Allowing the shift to a first person perspective

Edelweiss Juliea
Technical University of Eindhoven
Eindhoven, the Netherlands
E.C.S.Juliea@student.tue.nl

Pom Smit
for Submission
City, Country
e-mail address
P.C.E.Smit@student.tue.nl

Joris Raaphorst
Technical University of Eindhoven
Eindhoven, the Netherlands
J.Raaphorst@student.tue.nl

Malin Winter
Technical University of Eindhoven
Eindhoven, the Netherlands
m.winter@student.tue.nl

ABSTRACT
UPDATED—5 July 2018. This sample paper describes the formatting requirements for SIGCHI conference proceedings, and offers recommendations on writing for the worldwide SIGCHI readership. Please review this document even if you have submitted to SIGCHI conferences before, as some format details have changed relative to previous years. Abstracts should be about 150 words and are required. proceedings, and offers recommendations on writing for the worldwide SIGCHI readership. Please review this document even if you have submitted to SIGCHI conferences before, as some format details have changed relative to previous years. Abstracts should be about 150 words and are required. proceedings, and offers recommendations on writing for the worldwide SIGCHI readership. Please review this document even if you have submitted to SIGCHI conferences before, as some format details have changed relative to previous years. Abstracts should be about 150 words and are required.

Author Keywords
Switching between the perspectives, laddering, thematic analysis, systemic change, first person perspective.

CCS Concepts
• Human-centered computing~Interaction design~Interaction design process and methods

INTRODUCTION
The role of designers is shifting within a changing society, designers increasingly have to integrate knowledge, skills and attitude to be able to transform the world, however to transform today's complex systems, we have to be able to understand the impact of our designs on those complex systems [11].

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Tomico et al. [11] developed an approach based on the third, second and first person perspectives, where designers design 'for' the user, a third person perspective (TPP), 'with' the user, a second person perspective (SPP) and from 'within' the system, a first person perspective (FPP). This approach is further elaborated on in later studies, showing the value of perspective transitions and clusters [9], and the characteristics of the perspectives and their transitions with regards to empathy [9].

Those studies also indicate that designers struggle to use the FPP, resulting in little application of the perspective. While several design methods exist to support the FPP and the empathic formation compassion developed by Smeenk et al. [2019] explicitly sought to help designers to legitimately use their own experience in empathic design. No evidence was found of research that explains what exactly makes it difficult for designers to integrate their personal experience.

Before new methods are developed to guide designers in the use of their experience as part of the design system, we first have to understand why they struggle with its application. Especially for the new students of design, as they need a new skill set to transform ever increasing complex systems.

The purpose of this study was to explore and describe the barriers of applying the FFP that master students experience at the department of Industrial Design (ID) of the Technical University of Eindhoven (TU/e). The study sought to explain in which way those barriers were hindering the students to apply the FPP.

This paper provides, based upon the found barriers, recommendations for education to implement, in order to lower the barriers for students when applying the FFP. By providing these we want to support students in switching between the three perspectives as described by Tomico et al. [2012]. The given recommendations are first of all interesting for the department of ID at the TUe, but we also believe that they hold value for other design departments that explicitly aim to design for complex and societal innovation.

RELATED WORKS

Changing design field

In a constantly changing society, problems, crises but also opportunities emerge to develop our society [11,6]. Within this world, designers have the ability to go from vision to making, put research into practices and make societal change happen [11]. The changing role of designers is reflected in the vision of the department of ID at the TU/e, leading professors of the department indicate that designers have to be educated in integrating knowledge, skills and attitude in order to transform rather than to solve problems [4]. It is also mentioned that they want to educate students who are able to apply these new technologies in ways that are new and daring, driven by a design vision of how our world could be, and validated afterwards by solid user research [4,5].

Designers are increasingly asked to design for complex situations rather than to deliver a single product [3]. Product design processes no longer provide the right perspective to engage with social systems [3]. Designers have to give form and meaning to things but also understand how they impact social systems [3]. The ability to create empathy and meaningful social impact has been largely agreed as key and is gaining traction in the field of HCI and interaction design [8, 12]. This previous research shows that new research methods are needed to grasp the complexity of designing for social systems.

