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Introduction: towards a new design discipline

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Innovation is at the top of the management agenda in nearly every company today. However, despite significant investments in innovation, results remain largely disappointing. Today's product and service innovations, like the growth they generate, are often incremental, fleeting and marginal. According to recent research (Jaruzelski et al., 2015), worldwide research and development (R&D) spending on innovation rose 5.1 percent in 2015 and yet revenue for the same companies increased by less than 1 percent. Times are changing fundamentally and what we need now is a more holistic approach to innovation first. To say it metaphorically: we need to stop rearranging the deck chairs, while in many industries we are on the Titanic. To become more effective in product and service innovation, we need to focus on innovation from the experience perspective first.

Innovating from the experience perspective is fundamentally different from innovation from the expert perspective. Expert, mechanistic innovation happens mainly in R&D departments and is often about fixing problems. Innovation from the experience perspective is emergent and joined-up in nature. Instead of being an isolated project or event, experience innovation is an unfolding journey of people thinking and acting differently. The emergence of novelty results from an articulated ideology that inspires many fine-grained, creative human interactions, each building upon one another in complex innovation eco-systems. Innovations such as the slow-food movement, Ben & Jerry's (Lead with your values and make money too), Harley-Davidson (independence, freedom, express yourself) and Starbucks (creating a third place, a place away from home and work), start from a better ideology rather than a better technology.

The concept of experience innovation needs some deeper clarification first while it is central to this book and is used with different meanings in different streams of literature. In the literature on the hedonic sectors, such as entertainment and hospitality, the concept refers to innovating experiences (Jernsand, Kraff and Mossberg, 2015) while in the literature outside these sectors, experience innovation refers to innovating strategically through experience staging (Candi, Beltagui and Riedel, 2013). This book focuses on the latter meaning: innovating strategically from the experience perspective. Writing this book is the more relevant while there is a growing recognition of the opportunities for

experience innovation but the literature so far is failing to address how firms and organizations outside the hedonic sectors can join, what Pine and Gilmore (1999) coined as the experience economy. Pine and Gilmore argued that strategists that ignore the experience perspective in value creation risk falling into the trap of competing purely on price, resulting in ever dwindling profit margins and disconnection with the market in the long term.

The experience perspective on innovation has always existed but it often goes unrecognized and has remained somewhat unexplored in the non-hedonic sectors. With growing connectivity in society, however, times are changing fast. Today we all know some iconic experience innovators: Uber, Airbnb, and many more startups. Car service Uber did not innovate the taxicab product by changing the vehicle or retraining the drivers. It fundamentally redesigned the experience: the way you order, meet and pay for rides, and also how you assess your driver after a ride, which might generate even more business for him or her. Airbnb did not innovate the hotel or the travel portal. Without owning any lodgings itself, it completely redesigned how people find somewhere to stay. Moreover, it also created a way to make new friends all over the world by renting the house of a local.

Of course, these iconic experience innovators, as with all structural innovations, challenge the status quo of society too. But this does not prevent the list of startup experience innovators becoming longer by the day: Spotify and iTunes changed music consumption, Snapchat changed news consumption, SocietyOne changed banking, Netflix redesigned the movie industry, and while producers such as Gillette are still looking for one more variation in the assortment, experience innovators such as the Dollar Shave Club shake up the market with simple, low-cost mail subscription business models (Marshall et al., 2016).

This is not a new phenomenon. As early as 2003 management scholars Prahalad and Ramaswamy (2003:12) announced experience innovation as the next development in, and the future of, innovation. They noted that growing connectivity in society was transforming the meaning and process of innovation in such a way that it becomes ever more difficult to realize profitable business and growth through traditional means only. According to them: ‘The next practices of innovation must shift the focus away from products and services and onto experience environments – supported by a network of companies and consumer communities – to co-create unique value for individual customers.’ Designing innovation as an opportunity for collective creation by a community of creation (Sawhney and Prandelli (2000:24) able to ‘benefit from the creativity, diversity, and agility’ of partners and customers, however, is as yet in its infancy. Communities of creation, different from traditional communities of practice, are communities that span as well functional organizational boundaries. They integrate the broad diversity of actors in a system to create common knowledge and value.

Let’s first illustrate the need for complementing expert innovation with experience innovation in a practical situation that we can all relate to (Boxes 1.1 and 1.2).

The problem of inner city centers is just one of the many examples that illustrate the ineffectiveness of our conventional, expert innovation today. In the

BOX 1.1**IMAGINEERING SNAPSHOT: INNOVATING THE EVER MORE DESERTED CITY CENTER**

There was a time when city centers were vibrant places. But the centers of most Western cities today are ever more deserted: 10 percent and sometimes up to 30 percent of the business units stand empty. Why? Two major forces affecting high streets are the growth of online shopping and the emergence of out-of-town shopping centers. City councils in hollowed-out towns are unhappy with this evolution since the high street has always been an indicator of how well a city is doing and boarded up shop fronts simply don't look attractive. There are plans in almost every city to try to reverse the rot. Millions are invested in a High Street Innovation Fund most often to realize infrastructural improvements: for example, building a large covered market in the city center. But these 'infrastructural' plans are made on the 'supply-side' only; they are unlikely to save city centers since they don't bring people back. The conventional, 'mechanistic' way that expert innovators cope with this kind of complex eco-system problem is no longer effective. We need complementary thought and action if we want to become more effective in coping with this kind of systemic issue. We need to complement expert innovation with experience innovation.

