). Here, through, the scholarly contribution seems rather thin. Johansson et al have too contributed to encircle a definition of the term distinguishing between two discourses - designerly thinking and design thinking. Here they chategorize designerly thinking as ‘rooted in the academic field of design’ and linking theory and practice, while design thinking regards design practice outside the design context, e.g. in the management discourse (Johansson-Sköldberg & Woodilla J., Cetinkaya, 2013, p. 123).

Design Thinking in a Management Perspective

Since the mid 2000s, the number of contributions to design thinking and design thinking as a

Boland and Collopy (2004) were some of the first scholars who explicitly addressed design thinking from a management perspective⁴, although they used the term ‘design attitude’.

Traditional management education is too preoccupied with teaching decision-making, thus assuming that ‘sufficient and proper design work [has] already been done,’ they argue. This leads to the conclusion that design in general is an important concern for managers.

According to Boland and Collopy, managers need to learn to manage as designing, managing by applying a so-called design attitude in response to the fact that change rather than societal stability is now the norm. David Dunne and Roger Martin (2006) brought up the same issue and introduced it to the management literature, only now referred to as ‘design thinking’.

Later, publications by Tim Brown and Roger Martin followed (Brown, 2008; Brown, 2009; Martin, 2009). As Di Russo summarizes it:

‘(…) design thinking has become intertwined with management discourse in the design for organizational transformation today (Martin 2009; Liedtka 2000; Beckman, 2007)’ (Di Russo, 2016, p. 20).

Since then, the interest has spread to many areas within both academia and practice, although certain constraints make it difficult to get businesses to buy into the idea of design as a driver of innovation, as reported by a large body of scholarly contributions (Carlgren, Elmquist, & Rauth, 2016; Cooper & Junginger, 2011; Cooper et al., 2009; Johansson-Sköldberg & Woodilla J., Cetinkaya, 2013; Johansson & Woodilla, 2008, 2009; Liedtka, 2015; Rylander, 2009; Svengren-Holm, 2011)⁵.

Collaboration challenges between design and management

Epistemology. According to current research, the differences in epistemological background
between design and management studies seem to pose a barrier to collaboration (Johansson & Woodilla, 2009). The editors of the DESMA report put it as follows:

‘(…) design and management have different historical roots and professional cultures as well as different educational and research traditions, which makes research collaborations prone to misunderstandings and conflict’ (Eklund, Dell’era, & Karjalainen, 2015, p. 14).

Cases written by Brown and Martin intend to pave the way for the use of design thinking as beneficial for businesses. However, in most cases, managers see design as styling applied to physical artefacts; and on the other side, design consultants aiming at bringing design thinking in to the organizations approach organizations (and managers) with more or less obsolete assumptions and knowledge of management and strategy. In addition, they often see the manager as the single decision-maker potentially buying their services (Erichsen & Christensen, 2013; Johansson & Woodilla, 2008, 2009). This means that designers (and design consultants), who are educated within one philosophic tradition, approach business and industry managers trained within a very different tradition and philosophical background.

‘Designers (…) proceeding from a different epistemological tradition, produce symbols of creativity and do not always speak the same language as clients (Johansson and Svengreen, 2008). This is probably a contributing factor to the significantly lower profitability among design firms as compared to so-called KIFs [Knowledge Intensive Firms] in general and management consulting firms in particular’ (Rylander, 2009, pp. 14–15).

**Power.** Johansson and Woodilla (2008) argue that designers are trained to work in non-hierarchical and holistic environments. Inspired by the management scholar Mary Parker Follett, a contemporary colleague of Taylor’s, Johansson and Woodilla point to the idea of power in hierarchical organizations as one of the challenges for organizational creativity. Following Follett, Johansson and Woodilla understand power as distributed to persons rather than positions, the latter being mostly the case in organizations. According to Follett, a person who distributes power does not lose it but simply shares it in the situation or shares like feelings. In extension of this, they argue that designers do not care about hierarchies. Instead,
they argue, designers are interested in gaining sufficient knowledge from other disciplines in
order to find a solution to a problem. They refer to Follett’s concept of ‘the law of the situation,’
which implies that ‘participants do not bother having control over other people, but having
control and power over the (common) situation’ (Johansson & Woodilla, 2008, p. 109).

However, they might as well have drawn on other philosophers’ views on power and would
then presumably have arrived at a different conclusion. Rather than seeing power as being
shared in the situation of creating the new, we may view any kind of acting in relation to others
as an exertion of power, if we follow Michel Foucault (Foucault, 2000), one of the dominant
philosophers with regard to the concept of power. Naturally, the exertion of power leads to
resistance. Following this, designing is as much about the power balance between people and
groups of people in general, as it is about different epistemologies. From this point of view, it
remains an open question for research into managing as designing how to overcome
organizations’ resistance to power through designing (expressed through legitimization and
advocating, as shown above).

Definition. Newer contributions to design thinking point at another constraint, namely the
challenges to agreeing on specific characteristics for the concept (Carlgren, Rauth, et al., 2016;
Liedtka, 2015). Each has their individual focus on design thinking and arrive at their own
nomenclature or framework. In general, they all state that there exists no common
understanding of design thinking. Carlgren et al. conducted an empirical study involving six
different companies, all claiming that they work with design thinking as a driver of innovation.
‘Although DT [design thinking] seems to be growing in importance, there is little coherence
around the concept among scholars. The term “design thinking” is quite ambiguous and is often
a source of misunderstandings (...). Many academic publications on DT rely on popular
descriptions of the concept provided by its main proponents (IDEO, Rotman School of
Management, d-school at Stanford University) and in some cases the authors do not define it
at all’ (Carlgren, Rauth, et al., 2016, p. 39).

Hassi and Laakso review more than 50 articles or books on the topic and conclude that
‘(...) the elements should not be considered as separate units, but rather as forming an entity
that may be called design thinking. The approach of design thinking should be seen as a bundle
of certain elements that are interlinked and manifested through practices, thinking and
mentality’ (Hassi & Laakso, 2011, p. 2).

They state that different authors stress different aspects of the concept, and the elements
highlighted, ‘made explicit, implicit or simply not included,’ vary. Finally, they conclude that
‘a balanced holistic picture of design thinking or designerly way of working might not be
presented’ (ibid.) In line with this, Liedtka concludes that design thinking, a popular concept
in management discourse, is difficult to study empirically due to the ‘multifaceted nature of its
basket of tools and processes’ (Liedtka, 2015, p. 936).

