TIME TRAVEL, A METHOD FOR PLAYFUL FUTURE-ORIENTED USER RESEARCH

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ABSTRACT

This paper describes the development of a user research method called 'Time Travel'. The aim of the method is to inform and inspire designers with imagined futures by consumers. The method should give answers to the following question: How do consumers imagine technological and social developments to have an impact on their personal lives (in a certain domain)? An engaging game concept was developed in a research through design process: generative activities alternated with evaluating mini-experiments. The metaphor of time traveling shaped the design vision by presenting elements such as the suitcase (anchoring the imaginations in the here and now), and fuel (informing players about technological and social developments). The 'final' version showed opportunities to indeed transport consumers to possible futures. Further development of the method needs to focus on having players actually integrate the information on future developments (the fuel) with their personal contexts. This might be achieved by using the strengths of the game in individual interview sessions with consumers.

INTRODUCTION

A plethora of user research methods exist (e.g. IDEO, 2002; Goodwin, 2009). Researchers and investigative designers gain detailed insights in consumers' doings. These insights are key to successful human centered design processes (Valkenburg *et al.*, 2008). These insights are not a goal per se, but a source of information and inspiration for designers in human centered design projects. Current ethnographic methods of user research may overwhelm designers with detailed information on present situations, probably hampering inspiration instead of presenting new opportunities. The bridge between user research and design has been a research topic in recent years. For instance, Sleeswijk Visser (2009) focused on involvement of designers in user research projects and on communication of results of user research. Brandt (2006) developed playful ways for design teams to adopt information from user research.

In this paper we share our experiences with the development of a method called 'Time Travel'. We explored possibilities to bring the future into user research and let consumers imagine personal futures. The aim of future-oriented user research would be to gain more relevant and more inspirational insights than is gained with current methods.

Three basic aspects were rendered important for methods to elicit personal future narratives from consumers.

(1) *Personal narratives*. When talking about the future it is our experience that people are inclined to make general statements and predictions. Only a small number of people, domain experts and futurists, have sufficient knowledge for grounded general statements. In our Time Travel method we were not after laymen's predictions and armchair visions on the way of the

world. Rather, given certain plausible future technological and social/societal developments in the world, how would consumers see this having an impact on their personal lives?

(2) *Awareness of the current context*. Consumers need anchors in the present to reflect on their personal futures in meaningful ways. Who they are now, and what they are doing now should serve as jump-point and guide their imaginations of their future lives.

(3) *Games*. Futures and future scenarios can be explored via games and role-playing. Games enhance engagement, active participation and motivation, and they transport people to other worlds in time and/or space, freeing them from their present context. New, surprising and unexpected events are labeled in positive ways during games. Using games is not new in human centered design. Industry and academia use serious gaming for scenario-development and playing with scenarios (Brandt, 2006); Johansson and Linde, 2005; Rotte *et al*., 2009; Valkenburg and Rooden, 2009). In many of these games multidisciplinary teams of professionals imagine the future from various angles. Information from preceding user research is available in these games. It is specific to our approach that the game is part of the user research itself with consumers as players. The results of the Time Travel method are to be used for scenario development.

Our research question was: How do the aspects (1) personal narratives, (2) awareness of the current context, and (3) games contribute to future-oriented user research?

APPROACH

In our project we adopted a method of research through design. Insights and hypotheses are generated, not only via testing and empirical research, but also via generative and creative activities. Choices in design create stimuli to be tested in informal mini-experiments, triggering further choices and adaptations. The robustness of the insights and the quality and relevance of the design are more formally tested in later phases.

The project was carried out by the first two authors of the paper: a senior researcher/designer and a student Human Technology. In all some 45 players participated in the evaluating experiments. The project started in February 2010 and was finished in July 2010.

In this paper we first present our design vision, followed by a description of the process of design ideas and evaluations. We conclude by presenting the final design and discussing our gained insights.

DESIGN VISION

TIME TRAVEL

At the start of our project we were playing with the metaphors of time machines and time traveling. The term time-machine was coined at the start of the project, neglecting the journey itself. Putting emphasis on the journey, both the outward and homecoming journey, helped us to define the main elements of the method 'Time travel':

(1) *Suitcase.* The literature suggests that thinking about the future is facilitated by awareness of the current context (Hekkert and van Dijk, 2001). The suitcase helped us to find an anchor in the present. It was rendered important to have participants prepare for the 'journey' by packing a suitcase. They were to bring something relevant for them in the present and related to the specific topic of the user research. Apart from anchoring in the present it would help participants to sensitize for the topic (Sleeswijk Visser *et al*., 2005; Sanders, 2000).

