

Imagineering as Complexity-Inspired Method for Transformative Service Design

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Abstract

Service design is increasingly oriented toward transformative aims and practices in organizations. With this evolution, service design is entering the fields of organizational studies and social change with high responsibility and sometimes little background knowledge of their respective theories, principles and their recent evolution. Particularly in the field of change and transformation, the recent evolution of theoretical insights and perspectives of organizational science are significant as the move towards complexity science is gaining academic acceptance and starts to be embraced in practice.

This article presents Imagineering as a complexity-inspired design approach to realize transformational objectives, and it illustrates the method with the case study of the transformation of the enterprise logic in the city of Antwerp. The paper concludes by reflecting on the eventual implications and perspectives of the method for the practice of service design as transformational design and for design thinking in management in general.

Keywords: Service design, Organizational transformation, Emergence, Complexity, Imagineering

Introduction

Service design is recently emerging as a design practice of great interest to organizations with levels of potential impact reaching from service interaction design to something as profound as organizational transformation (Junginger & Sangiorgi, 2009). Designing for organizational transformation is specifically needed in society as value creation in society is shifting from a goods-dominant logic to a service dominant logic which implies that organizations are in need to transform their enterprise logic to thrive in today's networked society (Kimbell, 2009; Vargo & Lusch, 2004, 2008).

Recent advances in the theories and practices of service design (Morelli, 2007; Young, 2008, Sangiorgi, 2009; Junginger & Sangiorgi, 2009; Sangiorgi, 2010) as well as the theories and practices of service dominant logic (Wieland et al 2012) point towards the need for

theoretical frameworks and methods to understand and approach services from a systemic perspective, and more specifically from a complex systemic perspective, seeing services as complex social systems. This shift in scientific perspective from conventional systems thinking to complex systems thinking is particularly important when designing for organizational transformation as both scientific perspectives differ fundamentally in this regard. So far, however, apart from important developments in the field of computational complexity, the field of organizational design and social complexity is still in its infancy.

Already Banathy (1996) in his book 'Designing Social Systems in a Changing World' argued that designers can make use of two different scientific resources for doing design work: conventional systems thinking and complex systems thinking, the mode of systems thinking that is nurtured by the emerging scientific paradigm of complexity science. In his work Banathy argues about the importance to explore the relevance of this emerging scientific paradigm for design in working with human systems especially in the context of the changing society.

One of the emerging ideas of the new physics that might shape design thinking in this context according to Banathy is Bohm's theory of wholeness and order. In this theory Bohm (together with Peat (1987) defines 'implicit order' as the enfolding of reality from which the explicit order of specific phenomena unfolds. As Bohm suggests that 'generative order' is relevant not only to science (e.g., the science of chaos) but to all areas of experience, Banathy finds the notion of generative order to be directly relevant to design thinking. The artist, as the designer, begins with an overall vision (the image of the future system), a general idea and a feeling that already contains the essence of the final work in an enfolded way, from which, as the painting (value creation) progresses, details are created gradually, each time building on the whole.

Confronted with growing complexity in society at the turn of the century and puzzled by the alignment of the theoretical insights articulated by Banathy and the practice of the 'high concept'-way of working in the movie-industry (and the broader entertainment industry, a way of working that the Disney-concern started to call 'imagineering: engineering a concept that appeals to the imagination of employees and customers at the same time'), we started to experiment with these insights in change practice. We experimented with transforming the enterprise logic by redesigning the logo in an imaginative, participatory, 'high concept'-way. The first experiments were in leisure, tourism and recreation and soon after in all kind of other situations such as the city of Antwerp, several Belgian retail-chains and several governmental and non-governmental organizations in the Netherlands.

This article reports on the experimental work and the findings in the case of the city of Antwerp, an experiment that was going on for some ten years and in which it can be said that sustainable transformative change has been realized. First, however, we summarize two essential building blocks of the method: The shift in value creation in society (the reason why transformation is needed and possible) and the complexity perspective on organizational transformation (that brings in another ontological image of change as emerging order). Then we present the method and illustrate it with the case of the city of Antwerp. Finally we reflect on the method and on its potential and implications for furthering the field of transformational service design.