**Concluding remarks**

In spite of the challenges to agreeing on one specific characterization of design thinking, the
authors discussed above do, however, agree on a fairly broad understanding, expressed in the
phrases a ‘basket of tools and processes’ (ibid.), a ‘bundle of certain elements that are
interlinked and manifested through practices, thinking and mentality’, (Hassi & Laakso,
2011, p. 10), ‘(...) the interplay among its elements, rather than [in] a single element in
isolation’ (Carlgren, Elmquist, et al., 2016, p. 53) and ‘no formal consensus’ but ‘major’ and
‘consistent themes’ (Di Russo, 2016, p. 39). Stefanie Di Russo outlines a history of design
thinking and stresses that we cannot speak of a ‘brand new field or sub-discipline of design’;
instead, it should be recognized as a ‘new approach for fields outside of design practice’
Regarding the current constraints about defining design thinking, she concludes, ‘Contemporary scholars agree that there exists no current formal consensus over what defines design thinking. Yet, reviewing the literature, major themes emerge and remain consistent across contemporary definitions’ (ibid., p. 39). Thus, she presents a table listing 17 different themes found in the literature, stating that pressure from economy and environment has forced businesses to ‘reconsider traditional product-centric business models’ to ‘people and service-centric models’ (ibid., p. 41). Regarding nomenclature, she concludes that ‘[t]hrough an analysis and synthesis of the history, development and contemporary descriptions, it is proposed that design thinking may be considered synonymous with the term designing’ (ibid., p. 4).

So far, I have followed the call for studies of innovation in line with ongoing discussion and concern about disruption; next, among the different innovation methodologies, I chose to shed light on the concept of design thinking as a managerial mindset aimed at innovation for strategic purposes. Reviewing the literature on the common understanding of design thinking in business, I pointed to three collaboration challenges related to design thinking and business: different epistemologies, constraints related to power and challenges to arriving at a single definition of design thinking. Either there is a problem with accepting design thinking as a driver of innovation (due to power issues and different epistemologies), or there is a problem with defining design thinking and thus answering the question, what can managers can learn from design in order to increase innovation capacity and avoid disruption as proposed in the (popular) literature?

Regarding the adoption of design thinking, the literature has also pointed to individual skills and characteristics and conceptualized the design thinker as having creative confidence (Rauth,
Köppen, Jobst, & Meinel, 2010), a design capability (Hobday et al., 2012) or a design attitude (Boland & Collopy, 2004a; Michlewski, 2008, 2015). In addition, one contribution looked at design thinking as mitigating managers’ cognitive biases with regard to innovation outcomes (Liedtka, 2015)\(^8\). In other words, the focus has been on what it takes to use design thinking as a manager or innovator i.e., what managers need to learn before they are able to act like a designer in their own settings as managers, but also on the converse issue: since managers do engage in design in their daily practice, they need to be better at it (Boland & Collopy, 2004b). The idea is that they need to achieve these skills in order to be able to create conditions for employees and collaborators to engage the different phases of a process before reaching the final, innovative solution – the product or service.

**Karl Weick and Managing as Designing**

In the following, I explore whether we may get closer to the definition of design thinking from a management perspective, where it is aimed at guiding innovation. To this end, I take a closer look at Weick’s contribution to the concept of managing as designing, from the event at Case Western in 2002\(^9\), and from here I draw the term managing as designing based on Di Russo’s conclusion and on Boland and Collopy’s use of the concept as the first scholarly contribution within the management field.

In the context of managing as designing, Weick’s concept of sensemaking and the derived concepts of thrownness, moments of confusing, collapse of sensemaking, cosmology episodes, tool-dropping etc. are expressed in the article ‘Rethinking Organizational Design’\(^10\). It revolves around the design process, exemplified by Frank Gehry’s working method when he designed the Lewis Building at Case Western Reserve University, and Hock and partners’ revision of an overly fixed organizational design, exemplified by the design of the VISA credit card. ‘Designing for Thrownness’ contains Weick’s view on our human condition of constantly
being in the middle of a process that we cannot stop or step away from, and where doing nothing is doing too. ‘Thrownness’ is the messy perceptions that we constantly need to deal with. As a consequence, we are forced to interpret and coordinate our perceptions into mutual interpretations, names, concepts, labels, reifications etc. to be able to understand each other and live together in societies, workplaces and families. The challenge or risk, however, is an overly coordinated perception of the world that settles and reifies concepts, labels and names too firmly. When that happens, the environment becomes difficult to change. It becomes difficult to look outside these strong concepts to let in the new. Weick mentions six aspects of what it feels like to be thrown: 1) We are forced to act – even when we do nothing, we act, and these acts have consequences; 2) Pausing and reflecting is not an option, 3) Prediction of future events is excluded, meaning that rational planning is more or less useless, 4) A stable representation of a situation is an illusion, 5) An objective or right interpretation of a situation does not exist, since ‘[e]very representation is an interpretation.’ (Weick, 2004a, p. 75), and finally, 6) ‘Language is action’ and thus has consequences.

According to Weick, the role of the incident commander in a wildfire situation is quite similar to that of a chairperson, a designer or a design client.

‘In situations such as these, designing unfolds in a world that is already interpreted where people are already acting, where options are constrained, where control is minimal and where things and options already matter for reasons that are taken-for-granted. These taken-for-granted reasons are lost in history and hard to retrieve, if retrieval was even an issue. The question “Why are we doing this” seldom comes up in the mood of thrownness because acting with what is at hand is primary and detached reflection secondary’ (Weick, 2004a, p. 76).

Weick states that designers are able to tune the experience of thrownness up and down, which makes it easier for them to act wise and generate

‘reflection-in-action (Schon, 1987), action that can be fine tuned and reversed so that prediction is unnecessary, increased situational, awareness with decreased dependence on stable representation, richer interpretations and more differentiated and nuanced language’ (Weick, 2004a, p. 77).
To Weick, thrownness and design support each other; as we are forever subjected to thrownness, and the ‘handrails’ created through design have a significant importance to and impact on us. Design’s capacity to increase or decrease our experience of thrownness makes it a powerful phenomenon, as he puts it. Weick borrows the ‘handrail’ concept from Frank Gehry and describes it as

‘familiar details in an otherwise strange setting that give people a feeling of safety and heighten their willingness to wade into someone else’s reinterpreted world and try to become more attuned to what is already underway in it’ (Weick, 2004a, p. 77).

On the other hand, there is an inherent risk for this handrail to become too fixed and thus becomes what he calls dangerous design. Weick’s characterization of designers’ work as the transformation of perceptions deriving from thrownness through a naming process corresponds to the design literature’s description of designing as progressive and future-oriented behaviour. To Weick, design creates ‘labels’ or ‘handrails’ for users as a wayfinding aid in the journey to the new, and while he speaks of managers making sense of what they view as unforeseen events, designers have been trained in methods constructing the new outside the realm of the known by sensing the unknown, having courage and self-confidence in facing the blurred uncertainty. In this phase, zones, forms, perceptions and relations are explored.

