Alt-Experience: Alternative Personal Narratives through Autoethnography

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Data has the potential to provide an alternative narrative of our mundane everyday life at home. In this workshop paper, I first report the data collection using autoethnographic approach, then focus on three distinct experiences recognized and their analysis result. Lastly, valuable insights and reflection of the data gathering experience are provided, along with two points regarding data reliability and usefulness proposed to discuss in the workshop.

1 INTRODUCTION

In my research I explore the future of intelligent and connected objects in a broader view of Internet of Things (IoT) with a focus on aesthetic experiences [3]. This involves the context of mundane, everyday life, and humans in the interconnection, using a research-through-design (RtD) methodology. The first goal is to prototype a system of things [5] that produces novel domestic human-thing connection experiences. However, its design space remains unclear at the early stage. My motivation is to understand how to construct the narrative through data, i.e., taking an autoethnographic approach; iterating through data collection tells a personal story in which insights generated through and with data provide different interpretations on the design space. I seek series of first-person narratives to become more aware of the home environment, scenarios, and people's experience living in it. That means contextual and experiential data should be collected to enrich the design spaces–instead of using traditional qualitative methods only, a combination of them with the collected data could provide valuable insights [1]. I chose to collect the data from my everyday life at home as a rapid way to get started and gain insights. The process of collecting and analyzing my own data is framed in an autoethnographic approach [4], which is similar to personal informatics [12] but involves more subjective interpretation and reflection. This method will also be used later to investigate the personal and cultural experience of being connected to smart home technology and products.

2 FROM AUTOETHNOGRAPHY TO PERSONAL NARRATIVES

Autoethnography as a first-person method has a tradition in HCI research with different uses: *traditional autoethnography*, *autobiographical design*, and *autoethnographic research through design*. Autoethnography is an approach to research and writing that seeks to describe and systematically analyze personal experience in order to understand cultural experience [4]. As an increasingly popular approach in HCI, autoethnography recognizes the importance of first-person interpretation of technology and utilizes personal experience as research material [4]. Lucero [10] presents autoethnography of his experiences of over nine years living without a phone, describing its impacts on identified meaningful themes and allowing him to reflect on the roles that technology plays in everyday life. Gamboa [6] reports

an autoethnography study on her family's one-year living with robots and drones, revealing child-drone interaction design opportunities.

For designers and researchers, autobiographical design [13] focuses on using the self-created system extensively with true needs. Neustaedter and Sengers [13] interviewed 11 HCI experts who had experience in designing through long-term self-usage and accordingly offers guidelines for engaging in such design activities. Autobiographical design is therefore described as allowing designers and researchers to 1) reveal major factors that could make or break a system, 2) uncover detailed and nuanced insights, and 3) generate uniquely new design ideas to design exploratory systems in the field with no existing system or established culture of use. Helms [7] explored breastfeeding experiences entangled with more-than-human materials and agencies using autobiographical design. Heshmat et al. [8] explored automated video recording in the home for collecting and displaying family memory through the autobiographical design of an always-on video recording system.

Similarly inspired by self-design and usage, autoethnographic research through design focuses on producing knowledge by individually accounting for a phenomenon with a systematic analysis [11]. An example is Chien and Hassenzahl's [2] study that reports autoethnographic research through the design of the first author's maintaining a romantic long-distance relationship with his partner. It reveals the complexities of designing "couple technologies" and offered insights into meaningful everyday interaction. They also consider it as a way for autoethnographic design to contribute to designerly knowledge.

3 ITERATED PERSONAL DATA COLLECTION AND ANALYSIS

The *setting* of my personal data collection environment is a 23 square meter studio located in Eindhoven, the Netherlands. In the studio, there is no obvious division of bedroom, kitchen and living room, but there are separated toilets, portico and storage room. It is located on the sixth floor, adjacent to a transparent public corridor that can be seen from my window. I assume a central data collection point, usually at the center of the room, where I can see all around the indoor environment except for the small corridor and toilet. I set a camera on a tripod situated in the corner next to a wardrobe, which covers most of the elements and aspects of interest in my home (e.g., light, my activity, two trash bins, curtains).

The *parameters* to collect were carefully selected as they together form, perhaps even model, a general experience of my mundane daily life at home. They are: 1) date, 2) time, 3) weather type, 4) curtain openness, 5) lights on, 6) sound, 7) smell type and intensity, 8) thermometer reading, 9) what I was wearing, 10) trash bin empty or full, 11) kitchen cleanness, 12) home cleanness, and 13) subjective experience as class. Most of the parameter values are quite subjective in description, except for date, time, and thermometer reading.

The data collection *process* is as follows. I set the alarm clock from 7pm to 11pm, and recorded the home data once per hour. When the alarm rang, I stopped immediately, kept everything as what it was at that moment, took the mic and described the home attributes one by one. For example, I would say "now it's 8pm, Nov 11. The curtain is half open and half closed. Kitchen light and desk lamp are on. A little noise from the outside street and neighbours…" and lastly with my feeling. After that, I went to the camera which was set stable on a tripod at a specific point that has the widest sight of the room, and took a picture of the environment. Then it came up with one data point. Later, I transcribed all the audio records into data rows in the Excel sheet and matched the pictures to the rows based on date and time.