The shift in value creation in society

According to Ramirez (1999) people have always got two modes of value creation: the sequential mode (in value chains) and the simultaneous mode (in value networks). Technical and social breakthroughs are rendering today the simultaneous mode more relevant. In the connected society roles and responsibilities of marketers and consumers can be rethought in a broader way (Seth & Uslay, 2007). Ramirez (1999, p. 61) considers 'the (sequential) industrial view as still applicable to a limited set of value creation situations, but (simultaneous) 'value coproduction' goes well beyond these'.

Because of growing connectivity and interactivity, value creation can now be installed in an orientation of mutual interest and with an emergent perspective of co-creating value with participants for society at large. This way every social opportunity becomes a business opportunity and vice versa.

Paradigm shifts that transform scientific disciplines and the value creating logic in society do not occur frequently and they are not welcomed unanimously and even not easily seen by scientists and practitioners. Ciborra (1995) argues that co-production has been there all the time but that it were industrial-based conceptual frameworks that made us think that we should study production and consumption separately and statically instead of studying them as dynamic relational processes.

The shift in value creation as a consequence of growing connectivity, has implications in at least four fields of practice and research (Ramirez, 1999): First: The business definition: Interactivity as a focus leads us to rethink relevance, roles, relationships and responsibilities; Second: The way we organize work: a co-production framework is of 'a higher logical type' than the industrial framework and it makes the industrial one only applicable inscribed in a wider typology of possible forms of value creating networks (value creating systems should be as under-designed as possible (Brand, 1994 in Ramirez, 1999, p.57)); Third: The way we manage: managing complex systems requires managing ignorance, it asks for coordination skills to 'enhance auto-organizational processes in line with current 'Santa Fe' thinking on complexity' (Waldrop, 1992 in Ramirez, 1999, p. 59) allowing people to co-design and to learn and it asks for challenging 'dynamic conservatism' and 'institutionalized inertia' to bridge ever greater incompatibility. Ramirez even introduces the concept of 'Return on customer base' in this context as customer effectiveness becomes as much a corporate worry as own employee effectiveness; and Fourth: The transition towards a co-productive economy: the transformation of the enterprise logic from the industrial exchange logic towards the networked logic of value co-creation, a field in which according to Ramirez anno 2000 more research is needed as to prevent 'change-leaders to become cheer-leaders'. The fore-lying transformative service design research fits in this context.

A complexity perspective on organizational transformation

It was the Nobel Prize Winner Chemistry (1977) himself, Ilya Prigogine, who connected today's growing connectivity to the emerging paradigm of new physics, articulating that by growing connectivity, the study of non-linear, living dynamic systems such as the weather, offers better glasses to understand today's dynamic reality than the equilibrium focused glasses of the Newtonian paradigm (Van der Heijden in Kahane, 2012, p. x). The Newtonian mechanistic and deterministic template that assumes predictability and certainty will still

serve us well in 'closed systems' such as the production of materials. In open systems however, such as the weather, a burning candle light or organizations in the connected society, other principles and processes (such as the relationship with the environment and metaphors such as the butterfly effect) of non-linearity dominate the scene. Different from the Newtonian world where systems run down and are subject to deterioration, non-linear dynamic systems are able to transform themselves into emerging new states of being.

Just like service-dominant logic offers a perspective for studying today's value creation in an integral way, a perspective that is more aligned to today's reality, complexity science offers an even more profound, complementary scientific perspective to study dynamical processes in a connected society such as the process of transformation or strategic innovation. We have all been raised with the idea of cause and effect in the sense that we are used to the fact that small causes have small effects and large causes have large effects. In case the opposite happens as is often the case on the internet or in starting successful entrepreneurial activities or with fascination (remember the tourism effects of the books of Dan Brown or Harry Potter), we don't perceive this as a 'normal rule of non-linear' systems but more as a 'lucky' (or unlucky in case of the Arab spring in Egypt) accident observing these events with our linear glasses. Daily it becomes more evident that the management logic that has been developed in the last 40 to 50 years is framed on the linear template and that in coping with complexity, (in coping with problems where everything is connected to everything else) we need a complementary logic, a logic framed on the non-linear template.

New assumptions emerge from studying non-linear dynamic systems, assumptions that contrast with conventional thinking about organizations (West, 1985): Instead of being in stable equilibrium, organizations are in a state of constant change; instead of being able to understand organizations by analyzing their separate parts, emergent systems are not reducible to their parts; instead of being essentially a linear process involving independent elements (employees, departments, SBU's), organizing is a mutually interdependent process and instead of cause and effect being proportional to each other, there is no clear cause and effect relationship and actions and outcomes are non-proportional, in other words: In non-linear dynamic systems, small interventions can emerge in something big. These counter-intuitive behaviors also highlight that simple cause effect linear thinking (such as much of strategic planning) has limited meaning in complex dynamic systems, especially in living systems in a highly interconnected world.

