

Jun 12th, 9:00 AM - Jun 14th, 5:00 PM

Anticipating the futures of the gender dimension in research: Storying entangled practices and bodies

Eva Durall
University of Oulu

Netta Iivari
University of Oulu

Mervi Heikkinen
University of Oulu

Suvi-Tuulia Pihkala
University of Oulu

Marianne Kinnula
University of Oulu

Follow this and additional works at: <https://dl.designresearchsociety.org/nordes>

Citation

Durall, E., Iivari, N., Heikkinen, M., Pihkala, S., and Kinnula, M. (2023) Anticipating the futures of the gender dimension in research: Storying entangled practices and bodies, in Holmlid, S., Rodrigues, V., Westin, C., Krogh, P. G., Mäkelä, M., Svanaes, D., Wikberg-Nilsson, Å (eds.), *Nordes 2023: This Space Intentionally Left Blank*, 12-14 June, Linköping University, Norrköping, Sweden. <https://doi.org/10.21606/nordes.2023.106>

This Research Paper is brought to you for free and open access by DRS Digital Library. It has been accepted for inclusion in Nordes Conference Series by an authorized administrator of DRS Digital Library. For more information, please contact dl@designresearchsociety.org.

ANTICIPATING THE FUTURES OF THE GENDER DIMENSION IN RESEARCH: STORYING ENTANGLED PRACTICES AND BODIES

EVA DURALL

UNIVERSITY OF OULU

EVA.DURALLGAZULLA@OULU.FI

NETTA IIVARI

UNIVERSITY OF OULU

NETTA.IIVARI@OULU.FI

MERVI HEIKKINEN

UNIVERSITY OF OULU

MERVI.HEIKKINEN@OULU.FI

SUVI-TUULIA PIHKALA

UNIVERSITY OF OULU

SUVI.PIHKALA@OULU.FI

MARIANNE KINNULA

UNIVERSITY OF OULU

MARIANNE.KINNULA@OULU.FI

ABSTRACT

In recent years, scholars have been increasingly urged to address a gender dimension i.e. sex and gender impact in research. In this study, we explore scholars' explicit and implicit views about the future of implementing gender impact assessment (GIA) in research. We do so by analysing a series of co-design workshops in which participants anticipated possible futures regarding the use of a GIA checklist. We conduct a narrative inquiry of participants' stories consisting of the personas and scenarios created at the workshops. Our analysis reveals silenced viewpoints and tensions for adopting GIA, while unveiling quite stereotypical bodies and practices in the academic world. Based on our findings, we claim that storytelling approaches help create a safe space in which participants can express discomfort and conflicts playfully and with humour. This study contributes to advance co-design futures-making by accommodating plurality of voices when

discussing sensitive topics such as gender equality.

INTRODUCTION

According to the European Commission (EC) statistical report SheFigures, less than 2% of European research publications include sex and gender dimension (EC, 2021a). In practice, this means that most of the research conducted in Europe is gender blind resulting in inaccuracies when translating results, and fallacies when applying them. As case studies produced by the EC and the Gendered Innovations research group at Stanford University show, not considering the sex and gender dimension leads to bad praxis in research, wasting resources and negatively affecting human lives and planetary wellbeing (EC, 2020; Schiebinger et al., 2011-2020).

In research, the sex and gender dimension is important to assess what is researched and how the research is conducted, but also who engages in research. The overall picture is that the field of research is still strongly segregated by gender and ruled by the global north. Globally, two thirds of researchers are men and when looking at different disciplines separately, the challenge of segregation is even more significant and complicated (UNESCO, 2017). In addition to sex and gender other intersecting social categories such as disability, ethnicity, LGTB, race, socio-economic background, religion, belief, class, social origin, sexual orientation, and vulnerabilities have been increasingly considered in research as an intersectional approach (EC, 2021a). Among other factors, both horizontal and vertical gender segregation result in more homogeneous



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International Licence](https://creativecommons.org/licenses/by-nc/4.0/).

<https://doi.org/10.21606/nordes.2023.106>

research groups, which limits what gets researched, the methods used, the diversity of data and the informants (Nielsen et al., 2018). Thus, in addition to being a basic universal human right, intersectional gender equality is deemed crucial for ensuring good research conduct, research integrity and sustainability (EC, 2020; Herbert et al., 2020; Nielsen et al. 2018).

