

# PARTICIPATORY INNOVATION AS UNFOLDING PROCESSES OF RELATING

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## ABSTRACT

This paper sets out to explore the current theoretical development of participatory innovation, and aims to expand our understanding of how this field of research deals with the complexity of the processes of relating between people in organisational contexts. We are interested in exploring the interactions that take place between multiple stakeholders, in cases where a particular goal is reached, but also when no immediate outcomes are reflected in the process. We argue for understanding participatory innovation as an attempt to engage many stakeholders through explorative approaches in which one has to accept uncertainty to what the outcomes of these processes may be. We argue that the social dynamics emerging between stakeholders in participatory innovation processes are just as important to study as pre-defined achievements or business outcomes. Hence, we seek to make a conceptual contribution, by laying the steppingstones for a nuanced perspective of participation and stakeholder negotiations.

## INTRODUCTION

Since participatory innovation was coined in 2008, it has been widely explored in different contexts; mainly focusing on how innovation is facilitated in- and outside the boundaries of an organisation (Buur and Matthews, 2008). Participatory innovation focuses on cross-disciplinary exploration of innovation and highlights that novelty does not solely emerge from within organisations, rather it happens in the meeting of different perspectives and in the boundaries between different areas of expertise. The concept was originally developed out of a need to involve end-users in the design of new products and ethnographic field methods were utilised to generate in-depth insights about their use practices. Buur and Matthews noticed that organisations did not easily adopt user insights in their work, and in the paper argue for the need of anthropological provocation. In addition, participatory innovation partly developed from the traditions of participatory design (Buur and Matthews, 2008). Historically, participatory design developed as a response to workplace struggles in Scandinavia in the 70's (Greenbaum and Loi, 2012), and thus sought to equalise power relations, in a time when political conflicts were perceived as the main catalyst for change. Here, participatory design emerged as a way of bringing conflicts between workers and employers to the table and to open up for new possibilities (ibid) by supporting the weaker party; the workers. In those lines, organisations dealing with product development utilised the concept of equality by shifting traditional development practices into user-driven ones; and increasingly focused on developing new methods for doing so (Buur and Matthews, 2008).

According to Ehn (1993) participatory design raised two different concerns; one being political and the other technical. From a political perspective it focused on the necessity to democratise design practice. Under those conditions, the technical perspective related to the actual design of industrial products. Through a

democratisation of design practice, end-users were given a voice in the design process for the products to particularly address market needs. Participatory design has increasingly focused on encouraging ideals of equality, which is why it has become common practice to find new ways of involving people in design processes (Iversen and Dindler, 2014). And even so, Ehn (1993) argues that while we attempt to make decisions in the interest of the majority, the democratic rights we describe in contemporary capitalistic civilizations often remain at a formal level.

Acknowledging the value of democratic design practices, participatory innovation sought to bring together the qualities of three different perspectives to product development; design anthropology, participatory design and lead-user approach. Design anthropology takes a particularly societal focus, and brings with it sensitivity towards the understanding of users and use practices. Participatory design disturbs usual patterns of working with development by bringing together stakeholders and offering active modes of engagement through interventionist design methods. Lastly, the lead-user approach is highly market oriented, yet focuses mostly on technological forms of innovation. By bringing these three perspectives together, participatory innovation shed new light on product development. It highlighted the importance of understanding use contexts, and benefitted from participatory design's interventionist approaches to the involvement of people, for the particular purpose of generating new business opportunities (Buur and Matthews, 2008). As such, participatory innovation emerged as a nuanced perspective on design practice, and as a reaction to different strands of user-driven innovation, due to the practical difficulties in implementing these in organisational contexts. Hence, it sought to bring together these three different disciplines, as a way of addressing challenges that organisations experience in dealing with user-driven innovation in their daily work.

In this paper we argue that practices of user-driven innovation, including participatory design and lead user approaches maintain a simplified understanding of organisational dynamics. With participatory design it remains at a level claiming that the researcher or facilitator sits with the responsibility of engaging people in workshops that involve users and co-design methods, and that things will unavoidably evolve through the workshop activities. Thus, user involvement has continuously progressed as an idealised and important factor for successful product development. With this point of origin, we are directed to participatory innovation, which nuanced these particular understandings of design practice. Within design anthropology we have seen sophisticated ways of exploring the practices of users, but when it comes to ideas about what the company can do about it, the

suggestions usually appeal to traditional management solutions. Lead user activities have developed methods to include users to generate new ideas (Franke et al., 2006; Lütje & Herstatt, 2004). This has shown to be a naïve approach, in which companies even if they do such workshops, do not end up following up on the insights (Brem & Larsen, 2015).

