

UNFOLDING PERSONAL STANCES ON A DISTANT CLIMATE DEBATE THROUGH PROBES

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ABSTRACT

Climate questions related to everyday life are comprehensive and can be challenging to capture during the short timespan of an interview. In order to create a space and opportunities for empathic dialogues we carefully designed a set of probes to capture facts and unfold reflections of the everyday themes: motivation, food, housing, transport and dark CO₂ thoughts. The probe set consist of five objects designed for the participants to add their routines to. They were handed out one week prior to the interviews and functioned as dialogue tools during the interview session. The probe methodology resulted in deep reflections of personal beliefs, values and attitudes related to sustainability and everyday life. We consider this method due to its depth of reflection facilitation, valuable when creating insights for participatory innovation processes.

INTRODUCTION

For about a decade, international research efforts have explored various ways of creating awareness, visualizing and motivating pro-environmental behaviour in various ways (Froelish 2010, Disalvo 2010, Gustafsson 2005, Katzeff 2013, Broms 2010). Some of these explored ways have been critiqued for having a narrow view of users, being distanced from the messy

everyday life and being disconnected from actual challenges (Brynjarsdottir 2012, Strengers 2014, Mont 2010).

Positioned in the above, we have, during a two year design research project, explored the aesthetics of and tension between climate goals and carbon dioxide combined with quantified self to uncover what it feels like for people to access this type of information. The design research process consisted of a feasibility study with expert interviews, pre interviews with participants supported by probes, a design process developing concepts, a contextual study followed by exit interviews and an expert workshop. In this paper, we focus on the pre-interviews, the supporting design probe methodology and what they resulted in. The objective of the pre-interviews was to capture the participants' lifestyles and daily habits in order to match this with their upcoming experience of receiving real time feedback on their carbon footprint, but also to encourage a higher reflection about the participants' beliefs, values and attitudes. Another objective was to invite the participants to a space for them to 'reimagine themselves' (Strengers 2014) in a dream situation they would prefer to live in.

During the short timespan of an interview, some topics, such as articulation of personal reflection, beliefs, values and insights might be difficult to uncover. Questions about the climate and how it relate to everyday life and how it connect to society is comprehensive and hard to relate to. To facilitate a space for a dialogue between participant and designer, we explored the skillset of the designer. Designers might have limited knowledge and experience in anthropology and its method, but knowledge of how to embody themes and aspects into objects. We apply the methodology of design probes as a means to facilitate a space to unfold personal stances of how climate questions and issues relate to the participants' everyday life and whether they guide the participants in their decision making.

Through this paper we want to showcase the opportunities of the design probe method in facilitating reflective dialogues regarding people's everyday life, climate goals and CO2e emissions. Firstly, we will present the theoretical frameworks we position our work within. Next, we briefly describe the design rationale, process and design of the probes. We present the setup of the interviews and the analysis of the data. The results are presented in text and images and based on these results we discuss the potential and shortcomings of the methodology.

LITERATURE AND THEORY

Our aim is to understand our participants' daily routines, but also to encourage reflections with questions like: what it means to be human and what being in this world is like. Such questions were previously just addressed by anthropologists, social scientists and others working within humanities. However, design has been moving more and more towards these type of questions. This, however, does not necessarily mean to adapt the same methods to address these questions. We should not attempt to do the same as the social sciences do, instead, we feel that we have to build from our own background and design methods in order to try to reach a level of understanding that touches upon values, beliefs, attitudes, lifestyles and daily routines.

In order to have the potential to reach such a level of understanding empathy is required. For Mattelmäki and Battarbee (2002) design empathy can be seen as a personal connection between designer and user, a connection beyond seeing participants as test subjects but rather as people with feelings. Wright and McCarthy expanded on this notion of empathy, informed by Bakhtin's dialogical notion of 'aesthetic seeing', as a form of 'creative understanding' of the other that draws on aesthetic sensibilities. For Bakhtin, aesthetic seeing is different from scientific inquiry. It involves a felt, valuational response from one's own particular, unique value position to the other (the participant) who is also seen as a separate and unique centre of value. This cannot be a neutral, indifferent contemplation of the other. On the contrary: it can sometimes involve strong feelings between self and other and is certainly always more than instrumental contemplation. It is about entering a dialogical space. According to David Bohm's theory of dialogue (Nichol 2003), people take a position within a dialogue and they will keep this position relatively static. Even though this position is negotiable, people often hold onto their stances. It is for this reason that something needs to intervene to create a negotiable dialogical space. Such a dialogical space might occur through an interview. However, during the short timespan of an interview, some topics, such as articulation of personal values might be difficult to uncover. Climate questions related to everyday life is

