Innovation and Gender in the making: A gendered analysis of technological performances at The Stage

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ABSTRACT

This research attempt to challenge traditional discourse on innovation that tend to treat innovation as a result of the successful acts of individual talents, while paying little attention to particular places and culturally specific practices of transformative change. The research presented in this text evolves from a strong organizational platform, *The Stage*, that in everyday life prosper under a different name. By setting The Stage we attempt to convey some of the rules of the play, movements between actors, aspects of farness and distance in space, periphery and centre, mutual interest and goals as they are enacted in our discussions and meetings with various actors, props and quests. The aim of the text is to make visible how relationships between gender and information technology matters by employing ideas from feminist technoscience in juxtaposition with the design of technologies and political orderings. A further intersection of gender and technology is provided by a description of digital materials as objects of and resources and arenas for feminist interventions in innovative design. The results from the presented study indicate that feminist technoscience is increasingly accountable for the IT-based innovation systems that are progressing around the globe.

Keywords

Innovation, feminist technoscience, design strategies, performativity, information technology

INTRODUCTION

A significant technological shift is presently transforming the innovative landscape. A shift characterized by advanced IT solutions forming the basis of most production, organization and innovation. It is in the light of this *cut* that *The Stage* emerges—connecting process and manufacturing industries with leading actors within digital business and academia. The research presented in this text evolves from this strong organizational platform that in everyday life prosper under a different name.

Our research is driven by the ambition to integrate feminist technoscience as an important knowledge domain for emerging innovative arenas of digital designs [1, 3, 9, 24]. Therefore an attempt is made to reveal the relationship

between information technology and gender by recognizing that scientific as well as technological knowledge is not only socially coded and historically situated, but also sustained and made durable by human and non-human networks.

Our research also departs from the idea that innovation suggests something new, in terms of a new idea, method or device [6, 7]. By employing ideas from feminist technoscience in juxtaposition with the design of technologies and political orderings, our aim is to make visible how relationship between gender and information technology *matters* and how we ourselves are part of the ongoing reconfiguration on The Stage [1].

There are several major theoretical work on technoscience that address scientific and technological practices critically, e.g. in Sociology, History of science, and Theoretical physics [1, 3, 12, 13]. Among other things such research suggests that science, materiality and technology should be valued for and guided by its *performative character*. It is also suggested that if one is interested in exploring an understanding the innovative potential in technoscienctific practices *new forms of representing should be sought*. In what follows this advice has been taken up, resulting in four different stories, fractions of our memories from our different attempts to make visible, knowable and possible feministic technoscience at The Stage.

So it is based on feminist technoscience that this text as well as our research is allowed to move a bit closer to the artistic, visionary and novel ways of presenting and conveying observations and project progress. The text is comprised by a number of visionary, artistic, and novel attempts to focus on the interplay of seemingly separated areas of design of technologies and political orderings. Finding support to attract several loosely coupled events in such a generative form allows us to advance some questions concerning traditional boundary-drawing concerning the term 'technology' that also makes it possibilities for us to re-negotiate our participation in the production of knowledge and innovation at The Stage.

Our research has been progressing for almost two years and some of our advances in strategies, knowledge and direction are hopefully revealed throughout the text. Among our tools for analysis are *feelings*, *responses*, *questions* and *turns* within The Stage's continuing evolution. In what follows we hope that our story will indicate *voids* where alternative arrangements and networks

might evolve improving the basis for sustainable design of future acts at The Stage as well as elsewhere where innovative processes are being scrutinized.

The story begins with *The Stage and its Ensemble* all with a background, history and position in process industry, academia and/or IT-industry. In the second part *Exploring the Props* some of our strategy seeking endeavors are described revealing the necessity of social networks supporting new ways of knowledge generation, innovative methods, technologies etc. Part three, *Seeking the Quest* is an interlude that briefly describe our experiences from a hands-on game design project exploring the digital material as objects of, resources and arenas for feminist interventions in innovative design. The last part of the story *Innovative Performances* present one of the particular passages of explicit gendered performance at The Stage. Ending the text and concluding the story is a part called *Relocating Innovation*, summarizing our endeavors at The Stage so far.