Out of this research interest followed a series of Participatory Innovation Conferences, established by the SPIRE research centre at the University of Southern Denmark, Sønderborg. With the aim of building a new community that deals with innovation research from different perspectives, the conference became a hub for interdisciplinary research. At each conference, new tracks were created, yet there has been a continuous interest in the involvement of a diversity of stakeholders. Several papers presented at the conference have been dealing with the theme of navigating complex landscapes, which involve a diversity of stakeholders with different interests and intentions. The papers attempt to, both describe the challenges of involving multiple stakeholders in innovation research, as well as propose guidelines on how to deal with these.

One example is the work of Mack et al. (2013), who focus on the social processes emerging in organisations when dealing with innovation. In the paper they propose a framework for innovation practices, and argue that it can support the activities that are meant to nurture innovation in organisational settings. In another paper by Gottlieb et al. (2013), the authors state that conflicts and negotiations between stakeholders in innovation projects are inevitable, and at the same time as being difficult, can support the emergence of new themes, potentially leading to better results. As such, they argue that social constructions can influence the emergence of innovation. These are just two examples of how participatory innovation has been dealing with themes relating to social figurations in complex settings. Both papers present us with a perspective on participatory innovation as leading towards an innovative outcome, regardless of the messiness of the process.

Hence, participatory innovation is in the midst of a shift, which is highlighted by its interest in the interactions emerging between multiple stakeholders in processes of innovation. We are beginning to increasingly acknowledge that innovation processes are more complex than previously anticipated within the design field, and that there is a need for us to understand what happens within this complex web of relations between stakeholders. For this reason we try to make sense of organisational dynamics and human interaction by inviting inspiration from particular strands of organisational research. Summing up, we thereby attempt to bring forward a nuanced perspective on stakeholder interactions in participatory innovation processes.

## FROM PARTICIPATORY DESIGN TO PARTICIPATORY INNOVATION

While participatory design aims to democratise design practice by giving a voice to weaker parties, and to create tools that enable participants to articulate their thoughts (Greenbaum & Loi, 2013), participatory innovation seeks to overcome the practical issues in approaching industrial product development from a user-driven perspective (Buur & Matthews, 2008). This moves the concern from translating user insights into innovative products, to a question of nurturing user-driven innovation within organisations (ibid). We acknowledge these perspectives; yet seek to expand our understanding of the social dynamics emerging through engaging in and encouraging new conversations. Both within and across different organisations involving many stakeholders. We experience that the social dynamics in stakeholder collaborations are critical to what happens in the innovation process. In Gottlieb et al. (2013) the authors describe how the perception of users continuously changed in the negotiations and interdependencies between stakeholders, and how the social dynamics can emerge as both enabling and constraining project outcomes. The authors argue that the challenges stakeholders experience in collaborating are the very substance of innovation. Likewise Mack et al. (2013) argue that when stakeholders need to work together they become interdependent; constraining and enabling each other in taking specific action. These cases show how innovation does not solely emerge as a final outcome of a product development process, nor does participation mean involving people through particular methods, with a promise that it leads to successful collaborations. As such, we move beyond participation as a self-contained concept that mainly takes place in workshops, to understanding it as a way of opening up lines of inquiry that help us better understand the relational complexity emerging in the interactions between stakeholders (Heape et al., 2015).

## METHOD

The paper is based on a qualitative study within a product development organisation located in Scandinavia. We have conducted participant observation and semi-structured interviews with department managers and practitioners over a period of 14 months, attempting to understand their innovation processes. As a way of nuancing the formally collected data, we have engaged in informal conversations to gain richer understandings of the organisation. Through this informal engagement, we have attempted to identify themes that we invite the stakeholders to engage with. These activities are described later in the paper, where we introduce perspectives from three different groups of stakeholders; managers, engineers and designers.

