

CAPTURING CONFLICT EXPERIENCES FIVE METHODS FOR IDENTIFYING INTRAPERSONAL CONCERN CONFLICTS

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ABSTRACT

This paper starts from the proposition that concern conflicts can be powerful starting points for user-centered design processes. Our focus is on the challenge to identify conflicting concerns that are both inspiring and relevant in the context of use, or in the user's general context of life. First, three main ingredients of concern conflict experiences are introduced: choices, goals, and emotions. We propose that any of these ingredients can be used as an entry point to access concern conflict experiences. Next, five research methods are suggested that can be used to identify relevant and inspiring concern conflicts; three methods that are user-centered, and two that are designer-centered. We describe these methods using illustrative research contexts with the intention to inform and inspire suitable research protocols when designers are actively seeking concern conflicts.

KEYWORDS: *design, concern, conflict, tool, method*

INTRODUCTION

What do you do when your alarm clock goes off in the morning? Do you immediately jump out of bed or do you keep snoozing your clock at the risk of being late for work? This is the first concern conflict that many of us experience in a typical day: we may want to wake up early (concern for timeliness), which conflicts with wanting to relax in bed for as long as possible (concern for comfort). Many daily decisions involve such concern conflicts. For example, we may want to spend quality time with our loved ones (concern for belonging), yet we may also want to work extra hours to ensure a successful career (concern for professional success). We may decide to skip our gym-night to go to the movies (concern for fun), and yet, wish we would have a fine-looking body like the movie stars we admire (concern for beauty). These concern conflicts are 'the rule in everyday life rather than the exception' (Frijda, 2010, p.70). Ignoring them when designing products would be like ignoring a crucial part of what makes users human. In this paper, we propose that concern conflicts can, in fact, be an inspiring starting point for user-centered design, and suggest that designers can actively seek for —and design with— concern conflicts to create user-relevant products and services.

An example of a conflict-inspired design is the 'Uniekies Game' (Figure one), which was designed by Janine Innemee with the goal of helping able-bodied children to empathize with disabled children in the context of social play.¹ In this case, the designer found that able-bodied children were ambivalent towards including disabled children in play activities. Playing with disabled children slowed down the game leading to boredom (concern for fun); however, completely excluding them caused able-bodied children to feel guilty (concern for unity). The game addresses this concern conflict by introducing disabled children as heroes with special powers who are to be admired. Able-bodied children can also become heroes by dressing up in special suits and training their powers. For example, Bumper (Figure one) symbolizes a child in a wheelchair who cannot run, but has the unique power of quickly clearing off the play-path for his followers. When playing the game, an able bodied child can wear a balloon-suit to experience the challenges of being in a wheelchair in a fun way. As a result, the Uniekies Game creates a play context that enables challenging solidarity, and thus, fulfills conflicting concerns simultaneously.

¹ The Uniekies Game was the outcome of Innemee's graduation project at the faculty of Industrial Design Engineering, Delft University of Technology, supervised by the first author and Dr. Mathieu Gielen.

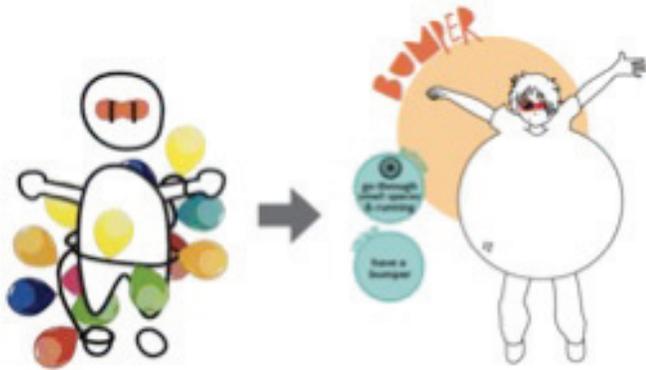


Figure 1. Uniekies game (Innemeer, 2014); reprinted with permission.

