# **Empathy via Design Thinking: Creation of Sense and Knowledge**

Eva Köppen and Christoph Meinel

Abstract A growing demand to be empathic can be witnessed in organization studies and management advice literature. This requirement does not only focus on the leadership anymore, but rather on the whole staff. Design Thinking has ultimately provided methods and techniques for fostering empathy in teamwork settings. From these developments two questions arise that shall be addressed by this article: How could empathy have become one of the most important things for the economy today? And second: Does Design Thinking indeed deliver useful empathy-techniques that will help employees in their daily routine? For this study we used a documentary analysis approach. The results show that empathy in organizations is a creator of sense and knowledge, but misconceptions of it may also lead to unintentional costs for employees.

# 1 Introduction

Empathy has gained much attention in recent years within the realm of management studies and advice literature (see e.g. Leonard and Rayport 1997; Miyashiro 2011; Postma et al. 2012; Pavlovich and Krahnke 2012; Cameron and Spreitzer 2012; Goleman 2003). A frequency analysis showed that the number of empathy-related publications for the area of business and economics has been growing constantly over the past 20 years. The database JSTOR registers more empathy articles in economics and business than in the areas of psychology and philosophy, where the term "empathy" was actually rooted. Why is the concept of empathy suddenly of

E. Köppen (⊠) • C. Meinel

HPI-Stanford Design Thinking Research Program, Hasso Plattner Institute for Software Systems Engineering, Prof.-Dr.-Helmert-Street 2-3, 14482 Potsdam, Germany e-mail: Eva.Koeppen@hpi.uni-potsdam.de; Christoph.Meinel@hpi.uni-potsdam.de

interest for the economic sector? And how does Design Thinking contribute to the growing demand to be empathic?

Design theorists as well as practitioners describe empathy as a crucial impact factor of Design Thinking (e.g. Brown 2008; Kouprie and Visser 2009; Kolko 2011; Carlgren et al. 2013; GE Reports 2011). Design Thinking authors are of the opinion that empathic insights are a form of extremely important knowledge that stems from concrete interaction with other people. This knowledge is therefore not the result of a solely analytical process (Grotz and Creuznacher 2012). Indeed, three types of knowledge characterize design (Utterback et al. 2006 in Rylander 2009: 10): technological knowledge, knowledge about user needs, and knowledge about product language (e.g. which signs are to be used to deliver a message to the user and the cultural context in which the user will give meaning to those signs). As will be proved later on, the two last forms of knowledge are rooted in an empathic understanding of other people. In order to achieve this specific knowledge, elaborate strategies are described by Design Thinking.

In this article, we ask what empathy in the context of Design Thinking and organizations actually means. We thereby challenge a positive but rather fuzzy view of it, which can be found in the management texts on empathy. To put it in the words of philosopher Jesse Prinz:

Empathy is a thick concept, and it connotes praise. But an endorsement of empathy requires more than a warm fuzzy feeling. (Prinz 2011: 214).

We suggest to viewing empathy in organizations via Design Thinking as a form of knowledge construction. The analysis of empathy techniques in Design Thinking will further show that empathy can be divided in two forms: internal and external empathy. The specific techniques in these two areas will be analyzed. Paradox and problematic issues arising from them will be discussed.

We will conclude by (a) suggesting reasons for the important role that empathy plays in contemporary innovation strategies and (b) highlighting why Design Thinking is the answer to this demand by facilitating the integration of empathic techniques in the organizational context and (c) pointing to misleading empathy conceptions that are more likely to be a risk than a solution. A documentary research approach was chosen for this study.

#### 2 What Is Empathy?

We understand the term empathy in its broadest sense as perspective-taking, including both the involuntary act of feeling with someone else as well as the cognitive act of placing oneself into someone else's position and adopting their perspective (see also Köppen et al. 2011). As a basic form of social cognition, empathy is the capacity "to share, to experience the feelings of another person" (Greenson 1960). Empathy is an ability that allows us to comprehend the situations and the perspectives of others, both imaginatively and affectively (Rogers 1975). It

is therefore not about how I would feel in the certain situation of the other. Empathy is the attempt to reconstruct the specific perspective of the other and how *he* perceives the situation. The aim of empathy is to construe mutual understanding.