THE STAGE AND ITS ENSEMBLE

The Stage and its Ensemble located in a rural area of Scandinavia. Here, natural resources have historically motivated people to live and dwell under rather extreme conditions. People have a long history of working together in close collaboration and in strong social networks to elaborate methods, techniques and skills improving the utilization of the richness inherent in the environment. Besides a long history of refined techniques and skills the backdrop of social and historical anecdotes defines the praxis of technological performances.

Since its conception in 2005, The Stage has been an important arena for the development of the cooperation between industry and university. The potential is to get already strong actors to collaborate in developing new and competitive digital products and services. Today The Stage is continuously co-producing so called technology road maps in cooperation with some of their lead actors (universities and companies). These road maps are also part of the *script* that we claim determines most of the performances that take place at The Stage. With respect to our research the most dominant theme of the script is the emphasis on the juxtaposition of traditional process industry and IT-industry in promoting regional strength and renewal.
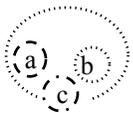

Figure 1. A brief sketch of The Stage and its Ensemble

The Stage is hence a contemporary strategic attempt to bring together process and engineering industry (a, in Fig.1) with IT-business (b, in Fig. 1) and academia (c, in Fig 1.). The aim is to reinforce existing primary industries and develop the region's IT-industry to an internationally competitive position. The platform is further designed to meet the challenges facing today's knowledge-intensive, high-tech primary industry with an extensive knowledge base in production, manufacturing and research in and of technology. As the competitiveness of primary industry

continues new and effective ways seems necessary to improve the measure, control, and regulation of important production processes such as the development of communications, infrastructure, user interfaces, and business proposals. Hence, there is a great potential for the IT-industry if they are able to successful meet these demands and challenges.

For this reason The Stage's ensemble all have a background, history and position in process industry, academia and/or IT-industry. The merger of process and engineering industry, digital services and advanced knowledge is considered to be a crucial factor for performative success. Or as expressed on the website:

"The players in the system are already in place, the process is on stream, and all intermediate players are involved and working together in their own interests to develop their own activities."

So at The Stage, innovation is a regarded a key concept (*or theme*). A theme also found dominant discourses of strategic initiatives and national policies, in Sweden as well as in many other countries. Often innovation is related to change and concerned with applying new technologies in society. Innovation is also often regarded as a collective process in which different competencies and backgrounds are able to co-act. But so far it seems as if a good understanding is missing concerning how peoples' knowledge and competencies can prosper beyond traditional organizational boarders and/or specific sociocultural domains. Hence, the *artful integration* of social relations, discursive resources material arrangements and supporting infrastructure are in a continuous need for improvement [19]. To certain extents it seems as if what is an innovative condition for a certain field or subfields might appear to be counter-productive for the innovative system as a whole.

One important question in setting The Stage was how to sustain, enable and make visible the important knowledge domains and experience in the ongoing development of the innovative structure. One of the main assets within this platform was the active involvement of companies both from the primary process industry and the IT-sector. It was also considered important that the platform covered big global companies in the region as well as a large number of small and medium enterprises (SME). Another important part of the platform was the institutional backing from the region in terms of the regional administrative boards and municipalities. As part of the R&D-strategy (*the script*) the innovative system has developed a structured functioning approach for the cooperation between the primary industry, IT-companies and the universities.

