

PARTICIPATION



IN

Master Thesis by Pedro Gil Farias

April 2020

**SPECULATIVE
DESIGN**

“The Future is already here – It’s just not evenly distributed”

William Gibson

PARTICIPATION IN SPECULATIVE DESIGN

Master Thesis

Pedro Gil Vaz Filipe Farias
pedrogilfarias.com
pedrog.farias@gmail.com



Master Strategic Product Design
Faculty of Industrial Design Engineering
University of Technology Delft
Landbergstraat 15
2628 CE Delft
The Netherlands
www.tudelft.nl

In collaboration with Imagination of Things

Supervisory Team:
Roy Bendor (Delft University of Technology)
Bregje van Eekelen (Delft University of Technology)
Vitor Freire (Imagination of Things)

14 April 2020

DESIGN !?

DESIGN !

DESIGN ?

FOREWORD

If my present self would meet my past self and explain him what I was doing now, my past self would probably give up the idea of enrolling in a product design bachelors.

Not that what I'm doing now is dull or uninspiring. But six years go, my past self would simply be puzzled about my interests now and how it even relates to design itself. In fact, over the time my interplay with design has changed overtime. From suspicion to action and finally interrogation, this journey be explained in three acts:

Act I

My first encounter with design was when I was enrolling in university. This first encounter with the word 'design' was of surprise: "Design?!" I had not idea of what it meant. My head jumped immediately to images of designer pieces: Chairs, Lamps and other items. This was what I imagined I would do if I enrolled in product design. Posters and advertisement if I enrolled in communication design. Because I was also considering architecture and I enjoyed the materiality and physicality of products I chose the former.

Act II

The next three years that comprised my bachelors were done with enthusiasm towards the practice: "Design!". I was creating things in a free and creative environment that was the faculty of fine arts. I got hooked with 3d modelling and user-centred design and imagined the possibilities of working in the technology industry. What couldn't design do? However, every good narrative needs a conflict, a bit of tension. While creating things that other people could use and solve their problems was still my drive, my mind became populated with 'why' questions: Why do people need this? Why should we do it in the first place?

Act III

These questions led me to look for a masters in design where I could explore more deeply what it meant to design. In 2017 I started a the masters Strategic Product Design at TU Delft. Another confusing but promising term for a masters in design. While the masters had an inclination towards exploring designers role in strategy making within organisations, my interest in combining the word strategy and the word design was in exploring what comes before design itself and why should we be even designing. Throughout the two years, I gained an interest in working with the future and exploring future scenarios through design. Inevitably this lead me to one of the intersections between design and futures: speculative design. With an orientation towards the future, speculative design was interested in exploring critically the design practice itself and the role of designed products, services and systems in the world. It was a perfect match.

Act IV?

This thesis is situated already in a possible fourth act. It is a continuation of my interest for critical approaches to design and the future. And, while I don't know what will come after this, the curtains are already open. The fourth act already began. However, before continuing I wish to thank all the people who supported me in the completion of this project.

ACKNOWLEDGEMENTS

First I would have to express my gratitude towards my supervisor team, Roy Bendor and Bregje van Eekelen. Without their support I wouldn't have deep dived in the topic of participation in speculative design. Thank you for supporting this exploration and for challenging me with questions every time we met.

I am also grateful to Vitor Freire, whom I thank for opening the doors of Imagination of Things and supporting me throughout the thesis project in spite all of the obstacles and uncertainty. More than valuable insights, the various meetings and dislocations to Amsterdam resulted in fruitful discussion about design, the future and my personal ambitions.

I would also like to thank the different designers and experts that were interviewed and/or were involved in the evaluation study: Tobias Revell, James Auger, Ricardo Meija Sarmiento, Tobie Kerridge, Theo Plug, J.Paul Neeley, Francisco Laranjo, Lorenzo Romagnoli and Bastien Kerspern. Without their availability and invaluable contribution, the main body of research would be not exist and the project would not be the same.

Finally, but most importantly, I would like to thank my family and friends who made the whole journey possible. More specifically I would like to thank Inês Theriaga, who has been sharing the same stages during the last two acts of my journey and who I'm grateful for the support during the most stressful times. I would like to thank my always present girlfriend Salomé Oliveira for dealing with me even when I can't deal with me myself and the continuous partnership and support during the different acts of my journey. Lastly, I would like to thank my parents, António and Fátima Farias, and my brother Gonçalo, for giving me the tools and freedom to explore what the future holds.

SUMMARY

There is a more than ever need to be critical of the present and imagine future possibilities. Several critical approaches to design place its efforts in creating artefacts for critical reflection. As part of the spectrum, speculative design is an approach that, through speculation into the possible, aims to challenge the status quo, explore the implications of emerging issues, and frame debate around matters of concern.

While the goal of speculative design is in engaging publics in debate and exploring alternatives to the dominant narrative, the practise has been facing several critiques. More specifically, speculation as remained exclusive to the designer as an author and most of the work is disseminated in gallery spaces, limiting the reach and depth of the debate generated. New projects and practitioners have emerged that push speculative design work into new contexts and within a participatory mindset.

This thesis is placed at this intersection between participation and speculative design. While this intersection seems promising and valuable, there might be some challenges in the transition from authorial practise to a participatory process. Additionally, bringing speculative design in new contexts might bring several risks, specially when practised within the domains it aims to critique. The main research question addressed by this thesis is the following:

When we open up the speculative design process, is the practise able to retain the critical aspects related to it?

Eight semi-structured interviews with leading practitioners working on this space were done. From the interviews, three main challenges were identified: “Stuck in a Singular View” refers to the challenge of engaging a plurality of voices and on maintaining a nuanced perspective when critically discussing the future; “Stuck in the Context” is related with the difficulty in engaging in self-reflexive behaviour when working with speculative design inside contexts that might be reluctant to critique; “Stuck in the Now” refers to the difficulty in working in the future and how short-sightedness might create an obstacle to speculative thinking. Additionally, several issues were mapped from the interviews and brought in a provisional framework for participation in speculative design. This framework consists of four levels that represent different aspects of the process: Context of Operation, Participants, Moments of Engagement, and Outcomes.

Finally, the four levels and the three main challenges were used to problematise the design space and create a critical toolkit for integrating participation in speculative design. The goal of the toolkit is not to provide a solution on how to this, but it proposes several different questions and issues for reflection.

The toolkit consists of 37 issues, spread throughout the four levels and in relation to the three challenges. The issues took shape as hexagonal playing cards, making it possible to connect the different cards and explore the design space.

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INTRODUCTION

This first chapter provides an overview of the project ‘Participation in Speculative Design’. It starts by setting the context within the design field. In addition, the scope of the project is defined and its relevance explained. Finally, the project structure is outlined, alongside short notes on the approach taken.



Black Swan. Photo by Marvin Rozendal

When I started writing this thesis everything in the world seemed normal. Yet, in a matter weeks, things have changed. Alongside a great percentage of the world, I'm now working from home. In isolation from others, to fight the COVID-19 global pandemic. Schools are closed, most people can't go to work and whole cities and countries are on emergency situations and in lockdown.

Futurists refer to these events as wildcards. Events that are highly improbable but can have a significant impact on the world (Voros, 2003). These events can also be referred to as "black swans" (Taleb, 2007). Some authors have referred to the COVID-19 pandemic as the "Black swan of 2020" (Canellis, 2020). However, others have noted that this new coronavirus was not unknowable or unpredictable (Inayatullah & Black, 2020). We were just not prepared for it.

The focus of this thesis is in the intersection between speculative design and participation. Or, in other words, how can designers create a space to collectively challenge the status quo and critically explore the possibilities for the future in an uncertain and volatile world.

1.1. PROJECT CONTEXT

Designers work in the interface between what is and what could be. With an orientation towards the future, design is concerned with building the products, services and systems of a future world. And in a volatile world, there is an increasing need to imagine how things could be. With this goal in mind, critical approaches to design have emerged that take an interrogative stance towards the status quo. Putting present ways of being, living and making into question and projecting possibilities for the future.

The term “Critical Design” was coined as an umbrella term to describe design work that, as a counterpoint to commercial design, challenges the status quo instead of reinforcing it (Haylock, 2018).

As part of the spectrum of critical approaches to design sits speculative design. Haylock, refers to speculative design as a “wildcarding” activity (2018). Through speculation into the possible, designers create tangible artefacts and scenarios that challenge the status quo, expose dominant structures, explore the implications of emerging developments and frame debate around specific issues. An important aspect of this practice is to engage the public in critical reflection and debate. Nonetheless, the practice has been the target of several critiques.

One of the major critiques is that the practice is limited by its “top-down” process. Where the designer, as an expert/author, is the one imagining and creating visions for the future. As a consequence, this can lead to a limited view of what a “better” future means and for whom (Prado O. Martins, 2014; Ward, 2019). Another important limitation of the practice relates to the context where it is practiced and disseminated. Most of the work is created academic and artistic contexts and disseminated through exhibitions and galleries. Thus, its output only reaches small groups in the design community. This puts into question its function to form publics and spark debate (Koskinen et al., 2013).

In reaction to these critiques and limitations, several new projects have emerged that aim to expand the reach of speculative design to other contexts and explore novel ways to involve people in the process. By engaging broader publics in participatory settings (workshops, forums or public interventions), the aim is in “democratizing the future”. Through participation, designers goal is to empower communities to imagine and define their version of a preferable future. Additionally, practitioners are also expanding their work to new contexts as more speculative designers are working in governmental, public and commercial domains. However, this expansion, specially in corporate domains, brings into question the ability of the practice to maintain its critical qualities as it might conflict with the commercial context interests and agendas.

1.2. SCOPE AND RELEVANCE

This thesis places its inquiry at this intersection. On one side speculative design and on the other participation. With a specific focus on how participation might influence the critical aspects inherent to the practice. In an attempt to go beyond an outsider perspective of what is happening, eight key practitioners were interviewed. This way, it was possible to get a more practical point of view of the different ways in which participation is approached in speculative design.

As a developing practice, speculative design constantly mutates. With both practitioners and researchers pushing its boundaries and exploring its limits. In general, this project aims to contribute to the exploration and to the development of the practice. More specifically, it aims to provide a nuanced account of the crossover between speculative design and participation. First from a theoretical perspective, and later by purposing a practical toolkit for practitioners that want to integrate participation in speculative design.

As a prelude to this project, different projects that were acting on this intersection were collected and mapped. From this initial exploration, one of the hypothesis that emerged was that there might be some risks of making the process more participatory. Moreover, it might be difficult to maintain the critical aspects of speculative design with a move to more corporate settings. Thus, one of the tensions that emerged was between participation and the critical goals of speculative design. The aim of this project is to dive deeper into the question of opening up the process of speculative design by looking at the intersection between participation and criticality in speculative design. This project explores the following overarching research question:

- When we open up the speculative design process, is the practice able to retain the critical aspects related to it?

Additionally it will also focus on the following sub-questions:

- How are practitioners currently involving more people in the speculative design process?
- What challenges practitioners face when making the speculative design process more participatory?

When we open up the speculative design process, is the practice able to retain the critical aspects related to it?

1.4. SETUP AND APPROACH

To tackle this challenge, the project is split between a research and a design phase (Fig. 1). In the former phase, the goal will be to explore the practitioners perspectives and synthesise the findings. In the design phase, based on the findings, a design direction is formed and a final toolkit devised. This toolkit aims at supporting designers working with speculative design in participatory settings. The rest of the thesis is structured as follows:

To set the stage for the topics explored by this thesis, chapter 2 presents a background research on the subjects approached by this thesis. More specifically, section 2 will introduce an initial account of speculative design, criticality and participation. As a bridge to the main body of research, this section ends with a discussion on the initial mapping of projects sitting at the intersection and exposes the hypothesis that lead to this project.

As the project deals with questions of practice and in order to get a first hand perspective on the topic, a qualitative approach was taken. Eight leading practitioners that operate on the space of participation in speculative design were interviewed. Chapter 3 describes the method of research and analysis.

Chapter 4 presents the main themes from analysis of the interviews and combines them into a provisional framework for integrating participation in speculative design. Additionally, three overarching

challenges were identified across the different interviewees. Both the challenges and the framework help structure the design space and give direction to the design phase.

Chapter 5 deals with the design phase of the project. It starts by defining the direction for the design phase. Both the challenges and the framework are used as a starting point for creating and structuring the questions used in the final design. In this section, a first mapping of the key questions, alongside their links is shown. This is then translated into an interactive prototype.

Finally, the designed prototype was sent back to some of the interviewees to obtain expert feedback. Section 6 describes the evaluation method, the main insights and ideas on how it could be incorporated in further iterations.

The thesis is concluded with a discussion on the project in chapter 7. Here, the contributions to the field and limitations of the process are presented. As well as further indications for future research.

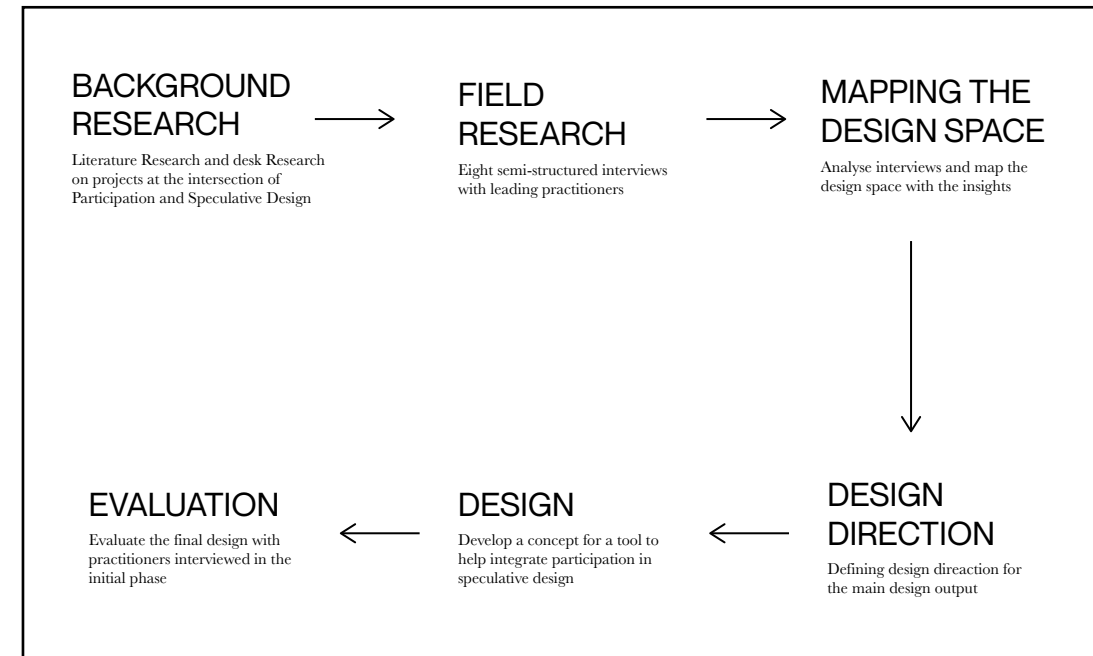


Figure 1: Project Approach and Structure

1.3. IMAGINATION OF THINGS

This project was done in collaboration with Imagination of Things, a design fiction studio based in Amsterdam that uses fiction as a device to spark cultural impact. One of the goals of the studio is to understand how diverse communities and groups can reclaim 'ownership of their imagination' and use fiction as a tool for change and transformation.

As an example of a studio working on this space between participation and criticality in design, Imagination of Things mentorship during the project was particularly important to get a first hand account on the practice. Additionally, throughout the project, several meetings with Vitor Freire, the studio's creative director, helped translate the findings from the research into a more concrete design goal and shape the final output of the project.

BACKGROUND RESEARCH

This thesis is situated on the intersection between speculative design and participation with a special focus on the practice's critical qualities. But what do we mean by speculative design, criticality and participation? And how are they intersecting? This chapter aims to answer these questions by providing a first glimpse of the concepts behind Speculative Design and deep dive into the critical qualities of the practice. This is followed by unpacking different accounts of what it means to participate in the design process. Lastly, by taking an initial look at this intersection and mapping the current efforts of combining speculative design and participation, the last chapter exposes some of the questions which lead to this graduation project.

2.1. SPECULATIVE DESIGN

While there is no single definition of speculative design, some common characteristics can be mapped. Several authors consider Speculative design as a perspective towards design. With a loose set of methods, tools and practices, there is one single approach to the practice. Operating as a counterpoint to mainstream design practice, this type of work aims to use design as a device for speculating about how things could be and challenge our current relationship with reality (Dunne and Raby, 2013).

Anthony Dunne and Fiona Raby first coined the term in their book *Speculative Everything: Design, Fiction and Social Dreaming* (2013). In the opening sections of the publication, the authors call for a new type of design. Juxtaposing speculative design to what they refer... what they refer to as “affirmative design”, or design that affirms the status quo as opposed to questioning it.