BOX 1.2**IMAGINEERING SNAPSHOT: FASHION DISTRICT ARNHEM (IN DUTCH: MODE KWARTIER ARNHEM)**

Arnhem as a city has a history and reputation in fashion and design. At the turn of the 21st century, the local government decided that the livability of one of the neighborhoods, the 'Vogelaarswijk' (Vogelaars Neighborhood), should be improved. A public housing corporation bought some ten units and started to rent them out to fashion and design entrepreneurs at a reduced tariff. In 2006 the first four fashion shops opened their doors. In 2007 a disused postal distribution center from another location was broken down into 125 pieces and re-erected in the district as 'Station Klarendal', a fashion center with several shops and a café-restaurant. In 2012 the central square was named 'Elly Lamaker', referring to the founder of the Fashion Academy of the regional Art University (Artez). Increasingly, decisions in this neighborhood drew their inspiration from the field of fashion to further develop the authentic (at least to the city of Arnhem) and inspiring identity of the district. Today there are some 50 shops and some 70 fashion and design business units mixed with regular houses to avoid the conventional high street idea. Fashion District Arnhem is now a vibrant place. It has already won several prizes for inspiring urban renewal projects.

network economy, coping with many of our 'unsolvable' problems is no longer a question of fixing the past but requires re-inventing and re-creating the future together. It requires a mindset of experience innovation first. The fact that so many city centers continue to struggle with revitalization raises the question why these cities do not make this seemingly simple choice.

There are several reasons perhaps. Firstly, there is the scenario of simply not knowing; ideological, cultural and experience opportunities have often gone unrecognized because of the dominance of the conventional, engineering paradigm that is oriented towards economies of scale and safeness. Secondly, even if those responsible do recognize the potential of mind-shifting experience strategies, they often have no idea how to shift from a mind-sharing to a mind-shifting paradigm since it is systemic in nature; an individual shop-owner cannot turn the tide of urban decline. And, thirdly, it seldom happens that ‘emergent’ experience innovation, also called value-driven innovation (Lindhult et al., 2015), emerges ‘spontaneously’, as was the case in Arnhem. Emergent innovation, innovation from the experience perspective, must be designed for consciously or unconsciously. Fashion District Arnhem emerged from unconscious design. In this specific case, many creative actions consistently took further the unconscious, intuitive choice for fashion that was taken by the public housing corporation leading to an ever stronger, emergent whole system innovation.

This chapter will unfold as follows: first, we will focus on the evolution of innovation in society in order to understand that to become more effective innovators we should learn to talk in a more nuanced way about the phenomenon of innovation. With a more nuanced view on the phenomenon of innovation, we will discuss the need to extend our thinking with what Lichtenstein (2014) calls ‘generative emergence’, a new discipline of organizational, entrepreneurial and social innovation. Aligned with this thinking, we will argue in Section 1.3 that we too need a new discipline of design in order to unlock generative emergence which Nijs (2014) calls ‘Imagineering’: unlocking and orchestrating whole system experience innovation by designing and using properly a generative image that shifts the collective focus from problem to aspirational future. We will finish this chapter with an overview of the structure of the rest of the book (Section 1.4).

1.1 The evolution of innovation

The example of the revitalization of the inner cities illustrates that the challenges we face in society and the nature of the micro-innovation processes we can use to cope with them, co-evolve with the socioeconomic context that characterizes the economy, in this case the network economy (Teece, 1987; Bessant, 1991; Dodgson et al., 2005). Innovation scholars have recognized this evolution. Rothwell (1992, 1994), a British sociologist and pioneer in understanding innovation management, documented this evolution in five generations of micro-innovation models (see Table 1.1). His five generations model provides a historic overview of innovation management in the Western world between the 1950s and 1990.

Rothwell observed that more effective innovation processes lead to a decrease in time to market and a reduction of costs. These five generations of models, going from ‘supply push, technology-driven innovation models’ (1G) in the 1950s and 1960s to ‘strategic, integrated and open, ideology-driven models’ (5G) of innovation in the 1990s, appear with a different timing in different countries, industries, segments and policies.

One of the main changes evident across these five generations of

Table 1.1 Rothwell's five generations of innovation models

Generation	Key features
1st: supply push	Technology-driven push: simple linear sequential process
2nd: market pull	Need pull: simple linear sequential process
3rd: coupling model	Recognizing interaction between different elements and feedback loops between them, the interaction between different departments, all within a firm
4th: collaborative model	Interaction upstream with suppliers and downstream with demanding and active customers, emphasis on linkages and alliances
5th: collective model	Whole eco-system integration, extensive networking model with continuous innovation ever more ideology-driven A strategic, integrated and open model

Source: Based on Rothwell (1992).

micro-innovation processes is the shift from closed, technology-push, expert models to progressively more open, whole system experience innovation models of collective creation, in which the boundaries of the innovating organization become ever more porous. Each new generation retains the key features of the one before, but adds ever-greater interaction and feedback. This increase in openness and complexity (everything relates to everything else) creates strategic innovation challenges, mostly around orchestration of the initiatives. Further, each generation of innovation model is harder to adopt than the previous one, as ever more actors are involved.