comprehensive and complex to unfold and we see a need for a tool that facilitates and encourage reflection prior. The learning theory proposed by Kolb (2005) is based on social knowledge that is created and recreated in the personal knowledge of the learner. In experiential learning, learning is the process 'whereby knowledge is created through the transformation of experience' (Kolb 2005: pg.193). Kolb's theory is amongst others based on the work of Dewey. Dewey introduced the concept of primary and secondary experiences (Dewey 1965). Dewey argued that in order to obtain practical knowledge, one needs to move back and forth between practice (primary experience) and reflection (secondary experience). Primary experiences are experiences that result from a minimum of incidental reflection and that occur through practice. Secondary experiences are a consequence of continued and regulated reflective inquiry (Dewey 1965). Schön (1983) promoted the same idea through the process of reflection-in-action. He said that obtaining insights and understanding occurs through iterations of the stages: appreciations, actions and re-appreciations. This connects to Kolb's idea that all learning is relearning. As Kolb states, learning is best conceived as a process, rather than as its outcomes. Kolb introduced grasping experiences and transforming experiences (Kolb 1984). Transforming experiences are similar to the actions as introduced by Schön and switches between active experimentation and reflective observation. In order to obtain rigour in reflection-in-action, Schön (1983) suggests to create a virtual world. This virtual world is meant to be leisurely examined. The virtual world aims to provide space to slow down in order to create time for insights to arise. Within this virtual world, all moves are reversible, so mistakes do not have a consequence.

We created those reflective virtual worlds through design probes. There is a diverse set of visions on what probes are, for example: cultural probes (Gaver et al. 1999), design probes (Wallace et al. 2013; Mattelmäki 2006) and empathy probes (Mattelmäki and Battarbee, 2002). In this research we have taken Wallace et al.'s (2013) notion of design probes. We considered this notion most relevant since these probes strongly emphasise empathy. Mattelmäki and Battarbee (2002) introduced empathy probes - suggesting an empathic approach to probes. However, they designed these probes in order to communicate an empathic understanding of the 'user' to designers of a client company. They were consultants in the process: a bridge between designers and users. This indirect approach stands far away from what we are trying to achieve and the direct and personal notion of Wallace et al. (2013), with the potential to create a dialogical space between designers and 'users', is therefore more relevant for this project. The design probes introduced by Wallace et al. (2013) are based on the cultural probes developed by Gaver et al. (1999). Gaver et al.

introduced cultural probes to participants to provide inspiration for the designer for further design activity. Unlike Gaver et al.'s (1999) cultural probes, design probes are deliberately and specifically crafted towards phenomenon one wish to address Wallace et al (2013). Wallace et al. (ibid) introduced them as tools for empathic understanding. Each artefact is designed specifically to relate to a specific question and context through its materiality and form. According to Wallace et al. (2013) it is in this materiality that the strength of the design probes lies. Through the materiality of the technique, they state, the ability to be creative is facilitated and it supports exploration, reflection and expressions in subtle and gentle ways. It enables a question to be framed in a specific way. It provides a structure that facilitates participants' creativity and response. The materiality of design probes also helps to physically create a space that stimulates thinking differently about a topic. At the same time a unique environment can be created for dialogue between researchers and participants. Wallace et al.'s (2013) notion of design probes suggests that probes can facilitate a deep engagement and enquiry around what is personally meaningful. This strongly connects to our ambition to get a deep insight into how our participants connect to their carbon footprint on a holistic level. In our work we build upon Wallace's (ibid) view of probes as a mean to co craft, add upon and unfold (in our case) everyday life and climate reflection. Critique of previous eco-feedback technologies have been their disconnection from everyday life and one suggestion have been to articulate how to create a space to 'reimagine yourself' (Strengers 2014) and to rethink your lifestyle.