## 3 Method

In this chapter, we want to create access to the provided empathy techniques as well as to the normative expectations that are raised by Design Thinking regarding the empathic behavior of employees. For various reasons we decided to use a qualitative approach for this work. Firstly, quantitative methods of collecting data in the field of empathy research, such as questionnaires or scales, are generally used in the study of psychopathological groups (e.g. sociopaths, narcissists, people with autism). That means almost no effects arise from these methods for non-clinical groups. Quantitative measurements are also highly problematic because they do not deliver information about the circumstances and challenges of certain interactions in companies (Rastetter 2008: 160). Second, these methods try to measure the actual amount of empathy in people as a static psychological construct, while of interest here are the empathic techniques required by modern work and how Design Thinking delivers a framework and tools for these techniques. From this follows that empathy is not seen as something static within a person but rather as something that changes according to the social situation or context.

For these reasons, a qualitative documentary research approach was chosen for this study. This is a method of observation that analyzes documents and archives of cultures in order to provide a description of, for example, the self-descriptions and agenda levels of organizations (Aronson et al. 2004). These text fragments are a symbolic interaction of organizations with their environment (Rastetter 2008: 167). Our text material consisted of (a) programmatic descriptions of Design Thinking from Design Thinking facilities in companies and "schools of Design Thinking" and (b) descriptions on websites of companies that implement Design Thinking.

The use of textual material stemming from websites has the disadvantage that these materials are not reproducible. Furthermore, they may be changed by the editors of the webpage after the request in carrying out this study. This does not necessarily need to be a problem, for

 $(\ldots)$  documents need to be considered as situated products, rather than as fixed and stable 'things' in the world. (Prior 2003: 26)

The text fragments were chosen in an open selection process that did not follow a structured approach. The important criterion was that the documents need to show certain discursive similarities, like the modeling of specific empathic practices and conventions about how to work with empathy. Furthermore, the documents needed to demonstrate an analogical vocabulary and follow the same "story line". A similar structure and a certain line of argument regarding empathy in fact became apparent.

From these traits we were able to extract the distinction between internal and external empathy as will be elaborated later on.

#### 4 Empathy in Design Thinking

Within a modern corporate world, design-driven techniques, intercultural and multidisciplinary teamwork as well as the term "user-centeredness" are becoming more and more relevant. The question has to be raised, which new forms of non-technical, interpersonal knowledge are being created and how they can be managed and carried on. In the course of this development, the working world of the last decades has also witnessed a growing demand for access to personality-bound and emotional capabilities of employees (in the research literature known as "subjectifying" processes in the workplace, see e.g. Schönberger and Springer 2003; Voswinkel 2002). Accordingly, the social skill of empathy has also grown more important for companies, management and advice literature (see e.g. Miyashiro 2011; Postma et al. 2012; Pavlovich and Krahnke 2012; Goleman 2003).

However, there still seems to exist a lack of concrete techniques that facilitate the enhancement of empathy and empathic knowledge of the daily work in companies. At this point, the Design Thinking process can be seen as the attempt of utilizing empathy methods from the realm of design in order to generate empathic perspective taking (a) among team-members and (b) toward the user. Both cases are about generating access to the perspectives of other persons and to create an interpersonal knowledge from these insights that shall be useful in the further development of a product.

The whole Design Thinking process should guide the non-designer, who is supposed to work on creativity-related topics in teams iteratively, from a vague understanding of a problem to an appropriate solution. Design Thinking relies on five iterative working modes: "Empathize" is about exploring the nature of the problem and understanding the users and their needs. The findings of this phase are then categorized in a "Define" step, which synthesizes the main findings and acts as a "persona" (an ideal user) to validate decisions later in the process. The remaining three modes are "Ideate", "Prototype" and "Test". These modes deal with generating ideas that are expressed in prototypes, in order to test them with users, who are close to the persona.