Concern conflicts arise in every design context without exception; people have an endless number of concerns governing their daily interactions that often conflict with each other. In the Uniekies Game project, the designer collected many concerns, which were either congruent or conflicting. She could have taken any of these concerns as the leading theme for designing something that appeals to the children. For example, the concern for challenge can be the basis for conceptualizing new and exciting challenges; however, these concepts may exclude disabled children. Alternatively, the concern for inclusion can be the basis for designing games that integrate disabled children into play; however, these concepts may lack the challenge for able-bodied children. The point here is that, in both directions, the resulting designs will both generate positive and negative experiences. Therefore, we propose that focusing on the tension between the concerns, rather than on specific concerns in isolation, can lead to solutions that solve this emotional duality.

In line with this focus, the purpose of this paper is to assist designers in identifying relevant and inspiring concern conflicts, as input for their design process. The inspiring nature of using concern conflicts in design activities has been shown in several studies. Tromp et al. (2011) adopted an interpersonal approach to conflict-driven design and utilized the concept in motivating socially responsible behavior (e.g. reducing litter in public environments). Ozkaramanli et al. (2012) focused specifically on intrapersonal conflicts between long-term and short-term concerns; and provided multiple design directions to handle such conflicts. In addition, a theoretical framework that supports our understanding of concern conflicts has been published (Ozkaramanli & Desmet, 2012).

An important challenge in this approach is that it requires identifying users' experiences of concern conflicts that are relevant to the user and inspiring to the designer. To facilitate the activity of formulating concern sets, Desmet (2008) proposed a matrix with nine distinct sources of product emotion. Each source represents a particular concern type. Although this matrix supports designers in formulating a broad set of user concerns, it does not offer assistance in prioritizing between concerns. Moreover, the matrix represents isolated concerns without supporting designers in identifying promising or inspiring concern conflicts. To support designers in this challenge, this paper introduces research tools that can be of use in identifying

concern conflicts. First, the concept of concern is discussed. Next, the three main ingredients of concern conflict experiences are proposed, each of which can be used as an entry point to access concern conflicts. Finally, five research methods are introduced and discussed, which are either user-centered or designer-centered. The intention of introducing these methods is to inform and inspire suitable research protocols for those who want to identify and define usable concern conflicts.

CONFLICTING CONCERNS

Concern is a collective term that refers to people's goals and motives (see Frijda, 1988). Concerns play a key role in our emotions: we get emotional about events that are perceived as being relevant for one or more of our concerns (Arnold, 1960). When the event matches our concern, we experience a positive emotion, and when there is a mismatch, we experience a negative emotion. Hence, concerns can play an important role in emotion-driven design: one potent way to design for emotion is to design for concerns. Considering that people have numerous concerns in their daily interactions, an important question is which of these concerns are relevant and inspiring as input for user-centered design processes. In this paper, we focus on intrapersonal concern conflicts as powerful starting points for user-centered design. For this, we use a phenomenological perspective to discuss the 'lived experience' of concern conflicts (i.e. conflict experiences). In this perspective, *concerns* (or goals) are one of the three main ingredients of conflict experiences (Ozkaramanli et al., 2012). The other two ingredients are *choices* and *emotions* (Ozkaramanli et al., 2012). To illustrate the three ingredients, we will use the following anecdote:

Imagine Jane, who has to get up early for a Skype meeting at 7 AM; and because she woke up a bit late, she needs to rush her morning routine. In her kitchen, she has to decide on what her morning drink will be. For a moment she hesitates: should she prepare herself a cup of tea or a cup of coffee? On the one hand, she prefers coffee because it will keep her energized during her morning meeting (concern for competence). On the other hand, she prefers tea because it takes less time to prepare than preparing coffee does, which assures her that she will not be late for the meeting (concern for timeliness).

(1) Choices

Jane's moment of indecision or hesitation between two choices is an essential ingredient of all conflict experiences (see Figure two): She can either choose 'A' (prepare tea) or choose 'B' (prepare coffee). Conflict experiences always involve such a decision, in which both choices (A and B) come with 'gains and losses', because they match with one concern and conflict with another concern. Note that not every decision turns into a conflict. Conflict experiences are triggered only when one becomes aware that each choice will lead to gains and losses that are relevant for one's concerns in varying degrees. Consequently, the person starts deliberating the consequences of each choice.