(2) *Fuel.* In order to imagine their own personal futures, consumers need knowledge on expected developments by futurists and domain experts. This knowledge can be seen as fuel helping consumers to travel a distance and project themselves into a future world. Fuel can be administered in various forms: film, written or spoken verbal explanation, visuals.

(3) *Souvenir*. The suitcase is not only useful for bringing stuff into the future, but also for bringing something back into the present: a souvenir. By unpacking a suitcase at home after the journey the contents can be shared. Stories connected to these souvenirs are part of the imagined futures.

BOARD GAMES

In addition to examples of serious games, we found inspiration in three leisure board games: The Game of Life, twists and turns (Levensweg in Dutch), and vintage games such as Future (1966) and Future Stories (1992) (see figure 1). Various consumers are familiar with such games and associate them with informal settings, which should facilitate them to jump in. We were not interested in a game per se, but in its potential as a catalyst and guide for conversation.

Figure 1: Board games Levensweg and Future Stories

PROTOTYPES AND EXPERIMENTS

During the project various game elements and game-concepts were explored. It is beyond the scope of this paper to present the design choices and the evaluating experiments in detail. The major steps are briefly

presented to give a flavor of our method of research through design and our choices. More detailed descriptions of the game rules follow in the paragraph presenting the final game.

CARD GAME

An early concept took its core principle from the card game quartets. Players exchanged cards in order to gather sets of four cards on a similar topic (see figure 2).

Figure 2: Card game

The players were sensitized and fueled (in this case with clips from YouTube) before playing the card game. When a certain card was exchanged a related question, which was printed on the card, had to be answered before receiving the card. By answering these questions and listening in, the players were expected to imagine their possible futures.

Gained insights in evaluation.
- Games of question and answer stimulate conversation and narratives.
- Fuel should be dosed or be available throughout the game in order to influence future imaginations.
- Motivations to win the game can hamper talking and thinking about the future.

THE SUITCASE

In various versions of the game, participants were asked to bring objects or photos to fill their suitcase at the start of the game. At the end of the game participants were asked to imagine an equivalent of this object in the future. How would it change and improve?

Insights gained from evaluation.
- The contents of the suitcase should play a role throughout the game. As soon as new knowledge about the future is shared, this should be connected to the personal object.
- It is advised to exert some level of control over the contents of the suitcases to make them useful during the game.

CHALLENGING GAME-ELEMENTS

During the course of the project various interesting game-elements such as scoring methods and alternatives for dice) were combined, borrowing from existing board games.

Gained insights in evaluation.
- The game should be simple and clear, though challenging and surprising at the same time. Long term play value is not an issue as with leisure board games.
- The moderator plays an important role in explaining and guiding the participants through the game.

BOARDGAME WITH TRACKS

The initial card trading concept was dropped for a board game with tracks with pawns going from a to b (see figure 3 for an example). This fit very well with the concept of traveling. Various loops and tracks were tried.

Figure 3: Early version of a board game with tracks.

Gained insights in evaluation.
- The track on the board should explain the procedure of the game
- The actions along the track should motivate players to move along.

FINAL DESIGN: TIME TRAVEL

Experiences with designing previous versions, discussions and experiments resulted in a final design. Some aspects of the game are topic-related, such as the fuel and the contents of the suitcase. Our chosen example topic was food and drinks in 2020.

Four players participate in the game with an expected duration of two hours. In preparation participants are requested to bring along three items or visualizations of these items. All three should be related to eating and drinking, and should be meaningful to themselves. One item should have a link with technology, another item should have a link with society, and a third item should be really personal. At the start of the game each player explains the three items briefly and places them in his or her suitcase (see figure 4).

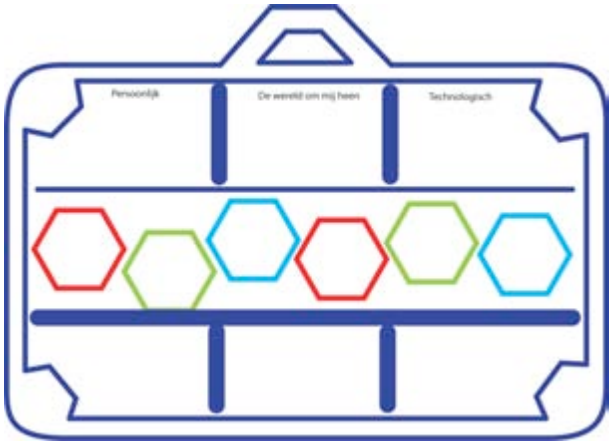

Figure 4: Empty suitcase. The upper part contains placeholders for the three items which are brought along by the players.