## PARTICIPATORY INNOVATION IN PRACTICE

Within the organisational case, a recent shift in product development practice took place. The organisation is divided into several departments, but the department we refer to hires both designers and engineers, and has three sub-sections; design, mechanics and electronics. The organisation previously located the responsibility of engaging with end-users to the design group, and expected them to hand over insights and product concepts to the engineering group. As a new department manager was hired to increase the successfulness of the department, it became a part of his work to break down these silos and require employees to work across disciplines. This meant that both engineers and designers were to engage in user studies, concept and product development. Inevitably, this raised a series of issues and questions. Rather, than the central concern still being that of developing products, it became a question of how to facilitate the innovation process, and how to create a willingness amongst the employees to work together. While some accepted the challenge, others refused to give up their competence centres to work in cross-disciplinary project groups. As researchers, we became curious about the negotiations emerging as a result of the new work procedures, as we find these conversations highly important in respect to the further development of the innovation process.

Within the organisation, it became a question of highly experienced engineers refusing to engage in the exploration of new ideas. For one, they were highly focused on simply being provided with product specifications from the designers, and from this new work procedure they realised, that they were being asked to engage with the designers on a different level. Secondly, they did not acknowledge it as part of their job to engage in fluffy processes of concept design, due to believing that they already had looked into versions of many of the ideas years ago. On several occasions this created frustration amongst younger designers, who aimed at exploring new concepts and engage with end-users in the process. For this reason, the perspective of the experienced engineers became a hindrance. Another challenge was the different levels of sensitivity towards the existing product portfolio. Some of the experts had been given the responsibility to ensure keeping the component portfolio at a limited level. The reason being to prevent the constant introduction of new elements, since each needs resources to be developed and manufactured using special moulds. If these new components only were to be used for one specific product, the development and manufacturing would not economically be worthwhile. According to the experts, the younger engineers and designers had not adopted the company's DNA yet, and thus still were not attentive enough to these issues. As such, some of the experienced employees were more concerned about new ideas fitting into the product portfolio, and to be built by

existing components, than having to explore new innovations, and introduce new components to the system. One of the experts we interviewed articulated this by stating that they, as experienced engineers, have the responsibility of pushing the designers into the right direction. He states:

*“If we have too many fluffy ideas, we have to start over all the time, because things cannot be done. We are not limiting the designers’ ideas, we are just asking them to bear technical rules in mind, and then leave them to it. Or okay...we are in the process of doing that, but have not succeeded yet. I guess they look at us and think that the engineers are the ones always saying no. We are also learning that we are not allowed to say no. But the designers also need to learn, that maybe they should listen to us – that maybe we are right! Until now we have worked in silos and I have had one responsibility. But does the designer have the same responsibility? We have to work together to understand each other’s responsibilities and intentions, and we are not there yet”.*

As we discuss the need to innovate and to work across disciplinary boundaries, he says:

*“We have to open up, but the designers should not say that two plus two gives five. Engineers are all about putting things into boxes and two plus two gives four. If we want to change things there are a lot of stakeholders to be asked. Of course my boss is important, but he does not sit on all the money - everyone with a stake in this need to be consulted”.*

Speaking to the engineers and the designers about the changes, all of them argued that they have experienced challenges in merging their professions and in developing products according to the new procedures, requiring closer collaboration. It reached a point where one of the highly experienced engineers quit his job. The reason being that he could not see himself being able to work with others, who did not possess the same knowledge and understanding of product development as him. This particular engineer, as well as other employees started opposing the idea of cross-disciplinary work, and claimed that management was neglecting their shared ground. As such, the shift from a silo-driven to cross-disciplinary perspective on product development raised a number of concerns within the organisation. It was no longer a question of involving users in design processes. Rather, the central issue emerged as a challenge of navigating within a complex landscape of stakeholders, and facilitating the process of innovation within that setting. Inevitably, it raised some questions within the organisation. What are we doing? How are we doing it? Who are we as an organisation? Who am I as an individual and what do I contribute with? How do I identify myself with my colleagues? Thus, this change raised both reflexive and existential

questions that are important to try to understand in the discussion of stakeholder interactions.

#### SHIFTING FOCUS

As social researchers, our interest shifts from being methods for co-design to that of understanding what happens in the interaction between multiple stakeholders. We bring awareness to the fact that participatory innovation brings together different stakeholders for them to innovate together. But we ask ourselves: What does that mean? What are the implications of it, and how can we understand these social dynamics? We want to be careful discussing only the empowerment of users and the creation of business potentials, and instead bring focus to that of understanding the complexity of participatory practices of innovation. Hence, we present arguments that lean towards understanding innovation endeavours as emerging and negotiated in the unfolding events between people. For that reason we encourage sensitivity towards the continuously negotiated identities and roles across time and space in participatory innovation activities. We discuss how social interactions in the real-time unfolding of innovation processes can have implications for the emergence of conversations, and therefore move beyond participatory innovation practice as an idealised account for pre-defined achievements.

