Innovation: change initiated by a design and gender approach

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Abstract: This paper focus on how innovations as radical change can be stimulated through a design and gender approach. The main argument is that people have the possibility of becoming more innovative if they are stimulated to change thought patterns through methods that challenge current perspectives and practices. In our design and gender approach we use design methods, such as personas and scenarios in combination with gender theory in interventions, as a way to communicate gender and equality perspectives and thus promote a diversity of perspectives. We find personas and scenarios as useful tools for critically reflections on the current state and furthermore imagining how things ought to be in the future to be better. By using the approach we want to reframe mindsets, encourage participants to new ways of thinking and contribute to change innovative outcomes, processes and systems.

Keywords: innovation; change; design; gender; personas; scenarios; action-based research.

1 Introduction

The traditional notion of innovation is as something new, not previously known or as new combinations of things. Many contemporary descriptions derive from Schumpeter's definition of innovation as "…the commercial or industrial application of something new-a new product, a process or a method of production; a new market or source of supply; a new form of commercial, business or financial organization" (Schumpeter, 1934). Furthermore, innovation is sometimes defined as incremental development and sometimes as radical change.

Although the field of design has a tradition of using various methods to reframe situations and make new and alternative solutions, in general, there are rarely talks of innovation. A reason for this can be that for an artefact, system, environment or service to be considered as 'new', it of course depends on who perceive it as such. Thinking new in the field of design is in general more about creating artefacts that enhance the intended user's practical and emotional experience. The central focus of creating user experience thus is unlike a general technical rationality focus on creating new technologies. However, we propose that a design perspective is relevant for innovation because it is people that expresses, changes, creates, or otherwise exercise new ideas. The relevance of people is rarely explicit in talks of innovation. The consideration of awareness and maintaining an open-minded attitude is therefore vital in growing innovative cultures (van de Ven, 1986). Sherry (2003) argues that innovation involves a process of radically changing the form or function of a thing, a system or a person. This implies a reframing of mindsets and new approaches to thinking new. An innovative process may hence facilitate change by promoting different perspectives and perceptions within current business. For example norms, standards and practices can be challenged, in order to contribute to a diversity of perspectives and thus a better ability to thinking new. Questioning of current practice is central in design disciplines, as it contributes to an understanding of underlying meanings, which is considered necessary for finding new and enhanced solutions. A design process can for this reason be seen as a process of deliberate radical change. Given the discussion of the need for a reframing of practice, norms and situations in order for firms to become more innovative, we propose the same reasoning goes for gender constructions.

Within the field of *gender* a central theory is 'doing gender', which is an understanding of gender as socially constructed in peoples everyday actions (West & Zimmerman, 1987; Acker, 1999). Within the social constructionist perspective it is argued that 'doing gender' is undertaken in interactions between women and men, women and women, men and men, involving a complex array of social activities that pursuits as expressions of masculine and feminine 'natures' (West & Zimmerman, 1987). The doing of gender is further said to assume a ubiquitous dichotomy of women and men (Lorber, 2000), resulting in one being what the other is not (Ahl, 2004). Unequal gender relations can be a result of stereotypical descriptions of women and men and taken-for-granted assumptions, values and practices that result in certain men gaining power and privilege at the expense of women and other men (see e.g. Meyerson & Kolb, 2000). Haraway (1997) uses a metaphor of diffraction as she stresses the need of reflection on diversity of meanings and experiences, and to both critically

reflect on the current state, and imagine how things could be instead. By using such an approach, new knowledge and understanding can be achieved through the process of thinking new. Thus, a gender perspective can be one contribution to change and thinking new.

In contemporary societies, most organizations strive be innovative and to have an innovative culture. The main problem, we propose, is that people in innovation processes focus on technology instead of people, and emphasis on problems rather than future opportunities. As we see it the challenge is to make people think 'outside the box' of 'what is' and thus widen their awareness of 'what might be'. This is not an easy and straightforward process, because most people have limited awareness of possibilities and alternatives. Schön (1973) refers to it as a stable state mentality or a dominating logic; even though people in general are positive of change and support dynamism, it is often change and transformation in very small steps they talk about. To create radical innovations, it is therefore necessary to challenge or even provoke bounded mind-sets, and thereby inspire to radically thinking new.

