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Re-framing design and designers: Studying design processes through a Pragmatist lens

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Abstract: This paper explores the aspect of empathizing in design thinking and moments of collective creativity in designer practices. Although both design thinking perspectives and designer practices emphasize the need for exploring and framing problems through the eyes of the user, this has different meanings in design thinking and in design practices. Pragmatist understandings of identity as a social, situated and dynamic aspect of meaning making can provide a fruitful way of understanding how moments of collective creativity is fostered by the ability to take the attitude of the specific or Generalized Other in a given situation. Findings from product development work in a porcelain company gives insight in how social identities contribute to exploring possibilities and limits to what it is possible to do in developing new solutions. The paper contributes to both widening the understanding of pragmatist approaches to understanding the aspect of social identities in moments of collective creativity in design work.

Keywords: product development, social identities, pragmatism, inquiry

1. Introduction

In order to develop solutions that can address the complex challenges of the future, we need to empathize with both the situation and those involved in it. This paper explores the aspect of empathizing in design thinking t in moments of collective creativity in designer practices. Organizational developers and theorists have aimed at translating the creative work processes of designers into process models that can be generalized into any organization. These process models and perspectives have been labelled as design thinking. Yet, despite the good intentions and the apparent similarities in the elements going into the work processes, design thinking has developed into something quite different than what is going on in the work studios and workshops of designers and crafters. It is proposed that the embodied process of designers developing solutions cannot be captured by the cognitive management perspectives that design thinking theories are embedded within. This is due to the

ontological difference between how development work is understood in Management perspectives and in perspectives embedded in Pragmatist understandings.

This paper argues that the cognitive ontology that management theories are embedded within is less capable of capturing the social dimensions of empathizing in design practices and how practices are interweaved with numerous social identities. Pragmatist understandings of identity as a social, situated and dynamic element can better capture how moments of collective creativity are fostered by the ability to adopt the attitude of the Other in a given situation. The perspectives of G.H. Mead (1932, 1934) have to a lesser extent been used in exploring designer practices and moments of collective creativity. However, in this paper, Mead´s understanding of social Selves as part of the explorative meaning making processes of becoming is taken to the forefront, together with Dewey's understanding of transactionality and inquiry. Through findings from an embedded field work on product development work at a porcelain manufacturer, this paper offers insight into how social identities contribute to exploring possibilities and limits to what it is possible to do in developing new solutions. As such, the paper contributes to both widening the understanding of pragmatist approaches aimed at understanding designer practices and collective moments of creativity as well as giving insight in the more tacit and less expressed aspects of creative work processes by which they are characterized.

This paper aims to show how empathizing in development processes is part of the continuous process of becoming where both designers and developers explore possible interpretations of what they can do or should do, seeing themselves through the eyes of others relevant for the situation. As such, the paper can contribute to a better understanding of how cognitivist-inspired, linear process models of design thinking fail to capture the core of designer practices and collective moments of creativity as situated and relational. Hence, I recouple thought and action, solution and situation, situation and the situated, designers and the users, and provide insight into what this means in designer practice.

Next, I give a brief overview of the ontological differences between the understanding of design thinking as a cognitive and linear process and design practices as an embodied, dialogical and situated practice, and what these ontological differences possibly mean for how we understand what it is to explore a problem with empathy. Following this, I present a Pragmatist approach based in the work of Mead (1932, 1934) on meaning making and meaning makers developing trough gestural conversations, and how this also related to Dewey´s (1938) understanding of reality as transactional. Then, I describe the research material that the paper draws on with its methodology and methods. Following this, I offer insight into different ways social identities emerged and were drawn on in the conversations in the product development work in a porcelain factory. Then, the findings are discussed through the presented Pragmatist perspectives, and implications are elaborated on. A short conclusion and suggestions for further research are indicated.

