Creative Analysis & The Value of Nonsense

A Fashion Focused Exploration
into the Design Possibilities of Probology
as an Accessible Tool
for Inclusive Co-Design

Fig. 1, Paper Folding Fashion Illustration, Artwork by Author

Designer Statement

I'm a designer with 15 years of experience working within Fashion and Textile Design, I also have a BA (Hons) in Fashioin Marketing, as well as a PGCE in Art and Design.

Due to the growing concern regarding the ephemerality of modern Fashion, I have increasingly worked towards less wasteful and more sustainable practices within this field. I have spent the past 3 years as a tutor on a Fashion and Textile courses at Brighton MET, with a particular interest in zero waste, upcycling and reusing what we wear.

Throughout this Master's course I have taken the opportunity to explore different design disciplines and engaged particularly with collaborative design, seeking to facilitate sustainable change through exploring the radical research method of probology, research through design and adopting a codesign approach to consider more inclusive and sustainable futures.

Beyond the Sustainable Design MA, I hope to continue my work in inclusive codesign, connecting consumers and designers within the Fashion discipline, and developing the Co-Creative Communities website. I am also hoping to submit a paper to the ICSDCI 2023 conference exploring the reimagination of the design process bounderies.

Statement of Intent

In a time of significant environmental, social, and cultural challenges, we need to work together to create positive change[1], breaking down barriers of hierarchy and assigned roles, and value all collaborators as equal experts and co-creators. We can only begin to achieve this by shifting focus from equality in design research methodologies to equity.

In technology, using participant-designers, that is, positioning participants as experts, has been widely adopted for some time, and we see this filtering into social design and other disciplines. However, within fashion this is a radical concept, and one far less explored[2]. In an industry that struggles to find sustainable solutions, opening up the design space to users, especially within minority and marginalised communities, could lead to new avenues of exploration, building bridges that reconnect people and designers with clothes, and widen knowledge of the processes used to make them leading more sustainable ways of production.

This work aims to address the fuzziness surrounding creative research methodologies. It focuses on Probology as a concept to highlight how creative analysis and nonsense can open doors for versatility, enabling us to adapt and create inclusive research tools for accessible codesign, and how pushing the parameters of the design process can uncover new opportunity for collaboration.

This workbook is a rigorous independent study of the possibilities and limitations of probology as an inclusive and accessible research tool, resulting in an exhibition showcasing 4 examples of how the versatility of design probes enable them to be manipulated and adapted, allowing more accessible and inclusive methods of research to emerge. I will also create a website that connects individuals, forming co-creative communities, and providing a platform for codesign fashion projects and skill sharing. I will also present an extract for a paper entitled 'Reimagining the Fuzzy Front End of Design: Introducing Codesign from the Root Up", to be written for submission to the ICSDCI 2023 conference.

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1 Liz Sanders, About, MakeTools, www.maketools.com, Accessed 18th July 2022

2 Hur, ES and Beverley, KJ, The Role of Craft in a Co-Design System for Sustainable Fashion, P. 1

Situating myself within the intersection of Inclusive Design, Adaptive Research Methodologies, and collaborative codesign ways of thinking, this project undertakes a systemic thinking through of the theoretical and practical elements that a collaborative approach to design takes. Through an exploration and critical review of design probing, we can create a lens through which to explore the contextual space of user centred codesign from an inclusive and accessible perspective. The scope of this work creates a continuum, engaging research into creative probing and its contributing factors, researching through the designing of my targeted tool kits, and developing inclusive research activities that help others research for new products or to identify paths for positive change.

Success in co-design is measured by all members of the group finding meaning and purpose through discussion, reflection, and discovery. This work will support this by bringing in users at the tool design stage, encouraging researchers and designers to adapt and target their design tools to the individual for maximum engagement. The website will provide a platform to encourage and facilitate codesign, connecting individuals from all backgrounds to come together encouraging discussion, reflection and discovery. Opening up the discussion around inclusive codesign within the fields of design research and fashion, and giving voice to minority and marginalised communities will make way for future enquiry and further exploration. This work is therefore of interest to Designers, Researchers and academics engaged with participatory and collaborative research, especially those working within a human centred, inclusive, and social design context. The website is also of interest to the wider community, anyone that would like to become part of the design process and is interested in the future of an industry that faces many sustainable challenges.

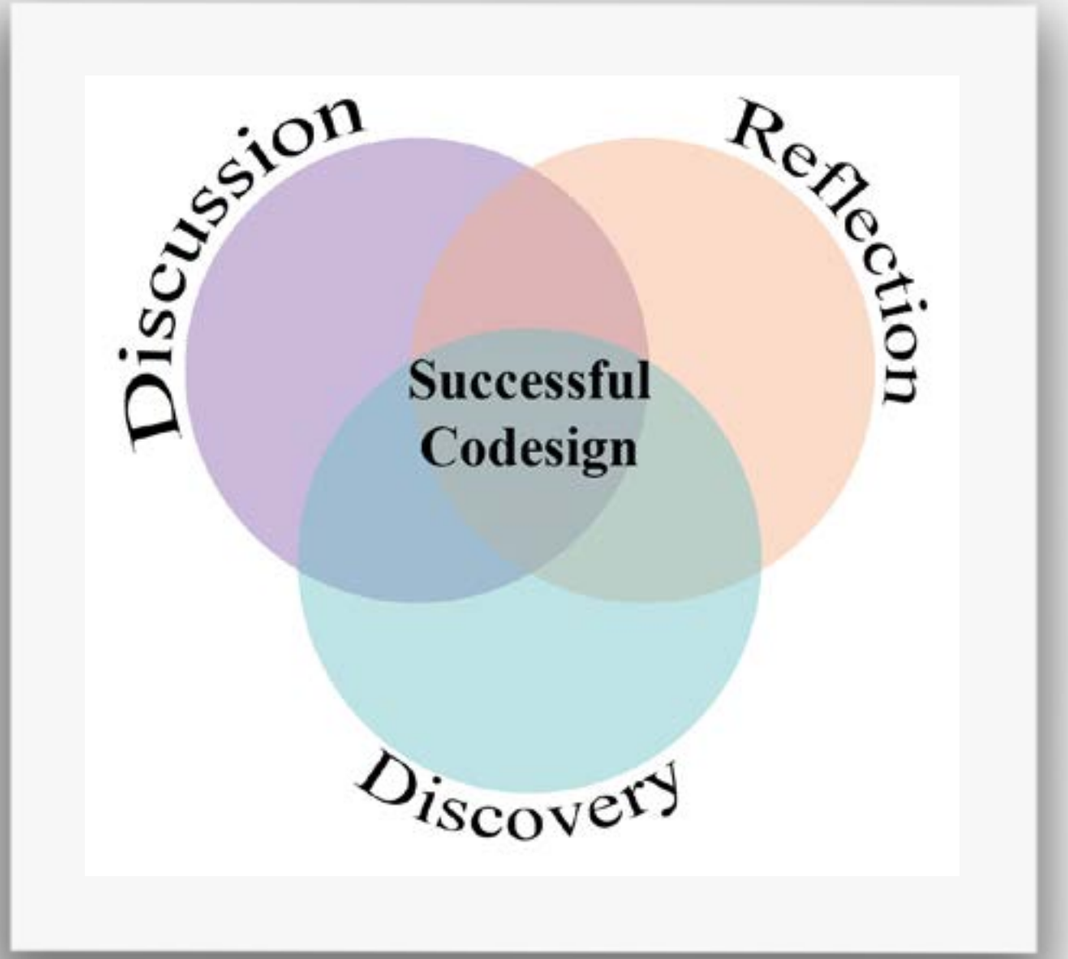

Fig. 2, Successful Codesign, Artwork by Author

Due to the importance of inclusivity within the field of design methodologies, I have sought to include exploratory voices that work with qualitative research as opposed to quantitative, educators and academics from different backgrounds and cultures that have experimented within their work and documented in detail their journey and thoughts. I have represented strong female figures such as Liz Sanders and Tuuli Mattelmäki for their extensive work with design probes, Liz Sanders work has synergies with mine in her rigorous documentation of using design tools with minority and marginalized communities. I have built upon her findings with the design of my own kits along with input from the work of Tuuli Mattelmäki, however I find her method of isolated probing unconducive with codesign due to the lack of opportunity for discussion and growth, and so situate myself more in line with the community approach of Sanders. Female voices within Fashion are represented by Kate Fletcher who has brought systems thinking to fashion and is a leader within the sustainable fashion field.

I also cite the work of Claude Steele and Joshua Aronson as their classic exploration into the stereotype of African Americans gave birth to the concept of Stereotype threat, and they bring a unique standpoint of a black man and a white man writing about their communities being tested against each other. Although I am aware of the prominence of privileged white men within design research, I have also chosen to cite Jamie Holmes, as I feel his work around the power of the unknown is uniquely modern and unmatched.

The collaborative project run by the V&A museum during the 'Africa Fashion' exhibition also runs parallel to my work, focusing on opposite ends of the design process but still bringing codesign into reimagined boundaries.

Contents

Introduction

Codesign, collective thinking and collaboration can all be seen as variations for the act of participation within design research, which in a time of significant environmental, social and cultural challenges is crucial to innovation and change 'but only if we open up the design process to everyone'.[1] We can only begin to achieve this by making research methodologies more accessible and inclusive for wider, minority or marginalized communities that have in the past been side lined or excluded for whatever reason from contributing.

Liz Sanders work, MakeTools, grows from the belief that 'All people are creative and can participate in co-designing if they are provided with relevant tools'[2], design tools which act as a facilitator for co-exploring with non-designers.[3] Gaver et al[4] popularised the use of research tools within design when they introduced the Cultural Probes back in the late 1990's. Gaver positioned probes 'as an alternative to more traditional forms of user research.'[5] and since then they have been manipulated and used within a diverse range of research through design projects. They saw 'probes as embodying the artist-designers' playful, subjective, and subversive approach to conducting user research, yet also avoided providing explicit articulations of why and how their Cultural Probes do this'[6]. They omitted framing them as a formal methodology, which is perhaps why Probes have evolved so desultorily, varied in interpretation and been left wide open for manipulation. This is the subject of much discourse within design probe literature; however I believe there is possibility in the uncertainty of probes. The opportunity to reimagine and redesign them over and over, to meet very detailed and specific requirements makes them unique and valuable as a tool for accessible and inclusive methods of research within an increasingly diverse population.

Throughout this work I address the criticism of 'constrained roles attributed to researchers and participants'[7] and follow more the notion of users as experts, equal and present at all stages of the process. I explore not only how we can make design tools and collaboration a more accessible endeavour, but also how we can incorporate codesign into the design of these tools, bringing community experience and knowledge to the table at the earliest point, creating tools that avoid stereotype and offer comfort and familiarity.

This study was motivated by my experience in Studio Module of the designing, creating, executing and analysis of research probes, along with the extensive reading of existing literature surrounding the subject. Collectively, this inspired me to explore the possibilities of design probes as an accessible tool for inclusive codesign and their ability to be uniquely positioned and targeted to specific needs. The focus within this project therefor shifts from equality in design research methodologies to equity, exploring how we can codesign and adapt our tools to give everyone an equal opportunity to achieve the same result, a place and voice at the codesign table.

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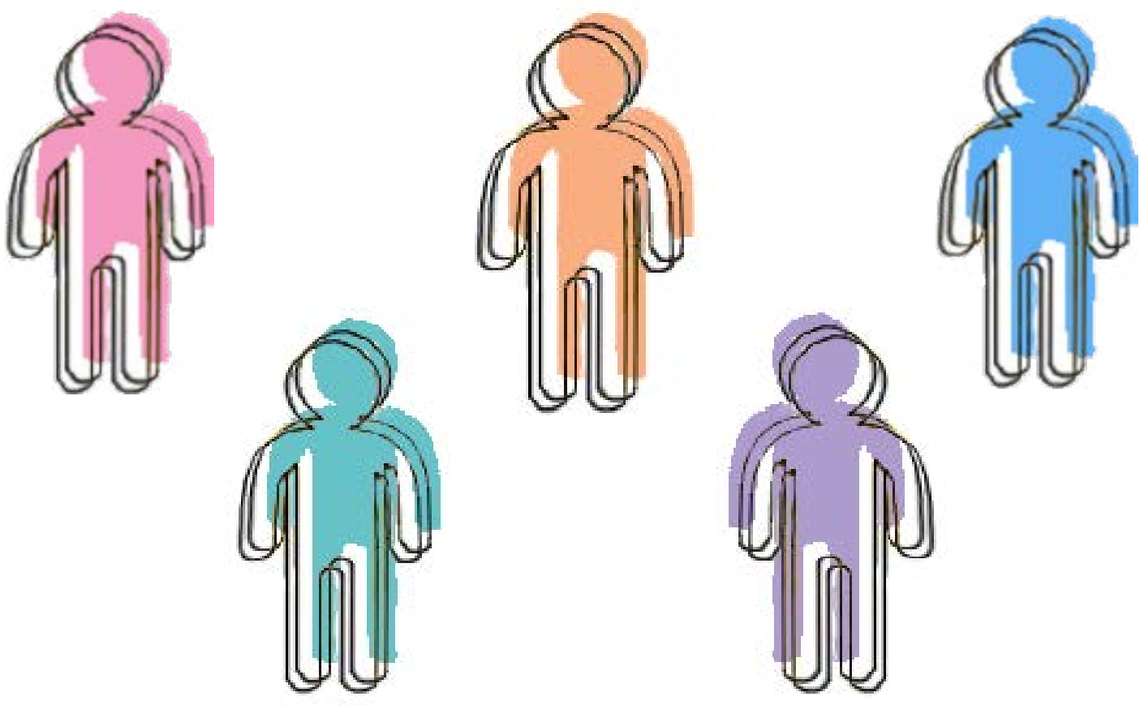
1 Liz Sanders, All people are creative, MakeTools, www.maketools.com, Accessed 18th July 2022
2 Liz Sanders, All people are creative, MakeTools, www.maketools.com, Accessed 18th July 2022
3 Tuuli Mattelmäki, Probing for co-exploring, CoDesign, Vol. 4:1, P. 65-78, 2008
4 W, Gaver et al.The Presence Project (RCA CRD Projects series). London. RCA Research Publications, 2001 P. 22
5 W, Gaver et al.The Presence Project (RCA CRD Projects series). London. RCA Research Publications, 2001 P. 22
6 Sena Cerci, Marta Cecchinato and John Vines, How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research. In: CHI '21: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems. Association for Computing Machinery, New York, p. 624. 2021
7 Gaver, et al. The Presence Project, 2001 P. 21-52

What?

Co-design is an approach to design that actively involves all stakeholders in the design process. At the heart of this understanding is the notion that we should not be designing for people, but rather, designing with them.
This approach to design breaks down barriers of the traditionally constrained roles of researchers and participant, of designer, expert and user, and appreciates all stakeholders as valuable commodities. It respects participants as experts through lived experience, researchers with multiple perspectives, and perhaps most importantly, this multifaceted approach inspires creativity even where it is least expected, revealing new avenues of enquiry and allowing us new ways of thinking.



Creative Communities

Communities are made up of a diverse group of people who can offer varying ideas, experience, skills, and abilities, and it is the coming together of this eclectic mix with varying strengths, where we begin as a society to learn and develop.

In his essay 'Counterweight', the timeline's author David Boyle reflects on his own experiences, and suggests that there is a 'horizon of memory' of only about 10 years before the lessons are forgotten and then have to be learned all over again. He further argues that extending that horizon of memory, and continuously building on what has been learned, rather than blindly inventing and reinventing, is the way to really move towards powerful and sustainable communities.

Building strong creative communities could then be fundamental to continuous positive development, extending the horizon of memory by strengthening the connections we have with each other, and hoping that deeper connections lead to significant change and longer creative relationships, so we can build on the change before it is forgotten.

'A community is where problems come together – you can see the connections and interdependencies and are pushed to work with interconnected system rather than single issues'[8]

which leads to longer lasting solutions through human-centred design. For this to work effectively, we need cohesive communities, where people feel a sense of acceptance and belonging, 'where differences are valued, where relationships between residents are rich, and opportunities are shared'[9]

8 Goodman, James. 'Powerful local communities are key to a sustainable future' Local Trust, https://localtrust.org.uk/news-and-stories/blog/powerful-local-communities-are-key-to-a-sustainable-future/, June 2021

9 Guidance on Community Cohesion, Local Government Association, LGA Publications, London, 2002

Codesign Process //

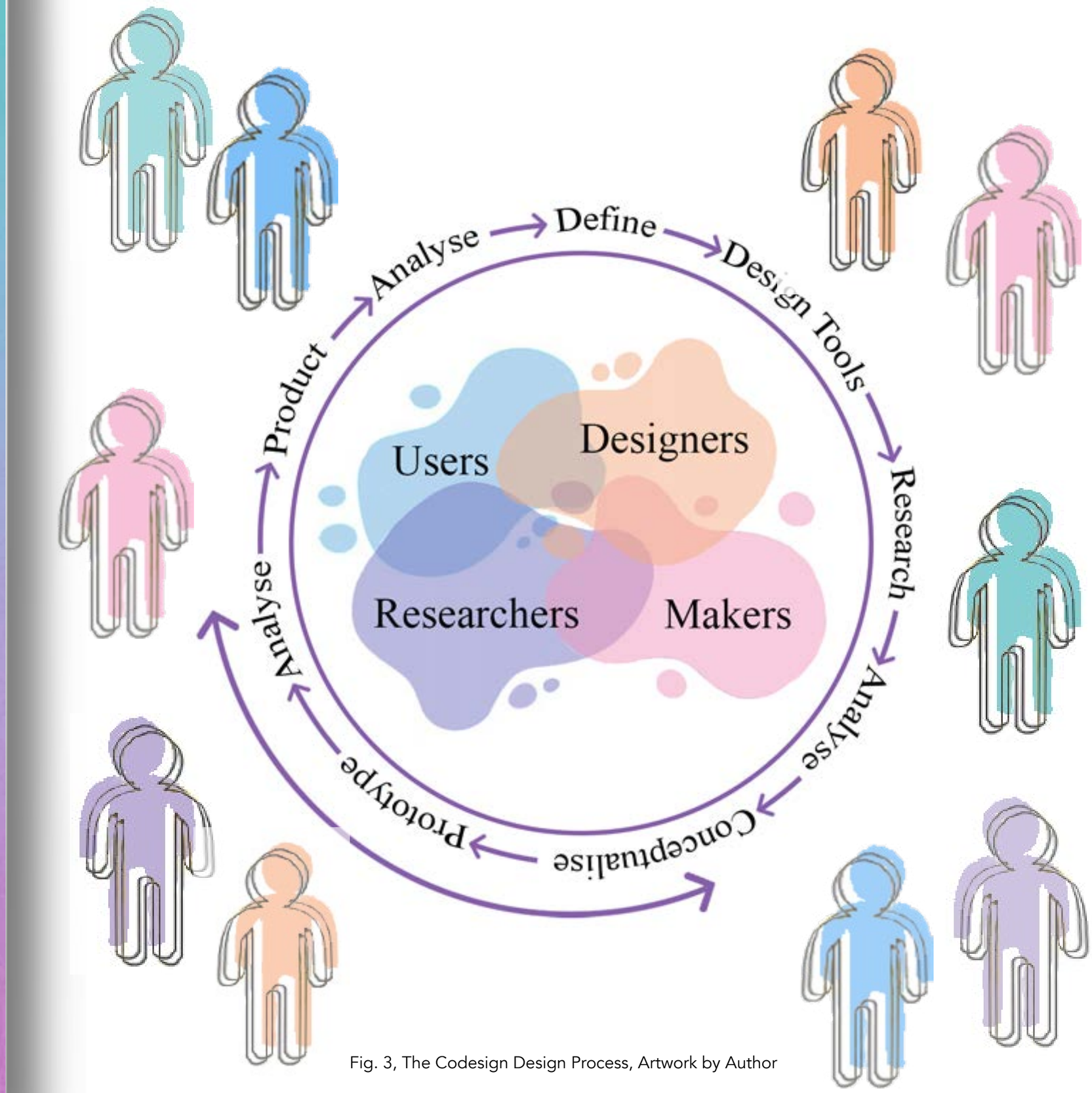


Fig. 3, The Codesign Design Process, Artwork by Author

Why?