(2) Goals

Jane's dilemma is fuelled by her goals to be competent and punctual. It is important to note that this conflict experience is context-driven: the two goals do not conflict as such because, in principle, Jane can be competent and punctual at the same time. In this specific context, however, the two goals are conflicting. In addition, it is not the (anticipated) events as *such* (e.g. being late and energized with coffee, or being on time and still sleepy with tea) that trigger the conflict experience. Instead, the conflict experience is triggered by the *evaluation* of these events in terms of their consequences for one's wellbeing, for which our goals serve as points of reference (see Figure three).

(3) Emotions

In her moment of hesitation, Jane experienced mixed emotions (see Figure four). If she chooses tea, she may feel confident because she knows she will not be late for the meeting. Yet, she may feel regret because she knows she will not have the energy to contribute much to the meeting. If she chooses coffee, she may feel proud because she knows she will be sharp in the meeting. Yet, she may anticipate feeling guilty due to being late. Emotions bring the experiential quality to conflict experiences. If there is no emotion, there would be no concern at stake, and thus, no conflict would be experienced. These emotions are all anticipated emotions in nature, i.e., they are emotions experienced in response to potential future outcomes (see Perugini & Bagozzi, 2001). Emotions experienced in the moment of decision-making may, for example, be doubt, reluctance, hope, fear or worry, which are evoked in response to indecision instead of potential outcomes.

The three ingredients of conflict experiences enable us to summarize Jane's concern conflict in Figure four. Even though the specific choices, goals, and emotions are different for each conflict, it should be possible to determine these three ingredients in every experienced conflict. You may now think that one would not invest so much cognitive and emotional effort in making simple decisions such as preparing tea or preparing coffee; however, our brains do. According to recent research, goal conflicts can occur outside of conscious awareness (Kleiman & Hassin, 2011). This is because people have many goals that are potentially conflicting, while our mental resources are too limited to resolve all goal conflicts within our conscious awareness (Kleiman & Hassin, 2011). Therefore, we often experience manifestations of goal conflicts such as *behavioral variability, increased decision time, and emotional arousal* (Kleiman & Hassin, 2011). These manifestations might be linked to the ingredients of conflict experiences. In essence, behavioral

variability corresponds to indecision evoked by two choices, while increased decision time corresponds to weighing out potential gains and losses with respect to goals, and emotional arousal corresponds to mixed emotions. These three manifestations can act as 'cues' or 'symptoms' for designers when diagnosing the presence of a goal conflict in specific situations.

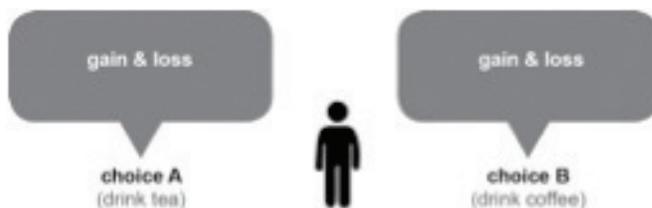


Figure 2. Choices involved in the conflict experience.

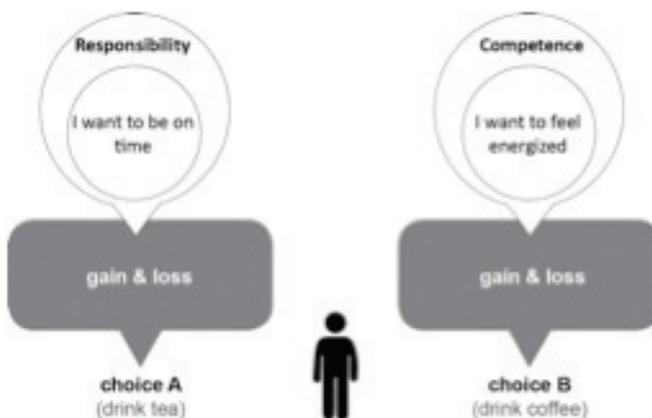


Figure 3. Choices and goals involved in the conflict experience.