2. The different ontological understandings of design thinking and design practices and what it means to "explore the problem with empathy"

Design thinking as a term for creative development processes was first defined by Simon (1969). But Simon´s definition of design thinking was not directed towards what designers did as a craft, but more understood as the cognitive process of developing solutions to complex problems. As such, he separated cognition from action, where the cognitive steps are separated from the operative steps of setting solutions into practice. This ontological understanding of design thinking has been developed in Management studies as well as organization development, especially through the work of IDEO´s Tim Brown (2008; 2009) and Kelley and Littman (2001). Rylander Eklund et al. (2021, p. 30) also connect this cognitive understanding to Edgar Schein's (1992) understanding of management cultures as layered, with focus on output rather than process. This cognitivist approach to design thinking has been implemented into organization development, both in private and public sectors as methods and tools that can be implemented more universally in organizational contexts way beyond creative industries (Dorst, 2011; 2015). These methods translate design work into disembodied processes of cognitive problem solving followed by implementation of solutions to be evaluated and have become popular in public innovation as forms of co-creation and co-production with users (Strokosch & Osborne, 2016; 2020; Torfing, 2016; Vanleene et al., 2018). Input from users is here treated as fixed input for the processes that developers can use as criteria for solutions.

Research on moments of collective creativity has given insight into how consultants and knowledge workers (Hargadon and Becky, 2006) use their colleagues in exploring problems and possibilities, and how individuals can develop a collective mind (Weick and Roberts, 1993). However, the contributions they represent are still embedded in a more dualistic understanding of the individual and collective as separated elements, where knowledge and meaning as well as meaning and action are de-coupled from the relations as such.

Simon´s understanding contrasts Schön´s (1983) understanding of design thinking as a reflexive practice, where thinking and doing are co-constructive aspects of the same process. Thinking fosters action and vice versa. Hence, Schön´s understanding is embedded in a pragmatist understanding of reality where dualisms are rejected and rather understood as dualities. He builds on the work of Dewey (1934, 1938), which also resonated with the work of Mead (1932, 1934). I will provide insight into how empathizing with users and developing insight of challenges from different angles is not about collecting and combining information. It is rather the social process of understanding how situations become through the eyes of others. This implies seeing oneself objectively through the eyes of others to imagine what others expect from us in the situation. A pragmatist approach gives room for such an understanding.

2.1 Reflection-in-action as a performative inquiry

The epistemological foundation for this paper is embedded in American Pragmatism. Professional learning through pragmatist lenses is understood as a form of abduction in the sense that it explores novelty as an everyday experience (Lorino, 2018). This also relates to inquiry (Dewey, 1938) involving steps of abduction by transforming an indeterminate situation into a determinate one, by reconsidering the situation in a way that makes the situation reunified (ibid. p 103). This pragmatist approach implicitly shifts attention from substance to process (Rylander Eklund & Simpson, 2020, Buchan & Simpson, 2020). It draws attention to what happens and emerging possibilities, rather than trying to find causal connections between input factors and outcomes.

Meaning making is here understood as the communicative process of gesture – response: the gesture gets its meaning by holding the gesture together with the response it evokes in those affected by it (Mead, 1934). These gestures can be utterances, body language and acts, but also emerging events. It can, furthermore, be physical objects, moments of change and confusion. Both the meaning of the situation and who the participants become in relation to one another, emerges in the moment. Mead (1934) explained this as the Self consisting of both the subjective and intuitive "I" and the objective and socially constructed "Me´s", where the Me´s are under continuous re-interpretations related to the development of meaning. The Me´s can be described as how we see ourselves from an outsider's position and can thus enable us to take the attitude of specific or more generalized Others in figuring out how to interpret and respond to situations.

Internalizing more or less shared meanings of specific gestures is what Mead (1934) called Significant symbols. Recognizing a gesture as a significant symbol helps one respond to the gesture adequately. Often, responses to significant symbols are more or less habitual and do not need further thinking. In other situations, it can be hard to figure out what the situation is and thus what kind of response would be suitable. Such situations are what Dewey (1938) calls inquiries. An inquiry is a process that starts with a moment of indetermination or doubt, typically prompted by unexpected occurrences. In these situations we act creatively, as our previous expectations do not fit the current situation. However, in hindsight, we need to re-assess what the situation was and why something unexpected happened. This will often lead to re-considerations of how we understood the situation and our expectations to similar situations in the future. In other words, significant symbols are never fixed. They are under continuous development and there are variances between individuals in how they are understood.