The role of empathy in Design Thinking is not only highlighted by the process itself (remember the first step "Empathize"), but also by studies on Design Thinking. For example, authors like Tim Brown explain that the most important skill for a Design Thinker is to

(...) imagine the world from multiple perspectives – those of colleagues, clients, end users, and customers. (Brown 2008: 87)

Case studies on the use of Design Thinking, as well as self-descriptions from companies, also demonstrate that empathy is the most basic and most desired principle for companies as to why Design Thinking should be implemented:

In the interviews, it was striking how essentially all interviewees stressed the importance of empathy as part of a mindset, as a way of relating to the customer, and as an outcome of user research. (Carlgren et al. 2013: 13)

(...), design thinking is really about seeing the world through the eyes of people... We don't design products for customers, we design experiences for people. (GE Reports 2011)

The set-up of a multidisciplinary team is furthermore seen as a crucial element in Design Thinking:

The principle of diversity also includes diversity in team members and networks. The importance of teamwork and making teams as diverse as possible were central themes in the interviews. (Carlgren et al. 2013: 13)

For this kind of cooperation, empathy is said to be mandatory. Grotz and Creuznacher (2012: 20) remark that a Design Thinker needs to be empathic because otherwise he will not be able to acknowledge his teammates who probably have other cultural or disciplinary backgrounds. He has to gain empathic knowledge about the strengths and weaknesses of a colleague and needs to know which thoughts or feelings stakeholders have.

Obviously, empathy is of high relevance for the concept of Design Thinking. We now want to dig deeper and look for the meaning of empathy. During our analysis we found that there exist two areas where empathy takes place: in user research and in teamwork. We call the two specific empathy forms external and internal empathy. In the course of the following two sections we will gain a clearer picture about what empathy is by using this division. We will also discuss the respective advantages and weaknesses of both forms.

# **5** External Empathy

The goal of the empathic approach is to find out what users need. What sounds banal at first, points to a modern understanding of product development: While in the past products evolved from technical progress and intellectual and analytical knowledge work, the production in the Design Thinking paradigm should not start until the hidden wishes and needs of users or customers are analyzed.

The work of a Design Thinker therefore includes an unequivocal customer and user orientation. The highest goal for a Design Thinker is to conceive and design something useful. Whether he has really achieved this goal has to be proven in cooperation with the user himself:

Empathy for the people you are designing for and feedback from these users is fundamental to good design. (d.school bootcamp bootleg 2011, introduction)

For empathic practice in the daily working routine, three guidelines are given for the successful completion of this empathy requirement. First, there is the observation of users in their "natural environment"—so to speak in the context of their living environment. To find out something about the target group by solely doing a market-oriented analysis is apparently not sufficient anymore. The second aspect is the interviewing of and interaction with the user. Being communicative and gaining access to the social world of the user may still not be part of the traditional curriculum of, for example, a technical education. It nevertheless seems to be an indispensable part of modern creative work. Third, putting oneself in the position of someone else by tracing the experience of that user's world (a classic example is the simulation of being in the situation of elderly and frail people by wearing glasses that are intended for this purpose etc.) can be helpful to foster empathy.

These techniques already give information about how empathy is being understood in this case: not as something that comes to you spontaneously and automatically but as something that can be achieved by an active and conscious focus on the counterpart. It is about gaining knowledge of other people, which means that

(...) problems you are trying to solve are rarely your own – they are those of particular users. (d.school bootcamp bootleg 2011: 1)

Empathy is possible if one's own perspective is rejected in favor of the observed user. This clearly concentrates on the rather non-spontaneous and more cognitiveanalytical aspects of empathy. Empathy functions as a bridge between people and needs to be something that stems from self-reflection and attentive observation of the user.

Note that thoughts/beliefs and feelings/emotions cannot be observed directly. They must be <u>inferred</u> by paying careful attention to various clues. (d.school bootcamp bootleg 2011: 15, underlined in original)

The term "infer" strongly relates to the analytical skills of a person. The required capabilities do not refer to forms of "emotional resonating" or "emotional contagion". Basically, this ability expresses the mindset of the therapist. These capabilities can also be compared with the viewpoint of a qualitative researcher, who not only takes into consideration what people *say* but also takes into account the ways people *do* things and the implicit meanings of their actions.