The shift from closed, first-generation, expert models to open, later-generation, experience models is also visible in the evolution of the definitions of innovation. From the original distinction made by Schumpeter between invention ('the occurrence of a new idea for a new product or process') and innovation ('the first attempt to carry it out in practice') (Fagerberg, 2004), more recent definitions of 5G experience innovation embrace the demand side. Innovation now is defined as 'the adoption of a new practice by a community' and it focuses on the mobilization of new, collective and creative behavior (Denning and Dunham, 2010) and the use of generative innovation practices (Tanev and Frederiksen, 2014; Tanev et al., 2011) to augment the effectiveness of the innovation micro-processes. Such recent, behavioral-oriented definitions and the aligned generative practices to foster innovation in a sustainable way emphasize the critical role of all the actors involved (hence a collective model): the innovators, the entrepreneurs, the customers and the policy makers.

While 1G expert innovation processes take place in a single department in a single organization, 5G experience innovation processes mean that innovation and value creation become ever more connected in ever more complex ways to other actors in the innovation and creation eco-system (Dougherty, 2016; Vargo et al., 2015). Thus, coordination and orchestration across the actors become a core part of the 5G innovation process. 5G experience innovation processes are at the frontier of today's best practices in business innovation. They are

Figure 1.1 The evolution of innovation models (Rothwell, 1992) and the dominant logic of value creation in relation to growing complexity and openness

strategically fully integrated network-based, open creation and innovation processes, integrating both knowledge and creativity from inside as well as outside actors in processes that are central to what the organization does (Figure 1.1).

The new technologies that dramatically lower the cost of communication, research, and distributed learning and production are central to the emergence of 5G experience innovation processes. This generation of innovation processes enables collective creation and collaboration as never before. 5G experience-innovation processes (think, for example, of social, public, organizational or whole system innovation) require special skills and practices. Indeed, this is so much so that scholars argue that we face a paradigm shift from closed to open innovation systems for which we need a new innovation discipline, a discipline which Lichtenstein (2014) proposes to call ‘generative emergence’ (Section 1.2). Within that framework we need a new design discipline that Nijs (2014) proposes to call Imagineering (Section 1.3).

1.2 A new discipline of innovation: generative emergence

The paradigm shift from closed to open innovation that is manifesting itself in the network economy has far-reaching implications for both practice and science. Digitalization is not only a major driver of this growing connectivity, openness and complexity, but it is also leading to the deeper scientific understanding of our world. The huge computational power we have today means that scientists can start to decode the non-linear phenomena that are central to all living systems, such as the weather, the economy and other living phenomena, to complement the conventional, linear Newtonian worldview (see Chapter 3). Goldstein et al. (2010:5) write: ‘finally it is important to note that organizations have always been complex. What has changed is our ability to understand them as complex systems and thereby influence them’. The emerging complementary worldview of the living systems (introduced in Chapter 3) leads scientists to a more in-depth understanding and to new thinking, not in the least concerning 5G experience-innovation practices and the implications for management and innovation policy.

Scientists have started to make a distinction between two types of science: an equilibrium science of forces through the mechanistic science perspective that began with Newton, and a new, emerging science of rules based on living systems

(Potts, 2017) – also called complexity science (introduced in Chapter 3). To put it simply these two complementary worldviews lead to two complementary frameworks for innovation policy and management: a framework for reallocating resources (such as realizing infrastructural innovations or realizing taxes and other regulations on the empty shops in the inner city case) and a framework for redesigning rules to generate new order in living systems (Colander and Kupers, 2014; Potts, 2017). This is similar to the choice of fashion as an experience rule of thumb for rethinking critical actions in the Arnhem case. While conventional design, which makes use of the imagination and creativity of involved experts, operates in the first framework, the design approach of Imagineering makes use of the imagination and creativity of all the involved actors, and thus operates in the second.

The real challenge, of course, is to master this second perspective on innovation by redesigning rule(s) consciously; this is the intention of the design approach of Imagineering. While the case in this chapter has been chosen for clarity, most of the other examples in this book were consciously designed for; indeed some have been designed for by the authors of this book themselves.

1.2.1 From emergent, experience innovation to generative emergence

According to complexity scientist Lichtenstein (2014), emergent 5G experience innovation processes should be approached as a matter of ‘emergence’ and not as the mechanistic concept we call ‘innovation’. Lichtenstein argues that to become more effective in organizational, entrepreneurial and social innovation, and in all these new innovation challenges that typically emerge with the network economy, we need to build a new discipline of innovation. This will be a new field of study based on insights from the science of the living systems – a discipline of ‘generative emergence’. Let’s first understand the concept of emergence and its relevance for organizations and then we will turn to the characteristics of ‘generative emergence’ (Chapter 3 is totally devoted to this new scientific worldview).