'It is only through collective thinking and acting that we will be able to use design to help address the challenges we face today.'[10]

and so we need to make the process accessible to wider communities and move away from designing methodologies with a 'one size fits all' approach. The more accessible we can make participation, the wider we can cast our net for a diverse cross section of community, taking valuable insight through lived experiences and multiple perspectives, whilst realising user needs and increasing design empathy.

Collective thinking pulls inspiration and ideas from multiple sources, allowing research the opportunity to explore multiple avenues and directions. Thoughts are developed further and from varying angles as each builds on the last, scaffolding ideas which take an improvised journey through diverse thinkers.

Appreciating participants as valuable collective thinkers and bringing them in on a codesign level has many benefits. By becoming a contributor to the subject discourse, and being a part of positive change participants gain a closer connection to the cause, becoming more Invested in the research and in turn more engaged and dedicated. Codesigner's that have actively steered and influenced the process could also place increased emotional value on the resulting design outcome, which could go a long way when tackling sustainable challenges such as throw away culture and community support of sustainable change.

Kate Fletcher[11] proposes that more participatory models of fashion design may encourage more sustainable consumption, however 'the adoption of co-design for sustainable fashion is in its early stages'[12] Fletcher and Beverley's paper was written back in 2013, and codesign has been written about often in literature since, but development in practise is still extremely limited within the fashion industry.

- Bringing non-designers into the design of their clothes could create a more emotional attachment with their garments, working towards a less 'throw away culture' and allowing garments to live longer in circulation.
- Being part of the discussion could allow for deeper knowledge of the problems we face, and result in a more empathic approach to fashion consumption
- Fashion in the past has not been conducive to inclusivity or diversity. Codesign spaces can offer opportunity to bring in the voices of non-designers from minority and marginalised communities
- Collaborative thinking can scaffold ideas from multiple sources to uncover new and exciting avenues for research or design.

This approach would hold the voices and insights of participants from all communities at the heart of the design and creation process at every level, allowing for future fashion making to be more accessible, inclusive, personal, and emotional, and perhaps help tackle at least some of the complex issues within an industry that struggles for sustainable solutions.

10 Liz Sanders, All people are creative, MakeTools, https://maketools.com/ Accessed 24th July 2022

11 Kate Fletcher, Sustainable Fashion and Textiles: Design Journeys, London, 2008

12 Hur, ES and Beverley, KJ, The Role of Craft in a Co-Design System for Sustainable Fashion, Making Futures Vol 2, Plymouth College of Art, 2013

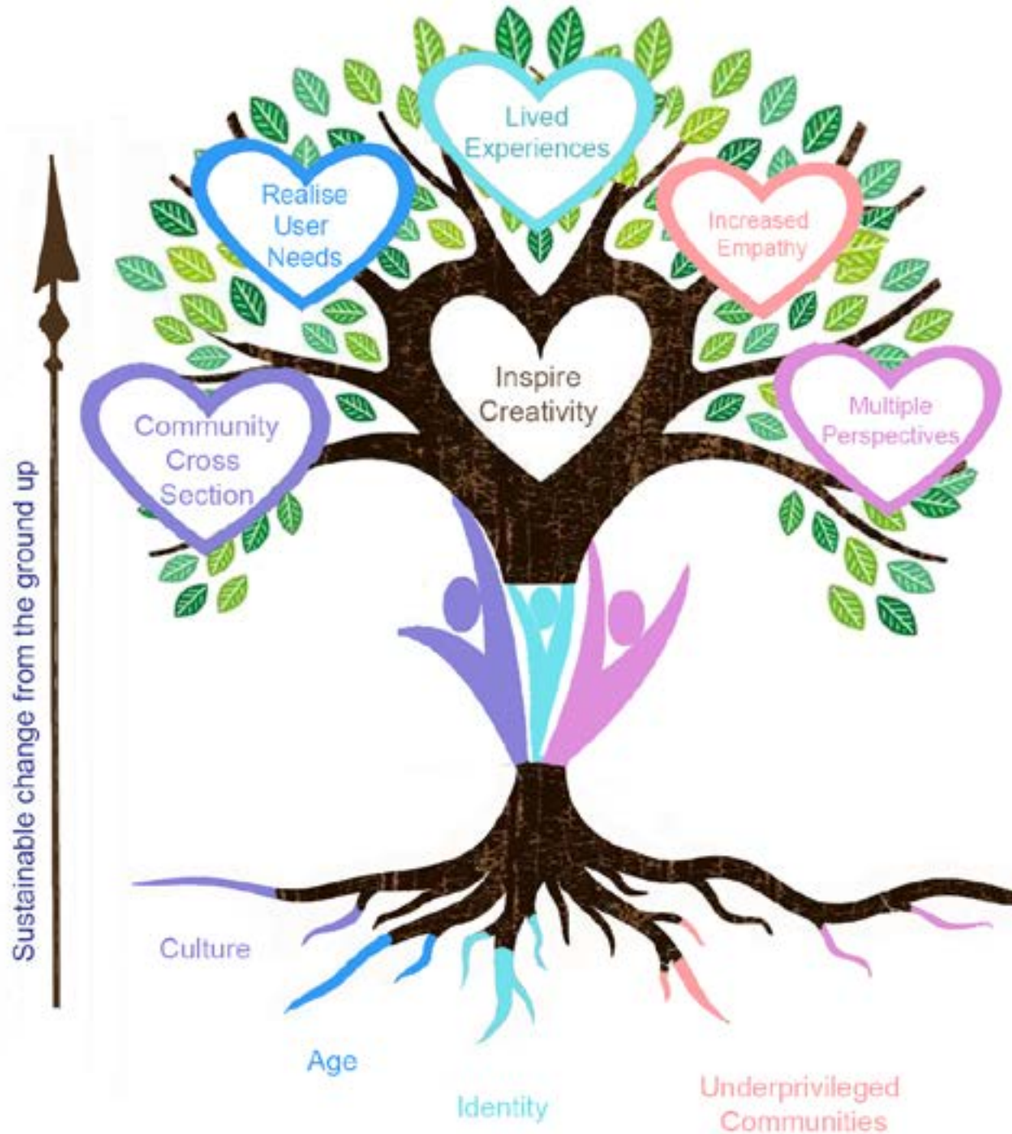


Fig. 4, Inclusive Codesign Tree, Artwork by Author

How?

This piece of work will explore codesign from an inclusive and accessible perspective, and the possibilities it could bring 'in times of rapid and profound transformations, in which the most pressing societal challenges need to be tackled in a more innovative and collaborative way.'[13]

Design probes are so versatile and open to interpretation that unpacking the problematic properties of probology as well as recognizing its inclusive possibilities could help us to target them to individuals more successfully in the future, and increase our ability to design from the ground up, rather than be constrained by the disconnected and impersonal boundaries of top down change

We also need to be aware that 'Collaboration is more than just tapping into the individual knowledge that internal and external stakeholders possess. It is about discovering their unique, and collective perspectives ..... which makes it vital to create together.'[14] and designing probes that speak on a more personal level to participants may be able to draw this insight from a wider range of people and make codesign and research a more successfully inclusive space.

Inclusive research tools need to be comfortable and familiar to the user, relatable to their lifestyle and background, and they need to be able to see how it connects to their live or how it could benefit their lives or others around them to gain trust and investment. With this is mind, we can begin to see how the design of the research tools and methodology, and how we adapt that to meet participants needs, is crucial to making codesign more accessible to wider communities, and minority and marginalised groups.

13 Daniela Selloni, CoDesign for Public-Interest Services, Germany: Springer International Publishing, 2017. P. xxiii

14 Stratos Innovation Group, Co-design: A Powerful Force for Creativity and Collaboration, Oct 15, 2016, https://medium.com/@thestratosgroup/co-design-a-powerful-force-for-creativity-and-collaboration-bed1e0f13d46

Some might think ‘creative analysis’ is nonsense! In their traditional forms the two together create an oxymoron that may not sit comfortably with traditional quantitative analysists, or with faithful creatives, and if we search for a definitive meaning of the concept, it is as fuzzy as design probology and the fuzzy front end where we find our design tools.

There is a difference between creativity, which generates a new way to tackle an opportunity or challenge, and analysis, which looks at what’s happening and evaluates to make sense of it, but that doesn’t mean creativity has to be separate from analysis, or that the two are mutually exclusive. If analysis is the detailed examination of the elements or structure of something, in order to discover or understand more about it, or your opinion and judgment 1, then creative analysis could be a creative approach to this examination. Researching, crafting, designing and making, are all methods of exploring the elements and structure of something, and so thinking and learning through making could be seen as creative analysis. If we think of creativity and analysis from a wider perspective, could adding creativity to analysis in fact push analytic conclusions far beyond what’s seen, and uncover new opportunities perhaps missed through traditional means?

Of course, the fuzziness means there are again alternative ways of translating the concept, for example, if we are analysing complex data, creative analysis could be seen as the way we unpack that complexity, such as infographics or gigamaps. It could be in the way you draw data to be analysed in the first place, using innovative and creative research methods such as design probes and tools, or it could a creative way of communicating your data once it has been analysed (Fig. 5)

If we zoom out even further, are we not constantly subconsciously creatively analysing? For example, when we critique a product we may think to purchase, do we not ask ourselves questions such as does it meet my needs? will it adequately fulfil a purpose? And Do I like it aesthetically?

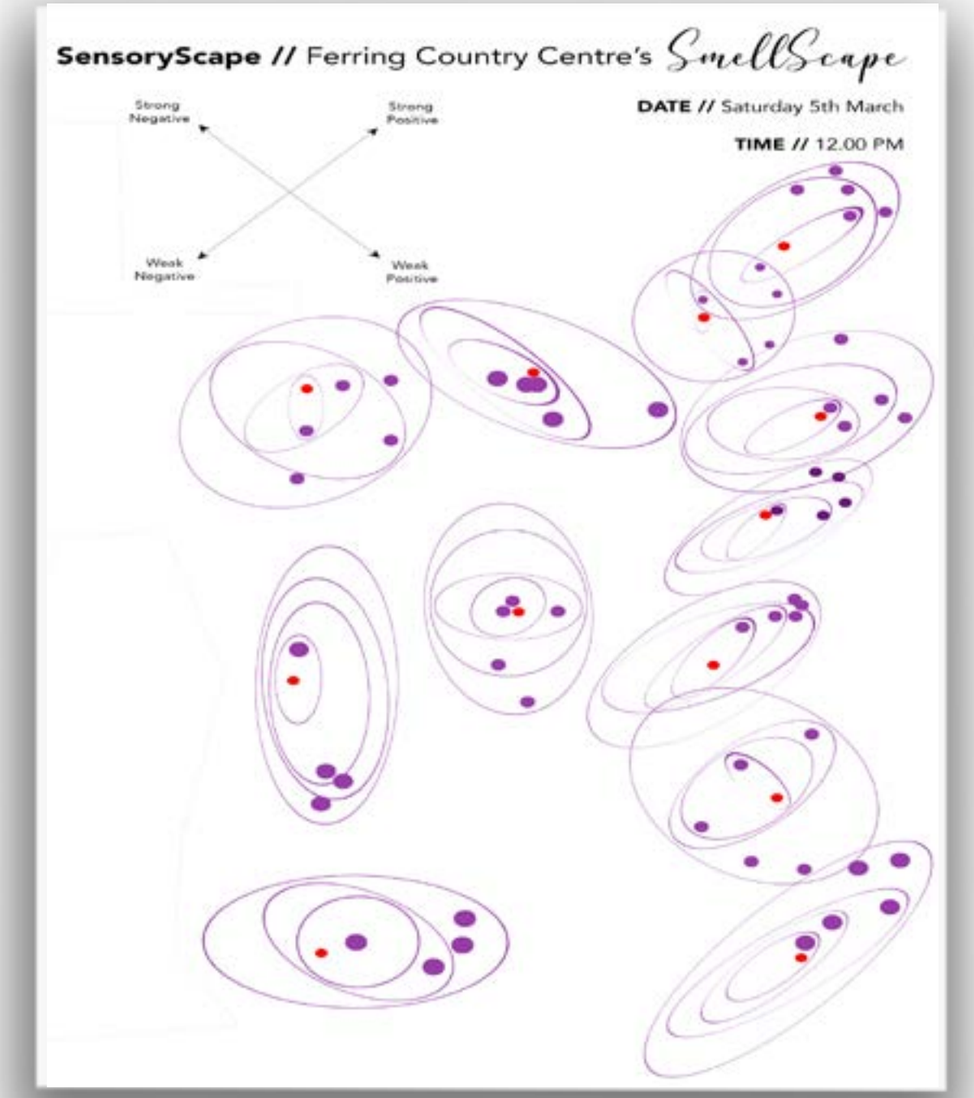


Fig. 5, SensoryScape Map, Artwork by Author

Liz Sanders argues that 'All people are creative but not all people become designers.'[15] Sanders identifies 4 levels of creativity within people's lives: doing, adapting, making, and creating (Fig. 6) The four levels vary in terms of the amount of expertise and interest needed, while expertise interest/ passion, effort, and returns grow with each level.

Sanders argues that people live simultaneously at all levels of creativity in different parts of their daily lives. For example, 'they may be at the creating level when it comes to cooking but at the adapting level when it comes to technology products.'[16] and to move up the levels takes knowledge and passion in the subject. At the 'Doing' level a low amount of knowledge and engagement is needed, the activity is a means to an end, to get something done. The second level of creativity 'Adapting' brings in a small amount of motivation to make something which takes a small amount of interest and some expertise and experience. The third level of creativity is 'Making', and requires a genuine interest and a good amount of knowledge in the making process, at this level some experience will have been gained through general passion for the subject. The highest level of creativity is the 'Creating' level, this level is guided by a high level of passion and knowledge, and 'differs from making in that there is the absence of a predetermined outcome.'[17]

Sanders believes that all people are creative and are capable of reaching the creative stage if they have the desire and passion to do so, however, she also believes that standard approaches to craft do not scaffold in a way to support individuals wanting to be at the creating level. In her paper 'Co-creation and the New Landscape of Design' Sander proposes a range of 'design spaces' which enable each type of creativity, where designers provide tools which match the level of creativity, but also provide extensions to encourage and inspire the next stage. And here in lies what creative analysis means to me in this project, designing creative tools which allow for analyses at every level, offering equity to facilitate participants of all abilities in gaining and building knowledge to move up the creative ladder, adaptive and versatile tools that allow everyone to reach the 'creating' level until they are not just codesign participants, but designers in a co-creative communities.

15 E, Sanders and P, Stappers, 'Co-creation and the New Landscape of Design', Article in CoDesign, March 2008
16 E, Sanders and P, Stappers, 'Co-creation and the New Landscape of Design', 2008
17 Hur, ES and Beverley, KJ, The Role of Craft in a Co-Design System for Sustainable Fashion, P. 5

LEVEL	TYPE	MOTIVATED BY	PURPOSE	EXAMPLE
4	Creating	Inspiration	'express my creativity'	Dreaming up a new dish
3	Making	Asserting my ability or skill	'make with my own hands'	Cooking with a recipe
2	Adapting	Appropriation	'make things my own'	Embellishing a ready-made meal
1	Doing	Productivity	'Getting something done'	Organising my herbs and spices

Fig. 6, Four Levels of Creativity, E, Sanders and P, Stappers, 'Co-creation and the New Landscape of Design', 2008

Dimitris Grammenos[18] discusses nonsense as a tool for creativity alongside stupidity and ignorance, stating that the 3 human traits have been largely overlooked in the abundance of approaches and information relating to creative thinking. When focusing in on the nonsense, he argues that it is in fact the very essence of our lives, as we still have no idea what life is about or it's meaning. Perhaps this underlying current of nonsense is why we find a need to try and make sense of everything? Scientists and researchers dedicate their entire lives to making sense of the unknown, forming new questions to explain the unexplained or challenging established theories to find better ways to explain the chaotic nature of our universe.

Nonsense can create a portal for imagination and personal interpretation to enter the design space, where perhaps sense would close off. For example, a piece of abstract art may come across as complete nonsense to you or I, but it only takes one person to relate to it in some way, to appreciate the nonsense for its beauty and unidentifiable subject matter, drawing on their own imagination and perception, for this artwork to have value. I also propose that the value the painting holds to that one person, is far greater than the value had someone told them how the art should make sense, and they had not drawn on their own perceptions to find their own personal meaning. This then allows nonsense to address the growing diversity of the population, to offer anyone the ability to relate to something if it has no fixed sense in the first place, and to address accessibility and inclusivity within design research. One person's sense may be another person's nonsense, and vice versa, and so supports the need to bring in participants from diverse communities, creating opportunity to tackle new design from multiple angles, and for reimagining what already is.

'Nonsense is far more powerful than sense and can provide solutions to problems that logic may deem unsolvable.' [19]

If logic and existing sense can provide a solution to our explorations, are we really being innovative and forward thinking? If wicked problems can start to be unravelled and resolved through logic, are they wicked problems in the first place? We need nonsense within design, especially in the fuzzy front end, if the radical sustainable changes we need are to emerge.

18 Dimitris Grammenos, 'Stupidity, Ignorance, and Nonsense as Tools for Creative Thinking' Interactions, Sept-Oct 2014, P. 54

19 Dimitris Grammenos, 'Stupidity, Ignorance, and Nonsense as Tools for Creative Thinking' Interactions, Sept-Oct 2014, P. 54

Fig. 7, Composition X, www.wassilykandinsky.net/work-62.php, Accessed August 5th 2022

This is the last work of Wassily Kandinsky. As an artist he expressed great aversion to black colour within his work, and so the use of it so dominantly within 'Composition X' has led the critiques and discussions surrounding the piece of art. It is widely thought that the black is a symbol for the end of life, representing the cosmos and also the darkness which is believed to be waiting for us, and the numerous floating planes of colour in the painting as a representation of microscopic organisms.[20]

Kandinsky often related the painting of colours and pictures on a canvas to the composition of beautiful music, and as such, named many of his paintings variants of Composition. His analogy of art as a musical composition revolved around the piano: the eyes were the hammers, the colour is the keyboard, and the soul is the piano and strings. Similar to music, which is not just jumbles of notes, Kandinsky's works were not just amalgamations of non-distinct shapes and colours. They were carefully arranged musical elements, precisely proportioned to evoke the maximum aesthetic and emotional response from the viewer[21], a personal response allowing individuals to give their own meaning and interpretation.