Schön (1983) proposes that the technical-rational understanding of professional knowledge as something that can be taught from books, has failed and that education does not relate to the reality that professionals experience in their work. Professionals need to act in accordance with situations that are ambiguous, complex and emergent. Professionals work through reflective practice, where acting and reflecting are co-constituting one another and where

the know-how is in the action (1995). Schön calls this a reflective conversation with the situation (1992), where he understands this as a Deweyan inquiry "… mediated by conscious reflection on the situation and, at the same time, one´s way of thinking and acting on it" (1992, p.126). This also resonates with how Dewey talks about experiencing art (1938), where in order to perceive a beholder must create his own experience (ibid, p 56). "The process of art in production is related to the esthetic in perception organically … an artist in comparison with his fellow, is one who is not only especially gifted in his powers of execution but in unusual sensitivity to the quality of things. This sensitivity also directs his doings and makings" (ibid, p.51). Experiencing art in the wider sense is about the movement evoked by holding the artwork together with the response it evokes in oneself, where past experiences and expectations towards the future guide the understanding. "An experience is always what it is because of a transaction taking place between an individual and what, at the time, constitutes his environment, whether the latter consists of persons with whom he is talking about some topic or event, the subject talked about is part of the situation; or the toys with which he is playing; …" (Dewey, 1938, p.44).

The transaction between the individual and the environment is a social process of becoming where the individual interprets the situation by taking the attitude of the specific or generalized Other towards oneself (Mead, 1934), and where physical objects, like product models with their specific properties can be gestures contributing to making sense of the situation. Contradicting gestures and conflicts can thus also be a source of creative development as it can lead to alternative understandings of the situation and new ways to address the challenges. The contributions of Dewey and Mead as outlined above make up the theoretical framework for this paper.

3. Methods and context

3.1 Methods

The empirical material in this paper stems from a research project where the product development work of a private company was followed over a period of four years (2007 – 2010). The initial aim of the project was to understand how those involved in product development processes developed a shared understanding of what it was possible to do. How did they figure out what a good, innovative product could be when it did not yet exist?

The research was conducted as a qualitative fieldwork where I spent over 900 hours as a more or less participating observer. It comprised of numerous meetings related to the product development work, strategy seminars and other meetings connected to work organization in the company. Between meetings, I interacted with the employees related to the product development work in their various tasks. In addition, 13 interviews were conducted, and written material analyzed. In all, approx. 120 product development processes, 14 product development projects and 7 product launches were involved. The research was documented through field notes.

The ontological position I take in this research is that there is no outside position for the researcher. Although I did not take active part in the professional discussions about how to proceed in the product development work, the participants and I continuously re-produced understandings of what the research project could be about. They actively took part in performing the project through what they involved me in, what they considered as relevant for me and through how they corrected me, pointed out issues they wanted me to understand and through giving options to who we could be in relation to one another. My research also had a performative influence on their understanding of themselves and their work through mulling over my questions, my misunderstandings, and my responses to their suggestions for what to take part in.

The analysis for this paper is based on previous analysis of how the product development work in the company was conducted. Further, the initial material has been re-visited with more emphasis on gestural conversations involving both physical objects, participants present in the situations and evoked "voices" of specific and generalized Others in the situations. This was done through coding and systematizing field notes from conversations regarding product models in product councils.

3.2 Context

The company with approx. 200 employees at the time of the study, develops, produces and markets porcelain tableware for professional kitchens. In contrast to the automation in most of the porcelain industry, there is still much manual work in the company where the employees require considerable insights and specialized skillsets relating to the properties of the material. All departments are located at the same site with substantial interaction between employees and leaders across departments.

The product development work was formally described as following a linear development process, starting with an idea, developing a concept, making a prototype, setting it into mass production and launching it. All formal decisions regarding the product development work were discussed in the product development council, which had the responsibility for managing the product development budget, for deciding on what products to launch and phase out of the product range. The product council consisted of management representatives and employees from production, product development and sales. In addition, marketing employees, other designers and product developers participated in the meetings when requested.

The product development strategy divided the products into three different product categories performing different functions. The first product category consisted of mass-produced standard products that were expected to be profitable and should cover all tableware functions requested from professional kitchens.

A smaller product category consisted of products that were aimed at testing the limits of what the market would accept and what the production limitations could be, called Front products. And finally, the product developers were also expected to dedicate part of their

time on experimenting and testing out ideas without considering market potential, profitability, and function. Thus, the different product categories had different characteristics and criteria for what a good product solution was expected to meet.

4. Product development work as gestural conversations

In formal product development descriptions, the product models and prototypes are first made when the product need is thoroughly defined and conceptualized, and different options have been assessed. In the company I followed, this was rarely the case. The product model was not first and foremost seen as the outcome of a process, but rather a tool for discussing what the purpose of the specific product could and should be, what kind of need it should cater to and how it resonated with what a good product from the company would be. The reason for doing so was apparently that the product model made it easier to evoke more concrete responses in the discussions around the product.