‘Emergence’ is a property of all complex adaptive systems (adaptive systems are systems that can learn – human systems for instance). Emergence is the coming-into-being of a sustainable dynamic state arising out of the interactions among components (agents) that make up the system itself (Lichtenstein, 2014). Emergence is a natural pattern of change that can easily be recognized in times of ‘emergency’, which is a closely related word and phenomenon. In case of emergency, a disturbance interrupts ordinary life and all people spontaneously take on different tasks. This natural way of changing provides an alternative for the mechanistic thinking about change and innovation. Simply put, emergence is order arising out of chaos. Emergence is a phenomenon that has always existed. It is the reason a tree can grow from a small seed or a chicken can grow from an egg: two biological events that clearly cannot be explained based on the laws of gravitation. Emergence is not only the reason why there are hurricanes but also why there are social phenomena such as traffic congestions, rock concerts, and democracies.

‘Generative emergence’ then ‘explores the dynamics of creation and re-creation of and in organizations, ventures, projects, initiatives, and social endeavors of all

kinds' (Lichtenstein, 2014:3). 'Generative emergence' refers to social entities that 'arise and remain stable through intentional creative agency and organizing'. While emergency is triggered by a dramatic event, generative emergence, the emergence of an entity (e.g. an organization) is triggered by aspiration – 'to provide some kind of value, that is [. . .] valued by other agents' too (Lichtenstein, 2014:17).

1.2.2 Differentiating generative emergence from change and transformation

According to Lichtenstein (2014:5), the concept of emergence throws organizational change and transformation into a whole new light. Emergence presents itself as a third distinct process. Lichtenstein mentions four crucial differences between emergence as a process of generative, complex innovation and the two other processes, namely change and transformation:

First, while change and transformation always involve the modification of existing elements after a crisis dislodged the inertia of the system, emergence is **always creation**, and never simply change or transformation. 'Emergence is the invention of something new, the origination of a distinct system and/or the structures within it.' Consider again the case of the inner city, where the emergent entity is not the result of a change. Although the behavior of the individual actors in the system changes, there is also a new situation that arises based on the design of the mind-shifting concept of 'Fashion District Arnhem'.

The second difference with change and transformation lies in the trigger for the emergence of a new system, which is **aspiration** (Simon, 1955). Lichtenstein (2014:5) interprets:

The vision and enactment of a new opportunity to be capitalized on. [. . .]
Whereas crisis leads to a reactive attempt to save the organization, aspiration is an entrepreneurial desire to create new value, to make a new, meaningful contribution to a community or market. For this reason, emergence and re-emergence are often initiated when nothing is wrong per se in the organization; they are not triggered by a problem or urgent issue. And if they are, they turn the reactivity into proactive action. [. . .] One of the benefits of aspiration is that it can generate a projected future that may have fewer constraints and more creativity for the organization.

Articulating the concept of 'Fashion District Arnhem' in that specific context was the aspirational, creative spark that shifted the collective focus and triggered the emergence of an important development that would not have happened otherwise. However, emergence is not a matter of planning, meaning that the articulation of this concept won't have the same effect in every situation; what emerges is dependent on the unique situation and can never be predicted.

'Thirdly, this spark of creativity produces a whole different set of behaviors than is likely in crisis-driven change' (Lichtenstein 2014:5). Instead of evoking 'reactive creativity', which is characterized by negativity and desperation, it evokes '**proactive creativity**', which is characterized by 'intrinsic motivation, positive affect, and focused self-discipline' (Heinzen, 1994:140). In 'Fashion District Arnhem' both employees and visitors will act differently in that region

than they did before the reframing of the identity of the system. Moreover, talking about a 'Fashion District' in different settings will lead to different policies than would have been the case when seeing this region as a fragmented and deteriorated neighborhood. The aspirational shift in the collective focus will lead to previously unthought-of creative actions and interactions.

Fourth, contrary to the common modes of change and transformation, 'emergent structures **expand the capacity of the system** by an unprecedented amount, vastly increasing the capacity of the system to accomplish its work' (Prigogine and Stengers, 1984; Swenson, 1988, 1989 in Lichtenstein, 2014:6). A process of emergence improves the efficiency, adaptability and performance of the system in ways that would be impossible through common modes of change. In Arnhem, the reframed identity of the deteriorated eco-system made it possible for this region to become an example of economic, social and environmental development and to flourish. This new identity expanded the capacity of the system in many ways.

1.2.3 Beyond self-organization

From the foregoing it becomes obvious that emergent, experience innovation, or rather 'generative emergence', is at the same time a matter for the forest and for the trees. It is only by reframing the identity of the system (the forest) that individual actors (trees) are enabled to rethink decisions and actions in view of the collective aspiration (it is possible to plant new trees that together make the 'new' forest come alive).