While affirmative design works within the market-led paradigm, the authors position speculative design outside of the scope of the market and commercial incentives (Dunne and Raby, 2013). By working outside the market constraints, speculative design ambition is not to create products as solutions for solving problems or fulfilling needs. Instead, its goal is to create artefacts that embody certain discourses or ideas. Speculative design is thus considered as a critical approach to design with the role of questioning the status quo (Malpass, 2017).

In speculative design practice, the future is used as a device to remove these constraints. By making tangible ‘what if’ scenarios, designers explore future implications of emerging technology and societal issues. Proposing alternative ways to think about reality and provoking debate about the themes engendered by the designed artefacts (DiSalvo, 2009, Dunne and Raby, 2013).

Looking at the “Futures cone” (Fig.2) , a model borrowed from futures studies and commonly cited in speculative design literature, the speculative designer’s goal is to expand the cone and explore scenarios that sit in the realm of the possible. While other approaches to the future normally tend to look at the future as a way to prepare for it or predict what will happen, speculative design is concerned with exposing the future malleability and its possibilities. As noted by Anthony Dunne and Fiona Raby:

We’re not interested in trying to predict the future but in using design to open up all sorts of possibilities that can be discussed, debated, and used to collectively define a preferable future” (2013, p.6).

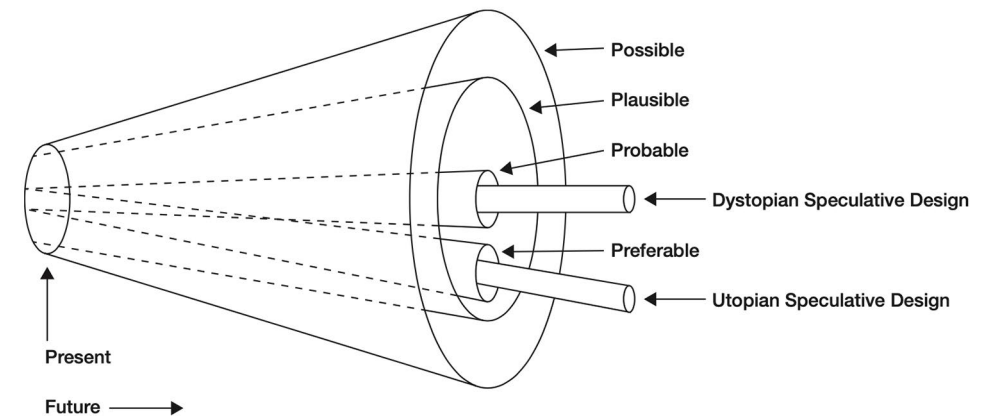


Figure 2: Futures cone showcasing speculative design as a critical practice. Hancock and Bezold (1994), adapted by Haylock (2018).

CRITICALITY IN SPECULATIVE DESIGN

Speculative Design is considered to be a critical approach to design, interested in using designed objects as a medium for critical inquiry (Malpass, 2017; Tharp and Tharp, 2019). As noted by Haylock (2018), critique is an interrogative practice. It does not take the current conditions of society for granted but instead takes it as an object for scrutiny and interrogation. Likewise, critical design practices, like speculative design, aim at opening new lines of inquiry and not in offering answers or solutions (Malpass, 2017). But the goal of cri-

tique in speculative design is not only in exposing ‘hidden’ tensions or challenging the dominant narrative. It is also in showing that there are multiple futures and. Thus, besides exposing present tensions, critique also plays an emancipatory role (Haylock, 2018).

Looking again at the futures cone presented above, Haylock suggests two ways speculative design can be seen as a critical practice. In one way, by presenting a dystopian scenario that could happen but would be undesirable, the designer aims to interrogate and expose present tensions and by contrast trigger thinking into a preferred situation. Alternatively, speculative design can also trigger imagination into the possible, making it possible to imagine preferable futures outside the dominant narrative (Haylock, 2018). In this way, Speculative design can be understood as a critical approach to design as it exposes the plurality and mutability of the future. It shows that the future is not single and predetermined, but that there are multiple ways it can unroll.

GALLERY CONTEXT AND DESIGNER AS AUTHOR

Looking at the process and dissemination strategies of speculative design, a issue that is commonly brought up in the literature and other discussions of the practice is, whether speculative design is closer to be considered a design or an artistic practice. While discussions about the practice belonging to art or design are not fruitful, it is important to discuss two aspects in this issue that are important for the research: the gallery as a dissemination strategy and the speculative designer as an author.

As explained above, speculative design is an affective practice. Through engagement and discussion of the issues engendered by the design artefact, users are confronted with novel ideas, questions and a better understanding of the issue (Malpass, 2017). And while this role for speculative design as a catalyst of public imagination (Dunne & Raby, 2013) is widely acknowledged, objects of speculative design are normally found inside gallery spaces, design magazines or blog posts. One risk of the gallery as an dissemination strategy is that the work might be taken out of context and without the necessary supporting material. Consequently, the initial critical intentions of the designer might be lost in translation and the critique overlooked (Koskinen, 2011; Malpass, 2015; Auger, 2017). As noted by Koskinen et al. (2011), exhibitions and gallery spaces offer the possibility for the different ideas promoted by speculative design artefacts to be communicated (Tonkinwise, 2015). However, these dissemination spaces

also create the need to carefully think about how the discussions and debates engendered by the artefacts are happening in order to maintain the designer’s intentions.

Additionally, if speculative design continues to exist solely on these contexts, the breadth of engagement becomes limited to the people already inhabiting these spaces, “design for designers”, and the depth of engagement is limited to a passive observation and/or reaction to the work already done (DiSalvo, 2016; Malpass, 2012).

Another important aspect to consider is how speculative designers work in a top-down structure, with the design as an author presenting a critique embodied in an artefact. As noted by Bowen (2010), when we look at speculative design’s critical quality of emancipation, showing that a preferable future is possible, speculative designers might fall in the trap of projecting a limited view of a ‘better world’. Raising the question: What does preferable future mean and for whom?

OUT OF THE GALLERY AND “DEMOCRATISING THE FUTURE”

In trying to distance speculative design from art, Dunne and Raby (2013) assert that “design needs to be closer to everyday life” in order to expose that everyday reality could be different (Raby, as cited in Koskinen et al., 2011). Following this line of thought, if speculative design should be closer to everyday life, why is it disseminated in closed cultural or academic circles? Koskinen et al. (2011) suggests that if critical approaches to design want to engage publics in discussion and debate about societal issues, the discourse should be taken into the real world. The debate should happen in different contexts like companies, organisations, government, streets, etc.



Figure 3: Pull-tab Alley by Extrapolation Factory

As a reaction to this tensions, new projects started to emerge with the goal of “democratising the future” (Montgomery & Wuebken, 2016) and bringing speculative design to new contexts. The Extrapolation Factory, a design studio based in New York is an early example of that move. By engaging different groups in the different contexts, the designers have the opportunity to expand the breadth of engagement to more diverse groups and the depth of engagement to more than a simple reaction. In Pull-Tab Alley (Montgomery & Wuebken, 2018) create an impromptu futuring workshop in the middle of the street, where locals were invited to imagine pull-tab advertisements from a fictional future (Fig. 3). This situated intervention outside the ‘white walls’ of the gallery make it possible to engage people in discussions beyond passive observation of design objects in a gallery.

While moving out of the gallery and academic contexts presents opportunities, it also poses some risks. As we have seen above, criticality in design is concerned with challenging the dominant narrative, but what happens when critique is presented from inside the systems that are being critiqued? Speculative design as an approach as gained popularity inside mainstream business and design practices. With this increased popularity, the practice risks being appropriated by commercial interests and thus losing its critical qualities (Revell, 2019).

In relation to this, Malpass (2017), explores this paradox of critical design in commercial use and notes that these practices, when operating in academia have the freedom to critique present situations and explore alternatives. Contrasting with the commercial pressures of day to day activity of design consultancies and companies. As Walker argues:

Design in academia has the opportunity to focus on fundamental, conceptual design in ways that are often more difficult to justify in corporate culture. (2010, p.98).

2.2. UNPACKING PARTICIPATION

With a better understanding of what speculative design entails and the motivations for moving outside of the gallery and involving different groups in participatory settings, the focus of this section will be on understanding what participation means and the motivations

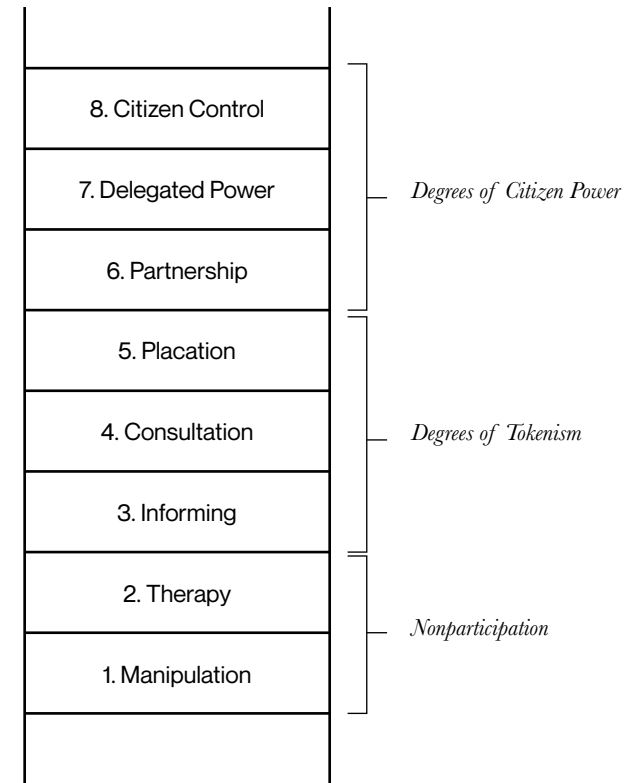


Figure 4 - Arnstein's Ladder of Citizen Participation (1969)

for opening up the design process to include more voices. When we talk about participation it is important to dive deeper on what we mean. What exactly are people participating in? How is control shared between the different actors? What are the motivations for opening up the process? This section will explore these questions by giving different accounts of the concept of participation in the design process and other domains.

Different authors have explored this concept and its different meanings. Several models, like Arnstein's (1969) Ladder of Participation (Fig. 4) and Pretty's Typology of Participation (as cited in Cornwall, 2008) present us with normative illustrations of different types and degrees in which participation is approached in different domains. As an example, people might be involved in passive forms of participation by being informed about what has been decided. Or they might be consulted on a decision but with no certainty that their view is going to influence the process. In 'higher' levels in both ty-

pologies, people might be seen as partners in the process of decision making, lead and self-initiated the transformative processes that lead to change in the system.

These different typologies expose that the concept of participation is not as straightforward as involving people in the process. As noted by Arnstein (1969), there is a distinction between participating in the process and actually having the power to influence the outcome of the process. In fact, central to the idea of participation in design and other domains is what Steen (2013) refers to the ‘virtue of empowerment’. By being involved in the process, participants should be empowered to have an influence in the decisions taken during the process. This involves a “disposition and a willingness to share power with others” (Steen, 2013, p.956), or as Arnstein notes, citizen participation involves ‘redistribution of power’ so people that are normally not involved in decision making can have an influence on its outcomes. If empowerment and cooperation are not seen as goals when involving people in the process, it might lead to nominal forms of participation, where people are involved just as an act of tokenism.

Besides empowerment, another important aspect of participation is the motivations or initial interests to start the participatory efforts. Participatory Design emerged in Scandinavian as form of design concerned with ‘democratising innovation’ by seeing users as partners in the design process with the unique set of knowledge and skills to support the creation of products and services that meet their needs (Ehn, 1993; Björgvinsson, et al., 2010). This approach is motivated by democratic principles of participation and empowerment but also by substantive reasons (Stirling, 2004). By involving end-users as active partners in the design process, the final design would be informed based on more nuanced perspectives and consequently result in successful designs that would meet the users needs.

Finally, one should also ask who participates? While some participatory efforts might involve participants as active agents with the power of influencing the process, the same efforts might only reach a limited set of participants. If only a specific set of members of a community are involved, despite the depth of participatory efforts, the voices involved only represent a specific a limited set of views, and thus are limited in breadth (Cornwall, 2008). This aspect is specifically inter-

ested when we look at the strategies of dissemination of speculative design work. If the work is only disseminated in galleries and seen by a limited groups of people, the discussion is limited to those voices. The same is true when we look at the move to a commercial context. As Cornwall notes, the participatory efforts are conditioned by the different participants and their agency and interests, in spite of the initial intentions set by outsiders (in this case designers). So, with a move to different contexts, it becomes imperative to understand the different interests, power relations and how they might influence the participatory process.

2.3. SITTING AT THE INTERSECTION

Before jumping into the main body of research of this thesis, prior research was done in an attempt to map the landscape of work situated at this intersection between participation and speculative design. In total, 48 projects were collected. The projects were mapped in relation to its critical efforts to expose present tensions and explore future possibilities and against a spectrum of participation in design to understand in what were exactly people participating in.

From this research, it was noticed that there was in fact several signs of opening up the speculative design process to include more voices. With a great part of the projects engaging people in more active forms of participation, redistribution of power and ownership.

Nonetheless, it was noticed a clear difference in participation levels between the projects in the first to clusters (To Challenge and To Debate) comparing to the last two clusters (To Explore and To Inquire). A possible explanation for this might be that the projects sitting at the first two clusters, the created artefacts have a more finished look, the intention is to provoke and trigger a reaction and the designer is seen as an author with the gallery being used as a dissemination context. In contrast, projects on the other two clusters take a more instrumental approach to speculative design, where the process of making, ideating and reflecting is used to tap into the participants experiences and point of view. The artefacts are open for appropriation and adaptation. However, one might question if the practice becomes instrumental, and whether criticality is maintained.

Thus, from this research some questions remained unanswered: Do higher levels of participation result in better dissemination of the critical discourse promoted by speculative design projects? What are the challenges of opening up the process? Is it possible for speculative design to maintain aspects related to criticality when its process is opening up? These questions mark the starting point of this project. The next chapter will introduce the method and approach of the main body of research of this project.

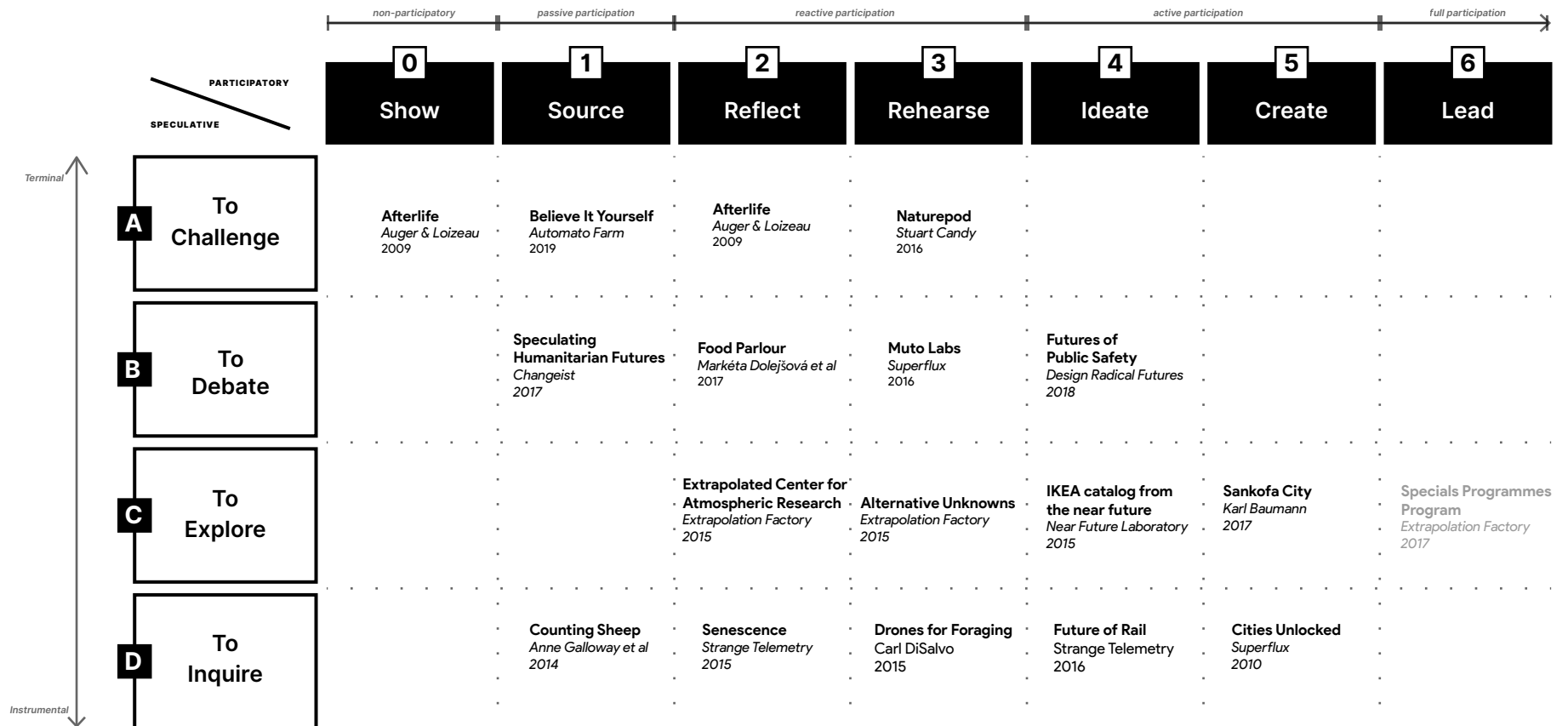


Figure 5: Mapping projects that sit at the intersection between participation and speculative design

FIELD RESEARCH

This chapter will focus on the interviews comprising the main empirical part of this research. Eight interviews were done with expert practitioners. This was done to gain a better understanding of the current strategies and challenges of opening up the speculative design process and to get a first hand perspective on its complexities.