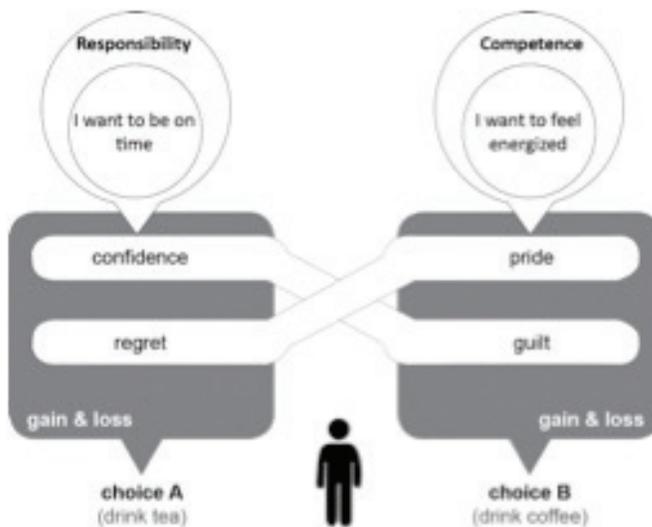


Figure 4. Choices, goals, and emotions involved in the conflict experience.

- 2 From a motivational perspective, the three types of concerns (goals, standards, attitudes) can be linked to high-order goals such as those provided by Ford (1992). Thus, the words 'concern' and 'goal' can be used interchangeably in the context of conflict experiences.

METHODS FOR IDENTIFYING CONCERN CONFLICTS

To use concern conflicts as input for their process, designers need to actively seek concern conflicts in the research context they intend to design for. We propose that any of the three main ingredients (choices, goals, or emotions) can be used as an entry point for probing conflict experiences. However, different research contexts may require using different entry points. A complication is that people simply do not always have conscious access to their concerns (see Wilson, 2002). This task becomes much more challenging in the case of conflict experiences, because people tend to ignore or deny conflicting thoughts as a way of maintaining consistency in attitudes or behavior (see Festinger, 1957; Bem, 1967). In this section, we suggest five qualitative research methods that can help access relevant and inspiring concern conflicts. The suggested methods can be divided into two categories:

- (1) *User-centered methods* that involve users as research participants in data collection: Emotion Capture Card (ECC) procedure, experience booklets, and phenomenological interviewing.
- (2) *Designer-centered methods* that rely on the knowledge and judgments of the design team and possibly other experts: introspection and co-exploration.

The suggested methods are exemplified using illustrative research contexts with the intention to inform and inspire suitable research protocols for the design brief at hand.

User-centered research methods

We propose three user-centered research methods for accessing concern conflicts. *Emotion Capture Card* procedure (ECC) originates from design research and has been previously applied by Ozkaramanli et al. (2013). *Experience booklets* and *phenomenological interviewing* are widely used in psychology (see Moustakas, 1994), and their combination has been previously applied in design research (see Ozkaramanli et al., 2012; Fokkinga & Desmet, 2012).

Emotion capture card procedure

Frijda (1988) formulated the ‘law of concern’, which states that every emotion hides a concern. In line with this law, an individual’s emotions can be considered as reliable entry points to their concerns. Imagine, for example, a friend who is disappointed after watching Eastwood’s movie *Million Dollar Baby*. In the after-movie conversation, you may discover that the underlying concern that created your friend’s disappointment was a ‘concern for happy endings’. Emotion capture cards are based on this law of concern.

Consider a design brief in which the context of design or the product to be designed is already specified in the brief, such as: designing a coffee-machine that enhances the morning experience of working mothers. In this case, it might be fruitful to focus research efforts on the given context by implementing

the Emotion Capture Card (ECC) procedure (see Ozkaramanli et al., 2013). ECC procedure follows three main stages: (1) capturing emotions, (2) distilling concerns, and (3) formulating concern conflicts.

In the first stage, the research team captures emotions (both positive and negative) through observing a working mother (i.e., research participant) in a relatively unobtrusive way as she goes through an activity, while occasionally probing her for emotions. The participant can either report emotions as they arise, or researchers can prompt for an emotion when they observe an emotional event.

In the second stage, the research team interviews the participant using a laddering-type technique to deepen the understanding of concerns underlying emotions (see Reynolds & Gutman, 1988). For example, if the mother gets angry with her kid for not finishing her breakfast, she can be probed to specify the personal reasoning underlying this emotion using a laddering technique (e.g. Researcher: *why were you angry?* Participant: *because, I want my children to have enough energy for school*). Both positive and negative emotions can be reliable entry points for concerns. In addition, mixed emotions can be valuable entry points for capturing concern conflicts, since, based on the ‘law of concern’ (Frijda, 1988), mixed emotions can guard multiple concerns. The emotion capture card shown in Figure five facilitates the first two stages of the ECC procedure.