The big question that arises is then: how do we design consciously for generative emergence? The aspect of reframing or redefining the forest (the whole entity) is often hard to grasp as conventional problem solving approaches have taught people to solve problems by analyzing them to see where improvements are needed. Generative emergence, however, is not a matter of fixing the past, nor is it a matter of pure self-organization or dismantling hierarchically directed command and control structures. Instead, it is about shifting the collective focus as to create the context in which all actors are inspired to act differently. It is a matter of setting the stage to enable innovation as self-organizing collective creation – exactly the opposite of *laissez-faire* (Goldstein, 2011; Goldstein et al. 2010; Goldstein, 2005; MacIntosh and MacLean, 1999).

Complexity researchers agree unanimously that it is a serious misunderstanding that emergence in organizational settings could be the result of self-organization only – 'a term that suggests spontaneity and the inner-driven onset of new order' (Goldstein, 2005:3). They argue that the emergence of new order is always appropriately constructed (Goldstein, 2005) or conditioned (MacIntosh and MacLean, 1999). According to Lichtenstein (2014:204), 'generative emergence is always driven by agency, in the form of a vision for how to improve the social ecology by creating new value, and an aspiration – a motivation and intention – to pursue that vision'. In other words: Generative emergence needs design, a design for evolution. This then brings us to the core of this book: the design approach of *Imagineering*.

1.3 A new discipline of design: Imagineering

Imagineering is a blend word of imagination and engineering: generating optimized realities by making use of the imagination of all involved actors (see Chapter 4). According to Simon (1969) to design is to devise courses of action aimed at changing existing situations into preferred ones. In 1G expert innovation situations, design is a matter of experts using their imagination and creativity to come up with better solutions. In 5G emergent, experience innovation processes, design is a matter of shifting the collective focus in an aspirational way as to create the context in which all the involved actors are inspired to use their own imagination and creativity to generate a more desired reality together. Designing to evoke generative emergence is a matter of designing for evolution. Design here is about setting the stage to enable innovation as collective creation. Nijs (2014) proposes calling this design discipline Imagineering: designing and using a 'Creative Tension Engine' (CTE) to catalyze innovation as collective creation.

Designing to evoke generative emergence is still a rather new field waiting to be discovered. In Chapter 4 we will articulate the history of the word, the coming-into-being of the design approach of Imagineering and in Part II we articulate the design approach in practice. For now we will focus on the central mechanism of all Imagineering, namely the CTE. CTEs are presented in this book as a central mechanism through which innovators contextualize all innovation with aspirational meaning (Garud et al., 2014; Garud and Giuliani, 2013; Garud et al., 2010 and 2011). Let's start with an example and zoom in on the micro-processes of innovation that unfold from the design and use of a CTE to then describe exactly what it is (Box 1.3).

Examples such as the slow-food movement, AirBnB, Arnhem Fashion Quarter, the first national park perhaps give the impression that Imagineering is fun and easy. It is most definitely fun but it is not at all easy. Challenge yourself for a moment to discover the complexity of the design work. Think for example about the center of the city you live in that might also suffer with too many empty shops and try to design an appropriate CTE to turn the tide. And no, you may not copy-paste the 'Arnhem Fashion Center' idea since this is highly unlikely to work for your own city. Or think of a CTE that might turn the tide for a local library that most probably suffers from a diminishing number of people still making use of it. Or think of a conventional school and realize how hard it is to come up with a great CTE to set the stage for innovation as collective creation. Designing a CTE such as 'First National Park' is definitely simple in hindsight (and indeed the best CTEs are very simple by nature), but it is much harder when facing the original problem at the start. Most probably this is what Oliver Wendell Holmes (1897), a physician and one of the best regarded American poets of the 19th century, had in mind when he said: 'For the simplicity on this side of complexity, I wouldn't give you a fig. But for the simplicity on the other side of complexity, for that I would give you anything I have.' Let's discover the concept in more depth.

BOX 1.3**IMAGINEERING SNAPSHOT: THE EMERGENCE OF THE FIRST NATIONAL PARK IN BELGIUM**

In the 1990s, at the very moment that all the coalmines closed down in the province of Limburg (Belgium) leaving 40,000 people unemployed, Ignace Schops and a group of friends were dreaming of 'making nature conservation sexy'. First, they developed the (marketing) concept: Hoge Kempen, Groene Kans (Hoge Kempen, Green Chance). But nothing happened until the friends, who regularly visited national parks during their holidays, started to dream of having the first national park in Belgium in their own region of Limburg. It was a rather strange idea but they imagined that, if all the fragmented land in the coalmine region could be brought together, this could result in the first national park. Reconnecting land instead of fragmenting it further for development is something rarely done. Bringing back nature to make the system healthy and flourishing again was something the friends really believed in as being a viable business model.

Their belief, together with their previous professional experience of developing high-quality biking routes and selling biking cards, convinced them of the fact that developing a national park was a viable route to building local economy by conserving nature. The '(Re) connection model' they believe is applicable for all value creation in society is based on four principles: reconnecting people with nature, reconnecting nature with nature, reconnecting business with biodiversity and reconnecting policy with practice.