In the paper we attempt to bring in a unit of analysis building on pragmatism, and in particular complexity theory. We do this to understand participatory innovation as a social process in an increasingly complex setup; specifically dealing with a number of different stakeholders. If we look at participatory innovation through that social lens, it becomes necessary for us to understand both what we already do in terms of involving stakeholders, but also the directions in which we are heading. This new journey of participatory innovation raises some important questions about what it means to innovate across organisations, disciplines and hierarchical levels, and whether we understand the value of these processes in the finalized outcomes or in the emerging interactions.

#### THROUGH A PRAGMATIC LENS

With the aim to explore a nuanced perspective on stakeholder interactions in participatory innovation processes, we look through a lens that takes seriously the emergent nature of social relations. We resort to a pragmatic and complexity driven understanding of social processes and connect that to the organisational case previously described.

Pragmatism is a philosophical standpoint, which is highly concerned with the on-going construction of lived realities, and basically rejects the existence of one single truth. Pragmatism has evolved into several directions through different disciplines (Elkjaer &

Simpson, 2006), but essentially acknowledges that practice is a dynamic and social process. Within pragmatist theory, scholars emphasise the emergent nature of life, and offer insights on how actions taken are inevitably social and connected. This is, by Dewey and Bentley (1949) explained through the concept of transaction, with which they reject the idea of entities being completely independent. Dewey and Bentley define the concept of transaction, as entities being connected to each other, in such way that there is no separation between the object and the subject, nor the observer and that, which is being observed. A process of inquiry is thus an inherently collaborative one, and no idea belongs to a single person. Rather, inquiry emerges as a process, not as a goal within or beyond the process itself. In this process, people shape and are shaped by their interaction. Everyone is thereby constantly subject to change, and there will never one final outcome.

Simpson (2009) refers to the pragmatist philosopher Mead, when stating that meaning is constructed in the social transactions between people. She highlights the emergent nature of conversations, and explains how humans in transaction influence the meanings and knowledge generated, as one single action takes no meaning in itself, but takes its meaning in relation to the response it evokes. As such, Simpson argues that practice from a pragmatist perspective is dynamic and socially unfolding in real-time. Hence, pre-planned achievements are not bulletproof. Rather, they are emerging in the social transactions, just as the identities of people also are becoming in the meaning that is mirrored back to them in the process of engaging with others. From a methodological perspective, pragmatism is more concerned with the question of how practice emerges as a result of social transactions, rather than what the particular practices are (Simpson, 2009).

On this note, we jump ahead to complexity sciences, which bring a focus on larger patterns emerging out of local non-linear interactions (Prigogine & Stengers, 1997). From this insight Stacey et al. (2000) have been looking for analogies in sociology and social psychology. They find such an analogy in the pragmatist paradigm, by attempting to understand organisational practice as the unfolding of social processes. Stacey (2010) argues that organisational life only can be explained through the processes uncovering and the participation of everyone. As such, there can be no objective outside influence; rather, any form of effect happens through the social process of transactions, and even if this effect seems small and insignificant it is part of shaping a future, which is unknown to everyone. Stacey highlights this by explaining how there is interplay of intentions amongst stakeholders. This means that nobody can control what others do, and thereby neither the outcome. The notion of uncertainty becomes the lived reality of everyone involved, and we inevitably have to deal with surprises and the paradox of