Our argument therefore is that innovative solutions, processes and systems cannot be achieved through a techno-centred rational and linear process performed by like-minded people. Rather, we consider it as necessary to cooperate with a diversity of actors with dissimilar knowledge, perspectives and understandings in order to encourage innovation. To change the former stable state of inequality in contemporary societies can be seen as an innovation in itself; it is new, not previously known, and may additionally contribute to enhance businesses and stimulate to new corporations. Change of dominating logics that is necessary for creating equal societies in turn can contribute to innovation as people become aware of new possibilities and alternative solutions. An equality perspective can therefore be seen as one important driving force to initiate change into more innovative cultures.

In this paper we explore how innovation as radical change can be stimulated through a design and gender approach

2 Design and gender approach

The merged design and gender approach we use combine design and gender knowledge in research interventions. Design can be seen as an approach that combines research and practice through the solution-oriented exploration of a particular situation. We are inspired by the

variety of methods used within the design field, methods aiming at challenging mind-sets and enhancing user experiences. In this paper the persona and the scenario methods applicability for innovative outcomes, processes and systems are explored. The reason for combining design with gender theory is the argument that gender equality is said to create a more favourable environment for growth (Kveine et al, 2011). Consequently, a gender theoretical base can contribute to an innovative environment.

In our approach we use design methods such as personas and scenarios as a starting point and we adapt, develop and re-design the methods on the basis of gender theories. In this paper we illustrate our use of the re-designed Persona method in interventions for applying gender theory such as 'doing gender' (West & Zimmerman, 1987), to discuss and critical reflect upon gender issues in everyday actions and activities to contribute to raise the participant's gender awareness. A persona is a fictional description of a person, whose characteristics are of importance for the project it is designed for (Nielsen, 2007). It is a frequently used design method to focus a development process on users' needs and preferences (Cooper, 1999). Developing a persona is an iterative process, consisting of mapping, contextualizing, characterization, persona and scenario creation and validation (Cooper, 1999; Grudin & Pruitt, 2002; 2003; Pruitt & Adlin, 2006; Nielsen, 2004; 2007). The personas are formed, consisting of a *body*; a fictive name and an image to illustrate the character, a *psyche*; such as an overall attitude towards life, work and the situation designed for, a *background*; e.g. social background, education, upbringing which influence abilities, attitudes and understanding of the world, and finally *personal traits* which brings the Persona to life and makes it an engaging character rather than a flat stereotype (Nielsen, 2004). The fictional details in a persona are included in order to increase communication and commitment to the character. Based on our understanding, Persona is in itself basically a different way of presenting an empiric material; it is during the interaction with people it becomes a valuable tool for discussions and critical reflexions. For this reason, we emphasize to place the persona in a scenario to make 'her' valuable. A scenario is a story, with a character (the persona), a context where the action takes place, goals that the persona wants to achieve and actions that the persona takes to fulfil those goals. The process of create personas is described in the model in figure 1.
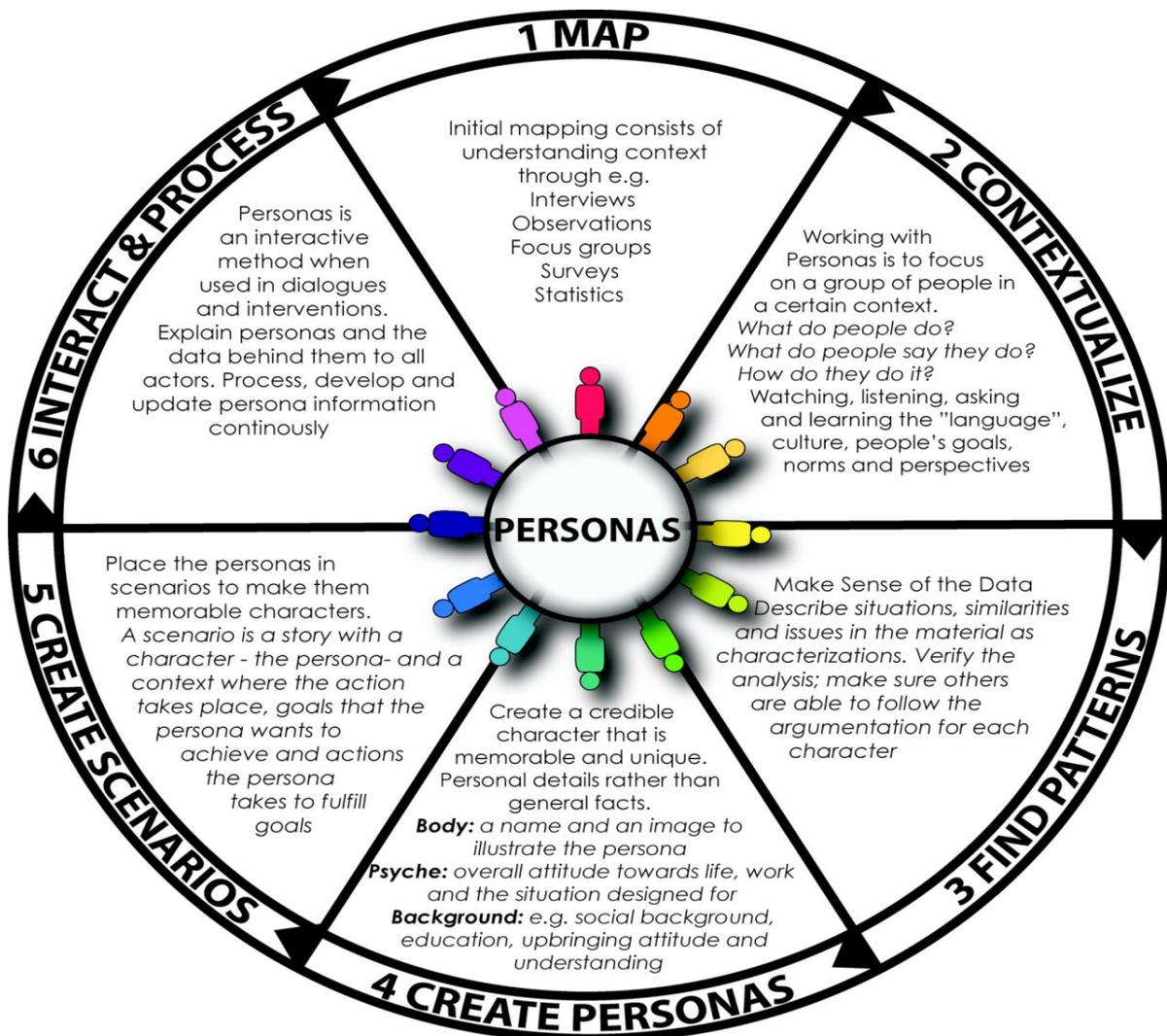
Figure 1. The process of making a Persona, a model inspired by Cooper (1999), Grudin and Pruitt (2002; 2003)Pruitt and Adlin (2006), Nielsen(2004; 2007). Illustration Åsa Wikberg Nilsson