Early on one major problem appeared on The Stage, of relevance for this text. That is the fact that all roots, actors and themes so far are based on male cultures and traditions. The primary industry in the region (steel, wood, pulp, iron), IT companies mainly based on an engineering tradition shaped and reshaped by male actors rooted and coded behind years of establishing business relationships with each other. The problem is also found in academia that so far had been unable to promote any female top class researchers (read professors) of relevance to act on The Stage. The problem was that in spite of many years of

active work preventing gender inequalities there were still an unsatisfactory imbalance between the number of female and male actors on The Stage. This unbalance concerned both process and IT industry, private as well as public sectors. Hence it became critical to consider how the casting procedures at The Stage could change in order to better promote and cater for women's, as well as men's experiences and competencies within the innovative system under development.

In prior studies women reports that they experience that they are demanded an interest in changing present situations. As such the unbalance is turned into a 'feminine' problem that best is solved by actively engaging women in particular networks and clusters without any real support and/or relation with their own professional areas. At the same time there is a danger in placing the question of equal opportunity in the laps of women. Especially if interested in making a difference and serious about learning about IT and gender in the making. Studies that paraphrasing Judith Butler (1990) is not understood from one, but from a multitude of perspectives.

"Information technology is not a matter of fact but something that comes into existence through people who, in different ways participate in research on and development and use of it" (Mörtberg, 2000, p. 69)

So, considering this, our role as female researchers performing feminist technoscience at The Stage did not come natural at all. Other feminist scholars had previously been asked to support The Stage with knowledge, ideas and interventions. But they kindly, but firmly rejected the invitation claiming that feminist interventions need radical reconsiderations and redesigns. But it was within this void that a new direction towards actors within the IT-sector was found, a sector in which we ourselves already were accepted and acknowledged as significant actors. Hence in the beginning of 2007 we entered The Stage on shaky legs but supported by formal positions as well as by the director of The Stage.

It is important to note that our role as actors at The Stage started by our interest to generate a deeper understanding of both gender and information technology especially since they are assumed to be co-constitutive of each other. As such we entered The Stage aware that the categories men, women and information technology are best approached and understood as unstable units. Also that theses categories should be considered as comprised by a diversity of possibilities enacted and re-enacted in relation to one another. So what we were seeking was an understanding of how these categories were created and negotiated by making visible and posing question rather than by creating order and cover-up inconsistencies. It was thus by acknowledging difference and inconsistencies that we thought we would be able to contribute to the development of a sensibility for the local and subjective conditions emerging in an increasingly IT-based and knowledge intense reality.

However, we soon learned that The Stage is an extreme environment where comradeship intertwined with dirt, smell, pain and muscular strength, historically have defined technological excellence. Also, that it was from this backdrop that new innovative and refined techniques and skills were drawn. However only certain skills were sought and found, since innovation was mostly enacted by an inventory in already known soils. So from our perspective we found that it was the familiar rather than the unknown that were forming the basis for most of the innovative progress made so far.

EXPLORING THE PROPS
In this part some strategy seeking endeavors are described revealing the necessity of social networks supporting new ways of knowledge generation, innovative methods, technologies etc. With the use of the word prop we refers to any object held or used by an actor in furthering the story line, rationale or narrative idea. In ordinary language a prop refers to a support placed beneath or against something to keep it from shaking or falling. The choice of the word prop in this story is related to such ordinary use, since we have found successful innovative practices as well as feminist technoscience to need a great deal of support, sensitivity and nerve. Although our assumptions behind our choice of strategies are not explored at great length, we hope that our awareness of the different props that we have used and found important can be useful in distinguishing some of our good ideas from our bad. As such our strategy seeking endeavors might contribute to foster an ability that is crucial to any durable innovative system.

Questioning and finding ways to integrate gender in ongoing activities at The Stage initially demanded some considerations concerning strategies, directions and support. From previous research we had learned that it is by bringing together and establish *trust* among important individuals and actors from different branches that innovations are likely to emerge [17, 18]. We have also learned that sustainable innovations are dependent upon firm infrastructural support and development [20]. Hence our strategies for exploring the props was to artfully integrate significant nodes of the network positioned to support, disseminate and enact various gender dimensions at The Stage.

