THREE CHALLENGES WHEN DESIGNING FOR AN INDIVIDUAL'S CREATIVE PRACTICE

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ABSTRACT

This paper intends to provoke reflections on how to design for an individual's creative practice when explored in vivo as this research field has not yet been covered in depth. Our work is based on field studies with a food blogger. During the process it became clear that insights on the creative practice are difficult to retrieve for designers when most of the creative practice is an internal cognitive process. We have identified three major challenges when trying understand the individual's creative practice; Observing an individual's creative practice, revealing tacit knowledge and defining and articulating the creative practice. These three challenges are analyzed and discussed so designers can be aware of the implications on similar practices in the future. When designing for this context we propose that designers apply an explorative approach as a way of enabling the externalization of individuals' creative practices. We hope these reflections can be useful for other design practitioners and encourage further research on how to design for similar design situations.

Keywords
Creativity; Design studies; Participatory Design;

ACM Classification Keywords
H5.m. Information interfaces and presentation (e.g., HCI):Miscellaneous.

INTRODUCTION
Research on creativity has been covered in many projects regarding collaborative creativity. There is a general research interest in exploring creative practices focusing often on collaborative practices or in vitro settings for an individual's creative practice. However, designing for an

individual's creative practice based on cognitive processes that are not externalized, has been under examined in vivo so far. In these practices knowledge is not externalized in the same way as collaborative practices, which makes it difficult for designers to retrieve useful insights from their domain and user.

Working creatively alone is not uncommon and practices such as blogging and freelancing has only grown during the last couple of years. These practices are often done individually. This is also the case for the food blogger with whom we conducted our field studies. Her creative practice consists of idea generation of new blogposts and recipes. Furthermore, she is styling and editing the pictures of her food and composing the final blogpost. Often she gets her ideas on the move whenever eating out, visiting other blogs or browsing through her cookbooks. These ideas are often a sort of eureka moments, which makes it difficult to observe.

In this paper we seek to unfold our findings designing for this context and hereby contribute to the existing research. During this paper we identify three challenges when designing for an individual's creative practice; Observing an individual's creative practice, revealing tacit knowledge and defining and articulating the creative practice.

These challenges and their implications are analyzed in order to discuss new ways to design for these types of situations. Our contribution is aimed to provoke reflections upon the practitioner's choice of methods in the future.

RELATED WORK
Within creativity research, several projects aim to establish knowledge about collaborative creativity, whereas individual creativity has been less examined. Coughlan and Johnson [3] argue that designers should study this field and that the creation of novel ideas does not just occur in certain group settings where it is supposed to happen. Through a survey they investigate creative practitioners' idea generation and management. Within another project [4] they observe collaborative creative work during three weeks in order to design a system, which they argue support both the individual and collaborative creative work.

Within the field of psychology several attempts to investigate creativity have been carried out. Simonton argues that both the person, the process, and the product must be investigated in order to establish the ontology of

creativity. He emphasizes the need for behavioral data when integrating the three aspects [11]. In addition, Wiltschnig and Onarheim [12] argues that there is a gap between experimental in-vitro studies and the in-vivo study of real world settings which need to be bridged. They attempt to do so through the study of two real world design processes by means of ethnographic methods and participatory research. Furthermore, they agree that creativity is a complex phenomenon which cannot be defined comprehensively from one single approach.

Thus, it seems that there is a need for more adequate research on how to design for individual's creativity. We aim to contribute to the existing research by presenting and discussing the challenges and implications, we discovered when designing a tool to support an individual's creative practice.

METHOD

The insights described in this paper are based on our work with a food blogger. The goal was to understand her creative practice in order to create a tool she could use to support this practice. Therefore, this study was conducted through a Participatory Design approach [6, 9], where the intentions are to involve the end user directly in the design process in order to understand the user and context [1]. Our work consisted of an initial interview with the test person, analysing the interview, developing a mock-up and finally a mock-up session with our test person.

In order to learn about our test person's process, we decided to start our work with a semi structured interview, where we also asked her to show us some of her work practices. This method was chosen in order to quickly gain a fairly large amount of data. We choose this method since we have previously experienced this to be successful in similar design situations. During this process we relied on interviews since the food blogger's creative practice was challenging to observe. Her practice is distributed temporally and spatially and most of the idea generation happens unscheduled, which made it difficult observing important parts of her practice.

An investigation of a food blogging practice

The food blogger works by herself and often at home, so we met with her in her apartment to maintain her usual workspace. The purpose of the interview was to get a more elaborate idea of which areas of her work practice she could need support in order to be more effective or come up with even more creative ideas.

Her creative practice is divided into at least four steps: gather inspiration, come up with a recipe, cook the recipe and finally blog about the recipe. We asked her to show us her practice in each of these steps, but we experienced some sort of a breakdown as she had some difficulties doing this

on command. E.g. it did not seem to fit her normal working procedure to be forced to perform the creative idea generation.