Designers create handrails in order to provide a smooth transition to the new and guide the audience to a new platform of meaning. This can only be achieved in a sensemaking process; however, the gap between the known and the new should not be too big. In the following, I will further explore the relationship between the handrails and the new.

The designer should not be too preoccupied or too zealous with finishing the design, whether tangible or immaterial. The labels created should be held ‘lightly’, as he puts it, as it should be possible to return to the world outside the fixed construction of concepts, labels and reifications and to return to zones, form conceptions, and relations to acquire new perceptions again and
again, in an oscillating movement between deconstruction and reconstruction. Thus, Weick establishes a dichotomy: on the one side of this dichotomy, we find our safe, known world, which we perceive as stable, predictable etc. On the other side, we have a completely unknown world, which faces us as a state of throwness, and which we can only interpret and make sense of in a continuous process. To provide an overview I have listed the two sides of the dichotomy as rows A and B in Figure 1:

**Figure 1.**

In order to get in touch with the B column, we make sense of what we see, transforming the seen into the known and thus into new meaning. ‘To make sense of something is to begin to provide a plausible platform for sharing mental models, coordinating activities, and interacting to produce relationships. To organize around something is to converge on an event whose articulation and preservation feels beneficial and of joint relevance. Sense makes organizing possible. And organizing makes sense possible’ (Weick, 2001, p. 95)\(^16\). This demonstrates how organizing and sensemaking are closely interconnected, understood as sharing, coordinating and interacting. The sensemaking process takes place as shown in Figure 2. The arrows show the sensemaking process oscillating between the known and the unknown.

**Figure 2.**

The concepts, labels and reifications constitute our current platform of meaning. The sensemaker moves back and forth between the two poles and thus interprets and creates handrails to the new. During the sensemaking process from C to D, negotiations, constraints, coordination and shareability occur and form the new concepts. By making sense of the new,
we arrive at new meaning. Etymologically, the word ‘sense’ stems from Latin – sensus, meaning perception, feeling – while ‘meaning’ derives from Latin ‘medianus’, which means what is in the middle of two extremes. Thus, meaning can be interpreted as different individuals’ senses being negotiated in order to find a common meaning to live with. This corresponds with Weick’s sensemaking and reconstructing process in the movement from C to D. However, the deconstruction process supported by the capability to drop tools is important too – the process from A to B, which I will show later through Weick’s two cases on Gehry and Hock. In the following, I provide an introduction to the concept of tool-dropping derived from his work on sensemaking, before I present and analyse the two cases.

Karl Weick arrived at the concept of tool-dropping by exploring sensemaking and the lack of life-saving agile behavior by US firefighters and knowledge workers, such as physicians and engineers. Weick’s studies of catastrophic wildfires in the United States and accidents within the NASA space programme and in hospitals mainly focused on the managers’ and employees’ failure to make sense of the situation, which led to vicious accidents or disasters.

Yet, in Weick’s Mann Gulch article, the fire caught the firefighters out for several reasons – one, because they failed to drop their heavy tools. Following this finding, he concluded that they failed to drop their tools because they were caught up in social dynamics, and their tools were closely associated with their identity (Weick, 1993). ‘As the fire gains on them, Dodge [the foreman of the firefighting crew] says, “Drop your heavy tools,” but if people in the crew do that, then who are they? Firefighters? With no tools?’ (Weick, 1993). Weick describes how analyses of wildfire incidents provided insights into consequences of failing to drop heavy tools. Today, part of firefighters’ training is to experience how it feels to run with and without
tools and reflecting on the difference. Based on actions and reflections, it has been considered, for instance, not to drop all tools but hanging on to things like a bottle of water or a minor axe, as these are important tools to grab for survival. However, elaborating on the concept in a more abstract direction, Weick proposes that tool-dropping is an issue for research and management education institutions too (Weick, 1996, 2007).

The design processes by Frank Gehry and Dee Hock

Weick illustrates his points by referring to two design processes organized by Frank Gehry\(^{18}\) and Dee Hock\(^{19}\). He describes the architect’s design of his own home in 1978, where Gehry removed almost every feature signalling a common cultural understanding of a house. He points to Gehry’s design strategy as actions moving ‘backward, away from reified notions of “house” towards forms and conceptions stripped of conventional relationships and names’ (Weick, 2004b, p. 46). Looking at the actual house, Weick comments that he has rebuilt and redesigned an old house and applied his own ideas of how people should live in houses. During the process, Gehry explored how much of the original house he could remove before it stopped being a house. From there he then added the new, his own interpretation of what lives in houses should be like. Weick uses the example as an image of concepts and an act of questioning reifications, questioning what appears in front of us and making room for new perceptions and other voices. In other words, Gehry *deconstructed* the cultural idea of a house and *reconstructed* a new idea of a house. In his own perception, he transformed the obsolete house into a better and more contemporary place to live and, I will argue, dropped the cultural idea of what constitutes a house.

Next, Weick draws a parallel to Dee Hock and partners’ design of the VISA credit card. What Gehry did to his house, Hock did to the banking community, to the network around the new, cross-national payment system in the 1970s. Weick compares Hock’s task with Frank Gehry’s
task when he designed the Lewis Building at Case Western Reserve University. In both cases, he identifies the deconstruction processes before the actual design process, meaning the deconstruction of immaterial ideas as well as physical artefacts, such as houses, the precedes the reconstruction of the new. Both processes are part of the sensemaking process.

The VISA card was invented by Bank of America in 1958 for American payment transactions and turned into the global BankAmericard in 1976. As Dee Hock describes the design process in his book²⁰, here read by Weick, the story went that after two years of negotiations, the group of bank representatives only had a few constraints left, and Hock aimed at finalizing the agreement. He did not succeed, however, in spite of all his efforts. As an attempt to resolve the final issues among the members of the organizing committee, he invited them all to dinner. At the end of this social arrangement, he had organized for each member of the committee to get a present. They unpacked the gift and found a set of golden cufflinks, each featuring half a globe – one carrying the phrase ‘the will to succeed’ and the other the line ‘the grace to compromise’. After a while, he asked the committee to convene the following day, when they were due to disband the work for the common credit card, since they obviously could not reach a deal. He asked them to meet up having considered whether, in the future, they would wear the cufflinks as reminders of how they succeeded and had the grace to compromise – or of the opposite. According to Weick’s description, the committee members sat in silence for a while.