We also nurtured an ambition to establish a durable knowledge infrastructure supporting the innovative ambition inherent within feminist technoscience. It is an ambition resonating earlier studies suggestion for advantageous for creative and knowledge intense processes where spaces for transformation and change have been demonstrated. Spaces where narrow approaches are allowed to move, shift, and develop to strategic and long-term perspectives [17]. Setting The Stage was in this respect the first part of the establishing support. By the close reading of field notes, interview protocols and formal records, and framing our experience as part of setting up The Stage, gendered performances started to appear. Hence the setting of The Stage has supported much of our interpretations of the rule of the play, i.e. the movement between actors, farness and distance, centre and periphery, what is considered to be mutual interest and goals. So by finding support from other scholars within feminist technoscience we were able to attract several loosely coupled events in a generative form we advance questions concerning traditional boundary drawing concerning the term 'technology' and re-negotiate possibilities of participation

in the production of knowledge and innovation [8, 10, 11, 12, 21, 22, 25, 26].

However, in order to artfully integrate gender in ongoing activities at The Stage a variety of different kinds of props seemed necessary. The Stage is huge both concerning number of activities, actors and spaces. But more importantly its structures firmly rooted in history and tradition with strong actors greatly challenged a reconsideration of which props to use. As mentioned in the introduction props help the actor in furthering the story line. Hence in seeking new story lines and directions at The Stage various props could be useful. One strategy to gender integration was therefore to explore some props willing to support different directions and performances at The Stage.

Early, the director at became the center of our attention. Learning from prior feministic interventions of technology production one key factor that has been documented are the leaders we initially spent substantial time with the director learning about his visions about the future [10, 11]. The explicit strategy was the being like a parrot, constantly repeating the director's responsibility for how the gendered dimensions at The Stage were allowed to prosper. Also, early own we insisted on the danger of performing gender as a feminine domain without any real significance beyond the surface of strategic documents. Instead our strategy was to promote the idea of gender as a strategic opportunity in the establishment of durable innovative practices at The Stage, as well as possibilities for new and innovative transformative spaces As such we also constantly declined all attempts and effort to place the problem of gender inequalities as a sole responsibility for our research endeavors. Initially our strategies created some tensions and were frustrating for everyone involved, including many heated discussion with significant actors who were concerned with what really the problem associated with gender is, neither willing or capable of acknowledge gender as an important domain with strategic significance. However gradually the director and some of his closest associates started to formulate their own strategic discourses concerning how the gendered dimensions could support future innovative practices at The Stage. The director and his board identified four domains in which innovative practices were to be stimulated: Products and services, knowledge infrastructures, entrepreneurship and new market all evaluated by a gendered dimension.

More importantly however, in our initial struggles to promote gender as a strategic opportunity for the director we also established a significant node based on mutual trust and respect. We also learned that most of the financial support behind the establishment of The Stage were formally directed and guided by political ambitions and policies supporting our research approach.

Or next explorations of props were directed towards our ambition to establish a durable knowledge infrastructure where feminist technoscience could be cultivated and nurtured. Surrounding The Stage were two leading academic institutions with a strong organizational support. Although perhaps a bit naïve, our strategy was to seek support within these academic institution and establish a loose, informal network for knowledge sharing and

dissemination. However, there has so far been remarkable few responses to our attempts of establishing an academic partner interesting of promoting, cultivating and/or sharing our experiences. No responses, but a lasting silence that we find ignorant and worthy to pursue further, in more detail later. Interestingly, however is that we in our initial and original approach considered the academic part of The Stage as known territories in which innovative practices would easily emerge. Hence so far our discussions among academic colleagues have not improved much. But rather than reporting on the failures our different attempt to collect some additional props within the academic setting, our doubts and troubles turned into a helpful support in understanding the complex entanglements of innovative practices.