In any case, this rather rational empathic approach should be adopted by employees working with Design Thinking in order to unfold hidden patterns of user action via interviews and observation

But interestingly enough, it is also possible to convert problems of others to your own problems in a far more emotional way. For example, with the method of the "bodystorm" the Design Thinker acts out a certain situation in which a user may find herself in order to test how it feels to be the other person. In the words of the Design Thinker:

What you're focused on here is the way you interact with your environment and the choice you make while in it. (...) We bodystorm to help create empathy in the context of possible solutions for prototyping. (d.school bootcamp bootleg 2011: 31)

The method of the "prototype for empathy" contains a similar background. Prototypical environments are created that are tested to check the insights into the real-life environment of the user that have been fostered so far (d.school bootcamp bootleg 2011: 33). To be able to personally feel oneself into the situation of another person is, of course, far more emotional than some of the cognitive techniques described above. In line with these techniques, another quotation also shows that the affective quality of empathy in Design Thinking plays a role:

Lose your agenda and let the scene soak into your psyche. Absorb what users say to you, and how they say it, without thinking about the next thing you're going to say. (d.school bootcamp bootleg 2011: 6)

Contrary to the traditional image of the rational, tactical, controlled employee, Design Thinking pursues the strategy of actively letting go to be able to even better place oneself in another person's position. These methods for the optimization of personal empathy are based on intuition as well as on the uncontrolled and emotional engaging with the other.

We conclude that even though the former descriptions and recommendations of empathy tend to describe the conscious and controllable components of empathy, the just mentioned method for an enhancement of empathy is applied to one's intuition and the uncontrolled emotional engagement with the other person. The necessary empathic attitude appears paradoxical because an analytical and controlled position is being intertwined with a spontaneous and unconstrained state of mind.

#### 5.1 Contradictory Requirements

From what has been said so far, we can now derive two aspects about external empathy that might be the source of misconceptions during the integration of Design Thinking:

First, empathy as a technique is something cognitive as well as something emotional. As a requirement, this might be a source of confusion for employees. Should I keep a rational distance or should I get emotionally lost in the situation? When nobody tells them, employees are likely to be frustrated because they don't know if they are doing things right.

This uncertainty about emotional versus cognitive aspects of empathy is nothing new and can be traced back to scientific studies on empathy. Some scientists claim empathy is an emotion (Pavlovich and Krahnke 2012) some say it's not a feeling at all (Stein 1980; Prinz 2011). Some divide between cognitive perspective taking and emotional empathy (Geulen 1982; Ekman 2004; Goleman 2003). Others assume that empathy is both: emotional and at the same time cognitive (Bischof-Köhler 1989). So called multi-level-theories are of the opinion that emotional contagion, mimicry and cognitive perspective-taking are all forms of empathy (Davis 2007; de Waal 2011; Rizzolatti et al. 2008; Lamm et al. 2007).

The diverse discussion on empathy has obviously expanded into the Design Thinking paradigm. If organizations want to implement Design Thinking, they should therefore keep in mind that the requirement of being empathic is twofold and not explicit at all. Employees might need support in deciding if they should use their cognitive or emotional skills while building empathy.

Second, depending on the context it can be emotionally difficult and exhausting to actually feel with another person (e.g. a homeless, ill or a suffering person). Studies on "emotional dissonances" resulting from "emotional labour" (Hochschild 2003) or the burnout syndrome (Neckel and Wagner 2013) have shown that "feeling into" another person can cause emotional suffering if the barriers between the own self and the other self are blurred. Managers need to keep in mind that being empathic is not just fun but also a "demanding way of being" (Rogers 1975). For some employees this might result in an extra work load.

# 5.2 Positive Identity Construction

The perception, documentation and interpretation of the experiences of a user make it possible for the Design Thinker to extract a form of implicit knowledge from these experiences. This is the promise of empathy in Design Thinking. From the hidden knowledge that slumbers in the user and can be dissected by the Design Thinker, really innovative ideas will be designed. For the employee who practices Design Thinking this means that he might find a new meaning in his daily work. He now knows who he is designing for.