During the game pawns walk the inner track of the board (see figure 5). When landing on a jerry can symbol, a card with fuel is presented and placed on the grey areas of the board. These cards inform the players with expected technological or societal future developments (for instance: nano tags supply all kinds of product-information). Each card comes with a question to the player to link the new information to his or her own life (for instance: what are the qualities of your tap water in 2020?). The new insight is written in the middle section of the suitcase, in order to keep these insights available.

Figure 5: The board at the start of the game.

Landing with your pawn on a question-mark means answering a question, using information from the fuel available on the board. The star fields come with challenges, presenting more active and surprising ways to process the new information (for instance: show a page of your 2020 cookbook). These challenges in particular help players to imagine their personal future lives.

Players also collect credits depending on the quality of their narratives. These credits help to bring in some kind of competition and motivation. The details of this system are beyond the scope of this paper.

After a number of rounds (an hour and a half playing), the participants are to use all new information and insights to reflect on their brought items. How would these transform in ten years? Figure 6 presents a view of the board and suitcases at the end of the game. The suitcases and a video-recording of the session serve as data in the user research.

Figure 6 The board and a suitcase at the end of the game.

USER TRIALS WITH THE FINAL GAME

Two user trials were carried out with the final version of the game. Per session four players were invited. The players had various backgrounds, varying on their affinity with technology and innovation. Both sessions took place in the university building. They both lasted about one and a half hour. The second author of this paper moderated both sessions, the first author was participating observer in one of the sessions. The moderator was challenged to give enough room for stories and set the pace to play a number of rounds to bring in enough fuel to actually feed the participants with future-information. The two sessions yielded the following experiences.

Personal stories from past and present. As with other methods of user research participants easily came up with personal stories from past and present, facilitated by the items in the suitcase (e.g. addictive snack tomatoes in a fancy packaging) and the question cards (e.g. What does your Christmas dinner look like?). These stories led to discussions in the group, enriching the information.

Intriguing future conversations. The fuel-cards and related questions triggered interesting discussions about

the future. When dealing with the question "What are the qualities of your tap water in 2020?" Participants talked about different water qualities for different activities, tap water with personalized taste and nutrients, disinfecting water, salty water for certain purposes, etc. Other narratives focused on the potential of a device advising what to eat and drink based on continuous measurements in the body. Information from the fuel was well integrated in the narratives. Sometimes the link with the personal situation remained unclear. When a player explained that for him healthy food is not an issue in 2010, what then is the relevance of his narrative about the convenience of measuring the nutrients in food in 2020? Another player told that she would buy local food in 2020, but she could not explain why she didn't do so in 2010.

Verbal information. The imaginations remained predominantly verbal. In the challenges players were to draw and visualize in various ways, but the participants found it hard to do so. It seemed that these individual tasks interrupted the social conversation dynamics of the game.

Individual differences. Some players were very well able to combine new information and translate this to their personal situation. Some participants fell silent or took on the role of interviewing the others. Some players had difficulties avoiding expert behavior and having strong opinions about developments (i.e. "I don't think that local food has a chance in urban areas."). It was difficult to have certain players talk about their own lives instead of talking about the general public. Some participants came up with wild and fantastic future views, others are more critical and pointed at unrealistic aspects. Both types of behavior played a role in keeping a balance.

Role of the moderator. All questions and challenges in the game were prepared with a certain aim (i.e. to trigger specific discussions). In many cases the conversation took unexpected turns. The moderator played an important role in keeping the atmosphere around the table future-oriented and respectful to all players. The moderator had to control the conversations to collect relevant information. The final phase of the game, in which the contents of the suitcase are transformed, suffered from time pressure (see empty spaces in figure 6). During the game itself many references were made to the personal items, serving as examples.

CONCLUSION

In this project we explored a method for future oriented user research: a time traveling game. Three aspects were introduced: (1) personal narratives, (2) awareness of the current context, and (3) games. The game aspect worked very well. Players were motivated to play a game, and it helped them to loosen up. The metaphor of a time-travel was well chosen. It was natural for users to travel through time within the context of the game, and to be confronted with unexpected questions. The sensitizing task of filling the suitcase with objects from the present, and talking about these objects in the first phase of the game, yielded awareness of their current situation. So, the building blocks for eliciting personal narratives were there. However, it still proved difficult to elicit personal stories which were both based on the presented fuel and on their personal situation. The dynamics of the game and the group of players brought along a number of distracting effects, such as trying to 'win' the game and trying to outwit the others.

For a next step in the development of the method attention will be paid to the quality of the personal narratives and the informational and inspirational power of these narratives for designers. In parallel, opportunities are explored for using the strengths of the method in individual interviews with consumers.

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