Although there is indefinite number of props that deserves our attention with respect to our specific research endeavors at the The Stage, we will only present one more in this text. The point here is rather to present some different kinds of support that we have elaborate, than portray a complete image of the props supporting gendered performances. The last prop regards how gendered performances are able to prosper and evoke cuts within IT-industry. This is here portrayed by our experiences working with a particular software company here referred to as Brilliant Computing. Insisting on directing our attention to the discourse regarding the IT-sector as in need of improvements with regards to gender imbalances, we were introduced to the CEO of Brilliant Computing early on. After some visits to the company focusing on the novel ways of using commercial computer game engines to support serious games applications for industry the CEO of the company remarked:

"I must confess that when I learned about the fact that our company would be collaborating with gender researchers in this project I truly hesitated and I was almost troubled. I must say that in spite of being a gender researcher I find that can be quite rewarding to be working with you."

One major difference between good and bad actors in a play regards their ability to perform in accordance to the character. In the academic disciplines related to The Stage there are few female actors that are considered relevant or strong enough candidates to play! Hence our doubts are not only related to feministic interventions as such, but also and perhaps even more intriguing related to we ourselves are accountable for failing to succeed on two important grounds. One is failing to provide our fellow scholars with number of props useful in continuous feministic interventions. Secondly is the danger of being continuous blind for anything, but the same.

SEEKING THE QUEST
In what follows an interlude is made to briefly describe a hands-on game design project exploring the digital material as objects of, resources and arenas for feminist interventions in innovative design. Below we will meet Inga Warg (fig. 2) who slowly is becoming a persona within a serious games application designed to improve entrepreneurs entering into an industrial setting. Inga Warg, a former male soldier in a different serious games application enters into The Stage, charged with the

appearance and behavior from peacekeeping missions in Africa. Ironically her new mission is to integrate gender awareness at The Stage. Her transexual appeal in combination with an established disbelief in serious games application evokes the binary opposition often used in the political orderings of gender stereotypes. Although the future and success of Inga Warg is yet to be seen, her entering the application is here regarded a first minor step in integrating gender as a strategic opportunity at The Stage.

Figure 2. Inga Warg in progress...

In most performances there is a quest or a mission. At The Stage the quest for feministic interventions proved to be found within the area digital game design. It appeared that within the region where The Stage was set up an emerging culture of game production, programming skills and visualization abilities had reached international recognition in certain areas.

One of the ideas that were considered as entangled with sufficient innovative heights was the use commercial computer-game engines (Unreal Tournament, 2004) as platforms for serious games applications. Brilliant computing had prior experience of developing virtual environments on commercial engines, based on a military need to educate UN-soldiers to become familiar with the setting and circumstances of their mission. The application that initially was developed for the platform was a typical net-based "shot-them-up" game. That Brilliant computing used as raw model and developed a shell on top of that environment out of which the rural African village evolved. The inhabitants in the village were blacks in groups or single, some kids, cottages, and sand. Females were sparsely distributed within the groups, never portrayed in singles. The main actors were the soldiers, dressed in camouflage kaki colored outfits, carrying weapons making decisions that after the game were evaluated in terms of proper or improper behaviors in peacekeeping missions (se fig 3 below).

Figure 3. The background to the Quest

But this is not really the story. The story concerning the quest begins when The Stage it set towards using gaming and the genre of serious game as a vehicle for innovative improvements concerning industrial entrepreneurs visiting foreign grounds. That is, any industrial sites previously unknown. In this context the director of The Stage found that a promotion of gender awareness could be integrated into the design of the serious games application as an innovative potential nurturing the innovative potential of the application.

Figure 2 and 3 briefly convey the roughness and rudimentary character of the developed application. But one should consider the phase of the project from which these images are derived, i.e. the prototyping phase used to visualize the potential of serious games application in industrial settings. Critically engaging in the development of this prototype, however, we experienced some interesting challenges in promoting gender awareness in design. First and foremost was the lack of sensitivity and insight into what gendered dimensions of the industrial setting could be concerned with. It was not until we suggested that some of the actors designed within the industrial setting preferably should be portrayed as females that the design team were able to immediately allow Inga Warg to enter into the application.