Our approach is action-based collaborations with a variety of actors from business, society and university. Action and interactive research traditions emphasises the need to involve participants in the research process as have possibility to undertake action in their own environment (Aagaard Nielsen & Svensson, 2006). Therefore, we agree on Lewin's (1947) argue for people participating in action-based research projects to learn better and be more willing to apply the new knowledge and understanding when they have been involved in the development process. Additionally, there is a claim for a socially robust knowledge production as a way to validate research results by including actors from outside the research community (Novotny, Scott & Gibbons, 2001; Gunnarsson, 2007). In our approach we use methods such as personas in future workshops as a tool to challenge and improve mindsets in order to develop innovative processes, systems and outcomes. The gender theoretical base has been the concept of 'doing gender' within organizations, based on a model illustrating four gender processes (Acker, 1999), as we refer to as structures, symbols, interactions and individual identity. See illustration in figure 2.
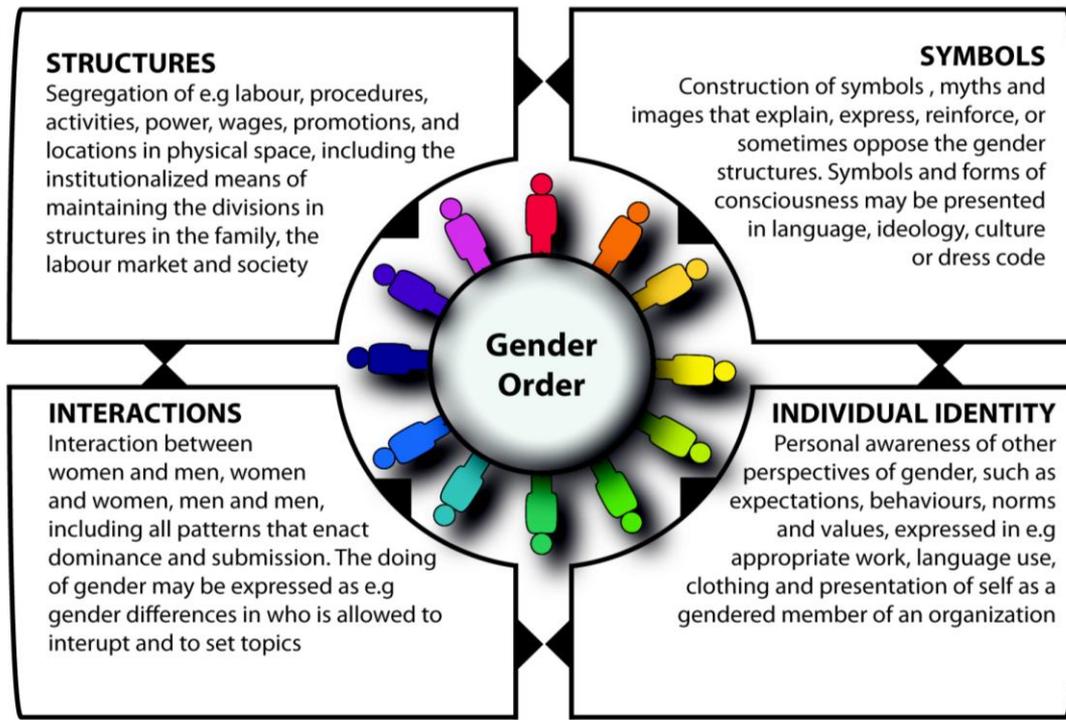
Figure 2. Our model for mapping and analyzing gender processes, with inspiration from Acker (1999). In the intersection of these four processes, a gender order is produced. Illustration Åsa Wikberg Nilsson