In the third stage, the research team forms an overview of participants’ concerns and focuses on relationships among these concerns to formulate potential concern conflicts (see Ozkaramanli et al., 2013). For example, some of the concerns in the above example might be ‘being a good mother’, ‘maintaining order in the kitchen’, ‘having me-time’, and ‘being a responsible employee’. Through comparing and contrasting these concerns, the research team can formulate potential concern conflicts. In this example, a concern conflict might occur between the concerns ‘being a good mother’ and ‘having me-time’: being a good mother requires the mother to invest time in taking care of children in the morning, while she may also desire a quiet moment for herself.

Experience booklets and phenomenological interviewing

Consider a design brief in which the context of design and product to be designed are open to interpretation, such as: improving the university campus environment to enhance academic success. In this case, the design team might be able to formulate suitable design contexts, such as lecture rooms or study rituals, and actively seek conflict experiences in these contexts using ECC procedure. Alternatively, the design team might start with researching students’ concerns and concern conflicts in a holistic manner, for example, by investigating students’ academic experiences across multiple contexts. For the second alternative, experience booklets in combination with phenomenological interviewing might be a more efficient approach than applying ECC procedure for multiple times in multiple contexts.

Experience booklets provide a medium for participants to record their conflict experiences by answering a number of questions designed to probe these experiences. Here, the goal is to bring conflict experiences into awareness and to collect inspiring concern conflicts (see Ozkaramanli et al., 2012). Similar to cultural probes (Gaver et al., 1999), experience booklets target inspirational quality rather than quantity in participants' responses. However, experience booklets are different than cultural probes or sensitizing booklets (Sleeswijk Visser et al., 2005), since they target experiences related to a specific phenomenon rather than information on general characteristics of users and their context. Figure six and Figure seven show possible questions that students might be asked in an experience booklet designed for the given research context.

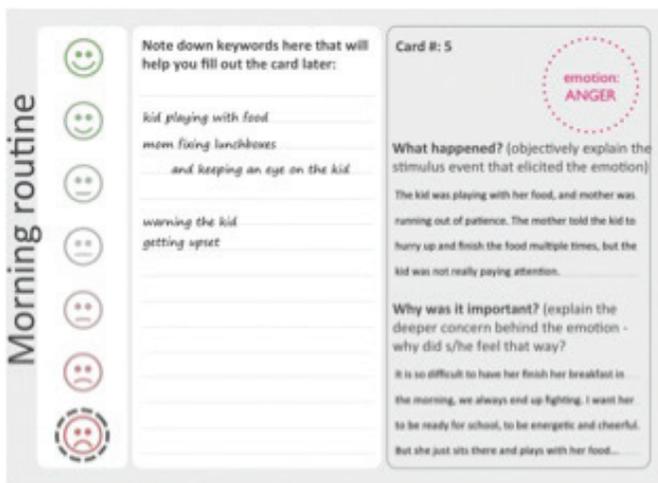


Figure 5. An example of a filled emotion capture card (the white section is used to take notes during observations, and the gray section is completed after the laddering interview).

The question in the booklet example in Figure six uses the well-known metaphor of an angel 'should-self' fighting against an evil 'want-self' to probe for conflict experiences between long-term goals and short-term pleasures (Mikman et al., 2008). This question uses choices (instead of goals or emotions), as an entry point to the conflict experience, where the choices may, for example, be 'I should study for my exam' versus 'I want to play the guitar'. In Figure seven, the question uses goals as an entry point (instead of choices or emotions) to probe conflict experiences. In this question, the focus is on the interference (i.e. conflict) among goals, where pursuing an academic goal interferes with the pursuit of another important goal due to limited resources such as time, energy, or money (Riediger & Freund, 2004).