Therefore, the session ended up being more of just an interview, where she talked about how she worked, and which pains she experienced doing this work.
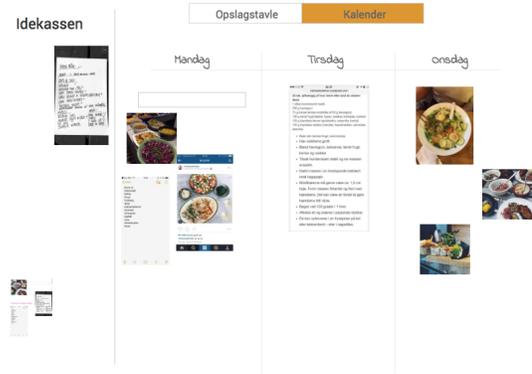

Figure 1. Screenshot of the initial mock-up which gives the possibility to schedule and generate ideas for new posts.

Based on the interview we created a rudimentary mock-up for desktop which incorporated her own materials such as notes and pictures on her smartphone. The mock-up we created gave her the opportunity of scheduling posts for the upcoming week. By using pictures, notes and text she got a visual representation of her forthcoming posts. The mock-up gave the ability of moving different objects around such as pictures and notes, in order to create clusters of her own liking. The mock-up has two functionalities – a schedule and a moodboard, which allows her to generate new ideas and copy them directly into the schedule. The mock-up was tested at her home by a think-aloud walkthrough where three assignments were given. This method was chosen in order to get an idea of whether we were working in the right direction. Furthermore, the mock-up session gave us the opportunity to create a common ground from which we were able to share and discuss further development of the design.

Unfortunately, it seemed that the food blogger was not able to apprehend from the lack of finishedness and number of opportunities due to the narrow selection of notes and pictures. Furthermore, it became clear during the test that we did not have a common understanding of her needs and framing of her practice. During the test she contradicted herself on several occasions which indicated that she was not fully reflected about the type of tools she needed for her practice. She rejected the tasks given and was not able to do any of them due to her different framing of what was needed.

As a result, the test evolved into another interview but with our mock-up as a new starting-point. This helped the conversation to reach a higher level of reflections than the

initial interview in the sense that she elaborated a lot more on, what she wants and does not want in a supporting tool.

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During our design process we have identified three challenges and its implications when designing for an individual's creative practice. The three challenges that we have identified are; observing an individual's creative practice, revealing the tacit knowledge about the creative practice, and defining and articulating the creative practice.

1. Observing an individual's creative practice

We experienced that our first mock-up did not fulfill the user's requirements. As it appeared later, one of the reasons for this was the fact that the practice itself is distributed temporally and spatially. The food blogger scrolls through her notes and pictures on her smartphone from time to time when she has a free moment, making her creative practice unscheduled and spontaneous. This made it extremely difficult for us to observe the practice and gain important insights in the creative practice. Furthermore, the studied creative practice is an internal cognitive process as she works alone and therefore does not externalize her work in the same manner or extent as if the practice had been conducted in a group session. In creative group sessions the members are forced to somehow externalize their thoughts in order to cooperate.

In our initial inquiry with her, we tried to get her to show us her practice, but it seemed difficult for her to replica the normally unplanned practice in the controlled setup. Therefore, the inquiry became more of an interview, which also had its limitations. As a result, we did not get the key insights from how she worked in order to develop a product that could support her creative practice.

2. The most important insights are often the unspoken

Whenever observations are a challenge, the easiest thing is to ask the participants to try unfold the unknown about the practice [7]. But as with all fieldwork, interviewing individuals about their creative practices can trigger some substantial implications of how to understand the situation. This is due to the fact that the user always has tacit knowledge about her work practice and some things are left unspoken [10]. Through a semi-structured interview, we were able to ask her to clarify, whenever we felt something interesting came up. But without any comparable insights or perspectives, it is impossible to know if we even covered the important aspects at all and the professional artistry in the situation was challenged. The risks of misunderstanding the important factors of the creative practice are therefore high when using this approach only. The mock-up test made these implications clear, when our understanding of her need to plan and structure posts on her blog differed

from her own framing. As Ehn and Kyng [5] point out, mock-ups have the ability to reveal this kind of tacit knowledge and become vehicles of learning, whenever breakdowns appear and the mock-ups no longer make sense to the user. Through the mock-up, we were able to reveal new and important aspects of her creative practice, which were previously unspoken and collaborate on the changes for a better system.

3. Definition and articulation of the creative practice

During our design process it became clear that a creative practice is hard to define – not only for the designers but also for the person performing the creative practice. This means that we as designers must be very aware of the fact that the test person does not always know how to articulate her own creative practice.

This became clear in our case during interviews and fieldwork. The food blogger said opposing things about her practice. E.g. she told us she would like to have elements of a physical calendar incorporated into the mock-up. When we tried to accommodate this wish within the mock-up the food blogger completely refused the concept. This was an important discovery to us as designers. As a result of this we learned that there is not necessarily any connection between what a test person say they want and what they actually need. This might be a result of the fact that creativity is difficult to frame and therefore might be challenging to articulate. This is not a unique insight from our specific practice. Research on creativity also articulates the difficulties regarding a definition of creativity [2]. This emphasizes how difficult it can be for common people to be aware of and articulate their individual trigger points. As a result of this designers must be aware of these circumstances and take them into account when designing for an individual's practice.