20 Composition X by Wassily Kandinsky. https://www.kandinskypaintings.org/composition-x/, Accessed August 18th 2022

21 'Composition X', Wassily Kandinsky Biography, Paintings, and Quotes, https://www.wassily-kandinsky.org/, Accessed August 18th 2022

In a sense,
we are aiming to make participants feel comfortable in the nonsense,
because only within this space,
can new sense be found.[22]

22 Words by Author

The Meaning Maintenance Model (MMM) proposes that 'people have a need for meaning; that is, a need to perceive events through a prism of mental representations of expected relations that organizes their perceptions of the world. When people's sense of meaning is threatened, they reaffirm alternative representations as a way to regain meaning-a process termed fluid compensation'[23], but in an increasingly complex and uncertain world, meaning is not always obvious, and as complexity increases through the challenges we face today, not always possible.

Jamie Holmes argues that 'Our need to conquer the unresolved [ ] is essential to our ability to function in the world.'[24] One of the reasons we carry out research is to systematically investigate resources to establish facts and conquer new avenues, which is fuelled by our need to make sense of life around us. In design, this is the Fuzzy front end, where ambiguity and uncertainty live, and it is then the design process that takes us through the stages of sense-making. (Fig. 7) But let's stay in the fuzzy front end for a minute, the stage that is thought to be the most impactful stage in the design process[25] however, as we have seen and as the name suggests, is also the most uncertain. This cognitive dissonance is an uneasy place for most people, after all, complexity and uncertainty are uncomfortable spaces to be in. Holmes' work suggests, the mind is likely to either snap shut or unlock in the face of ambiguity[26] or as Proulx suggests, seek to maintain a sort of homeostasis between sense and nonsense, sometimes reverting to adverse or conflicting behaviours to satisfy our need for clarity and closure.[27] When our need for closure is high, we also tend to revert to stereotypes, jump to conclusions, and deny contradictions.'[28]

It is therefore important to retain some level of familiarity and comfort for participants within our research, designing resources that offer a balance of sense, whilst still encouraging exploration and investigation into the nonsense. 'Aversion to uncertainty can be contagious, picked up subconsciously from those around us'[29] so targeted resource's that meet everyones needs are required, if we are to create successfully inclusive co-designing environments that appreciate and thrive within the nonsense.

I would argue that only when we create design tools and tasks that allow participants to sit comfortably within nonsense, and confident to shift thinking outside of the box, can the true value of nonsense be seen.

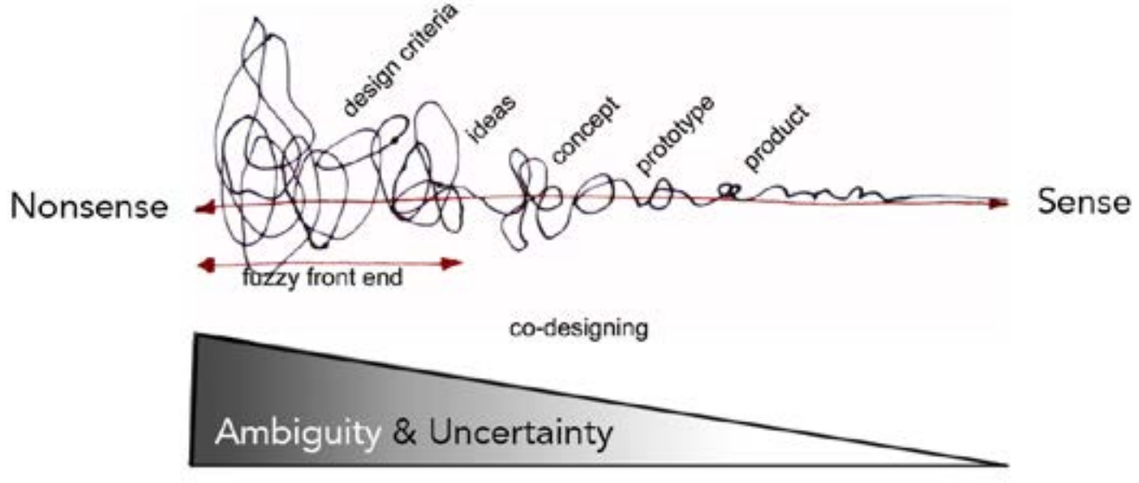


Fig. 8, A design journey of nonsense to sense, Sanders 2006 adapted by author

23 SJ Heine, T Proulx, KD Vohs. The meaning maintenance model: on the coherence of social motivations. Personality and Social Psychology Review. Vol 10 Issue 2, P. 88-110, 2006
24 Jamie Holmes, Nonsense: The Power of Not Knowing, Broadway Books, NY, 2015, P. 12
25 Cornelius Herstatt & Birgit Verworn. The 'Fuzzy Front End' of Innovation. In book: Bringing Technology and Innovation into the Boardroom, Palgrave Macmillan, UK, 2004, p.347-372
26 Jamie Holmes, Nonsense: The Power of Not Knowing, P. 4
27 SJ Heine, T Proulx, KD Vohs. The meaning maintenance model: on the coherence of social motivations.
28 Jamie Holmes, Nonsense: The Power of Not Knowing, P. 13
29 Jamie Holmes, Nonsense: The Power of Not Knowing, P. 13

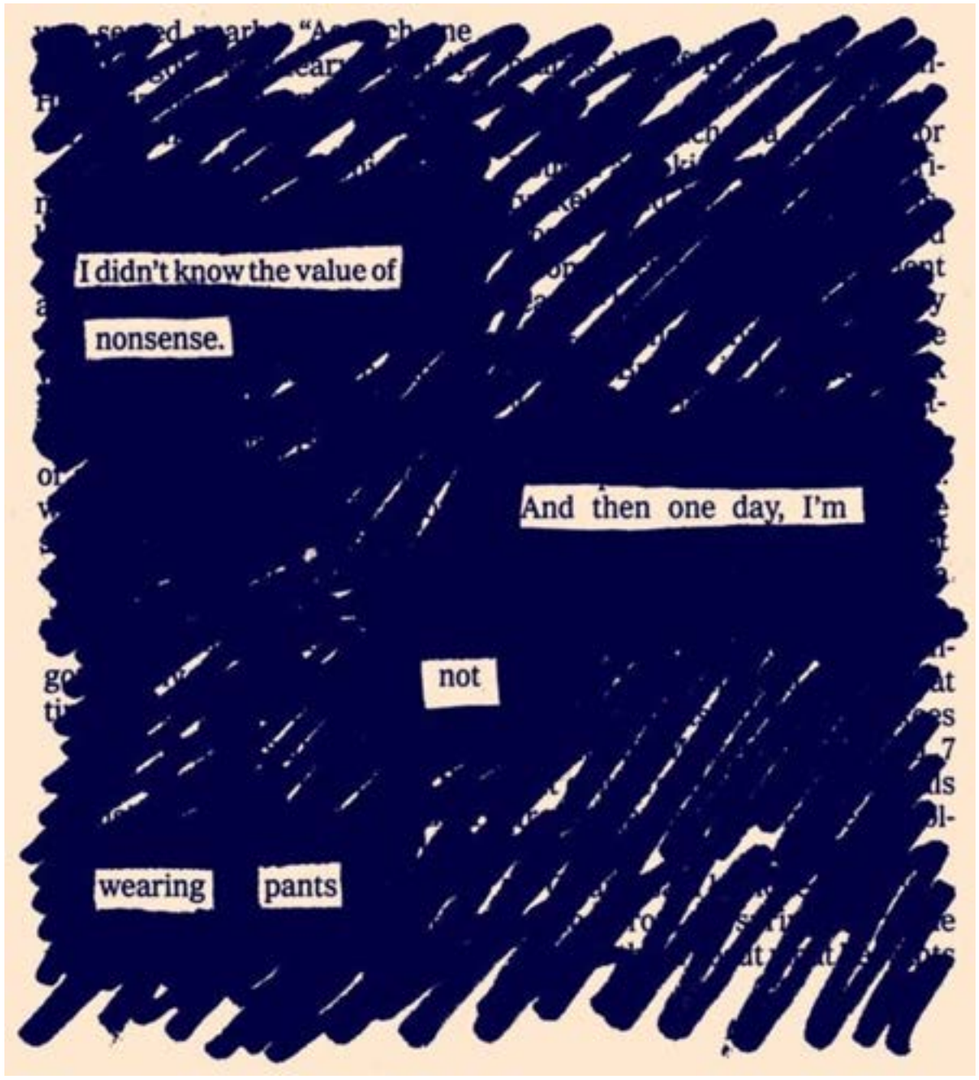


Fig. 9. Austin Kleon is a writer who draws.
https://austinkleon.com/2017/07/20/the-value-of-nonsense/

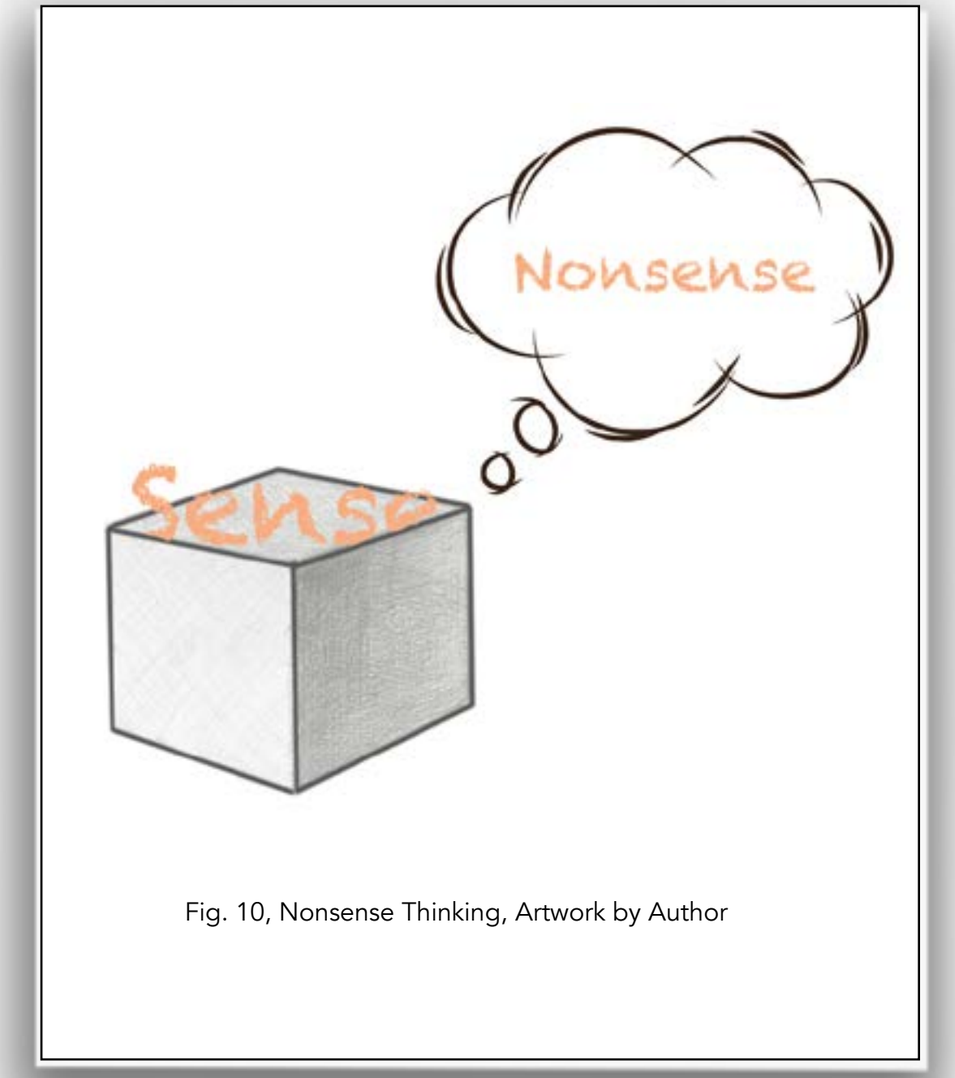


Fig. 10, Nonsense Thinking, Artwork by Author

'The existence of such a stereotype means that anything one does or any of one's features that conform to it make the stereotype more plausible as a self-characterization in the eyes of others, and perhaps even in one's own eyes. We call this predicament stereotype threat. [ ] In form, it is a predicament that can beset the members of any group about whom negative stereotypes exist.'[30]

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30 Steele CM, Aronson J. Stereotype threat and the intellectual test performance of African Americans, Journal of Personality and Social Psychologyl. Nov 1995, Vol 69,5 P. 797-811.

Jenny Waycott et al.[31] conducted studies with socially isolated older adults who used and evaluated an iPad application that was designed to help build new social connections. In their studies, some older adults chose to discontinue participation, later reflecting on how the values and assumptions guiding the research were not always shared by all the people. They argue that much can be gained by looking beyond the subject of research, and examining the socio-technical context in which people choose to not participate or discontinue in evaluation studies. 'This is particularly important when we are designing technologies that aim to support people who might be considered "marginalized" or who typically have limited opportunities to have their voices heard, such as those in the later stages of old age'[32] The paper later concludes that identifying common characteristics of specific user groups doesn't necessarily lead to useful and usable design, and that the reality is much more complex.

Although stereotyping comes with negative connotations, I would argue that in some cases they can be used as a starting point for empathic research. Recent discussions and presentations at the CHI conference have demonstrated that the ethical issues encountered during "non-traditional" research can be highly complex, emergent, and contingent on the particular contexts in which the research takes place[33] Munteanu et al[34] called these issues "situated ethics", noting that the ethical challenges researchers face, particularly when working in sensitive settings cannot always be predicted or planned for, however, to be empathic and ethical we do as researchers have to try, and so to carry out a risk assessment on a vulnerable group, especially until we get to know each participant on a personal level, there comes some degree of pulling characteristics from general thinking or 'stereotypes'.

31 Waycott et al, Not For Me: Older Adults Choosing Not to Participate in a Social Isolation Intervention, CHI '16: Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems, May 2016, Pages 745–757

32 Waycott et al, Not For Me: Older Adults Choosing Not to Participate in a Social Isolation, 2016

33 Wendy Moncur. The Emotional Wellbeing of Researchers: Considerations for Practice. In Proceedings SIGCHI Conference on Human Factors in Computing Systems (CHI '13), 1883-1890, 2013.

34 Cosmin Munteanu, et al. Situational Ethics: Re-Thinking Approaches to Formal Ethics Requirements for Human-Computer Interaction. In Proceedings SIGCHI Conference on Human Factors in Computing Systems (CHI '15), 105-114. 2015

Stereotype threat however is born from negativity. 'It focuses on a social-psychological predicament that can arise from widely-known negative stereotypes about one's group'[35]. Steele and Aronson' radical paper published in 1995, focused on African Americans and testing whether they were at risk of fulfilling the racial stereotype about their intellectual ability. What was perhaps most interesting, was how the study did show that 'mere salience of the stereotype could impair Black' performance even when the test was not ability diagnostic'[36] put simply, the predicament of knowing you are being stereotyped may be self-threatening enough to have disruptive effects, the pressure of not wanting to conform and strengthen the negative stereotypes put upon you and your peers.

When we are looking to design inclusive tools for design research, there is then a fine line between pulling characteristics from general thinking (positive) and characteristic stereotyping (negative) I would even argue that due to the diversity of some groups, there is a grey area between, where some might find a characteristic offensive and others in the group might in fact think the opposite. Even when we are meaning to be empathic, we may in fact threaten not include, especially when dealing with minority or marginalised groups. Taking on board Steele and Aronson' research, stereotyping, even though not intentional, could have detrimental effects on the research outcome. As we have seen, uncomfortable participants at best can not fully give themselves to the research task, and at worst, shut down and close off completely.

35 Steele CM, Aronson J. Stereotype threat and the intellectual test performance of African Americans, P.797

36 Steele CM, Aronson J. Stereotype threat and the intellectual test performance of African Americans, P.797

How can we avoid stereotyping when designing research tools? Cornelius Herstatt & Birgit Verworn[37] depict the 'Fuzzy Front End' of innovation in Fig. 10, as we can see, their model, although it does acknowledge that products should be 'customer oriented', does not include the voices of these customers at any point, the earliest stage of the design process is seen to be the idea generation stage, where designers or R&D teams come together to make the decisions about what products consumers need or want.

In Tuuli Mattelmäki's extensive PhD work on Design Probes[38], she focusses her approach on a more empathic model (Fig. 11) including users in the process in an attempt to create a deeper level of understanding and connection. She also does acknowledge that there is an earlier stage of the design process and begins her depiction at the designing of the design probe kits, however, she only includes the design team and researcher before delivering the kit for use. Hur and Beverley[39] conclude in their paper exploring codesign for sustainable fashion that 'involving the user at the earliest stages of the design process' allows users to progress through levels of creativity. The earliest stages here again refers to the use of the probes.

As we have seen, for research to be inclusive and accessible, the tools need to be familiar and comfortable for the user, they need to feel comfortable with the resources, and be able to relate the tools and tasks to their lives and how that relates to the subject in which we are crediting them with expertise. To achieve this, could we not bring the user in as a participant-designer at the tool design stage, an even earlier stage of the design process? Take on board their knowledge and experiences as input right from the beginning, and appreciate and value their insights from the root up, after all, if we are making the shift from user to expert, who is more of an expert in a community than the members themselves?

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37 Cornelius Herstatt & Birgit Verworn. The 'Fuzzy Front End' of Innovation. In book: Bringing Technology and Innovation into the Boardroom, Palgrave Macmillan, UK, 2004, p.347-372

38 Tuuli Mattelmäki. Design Probes. University of Art and Design Helsinki. 2006.

39 Hur, ES and Beverley, KJ, The Role of Craft in a Co-Design System for Sustainable Fashion, Making Futures Vol 2, Plymouth College of Art, 2013

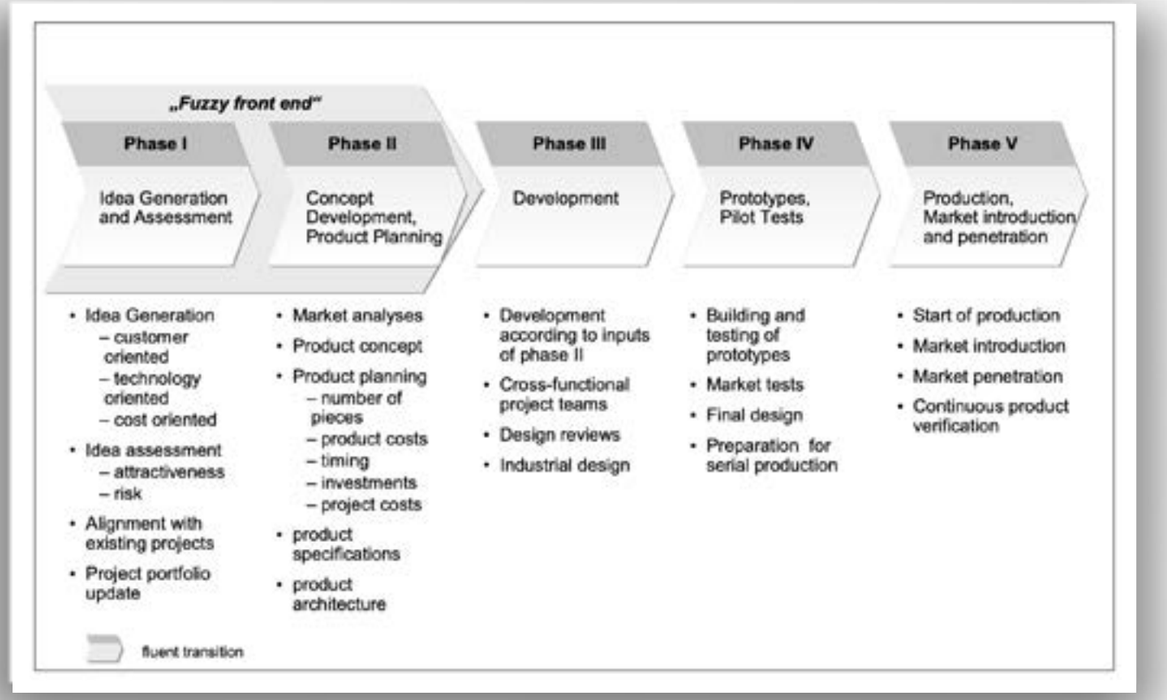

Fig. 11, The Innovation Process, Cornelius Herstatt & Birgit Verworn. The 'Fuzzy Front End' of Innovation. 2004.