Phenomenological interviewing can be facilitated by using the responses given in the experience booklet as input (see Ozkaramanli et al., 2012; Fokkinga & Desmet, 2012). According to Moustakas (1994), phenomenological interviews can be conducted in an informal, open, and interactive way, and in a setting that is natural to the participant. The fundamental question that needs to be answered in the phenomenological interview is 'What is it like to experience this specific phenomenon?' (Englander, 2012). For conflict experiences, the interviewer and the participant can go through the responses given in the experience booklet and discuss them in greater depth, for example by collecting information on choices, goals, and emotions involved in these experiences (see Ozkaramanli et al., 2012).

Designer-centered research methods

We propose two designer-centered methods for accessing concern conflicts: introspection for exploring concern conflicts through designer's own conflict experiences; and co-exploration

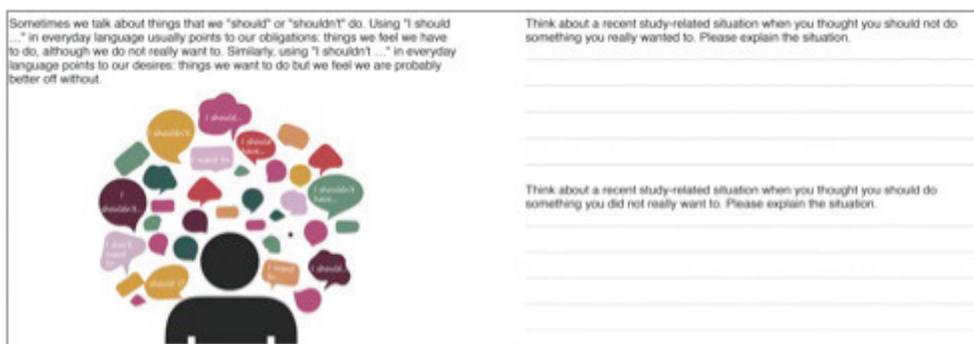


Figure 6. Booklet page that asks about choices of a 'should-self' versus a 'want-self'.

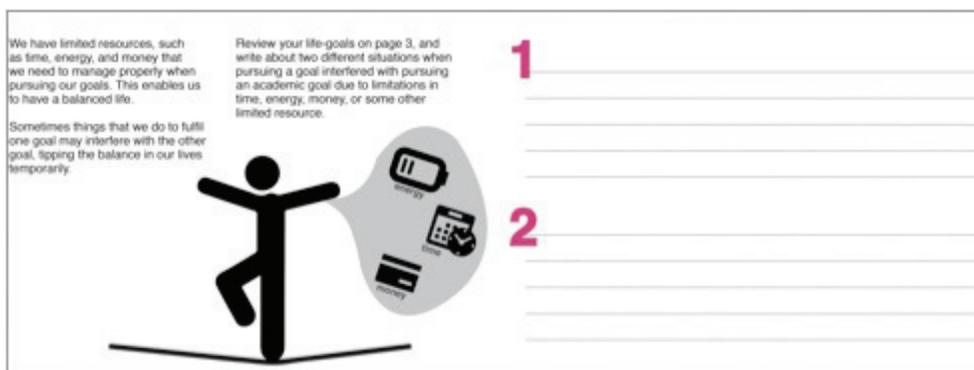


Figure 7. Booklet page that asks about an experience when pursuit of an academic goal interferes with the pursuit of another important goal due to limited resources such as time, energy, or money.

ration for exploring concern conflicts through collaboratively formulating insights in a team of designers and experts. Consider a design domain that has been widely researched such as: motivating sustainable eating habits by reducing red-meat consumption (see Ozkaramanli & Desmet, 2012). Sustainable eating is a broad design domain that hosts many controversies and opposing opinions. More importantly, much has been written on this topic, in academia and other fields, which can form reliable sources of information for the design team. Due to abundance of research material in this domain, it might be a plausible approach to involve members of the design team, and expert opinion to identify relevant and inspiring concern conflicts, instead of involving users.

Introspection

Introspection can be defined as ‘an ongoing process of tracking, experiencing, and reflecting on one’s own thoughts, mental images, feelings, sensations, and behaviors’ (Gould, 1995, p.1). Introspection might be particularly suited for investigating conflict experiences for two reasons: they are abundant in everyday life, and they are emotional (i.e. self-relevant) phenomena that can grab attention. Designers can use introspection by being mindful about and reflecting on situations in which they *themselves* experience the symptoms of conflict (i.e. behavioral variability, prolonged decision making, and emotional arousal), which might enhance designers’ understanding of the phenomenon through first-hand insights. For example, in the domain of sustainable eating, the designer might choose to systematically record moments of hesitation regarding selection, preparation, and consumption of food. Here, introspective thought exercises suggested by Gould (2012) can help focus designers’ awareness on their mental processes.