3.1. RESEARCH GOAL AND SCOPE

The background research provided an outsider perspective into the intersection between participation and speculative design. It showed how speculative design can benefit from having a participatory structure and the initial efforts of practitioners working at this intersection. However, there is still a lack of research on how exactly designers can open up the speculative design process and include different voices. Thus, to gain a better understanding of a design practice, there is a need to engage directly with its protagonists and get a first hand perspective on the topic.

A qualitative approach was used in order to tap into its complexity and to understand the different experiences and challenges from the standpoint of different participants (Braun & Clarke, 2013; Rubin & Rubin, 2011). This aspect of qualitative interviews is particularly important as each designer has its own approach to the practice and distinct view on the topic.

In total, eight semi-structured interviews were conducted. The interviews were focused on understanding the particular point of view and experiences of each designer when integrating participation in the speculative design process. As a way to probe into their practice and experiences, the main goal of the research was to get a first hand perspective on the challenges and dynamics of opening up the process to include more voices. More particularly, the following goals were defined:

- Understand how are practitioners currently opening up the speculative design process to include more people
- Confirm the hypothesis exposed in the background research related to the tension between criticality and participation.
- Understand what factors might influence the process;
- Explore the current challenges and obstacles found by practitioners;
- Explore different strategies used by practitioners to overcome the challenges.

3.2. PARTICIPANT SELECTION

Based on prior research, the participants were selected in relation on their experience with working in the intersection between speculative design and participation. Due to the emerging nature of the practice, there aren't many practitioners working on this intersection. Thus, the interviewees represent the leading practitioners on the topic. Because of the reduced community of practice, the participants selection was not limited by location. As a consequence, some of the interviews were conducted remotely via video call.

In some cases the participants don't exactly label their work with the term speculative design. However, common characteristics of the practice can be found. The participants take a more problem-setting approach to design, engaging different communities in speculating about the future (or alternative presents) with the goal of engendering critical discussions about the present.

Nonetheless, it is important to stress that while the designers' practice sit at this intersections, there are some differences in their work and approach. This was acknowledged and made intentional when sampling participants, as a way to purposefully engage with divergent perspectives.

While most of the participants run their own design studio practice, the context of operation, the type of clients and their perspective on the practice varies per interviewee. Some of the interviewees work with public institutions while others engage in commercial consultancy services. Sometimes practitioners also engage in self-initiated work. Additionally, and as explained beforehand, there isn't a consensus on what exactly speculative design entails. This variation is also a reason to choose interviews as a data collection method as it is flexible to account for the complexity and divergent perspectives in relation to the topic. In Appendix B, there is a short bio for each one of the interviewees approached during this study.

3.3. INTERVIEW PROCEDURE

The interviews had the duration of approximately one hour. Five of the interviews were conducted remotely via video-conference software and three in person.

For this research, semi-structured interviews supported by an interview guide were made. This way it was possible to ensure that the same topics are pursued with each participant while, at the same time, making it possible for the researcher to explore particular issues and follow up on interesting lines of inquiry according to each participant and his/her experiences (Patton, 2002).

The interview guide, found in Appendix X, was used in each interview to maintain the same lines of inquiry by structuring the interview in more specific subjects. In general, The interview started by an introduction of the project, followed by a short contextualisation of the practitioners practice in relation to the project topic. After situating their practice, participants were probed about the challenges, dynamics and other key situations that might arise from opening up the speculative design process. Finally, the conversation shifted to more complex and open-ended questions about participants' views on the value of integrating participation in the process.

cycle of focused coding resulted in grouping different codes relating to challenges faced by practitioners when approaching participation in speculative design, and different factors, constraints or strategies used to overcome the challenges. Finally, the codes were clustered into seven higher level themes. These main themes are described in the next section.

3.4. ANALYSIS METHOD

All the interviews were audio recorded for further analysis alongside notes taken during the interview. The audio data was then fully transcribed for each interview. While time consuming, this process worked as a first re-immersion into the data.

After reading through the transcripts, thematic analysis was conducted. By approaching the analysis without preconceived notions of what to expect, the analysis took an inductive code to theory method aligned with grounded theory (Birks and Mills, 2015).

An initial round of open coding was made in order to break the data into smaller fragments, while remaining open to all possible directions (Charmaz, as cited in Saldaña, 2012). Due to the rich content of the interviews, a second round of focused coding was made based on the specific goals of the interviews described above. This second

4

MAPPING THE DESIGN SPACE

In this section the main insights from the interviews were consolidated in a provisional framework for participation in design in order to understand which factors come into play when including people in speculative design process. Additionally, three main overarching challenges of opening up the speculative process are presented. Finally, some general insights from the interviews are shown as way to make the bridge to defining a direction for the following design phase.

As mentioned in the background research section of this thesis, moving speculative design out of the gallery and opening the process to include more voices in participatory settings might bring several challenges. One of the hypothesis was that there might be a tension, or a trade off, between participation and criticality. In general, this tension was confirmed by some of the practitioners interviewed. As noted by one of designers interviewed:

I think depending on where in the process the engagement happens or why the engagement is happening, it can either help the criticality or maybe dampen it.

The interviews revealed three main challenges. These represent, overarching challenges faced by practitioners when engaging different groups and communities in a speculative design process. In addition, more specific issues were grouped in four main themes, which were then put together in a provisional framework for participation in speculative design. These main themes represent issues that, in the interviewees view, are important to consider when approaching speculative design and participation together.

4.1. OVERARCHING CHALLENGES

Part of the interviews was dedicated to discuss challenges, obstacles, and other experiences interviewees had when using speculative design in participatory contexts. Three main challenges were identified as primary concerns across all practitioners. These challenges were reframed as questions to make them more actionable. Figure 5 shows the three challenges with the corresponding questions. This section will describe each challenge with reference to the participants views

Figure 6: Three main challenges indentified in the interviews

STUCK IN A SINGULAR VIEW

How can we create a space for plural and nuanced perspectives to emerge?

STUCK IN THE CONTEXT

How can we create a space for critique and self-reflexive behaviour to emerge?

STUCK IN THE NOW

How can we create a space for people to step out of how the world looks today?



Illustration Based on a picture by Maarten van den Heuvel

STUCK IN A SINGULAR VIEW

A challenge that is particularly interesting is the idea of dealing with plurality and nuance when creating or discussing alternative future scenarios. As noted in the background research, speculative design is not interested in predicting the future or making forecasts. Core to its exploration of the future is in accepting and exposing that the future is multiple and plural (Dunne and Raby, 2013; Haylock, 2018). So, there is an intrinsic uncertainty and nuance in the future that needs to be kept when involving other people.

This challenge is twofold. When people think about the future their imagination immediately jumps to a specific image of the future: “The Future”. A single perspective on how things will look like normally based on media, corporate visions, science fiction or other sources. This hardwiring for a singular future can be an obstacle to participants involved in these processes. As they may take the created scenarios as proposals, or visions for how it will be, discarding the possibility for scrutiny and discussion (Dunne and Raby, 2013).

Some of the participants referred that when engaging publics in this type of work, one must acknowledge that the idea of ‘uncertainty’ and ‘plurality’ is quite alien to a lot of people” and that sometimes, because of the way the scenarios look, participants might “assume it is a prediction or a proposal”. As a consequence of looking at the output of speculative design as a proposal for the future, the critical goal of showing that reality is up for discussion is overlooked and the opportunity for debate is abandoned.

Additionally, stuck in a singular view is also related to the voices involved in creating these speculations. As pointed out in chapter 2, the interest in opening up the speculative design process to more voices comes from a desire to include different perspectives in building the future, in order to represent its plurality. This is important, particularly when thinking about who should be engaged in the process and whether the outcome is promoting a specific narrative, or reinforcing the dominant paradigm. As pointed by one of the practitioners, if speculative design aims to deal with highly systemic issues:

You need to involve a plurality of profiles and experiences, to make sure that the design fiction work will reflect this complexity and not just deliver another vision of the dominant narrative.

This relates to Cornwall's (2008) observation that a project might be highly participatory but only engage a specific group of people, with very limited point of view.

Another particular sub-challenge suggested by some of the participants is in the bias towards extreme views of the future. Either utopian, overtly positive imaginaries where everything seems right. Or more dystopian scenarios that are normally provocative but fail to account for more nuanced views. This is also referred as one of the pitfalls of speculative design work by some authors, as this tendency towards dystopian narratives lacks nuance and overly catastrophes the future (Ward, 2019). On the other hand, overly utopian views of the future, as noted by one of the participants are "less interested in constructive or critical use" and are more interested in application or innovation.

STUCK IN THE CONTEXT

Stuck in the Context is challenge particular to speculative design's move to new contexts of operation. As explained in the background research, speculative design projects are normally associated with academic and research contexts, with its work normally disseminated in galleries. A move into new contexts where normally the critique is directed towards, might result in the practice becoming absorbed by the context itself and losing its critical qualities (Revell, 2019; Malpass, 2017).

As noted by one of the practitioners interviewed working in a corporate setting, one of the obstacles is in engaging participants in reflexive behaviour and facilitate self-critical perspectives beyond their own biases:

Let's say you're working with people in an audience who are working in that space (...) it can be very hard for those individuals to either critique their own work or their organisation work, or there's a culture that doesn't support critique.

Koskinen et al. (2011) suggested the importance of critical design to offer the critique in the contexts where the critique can be applied. However, an aspect normally overlooked is the designer position in relation to the domain it offers the critique. Offering the critique where it matters means shifting from critiquing the domain as an outsider to a position inside the domain it offers the critique in.



Illustration Based on a picture by Jude Beck

As described above, whether the project is done for a commercial organisation, a public institute or a self-initiated exploration, the challenge of self-criticality will vary. Some interviewees had a strong opinion about employing speculative design inside organisations because of this challenge. As noted by one of the respondents: “you can try and change the way companies operate. But, at the moment, they’re going to only go through that if it makes business sense”.

In contrast, while working from within the system it aims to critique might be challenging, some participants referred that this was their way to have an impact by being “where power is”.

Another instance of this challenge was referred by one practitioners working with governmental institutions as a problem of clients not wanting to engage in more political conversations or with specific controversies:

When you work with clients, we had several times clients that want us to, maybe not show these scenarios or push for these scenarios because they were afraid of political reactions to this. specially when working with public institutions and local governments. So it was more like political reasons and we had to do almost a political job to explain why it was important to push for this.

This becomes a problem as the main objectives of speculative design is to expose tensions and discuss different controversies. As recognised by Cornwall (2008), participants interests, view or agendas might pose a challenge to the process.



Illustration Based on the *Falling Clock* by Daniel Arsham

STUCK IN THE NOW

A third challenge expressed amongst the experts interviewed was related to participants difficulty in working in the future and distancing themselves to how the world looks today. When engaging different groups of people either in earlier stages of the process or in the final discussions, the “weight of the now” can be an obstacle to the process. By making it difficult to imagine how things could be different, and transport oneself to a future or alternative scenario, it becomes difficult to imagine possible alternatives and reflect change.

Haylock (2018) defines speculative design as a critical practice because it enables people to look at the future, and consequently the present, as something they can act upon. While this challenge is common to futures work, when people are involved in participatory activities, the weight of the now might be an obstacle from the beginning. While speculative design is usually faced with this problem when the artefact is finished and people are faced with the work, if people are brought in to the process in active creation of the speculative artefacts, they must be able to step out of how the world looks today and “suspend disbelief about change”¹ right from the beginning.

This concern was also commonly brought up as a key skill that speculative designers have in jumping from scenario to scenario and to work with the future. In fact, when discussing the value of participation and when to include participation, some practitioners referred that “there’s a comfort level there and ease in which they [designers] can move in and out of different scenarios”.

Another instance in which being stuck in the now was a common challenge was when there are short term goals or short term needs that are conflicting with the more explorative nature of the speculative design process. Either because the people invited have short term needs that will get in the way of speculative thinking, or because the organisations have short term goals and/or incentives that might also conflict with the goals of the project. As expressed by one of the participants:

I have to say that most of the SMEs are managed by dreamers (...) However, when they are planning, they tend to be short term oriented.

¹ The idea of transporting people to an alternative scenario is an important mechanism in speculative design and design fiction and really particular challenge these practices. Bruce Sterling’s definition of design fiction addresses specifically this challenge: “Design fiction is the deliberate use of diegetic prototypes to suspend disbelief about change” (Sterling, 2013)

4.2. PROVISIONAL FRAMEWORK

One of the main objectives of the field research was to understand how are practitioners involving different people in the speculative design process and uncover common elements between the different approaches. In the next section I will describe the four main themes of analysis that emerged in the interviews. It is important to note that the goal of the provisional framework shown below is not reduce the complexity of the design practice into four themes, but to explore how these four elements play different roles in the process.

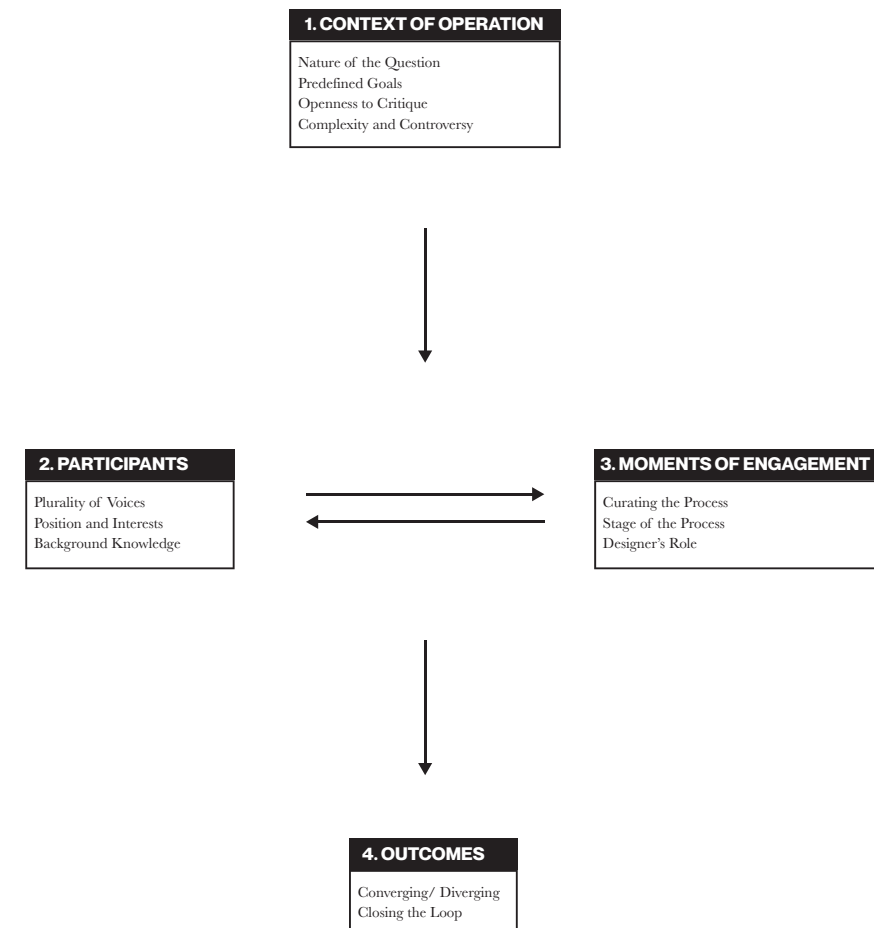


Figure 7: Provisional Framework for Participation in Speculative Design

CONTEXT OF OPERATION

Context of operation relates to the project's preconditions that might influence the participatory efforts. This includes the initial intentions, the framing of the project and the issues it deals with.