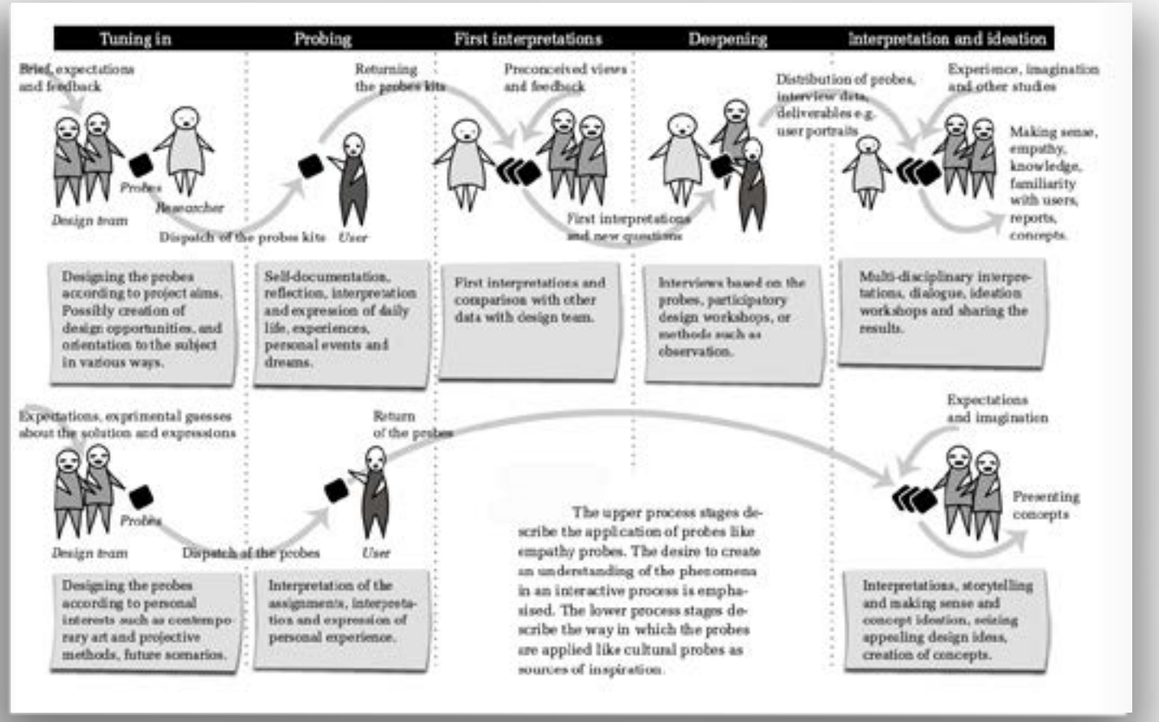

Fig: 12, The 5 phases of The Empathy Probes Process, Tuuli Mattelmäki. Design Probes. University of Art and Design Helsinki. 2006. P.97

Managers describe the fuzzy front end of design as ‘the greatest weakness in product innovation’[40] and ‘the least-well structured part of the innovation process’[41]

BUT .....WHAT IF?

we reimagined the front end? recognising an earlier stage to the design process and brought in the voices that matter not from the ground up, but from the root up?

It would still be a fuzzy front end, idea generation has to be complicated, confusing and in a sense, non-sense, to uncover innovative and as yet unexplored places and ideas, however, this work is proposing a shift of the front end, beginning the fuzziness at the design of the design research, bringing in participant-designers as early as the discussion of the design of the design research, and listening to voices from across wider communities from the very point of conception.

40 A. Khurana, & S. R. Rosenthal: Integrating the fuzzy front end of new product development; Sloan Management Review, Cambridge, 1997
41 Cornelius Herstatt & Birgit Verworn. The ‘Fuzzy Front End’ of Innovation. In book: Bringing Technology and Innovation into the Boardroom, Palgrave Macmillan, UK, 2004 , p.347-372,

It is within this space, that I invite you to reimagine the fuzzy front end of design from a codesign perspective.

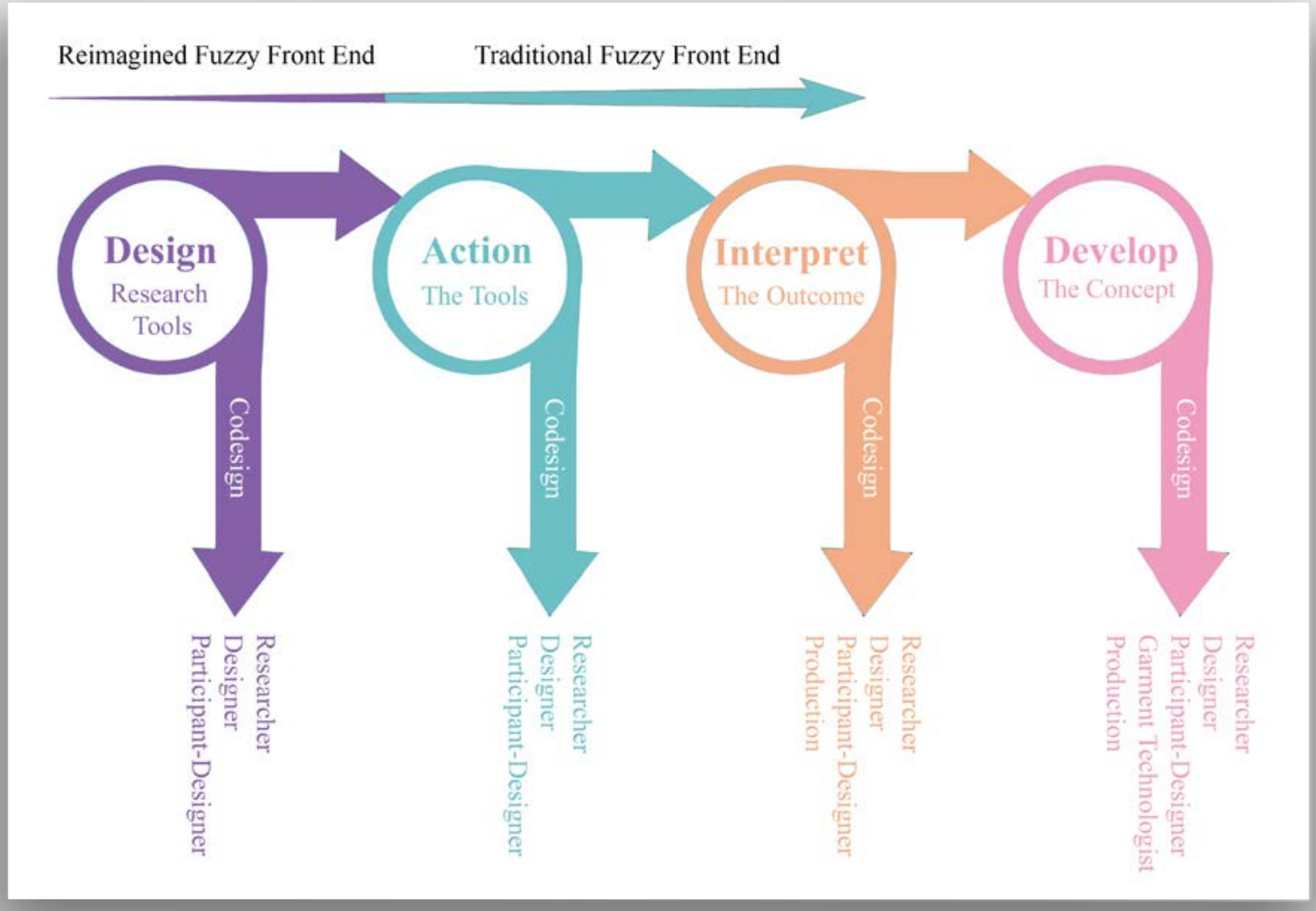

Fig. 13, Reimagining the Fuzzy Front End, Artwork by Author

African Fashion // The V&A Museum, Kensington

For the latest V&A museum exhibition 'African Fashion' they have worked collaboratively with groups of young people from the African heritage community, to put together work spanning from the iconic mid-20th century to contemporary creatives, including photographs, textiles, music, and the visual arts. 'Africa Fashion' explores the vitality and global impact of a fashion scene as dynamic and varied as the continent itself.

It is not this work itself that my work is comparable to, but the act of including users as experts, acknowledged the participants as professional collaborators[42] and supporting codesign at every stage, reimagining the collaborative boundaries of the design process. This work is comparable to mine, but at the opposite end of the design timeline, from the fuzzy front end right through to exhibiting, both projects are focused on collaboratively working together to design a more accessible industry. (Fig. 13)

Including users without expectation put upon them for the outcome, but valuing the discussion and the journey, is parallel with my work, and finding others that value this approach gives credit to this relatively new way of research and discovery.

'When inviting young people to join the Africa Fashion Co-design Group, we were clear that there was no expectation that participants would answer all our questions, draw concrete conclusions or produce a tangible output. Rather, co-design places value on all conversations, no matter where they take us.'[43]

Another comparison was the use of artifacts and tools to create these conversations. (Fig. 14) Through these conversations they hoped to garner young African and diasporic perspectives on African fashions – both as they already understood and knew them, and as they learned more about them. The coming together of past experiences being integral to the development of an inclusive outcome.

42 Mia Lewis, Co-designing and collaborating with young people for Africa Fashion, The V7A Museum, https://www.vam.ac.uk/blog/museum-life/co-designing-and-collaborating-with-young-people-for-the-africa-fashion-exhibition, June 23rd 2022.

43 Mia Lewis, Co-designing and collaborating with young people for Africa Fashion, https://www.vam.ac.uk/blog/museum-life/co-designing-and-collaborating-with-young-people-for-the-africa-fashion-exhibition

Fig. 14, Co-design Group members in the Textiles Conservation Studio, www.vam.ac.uk, June 23rd 2022

Fig. 15, Co-design Group members, www.vam.ac.uk, June 23rd 2022

As diverse as the world of probing is, the fundamental aim of probes is as the name suggests; research through design in order to reach and explore deeper, harder or even impossible to access places - to gain knowledge of a subject, artifact or environment, which will then be used for future progression within that space.

More than 3 decades after the introduction of Cultural probes, there are still tensions that developed through strong ideologies of how best probes should be used, and which now scatter probing literature. As we have seen, Probes come in a multitude of interpretations, and the term is widely thought of as being 'fuzzy' and 'lacking clarity and definition'[44] In many cases Probes have been used and not recognised as Probes, or defined as something else, such as 'creative packages', mediation tools' or dialogical tools'[45] whereas in other cases such as Cerci et al.[46] probes have been used and then questioned whether they had really been probes at all, which is the case for me after reflecting on my Studio Probes, as they lacked any participatory creativity. Are Design Probes anything that uses a designed artifact to inspire and elicit a response from a participant, or do they need a more designerly research approach requiring the participants to be creative and so taking on a more co-design role in the process?

Cerci et al's exploration into the reasons for the diverse interpretations of probes noted a key factor being the researchers 'early contact with Probes and the ways in which they have become familiar with the approach and learned to apply it to their own work'[47] If this is indeed the case then researchers are all learning from variable sources and it is no wonder Probes continue to be a hazy term, and will continue to be as it evolves and is open to continuous re-interpretation, however, If we stop trying to make sense of probes, and let ourselves become comfortable with their fuzziness and non-sense making, we can begin to appreciate them for their versatility and adaptibility, and as a result start to see opportunity in their uncertainty.

Wallace et al.[48] consider probes to be tools for design and understanding, which suggests that already they are looking for some kind of rationality from the methodology. They argue that their materiality and form are designed to relate specifically to a particular question and context, which hints towards their ability to be adapted for use, however, they don't mention this attribute in relation to the participant. If Probes can be manipulated to serve the needs of the research question, then they can also be manipulated to serve the needs of the participant.

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44 Cerci et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research. In: CHI '21: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems. Association for Computing Machinery, New York, p. 624. 2021

45 Cerci et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research, P. 624

46 Cerci et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research, P. 624

47 Cerci et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research, P. 624

48 Wallace, Jane. et al. Making Design Probes Work, Conference: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 2013

"Everyone's gonna always develop some variation of the method (Probes) [.....] I think that's a good sign for the design research community [.....] it means that 'Okay, we've kind of internalized what a probe was as a community and now we can just develop the one that makes the most sense to the project we're in."[49]

49 Cerci et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research, Participant 7, P. 624

Critical concerns towards probe practises are littered throughout Design probe literature. Discourse surrounding the language of probing, the relationship probes and researchers have with participants, the motivations for using design probes and its tendency to challenge normative and traditional design practices are just a few, and it is important to be aaware of these tensions if we are to look to design probes as tools for inclusive participation to bring about sustainable change.

How Probes are adopted //

Gaver et al. themselves find it heartening yet troubling how the approach has been adopted by researchers and design groups throughout the globe.[50] The tendency to rationalize the probes has caused tension around what was originally born out of the need for a more messy, undefined research method with fewer boundaries and rules. 'People seem unsatisfied with the playful, subjective approach embodied by the original probes, and so design theirs to ask specific questions and produce comprehensible results. They summarise the results, analyse them, even use them to produce requirements analyses.'[51] I think there's value in both approaches, and ultimately it depends on the context of the probing project. For example, Gaver 2004[52] was asking people to record dreams, and pointed out the lack of scientific grounding of this. He wondered how these dreams could be analysed, let alone allow user requirements to be derived from them. However, if we are recording participants conscious reactions, such as Stephan Wensveen's 'Alarm device'[53] which had a clear goal, there is more of an argument for a level of analysis.

Gavers approach, although is the foundations of the original Cultural probes, also sparks its own questions, for example, if there is to be no answers or data for analysis, is there any value to the research? Does research need to have results?' Is it purposeful and worthwhile without this? Or is there value in the nonsense of probe findings? These questions will be addressed through the design of divergent probe kits later in this project.

Herbert Simon's 1969 conceptual framework for design[54] discusses critique as being critical to design practice in its intention to 'change existing situations into preferred ones'. His framing of design as a science, being rational and problem-solving, 'dismissed the design practitioner's subjective judgement and the contingencies in decision-making'[55] In contrast to Simon's work, Schon's[56] view of 'reflective practice' emphasises intuition in the decision-making processes, while Nelson and Stolterman[57] re-evaluate design judgement as 'a full and equal partner in any intellectual pursuit in design on par with rational decision making.' In their paper 'How Design Researchers Interpret Probes' Cerci et al.[58] state that Simon's rational problem-solving framework for design still dominates, which may go some way to justifying why researchers have tried to rationalize the method of design probing.

50 Gaver, William, et al. Cultural probes and the Value of Uncertainty. Interactions 11, Vol 5. 2004. P. 53
51 Gaver, William, et al. Cultural probes and the Value of Uncertainty. P. 53
52 Gaver, William, et al. Cultural probes and the Value of Uncertainty. P. 54-55
53 S. Wensveen. Probing Experience. Overbeeke, C.J. & Hekkert P. (Eds) Proceedings of the First International Conference of design and Emotion, Delft University of Technology, Delft, The netherlands, 1999. P. 23 - 29
54 Herbert A. Simon. The Sciences of the Artifcial. (3rd. ed.). The MIT Press, Cambridge, MA, 1969 P.111
55 Cerci, Sena, et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research p. 624.
56 Donald A. Schön. The Reflective Practitioner. (1st. ed.). Routledge, London. 1983
57 Harold Nelson and Erik Stolterman. The Design Way: Intentional Change in an Unpredictable World, (2nd ed.). The MIT Press, Cambridge, MA, P. 157, 2012
58 Cerci, Sena, et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research P.624

How Probes are received //

We also need to take into account how probes are received, for example, as they are fun and playful, will participants see them as less serious and professional than other research methods, and if so, will they not put the same amount of thought or effort into completing them? If the probes are too casual in approach, we run the risk of the participants being casual in engagement and dedication, and so striking a balance here is a key aspect in the probes design.

Probes have been seen to be misapplied as a form of 'discount ethnography' to substitute deeper qualitative inquiry[59], a quick solution rather than for systemic change, or as a short cut compared to more traditional methods. This could be due to their whimsical manner and lack of justification, and that researchers that aren't comfortable with uncertainty and nonsense find it hard to place value and credibility on such methods.

Due to their openness to manipulation, some Probes could be seen as too abstract, and due to this, the point of them may be confusing for participants. Their lack of boundaries, and the way the results are intentionally left open to interpretation can lead to uncertainty, which is uncomfortable for people who like clarity and closure.[60] Participants need to be comfortable and familiar with the materials, otherwise they could feel alienated and disconnected from the task.

59 Paul Dourish. Implications for design. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '06). Association for Computing Machinery, New York, NY, USA, P. 541–550, 2006

60 Jamie. Holmes. Nonsense: The Power of Not Knowing. United States: Crown Publishers, 2015.

Motivation for using Design Probes //

Probes by nature are meant to be playful and fun, which can lead to them being employed as a method to make a research project seem more creative and engaging, even when they were not the most appropriate choice for the research in question. 'This use of probes is analogous to carrying out an object interview just to make your methods snazzier'[61] and can be problematic further down the line when trying to analyse and gain any conclusive results, although taking Gaver's view of probes into account, they should not be used to try and analyse or gain conclusive results, or prove or disprove a statement, but to simply explore it. 'Just as methods rest upon methodology, and a solid epistemology and rationale, so to, probes require probology.'[62] a branch of knowledge and understanding of probes that takes into account their characteristics[63] and unique approach to research, and if we are knowledgeable about the subject, could help against them being used for research that isn't fitting for the method.