The usage of the perspectives

Designing for those social systems relies on the openness and different perspectives that different backgrounds afford as it widens the solution domain [11] The approach of Tomico et al. [2012] consists of three different perspectives designers can take during their design process. On the basis of one case example they illustrate the employment of the three perspectives in the case of designing an innovative solution for using energy in rural areas of India.

Building upon the perspective approach, Smeenk et al.[2016] further improved the understanding of the perspectives and the role they can play in empathic design processes. Through a case study targeting mourning, they identified the value of transitions between perspectives and introduced perspective clusters and how they can give flexible guidance in design processes [8]. Another study shows how co-reflection, lo-fi prototyping and value-flow modelling can help in the shift between the TPP and FPP [3].

A study has further used the mixed perspectives approach and so developed the empathic formation compass which supports emphatic immersion [9].

Smeenk et al. [2016] shows that shifts from and to the first person perspective are made less as between 2nd and 3th. Furthermore, the empathic formation compass as elaboration on the mixed perspective approach, among other, helps designers legitimately utilize relevant personal experiences [9]. Also, in the field of HCI, research has been done on the integration of a designer's personal experience in the development of interaction design [12].

1st person design methods

A little amount of research has focused on the integration of a designer's personal experience in design [12] . A method to apply the FPP is for example autobiographical design through which the lived experience of designers can bring more detail to interaction design. Furthermore, various design methods exist and are promoted to include designers personal experience in the design process [2]. First person research methods turn the researcher into the researched subject, and those methods include for example duoethnography, autobiographical design, autoethnographical research through design, micro-phenomenology, somaesthetics, design memoirs and more [2].

METHOD

To elicit the barriers that students encounter when applying a FPP in their design projects during their time at the TU/e. A qualitative study of semi-structured interviews was performed based on the laddering method [7]. Other methods that have been considered were the repertory grid and cultural probes. Laddering was selected for its potential to elicit the drivers behind the barriers of applying a FPP. In retrospect the method did not allow us to fully elicit these drivers, but it did elicit many of the barriers and nuanced reasoning behind them.

Sampling

The research population selected was a group of ID master students within the academic context of the TU/e. This context was selected so that the results would be relevant for the faculty of the TU/e with the goal to improve the curriculum of the program.

To understand the barriers of using the FFP, it is required that the sample group is familiar and somewhat experienced in applying the design process. ID master students have been educated in applying different variations of this process and have at least three years of experience in various design projects. As such a purposeful sampling was applied to the extent that only ID master students within the TU/e faculty were allowed to participate. Since the study aims to create understanding of the phenomenology surrounding the perspectives through qualitative research, a high variation in participant backgrounds was desirable during the selection of participants. Table 1 below shows relevant parameters in which the participants differentiate from each other.

Differentiation	Sample
Nationality	2 foreign, 3 domestic
Education background	2 academic, 1 engineering, 1 arts, 1 industrial product design
Gender	3 woman, 2 men
ID squads	2 TP, 1 vitality, 2 Inclusive design & thoughtful technology.

Table 1. Sample characteristics

With a population of 164 ID masters students (Opleiding123, 2021) the participant selection had some characteristics of convenience sampling, as the researchers reached out from within their personal social network. An attempt to mitigate a bias within this selection was tackled by having each of the four researchers select at least one person from their personal network. With the 5 participants selected, it was decided after the interviews that a sufficient coverage of variety in backgrounds was reached and that follow-up was not required as the data was rich enough to answer the research question.

Data collection

The semi-structured interviews were structured in four phases, (1) introduction, (2) eliciting distinctions, (3) prioritising and (4) eliciting consequences and values. The first three phases of the interview were predefined questions, and the final phase was characterised as an open interview. Each interview took between 40 to 60 minutes to complete. A short explanation of the four phases will be described below.

1. *Introduction.*

At the start of the interview an explanation of the definition of the three perspectives by Tomico et al. [2012] was presented to the participant. Afterwards, this definition was compared to their own definition of the perspectives. To support the participants with the understanding of the definition of Tomico et al [2012], a handout with a brief summary was offered to them (Appendix. 1). To mitigate risk, the interviewers informed the participant that this definition of the 1st, 2nd, and 3rd perspective was not the only one in the design spectrum. However, this particular definition was only the focus of this research.