The model is based on gender theory and can be used to systemize gender analysis in organizations (West & Zimmerman, 1987; Acker, 1999). We use these four processes to map the context, and as a starting point for the persona development. The 'doing of gender' perspective is also used in interventions as a framework for participants to reflect on their own understandings of gender issues in their own contexts. According to Rasmussen (2004), the ideology of action research is that actors from the research context act as co-inquirers, reflecting on their own practice, and ideally reframe their understandings as well as take action for change. In our approach, the personas, characterizing people within the environment in question, are developed based on interviews and observations, and are subsequently used in interventions as a tool for critical reflections. This is in similar to Dewey's notion of 'reflective thinking' as the kind of thinking that consists of "*turning a subject over in the mind and giving it serious and consecutive consideration*" (Dewey, 1998a p.3). Thus, critical reflection can be one way for actors to become aware of alternative understandings and solutions, what is said to be a necessary precondition for change (Freire, 2000; Dewey, 1998a; 1998b; Schön, 1973; 1995;

Argyris, 1991). Our interest is to facilitate reflection on existing experienced realities in order to ensure sustainable change, a process Schön (1995) refers to as creating a reflective mindset. Haraway (1997) uses the metaphor of diffraction for both critically reflect on the current state of things, and furthermore constructively imagining how things ought to be in the future. This is similar to a design approach and therefore something we undertake in our "experiments of change".

3 Findings

The Persona method is a commonly used method in design processes to focus on user's practical and emotional experiences. However, in our approach we have re-designed the Persona method in order to challenge and provoke awareness of gender and diversity issues. The main relevance of this paper is therefore our experience of using a design and gender approach, including the re-design Persona method and scenarios, as a tool to stimulate radical innovations. We have developed a number of personas, each character with a base in interviews, observations and workshop activities within the environments in question, and used the persona scenarios as initiations of dialogues about various experienced realities.

In order to exemplify our utilization of the method, two of our personas are presented below. These persona's scenarios were developed based on 60 interviews, 2 focus groups with 14 people, and numerous workshop activities- so far involving 48 people, which summarizes to 122 human experiences as empirical base. After each persona there is a short reflection on addressed issues. First out is persona 'Lars' illustrated in figure 3. He is a character that we currently are using in an action-based research project in an IT context. Thereafter we present the 'switching gender' activity, as persona 'Lena', illustrated in figure 4, and our reflections based on this persona.