It is important to note that introspection is considered a controversial method in consumer research (Gould, 1995; Gould,

2013), and thus, understanding its contribution to designing requires future research. However, using this method in combination with user-centered research methods might facilitate mediation between designers’ personal insights and the insights obtained from future users.

Co-exploration

We propose co-exploration as a work-in-progress procedure that can be used by designers and experts to collaboratively formulate possible concern conflicts in a specific design domain. We suggest that the proposed tool shown in Figure eight can facilitate this collaboration. The tool is composed of an infographic of several conflict experiences in different contexts, and a set of goal cards inspired by the goal taxonomy of Ford (1992). The tool works as a two-step creativity tool typically used in brainstorming sessions. In the first step, the research team explores the infographic to acquire an understanding of conflict experiences. Next, each team member picks a concern card and tries to formulate a concern conflict by pairing this card with the card of another team member using free association. Imagine that a member of the design team picked the card of ‘tranquility’ while another member picked the card of ‘mastery’ (see Figure eight). By pairing these two cards, the team can brainstorm about possible conflict experiences that involve these two specific concerns and are relevant for the design brief at hand. A possible concern conflict between ‘tranquility’ and ‘mastery’ in the domain of sustainable eating may be summarized in the following narrative: ‘*I want to master the art of cooking by combining different vegetables with spices; however, when I get out of work, I am usually too tired to bother with cleaning, chopping and cooking vegetables – it is a lot easier to grill a piece of steak and eat it with some mashed potatoes*’. Following this formulation, the design team can discuss emotions and choices involved in this specific con-

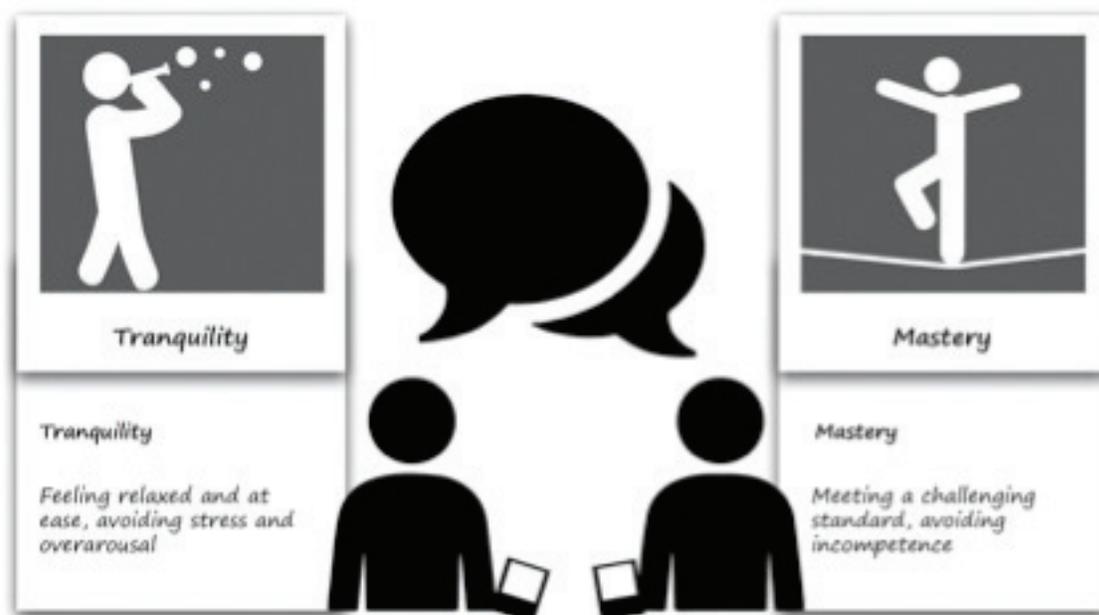


Figure 8. Pairing example goal cards for formulating concern conflicts by free association (goal definitions are adopted from Ford (1992)).

flict experience. The design team can repeat this exercise until designers and experts agree upon a relevant and inspiring set of concern conflicts.