The national park was opened in 2006 and looking back, Ignace highlights three principles as being core to their success: first, there is a real, big ambition that is easy to articulate (the first national park) and inspires many people, businesses and governments to join forces; second, all actors that decide to join forces should win through participating; third, there is M3: 'Mensen, middelen en mandaat' (people, resources and legitimacy). Let's explain and illustrate these three principles with some examples.

1. Real big ambition, aspiration, easy to articulate

'Our own national park' was a sufficient set of words to set people wondering how this could be a viable option in their region. Nearly everyone had positive associations with these words and were in favor of its realization as long as it brought them something and did not cost too much. As a result, all meetings were about the 'how' not about the 'what'. They made an initial master plan that had a long-term viewpoint (for example, a small industrial location in the park was planned to disappear in 25 years and the maintenance of the park stays with the Flemish Agency for Nature and Forests (ANB)). This plan convinced local governments as well as the provincial and national authorities to give them a budget on the condition that they had to match the amount with their own, commercial-generated funding. Which they did.

2. All actors that join the movement should win

All actors in the network learn by doing that they all can win by serving a better cause than by focusing shortsightedly on direct income.

Nearly all participation is free. Even the entrance to the park is free. Visitors pay only for extra activities, which are mostly organized by third parties who can earn money. An example is the city of Zutendaal, which created 'the bare foot path'. This little village has only 7,000 inhabitants but the activity attracts more than 150,000 visitors each year who each pay 3 euro, which adds up to a significant income for the village. In addition, these special activities act as sweet spots that keep the majority of visitors near to the villages instead of having them spread over the whole of the park, which might be damaging for nature in the long term. Moreover, the value of land neighboring the national park is reported to have increased.

Hotels in the neighborhood of the park may use the park-registered logos free as long as they act according to agreed guidelines. Failure to follow the guidelines can result in losing the right to use the logos. Even though these participating hotels have their own communication budgets, they all report rising figures from the very start of the park. They are even now in favor of other good causes as long as they see a positive return in the end. All actors in the network learn through their participation that they should take a short-sighted view on direct income but that serving a better cause can lead to a much larger indirect income. Some hotel owners have now redesigned their properties to make a better fit with the national park and its visitors.

From the very beginning Ignace worked with the regional universities on rolling sets of experiments with a focus on monitoring and measuring success. New experiments are continuously being designed, for example there is one now on social value. Ignace deliberately placed extra-large benches in the park because this encourages people to share them with strangers. The hypothesis is that this will stimulate them to talk with one another and share experiences leading to them becoming happy ambassadors of the venue. Ignace has another interesting hypothesis around healthcare: how does the emergence of the national park influence healthcare in the province?

3. People, resources and legitimacy

To be successful you must be able to work with passionate people. You also need to have resources to start with and the ability to grow the resources in the long term. Finally, you should not even consider starting the whole process without the support of the most senior people in charge of the endeavor. Research shows that the inspiring work of Ignace and his team realizes yearly a (direct and indirect) return of 191 million euro and that it generates 5,000 connected jobs (Otte, 2011).

Their 'dream' became the dream of many participants, who in turn made their own dreams come true in their sub-systems. The first national park in Belgium acted as a 'CTE' making it possible to use nature conservation as a catalyst to create a more flourishing eco-system. It enabled the attraction of 1.2 million visitors to the region. It created hundreds of jobs directly and even more indirectly. It made the actors (governments as well as commercial) in the neighborhood more entrepreneurial. It increased the value of the neighboring land. Finally, it enabled the regeneration of the social beauty of this multicultural setting and the natural beauty of the region. In 2008 Ignace won the Goldman Environmental Prize in San Francisco.

(Personal interview with Ignace Schops on February 13, 2018)

1.3.1 Creative Tension Engine

Senge (1990, 2014; Senge et al., 2015) defines creative tension as the gap between the current reality and the aspirational future. According to him, this gap creates energy and it exists in 1G expert innovation as well as in 5G experience innovation. As with all tension in life, people want to solve the tension that they experience. Tension is what keeps people thinking. In the context of expert innovation, it will be the engineers and/or the economists that feel challenged to resolve the tension. In experience innovation, we argue that the design and use of a CTE can create the context in which all actors in a system feel challenged to help resolve the tension. A famous illustration of the latter is the CTE created and used by Martin Luther King: 'I have a dream'.

In 'Letter from Birmingham Jail', Martin Luther King (2000:67–68) wrote:

I must confess that I am not afraid of the word 'tension'. I have earnestly opposed violent tension, but there is a type of constructive, nonviolent tension, which is necessary for growth. Just as Socrates felt that it was necessary to create a tension in the mind so that individuals could rise from the bondage of myths and half-truths to the unfettered realm of creative analysis and objective appraisal, we must see the need for nonviolent gadflies to create the kind of tension in society that will help men [sic] rise from the dark depths of prejudice and racism to the majestic heights of understanding and brotherhood.

His critics, afraid as they were of the tension his movement created, urged him to slow down, to be patient. They told him that the wounds of segregation would eventually go away and that all people would be equal in the end. Despite all of this, Dr King deliberately decided to identify and name the tension in order to use it as a tool for creative transformation. The tension created by his words offered the opportunity to open up a dialogue where there was none before. Creative tension is not an end in itself but, when well designed and managed, it can engage and mobilize a whole system in the desired direction.