2. Eliciting distinctions.

Two different techniques were used during this phase to elicit the distinctions: 'preference-consumption differences' and 'differences by occasion'. A third technique, 'triadic sorting', was considered but was left out to reduce the interview length. During this phase the researcher recorded all potential distinctions that were discussed by the participant. To ensure this was properly executed, all interviews have been conducted by two researchers, one as an interviewer and one as a minutes secretary.

2.1 Preference-consumption differences.

By asking the participants why they prefer one of the perspectives over the other, many of the key distinctions a participant experiences are discussed. Three questions are used to elicit differences between the perspectives:

Q1. What is your order of preferences with regards to using these perspectives?
Q2. Why do you prefer the first one over the second?
Q3. Why do you prefer the second one over the third?

2.2 Differences by occasion.

By asking the participant which of the perspectives were used during a recent, meaningful context, and why they did or did not use certain perspectives, distinctions based on situations can be uncovered.

Q4. Consider your main project from your previous semester, which of the perspectives did you use? Can you tell us why you used them?
Q5. Which of the perspectives did you not use? Why didn't you use them?

3. Prioritizing

Once a satisfactory number of distinctions have been mentioned, the minutes secretary presented all the mentioned distinctions on small paper cards. First, the participant was asked if the distinctions were interpreted correctly and if they felt the set was complete or if they wanted to add something to it. Then the participant was asked to make a ranking of the distinction based on the following questions:

Q6. What are the 3 most important differences that prevent or limit you in the use of a 1st person perspective at a university project?

This question is essential to pivot the interview towards eliciting the barriers of applying an FPP.

4. Eliciting consequences and values

After the participants finished their ranking, the open part of the interview started. This part of the interview is only reproducible in the sense of technique, as it is a repetition of the question:

Q7. Why is this an important limitation to you?

Per participant, the three top ranking distinctions were covered; Q7 was repeated until it started to cycle back to a previous answer. The question was repeated at least five times. The goal of this exercise was to elicit the drivers and reasoning behind why the most relevant distinctions were barriers when trying to apply the FPP.

Data analysis

After transcribing the five interviews, each of the four researchers coded all five of the interviews. For the coding a framework was applied based on the literature described by Reynolds and Gutman [1988]. The responses per string of 'why' questions are ordered in so-called ladders; each response can then be classified as distinctions, consequences, and values.

To ensure consensus among the researchers regarding the code definitions, a codebook was created. Each of the four code lists were merged in an affinity diagram. Afterwards, the meaning behind each cluster was discussed and concisely formulated. The codebook is constructed by 23 codes divided in 12 preliminary subthemes. The code was checked for accuracy and consistency by re-coding the interviews using the codebook. Each transcript was broken down per code, resulting in a list of supporting citations per code. Next to this an inventory was created to map which codes were mentioned during an interview (Appendix. 2).

The laddering theory of Reynolds and Gutman [1988] allows to understand the relation between distinctions between the

concepts and their values using an implication matrix and hierarchical value mapping. Since the research was aimed at eliciting barriers and as the perspectives were very abstract discussion topics, the researchers found that it was not appropriate to elicit the values behind the barriers, as such it was not appropriate to proceed with an implication matrix and HVM. Instead, it was decided to use thematic analysis to get an understanding of their commonality in experiencing the FPP [1].

When defining the codebook, themes naturally started to occur during the creation of the affinity diagram. This supported the discussions among the researchers in the creation of the final thematic analyses.

FINDINGS

In the thematic analysis, four themes were identified within the coding, each including multiple subthemes. The themes and associated subthemes show in which way different types of barriers are experienced by the participants. The themes and subthemes will be described in the following section.

Application of the FPP in complexity

During the interviews, participants felt that the FPP was not suitable for the complex systems which they were designing for. Their drive to "design good" clashed with the biased perspective that they saw FPP would include. Participants argued that the FPP had a too narrow viewpoint of the context and user, which they saw as a barrier for applying the perspective. Therefore, we divided this theme into two sub-themes accordingly.

Being biased from the designers' perspective

Participants mentioned that a barrier for applying the FPP is that they believe not all environmental factors can be replicated to give the designer the same experience, feelings, and mindset as the user. This leads to a limited understanding of the situation by the designer and therefore a biased perspective.