Designers engage with users (people!) to understand their needs and gain insights about their lives. (d.school bootcamp bootleg 2011: 11)

The narrative of empathy in the organization adds meaning to the daily work because it feels better to compose for people with feelings and needs rather than for anonymous and non-defined gray masses. What is more: Because of his empathic skills, the Design Thinker is able to find out needs that the user might not be aware of herself. The identity of the employee is thus strengthened in two ways. With her state of empathic knowledge she knows not only more about the user than the user himself, she also possesses a moral sovereignty which puts her before other the employees of other companies that are not taking into account the "true needs" of the consumers.

# 6 Internal Empathy

Another important "mindset" that can be found in Design Thinking aims at "radical collaboration". The object of this collaboration is to

Bring together innovators with varied backgrounds and viewpoints. Enable breakthrough insights and solutions to emerge from diversity. (d.school bootcamp bootleg 2011: 3)

This "mindset" with its focus on multidisciplinary teamwork indirectly implies the requirement of empathy on side of the Design Thinker. If employees with distinct perspectives and backgrounds should "radically cooperate," this means that they have to learn to adjust their own point of view in favor of other perspectives. This is necessary in order to work on a collective solution that arises from a diversity of the team members.

Also, "radical collaboration" necessitates empathy from team members because it is the premise for the acceptance of the perspective of colleagues with different cultural or professional backgrounds. In Design Thinking, no explicit methods are described that focus on this operation area of empathy—maybe it is assumed that the disposition to be empathic within the team is a given.

As an indirect method to optimize empathy within the team, one can consider certain techniques that strengthen the shared identity and team spirit, for example a set of exercises to loosen up, the so called "warm-ups". These exercises may appear bizarre to external observers (d.school bootcamp bootleg 2011: 27), and hence may be the reason why they create a feeling of team spirit.

Apart from those methods that may help to change the team spirit in an ongoing project, there are also techniques that focus on the manipulation of the individual's attitude in order to optimize one's own empathy. One of these techniques is the principle of "building on the ideas of others". A method to generate ideas that relate to this principle allows a person to introduce only one idea. Beyond that she may only optimize or detail the ideas that were expressed by her teammates. In this way, one is forced to deal with the line of thought of another person. This method is used to create a high degree of empathic attention for team members with each other.

Another example is the behavior guideline "defer judgment": It means that colleagues should be perceived, asked and understood without being judged in a normative way. By this, one can create an empathic understanding between the teammates. Another guideline is to acquire a "beginner's mindset", which means that one's own experiences and the expert knowledge of individuals can be intercepted in due course:

Your assumptions may be misconceptions and stereotypes, and can restrict the amount of real empathy you can build. (d.school bootcamp bootleg 2011: 5)

Interestingly enough, the implicit premise of this phrase is that there is a "real" empathy in contrast to an "unreal" empathy. That means there are different levels of understanding for other people. Empathy in this sense is something that can be enhanced via the reflection of one's own tendency to stereotype. It is useful to be permanently suspicious of one's own perspective and aware of personal prejudices, while remaining open and curious regarding the views of another person. This is the employee as we find him in literature about "subjectifying" in the workplace: The distance towards his own expertise is an important part of the employee's personality and is seen as a characteristic of an empathic personality.

# 6.1 Empathy or Sympathy?

The difficulty that arises from internal empathy, as described above, results from the thought that an expert—to a certain degree—should reject his own knowledge in favor of the team's decisions. It echoes the assumption that if I am empathic with another person her feelings and thoughts are suddenly my feelings and thoughts. But this is actually called "emotional contagion", something that occurs if, for example, one finds himself in a cheering crowd and all of a sudden feels happy himself without even knowing why. Transferred to the workplace this would mean that I give up my own opinions about something in order to vote for the team's solution. Superficiality is the obvious dangerous aspect of this "feeling the same way". The positive feeling of "finally we understand each other" is the reward of such a communication (Sennett 2012: 39). If teams relied more on this kind of harmonious cooperation than on their expertise nothing would be gained. A team discussion like this has a dialectic structure: I have an opinion (thesis), you have an opinion (antithesis) and we come together harmoniously in a shared opinion (synthesis). The aim of a dialectic conversation is consistency. That's why this type of teamwork is better expressed by the term "sympathy". Sympathy overcomes separation because in my mind I am trying to identify with you (ibid.: 38).