S.A.F.E. (Safe And Fun Environment) is the working acronym for the application in which entrepreneurs entering into an industrial setting for the first time need to conduct specific task before attaining a license to enter into a real world industrial setting. It appeared to be an important and obvious need too educate entrepreneurs in safety issues regarding working in industrial settings. Hence the application is considered as an integrated part of the educational program enabled by the Forest Industries Group for Standardization (SSG). In the game you have a first person view and are able to navigate freely in the environment. The quest is to avoid danger, to others, your selves or any equipment or machines in the environment. In the foreground is the male actor, i.e. the entrepreneur with an assigned task to accomplish. The highest level of the game is attained when the actor has been able to behave according to pre-established movements and actions. Ironically the levels of detail regarding the dangers in the environment are much more sophisticated, than those of the appearance of Inga Warg who at this point in time is the only lasting impression of any considerations of gendered dimensions in S.A.F.E.

INNOVATIVE PERFORMANCES

In this last part of the story we present one of the particular passages of explicit gendered performance at The Stage. That is one of the events in which we as researchers investigating gendered dimensions at The Stage have been held accountable for integrating an awareness of gender at The Stage. The passage is chosen due to its ability to reveal interesting borders and tensions in common responses to gender imbalances at the intersection between gender, technology, science and innovation. Carefully considered and nervously actualized this performance evoked responses from the actors. Some intrigued, others excited. But also ignorant and disinterested responses

combined with corrections, good advice and wit. This performance is also a more recent part of the material, yet to be complemented with other performances at The Stage. Still as a part of this plot our hope is that it by the reader will be embraced as a piece of the puzzle our analysis of how feminist technoscience evokes cuts that matter.

This particular performance is a public talk, presented at the evaluation of The Stage's performances from 2005-2007. One of us was summoned to this external evaluation and to elaborate on the notion of gender in relation to the platform and its innovative practices. The director of The Stage demanded that the talk was prepared using power point, a demand motivated by the necessity to document and disseminate all public events to other not present throughout the day.

It was an important day since the reviewers were asked to evaluate the innovative potential, the progression of The Stage from its inception as well as validate that the strategic considerations for the coming years were considerate and charged with innovative potential. Leaders from the engineering industry, process industry as well as IT-industry presented their ambitions and aspirations. Thereafter on full day were dedicated for reviewing the research potential in the various initiatives and studies conducted over the years. Throughout the day, researchers and evaluators shifted and turned in presenting, questioning, commenting, all of us seriously attempting to grasp and scrutinize all possible strengths and weaknesses. The room in which the presentation occurred was normally used as an engineering plant, with various mechanical parts offering sense that we were part of ongoing technological innovation as we spoke.

All speakers were male, with shirt and tie supported by the compulsory power-point presentation that as the day progressed constantly was modified. The hammering on the keyboards accompanied all talks and people's attention placed on the screen more often than on the face of the presenter. In total around thirty people, there were only two females, one was presenting one was an external reviewer. The title of our presentation was "Gender as Strategic Opportunity", placed last in the program for the day. By that time of the day all air in the room was gone, all focus lost. Still we manage to pursue the initiative to take this opportunity to use the talk as an opportunity to integrate an awareness of gendered dimensions at The Stage. Entering the podium where the director was situated, the director was keenly asked to assist in changing the slides as I the talk progressed. Of course, the presentations were not aligned with the kind of text produced in the letter. Hence accompanying our talk was not an audience preoccupied with hammering on their keyboard, but rather searching for the non-existing coherence between what was being orally presented and what was conveyed by the power presentations screened on the wall. Dressed in a skirt and cashmere scarf situated at a bar chair, in a position slightly above the rest of the group. From this position the handwritten letter was read, addressing the external panel as well as the rest of the group. My letter and talk is followed below. The highlights of the talk are perhaps not that many, but the responses evoked by this cut and/or break