Complexity science offers an imaginary that helps us in changing our thinking about change and the dynamics of change (Stacey, 1995). In a dynamic worldview change is 'the normal' as opposed to its position in a linear worldview. Instead of being oriented towards understanding change, the primary question in complexity science is how new order emerges. As such, change is seen as a process of emergence. Emergence then is a phenomenon that always has existed. It is the reason why there are hurricanes but also traffic congestions, rock concerts and democracies. The phenomenon has been studied as well by 'reductionists' as well by 'holistic' theorists (Corning, 2012). Goldstein (1999) describes the phenomenon as the coming-into-being of novel, "higher" level structures, patterns, processes, properties, dynamics and laws and how this more complex order arises out of the interactions among components (agents) that make up the system itself.

From the perspective of emergence then, change is a matter of generating momentum in a new (more wanted) direction. So far complexity scholars have identified two distinct drivers of emergence: Far-from-equilibrium dynamics (a state of being) that triggers order creation and adaptive tension (an energy differential) (McKelvey, 2004), which can push a system

toward instability, leading to the emergence of new order. In more recent work on emergence in human settings, entrepreneurs are seen as possible creators of adaptive tension that drives processes of emergence. Doing so there is ‘a place for man’ in Prigogine’s theory of self-organization by the use of the ‘imagination’ (Loasby, 2007, p. 1743). This insight is crucial in our argument on the design approach of imagineering. In our approach we suggest that the two archetypical logics of value creation allow for designing an ‘adaptive tension engine’ in order to evoke ‘emerging processes’ in human settings, an emerging process from one dynamical state of industrial sequential value creation to a more complex one of simultaneous value co-creation in interaction with the environment..

Imagineering

In complexity language then, imagineering is the design approach in which an adaptive tension engine is designed to evoke ‘emerging processes’ of self-organization/self-ordering such as enterprise logic transformation or systemic innovation. The adaptive tension engine works by reframing existing mental models in a strategically wanted direction. This reframing is orchestrated by a linguistic artifact designed in the narrative mode. It is the use of the narrative mode that invites and engages for re-interpreting daily routine and strategic actions by individual agents as members of a collective. Consecutively, the emerging processes are managed according to the dynamics of dissipative structures: the dynamics of stabilization, positive feedback, re-combination and fluctuation. (This second part of the process won’t be explained further in this article as this second part is more a matter of management than design).

In ‘conventional’ language then, we define Imagineering as the complexity-inspired design approach that makes use of the narrative mode in order to strategically ignite and frame collective creativity. Let’s explain the two elements that were not yet explained: the ‘narrative mode’ and ‘collective creativity’.

According to cognitive psychologist Bruner (1986, p. 11) 3 people have “two modes of cognitive functioning, two modes of thought, each providing distinctive ways of ordering experience, of constructing reality”, being the rational, logico-scientific mode of reasoning (“science of the concrete”) and the narrative mode of reasoning (“science of the imagination”). Logico-scientific reasoning seeks to understand specific phenomena in an ‘objective’ way, while narrative reasoning seeks to understand them in a ‘personal, subjective’ way. It seeks to understand phenomena in terms of human experience and purpose. Scientists rely most often on the former and artists work most often in the latter. The term of ‘narrative’ is often used interchangeably with the term ‘story’.

Narratives and stories do not convince the audience by their objective truth but by their emotional appeal. This emotional impact is achieved through the use of literary features such as aesthetic appeal, metaphor (something is made more meaningful or vivid through subjective comparison with something else) or moral order (being relevant to society). As linear answers are simply not possible to give in coping with complex problems, imagineering makes deliberately use of the narrative mode of reasoning as to stimulate interpretation, variation, collective creativity and sense-making. Designing in the narrative mode then is remarkably different from designing in the logico-scientific mode. Designing in

the narrative mode is about engaging people in a subjective, future oriented and creative way. Designing in the narrative mode is evolution-oriented instead of solution-oriented.