"Lars"

A persona used in an action based research project.
Photo: Istock

This is Lars, a 41-year-old associate professor working with user-driven innovations within the area of Information technology at the University. Lars means innovation is about creating something new and he thinks commercialization of research is important since its benefits the society as a whole. Even though the university is promoting entrepreneurship, sometimes Lars experiences entrepreneurship and commercializing as not being accepted as a university activity. He says:

"It is almost impossible for a single researcher or even a company to achieve innovations, but in collaboration with users and actors from industry you can reach a breakthrough"

Lars believes successful innovations are user-driven in other words based on valuable insight about users practical and emotional experiences. His research team, of fourteen men and two women, are trying to create new concepts, products and services for companies and organizations.

Figure 3. Illustrating persona Lars

He knows from own experience that *"it can be easier to get funding if you know the user's needs".* His research team have obtained a lot funding and been able to recruit many PhD students. Hence *"Innovations can contribute to regional development and job creation".*

Nowadays, it is a lot of focus on gender, equality and diversity as drivers of creativity and innovations. Thus involving more women might lead to more competitive products and it may contribute to new products and markets. Lars mean that it is no problem for him to try to involve more women in the innovation process, but obviously the women has to prove worthy just like the guys.

In his personal life, Lars is married to Annika, who works as a part-time pre-school teacher. They have two children together, Johan 7, and William, 9 years old. Lars consider he and his wife being quite pro-equality, for example his ambition is to help Annika with e.g. the vacuuming, though Annika usually has finished by the time he gets home. The reason is that Lars usually spends at least 60 hours at work each weak and in addition works from home or is away on business trips. Lars does not think it is a big issue because as he says; he has an understanding wives who consider that he is the one of them who earns most of the money and who does something valuable for society.

Still, Lars would like to have a bit more 'quality time' with his children. For example, he used to play football himself and now his sons play football as well and he wish he had more time to see them play.

Nevertheless, he did actually take parental leave when his youngest son was born. He is quite proud of having worked from home for ten whole days. This is not something the other men in his research team have done, and they often make fun of him being so "soft".

Through the readings, reflections, and discussions of the persona scenarios, participants are encouraged to new ways of thinking of present situations. Thereby, the actors have the ability of becoming more aware of various alternatives. The main contribution is the unsettlement of 'realities', of becoming aware of former dominating logics not being stable and hence a widened awareness and increased open-minded attitude. Furthermore, through development of own future scenarios, both as narratives and as role-plays; participants are stimulated to individual and collaborative reflections on both present states and future possibilities. In our experience, participants therefore themselves have discovered the limitations of dominating logics and initiated new ways of thinking about innovation.

'Switching gender'
An implication of using the Persona method is that images and representations, such as for example persona Lars, risk presenting gender as unitary categories (Kvande, 2003) and thereby reproducing gender stereotypes rather than challenging gender inequality. In addition, presenting a character that present the situation as 'it is', does not in our mind contribute to a challenge and provocation of dominating logics. Therefore, we have developed the design method to be a practical tool for communicating gender issues within innovation systems. With inspiration drawn from the qualitative method of Memory Work (Widerberg, 1999), we have challenged the stereotypical representations by switching gender of the personas. During workshop activities our participants are asked to address the situations presented by the personas and discuss consequences for women and for men. Thereafter, the participants are presented with e.g. persona Lars, and a discussion is initiated based on his story. Subsequently, the participants are presented with persona Lena, see below, who is a 'female representation' of persona Lars, and asked to reflect on whether the consequences change due to the switching of gender.The participants subsequently discuss and critically reflect on the result of switching gender and we find that participants are stimulated to new ways of thinking of both present situations and betterment for the future.

"Lena"

A persona used in one action based research project.
Photo: Istock

This is Lena, a forty -one- year old associate professor working with user-driven innovations within the area of Information technology at the University. Lena means innovation is about creating something new and she thinks commercialization of research is important since its benefits for the society. Even though the university is promoting entrepreneurship, sometimes Lena experiences entrepreneurship and commercializing as not being accepted as a university activity. She says:

"It is almost impossible for a single researcher or even a company to achieve innovations, but in collaboration with users and actors from industry you can reach a breakthrough"

Lena believes successful innovations are user-driven in other words based on valuable insight about users problems and needs.