knowing and not knowing. This brings us back to the organisational case presented. The designers and engineers are required to work together, but find it frustrating to do so, due to different interests and areas of expertise. Both parties attempt to articulate those concerns and influence the process in ways they find most beneficial. These attempts basically come from the assumption that being stubborn enough can convince the others that their way is for the better. Through the changes management proposes, these challenges slowly emerge as a visible conflict in the department. We argue that the conflicts affect the local transactions in the department, and open up for new conversations. The complexity sciences talk about conflict as an essential element of change. It is not presented in a negative form, but as a natural way of exploring negotiations. So, rather than trying to prevent it or manage it away, there is a necessity to deal with it for progress to take place (Grant, 2008). Grant discusses conflict as an unfolding process exploring differences to recreate our lived reality. Here, compromise becomes a central concern; the ability to move beyond own interests, and focus on ourselves mainly in the relation to others (Drabæk, 2008). We often perceive compromise as something undesirable, because we assess it as either our choice or someone else's choice and then the reaching of a middle way. However, Drabæk (ibid) argues that everyday events are far more complex than that, and that neither of the opposing parties can predict what the future will bring. Thus, rather than understanding compromise as a linear process between stakeholders, we look at it as social process entailing local interactions in the present. We act in the present with the future consequences in mind, all while relating to our past experiences. Drabæk (2008) sees this as a complex social process that acts as an enabling constraint, due to our lack of ability to predict the future. Therefore, in the conflicts emerging between stakeholders, they are inevitably confronted with the ability to relate to the intentions and interests of others.

#### CONFLICT AND COMPROMISE

In the organisational case presented, we attended several meetings involving management and practitioners in an attempt to understand the challenges and find ways of dealing with them. While the conflict was at a heated stage in the beginning, it opened up for new conversations, leading to compromise. Some of the engineers mentioned 'the learning curve', arguing that maybe they could involve the same designers in particular projects, so that they would learn about the technical restrictions over time. Working together would thereby become a way of learning about each other's practices. Maintaining consistency in composing project teams was thus proposed as one of the ways of dealing with the conflict. Others proposed to work closer together, as required by management, but not to the extent that they were forced to work on things they

had no interest in. They could thereby sit in project teams and consult each other, without the engineers necessarily having to conduct user studies or tests with the designers. At a meeting, one of the experienced engineers stated:

*“We might as well face it, we don’t understand each other’s priorities. Sometimes it is my feeling that engineers - and now I am speaking for my whole race - can have problems understanding why some things are so important for the designers; like the size of the product or the colours. For us, LEDs are just components that make light, and whether the colour is pure green or dark green doesn’t matter to us. Of course some things are more serious than that. There are cases where we immediately just have to say no. If it is not technically feasible, then we might as well kill the idea”.*

Essentially, it is in these conversations that the designers and engineers shape and are shaped by each other. Their identities, including their interests and skills, are continuously unfolding in the recognition by themselves and others. As Stacey (2003) explains, the collective and individual identities are formed in these local interactions, and reflected in the experiences of being together, through provoking, agreeing and disagreeing with each other. Hence, the conversations emerge as ways of negotiating patterns and themes, not just in the actions or words, but in the responses they offer. As previously described, in processes of innovation, during which stakeholders are to collaborate, conflicts and negotiations emerge as natural patterns of interaction. The dynamics of these social relations and the conflicts that allow for new conversations to emerge are thereby critical for novelty to unfold.

Back at the company, months of formal and informal dialogues passed by. While the negotiations eventually lead to an increased understanding of potential ways for them to work together, the organisational reality stepped in. With a larger number of projects approaching, the engineers and designers were necessitated to find ways of working together. With time being the primary constraint, they had to negotiate what parts of the process to put less focus on, in order to deliver the solutions in time. Due to the need to keep the sales going, the priority typically ends up being technical feasibility and manufacturing, which does not give much freedom for new concept design, including user studies and testing. As such, the designers were put in a position that required them to compromise their interests. The pressure to deliver demanded them to better understand the technical restrictions and find their own ways of incorporating their expertise into projects. This led to new ways of negotiating priorities. One of the designers we interviewed stated:

*“Production always wins. Those projects we are asked to deliver to our internal customers win, because they pay us to do it, and we need the money in our department. To be honest, we as designers are finding our own ways. Instead of negotiating too much with the engineers and our managers, we build other relations. We have come to realise, that if our internal customers approach our department managers, and tell them: we need this new technology in our product line, our managers will clear the way. We have recently started going to the customers and convince them to try cool new technologies, that we could then get the permission to explore. We basically go into the organisation and plant some seeds to our benefit. We intentionally sit and work in the buildings that work with innovation, because those employees will come by and ask us what we are working on. We then play on how cool these new concepts are to convince them. Instead of fighting the engineers and our managers too much, we build new relations to other stakeholders and get them to pave the way for us”.*

Thus, the conflicts and compromise emerging as a result of the organisational reality neglecting the expertise of the designers, led to new lines of inquiry. Participating in the projects became a question of professional identity and intrinsic motivation. As the designers realised it was a question about their existence in the department, they resorted to alternative ways of negotiating their roles. While they feel constrained by the engineers, this constraint enables them to find new ways of negotiating their roles in the organisation. Hence, they are not solely dependent on the engineers and their own managers. They create a web of interdependencies, and by doing so they change their dependency of the engineers.