METHOD AND DATA

Building upon Wallace's et al.'s (2013) notion of probes as a mean to articulate what is personally meaningful, the design rationale of the probes was to capture the participants everyday lifestyle and to give space to the

participants to articulate their dream situation and higher reflections. The two strands are deliberately chosen to visually articulate the dissonance between their lifestyle today and how they would render their dream situation, values and beliefs. Initially we built the interview guide in the interdisciplinary research team together with designers, an anthropologist and developers. The categories of the pre-interviews were: (1) the participants' overall perspective on sustainability and the motivation to partake in the study, (2) food, (3) transport, (4) housing and (5) dark CO2e thoughts that they might have. The research team then co-created the probe-set through 3 workshop session. Theme 1 and 5 are bigger overarching themes and theme 2,3,4 were (i) to capture the lifestyle of the participants and (ii) to give space for the participants to articulate their dream situation if they would 'reimagine themselves' (Strengers 2014). 2, 3 and 4 therefore contained objects that visually asked the participants' about their current situation as well as about their dream situation. We designed the probe kit to be added upon and co-crafted by means of different modes such as writing or illustrating or to take pictures with a small polaroid camera. The probe set consisted of 5 objects on tray, a polaroid camera and a pen (see sample figure 1).

Theme (1) Motivation about overall perspective on sustainability was embodied through a glass jar with a note attached to it saying 'motivation'. We were initially thinking of the metaphor of a memory jar. The participants were asked to put whatever they wanted in the glass jar to illustrate their motivation to engage in sustainability.

Theme (2) Food consisted of a set of tableware. An old style decoration print was printed on thick paper and cut out into plates. The big plate was attached to the tray and had the name food philosophy printed upon it. There was also a printed line saying: articulate your food philosophy in any way you prefer. There were



Figure 1: The design probe consisting of 5 objects addressing transport, food, housing, motivation and dark CO2 thoughts.

furthermore 7 smaller plates named monday-sunday were the participants were asked to write, draw or take a picture of what they eat during the week. The food philosophy plate was designed to capture higher reflections (like beliefs, values and attitudes). The 7 daily plates were designed to capture facts, lifestyle and habits, useful to plan the study and to understand the participants' everyday life.

Theme (3) Mode of transport. Transportation was visually embodied as physical big A and a big B standing on a distance from each other (fig). They were linked by two lines from A to B. They were designed from the expression of getting from A to B. One of the lines had a note saying transport today addressing facts and the other line had a note saying dream transport addressing their dream situation. The lines had small clothes-pins on them so that participants could hang pictures or illustrations on the lines.

Theme (4) Housing situation was embodied as a 3D printed shell shaped as a traditional house icon. On the inside a paper was mounted asking for today's floorplan. On the outside a paper was mounted asking for the participants' dream housing situation. This was meant to encourage higher reflections (beliefs, values, attitudes). A small booklet shaped as a house was placed in the house asking for information relating to their housing situation like the size of the house, electricity use, energy source and who is included in their household (lifestyle and habits).

Theme (5) Dark CO₂ thoughts was captured as a little black box made of wood. It was sealed thoroughly with a small thread giving the affordance that it could and should not be opened. It had a number of small notes hanging with thread for the participants to write down their concerns. On the top there was a small opening to put the notes in.

A Schedule visually represented like a calendar day was used as a tool during the interview to capture the daily routine of the participants. The metaphor of the tray was used to articulate it to be the receipt of your total carbon footprint. We designed it as a big cloud.

The participants were recruited through a conceptual movie in which we aimed to address different potential participants, eg. technology oriented participants, participants interested in sustainability questions as well as people guided by information. We spread this movie through our extended social media channels. The first seven people that applied were selected but we ended up with six, as one dropped out. A short description of the participants:

Participant 1 Lives in a two room apartment together with her boyfriend just outside Stockholm. She is in her 30's and works at a vegan café. She is very aware of social injustice and many actions in her daily life focus intentionally on sustainability e.g buy second hand

clothes, carefully selecting food and trying to save energy.

Participant 2 Lives close to central Stockholm. He is in his mid 20's and studies theology and human rights. He is a vegan and uptake many pro environmental actions and is very aware of the challenges we are facing to reach sustainability. He is planning a trip around the world without flying. He is impatiently waiting for system level change to happen.

Participant 3 Lives in a townhouse just outside centre of Stockholm with her boyfriend. She is in her mid 30's and works as an interaction designer with sustainability related subjects. She is interested in the future of food and choices we will have to make but does not make active choices in her everyday life towards sustainability.