Figure 5. Illustrating persona Lena

Her research team, of fourteen men and two women, are trying to create new concepts, products and services for companies and organizations.

She knows from own experience that *"it can be easier to get funding if you know the user's needs".* Her research team have obtained a lot funding and been able to recruit many PhD students. Hence *"Innovations can contribute to regional development and job creation".*

Nowadays, it is a lot of focus on gender, equality and diversity as drivers of creativity and innovations. Thus involving more women might lead to more competitive products and it may contribute to new products and markets. Lena mean it´s no problem for her to try to involve more women in the innovation process, but obviously the women has to prove worthy just like the guys.

In her personal life, Lena is married to Anders, who works as a part-time pre-school teacher. They have two children together, Johan 7, and William, 9 years old. Lena consider she and her husband being quite equal, for example her ambition is to help Anders with e.g. the vacuuming, though Anders usually has finished by the time she gets home. The reason is that Lena usually spends at least 60 hours at work each work and in addition works from home or is away on business trips. Lena does not think it is a big issue because as she says; she has an understanding husband who understands that she is the one of them who earns most of the money and who does something valuable for society.

Still, Lena would like to have a bit more 'quality time' with her children. For example, she used to play football himself and now her sons play football as well and she wish she had more time to see them play.

Nevertheless, she did actually take parental leave when her youngest son was born. She is quite proud of having worked from home for ten whole days. This is not something the other men in her research team have done, and they often make fun of her being so "soft".

In our experience of the 'switching gender' activities, participating actors have not initially recognized the scenario. It usually takes a while before they become aware of the fact that the story is the same, but the gender is different. When presented with persona Lena, the participants have commented that 'she' becomes the only woman working at the department, which differences the story from Lars's.

Thus, our experience of using Lena is addressing issues such as for example 'tokenism', being one or one of few in a structure dominated by the other gender. According to Kanter (1977), this may result in increased visibility; such as e.g. one woman act as a stand-in for all women and subsequently performance pressure. Another issue that can be addressed is arguments for the very symbol of an entrepreneur being a man (Ahl, 2004; 2006). An indicative example of this is the resulting identity, expressed by one of our participants as;

"Women at the university often try to defuse differences between women and men and women adapt to men's behaviour in order to be accepted". (Quote from interview the Daring Gender project)

During our initial mapping of this context, we identified what could be called a result of this; women do not want to be presented as 'female entrepreneurs' or 'female' whatever the suffix may be, in line with claims of a 'stigmatizing identity' (Ahl, 2004; Lewis, 2006; Fältholm, et al., 2010). Consequently, based on our understanding the strategy for some women is to adopt an identity that suppresses female identifiers and to work harder to prove worthy. Though, a positive effect of being a woman in a male dominated structure may be increased positive attention by people higher up in the hierarchy (Kanter, 1977).

An additional experience of using persona Lena is our participants' comments of Lena's family situation, for example the question of why she has children at all if she does not take care of them, an issue that in our experience have not been discussed at all with persona Lars. Our participants consider the scenario unrealistic because of Lena's husband; who is said to work part-time and take care of the home and the children. Apparently this is an issue where gender division is obvious, amongst our participants it is not considered normal that men work part-time and take on main responsibility for home and children. Another thoroughly debated issue is that "she" has chosen to take only ten days of parental leave. Although Sweden have a very favourable parental leave that both fathers and mothers can use, it is still more common for women to take major part of it. The fact that persona Lena's "home-service" and her short parental

leave often becomes a subject for harsh discussion, which is not the case for persona Lars, reveals a lot of gendered values and norms, both for us and for the participants themselves. For this reason, we argue that the critical reflections promoted by the switched gender of a persona contribute to a reframing of mind-sets, because our participants reflect on, and recognize, their own - often- stereotypical logics. In our activities, we use 'switched gender personas' to highlight and discuss strategies and consequences within the research contexts. As persona Lena is a female persona Lars, 'her' scenario is not based on empirical data, as was the case for persona Lars. Our experience is however that 'she' becomes a useful tool for challenging understanding of how things are and how things could be amongst our participants and therefore we consider the method to be a contribution to a critical reflection of current dominating logics, standards and practices. This, we argue, is vital for creating an innovative culture.