As Stacey (2010) argues interdependency is central to understanding the concept of power. From the work of Norbert Elias (1956) he explains the relations between people as mutual dependency; also understood as power relations. Thus, power is not one exerting power over the other, or as Elias puts it: “an amulet one can have”. People constrain and enable each other at the same time, and we cannot attain anything without continuously collaborating and competing. Stacey (ibid) discusses this as a dynamic conversational process of including and excluding each other. He states that it can have serious consequences for the identity of people. Exclusion could mean the destruction or loss of identity, leading people to feelings of existential concerns, necessitating them to deal with it in one way or the other. Although it could disturb the social dynamics between groups of people, these conflicts or disruptions of collaboration often lead to new patterns and new meaning. As previously written, novelty depends exactly on the disruption of existing ways of doing things and the forming of new patterns. In the

organisational case that meant disrupting the new work procedures, for the engineers and designers to reinvent their identity in the social patterns they were locked within.

## REARTICULATING PARTICIPATION

With the paper we set out to discuss and bring forward a nuanced perspective on stakeholder interactions in participatory innovation processes. The story of an organisation, in which conflicts and compromise between stakeholders led to new ways of innovating, challenges us to move beyond understanding participation and collaboration as purely empowering concepts.

In the beginning we presented participatory innovation as comprised by three different perspectives on user-driven innovation. In these, we find some tricky issues regarding the involvement of stakeholders, as they present simplified understandings of participation and the possible outcome of it. Participatory design focuses on the involvement of stakeholders in workshops through novel design methods. It passes the assumption that as long as users are present in the workshops, it will be possible to get their voices through, and the facilitators will be successful in presenting positive outcomes. Design anthropology has been successful in providing insights about users and use practices. However, it has not focused much on the dynamics emerging inside the organisation, or how well the insights on use practices actually challenged or changed anything within the organisational setting. The lead-user approach brings the hypothesis, that as long as the right users are involved, organisations will make an impact on the market. As such, the dynamics emerging within the organisation in these attempts to involve stakeholders are not clearly portrayed or discussed in the original way of describing participatory innovation. We find that slightly problematic and seek to explore what actually happens in these processes. Out of this curiosity we raise a series of questions and offer ways of understanding the challenges and opportunities emerging in stakeholder interactions. We do not intend to give final answers on these questions, but rather open up for new considerations and conversations within the participatory innovation community. While preceding papers have directed attention towards the social dynamics emerging in stakeholder collaborations, we seek to expand and nuance those perspectives, by turning to the organisational case we presented in this paper.

In the case, we articulated some of the concerns raised by the employees in being required to work cross-disciplinarily, and engage in the development of new innovations in a more coherent way than previously. If we are to challenge the notion that user involvement is the absolute critical factor in ensuring the emergence of

new innovation, we bring forward the dynamics between the designers, who's task is to do that and the engineers who are to implement the solutions subsequently. The designers have been and still are involving end-users in particular ways to generate insights on use practices and translate those into design concepts. Their challenge of working cross-disciplinarily was not to involve the engineers in doing so as well. Rather, the challenge emerges as both parties refrain from being able to understand the other's perspectives and responsibilities. The designers mainly see the resistance of the engineers to maintain an explorative approach in the beginning of innovation processes, and the engineers look at the designers and see a lack of understanding of and expertise in technical feasibility and the implementation of ideas. A third perspective is that of the management. The managers in the department acknowledge the rising issues and wish to take the responsibility of facilitating new conversations between these two professional identities. However, they fail to find ways in doing that, and finally end up creating increasingly strict guidelines and new work procedures. They do this without engaging the different employees in much more than a formal presentation concerning the implementation of these frameworks. Here, we see how the integration of user insights, concept development and final implementation of innovative ideas, do not only come down to the participation of the stakeholders. Rather, a much more apparent concern is that of understanding the social dynamics emerging in these collaborations, to be able to deal with the challenges in an open manner.