with the conventions throughout the day gave rise to a number of interesting response, questions and comments, both among the audience as well as among our selves. One of the responses was that although the notion of gender is important, it is equally important to considered ethnic groups, disabled people and other minority groups. Another was that gender imbalance in the intersection of IT, academia and Process-industry has always been, deeming it impossible to 'attract' females into this knowledge domain. Also, and perhaps more importantly, the fact that the responsibility and potential shift and change needs to be initiated elsewhere, in public school, in the homes and families where the daughters are fostered and educated. Afterwards, in more confined settings of our workplace, some colleagues confessed that they found the presentation thought provoking and challenging. Hence, in similar vein as the other of the fragments of this story, much more could be said and elaborated. But yet, the lasting impression of this in my view innovative performance was that the idea of gender as a strategic opportunity with important knowledge gains to make in guiding innovative practice was not understood, or considered.

"Dear guest and previous speakers... I am proud and honored to be part of this distinguished ensemble of researchers and examiners. I am also very proud to have the opportunity to highlight some of the gendered dimensions at The Stage. In my talk, entitled 'Gender as a Strategic Opportunity' I will briefly address an area of research decisive for durable innovative systems of the kind that we have learned about today.

My departure is an area or research called feministic technoscience, an innovative arena of interdisciplinary knowledge production with a particularly interest in technology production, use and knowledge generation. However, as with most innovative processes and products also often are considered provocative, associated with flaw, contradictions and politics...

Still, ... the title of my brief presentation indicates that The Stage is open for this line of research, embracing it as a strategic opportunity for... business growth, innovation system politics, practices and networks, knowledge growth and better understanding of technology.

It is an embracement that at times astounds me, at times terrifies me. Leaving me with feelings of the sublime. But this is a challenge that I as an actor on The Stage have taken seriously although the obstacles are many. Perhaps are we all here today carrier of one of the more important barrier to overcome, namely the cultural conception that there are only a few of us here today that are ascribed and associated with gender.

Within the technoscientific field from which I depart one common claim is that most innovative fields still are characterized by a consensual way of thinking, regarding the development of standards for technological systems and solutions. It is the dominant that conquer, i.e. the stronger the network the better idea. Such thinking besides being wrong prevents rather than promotes developments of innovative IT-based applications and systems that are to be used by general or specific groups in society. The ambition

is therefore not only to make visible what constructs that are being generated, but also to change its directions based on an awareness and understanding of the specificities and diversities within the local.

My presence here today indicate that The Stage is ready to challenge dominant technological discourses, exploring new understandings and reconfigurations of the specifics and diversities that will be made visible by feminist interventions at The Stage."

RELOCATING INNOVATION

Ending the text and concluding the story is a part called *Relocating Innovation*, summarizing our endeavors at The Stage so far, leaving more to be investigated in the future. The title of our final part is borrowed from similar but more advanced work conducted by Lucy Suchman and her colleagues [23]. By ending the story with a borrowed subtitle we like to make explicit that our attempts are part of a larger technoscientific initiative re-examining conventional assumptions regarding what counts as innovation and where it happens, by examine particular places and culturally specific practices where aspects of the new are claimed to be found [23, 24].

What we have attempted to convey in this story are some of the open-ended practices involving specific intra-actions of human and nonhumans, implicated in the dynamics of intra-activity and the dynamic structuration of world-body spaces [1]. Practices of particular interest for feminist technoscience and accordingly are part of the ongoing reconfiguring of the world [24]. It is suggested that we are all responsible for what exist, and that we need a simultaneous account of the relations of humans and nonhumans and of their asymmetries and differences [1, 3, 4, 9, 12, 24]. Although, in at a primitive form, we have made an attempt to provide a simultaneous account, a particular cut, of gendered performances at The Stage. By this cut some different boundaries are evoked making visible how relationships between gender and information technology are part of ongoing practical, critical and generative acts of engagement [24]. Acts aiming to open up a much larger and more appropriate space for the dynamic and ever changing innovative practice enabled at The Stage.