But the aim of empathy is not consistency and identification. It's mutual understanding. To gain this form of understanding, one has to be a careful listener and one has to accept the "otherness of others." While one has to be able to feel into the uniqueness of a person—it is precisely because the other is so unique that it will never be possible to simulate his feelings or thoughts in exactly the same way. The challenge is to understand him as fully as possible as an individual, rather than by empathizing with his inner experiences exactly. A conversation like this is marked by a strong emphasis on listening and discussing and not by consensus. Its structure is called dialogic and not dialectic (ibid.: 36). The required mindset is not so much described in terms of "I want to feel what you feel" but rather with the sentence "I'm curious to hear what you feel".

If this distinction becomes clear, people will not be forced to act like "beginners," because they have the right to stay who they are (experts, members of other cultures etc.). If they are open to other opinions and are able to listen carefully they may at the same time maintain their expert status. A beginner's mindset might on the contrary hinder them in their empathic cooperation.

# 6.2 Solidarity

The sociological work on the "subjectifying" of the working world conducted in recent years has shown that people are suffering more and more from the "competitive" atmosphere in their workplaces (Voß et al. 2013). The reasons for this are numerous: the introduction of excessive flexibility and the increased dismantling of

hierarchical structures in the contemporary economy. Both lead to more freedom for the individual but also to more responsibility regarding one's own work and career. Many employees feel like they are on their own and have to fight against other competitors. This can lead to the feeling of insecurity or even burnout syndromes (Neckel and Wagner 2013).

The concept of internal empathy might provide a solution to this. Because empathic cooperation plays such a crucial role, the responsibility will be distributed on a team level. This means that it is not just one single person who will need to guarantee the success of a project or parts of a project. Not the individual, but the team is in charge. New forms of solidarity can arise from this "radical cooperation" that will counteract tendencies of isolation and separation.

#### 7 Conclusion and Outlook

The first of the two initial questions examined the question of why empathy could become so important for the economic area of the western culture. We saw that in general empathy in Design Thinking signifies a modern product development paradigm. In this framework, first the requirements of the user are analyzed then one thinks about technical or financial feasibility. This is an emotion-driven worldview because it is assumed that the access to a person via her emotions is the most important and deepest one. This is because emotions guide behaviors in an unconscious way. But why is knowledge about the inner processes and emotions of users so important nowadays?

Traditional idea management or mere creativity techniques would be sufficient if modern products would only focus on cognitive contents. But this is not the case. In the contemporary economy it is not about innovative ideas that are based on cognitive insights. It is all about association and "esthetic events", which means that products and services are "experienced" in an emotional way (see Reckwitz 2012: 142, translation by the author.). New forms of working aim in their core at "esthetic innovation" and the creation of certain affective perceptions. This is why innovative forms of working need access to the emotionality of people. It is exactly this access that shall be provided by empathy. In order to be able to find out which emotional experience a consumer wants to have, his feelings and thoughts need to be recognized by the employee. From what has been said above, it follows that empathic capability should close the gap between producer and the emotional desires of the consumer. At the same time we have an explanation for the ever more highlighted role of empathy in business.

The second initial question asked to what extent Design Thinking contributes to this necessity of being an empathic employee. To sum it up, one can maintain that the claim for empathy within Design Thinking, on the one hand, creates knowledge about private, inner activities on the side of the user. This in turn can be used for the development of new products. In this sense, the emphasis on empathy serves the process of production. On the other hand, empathy was analyzed as a crucial part of the creation of sense within a project team, because the narrative of external empathy establishes new values and a new pride within the employee. It is a realization that he designs his ideas and products not only for "someone out there" but rather for real users with concrete needs. Furthermore, the internal empathy leads to the creation of a social and liable sphere within teamwork. We therefore conclude that empathy seems to be a means for social construction of the employee, because

(...) on a social level, these constructions of knowledge influence how professionals construe their identities as either knowledge workers or designers. (Rylander 2009: 12)

In this view, empathy can be seen as a creator of value and sense. The humancentered rhetoric constructs identities—the designer sees himself as someone who works together closely with people and who satisfies their needs.