"The most complex thing on the first-person perspective is that, how can you not be biased on your design." – P1

"Yeah, it's the personal biases is the problem of first person because I might have a conception of what such society is like, and I've only been here for six months, so why does that validate?" – P2

"…but to empathize [with the user], you have to empathize with the rest of that person's life." – P3

"I think that the FPP always has a lot of bias, because you design from yourself. Not only as a person, but also as a designer." – P5

"You can try to experience [a person], but you will never know how it feels to be this person." – P5

Narrow viewpoint of context and user

Another barrier for applying the FPP was that this perspective would not include enough perspectives from other stakeholders. Other perspectives, SPP and TPP, were preferred to empathise with the user and the FPP would give a too narrow view of this user.

"…if you only use your own thoughts, I think you are missing a lot." – P1

"… I don't have a good enough grasp of the topic I'm designing for." – P2

"I have never felt like I was part of, or within the context." – P4

"And from me as a person I find it too narrow." – P5

Identity and vision of designer

Most participants felt that the FPP was not always useful to apply in their design research processes, regarding their altruistic attitude.

Inclusivity

Participants didn't want to take the designers' FPP, as this is linked to a too narrow and biased perspective. Due to an altruistic mindset of wanting to be "a good person" and wanting "to help someone else" through design, resulted in the need of designing for the user in an inclusive way.

"If I'm designing for someone, I'm not designing for me." – P1

"Eventually in the design process you have to consider all perspectives and context, so it can not be optimal for one person." – P3

"I am someone who will always go with what the stakeholder wants." – P4

"I find it important that the solution shows inclusivity." – P5

Added value seems limiting

This altruistic mindset also limited some of the participants in seeing the added value of the application of the role of FPP as they believe that they can't replicate all factors.

"If I'm designing something for someone, I feel that I really need to understand what someone feels or what is someone needs. Understand for helping and providing." – P1

"But the predominance in the choices I make will come from the input of stakeholder, not of my own experiences." – P4

"I want to hear from people what they want, I could have experienced it, but that does not mean this is an accurate experience or thought." – P5

External barriers

Furthermore, the participants experienced various external barriers when applying the FPP. With external we mean outside the control of the designer.

Time and place

Participants experienced barriers regarding the time they had when applying the FPP in a design/research process. This included the time-intensity of the application, the time-limitations of university projects and concluded that the FPP was not time-efficient. The participants also experienced some difficulties with placing themselves within the system

as the distance between the context and the university setting was too great.

"Because we only have half a year for a project, you really have a time-limitation." – P3

"Because I work with topics where I'm not involved in, so then it is hard with the time we get during the project to really use within." – P4

"It is really a time-intensive thing [to apply the FPP]" – P4

"I know I can pass my project if I would not [apply the FPP], so why would I do it?" – P4

"I have never been part of [the context] as a designer so then you distance yourself from it." – P4

Professional expectations

One participant found that the FPP was not academically strong enough to be a validation tool within a design/research process. Another participant saw the expected expertise as a barrier and could not achieve this with the FPP.

"…the way of convincing people in the academic university setting is by using previous literature, previous research as the backbone for why your project has any reason for existing" – P2

"If you approach [a user] within a context (…) then there are some expectations of expertise. I'm a student, I don't know what I'm doing." – P3

Knowledge the definition of FPP

Most participants felt unfamiliar with, or having a lack of knowledge about, the application of the FPP, this resulted in an uncertainty to apply the FPP in the design/research process.

Familiarity with FPP

During the interviews, participants explained their uncertainty about their familiarity with the definition of the FPP. Some participants already applied this perspective in their design processes without being aware.

"Because I see that the first person perspective is not something natural for me." – P1

"And therefore, if I had more knowledge about it or if I had more examples of it, I would perhaps be more confident of doing that." – P4

DISCUSSION

With the currently new developing world, designers have to put their research into practice and make societal change happen [11]. The department of ID at the TU/e strives to prepare the students to design for these complex situations to make a positive social impact. However, as this research shows, most students struggle with the role of their own design intuition in those design processes.

Based on the barriers we found, we elaborate on three implications for education and give recommendations for education.

Value of FPP

While the usage of a designer's personal experience has been shown a legit source of information in interaction design [11] and the FPP approach was necessary as shown by Tomico et al. [2012], not all students experience the application of FPP has been valuable enough in order to overcome the external barriers such as time limitation.