DISCUSSION

Conflict experience is a rich, everyday phenomenon that can be an inspiring starting point for user-centered design. This paper conceptualized concern conflicts as an experience that involves three main ingredients, namely choices, goals, and emotions. Additionally, we suggested five qualitative research methods that might help designers in identifying concern conflicts. In explaining the methods, we discussed three research contexts that differed from each other in the way that they specified the intended design context. The selection of these research contexts were random yet relevant for illustrating the implementation of the proposed research methods. It is possible to swap the research methods between the illustrated research contexts, or even to use them in combination. Here, it is up to the design team to select the most suitable research methods based on the qualities of the research context, and the goals and the resources of the design team.

We made a distinction between user-centered and designer-centered research methods. User-centered methods (ECC procedure, experience booklets, and phenomenological interviewing) are empirical methods that yield detailed insights into the lived experience of conflicts, as experienced by potential users (see Ozkaramanli & Desmet, 2012; Ozkaramanli et al., 2013). Therefore, they might be valuable research methods if the design team feels that involving users will lead to deeper insights on conflict experiences in a given domain. Designer-centered methods (introspection and co-exploration) rely on the knowledge and judgments of the design team instead of those of users. Introspection can deliver rich insights on specific experiences (Gould, 2013); however, the insights are limited to the experiences of one person, and thus, may not be generalizable to all potential users. Co-exploration might deliver reliable insights based on expert opinion; however, it might not yield a rich understanding of conflict experiences in terms of choices and emotions involved. There are emerging perspectives in design research that support designers in using their own experiences when designing or evaluating products, such as autobiographical design (see Neustaedter & Sengers, 2012), designer experience (see Nieminen et al., 2011) and immersion (see Jordan, 2000). Additionally, it could be a valuable approach to combine (i.e. to triangulate) user-centered and designer-centered research methods to ensure identification of relevant and inspiring concern conflicts.

Design teams can access concern conflicts either directly or indirectly. When using the ECC procedure, design teams formulate concern conflicts by comparing and contrasting users' concerns captured in a specific context by using emotions as an entry point. This is an indirect way of identifying concern conflicts, and the findings need to be evaluated either by users or by experts to ensure that the design team has a relevant set

of concern conflicts. Alternatively, design teams can identify concern conflicts by asking questions directly about the conflict experiences. For this, design teams can formulate questions such as those in Figure six and Figure seven, or they can be observant about the symptoms of conflict experiences, (i.e. behavioral variability, increased decision time, and emotional arousal) when observing users or when using introspection.

Following identification of concern conflicts, designers will need to determine which concern conflicts they would like to focus on when designing. From users' perspective, the intensity of emotions experienced in the conflict experience might indicate whether the concern conflict is worthy of designing. The stronger the emotions, the more important the concerns at stake (Frijda, 1988), indicating a strong concern conflict. Additionally, repetitive conflict experiences might be worthy of designing, since they indicate that users might need support in dealing with these concern conflicts (see Ozkaramanli et al., 2012). From designers' perspective, we suggest that concern conflicts need to be formulated at an appropriate abstraction level that supports creativity while maintaining relevance for potential users: concern conflicts that are too abstract and general (e.g. responsibility versus competence), or concern conflicts that are too concrete and context-specific (e.g. preparing tea versus preparing coffee), might hinder creativity.

Limitations and future research

The proposed research methods are intended as a possible tool-set that might help in identifying relevant and inspiring concern conflicts. These methods need further reflection and evaluation before establishing their effectiveness in accessing concern conflicts, and new methods may be added to the list following further research. Additionally, translation of research goals into simple and concise questions, understandable by users, can be a challenging task. Further research is needed to eliminate semantic issues while talking with users about abstract concepts, such as emotions, concerns, and concern conflicts, to enhance the effectiveness of user-centered methods. Most importantly, identifying concern conflicts takes designers only half way through the design process. As a result, further research is needed to address the following questions: 'what are possible criteria for determining the most inspiring concern conflicts?' and 'what are the design strategies that can form viable starting points for designing with concern conflicts?' Our future work will focus on answering these questions.

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