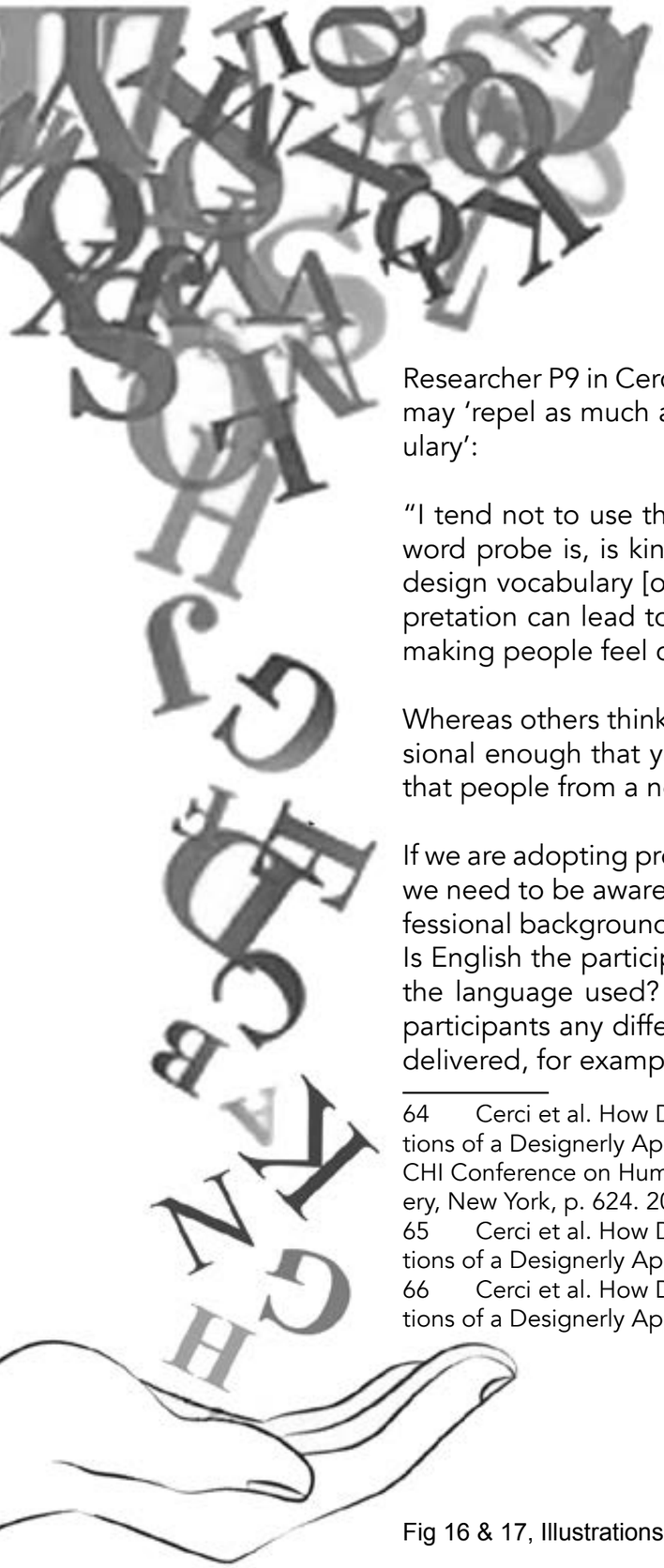
61 Sophie Woodward. Material Methods: Researching and Thinking with Things. United Kingdom: SAGE Publications, 2019. P. 62

62 Woodward. Material Methods: Researching and Thinking with Things. P. 62

62 Adams. Probe Research Workbook. Studio Module, https://www.sensoryscape.org/probes P. 12

Participants understanding of probes //

Participants as codesigner's in the design process is a relatively unexplored concept within the fashion industry, and one that participants from outside of the design discipline may not have encountered before, as is the research method of Design Probing. The playfulness and lack of any concrete results, along with other factors that may be specific to each project, may not make sense to some people and they may feel uncomfortable with the uncertainty of the activity, so perhaps a brief explanation of Codesigning and Design Probing within each probe kit could help with this and clarify the process and purpose, putting participants at ease. Some researchers believe that well designed probes don't need written questions or guidance, however I don't feel like providing written questions takes away from the physical creativity of the research but rather adds to it by guiding responses, drawing out deeper thoughts and inspiring creative thinking.



Terminology // The Language of Probes

Researcher P9 in Cerci et al's paper[64] noted that even naming the process as Probes may 'repel as much as evoke interest for those who do not share a design vocabulary':

"I tend not to use that vocabulary with participants, it just sounds weird, and the word probe is, is kind of quite medical [...] they don't necessarily have the same design vocabulary [or] the same language vocabulary [...] so that kind of misinterpretation can lead to quite a lot of confusion [and] not have the desired effect in making people feel comfortable about being involved."[65] – P9

Whereas others think it's 'the perfect linguistic trade-off between sounding professional enough that you know what the heck you are doing' but still in a language that people from a non-designerly background can comprehend.[66]

If we are adopting probes due to their inclusive abilities, as is the focus of this study, we need to be aware of the language we are using, for example: What is their professional background and is the vocabulary suitable? What is their level of literacy? Is English the participants first language? What aspects of their culture may affect the language used? Delivery also needs to be considered in this context; Have participants any different abilities or needs that may affect how the information is delivered, for example, audio, brail or large format text.

64 Cerci et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research. Participant 9, In: CHI '21: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems. Association for Computing Machinery, New York, p. 624. 2021

65 Cerci et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research. Participant 9 p. 624.

66 Cerci et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research. Participant 6 p. 624.

Fig 16 & 17, Illustrations, Artwork by Author

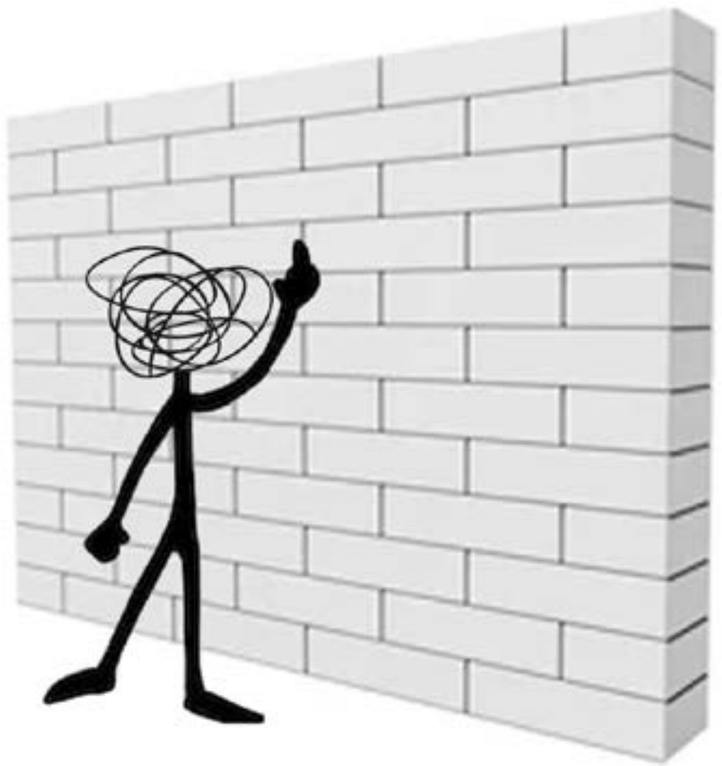
Credibility

A fundamental characteristic of probes, and one that seems to have survived the many changes and interpretations we've seen, is the playfulness they inspire. This could be one of the reasons that design probes face criticism suggesting they provide 'fragmented and somewhat deemed invalid data.'[67] Research has been dominated in the past by scientific, quantitative research that is more easily validated, whereas some forms of design research don't need to be validated or indeed evaluated at all, such as the non-sense of Gaver et al's[68] original cultural probes.

Perhaps the further we push the discussion on design probes, and realise the challenges we face, the more alternative forms of research will be accepted as reliable and credible methods.

67 Cerci et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research. p. 624.

68 Gaver, William, et al. Cultural probes and the Value of Uncertainty. P. 53-55



Cultural probes are ideal as a method if you are trying to get people to think, respond and reflect in ways that other methods do not allow.[69] By reframing everyday materials as methods we can familiarise the process of design research for our participants, while still ensuring they are creative, visual, and tangible, thus supporting and encouraging this designerly thinking. Tools act 'as a bridge between designer and participant to enable alternative modes of discovery in design research practices'[70] while blurring the boundaries between user, designer and expert, offering a design space that is ambiguous, undefined and therefore open to new ways of thinking and variety in perspectives. The probes versatility in design, and therefor ability to be adapted for anyone, opens them up to wider participation within diverse communities, which is important because 'Strong local communities aren't just nice to have – they are fundamental to a sustainable future'[71] and 'It is only through collective thinking and acting that we will be able to use design to help address the challenges we face today.'[72]

Tracing and documenting the process as much as, if not more so, than any outcome[73], also contributes to the accessibility of the probing phenomenon, by shifting focus from the expectations of results, to just observing the process, and eradicating the feeling that they might not perform or achieve as well as expected, or complete the task correctly, opens up the research space to less confident participants.

69 Tuuli Mattelmäki, Applying probes–from inspirational notes to collaborative insights, CoDesign, Taylor & Francis Ltd, Vol. 1, Iss. 2, Pages 83-102, 2005

70 Audrey Desjardins, et al. Bespoke Booklets: A Method for Situated Co-Speculation. In Proceedings of the 2019 on Designing Interactive Systems Conference (DIS '19). Association for Computing Machinery, New York, NY, USA, 2019, P.699

71 James Goodman, 'Powerful local communities are key to a sustainable future' Local Trust, https://localtrust.org.uk/news-and-stories/blog/powerful-local-communities-are-key-to-a-sustainable-future/, June 2021

72 Liz Sanders, All people are creative, MakeTools, www.maketools.com, Accessed 18th July 2022

73 Awais Hameed Khan, Stephen Snow, and Ben Matthews, Tracing Design: Practitioner Accounts of Design Value, Documentation & Practices. In Proceedings of the 2020 ACM Designing Interactive Systems Conference DIS '20. Association for Computing Machinery, 2020

Probing projects in the past have been known not to include any written or verbal aspect at all, relying solely on the creative response, letting the objects themselves ask the question and the materialised outcome give the answers[74]. This take on the process breaks down many research barriers, including language, sensory and neurodivergence. If we look at this from another angle, probing projects that ask questions, initiate conversation, and thrive through discussion, give those that are less or lacking confidence in creativity the opportunity to analyse and talk through their process and ideas, sense making through discussion and helping them and others turn the nonsense to sense, thus supporting design empathy.[75]

Due to the many divergent interpretations of probes, we can view the process as a framework that can be adapted and manipulated to fit not just the project and context under exploration, but also the individuals, communities, and demographics we are working with. This means that if inclusivity is considered right from the start, and probes are designed to be targeted and specific to the user, the method can be adopted as an accessible approach to inclusive research. Design adaptation does not have to mean big changes. Consideration of possibilities and limitations can make way for subtle changes when working with different minority or marginalised groups, but these subtle changes could be the difference between comfortable and inclusive participation or alienating and stereotyping groups and sections within our communities that should be, and need to be, part of future collective design.

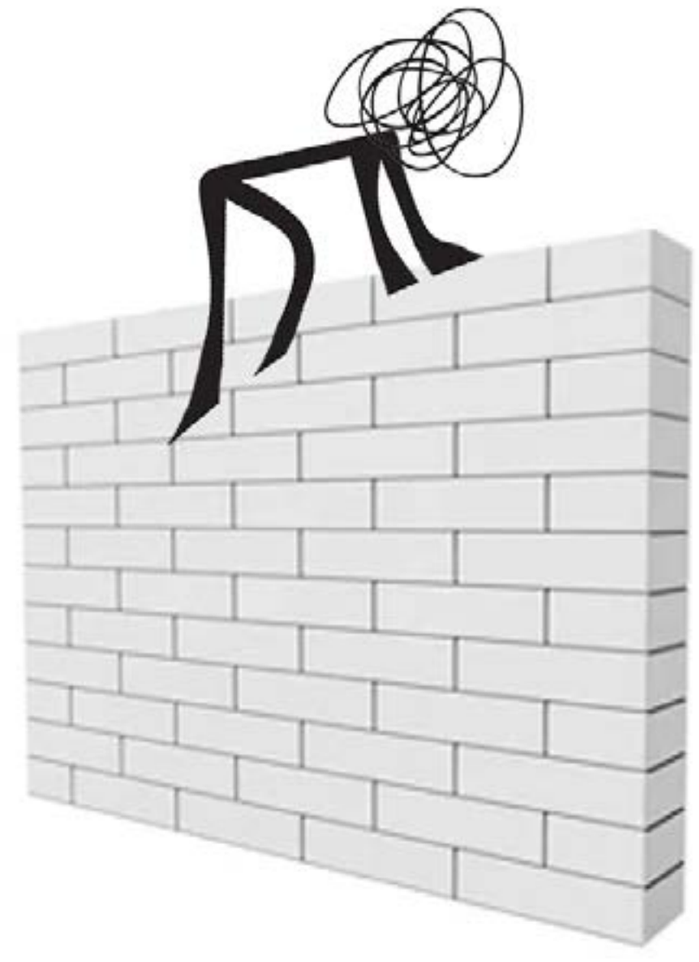


Fig 18, Illustrations, Artwork by Author

74 Cerci et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research. Participant 3, p. 624.

75 Tuuli, Mattelmäki. Probing for co-exploring, Codesign, Vol. 4:1, P. 65-78, 2008

Liz Sanders is the founder of MakeTools, a company that explores new spaces in the emerging design landscapes. She is a visionary in pre-design research, having introduced many of the tools, techniques and methods being used today to drive and/or inspire design from a human-centred perspective. Liz has practiced co-designing across all the design disciplines. Her current focus is on bringing participatory, human-centred design thinking and co-creation practices to the challenges we face for the future.'[76]

Her many papers on Co-creation, Collective Creativity and Generative Tools for Code-signing played a large part in my research for this project. Sander's work is comparable to mine in that her focus is on:

- Co-creation
- Co-designing
- Inclusive design thinking
- Human-centred design
- Participatory design tools, methods and mindset

These useful synergies enable me to draw on her vast insights and experience to build and shape my thinking. Her documentation of experiences with participatory design tools and collective thinking have influenced and shaped my Design Probe Kits, allowing me cut down a large part of the time exhaustive process of 'trial and error'.

I have come to admire her ability as a designer to design tools that take advantage of the visual ways we have of sensing, knowing, remembering, and expressing, reaching participants on an empathic and emotional level, (Fig.19) and using storytelling to find out more about participants everyday lives. (Fig. 20) which is essential for making people centred design decisions.

Sanders' work with Erika Braun and Sapna Singh from the Collective Design Initiative on 'Co-Designing with Communities' was of particular interest to my work. This comprehen-sive body of work documenting participatory workshops which use design tools to ex-plore and discover the complex issues that live deep within our communities, highlighted the need for subtle changes, the benefits of a shift from delivering probe kits to group working, and inspired many of my tool design adaptations.

Although Sander's work on the use of design tools is rigorous and detailed, she rarely discusses the design of the tools, and as others, notes the earliest stage of the design process and collaboration, being the use of design probes in codesign workshops. This important stage of the co-design tools process is again neglected and left unexplored.

Fig. 19, Codesign Workshop, www.maketools.com

Fig. 20, Tools for Dreaming, Sanders 'Generative Tools for Codesign' 2000

Fig. 21, Tools for Storytelling, Sanders 'Generative Tools for Codesign' 2000

76 Liz sanders, About Liz Sanders, MakeTools, https://maketools.com/about, Accessed 2nd August 2022

The creative process of designing and making probes is a familiar place to be for a designer, hence they can be 'fun and rewarding.[77] It's a comfortable space to enter into the complex world of research, using skills and materials from our practised expertise as apposed to the hard going nature of traditional academic research.

The creation of the probes helps to clarify the context under exploration and can uncover gaps in a rationale or open up new ways of knowing. The process of materialising your thinking can bring to the fore decision making and help us stay focused, not getting lost in the labyrinth of research with its many twists, turns and hidden avenues. Designing and materialising the probes can also kick start the research process, whether researching for information or inspiration, having to think the probe activity through from the perspective of the participant-researcher to assess it's usability can uncover your own thoughts and responses to the task.

It's important to pay attention to the care and thought that goes into the making of probes, due to the possibility that the detail will hopefully be reciprocated through better engagement and dedication to the process. Participant-researcher's will appreciate a beautifully designed probe kit, however, Cerci et al discuss how when working with various marginalised communities 'such designerly statements of care may also be viewed as an unintentional display of privilege and distance the researcher from their participants.'[78] Participants need to be comfortable and relaxed with the materials to begin to open up, express themselves freely, and access their deeper thoughts and creativity.

This limitation could be reduced by bringing the participant-researchers in at the probe design stage. If we are accepting them as experts, bridging the gap between researcher and participant, and involving them in every aspect of design, then bringing them in at the roots, and involving the participants in the design of the probes themselves, through the codesign of the design could create more inclusive tools. Participants, particularly in the space of social research, are the sculptures that manipulate and form our research to lead us to creative outcomes. Within design probing we see this in more ways than one; they manipulate the design of the probes, and the responses given to them, they are the puppet masters of the process more so than the researcher themselves, and so bringing them in at this early stage, to participate in the design of the probes will only make them even more comfortable and familiar with the materials, and hopefully lead to more rich and insightful outcomes.

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77 Tuuli Mattelmäki. Applying probes–from inspirational notes to collaborative insights, CoDesign, Taylor & Francis Ltd, Vol. 1: 2, Pages 83-102, 2005

78 Cerci et al. How Design Researchers Interpret Probes: Understanding the Critical Intentions of a Designerly Approach to Research, P. 624

As Malcolm McCullough wrote: "there remains a realm where scientific production cannot go, where mechanized industry finds too little demand to go, and where artistic discourses dare not go... there we find craft."[79]

79 M, McCullough, Abstracting Craft – The Practiced Digital Hand. MIT Press, Cambridge, MA, 1998.

'Craft is no longer an unconscious activity borne of necessity'[80], but a 'form of practise uniquely situated between art and life.'[81] It is a method that allows us to invite non-designers to be creative, and allows designers to reconnect with a fun and maybe rarely visited skill in a fun and sociable way, making space for these roles to work together and inspire each other. 'Craft knowledge is fundamental to developing a vision of design in a post-industrial future'[82] It is able to tap into personal creativity in a way that mass production cannot, and 'contradictory to existing industrial-scale design processes, craft values social engagement and knowledge-sharing, is reflective and produces authentic products imbued with cultural meaning.[83]

Craftmanship takes time and detailed engagement with the object, and could reconnect designers with product, a challenging relationship that has been lost in the fashion world due to our consistent need for newness, coupled with the pressures of being quick to market with the latest trend.[84] If we then shift this to the non-designer, spending time and detailed engagement designing or even creating a product, could encourage a more thoughtful approach to consumer habits through a deeper understanding of the effort and resources that went into making the product.

If we take on board Tonkinwise's concept of 'beauty in use'[85] we can begin to see how wearing clothes that have been created on a more personal level, could encourage an emotional attachment that is currently lacking, and therefore lengthening the lifespan of our clothes. This attachment may not be formed at the crafting stage, but may grow as we begin to use it, as we begin to appreciate the time and care that went into making it.

Csikszentimihalyi also explores the positive connection we have with craft, suggesting that creating new things and new discoveries makes us happy, and so enhancing one's creativity and personal growth, may therefore also enhance one's well-being.

Due to the ever-growing population, I am not suggesting craft as a solution for future production, crafting cannot replace cold and disconnected mass production, but, if we adopt it as a resource for research and design within an accessible and inclusive codesign environment, it's possible that it could go some way to bridging the gap between consumer, designer and product, making way for more sustainable fashion design, production and consumption.