DISCUSSION

When designing for an individual's creative practice, it is evident that there are some challenges. During our design process we identified several challenges; some during observations and some during interviewing. The overall challenge is the specific practice that we are designing for, since we are trying to observe a cognitive process. We cannot by any means get into the heads of the people we are designing for. This fact is usually easier to work around when you are observing a collaborative practice. The reason behind this is that the people collaborating have to externalize their thoughts and visions in order for the collaboration to maintain. Hereby the practice becomes easier for the designer to observe since the different externalizations indicate how the practitioners understand their practice.

Which reservations do we as designers need to have when working under these circumstances? First of all, it has

become clear that the complexity of an individual's creative practice might call for more explorative methods that can help externalize and provoke the unspoken. We discovered this finding when we introduced our mock-up in our second session. It became clear that we had not made a suitable product to support the food blogger's creative practice, but instead it worked as a cultural probe which became a stepping stone for further discussions and insights. When she works alone, she hardly reflects upon her own creativity and how she gets new ideas, which can be a challenge. By introducing a mock-up, the user can engage in a reflective conversation with the materials in the mock-up and thereby also upon aspects of her own idea generation practice.

Other explorative methods could probably also serve as a vehicle for the user's reflection on her own practice. The designers could make use of ethnographic methods such as cultural probes, diaries and such, so the designer can get insights from situations where the designer is not present.

In the future we believe that it would be beneficial to conduct a pilot study when designing to a practice that is similar to ours. In this way the designers are given the opportunity to gather useful information. This information can prove to be beneficial when choosing the appropriate methods for the actual study.

FUTURE WORK

Our studies raise a lot of further questions and aspects of how we, as designers, approach an individual's creative practice in order to fully understand, what we are dealing with. How can we (better) use interviews to understand the practice? Which alternative methods can be developed to externalize different cognitive creative processes? Our early mock-up session suggests that using mock-ups as an explorative probe have the possibility to reveal some of the unspoken knowledge left out by other methods. More research on this matter is needed to uncover how these kind of probes can be shaped and work in the best possible way.

Another interesting aspect we find relevant to unfold is the role of materials in the provocation of new insights. Are physical objects crucial to these practices? Do the materials need to be relevant and close to the actual creative practice to trigger the unspoken? This is a focus with a slightly different scope than our main research question, but never the less it would add meaningful insights to our contribution. In the future we hope to see more research on how to support the individual creative practices.

ACKNOWLEDGMENTS

REFERENCES

1. Blomberg, J. & Kensing, F. (1998). Participatory Design: Issues and Concerns. *Computer Supported Cooperative Work – A Journal of Collaborative Computing, 7* (3- 4), 167-185.

2. Boden, M.A. (2004). *The Creative Mind: Myths and Mechanisms* (2nd. ed.). London: Routledge.

3. Coughlan, T. & Johnson, P. (2008). Idea management in creative lives. Extended Abstracts of CHI 2008, ACM Press.

4. Coughlan, T. & Johnson, P. (2009). Designing Personal Information Management Systems for Creative Practitioners. *Journal on Digital Information* 10(5).

5. Ehn, P., & Kyng, M. (1991). Cardboard Computers: Mocking-it-up or Hands-on the Future. I J. Greenbaum, & M. Kyng (red.), *Design at Work: Cooperative Design of Computer Systems.* (s. 169-195). Hillsdale, NJ: Lawrence Erlbaum Associates, Incorporated.

6. Iversen, O. S., Halskov, K., & Leong, T. W. (2012). Values-Led Participatory Design. *CoDesign*, *8*(2-3), 87-103.

7. Kvale, S. & Brinkmann, S. (2015). Interview: Det kvalitative forskningsinterview som håndværk, Kbh.: Hans Reitzel.

8. Simonton, D. K. (2003). Scientific Creativity as Constrained Stochastic Behavior: The Integration of Product, Person, and Process Perspectives. *Psychological Bulletin,* 129(4), 475-494.

9. Löwgren, J. and Stolterman, E. (2007). *Thoughtful Interaction Design: A Design Perspective on Information Technology*. USA, Massachusetts: First MIT Press.

10. Polany, M. 1962. Tacit Knowing. *Philosophy Today*, *6* (4), 239–262.

11. Simonton, D. K. (2003). Scientific Creativity as Constrained Stochastic Behavior: The Integration of Product, Person, and Process Perspectives. *Psychological Bulletin,* 129(4), 475-494.

12. Wiltschnig, S., & B. Onarheim. 2010. "Insights into Insight – How Do In-Vitro Studies of Creative Insight Match the Real-World Complexity of In-Vivo Design Processes?" In *Proceedings of the Design Research Society Conference (DRS 2010)*.