Because it's all about gaining knowledge about desires of people, we suggest describing empathy in the organizational context as a form of knowledge construction. In order to create this knowledge about other people's mind, one has to be empathic. The offered empathy techniques as provided in Design Thinking are a mixture of emotional and cognitive aspects. On the one hand, the Design Thinker shall see himself from a reflective distance in order to negate his own view in favor of the users' perspective. On the other hand he should maintain an open and non-analytical attitude. Therefore a conscious handling of these partly contradictory requirements and a clear picture of what empathy means to oneself is recommended before introducing empathy techniques to the workplace.

We see our contribution in the listing of empathic techniques for the construction of internal and external knowledge and in the demonstration of pitfalls and successpromising aspects. We hope that our findings may function as a starting point for (a) the comparison with traditional knowledge work and (b) the observation of the consequences for daily practice in companies. We also considered the "big picture" and suggested an explanation as to why empathic techniques have grown so important in the contemporary western economy.

For our further research, it will now be of interest to find out if empathy will indeed lead to innovation and positive change in companies that try out the Design Thinking approach. It will furthermore be of interest to observe how the "radical collaboration" between multidisciplinary team members and whether the implicit requirement of empathy will find its way into the organization.

Acknowledgement We thank Sharon Nemeth and Birga Schlottmann for their editorial support and Holger Rhinow for his inspiring comments.

#### References

Aronson E, Wilson TD, Akert RM (2004) Sozialpsychologie. 4. Aufl. Pearson Studium, München Bischof-Köhler D (1989) Spiegelbild und Empathie. Die Anfänge der sozialen Kognition. Huber, Bern Brown T (2008) Design Thinking. In: Harvard business review (6), S. 84-92