"The pleasure of beautiful use must be the sort of devolved pleasure that comes from a sense of accomplishment. It is not a Platonic-Kantian appreciation of beauty, butnonetheless still an appreciation. Rather than being pleasing, it is a thankfulness. Onethinks of the designer, invariably anonymous, who made possible this cup of tea, andthanks him or her that there is this thing, where there could be have been nothing."[86]

80 S, Kettley. Crafts Praxis as a Design Resource, Engineering and Product Design Education Conference, Napier University, Edinburgh, UK, 2005

81 L. Mazanti, Re-reading the Functional, Proceedings of Challenging Craft, Gray's School of Art, Aberdeen, 8-10 September 2004.

82 Press, Mike & Cusworth, Alison. A New Vision in the Making: Exploring the Value of Craft Education in the Information Age, The Design Journal Vol, 1997, P. 12-29

83 Hur, ES and Beverley, KJ, The Role of Craft in a Co-Design System for Sustainable Fashion, Making Futures Vol 2, Plymouth College of Art, 2013, P. 1

84 Hur, ES and Beverley, KJ, The Role of Craft in a Co-Design System for Sustainable Fashion, P. 3

85 Cameron Tonkinwise, Beauty-in-Use, Design Philosophy Papers Issue 2, 2003

86 Cameron Tonkinwise, Beauty-in-Use, Design Philosophy Papers Issue 2, 2003, P. 5

Fig. 22, Quilled peacock, Yulia Brodskaya, Treehugger, https://www.treehugger.com/paper-artists-who-reimagining-medium-4869725l, Accessed 29th August 2022

The versatility of Paper Art is being explored from various angles within contemporary art, Yulia Brodskaya is an illustrator known for her elegant handmade and detailed paper illustrations (Fig.21) She has reimagined quilling and the possibilities using paper as a creative 3D material can bring. Paper is a readily available material, and a relatively inexpensive form of creating and so is accessible to many people. It provides both mental and physical stimulus which can be pitched at various levels and so is conducive with certain aspects of inclusive design, able to bring wider communities into the design space and exploring their ideas through the act of codesigning and making with paper.

Paper can be manipulated in different ways. Its versatility means it can be structured, layered and built upon, flat or rolled, or simply a mixture of colours and prints moved around the page to form new and exciting images. Paper folding can be a very structured and organised way of making, challenging us on a cognitive level as we create patterns. It is simultaneously flexible and rigid, it offers flexibility and opportunity in the making, whilst following rigid rules for it to make sense. Emotional satisfaction is a by-product of our work as we watch a piece of paper transform into a new creation, and many find the folding of paper a form of relaxation.

Paper art does however come with its limitations, it takes hand-eye coordination, fine motor skills, and mental concentration even in its easiest form, and so some participant-researchers may need help with certain aspects of the task, however this will be considered and discussed in the adaptation of each Probe Kit. Tasks will also be scaffolded, starting at the easier end of the scale, and offering alternative solutions for those that feel comfortable to push themselves and learn new skills and moving up Sander's levels of creativity.[87]

87 E, Sanders and P, Stappers, 'Co-creation and the New Landscape of Design', 2008

Fig. 23, Petit Pli Pullover & Bottom Bundle, https://shop.petitpli.com/

Translating paper art into fashion and drawing on the concept of paper folding is nothing new, Issey Miyake first introduced this with his 'Pleats Please' collection back in 1988, which was so popular it became a brand of its own in 1994 which is still running today. However, it is only recently the technique has been recognised for its possibilities within sustainable design.

Ryan Yasin has since explored how fashion can be a 'dynamic object rather than a static one'[88] growing with a child, cutting down on waste and pollution. One garment grows up to 7 sizes – that's 1 Petit Pli garment purchased in place of 7 traditional ones. Sustainability is at the heart of this innovation. He uses recycled fibres with stain and water repellent coatings suitable for rain or shine. He is so confident of their attention to detail at the making stage, he offers free repairs in the hope that the garments will live longer. Although these garments are produced over in Portugal, the factory they use derives its energy from renewable sources and pays a living wage. Petit Pli claims that it's 'designs significantly reduce waste and CO2 emissions at the point of production, distribution and after purchase.'[89]

Unfortunately, at £128 for the set, a large amount of the population will be priced out of supporting this concept. Despite it working out cheaper over the 7 garment sizes, many people don't have this amount of money to pay out on children's clothes, but, if we want innovation, sustainable practices and an ethical industry, it is going to cost more than the fast fashion and sweat shop production we have gotten used to, which, especially considering the cost of living crisis we are heading into, raises the complex and interesting question, 'can we afford to be sustainable?'

88 Emily Matchar, These Origami Clothes Grow With Your Child, Smithsonian Magazine, September 25, https://www.smithsonianmag.com/innovation/origami-clothes-grow-your-child-180965010/ 2017,

89 Emily Matchar, These Origami Clothes Grow With Your Child, Smithsonian Magazine, September 25, https://www.smithsonianmag.com/innovation/origami-clothes-grow-your-child-180965010/ 2017,

Level 1 //
2D Cutting and sticking

Fig. 24, Cut and Paste, Authors own Artwork

Level 2 //
3D Structural Thinking

Fig. 25, Roll and structure, Authors own Artwork

Level 3 //
Visualising Garent Detail

Fig. 26, Fold and Visualise, Authors own Artwork

These images are examples of how paper art can be adapted for skill scaffolding, building on creativity to push design thinking, making it an accessible tool for inclusive codesign with non-designers.

What //

To open up the discussion and gain multiple perspectives and insights I held a workshop of the paper folding task in its rawest form. This is to say there were no adaptations or considerations put in place. Materials and instructions were spread out on the table and I asked them to follow the instructions to make the clothing, then peg the garments to their washing line and pick some words that they feel best describes the experience or why they chose the materials they did.

Why //

This workshop was designed to begin codesigning and thought sharing at the priliminary stages, bringing participant-designers in to help the design of the research tools. Unfortunately, due to limitations, I couldn't use participants from the communities in question, however, a focus group of designers with an empathic perspective brought up interesting and useful insights.

Different weights and textures of paper (Fig. 26) were used to see how they effected the difficulty of the task, and a mix of images and plain paper (Fig. 27) to see which people preferred or found more inspiring. Some images had powerful messages or slogans (Fig. 28) which were chosen to see if they increased design thinking or made the participant-designers uncomfortable, and text was offered to give the group the opportunity to add another layer of insight into their work if they felt the need.

How //

Paper variety:
Plain Card paper 200g
Plain Paper 80g
Lined paper 80g
Magazine Images
Textured Paper 180g

Other materials:
Paper folding Instructions
String
Pegs
Magazine text
Prit Stick

Fig. 27, Textured Paper, Authors Image

Fig. 28, Workshop Table, Authors Image

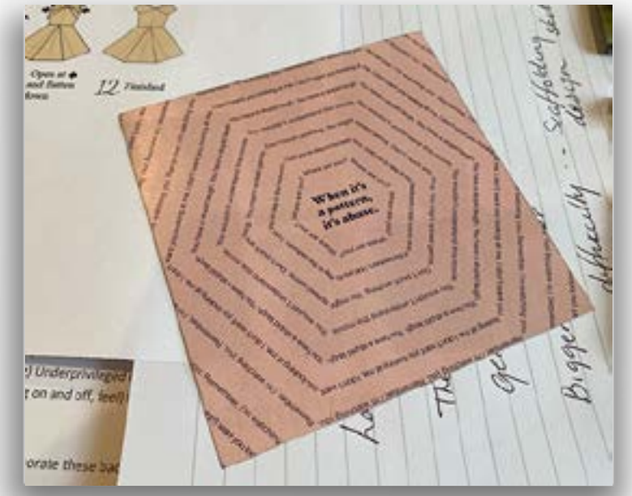
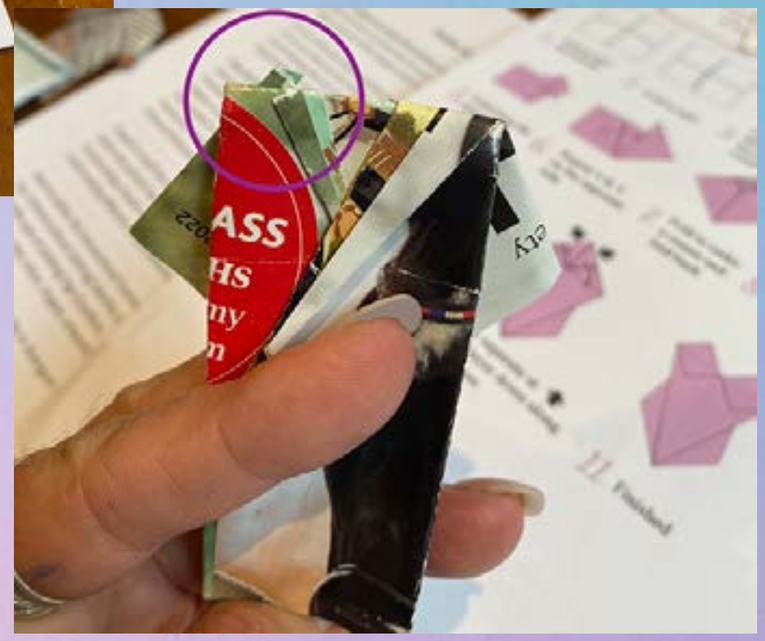


Fig. 29, Slogan Image, Authors Image

Workshop // Gallery



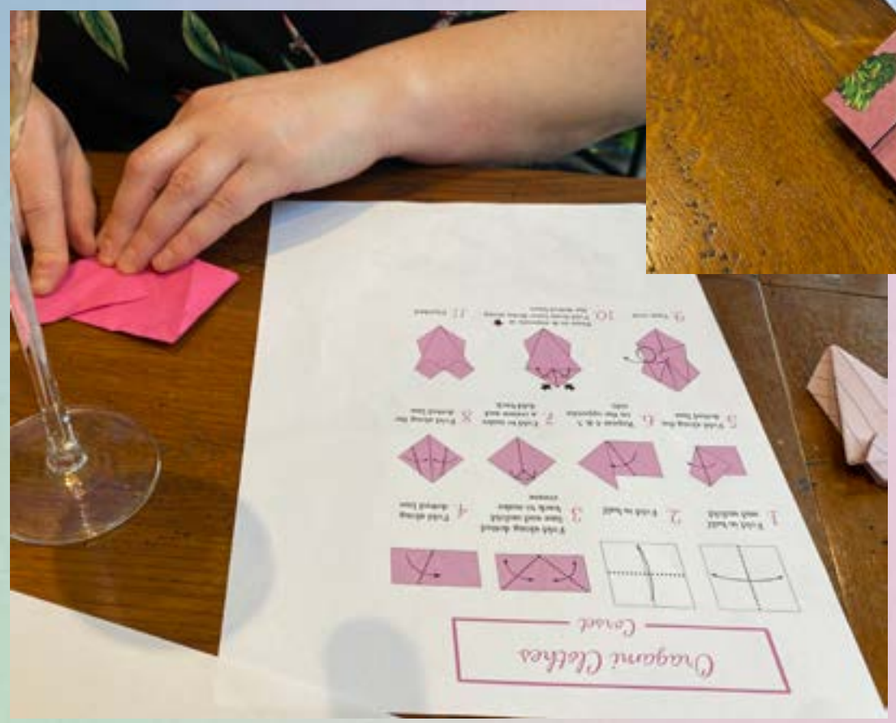


Fig. 30-35, Workshop Images, Authors Images

Workshop Notes

Immediately the group began to apologise that their outcome may not be 'very good' and so our first conversation was around the importance of the discussions that would take place, the process, and how people approach the task, rather than any outcome that may (or may not) result. It became apparent quite quickly that it was important to communicate this, and it put everyone at ease, created a relaxed atmosphere for conversation to start flowing, as people began to concentrate less on creating a 'perfect piece of work' and more on what and why they where doing what they were doing.

'A brief explenation of codesigning and the method of design probing could be useful to put in the kits for participants, to make them feel relaxed and comfortable with the process.' - *P3*

It was pointed out that spreading all the instructions out on the table together was quite intimadating as there were different ability levels. One member of the group on first glance likened them to 'flat pack Ikea furniture instructions' and was immediately put off by this a they thought they may not be able to follow them. A couple of ideas came out of this discussion; firstly that instructions could be presented in a booklet or some form where they are presented one at a time so as not to overwhelm, secondly, it would be a good idea to scaffold the task, number the instructions by ease and start participants from the ground up, getting to know the symbols and language, and becoming familiar with the processes. The group members that started with the more difficult instructions found the task much harder than those that started with the shorts and worked their way up.

As the group began to fold, the discussion turned to how the task could be adapted for elderly participants. Everyone agreed that the folding was sometimes 'small and fidley' and that having the option of larger materials would help, this was also extended to the instructions which were also in an A5 format, and could perhaps be printed in A4. Patterns and colours could be adapted to work with trends for the older demographic, however some group members thought this may be limiting for some and falling into stereotyping.

The gender specific clothes in this task became the topic of conversation on more than one occassion. It was undesputed that having gender fluid garments would make the task more inclusive for participants within the LGBTQ+ community, however what is seen as gender fluid caused some confusion. Shorts can be gender fluid, if the name on the instructions was changed from 'Boxer shorts' to just 'shorts' but 'does the design of the shorts effect how they are percieved?' 'Shouldn't all garments be seen as gender fluid and not assigned to a specific gender?' 'What makes a skirt a gender fluid garment rather than a female garment?' As no one in the group was from this community we faced limitations in our knowledge, and again found we were stearing towards stereotypes. The importance and value of codesign became apparent at this point, bringing non-designers in at the start line to share their knowledge, past eperience and perspectives, would create methods and methodolgies more targeted and specific to individuals within select communities.

Ideas for designing the activity to be more conducive for neurodiverse communities tended to be more creative and sensory. Having scented paper and more variety of textures and feels would increase engagement and spark their creative thinking. The idea of running the activity as a group project in this case brought benefits such as the opportunity to have group facilitators, having someone to translate in sign language, and other group benefits such as discussions and shared thinking. The larger format materials were also thought to be a benefit for this group, as people struggling with fine motor skills may find the smaller details hard to achieve.

Cultural adaptations was a complex conversation, as there is not a 'one case fits all' outcome for this subject.

'Instructions in the language of the particpant-researcher would help to break down language barriers, and show a level of respect for the cultural difference' - P2

and cultural clothing may make them more comfortable and familiar with the task. We can be empathic with the images and colours we use, for example, different cultures have different meanings for different colours, and being aware of these could avoid a cross over of interpretation. For the case of this project, rather than including lots of different cultures in one kit, which would go against the aim of inclusivity, I will pick one to base my example Probe kit on, with the aim of demonstrating how the method could be adapted for cultural differences.

Making the task easier to follow was thought to be a way of making it more inclusive on many levels. People spent some time finding the right size paper for their garment, and so specifying the paper size and marking the cut materials to match would have helped, it was thought that samples could come with the instructions, however this would limit creative outcome as the choice of mate-

rials would be taken out of the hands of the designer and into the hands of the researchers. Having the lines drawn onto the paper sample could make following the instructions easier, but would take the option to improvise away.

'I'm so glad we are doing this as a group! There's no way i'd be able to follow some of this if I was on my own, also, it's much more fun doing it with others and talking about it.' - P4

Hosting it as a group activity rather than asking participants to complete the task on their own would help if there was anything they didn't understand or couldn't work out as they would have the support of the group or work as a team to answer any questions or guide each other. Having someone to lead the activity who could demonstrate each design if literacy was a barrier, or if a participant prefered to learn visually. As the group found some of the harder designs difficult to complete, it was thought that a series of sessions might be more productive, so participant-researchers could master skills and really begin to explore thier creativity without the barrier of following difficult instructions.

'I wish we could do a few of these workshops as i'm just starting to get it and it's nearly over! I'm starting to think of cool designs I could try too .... I definitely think this needs to be a series of events that build up.' - P1

Paper thickness was discussed regularly as it was frustrating when a design ripped after spending time creating it. The thicker paper was seen as too thick for the task, whilst the magazine images and the 80g paper worked best. This was seen as an important point to make, because if participant-researchers begin to get annoyed or frustrated with the activity, there responses, thinking and insights will be effected, and could take on nagative feelings.

'I much prefer using the images than the plain paper, it's more creative and represents textiles and clothes more to me personally, the plain paper is also the same on both sides so the folding isn't as satisfying' - P3

The group gravitated towards using the imaged paper rather than the plain. The images I chose for this task were not by chance, but were chosen in relation to the intersectionalities addressed within this work, for example, the queen and her horse, or body confidant strong female images. When asked about the images, most said they hadn't thought about the images themselves in any detail, but rather chose the ones that had colours or patterns that would look good on the clothes, however if they thought about it, the images used would be an important factor for some groups. For example, one of the images was of a colourfully designed bottle of Vodka, which could be offensive to some religions and cultures. They said they could begin to imagine patterns and colours of garments by using the images, giving them more of an idea of how their designs could be in 'real life' and beginning to shift thier thinking from the abstract to the actual. The same was said for the textured paper as the feel was likened to the feel of material. This inspired a thought that maybe material could be used, especially for the textures needed for the neurodiverse adaptation.

'Are we going to discuss why we put the words we put on the washing line? I really thought about mine and it's seems a waste not to share those thoughts, also I feel they explain quite about about the experince for me' - P4

One person really wanted the opportunity to discuss the words they had chosen, and asked me to email him the image of his final piece so he could explain them at a later stage, this was interesting as he was requesting time to reflect on his experience before discussing it. I can see advantages and disadvantages to this. Reflecting on a task can help to process it, allow for new thoughts and insights to form through space and time, however, there is also the risk that memories fade, your thoughts or reasoning at the time may not seem so relevant or could even be forgotten. Depending on the rigour of the task participants might feel overwhelmed and need the time to come away and process their thoughts before disciussing them. I think inclusive research needs to open to both of these approaches, as the most appropriate one could depend not so much on the task, but on the individual and their cognative preferences.

A limitation of this activity became apparent during the exercise. To access new ways of thinking and creative and unique insights from participant-researchers, the idea was that after mastering the garments from instructions, participants could begin to improvise and create thier own designs. The group thought that this would be difficult for most people (including themselves) and may not be an option. This group however only had 2 hours working on this, and so one way to try and encourage improvisation may be to hold a series of sessions as discussed previously, so particpant-researchers begin to relax and gain skills in the art of paper folding, making improvisation and design thinking a less daunting task.

Fig. 36-42, Workshop Results, Authors Images

I have illustrated the possibilities and opportunities design probes can offer through a model of 4 example kits aimed at minority or marginalised communities that have historically been side lined from design research. These Design Probe Kits are examples of how we can begin to shift from a 'one size fits all' approach, adapting design tasks, tools, and kits in subtle and specific ways to create usable and relevant codesign resources. These kits are not meant to generalise or be aimed at communities as a whole, but rather examples of how the versatility and adaptability of probology as a method of design research allows for subtle changes to make significant impact. Resources aimed at some communities have been left to cross over into others to highlight how these design kits can work on multiple levels for intersectionality. They illustrate how tool design could be targeted and personal, allowing anyone to be part of the design process, and so allowing codesign to be an accessible and inclusive endeavour.