Different from conventional creativity that has been defined as “the generation or production of ideas that are both novel and useful” (George, 2007), collective creativity is the creativity that emerges from the interactions of ideas of diverse people rather than from the mind of any given individual (Marion, 2012). Most of the creativity research so far is entity-based. Creativity is considered (by psychologists) to be a variable of an individual, a variable of the ‘creative personality’ that can even be measured as such (Csikszentmihalyi, 1999). Collective creativity is the creativity for which no one individual insight is by itself responsible for solving the problem.

In this turn from seeing creativity as a characteristic of an individual towards seeing it as a characteristic of a whole system, the significance of artifact-mediated communities, domains and practices comes into play. It is an artifact that enables and inspires such processes and it is obvious that the Internet is a significant mediating and catalyzing infrastructure for processes of collective creativity. It is evident that the outcome of processes of collective creativity cannot be predicted from preceding conditions and that it cannot be planned as such. Nevertheless, it can be evoked, not in its specific form but in the fact that it will very likely emerge from dynamic conditions. The challenge of evoking collective creativity then lies in enabling dynamic conditions.

The case of the city of Antwerp

To reframe the identity and the mind-maps of stakeholders in regard to the city of Antwerp from the industrial exchange logic towards the logic of value co-creation, the logo was redesigned in order to reframe the logic. A narrative was designed (in Dutch) that says ‘The city is from everybody’, articulated in the local dialect. The narrative was integrated in the new city (promotional) logo and as such used in all communication of the city.

In 2004 Antwerp found itself in a downward spiral of negativism, cynicism and bureaucracy which culminated for the inhabitants and administrators in what they called ‘the VISA-crisis’ while in the midst of this negative downward spiral highly positioned managers abused the Visa-card of the city for private reasons. Because of this abuse the sitting female socialist mayor was replaced by a younger male socialist mayor who had a background in communication being the CEO of one of the biggest advertising agencies in Belgium at that moment.

From his perspective of communication, the mayor analyzed the situation and revealed the general fragmentation as the biggest problem of the city: policy was fragmented (there was no clear future direction) and structures were fragmented: every department had its own communication budget, its own logo and its own PR-agency. A we-feeling was missing as was a feeling of community. Dominating was the idea ‘We are doing well in our department but the city, the city is a big problem’. Therefore he organized a competition between the biggest advertising agencies of the country as in Belgium it is common use to hire this kind of agencies for strategic work.

Five agencies were involved in the competition and four of them presented a conventional change trajectory with workshops with all kind of stakeholders in order to solve the fragmentation problem. There was only one agency (the agency with which the author

worked) that presented a non-conventional approach, an approach based on complexity thinking. They delivered a communication ‘solution as an evolution’ instead of a change plan. It presented a new logo, a logo with a tagline in the narrative mode: a subjective text integrated in the identity of the organization, using the logo to reframe the logic. Even while there were cities and countries using taglines from a marketing perspective, it was definitely not common to use the logo for organization development purposes.

The mayor who had a communication background himself embraced the logo and in a rather authoritarian way, ‘rebranded’ all touch-points in only four months. This ‘fast way of introducing prevented stakeholders from questioning the choice for change and it also prevented them from going back to the former situation of fragmentation and intolerance as it was part of the identity from that very moment.



Figure 1. Box: Illustration of former, official logo and newly designed, ‘promotional’ logo of the city of Antwerp

Integrated in the logo, the artifact reframed mental maps. It caused an adoptive/imaginative tension towards the more wanted enterprise logic by effectuating two orientations:

- » Relevance orientation: It orients all stakeholders to more tolerance and openness which is essential to become a more creative city;
- » Relational orientation: It invites all stakeholders to participate in value creation. It invites them to reconsider their role from passive inhabitant to active and responsible creator of value.

The articulation in the narrative mode has heuristic and holistic effects. To say it with the words of one interviewee: ‘Everyone can see something else in it and that is definitely the strength and the intention of the message. But one thing is sure: it will be something constructive. It definitely tells you that you are part of the warm community called ‘the city’. And also: “The logo is great in all its simplicity. It’s purely poetic as had said the mayor when he first saw the new logo in the context of the competition”.

The narrative ‘openness’ of the strategic design causes an imaginative tension in the first place for the administrators and politicians of the city. It gives them a new window through which they can see a new, more meaningful collective horizon of acting. Integrated in the logo it acts as a message that asks for implementation. One interviewee articulated the integration of the message in the logo as follows: “From now on, we speak with one voice of hope. We are together in this and we are all as responsible for what we make out of it.” The message is a starting point for all that happens in the city and in all assessments it is the starting point of the interview asking from all employees to think over the meaning of the narrative for their own functioning.