Nevertheless, the intentions with a product model were often ambiguous, and often intertwined with other product development processes. This is illustrated by how a product developer presented a new product model:

> " … Then we have the jubilee product. We do not expect high sales figures on such a product. We have developed three special decors for the product. The brick (without the jubilee décor) in itself is not a bad product. But then again, jubilee products tend to live their own lives. But the brick is also a rectangular bowl – pretty nice – that could be used both for serving purposes and to eat directly from. Then we have the long rectangular form: This was initially developed for the ... national chef team. It was then made by hand. We have shown it for the … and for …. It might also be interesting as a "biscuit product" … We need to find some logic in this system–the jubilee brick in relation to the chef championship. We also look at the little rectangular tray that was developed for the tray project. This tray is very suitable for small products, the tapas products, the chef championship products, and the brick. They all share the same visual expression."(product developer 1)

This quote illustrates how many of the conversations in the product development work went. Comments around one product often linked to other products, discussions or challenges that needed to be solved. Ideas and connections to other work were thrown up into the air, often without demanding any clarification. In summary: it became meaningless to describe one product development process as separated and independent from another. Often, it was difficult to assess where one process stopped, and another began. What was explored in one process was often taken up in another process in a different way. Likewise, the intentions with the specific product or product solution could be very ambiguous and change underway. Often, several and contradicting intentions could be expressed without anyone trying to decide upon what to go for and what to reject.

Even in situations where the product developers worked alone, they evoked the potential responses from relevant others, and thus continuously judged the work according to several demands and perspectives. Physical, objective entities, such as weight, shapes and sizes

could also be judged differently according to who´s perspective one took to the situation. For example, one of the characteristics of fine dining is that the porcelain material is thin. Then, is it possible to make fine dining products in a material not suited for thin products and for professional kitchens where the products will be handled more roughly? In such assessments the product developer evokes the potential responses from both production employees, quality assurers, restaurant owners and their kitchen personnel, as well as the design community more generally. "Empathizing with the user" is thus not necessarily about working on the direct suggestions or specifications from the users. It is just-as-much about using one´s experience to hypothesize how to solve a situation, take the attitude of the prospective users and stakeholders for evoking prospective responses to the solutions. However, it is through actually realizing the solutions that it is possible to test whether one´s assumptions about others´ responses can be confirmed, or alternatively, has to be reconsidered.

Existing products could also be used to describe the properties of an imagined, new product. When customers asked for a specific new product, they often referred to a product they wanted in a modified version. The following example illustrate this:

> Meeting leader: "This is a request from the Asian market. They want a new version of the Planet. They want the plate to have a diameter of 27 cm, with a surface as big as it is possible to eat off. It has to be lower than the existing plate. Tom has already made a sketch. We think that this plate is actually already covered in today´s product range. It looks like a crossing between … and …." Product developer: "But we can adjust the design in order to give it a stronger resemblance." Meeting leader: "If this is going to be a Front product, it has to be more special. It would be a better idea to make a dinner plate inspired by the Planet." Product developer: "It is important that we stand more freely when we are making a Front product." Meeting leader: "This could be something for the buffet project."

We see in this conversation that the participants both discuss the very specific request in how it can be solved, but also its potential place in the existing product ranges. However, the customer idea breaches with the company´s norms for what a Front product is and how it should be initiated and developed. That is not to say that it was a static understanding of what a Front product could be, as this understanding developed through the development of new Front products. Requests from consumers were always discussed as input for exploration, but where there also were considerations about what the participants saw as a "correct company product".

There were several ambiguities in how the work was conducted. On the one hand the formal process descriptions and strategies were supported, upheld and followed. One the other, they were continuously disregarded, set aside or re-interpreted. The validity of certain rules could be re-interpreted. Hence, there was a duality in the rules of conduct.

Becoming a competent participant in this work seemed to hinge on one's ability to balance the different rules and figuring out alternative interpretations of the situation in order to see alternative possibilities. What it was accepted to do did not just depend on the situation, nor

the person as such. It appeared to have more to do with how the situation was judged to be, and who the participants defined themselves as, in relation to "others"; whether these others were competitors, the design community, society at large or to specific departments or persons within the company. By doing this successfully, there was room for considerable leeway in what to do while still working in alignment with the expectations emerging in the situation.