Fig. 43-46, The Kits, Authors Images

The Kit Concept//

Fig. 47, Introduction to Design Probes, Authors Images

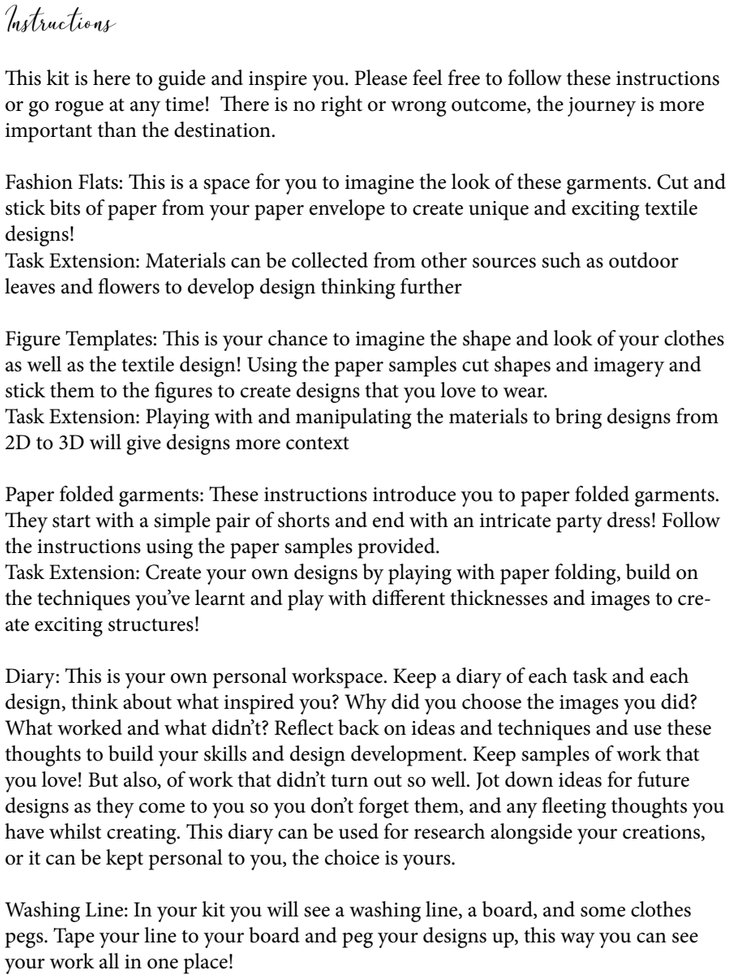


Fig. 48, Instructions, Authors Images

Fig. 49, Design Probes, Authors Images

A Brief Introduction to Design Probes

Participants from a non-design background may not have encountered the concept of Design probes before, and so a brief description of what they are and how they work will make them feel more comfortable and a valued member of the process.

Instructions

Each kit comes with a set of instructions. Although the idea is to work in groups so that discussion can flow, I still felt it more personal to include an explanation of what I was asking of them. This also means they can work at their own pace, reading the next stage of the activity as and when they are ready. Each activity has a suggestion of an extension task to push design thinking and build on creativity levels.

Design Probes

This is the booklet of design probes. It is in order of ease to scaffold skill and knowledge development. Participants can start it at any point they feel comfortable and leave it to go rogue with their creativity at any point. It is only there to guide and build on skills, knowledge, and creative thinking.

Paper Folding

Paper folding Instructions are scaffolded through level of ease and show step by step stages to making clothes, these can be followed, or show the skills needed to create original designs depending on the participants level of creativity.
Paper samples are cut to shape and provided in the kit. Images are relevant to the lifestyle and community of the participant for familiarity.

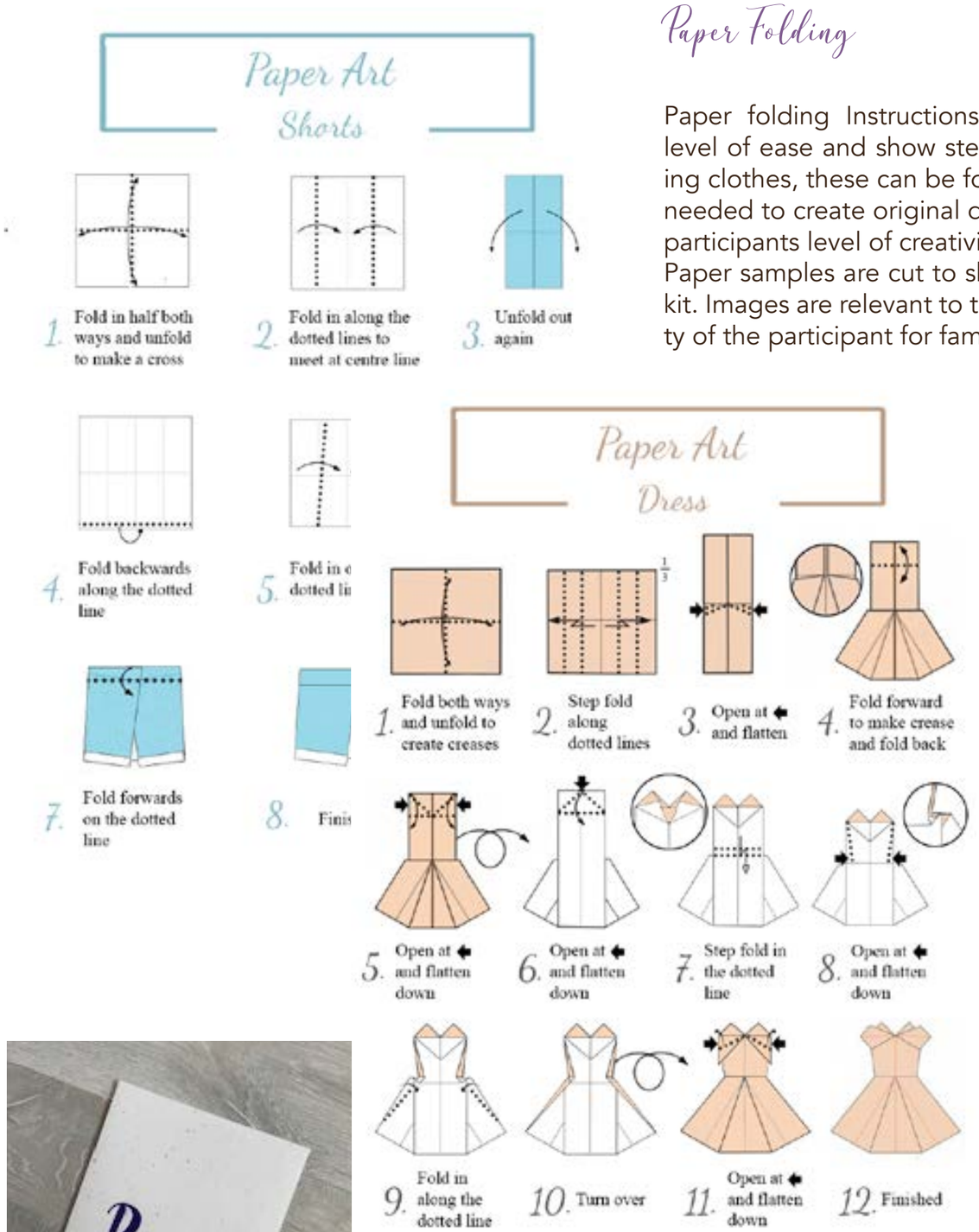


Fig. 52, Paper Sample Envelope, Authors Images

Fig. 50-51, Paper Folding Instructions, Authors Images

Design Templates

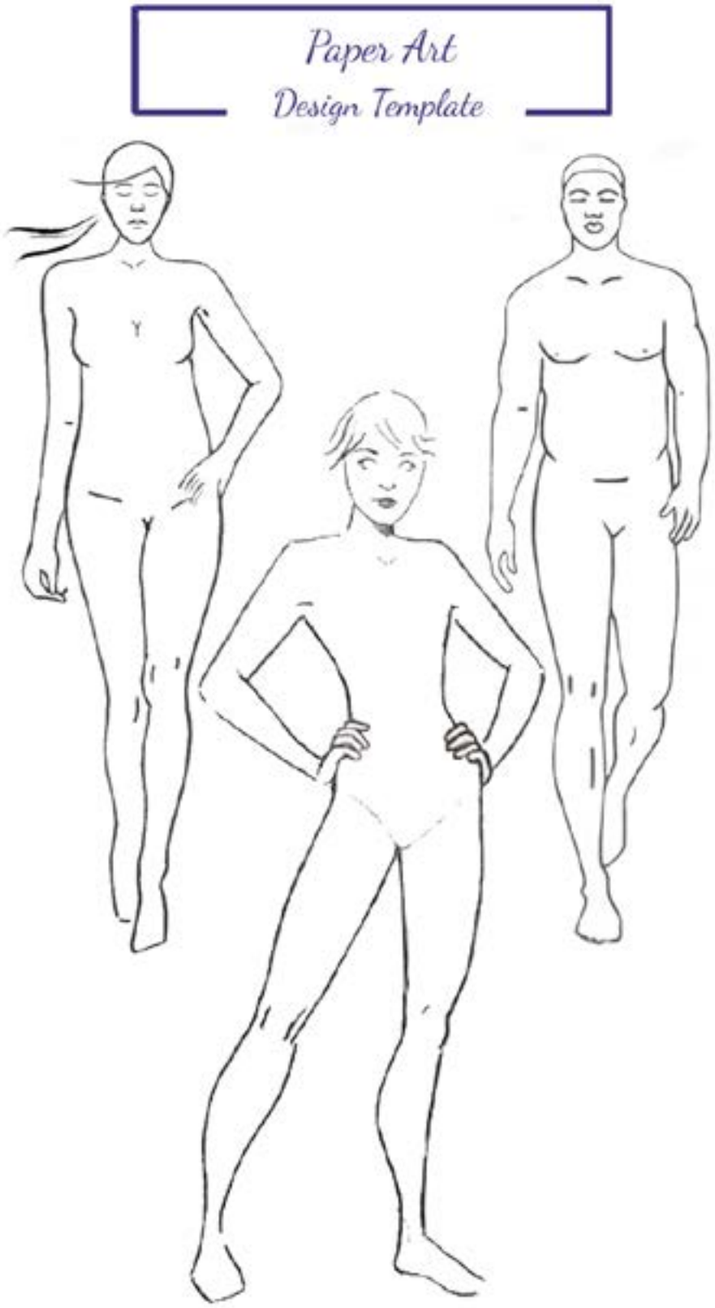


Fig. 53-54, Design Templates, Authors Images

Each kit has design templates included to give form to their designs. These can be copied as many times as needed. Paper samples from the kit can then be used to create clothes on top of the templates ranging from cutting and sticking, to more detailed paper manipulation or even materials found from outside of the kit (such as leaves, craft crystals etc.) Figures are designed to be familiar to participants, either through realistic or gender neutral body images. Flat garment images are also included as an earlier stage to visualising body form.

Fig. 55, Probing Diary, Authors Images

Diary

A diary is included for participants to log thoughts and ideas throughout the process or use as a sketch pad for ideas for further development as they arise. This diary may be handed in for research purposes at the end of the process, or if the participant prefers, kept for personal reference and either amended and handed in at a later date, or never handed in at all! This diary is a personal artifact to use and do with whatever makes the participant comfortable.

Fig. 56-59, Washing line Tools, Authors Images

Washing Line

Tools are included to create a washing line of the clothes created. The line is a piece of string that gets taped to the board, and the clothes created are pegged to it. This is a way of summarising and bringing together the personal development that has occurred and visualising the journey which can then inspire the words participants place around it. This stage could then spark and inspire new conversation which overarches the complete process and brings fresh ideas.

Adaptations //

Discussions within the workshop highlighted that subtle changes could make way for big impact, and that no change could be too small to make a difference, even if it went largely unnoticed, it would only have to make a difference to the user themselves to have an effect.

Due to earlier research, I was aware of stereotype threat, and tried my best not to fall victim to this. Creating these probe kits only highlighted to me the need for codesign to begin at the research design phase, and how much more effective the process would be if this were the case. Bringing in community voices at this point would bring insight and ideas only gained through lived experience.

Description of Adaptations

Age

This kit aims to create a comfortable and accessible experience for the mature generation.

- Large print is provided for ease of reading
- Card backing is soft and calm
- Model templates portray realistic body images and are larger to allow a bigger workspace
- Assortment of peg sizes are provided to suit hand mobility
- Large tape is provided for easier handling
- A 1950's dress has been added to the paper folding sample instructions for familiarity and relatability

Identity

This kit aims to shift away from assigned genders and stereotypical design features that relate to them:

- Neutral colours are used for the probe cards
- Images on the paper samples are ambiguous and gender-neutral
- The model template is a strong gender-neutral image
- Fashion flats are gender fluid garments

Culture

This kit aims to make the user feel comfortable and familiar with the kit by adapting aspects to the user's nationality and culture, for this example I have chosen Latin American:

- The language of this kit has been changed to Latin America's first language
- The words included are a mixture of Spanish and English, bringing the cultures together for mutual understanding
- Images on the paper samples relate to different cultures and places
- Latin American cultural colours and their meanings have been identified and used throughout

Neurodivergent

This kit aims to provide as much choice and opportunity for independent design thinking as possible:

- Resources are printed in large scale to allow for independent or facilitated reading
- Two copies of the probe cards are included for a facilitator to take part if needed
- Each copy has a different backing, one bright and loud, the other soft and subtle
- Figure templates are larger to allow a bigger workspace
- Images are bright, colourful, and playful
- Paper samples are larger and fabric samples are provided to give extra layers of sensory tangibility
- Larger tape, paper samples and pegs are provided to aid with dyspraxia (low motor skills)
- Large and medium sized pegs are provided to offer a choice of materials
- Double sided tape is provided as an alternative to sticky glue

Probe Kit 1 // *Age*

Fig. 60, Adapted Age Probe Kit, Authors Images

This kit aims to create a comfortable and accessible experience for the mature generation.

- Large print is provided for ease of reading
- Card backing is soft and calm
- Model templates portray realistic body images and are larger to allow a bigger workspace
- Assortment of peg sizes are provided to suit hand mobility
- Large tape is provided for easier handling
- A 1950's dress has been added to the paper folding sample instructions for familiarity and relatability

Probe Kit 2 // *Identity*

Fig. 61, Adapted Identity Probe Kit, Authors Images

This kit aims to shift away from assigned genders and stereotypical design features that relate to them:

- Neutral colours are used for the probe cards
- Images on the paper samples are ambiguous and gender-neutral
- The model template is a strong gender-neutral image
- Fashion flats are gender fluid garments

Probe Kit 3 // *Culture*

Fig. 62, Adapted Cultural Probe Kit, Authors Images

This kit aims to make the user feel comfortable and familiar with the kit by adapting aspects to the user's nationality and culture, for this example I have chosen Latin American:

- The language of this kit has been changed to Latin America's first language
- The words included are a mixture of Spanish and English, bringing the cultures together for mutual understanding
- Images on the paper samples relate to different cultures and places
- Latin American cultural colours and their meanings have been identified and used throughout

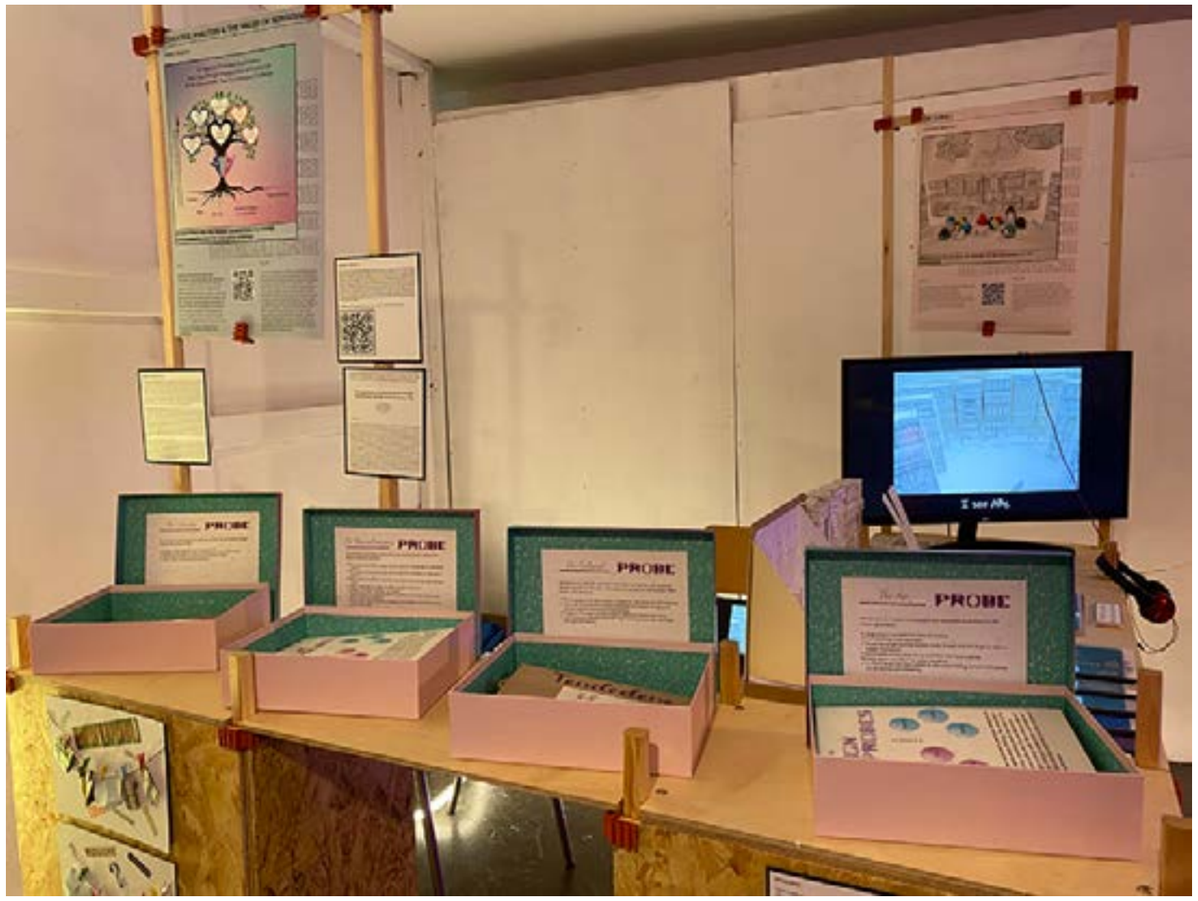
Probe Kit 4 // *Neurodivergent*

Fig. 63, Adapted Neurodivergent Probe Kit, Authors Image

This kit aims to provide as much choice and opportunity for independent design thinking as possible:

- Resources are printed in large scale to allow for independent or facilitated reading
- Two copies of the probe cards are included for a facilitator to take part if needed
- Each copy has a different backing, one bright and loud, the other soft and subtle
- Figure templates are larger to allow a bigger workspace
- Images are bright, colourful, and playful
- Paper samples are larger and fabric samples are provided to give extra layers of sensory tangibility
- Larger tape, paper samples and pegs are provided to aid with dyspraxia (low motor skills)
- Large and medium sized pegs are provided to offer a choice of materials
- Double sided tape is provided as an alternative to sticky glue

MA Sustainable Design Exhibition // Possibilities of Sustainable Change



Making the example kits for the exhibition was challenging due to me not being from the communities in focus. This highlighted the insight and collaboration needed to create something so personal to its user. In a world of increasing population, communities have become so diverse that drawing insights and pulling characteristics from general thinking no longer means our tools will be targeted and specific enough for the participant designer it was intended for.