- Cameron KS, Spreitzer GM (eds) (2012) The Oxford handbook of positive organizational scholarship. Oxford University Press, New York
- Carlgren L, Elmquist M, Rauth I (2013) Demystifying design thinking: a conceptual framing of design thinking in use (Forthcoming)
- d.school Stanford (2011) Bootcamp bootleg. Available on http://dschool.stanford.edu/wp-content/ uploads/2011/03/BootcampBootleg2010v2SLIM.pdf. 28 Mar 2012
- Davis MH (2007) Empathy. In: Stets JE und Turner JH (Hg) Handbook of the sociology of emotions. Handbooks of sociology and social research, Springer, New York
- De Waal FBM (2011) Das Prinzip Empathie. Was wir von der Natur für eine bessere Gesellschaft lernen können; mit Zeichnungen des Autors. 1. Aufl. Hanser, München
- Ekman P (2004) Gefühle lesen. Wie Sie Emotionen erkennen und richtig interpretieren. 1. Aufl. Elsevier, München
- GE Reports (2011) Fusing science and empathy in design thinking at GE. Verfügbar unter http:// www.gereports.com/fusing-science-and-empathy-in-design-thinking-at-ge/. zuletzt geprüft am 22 Nov 2011
- Geulen D (1982) Perspektivenübernahme und soziales Handeln. Texte zur sozial-kognitiven Entwicklung. 1. Aufl. Suhrkamp, Frankfurt am Main (Suhrkamp-Taschenbuch Wissenschaft, 348)
- Goleman D (2003) What makes a leader? In: Porter LW (Hg) Organizational influence processes. 2. Aufl. Sharpe, Armonk, NY
- Greenson RR (1960) Empathy and its vicissitudes. Int J Psychoanal 41:418-424
- Grotz A, Creuznacher I (2012) Design thinking—Prozess oder Kultur? In: Organisationsentwicklung. Zeitschrift für Unternehmensentwicklung und Change Management. S 14–21
- Hochschild AR (2003) The managed heart. Commercialization of human feeling. 20. Aufl. University of California Press, Berkeley, CA. Available on http://www.loc.gov/catdir/descrip tion/ucal042/2003042606.html
- Kolko J (2011) Exposing the magic of design. A practitioner's guide to the methods and theory of synthesis. Oxford University Press, New York
- Köppen E, Rauth I, Schnjakin M, Meinel C (2011) The importance of empathy in it projects: a case study on the development of the German electronic identity card. In: Proceedings of international conference on engineering design, ICED11, 15–18 August 2011, Technical University of Denmark
- Kouprie M, Visser S (2009) A framework for empathy in design: stepping into and out of the user's life. J Eng Des 20:437–448
- Lamm CB, Batson CD, Decety J (2007) The neural substrate of human empathy: effects of perspective-taking and cognitive appraisal. J Cogn Neurosci 19:42–58
- Leonard DA, Rayport J (1997) Spark innovation through empathic design. Harv Bus Rev 75:102– 113
- Miyashiro (2011) Marie R: the empathy factor. Your competitive advantage for personal, team, and business success. Available on http://site.ebrary.com/lib/alltitles/docDetail.action? docID=10497472
- Neckel S, Wagner G (eds) (2013) Leistung und Erschöpfung. Burnout in der Wettbewerbsgesellschaft. Suhrkamp Verlag, Berlin
- Pavlovich K, Krahnke K (2012) Empathy, connectedness and organisation. J Bus Ethics 105:131– 137
- Postma CE, Zwartkruis-Pelgrim E, Daemen E, Du J (2012) Challenges of doing empathic design: experiences from industry. Int J Des 6(1):59–70
- Prinz J (2011) Against empathy. South J Philos 49:214–233
- Prior L (2003) Using documents in social research. Sage, London
- Rastetter D (2008) Zum Lächeln verpflichtet. Emotionsarbeit im Dienstleistungsbereich. Campus-Verl, Frankfurt am Main

- Reckwitz A (2012) Die Erfindung der Kreativität. Zum Prozess gesellschaftlicher Ästhetisierung. Suhrkamp, Berlin
- Rizzolatti G, Griese F, Sinigaglia C (2008) Empathie und Spiegelneurone. Die biologische Basis des Mitgefühls. 1. Aufl. Suhrkamp, Frankfurt am Main (edition unseld, 11)
- Rogers CR (1975) Empathic: an unappreciated way of being. Psychologist 5:2-5
- Rylander A (2009) Design thinking as knowledge work: epistemological foundations and practical implications. Des Manag J 4(1):7–19
- Schönberger K, Springer S (2003) Subjektivierte Arbeit. Mensch, Organisation und Technik in einer entgrenzten Arbeitswelt. Campus-Verl, Frankfurt am Main
- Sennett R (2012) Zusammenarbeit. Was unsere Gesellschaft zusammenhält. 1. Aufl. s.l. Carl Hanser Verlag, München
- Stein E (1980) Zum Problem der Einfühlung. Kaffke, München
- Voswinkel S (2002) Bewunderung ohne Würdigung? Paradoxien der Anerkennung doppelt subjektivierter Arbeit. In: Axel Honneth (Hg) Befreiung aus der Mündigkeit. Paradoxien des gegenwärtigen Kapitalismus. Frankfurter Beiträge zur Soziologie und Sozialphilosophie, vol 1. Campus-Verl, Frankfurt am Main
- Voß et al (2013) Burnout und depression Leiterkrankungen des subjektivierten Kapitalismus oder: Woran leidet der Arbeitskraftunternehmer? In: Neckel S, Wagner G (eds) Leistung und Erschöpfung. Burnout in der Wettbewerbsgesellschaft. Suhrkamp, Berlin



http://www.springer.com/978-3-319-06822-0

Design Thinking Research Building Innovators Plattner, H.; Meinel, C.; Leifer, L. (Eds.) 2015, VIII, 289 p. 121 illus., Hardcover ISBN: 978-3-319-06822-0