We return to the importance of conflicts in acting as catalysts for change. Like Grant (2008), we acknowledge the power of conflicts in opening up for conversations that allow for new negotiations to take place. We suggest moving beyond the assumption that well-planned process and methods can ensure successful outcomes in the form of business potentials, and instead increasingly bring attention to the crucial impact of stakeholder negotiations in the emergence of innovation. In our organisational case the conflicts peaked to the extent that the employees required their managers to attend meetings in which they could discuss the new work procedures and the implementation of these. By bringing the conflict to the forefront at a series of meetings they eventually decided to disregard the new procedures for a while (Mosleh, 2017). We argue, that even though the decision did not immediately bring a positive impact, bringing the conflict forward did act as a driver for change. As such, we focus on portraying participatory innovation as a process that does not necessarily bring with it a tangible outcome. Here, we see it as a necessity to resort to complexity sciences to be able to understand the social dynamics influencing the emergence of innovation, and thus build on previous academic contributions

attempting to do that. We thereby seek to nuance existing perspectives on participatory innovation, and highlight that this process, even within the walls of one organisation, is not entirely unproblematic.

Organisations are highly complex, due to the diversity of people involved and their different interests, intentions and power relations. We cannot ignore that people shape and are shaped by each other in attempting to understand participatory innovation processes. In this respect, complexity sciences can help us shed light on the social dynamics. We turn to the theory of complex responsive processes (Stacey and Griffin, 2008) to make sense of stakeholder conflicts and negotiations emerging in participatory innovation processes. Stacey and Griffin (2008) remind us that humans are social beings that do not simply interact with each other thoughtlessly according to a set of rules. Thus, stakeholders in these highly social processes of innovation communicatively interact with each other, and establish relations that are influenced by their interdependency. The authors argue that stakeholders form social figurations in the interest of the group they identify themselves with, which then could be in conflict with other groups. Hence, it becomes difficult to argue that everyone is part of one large system that proceeds according to a set of guidelines. People act locally according to own interests and thus engage in power relations (ibid). Meaning thereby emerges in stakeholders responding to each other, rather as the result of one self-contained action. However, we also need to take into account the way we as researchers influence the organisations, as we try to study and engage with their innovation challenges. In the following section we try to depict that influence through counting ourselves as stakeholders on equal terms with the company employees.

#### RESEARCHERS AS STAKEHOLDERS

As researchers engaging within the organisational setting, we cannot avoid but count ourselves in as stakeholders that shape and are shaped by the emergent events and interactions as also argued by Gottlieb et al. (2013) and Heape et al. (2015). We argue that one of our tasks is to find ways, in which we can understand, the social dynamics by actively working with them. As researchers we do not reach a full understanding of the organisational context and challenges by simply asking the participants about status quo. We need to find ways of engaging in the temporal dynamics, by inviting to conversations and interactions about their burning themes, and as researchers take part in this (Larsen & Bogers, 2014). In doing so, we work with different methods in order to understand the challenges occurring in the facilitation of innovation, and to find ways for the organisational stakeholders to negotiate these themes in that process. In the organisation in question, we include tangibles (Buur et al., 2013) and use improvised theatre (Larsen, 2006; 2011) as a way of inviting for new

conversations. Through both of these methods we see our main contribution as disturbing the usual patterns, and inviting for new conversation among the involved, Figure 1. This can be conversation between people who usually do not interact with each other, or to serve as invitations to break repeating patterns of interaction, in which participants get stuck.



Figure 1: The tangibles work as invitations for new conversations between stakeholders.

As an example, we worked with a group of people from the engineering department. Apart from two managers, all of them were engaged in work with designers, and encountered each their challenges in that collaboration. Some of the newly employed engineers were more open to engaging with the designers, while most of the experienced engineers perceived the designers as unrealistically demanding new concepts to be developed, without showing any respect for the challenge of implementing them; not just in their own little project but more widely into the rest of the product portfolio. Some of these experienced engineers were elected to be part of a standard committee, to ensure that new components and materials would fit into their existing product portfolio, to simply prevent the constant introduction of new components to the system. Keeping a limit would prevent the waste of time and money on specially designed components for one of two products. The theme of this session was to work with the struggles the committee found themselves in.

In our conversations we had seen members of the committee being highly frustrated, due to not knowing what was expected of them. They experienced their meetings as highly unproductive, and basically found the task of deciding how to move on impossible. On top of this, they were all extremely busy in their daily tasks.

At the meeting, we asked the members of the standard committee to direct the theatre session; to present a standard committee meeting. Two of our actors, three engineers and one of their managers played out the scene. Neither of them are part of the committee in real life.