4 Contributions

In this paper we present our innovative approach based on design thinking, design methods, and gender perspectives, aiming at challenge and provoke people's mind-set and awareness of possibilities and alternative solutions. Inspiration was drawn of Simon's (1996) state of design being an intervention aiming at changing an existing stage into something better. Whereas we in our future workshops use a variety of methods, we in this paper focus on the re-designed Persona method for reframing mind-sets.

By this, the aim is to contribute with our development, experience, and continuous refinement of, the Persona method and its use within some entrepreneurship and innovation systems. The main challenge with our approach is to encourage awareness of alternatives, to introduce broader perspectives that go beyond dominating logics.

In our persona development process we are probing the structures within the environments in question, and communicate our findings to the actors within. It is emphasized that awareness only is possible if actors are given the opportunity to distance themselves from the situation and the structures they are in through reflection (Freire, 2000). Despite this, it has been noted that in reflection we risk only see a mirror of ourselves and our beliefs, and that reflection, as a critical practice therefore may not seriously challenge current conceptions (Haraway, 1997). We consider the Persona method to contribute to what could be referred to as an 'involved reflective distancing', as we present a fictive character the participating actors seems to become aware of how their context and practice can be

experienced. This, we argue, contribute to their increased awareness of alternatives. Additionally, Haraway (1988) calls for an ability to translate knowledge among different communities. This is something we consider the Persona method to be useful for, material from preliminary mapping is analysed and developed into a persona. Thereafter, in a visually attractive and straightforward way we are able to describe some experiences of a certain context.

In particular, we believe the switched gender personas to 'mess with' stereotypical gender representations that contribute to actor's awareness of dominating logics and practices. In our experience the Persona method engages people in dialogues about a variety of issues and opportunities, and thereby can be seen as a considerate contribution to creating an innovative culture. We do emphasize, however, that the personas should not be used as single objects, we use them as tools for discussing a variety of issues and not as posters on a wall. The reason for this is that some personas may contribute to a stereotypical representation of women and men and therefore not be a contribution to thinking new and innovative cultures. Each persona is based on thorough background investigation and in-depth discussions during workshops within the systems. In our experience the success of using a persona is dependent on the facilitator's ability of being open to new perspectives, i.e. of being in resonance with the actors. In both projects we have been working in practice-oriented contexts, meaning that participants in the activities have different aims. For example, long-term theoretical knowledge vs. more short-term usability has sometimes been an issue within these contexts. In such constellations, we have experienced the Persona method to be a useful tool for alternative solutions, or put differently; a tool that helps all participants to use diffraction and thereby move focus into what could be. Using the Persona method can be seen as a radical innovation, because it is a new usage of a design method, in non-design aware contexts, a method that have illustrated possibilities of contributing to a break of established patterns and practices. Therefore, our use of Personas meets what Roberston (1967) propose to be an innovation.

The main argument in this paper is that people have the possibility of becoming more innovative if they are challenged or even provoked to change thought patterns and become aware of dominating logics and practices. The challenge, we argue, is to make people think 'outside the box' of 'what is' and thus expand their boundaries of 'what might be'. With this contribution the purpose is to draw attention to a need of attending to people as creators of innovation, and of developing new approaches in order to create processes, systems and outcomes that are

significantly different from what is previously known. In this paper, the proposal therefore is that change and thinking new can be initiated by a design and gender approach Thus, we consider that the explored approach has contributed to the participants becoming more open-minded and ultimately this can be seen as a significant contribution to innovation.

5 Practical implications

Today, most companies and businesses like to describe themselves as innovative, but few actually succeed in the reframing of mindsets that we see as required to achieve something new. For this reason, we propose the need of new ways of thinking.

We are proposing a need for practical methods that are striving to stimulate innovations. Our design and gender approach can be seen as a new approach to stimulate innovation and hence we see a wide range of applications and practical uses in environments where people want to learn to think in new ways and thus be more innovative. The approach can be useful a tool for different organizations and a variety of actors in striving to create an innovative culture. However we stress that the original persona method was developed within the field of design for communication of users needs, and our applications of the method does not follow the original methodological idea (see Cooper, 1999). For this reason, we foremost consider our use of the method to be an experiment in how to become more innovative and how to create an innovative culture within a particular context. Such experiments can be undertaken in a variety of contexts, in which people can take action for change and hence become more innovative. The main reason for this is that people need to think different in order to create innovations; therefore, the emphasis ought to be on people and their experiences.

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