A CTE is an 'engine' that catalyzes 'emergent, experience innovation'. It is a verbalized, generative image that frames or reframes an existing mental model. It provides a new conceptual and metaphoric landscape and thereby enables new thinking, talking and doing. When managed 'generatively', it can create the flexible context in which novelty can take shape, as shown in the example of the first national park in Belgium. A CTE can enable whole system innovation (Figure 1.2).

Figure 1.2 Creative Tension Engine (CTE) as a core element in innovating from the experience perspective

1.3.2 Creative Tension Engine and whole system innovation

Much has been written in the organizational learning literature on how to use the creative tension between vision and reality. The Appreciative Inquiry (AI) Summit is an approach that embodies creative tension. It has emerged in the last decades as a very powerful design methodology for helping large, multi-stakeholder initiatives. The AI Summit consists of a 4D-process developed by Whitney and Cooperrider (2011): Discover, Dream, Design and Destiny. It is an organizational approach that holds that improvement in social settings is more engaging when the focus is on the generative strengths rather than on the weaknesses. Contrary to conventional problem-oriented approaches, AI prevents the emergence of resistance and opens the organization up to new thinking. AI involves the systematic discovery of what gives 'life' to a system when it is at its very best, and to take that further into a flourishing future for the system.

Imagineering has much in common with the organizational design approach of AI but Imagineering is not specifically an organizational approach both examples in this chapter show. Imagineering is a whole system approach. In coping with 5G innovation processes, Imagineering brings the tension out of the organization into the broader societal context. As we will see in Chapter 4, Imagineering makes use of poetic or daily language so as to include all people, laymen as well as professionals, in the innovation movement. Imagineering enables whole system innovation as collective creation.

We agree with Senge (Senge et al., 2015) when he argues that system leaders have three core capabilities: the ability to see the larger system; the ability to foster generative conversations; and the ability to shift the collective focus from reactive problem solving to co-creating the future. We extend those ideas to claim that even though people like Schops and King are an enormous blessing, a well-designed and well-managed CTE can have an equally strong effect in producing collective leadership for whole system innovation. Thus, rather than a book about conventional leadership, we are proposing a model for designing and innovating systems. This is a much-needed 'new' management competency with great potential in today's networked society.

While experience is a mental phenomenon (Sundbo and Sørensen, 2013) caused by external mind-shifting stimuli, Imagineering makes use of appealing and mind-shifting narratives to tap into the imagination of the many 'to catalyze in real life the potentials we are imagining' (Atlee, 2007, 2014). We argue that the design of a CTE such as the 'first national park' or 'I have a dream' makes many involved actors wonder how they can contribute creatively to help resolve the tension and make that aspirational future come true. This then is the first step in the design approach we like to call Imagineering: designing and using a CTE that shifts the collective focus from a problematic situation to an aspirational future and sets the stage for innovation as collective creation. to set the stage for innovation as collective creation. Contrary to the conventional engineering paradigm in which design operates with a solution orientation, the Imagineering paradigm design operates with an evolution orientation. Imagineering is about

appealing to the imagination of the many to generate collectively, and over time, a more desired reality.

As a CTE, a generative image such as ‘national park’ or ‘Arnhem Fashion Quarter’ is meant to do five specific things well:

- **Mind-shifting:** it creates a strategic mind-shift in an aspirational direction (from problem to opportunity) in all the people involved, each with their own experience archive that feeds the interpretation in context. This enables an enormous richness in daily dialogues and interactions as people see and interpret their interactions in a new strategic light.
- **Integrating:** it allows people to see the bigger picture, to approach system optimization in an integrated way. It brings departments together and as such functions as an antidote to silo thinking and acting. Moreover, new initiatives can build upon one another as the reframing is sustained over the long term.
- **Mobilizing:** the collective aspiration inspires engaged collective action, since all participants know that interpreting and acting is relevant for the whole system. It shows their creativity and their care for the whole system and it is strategically supported (so it is also safe to act).
- **Sustaining:** articulating this image and integrating it in the core of the system sustains innovative long-term action, making it possible for the innovation thoughts and initiatives to build upon one another.
- **Imaginative:** it allows all actors to see a new opportunity horizon which they can relate to, and creatively re-interpret daily activities and interactions.

It is obvious that a strategic generative image does not work just by being there. It has to be applied and managed in an appropriate ‘generative’ way in order to encourage movement in the envisioned direction. In Chapter 4 and in Part II of this book, we will dig deeper into the logic and the dynamics that are seen as central in taking care for the eventual emerging processes.