Then one of them ‘exploded, you miserable bastard! The room erupted in laughter’ (Weick, 2004b, p. 38). The following morning, everybody wore the cufflinks, the final issues were resolved, and the global VISA credit card was realized. According to Weick, the story got a happy ending thanks to the extraordinary and artful setting Hock had provided. As he sees it, the powerful banking industry had applied their own concepts, labels, names and reifications
to original purposes and principles, defined a certain reality and thus taken control of the less powerful and benefited from their power. He interprets Hock’s work as an *attack* on powerful structures in the banking world, and as a replacement he designed ‘a community of semi-autonomous equals who now collectively manage global transactions that involve $1.5 trillion a year’ (Weick, 2004b, pp. 46–47).

Weick concludes that the VISA case shows a ‘microcosm of design’ and lines up seven reasons why, which are a list of complex social interactions, of feelings, constraints, agreements, ambiguity identities and ‘structures that are reified into solidity’. Furthermore, it is about acting and improvising, about passion, cunning, exploding. ‘It is about heart as much as head,’ he summarizes and adds that to overcome such situations as the one Hock faced before the final dinner requires social pressure and attractive alternatives (Weick, 2004b, pp. 38–39). In order to succeed with his great project, Hock was forced to put pressure on the group of bank representatives and thus presented them with two alternatives – they would either become part of the global collaboration, because the project would be realized, or they would forever be marginalized both in business and socially.

Weick sees the constraints as the committee members’ self-image, derived from their identity as employees of independent banks. As members of the international committee for establishing the credit card system, they actually had an opportunity to act differently, as Weick points out. But they only chose to act collaboratively and constructively after heavy pressure, with the golden cuff links as a simplified physical manifestation and a creative answer to complexity. The bank representatives clung to their known social structure, which Weick sees as an example of dangerous design. As he interprets the story of Hock and the VISA card, Hock was able to envision a different, possible future due to his ability to look beyond the existing
concepts of the world, where he found a dream that he was willing to fight for. Through the story, we follow Hock’s struggle for his dream of making sense of the new, realizing that the old modus operandi (bank customers struggling with time-consuming and, to some extent, bureaucratic transnational money transfers) had become obsolete.

Analysis and Discussion

Weick does not address his tool-dropping concept in analysing the cases; this might, though, expand the understanding of the situation around the final dinner as well as Gehry’s design process. The existing structure within the banking universe could not be changed through a conscious and open co-creation process among the participants, as Hock had attempted for quite a while. If we can speak of tool-dropping here, it would be Hock’s idea of the necessary consensus within a group of decision-makers that was dropped. Once the burden of consensus that was weighing him down, paralyzing him and rendering him impotent was lifted, he could act more freely and thus came up with the creative set-up of the final dinner and the cufflinks as physical artefacts manifesting a possible common future with world-wide collaboration. He created a story, which the cufflinks were designed to support, and built a vision for the purpose of supporting a much larger one – that of the global VISA credit card – and moved on in a new direction after the bank representatives had initially stopped him from realizing the vision.

Hock accomplished a clearly entrepreneurial act (the cufflink event), through which he created a window of opportunity and seized on the opportunity to realize the VISA project. Now, the question is whether this too can be characterized as a case of managing as designing? The first attempt, bringing the bank representatives together, facilitating a common vision and negotiating the realization, contains parts of a ‘normal’ forward-acting and future-oriented design process as described in the literature. Hock sought to bring about the new organization through a co-creation process involving the stakeholders aimed at getting them to agree and
thus, necessarily, surrendering some of their autonomy. Put differently, he built his first, but
failed, design process on consensus and then found a different way, using the cufflinks.\textsuperscript{21}.

Weick summarizes that designing is about improvising and cobbling a bricolage of different
systems, which in this case can be seen as Hock’s dinner invitation as well as the idea of
cobbling the many different nations’ payment systems. Gehry also dropped tools when he
created his new house by deconstructing the old one. Tool-dropping processes are not
articulated as individual skills described within curriculums; rather, they are gradually learned
through education and years of practice and remain as tacit knowledge held by architects,
designers and their educational institutions.

The sensemaking process moving back and forth between A and B and C and D is
simultaneously an act of exerting and battling power. The bank representatives showed us this
in the Hock case, in which he undermined their process by means of the dinner event. The
example points to what Weick identifies as a ‘design failure’: when the concepts, labels and
reifications get too fixed, design becomes dangerous, he argues. Organizational structures and
relationships that are too rigid may lead to a growing inability to innovate and adapt to societal
change.

If the handrails we build are too fixed, we may be too vulnerable to a sudden destructive
cosmology episode, which builds up from initial \textit{moments of confusion} before potentially
leading to a \textit{collapse of sensemaking} and, ultimately, the \textit{cosmology episode} as described by
Weick in his many case studies of catastrophic events. These overly fixed structures, however,
prevent us from registering moments of confusion or make us blind to what is going on around
us. Moments of confusion can be experienced as worries during periods when threats are
building up; a collapse of sensemaking constitutes a ‘point of no return’ and releases strong
feelings, as described in the two cases. The bank representatives ‘exploded (...) and erupted in laughter’, while Gehry’s guests ‘loved or hated’ his house, and the firefighters in Mann Gulch panicked. Here, there is no way back. The circumstances have changed forever. And ultimately, cosmology episodes lead to disaster and disruption.

**Figure 3.**

Figure 3 summarizes Weick’s interpretation of the process of catastrophic events broken down into three phases. An initial soft sign of change (moment of confusions) is followed by a collapse of sensemaking that concludes in disaster or disruption. We may be able to prevent the two last phases if we deliberately seek the new outside our comfort zone by deconstructing current interpretations, handrails or designs.

Only by surrender to thrownness, managers and designers will be able to create the new, act on it, remain agile and, importantly, prepare for cosmology episodes, which cause the known world to collapse. ‘Cosmology is the ultimate macro perspective, directed at issues of time, space, change, and contingency as they relate to the origin structure of the universe. (…) People, including those who are smokejumpers act as if events cohere in time and space and that change unfolds in an orderly manner. These everyday cosmologies are subject to disruption. And when they are severely disrupted, I call this a cosmology episode’ (Weick, 2009, p. 105).

In the VISA case, success was achieved through a magic trick, and the outcome was positive. According to Weick, we can prepare for cosmology episodes by avoiding dangerous design, improvising and constantly making sense of and redesigning our world. As outlined above,
Weich does not give the positive version many thoughts in this context. His main focus is to describe the act of designing through his different concepts, which is very useful indeed. However, the positive cosmology episode is an important part of the process, too, although the interpretation of the event as positive depends on the perspective of the involved individuals. Moreover, following the description, it may only be experienced managers who are able to perform and execute such an event. The cunning trick, the magic intervention, was supported by the cufflinks as artefacts as well as, presumably, other effective design components at the dinner event. In the Gehry case, Weick describes the house as magical, while in the Hock case the event is cunning. He does not focus on the magic trick in the Hock case. Nevertheless, the description of magical events or artefacts is clearly one of his contributions.