Participant 4 Lives in a small one room apartment in a small city 10 minutes from Stockholm. Sometimes his girlfriend lives there too. He is in his mid 30's and is partly self employed and partly teaching in a medical institution. His work is on the subject of bio health and qs. His passion is food. He has a pragmatic attitude towards sustainability. He lives sparsely, would never take domestic flights, goes hiking in the forest but does not want to give up eating meat.

Participant 5 Lives with her cat in a shared house in the archipelago just outside the centre of Stockholm. The house is shared as a collective with other people. She is in her 40's, works as an artist part time and part time in a gallery. She is very aware of social innovations and injustices and takes actions on a daily base to live sustainably. She is a vegan, she is not flying when going on holiday and tries to use no more than she needs.

Participant 6 Lives together with his wife and 3 year old daughter. During summertime they live in a cabin on the countryside without running water and during wintertime they live in a one room apartment in a small village 1 hour outside Stockholm. He is in his early 40' and works part time as an accountant in a municipality office and part time as a politician. He is a vegan and is extremely aware of what sacrifices we need to make to achieve sustainability.

The probes were handed out one week prior to the actual interview so the participants got the chance to already reflect on their personal stances towards the different interview categories. In one case the probe was unluckily handed out just four days prior to the study and during a special holiday giving less time for that participant to add information to it. Two researchers conducted the interviews that took place in the participant's home and lasted 1-2 hours. All interviews started off with a open ended question about climate goals followed by conversations around the motivation jar. Next themes 2-5 were discussed. The interviews were recorded and transcribed.

EVALUATION OF DATA

We analysed both the transcripts and the visual probe material. In this way, we hoped to understand the type of understanding and information each of the parts of the pre-study could provide us with. We were interested in capturing the participants lifestyles and daily habits. In our coding we looked at habits and lifestyles as that what we do, the factual and practical way in which we conduct our lives.

We furthermore aimed to find higher reflections about the participants' beliefs, values and attitudes. In our coding we focussed on attitudes, values and beliefs as the motivational components of what we do and how we understand the world.

We also focused in our coding on reimaginings of how they saw themselves ideally in the future. In this we hoped to find reflections and visions on the human the participant wanted or hoped to be in the future as well as the kind of society they hoped for.

We brought our coding together through the interview themes: e.g *Motivation about overall perspective on sustainability, Food, Mode of transport, Housing situation, Dark CO2 thoughts and Daily routine*. In the following Section we will go through each of the themes.

RESULTS

The participants added their information in different ways: mainly through photographs, texts and illustrations but also personal drawings crafted with children and in one case a complementing word document, filled with information in the different categories. Participant 1 reasoned with a sustainability perspective that:

"It felt unnecessary to use paper and take pictures when I already wrote it down. So even if I like these objects and they sparked my imagination, as I started to write here (on paper) and not on them (the probe), I was like then I skip it, I don't use just because, instead next person can use it... You know like that. It became this conservation- thing in your task. That's me."

We present the results in relation to each of the interview themes.

The information that were put in the motivation jar were pictures, notes and in some cases empty (see sample figure 2). The theme and material related to it immediately sparked reflections related to larger ethical and societal sustainability issues and how we as human inhabitants should rethink our role."Especially that we might need a new type of ethics about how humans take care of the earth. Which doesn't work so well, that we see ourselves as masters of everything. How do you fix a decent foundation instead of the one we have? (Participant 5)

"I think about when you look at the globe we have designed it for our comfort. To me comfort and discomfort is interesting. That might be something we need to think about as main argument for how we should do things." (Participant 2)

The theme also sparked reflections related to regulation and politics role towards sustainability, expressing a wish for government and policies to steer and to take a stronger role:

"In some way I have always believed in the collective since I got politically aware and it almost turned out to a philosophical discussion because if we look at society today it is not one single person that built it. It is the collective efforts that built roads, busses, buildings and everything. It is not one person that does this we build society together. If you speak foundational philosophy that is I believe in regulations of how to build society and that also should go for environmental questions I believe" (Participant 4). Participant 2 expressing a long for clearer regulations making the way *"Say we have this goal, it won't be better without saying we must also make laws for this to work"*

Discussions of personal motivations and objectives for showing interest in the topic and the study. One participant expressing a wish to do something *"Feels weak not to just try and do something"* (Participant 2) Participant 6 reasoned the same way that: *"[...] So it's not a dark cloud who is driving me in that way it's more that this is the right thing to do and I want to be proud of what I did with my life so when I am talking to my daughter well you saw this coming. The problem is there you saw it 1990. What did you do then? Well i tried my best at least."* (Participant 6)



Figure 2. The material Participant 5 added as symbol for motivation

The themes 2,3,4, related to facts about food, transport and housing were completed with information prior to the interview. This made the topic easy to cover during a shorter time of the interview giving space for personal reflections. Some reflections arouse in relation to these themes but not at all as much as with the motivation jar. However this method saved us a lot of time giving us contextual information valuable for the study.