1.3.3 Creative industries as Creative Tension Engine

Recently the relationship between the art world and the market economy gave rise to new academic thinking. In *The Rise of the Joyful Economy*, cultural economist and economic sociologist Hutter (2015) runs the argument that these two worlds have been seen so far as statically distinct but that they are dynamically coupled. It are the dynamics of tension and resolution, created by interactions between different ‘logics of worth’ that drive the evolution of humanity. In this same sense, Jason Potts, an evolutionary economist and complexity scientist, recently made a remarkable statement (2007:9). According to him, ‘the “play” industries [being the creative industries and by extension also the broader leisure industries] are not just into economic significance as a set of industries, but more deeply into the main driver of the market-economy engine, the ultimate engine for generating new order in society’. The importance of the arts for innovation has been highly underestimated so far. The ‘play’ industries, unlike all others, have ‘dynamic’ value for society at large. They act as a CTE on a macro

level in society. They are the industries that keep people wondering. They are essential for all evolution.

The creative industries are not responsible for creativity in society. All industries (agrarian industry, biomedical industry, etc.) are as creative as they are. Yet the creative industries play a crucial role like no other as a permanent infrastructure that facilitates the processes of origination, experimentation, adoption and retention (Potts, 2007, 2009, 2012). They give rise to three different sorts of creativity:

- **Generative creativity:** the ‘original’ form of creativity associated with the development of a novel idea.
- **Adoptive or adaptive creativity:** the creative discovery of new ways of adopting those novel ideas and the development of new processes to facilitate that process (for example the adoption of a rule).
- **Retentive creativity:** the creativity with respect to the embedding of novel ideas into consumer lifestyles and into the routine operations of firms (for example, the installation of a social coordinating mechanism that effectuates the normalization or institutionalization, something which is often overlooked but core to sustainable evolution).

These three types of creativity are considered crucial to the sustainable emergence of novelty in society on a macro level. It is our hypothesis that these three types of creativity are also crucial for the sustainable emergence of novelty on a micro-organizational level and that on this level a CTE can play a similar ‘infrastructural role’. A CTE can set the stage for sustainable whole system innovation.

1.4 Conclusion and structure of this book

Concluding this first introductory chapter, we have seen how the evolution from 1G closed to 5G open and complex innovation processes demands a new discipline of innovation, which Lichtenstein (2014) calls generative emergence. We have seen how viewing organizations as living systems and approaching innovation in terms of generative emergence demands a new discipline of design, which Nijs (2014) calls Imagineering. Imagineering is a design approach that generates new order through the use of a CTE that reframes an existing complex issue in a way that it appeals to the imagination of all involved actors in the system and that enables and sustains long-term collective creativity and collective leadership.

Senge et al. (2015:28) note that ‘we are at the beginning of the beginning in learning how to catalyze and guide’ emergent, systemic change. Accordingly, the purpose of this book is to share what we have learned in the previous decades about fostering innovation as collective creation from the experience perspective. Whole system innovation from the experience perspective, also called ‘cultural innovation’, ‘emergent innovation’ or even better ‘generative emergence’ is a new approach. It is innovation that must be designed for either unconsciously or, more effectively, consciously. Being able to design for generative emergence

will complement our design toolbox and allow us to become more effective innovators able to cope with the growing complexity in society.

This book is split into two parts. Part I covers the ‘Foundations of Imagineering’ and has three chapters. Chapter 2 presents a broad view on the big shift in society and in the landscape of value creation. In doing so, the chapter explains why it makes more sense now than ever to study the design approach of Imagineering. Chapter 3 covers the big shift in science that is taking place at this very moment. It gives an overview of the key concepts and principles of complexity science as the lens of the living systems. This chapter shows how it leads to a whole new perspective on how living systems can be influenced to become more healthy flourishing systems. Chapter 4 considers the big shift in design logic that is taking place and it describes the complexity-inspired design logic of Imagineering. It articulates how Imagineers try to generate new order when facing social (or organizational) complexity.

Part II, ‘The Systemic Design Approach of Imagineering’, consists of six chapters. It explains the design approach of Imagineering, which combines the three phases of a regular design approach (inspiration, ideation and implementation) with the scientific framework of complexity science, resulting in an A–B–C–D–E–F design approach:

Phase 1: Inspiration

- Chapter 5: **Appreciating** – answers the question: ‘How do you try to understand a problematic situation in an appreciative way?’
- Chapter 6: **Breathing** – answers the questions: ‘Before jumping to solutions, I try to get a deep understanding of the bigger picture: “What is going on in this living system?” “Which small intervention might ‘heal’ or ‘appeal to’ the system in a very evident way?”’

Phase 2: Ideation

- Chapter 7: **Creating a vision and a concept** – answers the question: ‘Which principle might work for the experience and what narrative might ignite the system in the envisioned direction by mobilizing the individual actors creatively?’
- Chapter 8: **Developing the experience** – answers the question: ‘How can the working principle be translated into very concrete, consistent experiences?’

Phase 3: Implementation

- Chapter 9: **Enabling** – answers the question: ‘How can the experience platform (physical as well as digital) connect and enable the involved stakeholders?’
- Chapter 10: **Flourishing** – answers the questions: ‘How can the system be nourished on the longer term for sustainable flourishing?’ ‘How can the emerging processes be managed dynamically?’

By describing the design approach of Imagineering in these six activities, we hope to extend your design toolbox and to make you a more effective innovator, better able to cope with the growing number of complex issues in society.

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