To avoid dangerous design, we need to let usself embed in thrownness in order to make sense of the context, environment, social interactions, movements etc. From here, we can reconstruct our world, having improvised and changed our current world perception slightly. Weick usually refer to fields subject to his research such as wildfires, incidents at hospitals and the NASA accidents, when he writes on sensemaking and tool-dropping in a more general way. He has transferred the concept of cosmology episodes to management education and training and advocates for an awareness of potentially obsolete managerial tools, understood as ideas and mindsets that might lead to a sequence of escalating dangerous events resulting in various degrees of feelings leading to uncontrollable situations, cosmology episodes, such as disasters and catastrophic accidents. In the context of this paper and its focus on innovation and disruption, I view the disruption of enterprises as cosmology episodes, while moments of confusion may be seen as threats to the organization occurring from a wide range of actors, and the collapse of sensemaking equals the point of increasing organizational panic, from where it is impossible to return to earlier platforms of meaning. Moments of confusion may,
however, also lead to success, as illustrated by Weick’s VISA card example\textsuperscript{22}.

There are more similarities between the Hock and Gehry cases. Weick highlights the architect’s story about a Chinese painting of a fish being reduced to one single stroke of the paint brush. When one looks at the stroke, the fish is clearly visible. However, the picture is simultaneously associated with a degree of uncertainty by defining the seen. This experience can be transferred to the VISA case. The brush stroke imagining the fish equals the experience of a \textit{flux} transforming the bank representatives’ perception of the current organization and the idea of the world of banks into the new organizational set-up guided by the golden cufflinks. The reaction – laughter – shows the group’s surprise. The bank representatives are suddenly, in a glimpse, defenceless, forced into the new, captured, paralyzed and entrapped. They can do nothing but express simple feelings – here, laughter. In a glimpse, they forgot the name of the phenomenon seen – to paraphrase Robert Irwin\textsuperscript{23}. Their sense of what was happening collapsed. The bank representatives forgot their autonomous banks and their perception of Hock’s project as a threat to their authority and acknowledged the new common solution.

The same experience goes for the visitors to Gehry’s new house: ‘[t]here was something magical about the house. And I knew that the thing a lot of people hated or laughed at, was the magic’ (Weick, 2004b, p. 46). The visitors, too, for a while became uncertain what was going on; meaning might have collapsed here too, and they could not do anything except react emotionally – hate or laugh. ‘The incident is about feeling, intensity, passion, cunning, exploding. As much about heart as head’ (ibid., p. 39). Feelings with regard to designing are usually described as passion and intensity, but never as cunning or exploding\textsuperscript{24}. At least not caused by designing as a conscious act, performed by educated designers. They would, instead, aspire to consensus, contain disagreements and negotiate and transform these into agreements in line with Weick’s sensemaking (and tool dropping) process. In addition, educated designers
would listen to their collaborators and stakeholders. However, exploding might be a part of designing understood as deconstructing and reconstructing, but then it takes an experienced (and cunning) manager/designer to handle and contain this kind of feeling. The experience of entrapment releases feelings, which (according to Gehry) are expressed through the audience’s laughter or hatred; the latter potentially leading to conflict, distance and denial. Hock’s shift from consensus-driven designing to designing by secretly changing the agenda of how to get to the final common solution differs from design practice as mentioned above. It is through user-driven innovation, collaboration, co-creation and consensus and certainly not by setting up traps (magic tricks) for collaborators or by tricking stakeholders that results are achieved.

This process is described by Gehry (Gehry, 2004) referring to his design process for the Lewis building at Case Western Reserve University. Here he underscores the importance of involving the stakeholders and decision-makers throughout the process. Otherwise, the risk is a rejection of the final project; and, I will add, the risk derives from the stakeholders’ experience of a lack of sensemaking, too large a gap between the known and the new handrail. This might, however, also be interpreted as a magic trick, luring the stakeholders into a process that they cannot really escape. In this situation, the process will run over a longer but still fairly unknown period, which often leads to budgeting problems. Such an interpretation holds associations to European cultural material in literature and fairy tales, such as, e.g., the legend of *The Pied Piper of Hamelin*, which is included in The Brothers Grimm’s collection of fairy tales, 1816. The Pied Piper lured all the children in a German town, Hamelin, away from their parents by playing his pipe. A contemporary example is *The Serpent Gift* in *The Shamer Chronicles* by the Danish author, Lene Kaaberbøl, 2001, which describes the same phenomenon. The gifted owner of the magic pipe entraps people in a similar manner. The pied piper and the serpent seem to hold similarities to Gehry’s lengthy design process involving stakeholders to the extent that an exit
is no longer an option. Weick’s description of the magic of Gehry’s own home can be compared to the trick Hock plays on the bank representatives. Hock performed a magic trick, whereby he forced the collaborators to return to the negotiating table in order to create a new common organization, more or less against their will. However, a more positive interpretation might be that they dropped their identity of conflict-oriented autonomous negotiators because they were actually convinced of the merits of the new vision. Thus, without stressing the magical aspect in the Hock case, Weick nevertheless suggests that the managers (Hock and Gehry) perform like magicians as one of a multiplicity of roles for a manager-as-designer.

This may be in line with the general conception of the designer as someone who creates magical, desirable products. Within the magic trick, Hock first organized (designed) a platform for employees and collaborators to design his trick. The cufflinks became a new clear and convincing tool. The physical artefacts embodying Hock’s story of success might have sparked negative feelings within the group, as the group members were coerced into the alliance by means of physical and symbolic artefacts. They were tricked into desiring success by the symbols (the cufflinks) of belonging to a greater success story. Hock created a story about his collaborators that could never be dismantled. They were doomed to be a part of this story forever, as it is impossible to ‘wash off’ public narratives, and in the situation their only option was to join Hock’s project. In addition, the cufflinks became part of the representatives’ clothing, worn close to their body, which, too, might have supported the experience of entrapment.

Moreover, as moments of confusion undermine one’s sense of time and space, the bank representatives must have felt totally lost in a glimpse before the ‘explosion’ and the eruption of laughter. Weick only discusses the positive side of the coin. The flipside – a potentially bad
and manipulative intent – is not addressed, although it pertains to responsibility and morality, issues that are addressed in the Gehry case and thus acknowledged as part of designing (Weick, 2003). Furthermore, in this case, Gehry is his own stakeholder, as he is not dependent on the perceptions of his private guests.