There were also situations where the participants appeared to break their own rules just for the sake of upholding the "right" to do so. Bringing up alternative understandings through shifting between ways of defining the situation and its possibilities might be the core of reflection-in-action. Through reflexive discussions, arguments could be legitimized, made sense of and turned around, providing room for alternative interpretations of the situation.

Findings from the study showed that designers and product developers seldom asked potential consumers what they want to have. However, potential customers were often included through the expressed attitudes to existing products and how others have responded to these through their use. Physical objects, such as product models, sketches, production equipment and tools thus represent both prior experiences and knowledge, as well as responses by others to the solutions. Through drawing parallels to specific products, projects, customers, situations or persons the participants could include the views and attitudes of others in their conversations.

5. Discussion

The findings also demonstrate that the "user" is only one of numerous stakeholders that will have their stake in developing good solutions. Through their close contact with customers, sales agents, production workers, the design community and crafters, in addition to end users, the product developers had developed an ability to consider the attitudes of specific or more general stakeholders in imagining their response to prospective solutions. Product development work consists of numerous and continuous inner and outer conversations where it can be unclear who will have the strongest voice in a given situation.

What separates this transactional understanding of moments of collective creativity to a more cognitive understanding, seen for example in the research by Hargadon and Bechky (2006), is that the transactional understanding makes it possible to understand the exploration of both problems of solutions as embodied, situated and temporal meaning making processes. Taking the attitude of the Other the work at hand is not something we do for strategic reasons or as part of a corporate conduct. It is a natural part of making sense of the situation and what others expect of us in the situation. The task at hand is not something de-coupled from ourselves as professionals, but closely interweaved with who we are as crafters, as colleagues, as employees and as responsible citizens.

There is also another aspect to Mead´s understanding of taking the attitude of the Generalized Other. Taking the attitude of the Generalized Other is not about understanding the

needs of the Other. It is rather about imagining how the Other will respond to oneself in a prospective situation. How the situation is perceived, and the task is conducted is thus more a gesture to evoke the expected and wanted response in the other towards oneself and one´s work, than a response to a direct product request. Answering the expectations of others in a specific situation is thus also about shaping others' attitudes towards oneself. In comparison, the more linear design thinking process models do not take into consideration that organizations will understand some ways of acting more correct than other ways, independent of user demands. And that these understandings also relate to upholding and developing an understanding of Self in accordance with what others will expect from oneself.

6. Conclusion, implications and suggestions for future research

In this paper, the conversations around product development work are interpreted through the framework of Mead (1932, 1934) and how meaning making and meaning makers develop through gestural conversations, informed by the past and imagining possible futures. I have here provided insight into how these gestural conversations go beyond the direct conversations between participants involved in the development work (through the product council) through ongoing communication between products developers and production and sales agents.

Recognizing the development of meaning in product development as a process where both meaning and social identities are co-constructing one another can help us capture aspects of value creation that more linear, rational models generally overlook.

A pragmatist approach to how we understand moments of collective creativity implies an understanding of gestural conversations as dynamically developing situations. Our expectations to what we possibly become through the eyes of others and what it is possible and advisable to do are temporal and suggestive, rather than fixed. Seeing ourselves as detached from the situation is thus not an option; neither is seeing the situation as stable. We influence on and are influenced by the development of the situation.

The methodical implications for studying development processes as reflection-in-action is that we need to draw attention to both the "users" and their expressed needs as well as the ones that are to accommodate these needs, and the different Others they relate to when imagining possible ways of framing the challenges and suggesting solutions. Additionally, attention should be on what happens through and beyond the processes, rather than on the solutions themselves.

If organization developers and managers in the public sector want to develop solutions that are user-centered, they need to foster a constant interest in how users use current solutions, how they currently solve challenges and what the participants see as possible solutions. It must also be recognized that there are many other Me´s that both leaders and employees relate to, and that also defines the experienced limits for what it is possible and ad-

visable to do in the public sector. In other words, norms for how co-creation and co-production of public services and solutions are conducted may be more dominant in the exploration of solutions than the attitudes of the users. Developing user-centered solutions may thus imply development of stronger norms for following the needs of the users, even when they break with public procedures, habits and plans.

The cognitive understanding of design thinking is widely used in public and private innovation, as well as a framework for creating impact in social innovation research. Pragmatist perspectives can contribute to discuss, question and find alternative ways of addressing the lacks in these projects.

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