Nature of the Question

Initially, speculative design approaches were more common in academic research contexts with an intention of reflection. However, with an expansion towards new contexts (commercial services, Public research, etc.) the nature of the question that initiated the projects efforts becomes an important factor to consider. More specifically, it is important to ask why is there an interest in exploring a specific issue. As one of the practitioners notes:

If it's not clear who is paying for whatever is the thing that is happening, if I play, or if I engage, if I give you my interview, if it's not clear why or where it's going after this, then it's really hard.

Another important aspect related to the nature of the project is if there are already predefined goals or preferred outcomes. Some of the designers interviewed applied speculative design as a tool for applied research. Thus, the moments of engagement were curated and predefined based on the research questions and goals of the project. While explaining one of the projects within a research framework, one of the respondents affirmed:

We [the design team] produced all the speculations, we produced the framework, we had the research questions, and then we went and found information. Which is not very participatory, we're more just using the public as a resource there.

As the participants are instrumental and their insights are useful only when the designers see fit, this brings up the question whether this is in fact participation (Kensing & Blomberg, 1998). In this case, participants are consulted with their opinion but without any influence on the project goals nor its outcomes.

Context Openness to Critique

As was mentioned in the previous chapter, the context of operation of the different interviewees is diverse. One of the aspects brought

up by most of them was how the context where the project happened was more or less open to critical thinking. Most of the participants agreed that self-initiated work lends itself to be more open to set the course of criticality. With some participants even referred to having self-initiated work, apart from the main work of the studio, as a way to explore with more freedom the critical aspects of the practice.

Contrasting, when working with organisations, it might be difficult to break through the culture and hierarchy. As expressed by one of interviewees: "the way most of those companies are set up, it's changing slowly, but they are designed in a way that critical thinking is not in the business proposition".

Complexity and Controversy

A final aspect relating to the context level is related to the complexity of the issue the project is dealing with. As noted by most respondents, participation becomes a crucial element when the topic you're dealing with is highly systemic, impacting everyone at different levels.

Additionally, issues that are highly controversial might have implications on the rest of the process. Participant A, when working with public institutions referred that the course of criticality might depend with the public's familiarity with the topic:

if the public are already familiar with the controversies or stakes linked to the topic. Otherwise you might risk to be too radical and not accessible enough.

PARTICIPANTS

A second category of analysis prominent during the interviews was related to who participates in the process. As suggested by most interviewees, understanding who to engage in these participatory processes is one of the most important factors when setting up the project. This aspect was particularly referred in contrast to how the projects were setup in the "original canon" of speculative design. One interviewee refers:

it was very poorly articulated who those people were and how they debated. And it was kind of just assumed that people would gravitate towards the work.

As noted above, this aspect was brought up as one of the pitfalls of

the ‘original’ approach to speculative design and its dissemination in the gallery space. As the work was normally disseminated without paying much attention to who were engaging with the work.

Plurality of Voices

An important aspect brought up by the interviewees was how diverse was the group of participants that being engaged and if they represented a plurality of voices. As already explored in the challenge “Stuck in a Singular View”, interviewees noted the importance of engaging a diverse set of voices: “if it’s just like he interns or even if it’s just the boss, just the management team, that wouldn’t work as well”.

In regards to the type of participants, different interviewees expressed a diverse range of views on who might be involved in the process. The examples ranged from decisions makers, members of the public, scientists or experts, or even other designers. While the choice of participants depends on the type of project, it was noted by some of the practitioners that different participants might also influence the criticality of the project. As noted when discussing the challenge “Stuck in the Now”, the type of participants has a direct relation to how difficult might it be for them to critique their own practices. So it is important to think about the participants position and role in the project, and in the issue in general. Sometimes different interests and agendas can conflict with the project goals of critical exploration.

Background Knowledge

Concerns were expressed about the participants familiarity with the issue explored and the controversies around it. This aspect is specially interesting in relation both to the intention of the project to promote critical discourse and to the way the process is then framed and curated. In one way, some interviewees referred that when participants are not familiar with the topic, the goal of the project might be to raise awareness.

In another instance, some interviewees noted that if the issue is too complex and the participants are not familiar with it, it might be difficult for people to craft a scenario. Thus, it might be best to shift the participatory efforts to the reaction phase of the project:

Also sometimes the subject is very complicated so you might prefer to do the design fictions on your own and shift the participation only for the reactions (...) not feeling obliged to bring people in during the conception phase

The aspect of background knowledge and expertise is a recognised challenge and obstacle to participation (Dunbar-Hester, C, 2016). Not only participants might not be comfortable with the issues at hand and crafting scenarios and/or artefacts, they are also involved in speculative thinking. This issue also relates to the short-term focus exposed earlier in the challenge Stuck in the Now.

ENGAGEMENT MOMENTS

The third element of the framework relates to the engagement moments themselves. When in the process is participation brought in and in what ways is the process curated. This was a particularly recurring theme in the interviews, with the practitioners expressing that understanding the moment of engagement is one of the most crucial elements of including participation in speculative design. Again this aspect was put in contrast to the lack of effort in crafting the actual debate seen in the initial formulations of speculative design, as noted by one participant:

the original idea, I imagined, is that you stick in a public space or a gallery and then you expect people to gravitate around it and sort of have that debate and that kind of engagement.

Stage of the process

An issue where perspectives were diverging was in relation to the stage of the process in which to include different voices. In general, and across all participants, three different stages were identified. The first stage involves the framing of the project and creating an attention space around which the exploration will begin. Following this preparation stage, the main conceptualisation stage beings. Here, the speculative scenarios and artefacts are created. Finally, as one of the goals of speculative design is to spark conversation and debate, the last stage comprises reacting to the work created in the previous phase and reacting to it. These stage normally ends in a set of insights or in the joint creation of a preferred scenario.

But while these three stages could be identified across the different practitioners, there were different opinions on when it would be most valuable to include different voices. Several practitioners saw the value of including different perspectives both in the beginning of the process, as a research element, and in the last stages as a way to craft the debate.

However, when discussing the possibility of including people in the conceptualisation of the work, several interviewees expressed that it was more valuable to have the expert designer with experience doing that part of the work as the designer “has been working in that space [speculative design] or has the ability to render those works in a way for other people to engage with it”. Additionally, time limitation was another factor referred as an obstacle to include people at this part of the process. Nonetheless, some participants noted that involving people in creating the speculative scenarios and artefacts might also yield a lot of value, specially as a generative approach to reflection. By constructing things, people start thinking about the issues and controversies.

Still in relation to the stage of the process, one interviewee even suggested that there can be some flexibility on the people you invite. And that different groups can be invited to the same project at different stages. In an example from practice, one of the designers engaged a group of citizens in a first stage of the process to build the speculative artefacts, and in a latter stage the artefacts were brought to organise a “confrontation with the possible futures and then react and decide according to the visions” with a group of decision makers.

Curating the process

Some practitioners emphasised that this idea of “autonomous debate” doesn’t actually happen as expected and so when “engaging people in a participatory way, that process has to be quite curated”. However, this is where divergent perspectives emerged. Some practitioners expressed a need to curate the process so the discussion doesn’t go in all sort of directions: “then you kind of brief them on what they are about to see (...) and then you structure the discussion by using prompts, to avoid it going a bit crazy”.

By contrast, some of the interviewees questioned how much control and curation was necessary and alluded to the notion of “designing to be surprised”, where the project is successful if the project goes beyond “what was planned by the designer”.

In relation to this issue an interviewee brought up an interesting observation that “just by choosing with the team and prioritising what those issues should be, you’ve already just created a space for attention around a certain set of issues that, I mean just there you’ll have a big impact”. This is an interesting aspect to think about, specially because if the framing of the project becomes too defined, the participation efforts might become just for show, closing the possibility

for the participants input to have an impact (Cornwall, 2008; Kensing and Bloomberg, 1998)

An interesting insight still in relation to curating the process, is also related to how the work is presented when engaging participants in a discussion. Making a reference to concept cars, one interviewee mentioned because concept cars are presented in such high levels of resolution, they look similar to real products. Thus they are taken as proposals for the future and, as consequence, “closing all possible scenarios of discussion for people”.

Still in relation to this, several interviewees mentioned the importance of working in multiples, that way avoiding the trap of being considered a proposal and closing the possibility for discussion. As participant F states:

I think that also having multiple possibilities changes the nature of the discussion. So if you only have one future, that you’re showing, uh it’s just hard to critique. (...) And so, in terms of curating the discussion, that, that is an important part of it. Is making sure that those multiple possibilities are put in front of people.

Designer’s Role

Part of the interviews also considered the role of the designer and his/her position in facilitating the participatory process. A common view was that, because of the provocative nature of speculative design, the role of the facilitator was not to make participants life easy but to bring a certain discomfort, or as participant A notes:

We actually advocate for our work as itching powder, you know we bring discomforts in the organisation but we’ll have them face existing or incoming controversies.

By engaging people in difficult decisions and asking difficult questions, the designer aims to problematise the process in order to bring the discussion to a more critical level. This aspect relates directly to the challenge of Stuck in the context as the designer comes to the context as an outsider, free “of some of the culture and the limitations that they [participants] experience”, as noted by one practitioner.

Another position that the designer might take is in the role of the mediator. By creating a space of confrontation between divergent perspectives to emerge:

So we do mediation and one of the tools for the mediation we are doing is dissensus rather than consensus. Accepting the fact that there can be divergent versions of the same story and how we create the confrontation of this divergence, not only as a way to create some opposition but also to create some, uh let's say co-habitation between both of the visions

Lastly, one aspect to take into account is how accessible is the project to participants. This aspect came into the discussion when questioning the gallery space as place that requires a certain literacy and that is inhabited by certain group of people.

OUTCOMES

The fourth and final element of the framework relates to the outcomes of the participatory efforts. The outcomes of including participation might range from creating more nuanced views of the future, engaging different voices in discussing an issue or provoking participants into thinking about alternatives.

Converging/ Diverging

One aspect where different perspectives emerged was in relation to the outcomes of the participatory effort. Some practitioners were interested in creating a space for “co-habitation” of different perspectives or while others aimed to bring different perspectives to converge on a preferred scenario for the future. This aspect was particularly dependent on the project goals, and the context where the project was happening.

Closing the Loop

A concern shared by some of the interviewees was how the speculative design projects were acting in the world and how could the participatory moments connect back to action and decision making. One practitioners suggested:

Designer can create a bridge between design fiction, speculative design and service design. So it's not projection and debate for the sake of projection and debate, it's also what can you do the day after.

As explained in the background research section of this thesis, speculative design was intentionally formulated as a design practice op-

posed to what Anthony Dunne and Fiona Raby called ‘affirmative design’ (Dunne and Raby, 2013). This opposition, created a separation that now some of the practitioners interviewed are trying to bridge. As referred by participant B applying speculative design in a commercial context: “I was kind of interested in how, in how Speculative Design goes back into, back into the a lot of systems they offer this critique in”. This brings another layer to the critical efforts of speculative design as the goal is to go beyond provocation and into translating the discussion generated back into decision making.

4.3. CONCLUSIONS

This chapter looked at the different practitioners perspectives on the issue of opening up the speculative design process. While the insights presented here are nowhere near an exhaustive survey of the practice, they help give a first mapping of the design space. In fact, one of the main insights when carrying out the interviews was exactly how each interviewee shared different perspectives and ways of approaching the same issues. This leads to the obvious conclusion that there is not a single answer to the question of including participation in the speculative design process. Actually, it wouldn't make sense to have a single solution, as that would gloss over the complexity of the challenge. The next section will outline how the fact that there is no single solution or consensus between the interviewees can be seen as a design opportunity. By using the three main challenges and four main themes identified above, the design challenge consist in finding ways to navigate the complexity.

With the design space mapped in four categories and three overarching challenges, it is time to explore how these can be translated into a practical tool to be used by designers. This chapter will start by outlining the design direction, followed by a explanation of the design phase that led to the final concept.

Based on the field research, it can be noticed that the intersection between speculative and participatory design is all but simple. It is a complex space represented by divergent perspectives and approaches. In fact, there is not a single right way of approaching this challenge of opening up the speculative design process.

For this reason, the design challenge is defined as finding a way to navigate through the complexity of the space without reducing it to a few guidelines. The goal of the design should be to support designers in the process of integrating participation in speculative design. As stated by one of the interviewees: “it is the designers job to work through the complexity and design the process according to each project”.

Moreover, it was noted that speculative design practices are normally closely related with each practitioner’s worldview and values. This renders pointless the development of a single method or approach to participation in speculative design. Finally, as speculative design is a recent approach, there is not much research and exploration on the practice. Much less, if we consider the integration of participation in speculative design.

For these reasons, an interesting opportunity for design is in creating a way for practitioners to navigate through this complexity and the different elements and challenges mapped in the last chapter.

5.1. DESIGN DIRECTION

Imagine you arrive at an unknown city with only a map at hand. The map will show you different zones, different landmarks or places in the city and how they are connected. Whether you want to find a place to eat, a hotel or the nearest bus stop, the map shows you the different routes you can take. And while (modern) maps might make suggestions about which route is best, there are always different paths you can take.

The same notion can be applied to the challenge of finding a way in integrating participation in speculative design. Although it was

not represented in the previous chapter, there are numerous relations between the different categories and challenges, and in between the categories themselves: How can different participants influence how the process is curated? What if the project is done in a commercial context in opposition to a research context? How might different ways to frame the project yield different outcomes?

In short, there are different ways to navigate this space.

Three challenges were identified. These challenges can be used as a starting point for entering the design space. Practitioners can explore the design space by dissecting each one of the three challenges (Stuck in the now, Stuck in a singular view, Stuck in their own practice) and navigating through the four elements identified before (Context, Participants, Engagement, Outcomes). Visually, the design space would have a rhizomatic organisation, with the challenges as the entry points, different ways to navigate through and multiple exit points. It could be compared to a subway map (Fig. 7).

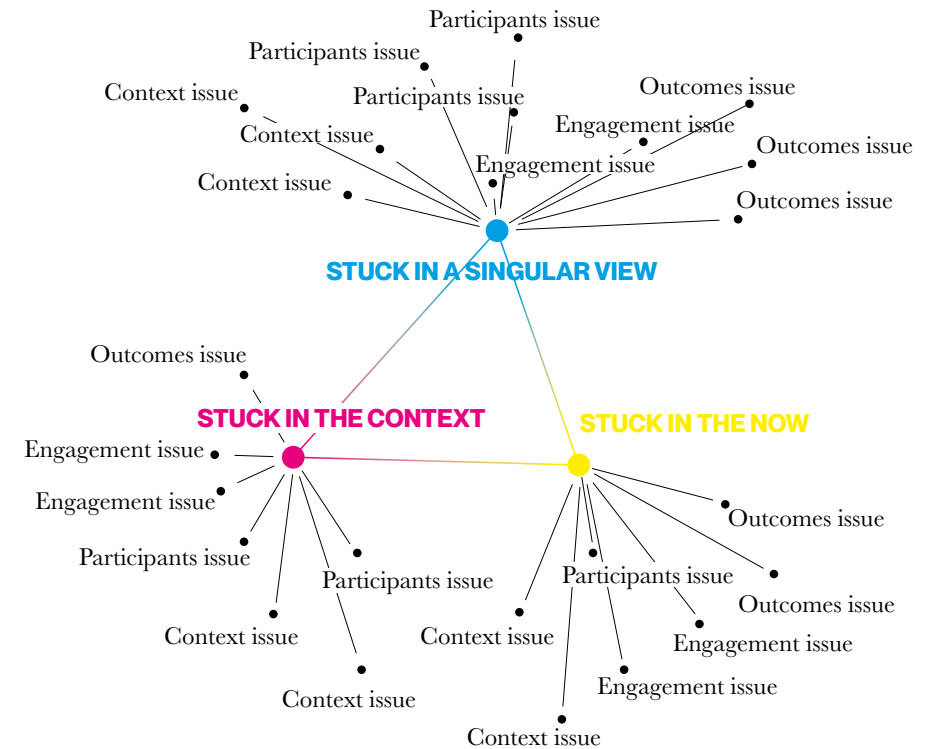


Figure 8: Visual representation of the design challenge and the structure of the design space

With this in mind, the designed tool will be a ‘meta tool’ supporting practitioners in crafting, and reflecting, on their own participatory speculative design process. It should aim at opening up the thinking process by providing questions for reflection instead of specific answers. In general, two main goals were defined for the final design:

ENABLE REFLEXIVITY AND PROVOKE THINKING

The design should not aim to give answers but provoke new questions and ways of thinking about the issue. As noted by one of the interviewee, part of the job of the designer is to understand how integrating participation can benefit the design process: “I think that is part of the reflexive approach of design fiction. Each way of including people in the process has pros and cons”.