**Figure 4**

In the context of Weick’s contribution to managing as designing, tool-dropping and the magic are important concepts, although they are not articulated as such in the two texts. These overlooked Weickian points are thus the basis for the contribution of this paper. To support the understanding the perspectives of tool-dropping and the magic I have combined Weick’s different perspectives on managing as designing (Figure 1, Figure 2, Figure 3) in Figure 4. The compound figure shows social micro-processes of deconstructing and reconstructing the world through tool dropping and sensemaking processes and the consequences of acting and not acting. The dichotomy between A and B is taken from Figure 1: concepts, labels, reifications (A) contrasted by controllessness experienced as thrownness (B). Through movement in Figure 2 – the deconstructing and reconstructing sensemaking process – we get a dynamic process between A and B as well as C and D that is supported by the tool-dropping capability. At home, we stand on a platform of meaning, and we feel safe.

The bottom line of A–B is an uncontrollable timeline characterized by three phases of experience in Figure 3. Through the deconstruction process, we can explore the new deliberately; if we do not, and if our labels are too fixed we risk being hit by the new, leading to the collapse of sensemaking or perhaps even a cosmology episode. Having faced thrownness (B/C), the process moves back towards D and the A/D line. In the reverse direction, new
handrails are built as we make sense of the new (C/D), and we arrive at a new platform of meaning (A\(^1\)), and/or a new product or service (D\(^1\)). A and D influence each other and shape our identity as individuals and organizations. If our handrails are too fixed, it will be difficult to loosen up an audience or ourselves in sensemaking processes, and thus the handrails will act as barriers for innovation. The sensemaking literature articulates this phenomenon as sensemaking on pause: ‘when enough members hold the same understanding to act together’ (Maitlis & Christianson, 2014, p. 95). Although consensus in the literature on when sensemaking takes place is hard to find (ibid.), I propose that too strong a connection between A and D will put sensemaking on hold and thus contribute to creating barriers to innovation\(^{25}\).

The first signal of change is the moment of confusion, which should be acted proactively upon, lest it leads to the collapse of sensemaking and, ultimately, a cosmology episode. The tricky thing is that the course of time is unpredictable. It may be very short, like the sudden glimpse in the VISA case; it may be long, perhaps lasting years. Depending on the relationship between our current platform of meaning and the timespan, different emotional experiences will be activated. Thus, the A/B line shows the quality of experiences.

The quality of handrails (line D–C) and the quality of experiences (line A–B) (Figure 3 moved into Figure 4) together form the innovation capability of organizations. Thus, a rectangle is added onto moments of confusion as a *magic zone*. This may, however, be perceived either positively or negatively, depending on the audience, the perspective and context. The innovation capability may increase, if the organization is able to move from left to right in a horizontal direction. This will depend on the ability of the managers (staff, stakeholders etc.) to enter a *mode of tool-lessness* for an unknown duration\(^{26}\). Weick reminds us that we should not be afraid to drop our tools, even if it threatens our identity, as we have a ‘set of remembered
values (...) that infuse meaning into the present and provide a platform for renewal’ (Weick, 2009, p. 257)\textsuperscript{27}. Thus, entering a mode of tool-less means loosening up the conception of our identity and letting our senses experience the surroundings, letting go of or decoupling the past and forgetting the names of the thing seen – to paraphrase Irwin – and allowing a deeper collaboration between body and mind. The organizational and individual ability to drop tools will be crucial in order to move the A–D position towards the B–C area, challenging the identity and balancing the power distribution. The audience’s experience of the magic depends on the quality of the handrail(s) as well as the tension between A and B. If the reconstruction process stops before the handrail(s) get(s) too fixed, there will be room for individual interpretations and emotional reactions.

The magic trick as performed by Hock and Gehry is a method to cut through the conventions and power structures of organizations or to overcome power struggles by luring collaborators and stakeholders into a magical zone. It thus serves to mitigate or even to abolish the power challenge in design and business (Johansson & Woodilla, 2008). The magic might also contribute to the phenomenon of power and politics within the sensemaking literature (Maitlis & Christianson, 2014, p. 98). Weick’s insights into the importance of dropping tools in order to remain agile support claims in the literature on disruption that disrupted companies’ managers failed to act on threats ‘building up’, just as ‘their model [did not] work’, as Weick puts it (Weick, 2007)\textsuperscript{28}. Following Weick, I will argue that managers and decision-makers might refuse to drop their old and eventually obsolete perceptions of their company and products, because they are too connected to their products, which constitute the company’s identity, their own identity and the collective perception of and story about that identity. As Weick stresses in his discussion of the firefighters: ‘Firefighters worried about who they are if they drop heavy tolls cannot pay attention to unfolding dramas that could suddenly turn into
dangerous situations’ (Weick, 2009, p. 257). Transferring this to managerial behavior with regard to disruption, managers who are worried about who they are if they drop their managerial tools (their known business identity) cannot pay attention to unfolding dramas that could suddenly turn into a dangerous situation (a disrupted company). Thus, the bank representatives should have wondered why Hock invited them to a final dinner, which gave him the opportunity to hand over the cufflinks, as they had already terminated the work on the global credit card. The invitation was the moment of confusion; the gift itself produced a collapse of sensemaking. Had they questioned their own identity as important bankers and seen that in this context, they were about to transform into co-creators of a new organization that might reduce the power of their own, they might not have put themselves in a position where they would be exposed to the collapse of sensemaking – the act of having to receive the cufflinks. The gift produced a sense of entrapment, which in turn lead to the expression of strong feelings, as shown in both cases (the VISA and the Gehry cases), and, ultimately, the end to a cosmology episode that set off a transformation process for their own businesses.

The tool-dropper thus runs the risk of potential conflicts due to the unsustainable tension between the known platform (A) of meaning and the ability to make sense of the new (B). In order to lead an audience to the new, the designer needs to make sense of the unknown and communicate this new sense to an audience. That is only possible if the audience can relate to it, that is, if it is already known somewhere in the collective consciousness, but yet not articulated. Thus, it should be understood that perceptions, conceptions, zones and relationships may already be seen, but remain as-yet unknown. Following this, we can detect a gap between the known and unknown; as if one rests a hand on a handrail that gets thinner and thinner and then suddenly drops away, while the body’s movement forces one to move along without the familiar support. When the handrail ends, and a gap emerges, we are left to
our own perception, senses and interpretations, which may produce an uncanny feeling, depending on one’s disposition.

The tool-dropper (the manager, leader, designer) moves back and forth between the two poles, changing from tool-dropper to sense-maker, designing handrails or artefacts; the tool-dropper follows his or her own naming process, an ability to strip off current ideas and move towards the thrownness in order to form new concepts, labels and reifications. When the new is perceived as a trick or a magic trick, this perception emerges from the lack of consensus-based handrails created through negotiations, coordination etc. or from the experience of a sudden hostile take-over, a sudden exertion of power (Figure 3b). Design as guided by firm handrails will thus not be followed by explosions or any other expressions of frustrated feelings, as it follows the reconstructive sensemaking course.