The employees see themselves no longer as people that plant trees, clean streets, design new buildings or organize events but they see themselves as people that plant trees that should be for everyone, they clean streets and keep streets clean because the streets are from everyone and that they design buildings that should be accessible for everyone (The building of the new Museum (MAS), for example, is accessible freely for everyone, only when one wants to visit the museum which is located at the inner core of the building, one has to pay.). When they organize events, these events are for everyone, which means, for example, that there is no longer VIP-treatment in events of the city of Antwerp.

“If there had not been a fertile soil in administration, one could never have realised such a transformation. In that case the mayor could have thought of changing things but other people in the organization should have taken things slowly.” Now there was a mayor aiming to change things for the better and there was an administration willing to make change come true. But as one interviewee mentioned: *“I don’t think that the transformation could have happen without the logo but it couldn’t have happen without the sentence in it either. On its own the icon should have been seen as a kind of Warhol-thing and with the sentence next to it, everything was clear. It needed no further explanation, the direction was obvious for all stakeholders. Both were needed to effectuate the transformation. The logo catalysed us away from negativism and bureaucracy into positivism and openness. Gone were the stories of us and them, the bad guys and the good guys. From now on, it was all about ‘us’. There was a significant growth of proudness and an even bigger decline of negativity. The new logo really worked as a catalyzer”.*

That the atmosphere in Antwerp changed in the period between 2004 and 2010 is obvious: investments grew significantly and there was a growth of 5% measured in ‘proudness on the city’ in as well national as local research. But as there are no clear cause-effect relationships possible in complex issues, it is hard to say ‘exactly’ how effective the small intervention was in effectuating the ‘measurable’ change. Nevertheless, the evolution was remarkably positive and the people that were already employee of the city at the time of the transformation, were all convinced about the positive catalyzing effect of the intervention on the total picture.

As a warning for future followers designers: it will be evident that changing the enterprise logic is not just a matter of redesigning the logo but, as with all design, there is the second part of the implementation. Managing emerging processes from a complexity perspective is a matter of managing the dynamics of dissipative structures, it is a matter of taking care that the change persists in the behavior of the individual actors as to keep the evolution going.

Conclusions

As service designers work increasingly across organizations, institutions and communities to enhance transformational processes in the connected society, there is an important need for theoretical frameworks and methods to understand and approach services as complex social systems. It is clear that complexity science offers a complementary ontological image concerning change and transformation as compared to conventional science. Seeing and approaching change and transformation as a process of emerging new order, results in ‘joining-up’ approaches in which collective creativity is an important operant resource. Therefore we have presented the design method of Imagineering and its application in the case of Antwerp as to challenge the existing perspective of transformative service design (and service dominant logic) from the complexity perspective.

It is evident the shift in value creation in society offers an important opportunity for transformative design approaches as more than ever transformation is needed in society and

new holistic approaches are needed as we can't rely on the recipes of the past. Service designers can play a crucial catalyzing role in this historic societal shift. At the other hand, what we seem to need in this context today is not 'design as usual' but 'design-informed-by-complexity science'. And this kind of design is still in its infancy, at least, in the context of transformative work. The creative industries might be an interesting field of research to learn about 'shifting perspectives by using the narrative mode'. More research is definitely needed in the triangle of management, design and complexity as the responsibility of transformative service design is significant.

As a last remark we would like to point in the direction of a possible 'myopia' in design thinking that might exist because of the word 'complexity' which has not always the same meaning in designer language as in complexity science language. In designer language working with complex problems is a much used 'narrative' in pointing to fuzzy, complicated problems, often in the context of closed systems thinking. This dual use of the word complexity could possibly result in an underestimation of the potential input of complexity science for design work in working with open systems. There is the risk that designers trained in the linear logic (as nearly all designers are) keep going with the linear conventional logic in designing for open, complex living systems and this might result in more systemic failure on the longer term as complexity is still growing exponentially. Word-use is definitely something the academic design community should take care of, on the one hand to prevent myopia and on the other hand, to be able to 'say new concepts' as is the case with imagineering as a complexity-inspired design approach. Words can create worlds but they can also keep worlds closed.

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