In a perfect world I would suggest that getting to know your participant-designers before designing their tools would be the solution to creating personal, specific, and targeted research kits, however, in practise this is possibly too time consuming, especially in the rapid world of changing fashion trends, and not a realistic approach to most industry research.

Showing the kits as comparable units highlighted how versatile and adaptable design probe kits can be, and how subtle changes can make a big impact, not just on how usable the kit becomes for its recipient, but on how it is received. We can adapt our tools within the kits with little planning, for example providing larger scissors with more grip for more mature participants, however, creating activities that lend themselves to scaffolding also plays a large part in how adaptable the kits are, paper art worked particularly well here offering many ways to transform the concept to match ability and growing levels of creativity.

Fig. 64-65, Exhibition Stand, Authors Images

Co-Creative Communities
Inclusive Codesign for Sustainable Fashion

About Co-Creative Communities

Welcome to Co-creative Communities! This is a space for everyone to share ideas and meet people with a range of skills enabling us to co-create together! These communities move away from the assigned roles of user, designer, and maker, allowing everyone to be a part of the design journey that leads to the products we really need and want. User voices, especially those that have so far been side lined from the design process, are at the heart of every project, and with the help of designers, researchers, technologists, and makers, we can start to create inclusive fashion that is produced in more sustainable ways.

Lets Get Creative!

Resources and tools are available to download, allowing everyone the equity to achieve whichever level of creativity they feel comfortable. In the Skill Share section, users can upload or search for videos that may enable others to learn new skills and even begin to make, upcycle, or repair our own clothes.

How it works

1

Anybody can create a profile, whether you design, make or simply wear clothes, either way we see you as an expert in the subject as it relates to you.

2

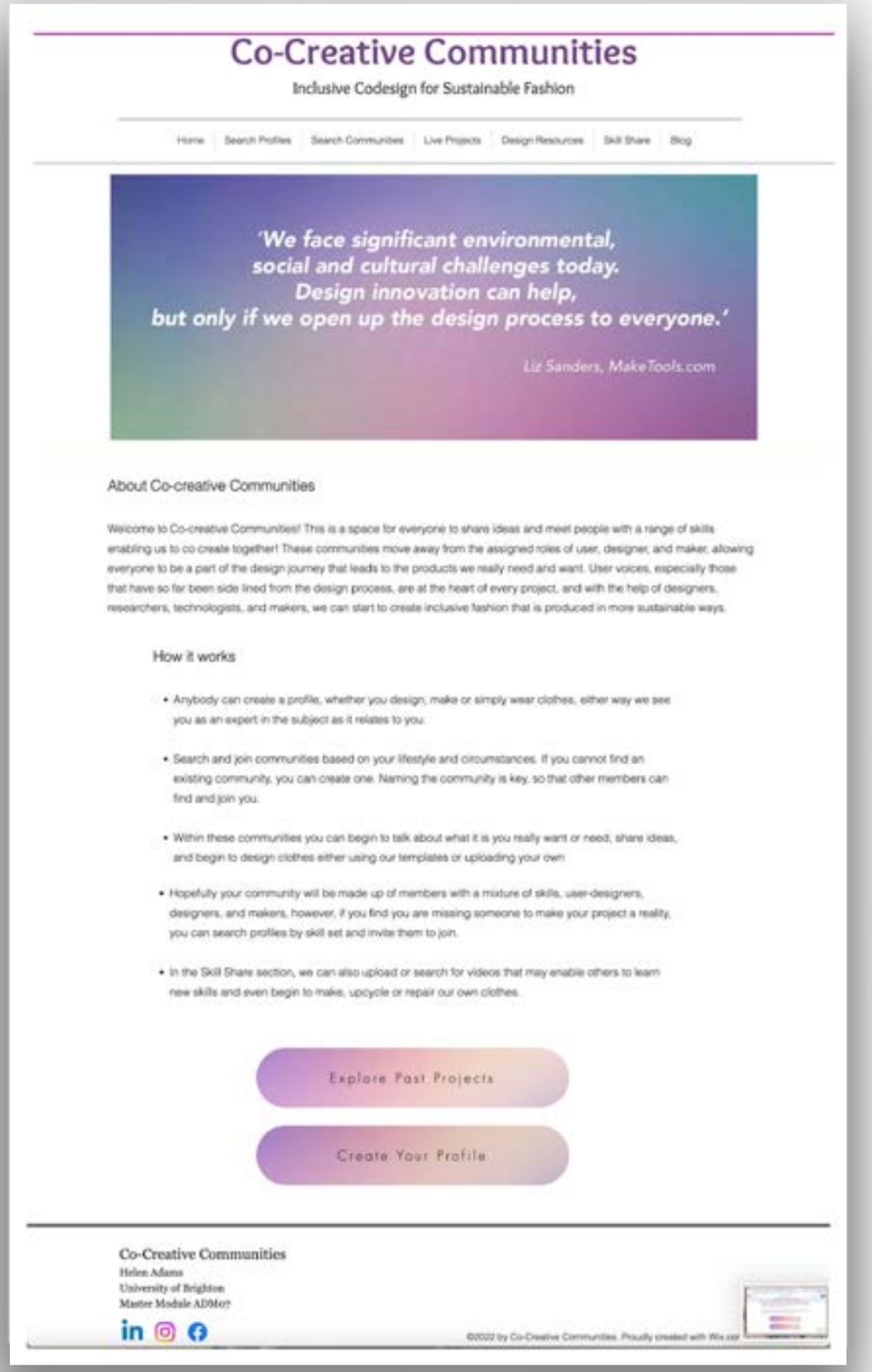
Search and join communities based on your lifestyle and circumstances. If you cannot find an existing community, you can create one. Naming the community is key, so that other members can find and join you.

3

Within these communities you can begin to talk about what it is you really want or need, share ideas, and begin to design clothes either using our templates or uploading your own.

4

Hopefully your community will be made up of members with a mixture of skills, user-designers, designers, and makers, however, if you find you are missing someone to make your project a reality, you can search profiles by skill set and invite them to join.



Members will be able to search for other members by skill set to easily find any missing links in their communities.

This section will be a library of resources designed for the community, by the community, and will be available to everyone to offer equity within the community.

This section will be where community members share their skills and passions, allowing others to develop their knowledge.

Fig. 66-69, Creative Communities Website, Authors Images

Fashion For Change // Website

'Community' in this case is aimed at the fashion industry as a community of professionals. Although it is a community, I feel the work they do and the work they have achieved, is far more pronounced than the idea of bringing people together to work on collaborative projects. The projects they discuss are run by them and to be a participant you have to apply to join them. Profiles can be made, (Fig. 69) but this is just contact details and a one line description of what they do, it doesn't tell us anything about them as a professional or their work, and if you click on the 'find out more' link it takes you to their external website, if they have one. Once you have identified who you would like to reach out to, you can 'Join the Discussion' (Fig. 70) but this then takes you to the 'Fashion for Change' LinkedIn page, so there is no discussion or collaborative working within the site.

Users are not considered in the organisation, and even for the 'experts' they are aiming at, the website is non-inclusive in many ways. The language of the site is sometimes quite academic, and there are no alternative provisions for anyone with a disability. The design is uninspiring and to me corporate (Fig. 71).

The website is pushing for sustainable change, and the projects they run are helping small sustainable fashion brands get a start in a saturated industry, however, stating that brands they have helped have 'turned out to be a solution for global problems'[90] shows either a lack of knowledge or credibility on their part.

90 Fashion for Change, 'Learn', https://www.fashionforchange.eu/knowledge-hub/learn/, Accessed 3rd August, 2022

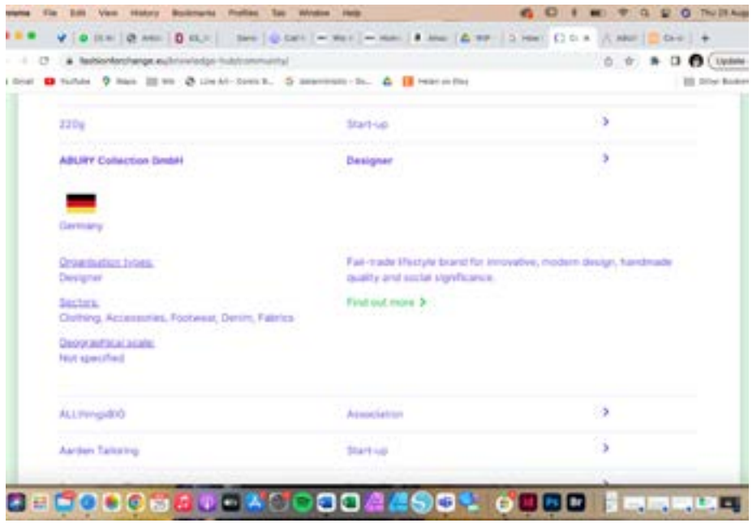


Fig. 70, Fashion for Change Community, https://www.fashionforchange.eu/knowledge-hub/community/, Accessed 2nd August 2022

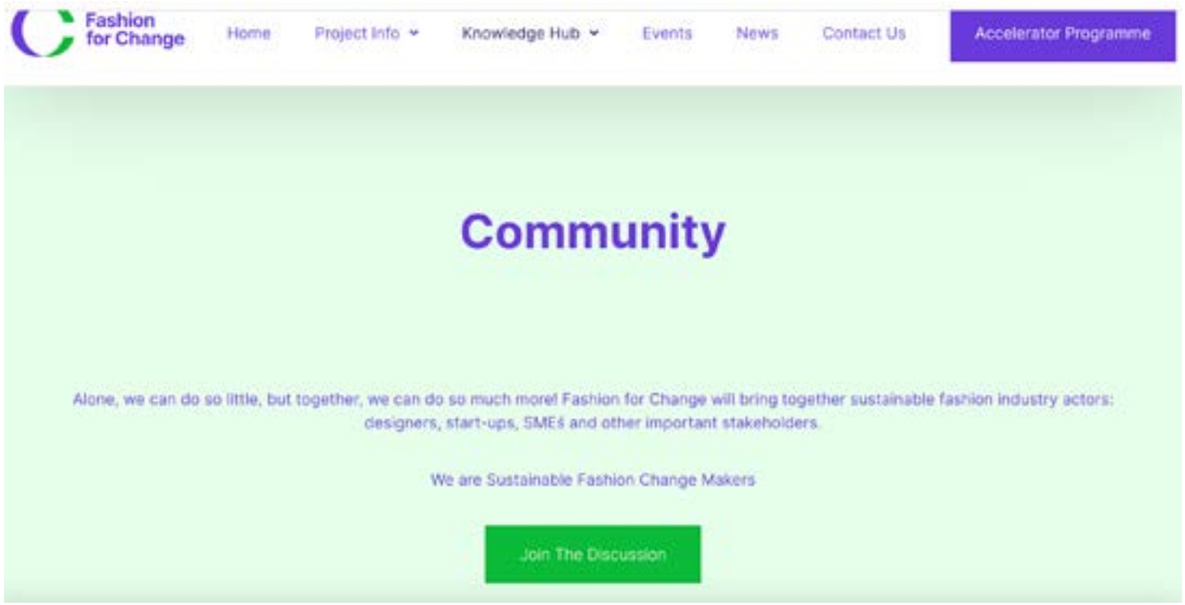


Fig. 71, Join the Discussion, https://www.fashionforchange.eu/knowledge-hub/community/, Accessed 2nd August 2022

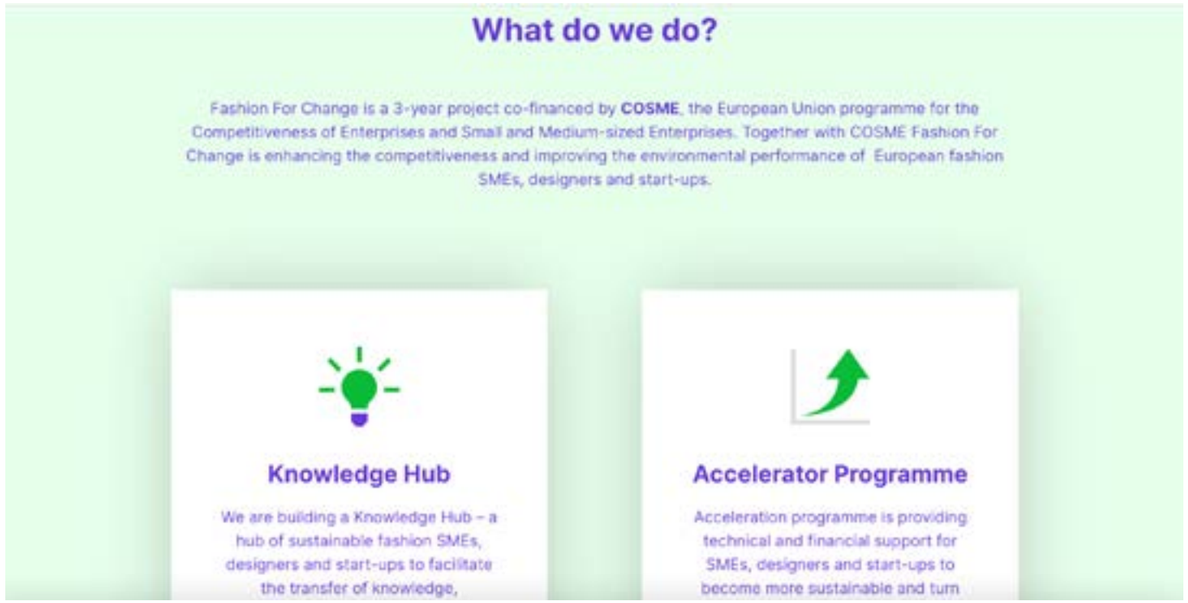


Fig. 72, Join the Discussion, https://www.fashionforchange.eu/knowledge-hub/community/, Accessed 2nd August 2022

ICSDCI 2023
Paper Abstract

Reimagining the Fuzzy Front End of Design: Introducing Codesign from the Root Up

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August 2022

I. Abstract

The importance of collaboration and codesign is not a new concept, however, it has in the past been limited to a select few. Other than a possible online survey, most people, especially those in minority or marginalized communities, have never even considered or been offered the opportunity to join a design team as a participant-designer, and would fear doing so due to a lack of traditional design skills, however, innovative, accessible, and inclusive design research methods are becoming more recognised and accepted, appreciating users as experts, and breaking down barriers of assigned roles. Creating research methods that are targeted and specific to users takes inclusive design thinking, and detailed thought needs to go into creating research tools that are adapted to meet the needs of the participant-designer, but without input from the voices within the diverse groups that will be using these tools, we are leaving ourselves open to stereotyping, and risk alienating the people from our research of which we are trying to include. Throughout this paper, I therefore invite you to reimagine the fuzzy front end of design, shifting the earliest stage of the design process from the product idea and design stage to the designing of the research design, codesigning research tools with the people that will be using them, to ensure familiarity and comfort with their resources, and to allow for inclusive and accessible design research that minimises the possibility of falling victim to stereotype threat.

Final Thoughts //

Throughout my studio work I became excited at the prospect of analysing the results of the design probes and forming creative maps to make sense of the data collected, however, throughout this project creative analysis and sense-making came to mean so much more. Zooming out from the obvious definition of creative analysis, I found creativity can be applied to analysis at every stage of the design process and doesn't have to result in a conclusive outcome to have value.

This work has not aimed to resolve the fuzzy issues it addresses but instead explored the concept of becoming comfortable and thriving in them, accepting the fuzziness and nonsense, and realizing the value they bring to the design process. There are still many questions within literature surrounding the use of probes that remain unanswered, and probably always will, due to the fuzzy nature of their creation and the method in which we use them, but it is this fuzziness that makes them so versatile and adaptable and positions them so well at being able to offer creative, inclusive, and accessible research methods. Maintaining this elusive definition will ensure they remain a versatile research method, open to interpretation for future exploration.

Exploring how we can include wider communities in the codesign space, developed my thinking to reimagining beginnings and ends, pushing the boundaries we work within which define the 'design process', and opening up these new spaces at a community level, an area which is significantly unexplored and which I would like to explore further.

My final thought is that in our quest for positive change, perhaps we should practise the art of not trying to make sense of nonsense, creatively analyse and embrace the fuzziness of it, challenge our need for closure, and live comfortably outside of the box.

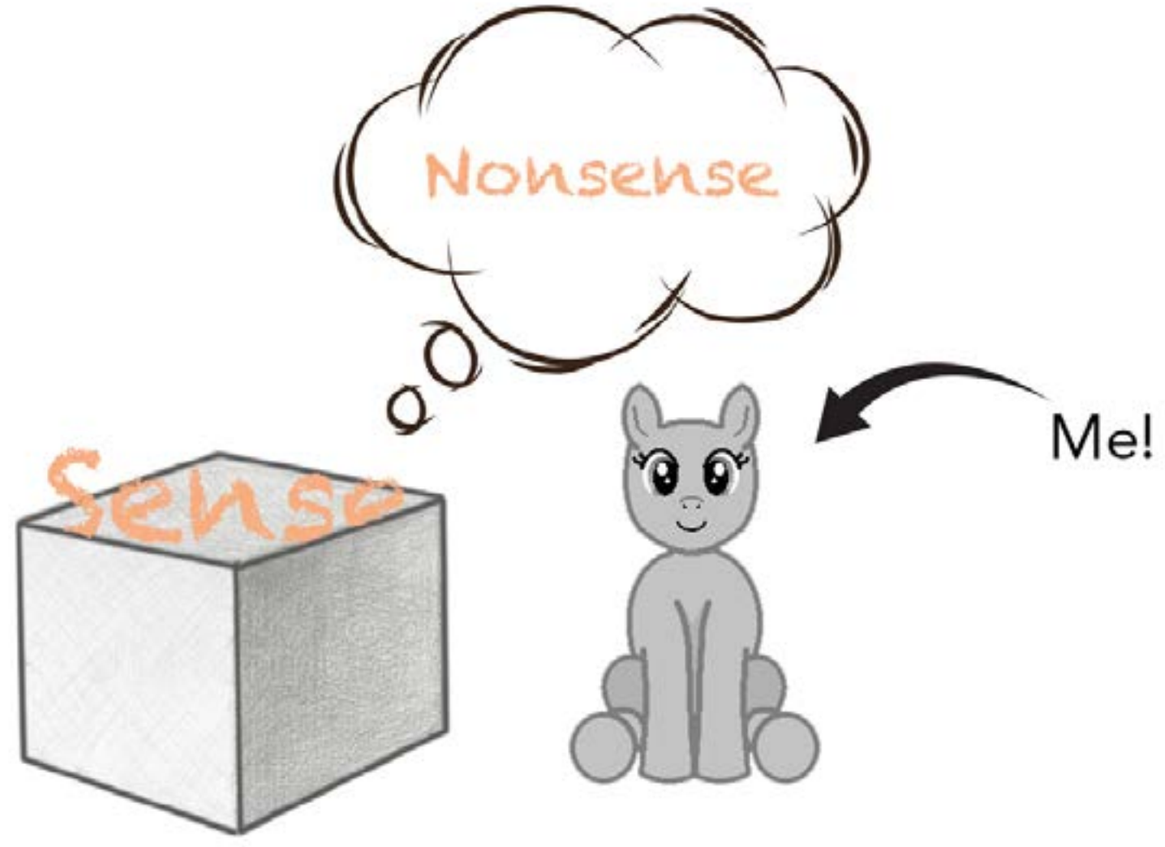

Fig. 73, Comfortable within the Fuzziness, Artwork by Author

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