4 DISTINCT EXPERIENCES AND ANALYSES RESULT

There are three distinct *experiences* that I noticed during moments of collecting the data. I recalled and wrote down these special experiences, and started to analyze the Excel sheet to see if there were any patterns to contextualize or

even explain the experiences. To analyze the data set for one special experience, I first extracted key information (e.g., parameters involved, key words from the subjective experience) from the special experience, filtered the data rows with these information, and then looked into the rows to see 1) whether the number of relevant rows is considerable, 2) other parameter values appeared frequently, which might represent potential relationships. Lastly, I highlighted the key cells in colors with different meanings for easier interpretation. As the data collection is still ongoing, I started with analyzing these distinct emotions that are often noticed in specific scenarios, and see if the data set could support these emotions with the records.

Experience 1: *"I wanted to be 'welcomed' and 'brightened' when I arrived home"*

> *"When I opened the door, I feel the home dark and silent compared to the bright public corridor. It reminds me of the great time when my parents welcomed me home after school, but now I'm living here alone. Therefore, I want to feel a bit more welcomed when I enter home. By feeling welcomed, I envision warm light and bright tunes from somewhere in the corner that are not creepy and scary, just like that my home things notice my arrival and say 'hi' to me. "*

The result is not quite supportive to the experience. There are only two relevant rows, but the time of arriving home (remains unknown) and the earliest data collection time (7pm) does not always match.

Experience 2: *"I feel relaxed after emptying the bin and kitchen sink"*

> *"The feelings came from the perception of an empty bin or sink every time, not from the actions of cleaning them. It's probably about senses of achievement, not procrastinating at this tiny task, freedom of putting things inside them for the next a few days."*

The result is in a way supportive. The keyword 'relaxed' shows in half the related data points. But the problem remains that experiences do not always pop up at the data collection time so there are some experiences not being recorded.

Experience 3: *"If there's anything in the sink, there will be more; if there's nothing, it keeps clean for long."*

> *"It's probably because I value the cleanness and I do not want to break it. Keeping things clean and tidy could bring me a feeling of achievement and being in control."*

The data analysis result supports the first half more, but not the second half. It seems that dirty dishes became more and more, and they also lasted for long, whereas the cleanness did not.

5 DISCUSSION

The main reason for the seemingly not supportive results is that the special experiences did not always emerge at the data collecting time, so there are some experiences not being recorded. This may lead to a reconsideration of data collection strategy. As far as I recognize them now, there are two different data collection strategies: collecting regularly (record once per hour) and irregularly (record for special moments or experiences). The former could allow us to refocus on subtle experiences that we are unaware of, and therefore has the potential to discover new design opportunities from mundane everyday life. The latter could allow us to focus on specific special moments and therefore can be further addressed and create deeper insights.

5.1 Experience of collecting structured personal data

Audio recording and taking pictures cannot fully record the home environment, as I cannot record my own sensible temperature and the smell which are influential in a way. Secondly, some parameters were not set properly. For example,

what I was wearing is in a way representing my haptic feelings (tight or loose, material senses) and the sensible temperature. These subtle experiences were not able to be recorded as well. Thirdly, the weather as a parameter seems contribute less to my home experience than I supposed, except for sunny or rainy days. Lastly, my emotion highly depends on the tasks and things to do instead of the environment. The environment was usually not distinct or special enough to break into my mind so that I could not notice its slight changes.

5.2 Reflections and inspirations

There are some insights of switching between two different roles as an autoethnographer and as a designer. Being an autoethnographer requires genuine honesty to what and how life data is collected, which is exactly as Neustaedter and Sengers suggested [13]. When it turns to being a designer, it would be better to keep an appropriate mental distance from what I've collected, therefore to be objective and also honest to "the old version of me". Moreover, the process of analyzing the collected data could be driven by *curiosity* instead of certainty or universality, especially towards self-collected data. As generating widely applicable knowledge or making precise predictions are neither what autoethnography aims at nor what it's capable of [13], curiosity could drive designer as analysts to analyze and get inspired from interesting patterns, and therefore to design for new possibilities to address them.

The tools to collect are an audio recorder, a note with the parameters to collect, and a camera for taking photos. It does not seem efficient and effective enough to record my home data. Researchers [9, 14] have started to address this issue by developing toolkits that allow for people's self-inquiry and interpretation. Therefore, I want to design an autoethnography toolkit to 1) help me as an autoethnographer to self-probe and record their experience around specific life moments or activities, and 2) assist me as a designer to interpret the collected data and make design decisions.

6 CONCLUSION

This workshop paper describes my use of autoethnography as an approach to lays the ground for creating alternative narratives of my Everyday as an expression of factual, objective recorded data and short experience reports that reflect my emotions. I describe three such distinct experiences and unpack how they create short narratives that are unstable and might change as the data changes.

Now, taking a turn towards the workshop, is this seemingly *personal* data truly personal and also *useful*? While the data is honestly reported and about clearly me, there might be errors or bias of omission and commission that ultimately paint a different picture of me and my Everyday that might even diverge from my experience reports. Next to that, I'm more aware that data can challenge memories and might lead to the reconsideration of an existing narrative of being at home. I hope to discuss this first point more during the workshop. As for the second point, usefulness, I also seek to understand better how data contributes to my research and framing of the design space. While this question needs to be taken into further phases of the RtD process, I hope to discuss this also at the workshop.

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