Effectively, theatre interactions are concrete, and cannot be completed by simply talking about the situations. The idea is to act. This enforced the group of directors, e.g. the people being part of the real committee to articulate how they worked at the meetings, to make it possible for the actors to play such a meeting. In itself this turned out to be important. As researchers we were provided with a nuanced insight into the dilemmas; however, this was also the case for the people that were not part of the committee in real life. The real committee members found the conversation extremely important; partly because it made their dilemmas visible, but also because it invited to a conversation amongst them, at the same time as showing the two managers what kind of problems they were experiencing.

We had prepared a situation, in which one of our actors brought a dilemma to the acted committee meeting. A designer had asked for a new material, and wanted it now. As the meeting was directed it turned out that there would not be time for such a particular discussion.

One of the actors playing a committee member was newly employed, but had years of experience in collaborating with the company from earlier. He took the opportunity to challenge their way of working, asking them to forget what they did in the past and be open to new things unfolding. He says: *"Listen, things have changed, we cannot wrap this place around what happened before, so let's hear what they have to say"*. It turned out that he was going to be part of the committee in the future, so the enacted meeting became a way for him, and the other people to reflect what his contribution might mean for the future meetings in the real committee.

The scene we engage them in performing is directly related to that of working across specialities and in understanding management's decision to enforce that. They take roles that emphasise the ways in which that particular character would react; for instance the experienced engineer taking a resistant approach, and trying to argue that a similar solution was tested years ago. The scene basically evolves with the involvement of the audience (other colleagues experiencing this reality on a daily basis).

As the conflict heated up, we as researchers asked reflective questions on how they imagine the situation to unfold. This led to them asking their two managers to take over the stage. So, the two managers were put in the hot seat, having their employees ask them about the process of decision-making in respect to the newly suggested structures. Eventually, the two managers ended up stating that they probably had not been very clear on the roles and responsibilities, and that they needed to invite their employees to a meeting in the nearest future to discuss the issues. However, at the same time the managers challenged the experienced

engineers; telling them that they had a much better background for making the decisions in the standard committee than they had as managers, which was why they had created the group in the first place.

By the end of the session, the participants agreed that they had found themselves part of an important discussion, they had not brought up until now. One of them insisted that if they have had the time to discuss it at a regular meeting, they would not need the theatre. However, the two managers did not agree with that, and recognized the impact this particular format had had on the quality of the conversation.

This way of working openly with conflicts and inviting for new conversations inevitably reflects our way of understanding participatory innovation; emphasising that the social dynamics are critical to the process. We work with it in slightly different ways, where tangible artefacts, just like improvisational theatre, are one of them. With tangible objects we also attempt to open up for new conversations enabling the employees and managers to discuss, negotiate, change and reflect on their way of dealing with innovation (Mosleh, 2017). Effectively, both methods attempt to bring conflicts to the forth, rather than neglecting them and assuming successful outcomes in the form of products will emerge regardless of the challenges emerging during the process. As such, we highlight the importance of not simply portraying participation as a positive concept, but instead nuance what the involvement of diverse stakeholders means in participatory innovation processes. Our current work with these methods goes into a direction, in which we encourage participants to use such methods on their own, rather than relying on us as researchers to facilitate (Larsen & Friis, in press).

## CONCLUSIONS

With this paper we seek to nuance the ways in which the participatory innovation community has sensitised the social dynamics influencing innovation processes and the outcomes of them. We aim to raise a series of questions concerning the interaction emerging between stakeholders dealing with innovation. By that we invite for new conversations that help us make sense of the complex organisational realities, within which we attempt to facilitate participatory innovation. We ask ourselves: what are the implications of different stakeholders collaborating on delivering novel solutions? How do we understand participation? How does the interdependency emerging, affect the way in which stakeholders enable and constrain each other in being able to do each their work?

Reflecting on the organisational case, we understand participation as everyone involved naturally offering their perspectives, skills, challenges, reflections and questions as processes of innovation emerge in their journey towards reaching a common goal. Therefore,

participation emerges as patterns of interaction, rather than as the responsibility of researchers or designers to invite to through workshops planned for specific occasions. In engaging with the organisation, we notice how internal social dynamics overshadows the question of how and when to involve users in the process of development. We find that these questions and the notion of participation are worth exploring further in the future work with participatory innovation.

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