With regard to organizational sensemaking the challenge is the deconstruction part, moving towards controllessness and thrownness. Having dropped his or her tools, the ‘dropper’ transforms into a tool-less character for a while, forced to rely on his or her capabilities, spirit and courage to face the unknown as well as the conflicts and power games challenging bodies, existences, identities etc. In Weick’s words, ‘Design is a battle of sorts between naming the thing and losing the dream, and keeping the dream but losing the name that stirs others to make the dream happen’ (Weick, 2004b, p. 48). While Weick underscores the battle, the magic or the cunning trick, design researchers debate the challenges of convincing, advocating, mitigating biases and legitimizing changes. Instead of this rather soft approach to changes proposed by design scholars, Weick considers the need for decisive grounding:

‘a deliberate effort to question reification, a deliberate effort to restore unnamed zones of focus, and a deliberate effort to invite re-differentiation. I labelled this reverse progression as
“decisive grounding” for a good reason. To ground anything is to cut through accumulated labels, and schemas, and stereotypes, and to move back towards original, natural, coherent wholes’ (Weick, 2004b, p. 46).

While Weick argues for cutting through concepts, labels and reifications and thus creating battles and unforeseen feelings in an audience, design researchers work with design methods, tools and processes to highlight smooth flows, without conflicts, ideally achieving results through consensus. On the other hand, following the idea of luring an audience over a longer period of time, the latter is a form of magic too, although it is not recognized as such.

**Conclusion**

To conclude my reading of design thinking in a management context through the lens of Karl Weick’s work, the concept and practice as described in the literature do not really match the actions needed in terms of incumbents’ innovation capacity. Instead, realizing the power struggle as a natural condition within incumbents, I propose a more radical focus on managing as designing as a concept that cuts through existing structures and reifications by means of tool-dropping, power and magic tricks. Weick’s contribution to managing as designing is richer than is immediately evident from a standard reading of his texts. While applying his sensemaking perspective to the practice of managing as designing, he simultaneously reveals a parallel track related to the importance of the capacity to enter a mode of tool-lessness. After identifying and analysing this perspective in his work, I found that his concepts can be used for analysing and describing the design process in a new light, whether it concerns physical artefacts (Gehry’s different buildings) or managing organizational structures (Dee Hock’s struggle organizing the new VISA card) to promote incumbents’ innovation capabilities. Thus, I find the tool-dropping capability to be an important or even overarching meta-tool with regard to leading and organizing innovation. From the literature study, I conclude that the capability of tool-dropping as a driver of agility and innovation, the deconstructive conditions for
designing is as important to organizational change and innovation as the design process itself, and that it seems unrecognized in the current discourse on design + management. In addition, the tool-dropping capability to deconstruct existing structures and conventions add new details to the definition of managing as designing. What kind of process is it, and what does it take to act it out?

To summarize, the tool-dropper is capable of skipping his or her current ideas of the world (or other tools), creating and then entering a space, and making room for the new, embracing new tools when encountering moments of confusion, resistance or even just being curious. What design researchers characterize as designers’ capability to keep solutions open (Boland & Collopy, 2004b; Michlewski, 2008) before making decisions might be characterized as a mode of tool-lessness. Moreover, designers are ready to drop all the work they have done, as Gehry did during the design of the building at Case Western Reserve University in order to start over again. What would be dropped here might be the idea of expensive and maybe exhausting work that should not be thrown away, while Gehry works as if time does not matter, and cannot possibly be allowed to pose an obstacle to a satisfactory result. Moreover, an experienced tool-dropper might be able to perform as a magician, in the same way as a highly skilled designer creates magical artefacts.

Following Sandström’s (2010) work on disruption, networks and business models, cunning and magic tricks, such as Dee Hock’s cufflink attack overly fixed structures within the banking industry, may be relevant to leading and managing networks and stakeholders with regard to innovation and change. However, this will, then, lead to questions of morality and responsibility (Weick, 2003) and adds a new dimension, albeit not articulated as such, to managing as designing: wisdom (Weick, 1996, 2011). What kind of desired goal allows us to
utilize magic as a vehicle for achieving it? What kind of leader is able to act wise and responsible?

Arriving at the concept of tool-lessness as a meta-tool driving innovation and the creation of magic moments as a hidden and unconscious characteristic of designing and exerting power brings up questions calling for empirical research. Do we see managers and leaders as tool-droppers, wise wo/men and magicians in real business life? And what consequences do tool-droppers have for businesses’ innovation capability? These questions call for empirical studies.
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Foodnotes

1 A publication *Managing as Designing* (2004) collects the thoughts and contributions from a workshop on management and design held in June 2002 at the Weatherhead School of Management, Case Western Reserve University. Organizational scholars, artists and managers attended a workshop exploring the relationship between design and management. Design researchers often refer to the workshop, without, however, going into depth with Weick’s two texts. (Additionally, Weick published the paper ‘The Gehry Experience’ in the Journal of Management Inquiry in 2003, where he reflects on the work of architect Frank Gehry.) The publication collects a variety of organizational scholarly contributions. Karl Weick’s contributions are chosen here due to the reasons mentioned above. The contributions offered by organizational scholars have been criticized for being just well-known scholars’ usual and known positions with an added design flavour (Johansson-Sköldberg & Woodilla J., Cetinkaya, 2013). To some extent, I agree with Johansson et al.: Weick’s points in this publication echo his work on sensemaking. However, I find that the two chapters ‘Rethinking Organizational Design’ and ‘Designing for Thrownness’ demonstrate Weick’s solid contribution to managing as designing that scholars have called for.

2 One of the most prominent scholars regarding design and sensemaking is Klaus Krippendorff, whose paper, published 1989, has become an almost iconic piece, known especially for the expression ‘design is making sense of thing(s)’ (Krippendorff, 1989). However, his contribution takes its point of departure in product semantics, industrial design and design reception. Initially, there seems to be no connection between the two authors, and find Krippendorff’s work outside the scope of this paper. The relationship between Weick’s concept of sensemaking and Krippendorff’s points in his paper from 1989 nevertheless could deserve a deeper analysis due to their reflections on language, philosophy and design.
The Mann Gulch Disaster is Weick’s classic text on sensemaking and disasters. Lots of contributions to this topic have followed, some are e.g. collected in the anthology Making Sense of the Organization, 2009.