However, as students also indicated their relative unfamiliarity with the FPP, we believe students should be equipped with more specific awareness of the value of the FPP. The participants that were interviewed were not all aware of the added value and were most likely to put a boundary to put real effort in engaging in activities regarding the FPP.

FPP and complexity

Students at the department seem to have aligned visions, where doing good for others and helping others has been shown as main drivers. However, it seems that students among others, due to a lack of knowledge and familiarity about the FPP, do not see how this perspective can be applied to grasp the complexity and different aspects of the complex systems in their design process.

We propose that education should equip students with more knowledge about the application of the FPP in collaboration with the other perspectives. Tomico et al. [2012] specifically came up with the perspective approach to deal with the complexity of social systems, this complexity seems especially as a main barrier for students to apply the FPP. Furthermore, several studies mentioned benefits of switching between perspectives to overcome the potential bias of only applying a FPP [3, 8, 9].

Practical implementation

The lack of understanding of the application of the FPP creates an uncertainty about the legitimacy of the designer's own intuition and to apply the FPP in a semi-professional context.

We believe that education has to put effort in giving the students more insights in the practical implementation of the FPP to overcome students' insecurity. We propose that methods that support the application of the FPP, such as duoethnography, autobiographical design, autoethnographical research through design, micro-phenomenology, somaesthetics, design memoirs, etc. should become an explicit part of the design curriculum.

Besides, participants mentioned several external constraints to not apply the FPP in their design process due to the time restrictions and their uncertainty regarding professionalism.

Limitations

One of the results of this study is the lack of understanding of the FPP by the participants. We tried to tackle the potential misunderstanding of the perspectives with providing a hand-out with the definitions of the perspectives. This lack of knowledge could let them apply the FPP in their

design projects without being aware, and so, leading to incorrect reflection on the barriers experienced.

To give an example of how we believe that the lack of knowledge has influenced their reflection, prototyping as discussed by Frens et al. [2012) is a valuable technique for shifting from the third to the first perspective. Based on our own experience as master design students, we can most likely say however that the participants have probably unconsciously included prototyping in their processes.

In retrospect we understand that the FPP can be applied in many ways, like prototyping or autobiographical ethnographic design. The way we frame how the FPP is applied within a project can have a high impact on the perception by respondents on the mitigation of risks like bias and the external barriers. Based on our reflection of this, we think there is a link between the framing of the FPP and the lack of knowledge experienced in application. This element was not acknowledged by the researchers during the research but should be part of the scope for future work.

There is a divide within the ID faculty, 'systemic change' and 'future everyday', squads represented in our research are all part of the 'systemic change' research group. Systemic change focuses on the influence of design on the ecosystem, while future everyday focuses on the influence of design on everyday life. Reflecting on the findings, we believe that it might be possible that the focus of the research group the respondents are part of, influence the focus of their design processes. Because the systemic change research group seems to approach complexity differently than the future everyday group.

Future research

Furthermore, this study mainly focused on the barriers experienced by students to use the FPP. Nevertheless, results show that a bigger focus should lie on shifting between the perspectives to overcome the potential bias that people experience in order to apply the FPP correctly. We suggest that future research should look into the potential barriers experienced in switching "to" and "from" the FPP.

We suggest that future research does not only draw insights on students' reflection via interviews, but it should be worthwhile to triangulate the students personal experience, with data about their design processes.