By this simultaneous account of the entanglements and innovative practices we aspire to convey the innovative potential in technoscienctific practices especially if considering the new forms of representing that we have generated. Narrating the strategic and innovative arena that in everyday prosper under a different name as a stage, with an ensemble, enabled investigations and acknowledgment of different potentials of the dynamics of intra-activity. Further by exploring the props we both learned, valued and are able future critically re-examination of our explicit and implicit assumptions in taking responsibility for The Stages continuous movements. In seeking the Quest, besides the tentative suggestion that digital materials can be understood as objects of and resources and arenas for feminist interventions in innovative design, we are also faced with questioning our own mission and motifs. Seeking and establishing the Quest is a main objective in digital game design that also can be a corrective for technoscientific investigations of innovative practices.

Today most organizations expresses interest in activities that establishes and develops platforms for knowledge transfer, knowledge growth, flexible and innovative production and organization. There are also great expectations on reducing cost for knowledge transfer by improving knowledge management by using advanced IT support. Pressured by demands for effectiveness organizations are however seldom able to develop new methods and forms within ordinary arrangements, it appears to demands a radically new and different view.

The organizational ability to know how to develop the relationship between IT use and innovative organizational development appears to be a key factor for success. Innovative IT-use is also ascribed large strategic effects on both organizational and individual levels. But it is not until fairly recently that we have learned that IT-use is a much more complicated phenomenon than previously assumed. Today we know that users are a heterogeneous group often preoccupied with tinkering with and creatively explore IT, at home at work ongoing and always. Sometimes, perhaps more often than we assume, these explorations and experiments result in a change and shift in the function and role, i.e. a change or deviation from what was planned. The role and function of IT becomes something other than planned, which contains both negative and positive consequences for organizational developments

Throughout our research we have had the ambition to integrate feministic technoscience as an important knowledge domain for innovative practices. The research is conducted within a project exploring factors and terms that exclude and include gender within the structures sustaining new forms of cooperation and collective acts characterizing performances at The Stage. One commonly shared preconception is that gender is all about representation and representation only. It is our hope that this text by its composition conveys some of the innovative potentials inherent in our approach. Feminist researcher have elsewhere advanced the limitation with only advancing quantitative aspects of gender, insisting on the need to integrate gender in discussion of strategic importance such as power, influence, interpretations, values, knowledge and experiences. Our analyses at The Stage suggest that innovative processes might benefit from an integration of gender as a potential for attaining a more elaborate understanding of aspects of novelty and the new entangled with notions of innovation and innovative practices. Some of the core concepts that we have found are learning, trust and respect. Or as Londa Schiebinger (2008) writes: "By gendered innovations I mean transformations in the personnel, culture, and content of science and engineering brought about by the effects to remove gender bias from these fields." [19] Employing feministic technoscientific perspectives on innovation is hence most about exploring alternatives and improving change, changes that might be prosperous for the innovative system as a whole. Or as Andrew Barry (1999) frames it: "What is inventive is not the novelty of artefacts in themselves, but the novelty of the arrangements with other activities and entities within which artefacts are situated. And might be situated in the future." [2]

We are continuously responsible for the critical questioning of the five parts that here have been generatively assembled as a simultaneous account. Hopefully the exploratory nature of this research presented in this text can further motivate and inspire others in aiming for successful integration of feminist technoscience in innovative practices. But we also hope that our work will contribute to the progression of knowledge about why and in what ways technoscientific strategies can be considered successful.

ACKNOWLEDGMENTS

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