The design output should have the same critical qualities of speculative design projects. By using the tool, designers will not find the right answers but be exposed to issues and tensions found in the intersection between participation and criticality in speculative design. By exposing these tension, the goal is to provoke novel ways of thinking about the problem and engage designers’ in reflections about the process.

In addition, as Steen (2013) suggests, reflexivity is a crucial virtue in participatory design practice. By reflecting on the process, designers can better understand how is power being redistributed, and how criticality is approached in the process. The author goes further to suggest that one can promote reflexivity by asking questions. Provoking thinking rather than providing answers and expose possibilities rather than prescriptions. The goal of the design should do exactly that, expose the different issues presented in the previous chapter to support designers reflexivity.

PROMOTE EXPERIMENTATION AND FLEXIBILITY

As explained beforehand, there is not a right way of approaching this challenge. So the design tool should work like a map in the way that the participants can navigate through different paths, and experiment different ways of opening up the speculative design process. Using a different metaphor, the design should not be a recipe but a list of ingredients and an urge to eat something. It should facilitate the process of thinking but not dictate a specific path. As one of the

practitioners noticed, experimentation and self-awareness are important when approaching this challenge:

So that for me is one of the fundamental things: self-awareness. It’s something that you can experiment with, you can say it could be this, this, this and this. And start to experiment with how would that change that aspect and how would I communicate that if it’s for this audience compared to that audience. But we need to be aware of those things

5.2. PROBLEMATISING THE SPACE

Maintaining the metaphor of the map used in the last chapter, if the four themes represent different levels or zones of the map, each zone would have different places of interest that you might want to visit. In our case, these places of interest are different issues that practitioners can think about when navigating through the complex space of participation in speculative design.

Therefore, the first step is to define these issues based on the four themes and overarching challenges defined earlier. As the tool should work as reflection tool, the issues took shape as open ended questions. One can think of this first step as a critical design exercise in itself, problematise the process of participation and speculative design and expose some of the questions that should be asked. By going through some of the issues, designers can unpack the three challenges and better understand the design space.

In total 37 questions were defined. For each question a short title was given, representative of the issue explored, alongside a short description that gave more detail and context to the question. As the questions were based on the interviews, most of the question were supported by quotes from the respondents. In the following pages (Fig. 8) the questions are laid out. For the corresponding quotes organised per question refer to Appendix D.

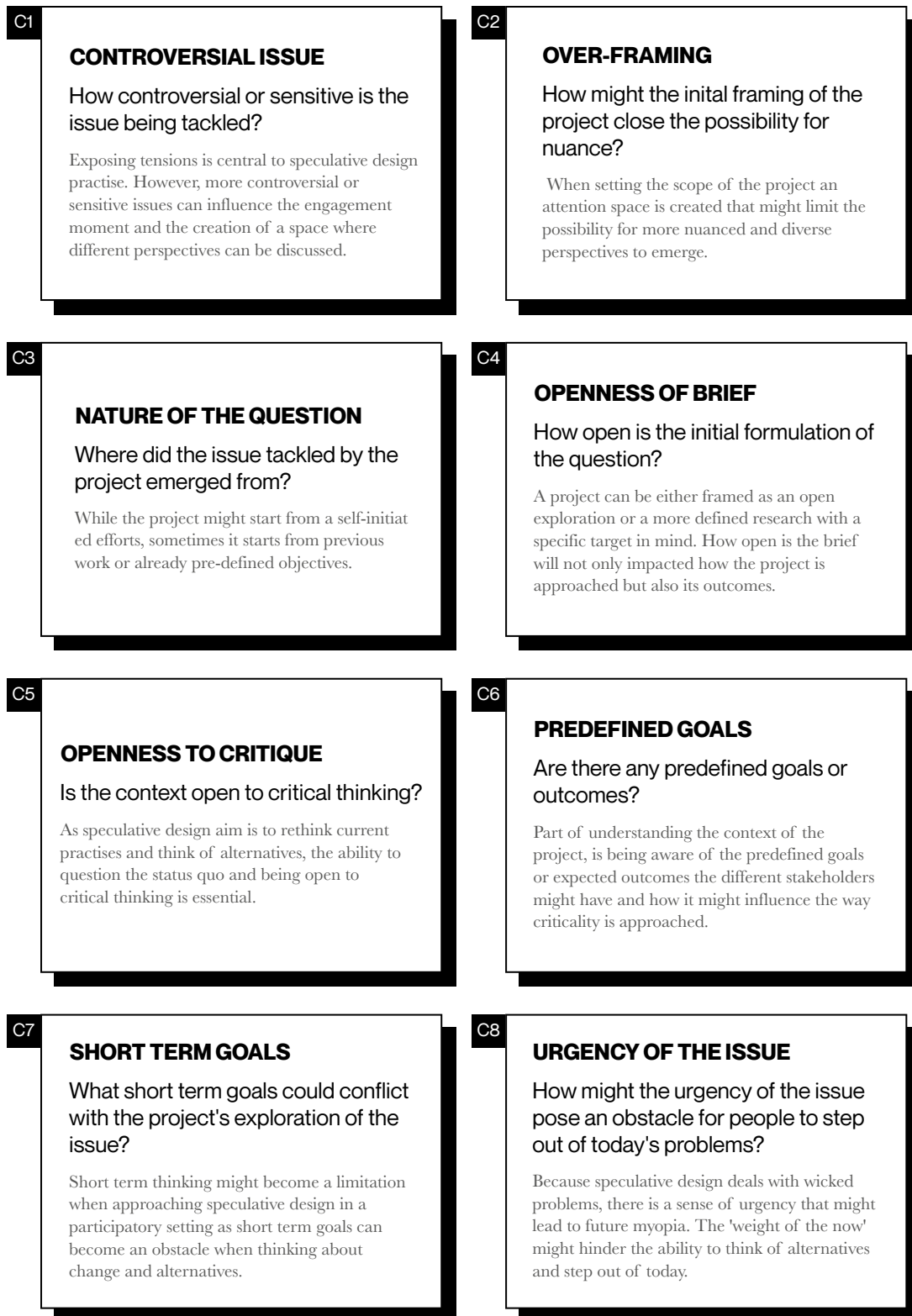


Figure 9a: Different issues and question categorised by theme

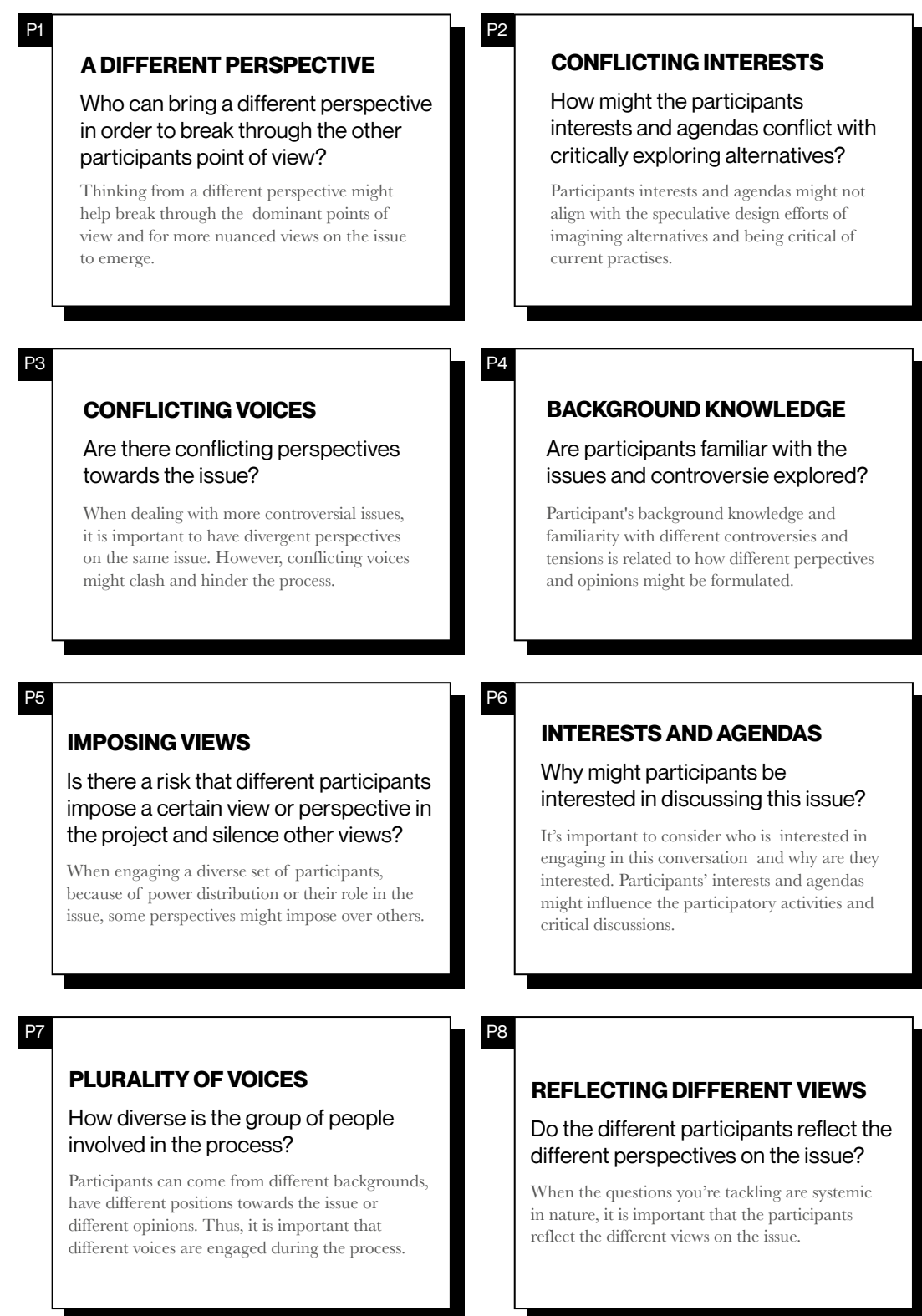


Figure 9b: Different issues and question categorised by theme

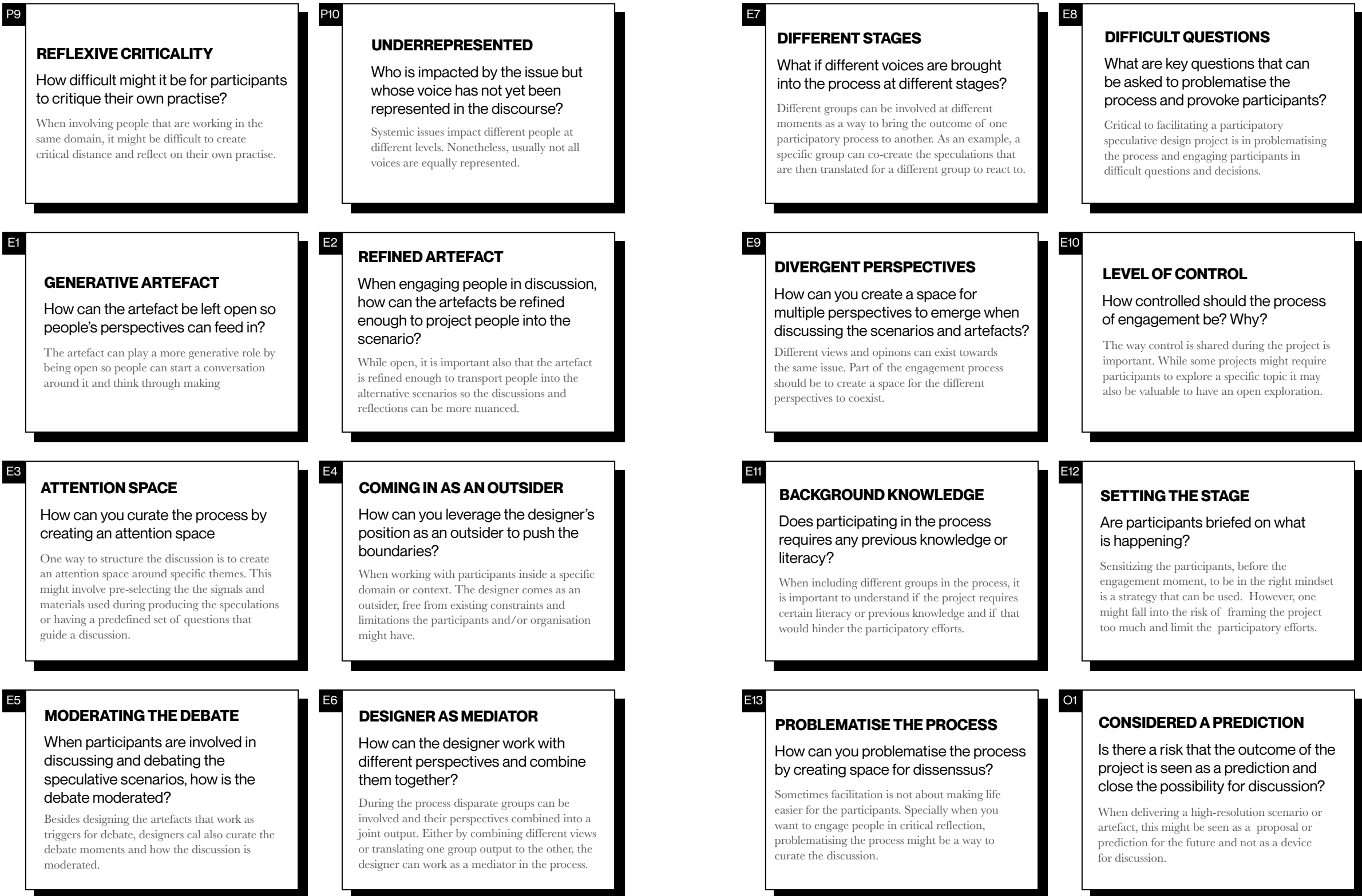


Figure 9c: Different issues and question categorised by theme

Figure 9d: Different issues and question categorised by theme

O2

PLURAL OUTCOMES

What if the outcome of the project results in multiple scenarios?

The outcome of the project might be a set of different scenarios, each one coming from different angles or perspectives.

O3

PROJECT'S AFTERLIFE

How can the reflection engendered by the project be applied by the participants involved in the process?

When engaging people in participatory speculative design it is important to consider how can the conversations generated by the process can turn into action or decision making at the present moment.

O4

REACHING CONSENSUS

What if the goal of the project is to reach consensus by creating a single preferable scenario?

The value of the project might be in involving different groups of people to create or discuss a preferable scenario.

O5

PART OF A LARGER PROCESS

How can participant's output be involved in a larger process?

Participatory moments might be integrated in a larger process. The designer can be in charge of refining and building on top of participants output or the output of a participatory process can be brought to a different stage with different participants.

O6

DISSEMINATION

Where is the outcome of the project disseminated?

Thinking about the dissemination strategy is important if the goal is to engage different publics in discussion around project's outcomes. Who is inhabiting this spaces? Who is not there?

5.3. MAPPING THE SPACE

An essential characteristic of any map is to show the different links, routes and how the space is laid out and structured. If we look of one of the most successful pieces of information design, the London underground map, the creators of the map were faced with a similar problem. They had to fit a whole city underground network in a map, so it could be understood by visitors and residents. Due to the large and uneven distances between the different stations, it was not easy to incorporate all the aspects of the underground network in a map. Until Harry Beck, in 1931, designed the famous diagram of the London underground map (Fig. 8), still in use today. The solution was to simplify the way it was represented on paper, more specifically discarding the precise distances and locations of the stations (Glancey, 2015).