FOOD

The theme food was completed by text and images on the plates. The participants seemed to articulate their philosophies easy by the plates (See sample figure 3.).

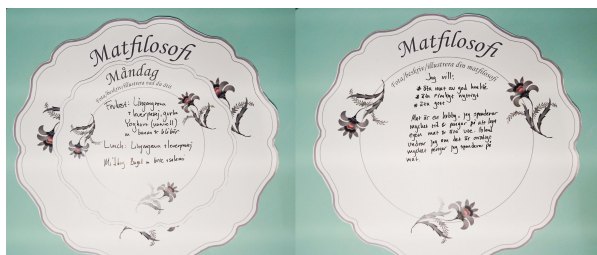


Figure 3. Left: Food for a day Right: Food philosophy

During the interview there was reflections about attitudes to waste. Participant 1 explaining a restaurant routine: “I said I would bring my own food boxes there because I don’t want to have a one time plastic thing to bring home. I hate, like it hurts inside me to throw away food. I’m happy to bring a doggybag from restaurants”. Participant 1 also brought up her food values stating that “I want to eat by season but I don’t want to skip things. But fair trade, I rather skip dark chocolate if there is no fair trade. Because it tastes, mentally it doesn’t taste so good if it was cheap, like people working in banana plantations so I can have this banana”.

Participant 3 expressed personal emotions related to actions she makes “I get bad conscious from almonds, since it is so water demanding in California. My mother said. But I eat almonds I don’t care it might seem like. I eat a lot of nuts and almonds. [...]”

The discussions exposed actions the participants decided to pick or not to pick. Participant 6 made an active choice ten years ago but decided not to make the same decision for his daughter.”I have been vegan nearly 10 years but when we got the kid we thought that. Actually from talking with the nutritionist at the care center and she knew nearly nothing of veganism. She was like: “Oh, this is dangerous. You have to feed your kid a proper way”. And I was like: if it is going to be like this, I am not going to take this fight. I have other fights to make. So we thought: we can eat cheese and milk products and have egg. So that is like normal vegetarian food. When I am making a dish I am trying to make it vegan”. Participant 1 one explained how some actions have started to come more easily in her local store: “They are really really listening when you say ‘I want this thing, but it should be ecological.’ Well. You wait two days and then they have it.”

TRANSPORT

The transportation probe was the probe that encouraged the most pictures. All participants except one hanged pictures of their transportations on the line (see sample figure 4.).

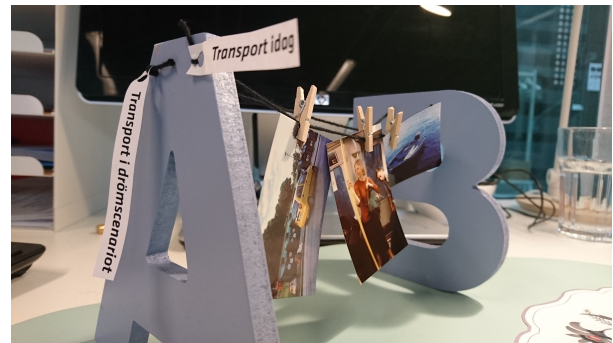


Figure 4. Transportation probe

In many cases 5/6 the participants displayed and articulated how they would want to reimagine themselves through bike commuting leading the discussion to structural boundaries in today's infrastructure (see sample figure 5.)

“I think it is sad that you don’t push more for bike as a mode of transport. On commuting trains it is aloud before 6 and and after 9 but no normal person go to work before 6 o’clock and after 9!”