CONCLUSION

REFERENCES

1. 1. Virginia Braun and Victoria Clarke. 2012. Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), APA handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological 57–71. American Psychological Association. DOI: https://doi.org/10.1037/13620-004
2. . Audrey Desjardins, Oscar Tomico, Andrés Lucero, Marta E. Cecchinato, and Carman Neustaedter. 2021. Introduction to the Special Issue on First-Person Methods in HCI. ACM Trans. Comput.-Hum. Interact. 28, 6, Article 37 (December 2021), 12 pages. DOI: https://doi.org/10.1145/3492342
3. Joep Frens, Oscar Tomico and John Zimmerman, 2012. Designing for Social Systems: Experiential Approaches. Department of Industrial Design, Eindhoven University of Technology, the Netherlands.
4. Caroline Hummels and Joep Frens. 2008. Designing for the unknown: A design process for the future generation of highly interactive systems and products. In DS 46: Proceedings of E&PDE 2008, the 10th International Conference on Engineering and Product Design Education, Barcelona, Spain, 5 pages.
5. Industrial Design. Eindhoven University of Technology. (n.d.). Retrieved April 14, 2022, from https://www.tue.nl/en/our-university/departments/industrial-design/
6. Ezio Manzini. 2015. Design, when everybody designs: An introduction to design for social innovation. MIT press, Cambrigde, MA.
7. Thomas Reynolds .& Jonathan Gutman. 1988. LADDERING THEORY, METHOD, ANALYSIS, AND INTERPRETATION. Journal of advertising research.
8. Wina Smeenk, Oscar Tomico and Koen van Turnhout. 2016. A systematic analysis of mixed perspectives in empathic design: Not one perspective encompasses all. International Journal of Design, 10(2), 31-48. http://ijdesign.org/ojs/index.php/IJDesign/article/view/2543/738
9. Wina Smeenk, Janieke Sturm and Berry Eggen. 2019. A comparison of existing frameworks leading to an empathic formation compass for co-design. International Journal of Design, 13(3), 53-68. http://www.ijdesign.org/index.php/IJDesign/article/view/3406
10. Thijsen, E., 2021. voltijd master Industrial Design - Technische Universiteit Eindhoven. Opleiding123.
11. O. Tomico, V. O. Winthagen, and M. M. G. van Heist. 2012. Designing for, with or within: 1st, 2nd and 3rd person points of view on designing for systems. In Proceedings of the 7th Nordic Conference on Human-Computer Interaction: Making Sense Through Design (NordiCHI '12). Association for Computing Machinery, New York, NY, USA, 180–188. DOI:https://doi.org/10.1145/2399016.2399045
12. Xiao Zhang & Ron Wakkary. 2014, June. Understanding the role of designers' personal experiences in interaction design practice. In Proceedings of the 2014 conference on Designing interactive systems (pp. 895-904).

APPENDIX I: HANDOUT

3rd person perspective (designing 'for')

For designers, employing the 3rd perspective means being receptive and designing for a society in general:

We receive a design brief, think about many alternatives with regard to means and ends in designing for the user.

Based on third-party means (such as, literature research, interviewing experts, sending out a survey) the designer is able to set up a (future) hypothesis to image and develop new ends (e.g., vision, design directions, ideas, criteria, concepts, prototypes) and to construct theoretical framing.

Furthermore you evaluate your design in a designers' context.

2nd person perspective (designing 'with')

For designers, employing the 2nd perspective means designing with the user.

Designers get into contact with the user group, organize workshops and conduct co-create sessions with the users.

This collaboration with stakeholders allows the designer to be inspired, to build an empathic understanding, and to construct an empirical framing of the user situation and the stakeholders' (current and past) values within it.

1st person perspective (designing 'within')

For designers, employing the 1st perspective means being committed:

They are "part of" and "within" the design context and include informal autobiographical reflection, based on his or her own (current and past) experiences within this context.

The designers get personally involved with the stakeholders and take responsibility, finds intrinsic motivation, uses intuition, and constructs an intuitive framing to ensure each stakeholder is valued within the system.

This perspective is about what a designer experiences and feels within a context. This perspective involves intuition and drives intrinsic motivation.

APPENDIX II: HANDOUT

	Code	Description	P1	P2	P3	P4	P5
Context							
1	Grounded in context	Understanding of the context is important (which is not achieved by FPP)		x	x		x
2	Multiple perspectives	As many perspectives as possible need to be taken into account (which is not achieved by FPP)	x		x		x
3	Various aspects of the context	FPP will not allow you to grasp enough aspects of the context		x	x		x
Insecurity							
4	Comfortzone	Scary to do something that one I am not familiar with			x		
5	Distrust intuition					x	
6	Expected expertise	Feeling vulnerable as I am expected to be an expert	x		x		
Limited empathic immersion							
7	Limited understanding from designers experience	Experiencing is not the same as feeling what the users feel			x	x	x
Familiarity							
8	Awareness of the existence perspective	Familiar with the definition of the perspectives	x				
9	Unnatural	Using the FPP does not feel natural to use	x				
10	Knowledge about the application	Specifically the application of the FPP	x			x	
Distance							