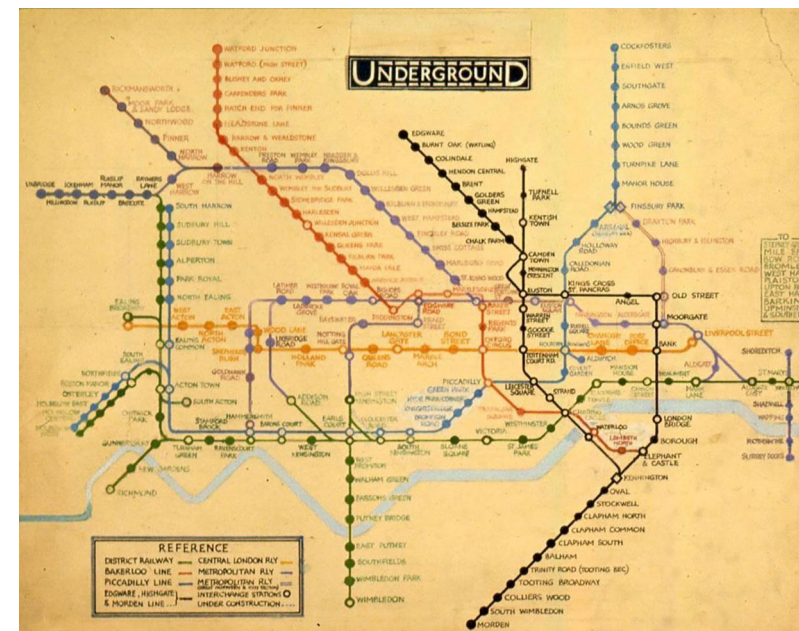


Figure 9c: Different issues and question categorised by theme

Figure 10: Harry Beck's 1931 design of the London underground network. Source: London Transport Museum collection

Essentially, I was faced with the same problem. The space of participation in speculative design is not simple. And while I have a more defined set of questions, there are multiple possible relationships between each one of the issues presented above. For instance, if the context is not open to critique (issue C5), the designer might want to leverage his or her position as an outsider (E4) to push the boundaries of the people working in that context. Additionally, if the context is not open for critique, it might be interesting to also explore if there are conflicting interests (P2) or if the participants might have difficulty in reflecting about their own practices (P9).

In a first iteration the mapping was done to understand these relations and understand the rhizomatic qualities of the map. The goal was to look at how questions related to each other and how they could be connected to explore different combination of issues. The questions were connected if they related to the same issues or complemented each other. Figure 10 shows a detail of the overall map. Inevitably, this way of mapping the space resulted in a confusing web of connections and overlaps.

In an attempt to find a better way to map the space, the problem was approached the same way Beck approached the design of the London underground map. The question asked was: how can the connections between the different questions be shown in a different way? The solution was to map the issues by challenge. If a questions relates to a specific challenge, it will inevitably also relate to other questions addressing the same challenge.

As explained before, the challenges will work as starting points for the exploration. Thus, each question should work as a door to unpack different issues in relation to the challenges. By reflecting on each question, we should better understand different ways to tackle the three overarching challenges. In contrast with the categories, some questions worked at the intersection between two or more challenges. Figure 11 shows how the different questions were mapped in relation with the three challenges.

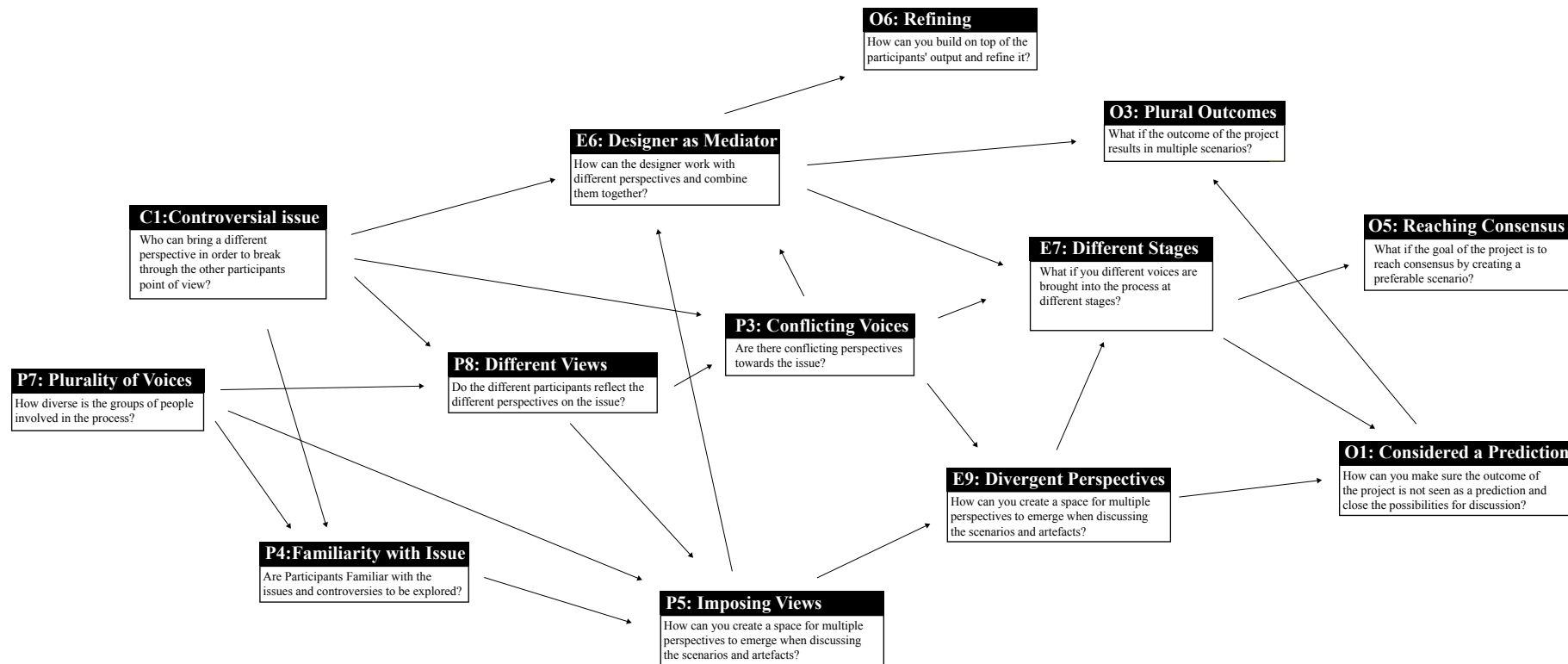


Figure 11: First iteration of mapping the questions by their relation with each other.

CONTEXT

		Stuck in a Singular View	Stuck in the Context	Stuck in the Now
C1	CONTROVERSIAL ISSUE	■	■	
C2	OVER-FRAMING	■		
C3	NATURE OF THE QUESTION		■	
C4	OPENNESS OF BRIEF	■		
C5	OPENNESS TO CRITIQUE		■	
C6	PREDEFINED GOALS		■	
C7	SHORT TERM GOALS		■	■
C8	URGENCY OF THE ISSUE			■

PARTICIPANTS

		Stuck in a Singular View	Stuck in the Context	Stuck in the Now
P1	DIFFERENT PERSPECTIVES		■	
P2	CONFLICTING INTERESTS		■	■
P3	CONFLICTING VOICES	■	■	
P4	BACKGROUND KNOWLEDGE	■		■
P5	IMPOSING VIEWS	■	■	
P6	INTERESTS AND AGENDAS		■	
P7	PLURALITY OF VOICES	■		
P8	REFLECTING DIFFERENT VIEWS	■		
P9	REFLEXIVE CRITICALITY		■	
P10	UNDERREPRESENTED	■		

ENGAGEMENT

		Stuck in a Singular View	Stuck in the Context	Stuck in the Now
E1	GENERATIVE ARTEFACT	■		■
E2	REFINED ARTEFACT			■
E3	ATTENTION SPACE			■
E4	COMING IN AS AN OUTSIDER		■	
E5	MODERATING THE DEBATE	■	■	■
E6	DESIGNER AS MEDIATOR	■	■	
E7	DIFFERENT STAGES	■	■	
E8	DIFFICULT QUESTIONS		■	■
E9	DIVERGENT PERSPECTIVES	■		
E10	LEVEL OF CONTROL	■	■	■
E11	BACKGROUND KNOWLEDGE	■		
E12	SETTING THE STAGE			■
E13	PROBLEMATISE THE PROCESS		■	

OUTCOMES

		Stuck in a Singular View	Stuck in the Context	Stuck in the Now
O1	CONSIDERED A PREDICTION	■		■
O2	PLURAL OUTCOMES	■	■	■
O3	PROJECT'S AFTERLIFE			■
O4	REACHING CONSENSUS	■	■	
O5	PART OF A LARGER PROCESS			■
O6	DISSEMINATION	■	■	■

Figure 12: Questions mapped by challenge and theme

5.4. NAVIGATING THE SPACE: IDEATION

With the questions created and mapped by challenge and category, now we have a an overview of the issues happening at the intersection between participation and speculative design. While this is not an exhaustive list of all the questions, challenges and categories that can exist, it is a start to understanding and exploring it. But how should the map be explored? As note previously, the three challenges were used as an entry point. So, if the set of questions identified form the different points of the map, then the challenges become the compass that guide the exploration process.

Different ideas were sketched in how the map could be translated to a more usable and interactive tool. This section will describe some of the initial ideas and outline some of their pros and cons.

VISUAL COLLECTION WITH FILTERS

One of the most simple and straightforward ideas was to turn the set of question into a visual collection, either on a website or as a poster, that by colour coding, it would be possible to filter the questions related to one challenge or the other (Fig. 11). Then, by clicking on one questions, that detail would appear as an overlay. While this idea fulfils the basic need of navigating the questions by looking through the lens of a specific challenge, the ‘messiness’ and experimentation is lost as the map is presented as a static artefact.

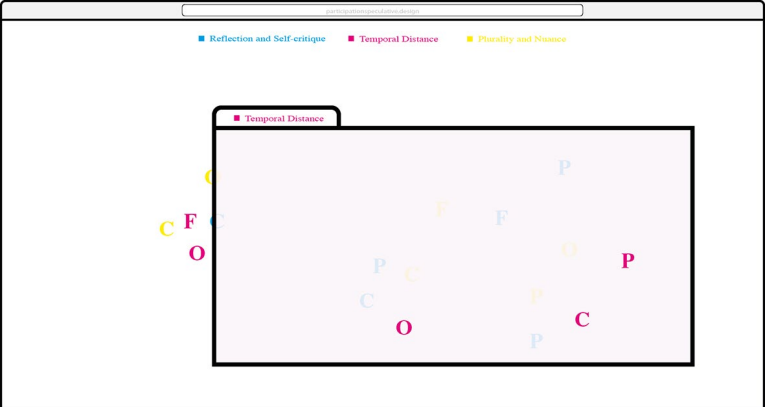


Figure 13: Sketch of web-based collection

Another idea was for the tool to work more as a navigation. By making some choices, the designer unlocked different questions and thought that mechanism exploring the space (Fig. 13). In the first screen the user encountered was a choice between the three main challenges. From there the exploration started to unpack the selected challenges by showing the questions linked to the challenge from level to level. Starting from questions about context, then to questions about the participants, followed by questions about the process and finally about outcomes.

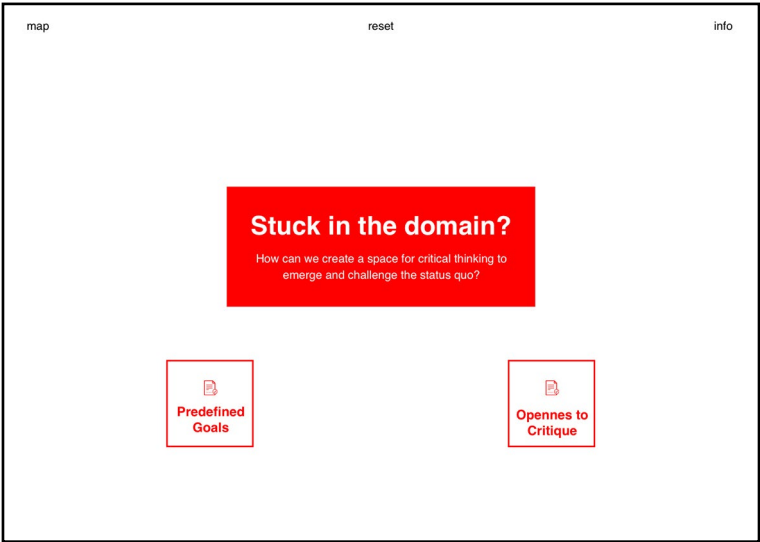
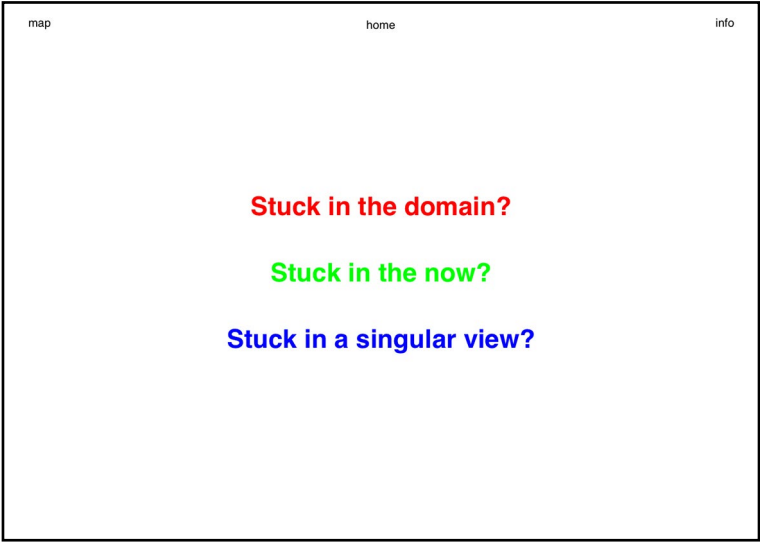


Figure 14: Web based exploration prototype.

TILE BASED EXPLORATION

A final idea turned to a more physical medium: cards and board games. Inspired by tile placing board games where players explore the game by building their own board, the idea was for designers to use the different questions to build their own 'reflection' paths (Fig. 14)

One positive characteristic of this idea is the visual trace of the thinking process left behind. In addition, by having each question as an independent element, designers can experiment with combining different questions or explore them individually.



Figure 15: Sketch of Tile based exploration

From this ideation phase, a few characteristics were distilled so that they could be possibly included in the final concept:

- Overview of all the questions with the possibility of exploring them independently;
- Looking through different lens the lens of the three challenges and use the questions to deconstruct them;
- Output as a visual representation of 'reflection path';
- Showing the connections between the different questions and how they connect with each other through the challenges and themes (rhizomatic structure).

5.5. FINAL CONCEPT

Two persons don't experience the same city in the same way. Even if you visit the same places of interest, stay in the same hotel and eat in the same restaurants, the way you navigate the city influences your perception of it. Even if you use the same map, the way you perceive the city might be different. Imagine you are walking through a new city for the first time. You start to create a mental image of its layout: "this is the centre" this is where people hang out", "here we are more in the outskirts", etc. You start to create a mental mapping of the city. While most times, this mental map changes and adapts accordingly each time you come back, this mental map is how you understand the city in spite of what Google Maps tells you.

With the final concept I wanted to apply the same idea. There are different practitioners, working in different contexts and with different problems. While we defined a limited set of questions, related to a limited set of categories and challenges, you can navigate through the different questions in multiple ways and look at the same question with a fresh pair of eyes each time you pass through it. You can create your own mental map of participation in speculative design. For this reason, instead of creating an overall map, the final concept is constituted by independent nodes that can be explored in multiple ways (Fig. 15).