“I would bike. I did. When we had an office closer, then i biked everyday. But xx you know that is not feasible”

“Biking you know, I love to bike. But it doesn’t work in the situation today. So that is the dream transportation. But today it’s metro”

Leading the discussion to a higher political reflections

“Free public transport, I really think, that should be a political decision, now we do this. It is not possible to take the car anymore. Building train, and I have this dream, from some science fiction book I read, but there are many, there is a flat escalator band under ground that people jumped on.”



Figure 5. Participant 6 reimaged his mode of transportation through a pair of shoes

And backsides of new developments

"Well, the electrical car is a thing that is kind of hard. When you get it it is going to be so easy to take it everywhere. But, in my values also, we don't have the place for the cars. It is really troublesome, right now, to decide should I buy an electrical car. Because I am going to use that more and it is going to take space in here, in xx and in xx. And then the parking lot and Building new roads. Then I am going to be a part of the dark side."

And some reflections relating to flying and vacationing and the anxiety flying brought to Participant 3

"Climate anxiety I think I have rather often. I try to make the right decisions but sometimes I don't know. Sometimes I just want to fly to my friends in London without anxiety"

And participant 2 stating how *"[...] there won't be flying on vacationing things anyway!"*

HOUSING

Most information appeared straight forward captured in the probe. A few reflections arouse related to structural boundaries about heating and decisions made:

"District heating from xxx. And I studied a bit and they have this kind of fuels they are putting it and that's not really green yet. And then you have to pay the bill for the electricity and then we had discussing with my wife and we landed on solar energy from xxx. Cause she met this director and he is a really nice guy. He is extreme in scale so the company he is leading is really extreme in the swedish energy market." (Participant 6)

Related to their everyday life and attitudes some frictions appeared Participant 1 articulated how her aspirations and her boyfriends habits were in contrast:

"He is like I will take a short shower and then it takes him 20 minutes and for me that is a looong shower. So there we have some things to work on I guess... But also I can not be too hard on him and nag all the time that is not right" (Participant 1)



Figure 6. Housing reimaged, painted together with 4 year old child.

The participants articulated pride of active choices they made in their compact living decisions in aiming for sustainability

"We said that if we don't kill each other that's good. I am proud of that". (Participant 1)

"And proud of what the living I was a bit afraid when we moved here that I wouldn't be able to enjoy but we have succeeded to find a living here." (Participant 6)

One participant expressed with pride how her visiting nephew said about their small home that: *"It is just like my transformers"* (Participant 1)

When the participants Reimagined themselves they articulated their dream situation as practical and social visions (See sample figure 6) :

"I want green areas around. I want public transport so I don't need a car. I want to live close to a city or live in an engaging smaller community. I had a friend outside xxx that found an old school and started a cooperative store where you really shop a trading economy, it is not a sleeping city because people make life there. But this is a sleeping city, I am not close to nature and water and not close to the city." (Participant 1)

"[...] And compact living in an apartment lots of people you can build effective and then you got this social life with if it's max 25-30 persons that you know everybody in the area. And some kind of mixture. The people issue is the most important that you are living with good people. So that's quite hard to write or drawn i mean. that you succeed to find a gang or how they call it. Then I tried to put some social places like campfire and a pool or for the kids also. And then there is a place to some mechanical things that there you can meet people and leave outside in the summer." (Participant 6)

BLACK BOX

The little black box of dark CO2 thoughts was only used by half of the participants. Relating mainly to policies and structural boundaries like:

"I see in my normal days of steps of going the wrong way. We are talking about 1,5 degrees but we are going to 6 degrees. And it is not just that we are doing the normal thing. That we are just driving cars. I'm driving on the highway and I see everyday when I am driving to Arboga that they are drilling beside the road and testing how the land is. And that is because they are going to build a new road there. A bigger highway. A situation that is idiocy. It is not the right thing to do and the guys are drilling everyday. And that is a reminder: we don't do anything. There is going to be this highway with lots of more cars. People know that we shouldn't do that but we are still drilling. And that is quite hard to see. When I am working on the other side, trying to change the direction. It is not like we are in a level where everything is the same today we are going forward"

towards the dark place in a higher and higher speed. And that is really eating me."

"Slow transition speed - non political will to put down their foot and regulate. Why is it still legal to build houses that are not environmentally friendly or energy efficient? Why is it allowed to produce products without sustainable and human perspectives. Why do we keep on using standard systems using clean water in toilets? [...] I wish that there were policies regulating this, the environment can not be a choice."