In 1987, Peter G. Rowe, professor of architecture and urban planning at Harvard University and chairman of the Department of Urban Planning and Design, published his book on architecture and urban planning, Design Thinking. It was, however, not a book on design thinking related to management but on the process of designing within the fields of architecture and urban planning.

I here refer to the group of scholars writing on design and design thinking and who explicitly refer to challenges regarding collaboration between design consultants or ‘design thinkers’ and management in general. Moreover, I refer to those who write about the need to ‘advocate for’ and ‘legitimize’ design thinking in order to convince managers to implement design thinking in their organization.

DESMA is a publication reporting on research projects on design and management across disciplines and universities in the EU.

The 17 themes are empathy, abductive, prototyping, problem solution framing, optimistic, fuzzy front end, wicked problems, inventive and innovative, human centered, visualization, collaborative, multidisciplinary, iterative, intuitive, ethnographic, systemic thinking and rapid (Di Russo, 2016).

Although Liedtka writes on managers' biases as barriers to innovation and not individual design thinking skills, I have added her work here due to the focus on the individual manager and his or her mental model as a barrier.

See note 1.

Organizational scholarly contribution to sensemaking has expanded since Weick’s introduction of the concept. Maitlis and Christianson provide a thorough review of the
literature, discussing, among other concepts, various definitions of sensemaking (Maitlis & Christianson, 2014). In this paper, I use Weick’s own definition, which I unfold along the way.

11 The concept of ‘thrownness’ is a translation from the German *geworfenheit*, which was coined by Martin Heidegger (1889–1976). (A noun derived from the German verb ‘werfen’, to throw. Geworfenheit/thrownness means to be thrown.) As mentioned earlier, Weick draws on European philosophy and includes reflections on Heidegger’s work in his paper (Weick, 1999).

12 In his writings on wildfires, NASA disasters and accidents at hospitals, Weick uses the concepts of sensemaking and tool-dropping to analyse the various fatal situations.

13 I return to the world-known architect Frank Gehry later in my analysis of Weick’s article on managing as designing.

14 The classic design literature (Heskett, 2002; Schön, 1983; Simon, 1969; Verganti, 2009) describes how designers construct, how design is about constructing the new as a forward acting behaviour.

15 I will leave out a debate on radical innovation and incremental innovation for now and follow Weick’s argument that we cannot talk about radical innovation as every new vision, dream and product stems from a known platform of meaning, from where the sense-maker moves on to new constructions of the world, building on current knowledge that is put together in a new way in a sort of bricolage.

16 Regarding the definition of sensemaking, Weick lines up seven components of the concept in his 1995 contribution; however, I find that the quote above matches Figures 1 and 2 well.

17 Weick’s well-known piece ‘The Collapse of Sensemaking in The Mann Gulch Disaster’ (Weick, 1993) is roughly a story about the commander’s failure to make sense of his actions
and orders to the crew and the crew’s failure to make sense of the situation during the chaotic wildfire situation.

18 The world-renowned architect, who designed the Lewis Building at Case Western Reserve University, gave a presentation on his considerations and process in the design of buildings and houses at the workshop on design and management at Weatherhead School of Management.

19 The former CEO of the VISA Dee Hock, who described the realization of the VISA credit card in his book *The Birth of the Chaordic Age*, 1999.


21 The two design processes might be explained differently. In this paper, I rely on Weick’s interpretation and description of the story.

22 Weick is not very explicit about this interpretation. In the chapter ‘Rethinking Organizational Design’ he only refers to a cosmology episode as a positive event in the notes (note 25): ‘This circumstance resembles what has been described as a “cosmology episode”’ (Weick 1993) suggesting that a moment of confusion can lead to a failure as at Mann Gulch or a success as at VISA’ (Weick, 2004b, p. 52) (my italics).

23 Weick often quotes Robert Irwin: ‘[t]o see is forgetting the name of the thing seen.’

24 See, e.g., note 9.

25 Innovation and creativity, change and learning are all key topics in the sensemaking literature (Maitlis & Christianson, 2014). Although it may be relevant in this context to examine the different contributions to the topic related to managing as designing, it would be beyond the scope of this article.

26 Michlewski’s study of what a ‘design attitude is made of’ might find a mode of toollessness quite equivalent to what he calls ‘embracing discontinuity and open-endedness’ as one of five different concepts related to design attitude. Thus, he describes ‘designers’ need
for the freedom to explore and their willingness to improvise, be opportunistic, have an open
mind and embrace ambiguity’ (Michlewski, 2008, p. 381). However, he does not describe it
as deconstruction association with a natural power struggle, although he does mention the
battle: ‘[t]here seems to be a danger associated with the attitude of open-endedness’ (ibid.,
381). This will, however, be too comprehensive a discussion for the present paper.

27 Weick published the article in the 40th anniversary issue of Administrative Science
Quarterly 1996, 41 (and got permission to reprint it in his 2009 publication). He n
otes that the
question of tool-dropping was first articulated in 1993 in his Mann Gulch piece.

28 See the paragraph on Disruption and Resistance to the New.

29 There is an ongoing discussion about the proper definition of sensemaking. In this paper, I
refer to sensemaking as a concept. Some speak of a theory, others of a framework or a
process, while Weick refers to sensemaking as a perspective (Maitlis & Christianson, 2014).

30 Design + management is a reference to the EU-funded project on the relationship between
design and management (Eklund, Dell'era & Karjalainen, 2015).
Creating an experience of:
control, known names, time, space, simultaneously producing barriers for innovation

Creating an experience of:
thrownness, no time, nor space, instead sources for dreams, possibilities and innovation
De-construction process through tool dropping

Tool dropping and sense making processes

Re-constructing process by building handrails

De-constructing process through tool dropping

Negotiation, coordination, shareability constraints
(3 components of the process of designing handrails)
FIG. 3
TIME AND EXPERIENCES

A
HOME

Moment of Confusion
Threats builds up
Worries increase

Collapse of sense making
Point of no return
Strong emotions

Cosmology Episode
Disruption
Nothing, but traces of history

B
CONTROLLESSNESS

Quality of experiences
Quality of handrails

Compounded abstractions

Too known handrails

Identity

Quality of experiences

HOME
Social, time & space control

Magic zone

Inventions

Flux and Hunches

Space of timelessness

Entering a mode of creativity
Re-constructing process by building handrails
Tool dropping and sense making processes
De-constructing process through tool dropping

Entering a mode of toollessness

Moment of Confusion

Collapse of sense making

Cosmology Episode

Threats builds up

Point of no return

Disruption
Nothing, but traces of history

Worries increase

Strong emotions

HOME

CONTROL-
LESSNESS

No time, No space

NO HANDRAILS
Nothing, but intentions

A

B

C

D