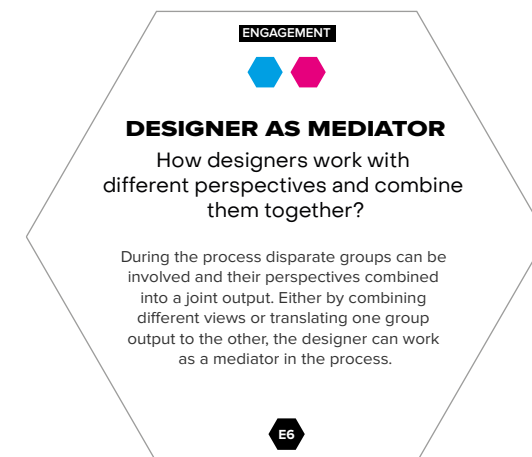


Figure 16: Example of a Issue card

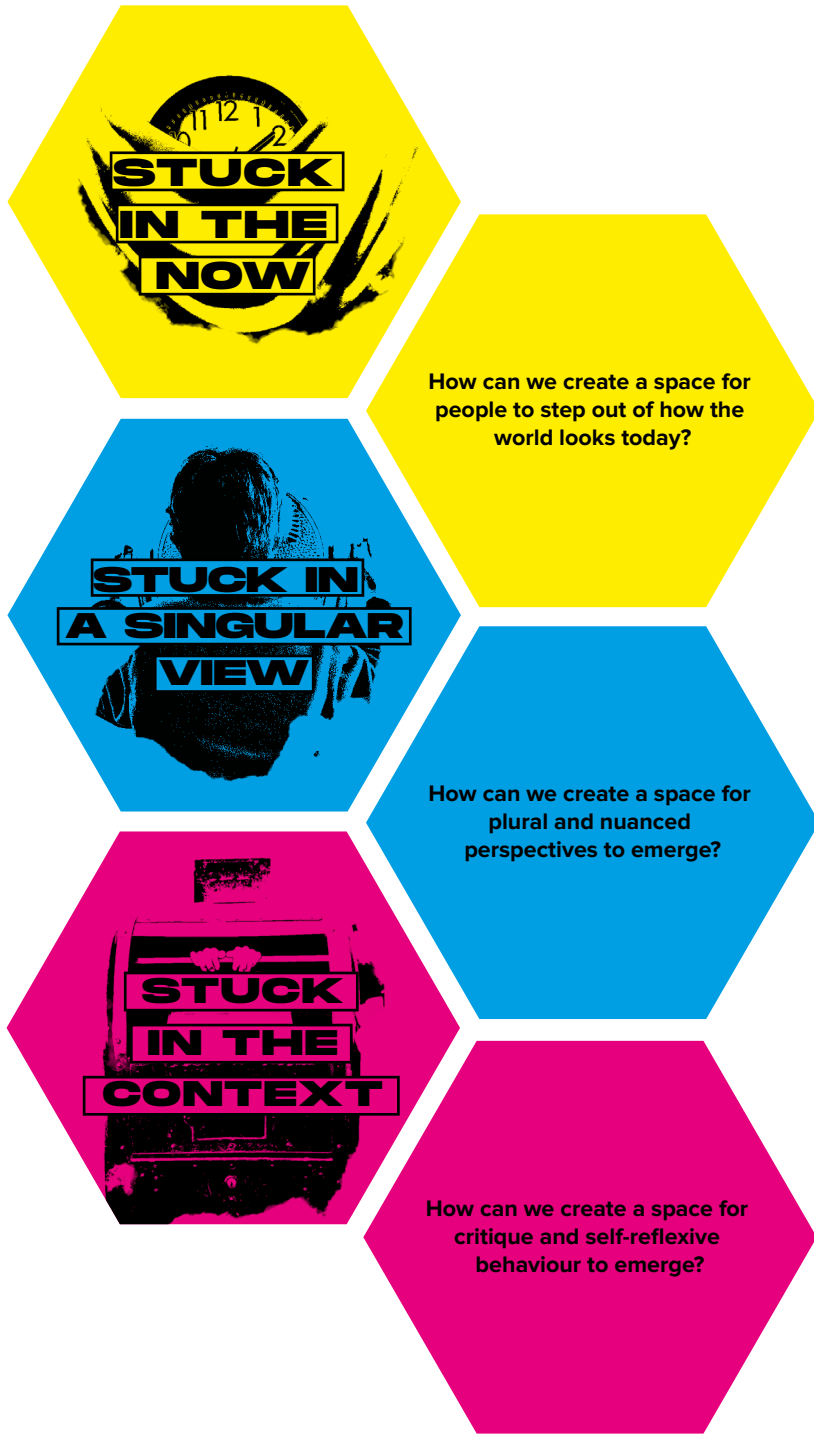


Figure 17: Challenge Cards

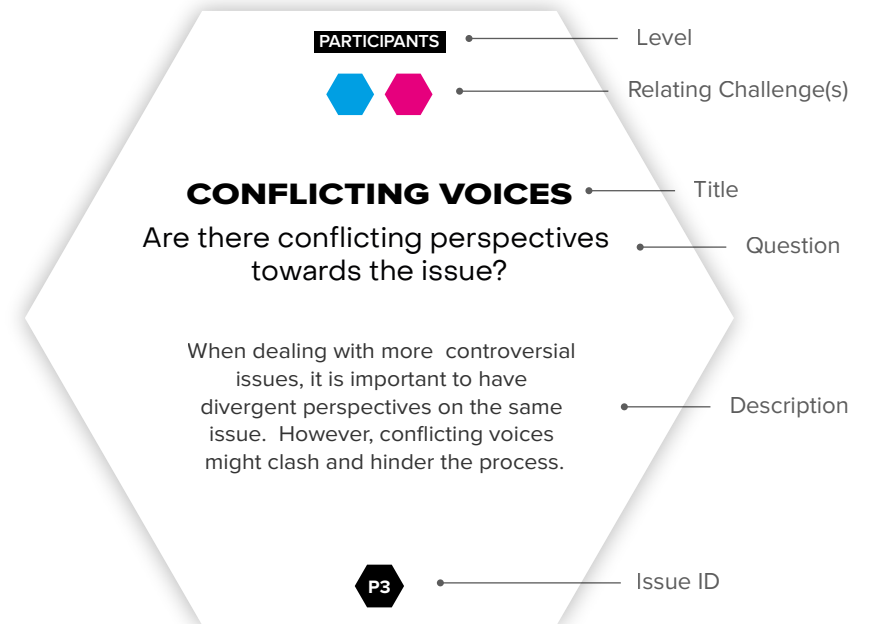
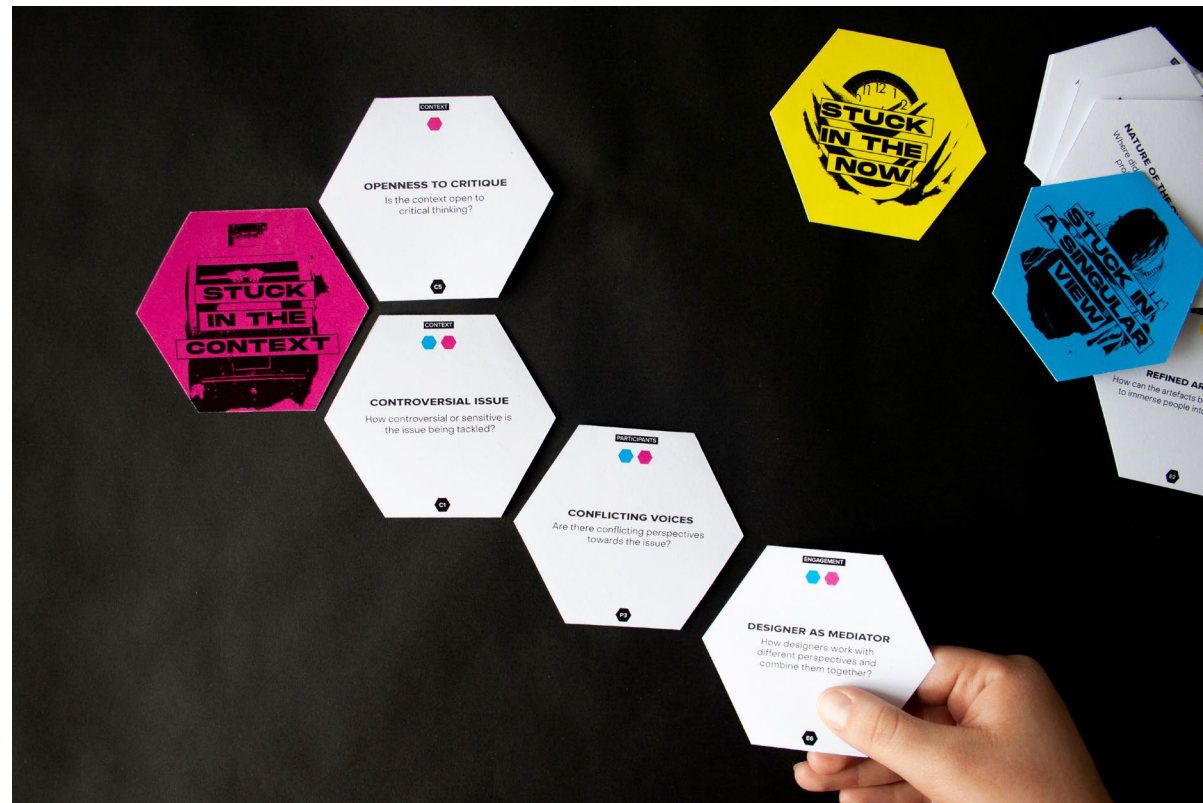


Figure 18: Anatomy of an Issue Card

There are two types of cards: the challenge cards (Fig.11) and the issue cards (Fig.12). As it was defined before, the three challenges should be the start and the guiding compass for the exploration.

The issue cards represent different stops you can take. They can be used to reflect on particular moments of the process and help deconstruct the overarching challenges. In each of the issue cards we can find a short title, the question itself and a short description to help give more context. They are visually labeled across the four different levels defined before (Context, Participants, Engagement, Outcomes) and colour coded in relation to the different challenges each question can help deconstruct (Fig. 12).

As the space we're exploring is complex and little of it has been explored, the goal of the final concept is not to give designers an answer in how to open up the speculative design process to more people, but trigger reflection and promote experimentation on different ways it can be done. For this reason, the cards have an hexagonal shape that permits them to be combined with each other while at the same time limiting maximum number of possible connections.



While each issue can be explored individually, One of the ways the space can be approached is by starting by selecting one of the three overarching challenges and use the different questions (that relate to that challenge) as different reflection 'stops' to help unpack it:

Figure 19: Example of use



Figure 20a: Example of navigation

1. Start by selecting one of the three challenge and place it on the table/wall;
2. Start with the context level, which issue might be interesting to explore? Select a context issue corresponding with the challenge you're exploring (Fig. 19)

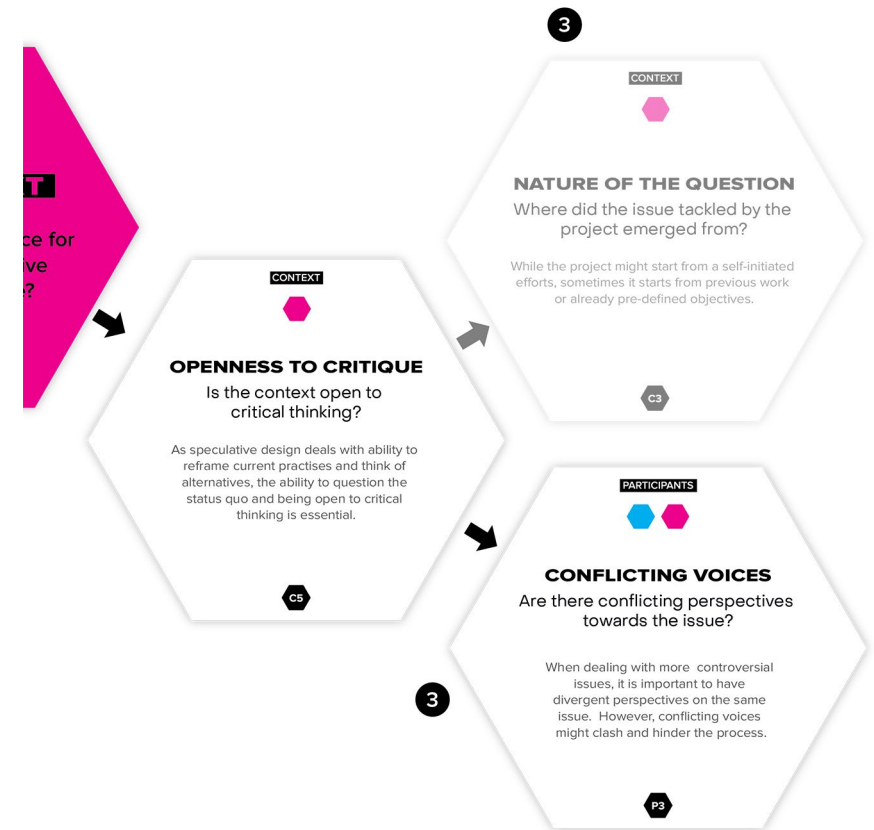


Figure 20b: Example of navigation

3. You can then continue to the next level, participants, or keep exploring the context level (Fig. 20)

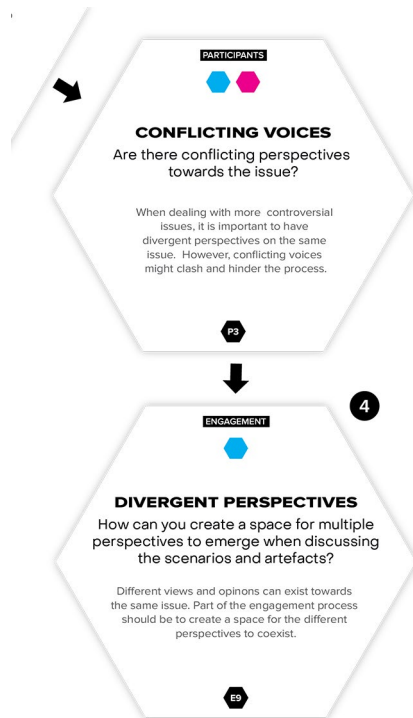


Figure 20c: Example of navigation

4. You can only explore issues that relate to the challenge selected in the beginning, unless the card selected relates to more than one challenges. If this is the case, then you can start exploring these other challenges (Fig. 21);

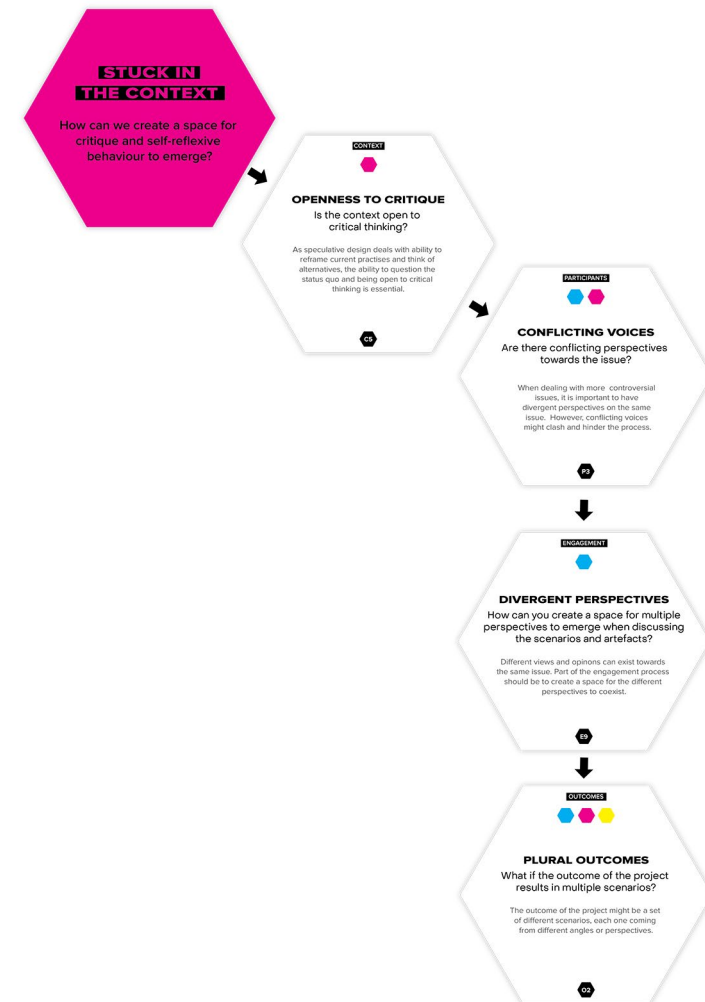


Figure 20d: Example of navigation

5. In the end, you will have constructed a board representing your exploration through the participation in speculative design space and the reflection paths you've taken (Fig. 22);

In addition to the card deck, a short accompanying ‘rulebook’ was designed in order to give an overview of the toolkit, explain the different challenges and themes, and explain the different ways to navigate the space.



Figure 21: Sample pages from the guidebook accompanying the card set

PARTICIPATION IN SPECULATIVE DESIGN WEBSITE

In order to make the research and toolkit easily and publicly accessible, a website was created to showcase the project. Here, the visitors can access an overview of the project and download the ‘print and play’ version of the toolkit. Additionally, the ‘explore’ page allows the visitors to get more information and detail on the toolkit, the three challenges and be introduced to the individual issues in the website itself. Finally, in the ‘info’ page, visitors can dive deeper into the background research and context of the project.

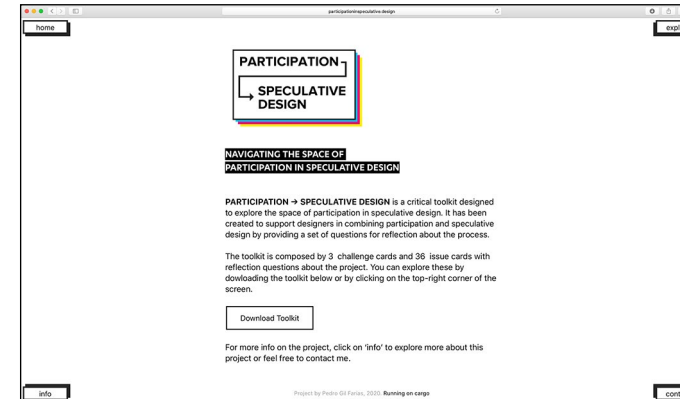


Figure 22: Website for Participation in Speculative Design Project

FURTHER STEPS

The card deck offers the flexibility to experiment with different ways to navigate the design space, and although it represents limited universe, it is always possible to expand with new questions and issues. While this project aimed to explore some of the challenges and issues relating to integrating participation in speculative design, the range of questions and challenges proposed do not represent a final set. For this reason, one of the possible ways this project could develop is in turning it into an open source tool, with the possibility for other practitioners and researchers to suggest different questions and challenges related to the design space. As explained in the last section, a website was developed to showcase the project outcomes. In this case, the website works as a communication tool for the project. A further step, would be to make the website an open source digital tool, where visitors could not only access the research and questions, but navigate the space like it’s now done with the card set and even contribute with further questions.