And some dark personal thoughts related to decisions and what they perceived as fair:

"That I don't want to do without non seasonal food even though I strive towards season based food."

"Flying: The feeling that if I had money I would fly multiple times every year, to visit friends all over the world and because I love to visit new places and see other cultures"

"That I don't have time money or energy to do what it takes"

DISCUSSION

BUILDING A POINT OF DEPARTURE

Wallace articulated the potential of using probes to facilitate an empathic space for dialogues deliberately and specifically crafted towards phenomena one wishes to address (Wallace 2013). This, we specifically did in the food, transport and housing probes. Through the probes we managed to already frame and capture most of the hard detailed facts of the participants daily routine and facts such as what they eat, how they travel and their housing situation. This gave space in the interview to follow up on softer insights and to articulate deeper reflections such as beliefs, values and attitudes. We see that the probe supported a direct departure to a reflective dialogue since we did not have to go into the detailed facts and could instead together move higher up immediately. The probe and the activity of filling in prior to the interview served as a base for practical primary experiences (Dewey 1965) leading to a reflective secondary experience (ibid) as the participants were encouraged to 'reimagine themselves' (Strengers 2014) and articulate their dream scenario and boundaries:

"Biking you know, I love to bike. But it doesn't work in the situation today. So that is the dream transportation. But today it's metro"

naturally leading the discussion to a structural and political reflection:

"Free public transport, I really think, that should be a political decision, now we do this. It is not possible to take the car anymore. Building train, and I have this dream, from some science fiction book I read, but there

are many, there is a flat escalator band under ground that people jumped on."

Two participants richly unfolded their 'reimagined' visions of their preferred social context such as communal living or strong sense of community surrounding the home. Articulating their reimagined vision illustrated in an image explaining that: "compact living in an apartment with lots of people you can build effective and then you got this social life with if it's max 25-30 persons that you know everybody in the area. And some kind of mixture. The people issue is the most important that you are living with good people. So that's quite hard to write or draw I mean. that you succeed to find a gang or how they call it. Then I tried to put some social places like a campfire and a pool or for the kids also. And then there is a place to some mechanical things that there you can meet people and leave outside in the summer." We see the emphatic crafting of the probe method as the key ingredient that enabled to unlock this very personal stances to the subject of housing and everyday life.

MOTIVATION

The motivation jar was the object that sparked many personal reflections of sustainability. This might seem obvious since the name 'motivation jar' already connects to beliefs and values. But we were actually surprised by how deep the interviews became. Especially in three of the interviews the conversation immediately took off covering high reflections of society politics and personal stances to climate goals and sustainability. The picture one participant added displayed a sunrise on the water. From which the participant explained her motivation:

"It feels a lot like it is about preventing catastrophes and then this kind of peacefulness and calm is the aim in opposite to the problem"

DARKNESS

The little black box was carefully crafted to encourage and capture more dystopic levels of reflections. However this was the probe that seemed to be the least engaging. Only three of the participants engaged in this. We ask ourselves whether those dark feelings were uncomfortable to share or whether the subject was too complex to engage in. This is something we can only speculate around since we did not want to put any guilt or question the participants in any way of the efforts. We expected the theme in the same category as the motivation jar that proved to be very unfolding and generated deep and personal discussion. Motivation has a much more positive tone and maybe this might be the reason why people were not really comfortable to share their despairs. The three participants that did contribute, shared deep thoughts in the same level of depth as with the level of motivation both on lifestyle fact level and on higher reflections.

CONCLUSION

From our results we see our probe methodology as a valuable space for dialogue argued by Bohm (Nichol 2003). The probes functioned as rich visual conversation pieces facilitating reflective conversations that appeared natural, honest and dynamic moving from facts to reflective states. From our previous experiences we learned that climate challenges and the concerns it may cause are topics people have difficulties to connect to in relation to their personal daily life. However, we can conclude from using the probe method, connected to the pre-interview categories, that it enabled an articulation of personal reflections and stances towards the future in this often distant debate on different levels. Like Wallace et al. (2013) articulate, the use of a design probe managed to scaffold deep personal reflections during our interviews. Both the careful crafting of the probes and its visual invitation enabled this. We see our work as a contribution of how design assets can cross with classical interview methodology to enable richer insights to how people relate to the world and how our skills can support a rich articulation of deeper thoughts. Insights valuable for participatory innovation processes.

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