11	Distance to context	Does not feel connected with the context topic				x	
Altruism							
12	Helping someone else		x				
13	Being a good person		x				
14	Designing not for myself, but for another		x			x	x
Biased							
15	Bias		x	x		x	x
Inclusiveness							
16	Take a wide userscope into account						x
17	Inclusivity						x
Academic application							
18	Academic validation	external constraints experienced by the academic organization		x			
Validation							
19	Personal validation	Validation for the designer him/herself, that what is designed the right thing for the user		x			x
Time							
20	Efficiency	FPP feels less effective than the other perspectives				x	x
21	Time restriction	To little time in project at the TU/e			x	x	x
22	Time intensive	Empathic immersion with FPP costs is time intensive			x	x	
Narrow							
23	Too narrow viewpoint			x	x		x

APPENDIX III: CONSENT FORMS

Subject Consent Form

User study

The thresholds of using the first person perspective

You are participating in a user study that investigates the preference of the usage of the three design perspectives as described to Tomico et al. (2012) and especially the thresholds experienced of using the first person perspective. We as researchers will conduct an interview of around 45 minutes to better understand your usage and preference of the perspectives and the thresholds you experience in using the first person perspective.

1. I have been given information and I understand what this research is about. I was also able to ask questions. My questions have been answered to my satisfaction. I had enough time to decide whether to participate.
2. I know that participation is voluntary. I know that I may decide at any time not to participate after all or to withdraw from the study. I do not need to give a reason for this.
3. I know that some people can access my data. These people are Edelweiss Juliea, Joris Raaphorst, Pom Smit, Malin Winter, Panos Markopoulos(supervisor) and Regina Bernhaupt (supervisor).
4. I consent to gathering and usage of my data for scientific publication and additional research on my data.
5. I consent to my data being stored at the research location for another 5 years after this study.
6. I consent to the making of audio recordings on which I am unrecognizable during the interview. This will only be used for research purposes. The recordings will be deleted after they are processed.

I want to participate in this study.

Name of study subject:

Signature: Date: 22/03/2022

I hereby declare that I have fully informed this study subject about this study.

If information comes to light during the course of the study that could affect the study subject's consent, I will inform him/her of this in a timely fashion.

Name of investigator (or his/her representative):

Signature: Date: 22 / 03 / 22

Subject Consent Form

User study

The thresholds of using the first person perspective

You are participating in a user study that investigates the preference of the usage of the three design perspectives as described to Tomico et al. (2012) and especially the thresholds experienced of using the first person perspective. We as researchers will conduct an interview of around 45 minutes to better understand your usage and preference of the perspectives and the thresholds you experience in using the first person perspective.

1. I have been given information and I understand what this research is about. I was also able to ask questions. My questions have been answered to my satisfaction. I had enough time to decide whether to participate.
2. I know that participation is voluntary. I know that I may decide at any time not to participate after all or to withdraw from the study. I do not need to give a reason for this.
3. I know that some people can access my data. These people are Edelweiss Juliea, Joris Raaphorst, Pom Smit, Malin Winter, Panos Markopoulos(supervisor) and Regina Bernhaupt (supervisor).
4. I consent to gathering and usage of my data for scientific publication and additional research on my data.
5. I consent to my data being stored at the research location for another 5 years after this study.
6. I consent to the making of audio recordings on which I am unrecognizable during the interview. This will only be used for research purposes. The recordings will be deleted after they are processed.

I want to participate in this study.

Name of study subject:

Signature: Date: 22 / 03 / 22

I hereby declare that I have fully informed this study subject about this study.

If information comes to light during the course of the study that could affect the study subject's consent, I will inform him/her of this in a timely fashion.

Name of investigator (or his/her representative):

Signature: Date: 22 / 03 / 22

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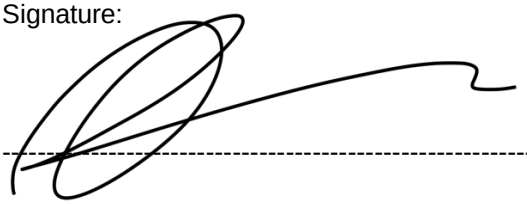

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