EVALUATION

In order to evaluate the final design outcomes of this project, the toolkit was sent back to the practitioners interviewed in the research phase of the project. This section will introduce the evaluation procedure, the questions used to evaluate the design and a summary of the most important insights.

6.1. EVALUATION PLAN

The goal of the project was to understand how can speculative design open up the process to include more voices and engage different groups in participatory settings. Additionally, it aimed to problematise this space and explore the tensions, challenges and obstacles to include participation in speculative design. Finally, a toolkit to support designers in exploring this space was developed. With this in mind, the evaluation of the toolkit should be done by expert practitioners in order to assess if the toolkit accomplishes its purpose.

For the evaluation, the designers approached during the design phase were approached again. This way, there was the opportunity to not only evaluate the final prototype but also validate the main themes and challenges that resulted from the interviews.

A digital version of the card set presented in the last chapter was sent to practitioners, alongside the guidebook. While sending a digital version of the toolkit allowed practitioners to evaluate the toolkit in general, it didn't allow them to test the cards and the navigation mechanism as envisioned. Although it was not possible to do a test session in person with each one of the expert designers, the cards were also placed in a digital workspace environment, using an online collaboration platform, so the designers could simulate a test session. The collaboration platform permitted the evaluators to move the cards around and test the mechanism without the need to print the cards (Fig. 25).

Additionally, a test session was made with the designers at Imagination of Things. This session permitted to more thoroughly evaluate the navigation mechanism and discuss ideas on how the project might develop further.

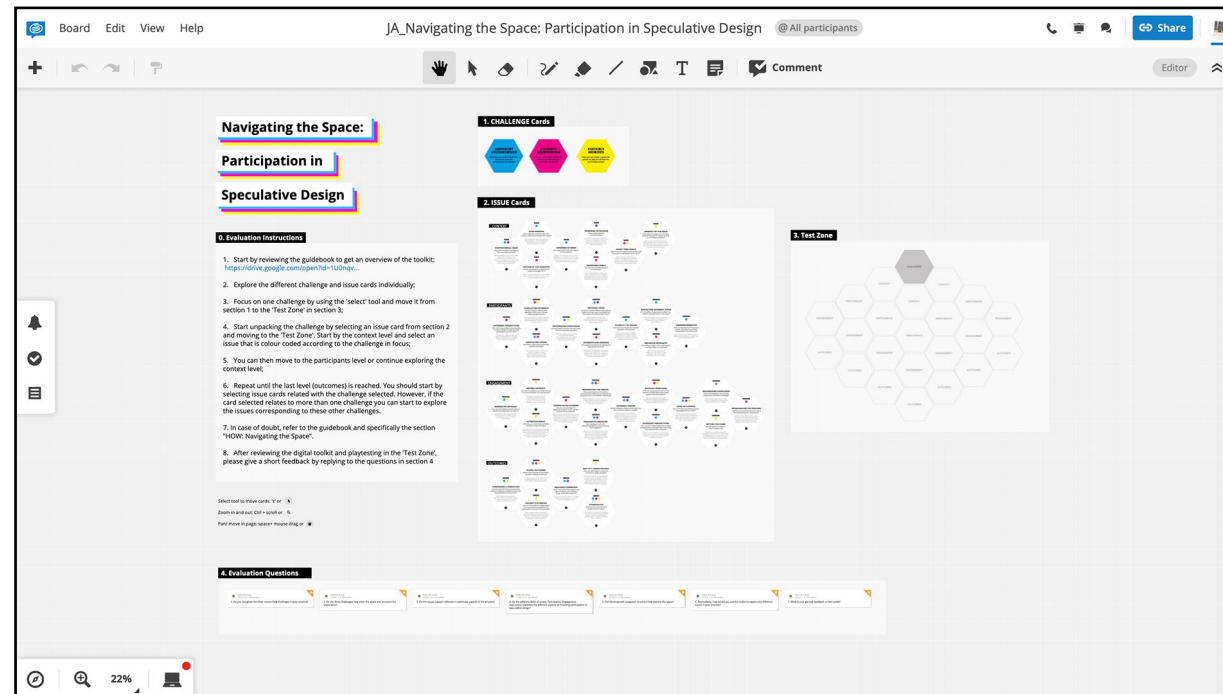


Figure 23: Screenshot of digital workspace environment simulating for the evaluation session.

EVALUATION QUESTIONS

In order to structure and support practitioners in evaluating the prototype, the following questions were defined. The questions were sent to the participants alongside the digital version of the toolkit.

Challenges

- Do you recognise the three challenges in your practice?
- Do the challenges help enter the design space?

Themes

- Do the four themes (Context, Participants, Engagement, Outcomes) help structure the space?
- Do you think the themes represent the different aspects of including participation in speculative design?

Issues

- Do you think the issues are relevant for the space of participation in speculative design?
- Are the issues open enough for different perspective to emerge?
- Do the issues support reflection in particular aspects of the process?

Navigation

- Did the proposed navigation structure help explore the space?
- Alternatively, how would you use the cards in your own practice?

6.2. MAIN INSIGHTS

In total, apart from the test session done with Imagination of Things, two other practitioners replied to the evaluation test. While this represents only a small portion of the expected evaluations, it provided a first glimpse of how practitioners understand and experience the toolkit. Below, some of the main insights are explored in relation to the evaluation questions.

INSIGHTS ON THE THREE CHALLENGES

In general, the practitioners understood and recognised the three overarching challenges in their practice and recognised that it helped them structure the discussion triggered by the different issue cards. Nonetheless, one evaluator noted that the challenges now are more generic and high level concerns. Noticing that there are other more pragmatic challenges that can be more urgent when setting up a project like this.

While running the test session, one note about the challenges was that while they offered an entry point to the discussion space, it was confusing how can the user during the session go from one challenge to the other using the cards. One of the ideas was that the challenge cards can be only for reference and not exactly placed on the “board”.

INSIGHTS ON THE LEVELS AND ISSUES

In relation to the four levels (context, participation, engagement and outcomes) one of the participants felt that there was one last level missing: “sharing”. In the participants words sharing would be a level “in which you use the outcomes with your stakeholders to talk about the future and the present”. This proposed additional level is connected to what was referred in section 4 as “Closing the loop”. The idea that speculative design outcomes should connect back to decision making and action today, by either reflecting on the discussion engendered or making the bridge to problem-solving approaches.

In general, the evaluators considered the way the issue cards were

formulated as triggers for reflection and discussion. One participant noticed that sometimes one card might trigger a conversation that covers other questions, making it redundant to then explore this. For instance, while exploring the question of conflicting voices, one might start to explore aspects related to the issue of underrepresentation. While will always exist some overlap between the questions it would be interesting to do further testing to see when do questions overlap and if the overlapping happens, how might it become a way of deepening the discussion and not repeating the same ideas.

INSIGHTS ON THE NAVIGATION STRUCTURE

During the live evaluation test with Imagination of Things, the structure of navigation proposed was easily understood and it was seen as logical. However, when evaluating the cards, one practitioner noted that it was confusing and it maybe needed further step by step indications.

Furthermore, one evaluator noted that there was no predefined space for reacting to the questions. While we can construct the map by placing the questions next to each other, the participant wondered where did the answer go and how do they relate to each other. In addition to the space for reaction, one participant suggested that there might be even a more actionable trigger in the question itself. For instance, when discussing the plurality of voices, the card might give a specific task to map the different voices now involved in the process or that are impacted by the issue at hand. As a workaround to this, during the evaluation session, the participant created post-its in the online platform itself next to the cards (Fig.26).

One last remark in relation to how the space was navigated was that maybe the toolkit could be useful if divided in the different stages of the process. In section 4 we three main phases were outlined: Setting the stage, producing the speculations and reflecting on the speculations. The participant suggestet that it might be interesting to explore what questions can be useful in each of this stages and how might the toolkit use vary per stage.

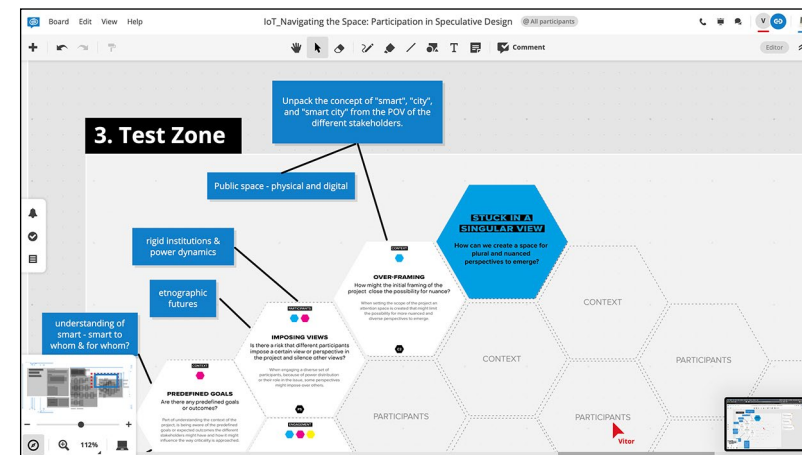


Figure 26: Participant making notes during the evaluation session in the online collaboration platform

A TOOLKIT TO SUPPORT OR TO REVIEW?

One of the main insights came from one of the evaluators that noted that while the toolkit proposes a novel exploration into the intersection between participation and speculative design, it now feels more like toolkit to review the practice and not to be used by practitioners when doing or delivering a project. It was referred that now it is structured more as tool for analysing work and not to support an ongoing project.

This observation suggests the use of the toolkit as an evaluation tool after the project is done. It would be interesting to explore this observation in further evaluation sessions and apply the toolkit in a real case study. This way, the usefulness of the toolkit can be better accessed. Additionally, by doing further research with practitioners during a project, it would also be possible to understand how could the toolkit fit in an ongoing project.

CONCLUSION

This final chapter shares the overall conclusions in relation to the research done and how the final output of the project has addressed the research questions set out in the beginning. It outlines the contributions to practice and theory and the major limitations of the project. Finally, the thesis is rounded off with a personal reflection on the project and topic.

The main aim of this thesis was to examine how can designers open up the speculative design process to engage a plurality of voices and perspectives, and bring the practice out of the gallery, without losing the critical qualities associated with the practice. It set out to achieve this by conducting eight semi-structured interviews with leading practitioners that in their practice combine aspects of participation and speculative design.

One of the main findings is that in each practitioner's work, participation in a speculative design project was approached in a multiplicity of ways. Even if we were analysing a specific practice or work from a specific design studio, it wouldn't make sense to look for a single solution as different projects have different conditions and factors that call for different ways to approach the challenges of participation in speculative design. The main contribution of this project then is not in defining a closed set of steps to follow if you want to conduct a participatory speculative design project, but in problematising the process and exposing some of the tensions and issues one may come across when opening up the process to more voices.

One of the sub-questions for this study was to identify specific challenges or obstacles practitioners face in their practice. In a first step, this study has identified three overarching challenges faced by practitioners: Stuck in a Single View; Stuck in the Context; Stuck in the Now. Respectively, these challenges relate to the ability to create a space for multiple perspectives to emerge around the same issue, create a space where people can become self-critical beyond their own biases, and create a space for people to move out of how the world looks today and imagine alternatives. Additionally, the project also set out to identify different risks of opening up the design process and different strategies currently used by practitioners. These were mapped in four high level categories relating to different as-

pects of combining participation and speculative design: Context of Operation; Participants; Moments of Engagement, and Outcomes. More detail on the three challenges and four levels can be found on chapter 4.

In a second stage, 37 specific issues were identified from the interviews. These issues took shape as small provocative open-ended questions with the intention of inviting designers into the space of participation in speculative design and probing into specific aspects of the process. The set of questions were categorised by the corresponding level (Context, Participants, Engagement or Outcomes) and each question was then mapped in relation to the three challenges. Finally, the questions were turned into a set of cards as a way to support designers in exploring the design space. By focusing on one of the challenges, the users can enter the space and deconstruct the process issue by issue. More detail on the design output can be found on chapter 6.

Coming back to the main research question, one can conclude that it is possible for different groups, communities and organisations to participate in speculative design process without the project losing its criticality. However, there are challenges, issues and different aspects that should not be overlooked. The space of participation in speculative design is complex, but it is this complexity that also makes it so valuable. While the challenges and issues identified during this research do not represent a final mapping of the practice, they presents a first problematisation that could lead to a better understanding of the space. The identified questions and toolkit don't offer resolution but support decision and hopefully support the creation of more spaces where speculative design and participation can intersect.

7.1. CONTRIBUTION TO PRACTICE

As noted before, speculative design is a relatively new practice which is in constant mutation. Thus, the body of research on the topic is also limited. This study and its key findings try to expand the research and push the boundaries of the practice by examining its intersection with participation. While the practitioners interviewed have in recent years given several interviews and notes on their practice, the specific focus on aspects of participation brings to light a new angle on the field.

Additionally, if speculative design is a relatively new practice, the efforts to engage a plurality of voices in a participatory process and taking the practice out of the gallery are even more recent, making this exploration timely. This research thus poses a first problematisation of this move out of the gallery and into participatory structures. This new understanding is present with the purpose to support practitioners in pushing the boundaries of speculative design boundaries and navigating the complexity of engaging communities, groups and organisations in critical reflections about the future and alternative ways of being. Additionally, this first exploration should also help improve the theoretical understanding of the practice and support further research.

7.2. LIMITATIONS AND RECOMMENDATIONS

The main body of research of this project consisted of eight interviews with leading participants. Because of the novel, emergent nature of the practice, this was a fruitful way to gather first hand perspectives on the practice. Unfortunately, it wasn't possible to participate in, and analyse, a project where participants were engaged in speculative design practice. This was one of the initial intentions of the project that was not possible to pursue due to time limitations and the COVID-19 global pandemic. Engaging in and researching a real life case study would be a possible next step for a better understanding of the dynamics and challenges of integrating participation in speculative design.

Another limitation related to the interview process was that only a small sample of participants were engaged. While the sample represents leading practitioners in an emerging field, it would have been valuable to engage in a second round of interviews with a theoretical sampling strategy. This would have helped to further iterate and explore the categories of analysis that resulted from the interviews and provide a deeper understanding of the practice being studied.

Thirdly, the study did not evaluate the use of the toolkit in a real case scenario. While expert evaluation provided useful insights, it was limited by the reduced number of respondents that replied to the evaluation test and the fact that the test had to be conducted remotely. Testing the value of the toolkit in a real case scenario thus would result in more appropriate evaluation of its value and the different aspects which it could improve.

Finally, one of the main insights of this study was how there are multiple ways to approach the challenge of participation in speculative design. In addition, different practitioners and design studios apply similar approaches but in different contexts. From self-initiated studio work, to commercial consultancy work and work with local communities and public institutions, the context of operation of each project is a major factor in the different challenges and issues one might face. Although this project tackled this issue by trying to engage practitioners working in different contexts, it would be valuable that further research would focus on a specific context and explore its limitations and merits.

7.3. A FINAL REFLECTION

As was pointed out in the introduction to this thesis, the final stages of this project were undergone during an uncertain and wicked time in the world. In a blink of an eye, what we took for granted was fading and the structures governing our life were exposed by its fragility.

As the project focused on understanding participation in speculative design, its interest is understanding how can different communities, or society at large, think the unthinkable – to challenge our reality before we are forced to be challenged, expose the tensions that we started to ignore because we got used to them. It's important to also note that speculative design can not solve the Covid-19 pandemic or all the problems in the world. But speculative designers can get out of the white space of the gallery or academic institutions and create what futurist Alvin Toffler refers to as “Imaginetic Centres” in his book *Future Shock* (1970).

Toffler describes Imaginetic Centres as “places where people noted for creative imagination, rather than technical expertise, are brought together to examine present crises, to anticipate future crises, and to speculate freely, even playfully, about possible futures” (Toffler, 1970, p.410). Spaces where thinking about the future and alternatives are not reserved for expert futurists, larger organisations or designers, but spaces where social imagination between different groups and communities is fostered.

By engaging a plurality of voices in exposing present tensions and expanding the possibilities for the future, designers can create spaces to engage in deeper and meaningful conversations about what ‘could be’ and collectively navigate the uncertainty and multiplicity that comes with tomorrow.

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Pedro Gil Farias

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