As part of the EC's commitment to research excellence (EC, 2014), consideration of the gender dimension has become a mandatory requirement for all research applications unless it is duly justified why this is not necessary (EC, 2021b). To foster the inclusion of sex and gender in research, the EC has published numerous materials (see for e.g., EC, 2014 and 2020; EIGE 2022 resources). Parallel to the dissemination of how-tos and best practices, the Commission has also funded research projects aiming to foster gender equality using co-design and co-creation approaches (Thomson & Rabsch, 2021). In this article, we report experiences from an ongoing project in which we used co-design to develop gender impact assessment (GIA) tools (Heikkinen et al., 2021), including a specific design artefact called "a GIA checklist", to foster gender dimension in university research content, practices, and impact. In this paper, we present the results from a series of co-design workshops to discuss the GIA checklist and its implementation.

We understand co-design to entail collaborative negotiation of values among the participants (Mechelen et al., 2017) and we maintain that these values can be deciphered as much from what is not said as from what is said. The omissions, gaps, and absences need to be acknowledged, too. We are specifically interested in the potential of co-design, understood as futures-making and anticipation, to unveil gaps, absences, and what is not explicitly said about the futures of gender dimension and the GIA checklist and its implementation in Higher Education Institutions (HEIs) conducting research. Our analysis of the workshop outputs is guided by the following research questions: What practices and bodies are privileged in the future scenarios about the GIA checklist? Which practices and bodies are explicit and which ones remain tacit or implicit? What is the potential of design futures techniques for addressing the tacit dimension in co-design?

In the following sections, we ground our research on co-design and design futures literature, and introduce the research site and the methodology used. As part of the results, we distinguish participants' tacit and explicit views on GIA and discuss the potential of co-design and design futures techniques to make various types of knowledge and assumptions visible.

BACKGROUND

FUTURES-MAKING AND ANTICIPATION THROUGH CO-DESIGN

Co-design has been celebrated in design research and practice as an approach enabling "collective creativity as it is applied across the whole span of a design process" (Sanders & Stappers 2008, p.6). Co-design has its roots in various research and design disciplines and practices originating strongly from Scandinavia but also from other European countries and the United States (see e.g., Spinuzzi 2002).

Co-design is much about futures-making and anticipation; the very practice of design has been described as futures-making as design solutions embed a particular way of relating to the world, leading to new behaviours and ways of thinking (Akach et al., 2021; Sanders & Stappers, 2014). Literature has linked co-design not only with collective creativity and joint imagination (Durall et al., 2019; Sanders & Stappers, 2008; Steen, 2013), but also with anticipation (Light, 2021; Korsmeyer et al., 2022): co-design can be approached as an anticipatory practice (Korsmeyer et al., 2022). From this perspective, anticipation is understood as "a collective capacity to imagine and use futures in the present" (Vesnic Alujevic et al., 2019, p.97). It is about the presence of that which is not (yet) realised, offering generative, speculative routes also to imagining futures otherwise (Gatehouse, 2020).

The rationale for using co-design approaches with a futures-orientation is because many futures are possible, and because the futures are not far in time but actively constructed in everyday practices and decisions taken in the present (Light, 2021; Slaughter, 2018). Collective anticipation can be seen as a strategy to raise awareness and trigger discussion about the futures we want to live in. Publicly negotiated anticipation has been linked to democratisation as it involves that diverse stakeholders are able to understand and influence future visions, co-build them, and exercise some agency upon them (Binder et al., 2011; Light, 2020). From this perspective, collaborative futures-making, and anticipation, intertwined with participatory design principles, seek to create alternative possible futures that not only serve to give voice and promote agency of diverse groups, but also offer a way to deal constructively with controversies (Ehn, 2016; DiSalvo, 2010).

THE UNSAID, THE SILENCED AND THE TACIT

Design and futures have been framed as disciplines of dialogue (Celi & Colombi, 2020). Despite the perceived value of supporting participation and dialogue in design and futures-making practices (Ehn, 2016; Light 2021), the process is not free from challenges. Among those, scholars have pointed at tensions between tangible and

intangible aspects of futures shaping (Celi & Colombi, 2020), as well as difficulties in making visible stakeholders' mundane, invisible work as well as their tacit knowledge since quite often this type of knowledge is less-readily articulated and thus, it remains invisible (Edwards & Korsmeyer, 2017; Langley et al., 2018).

For design practice, not making stakeholders' perceptions and feelings explicit is troublesome because it hinders empathic understanding (Kankainen et al., 2012; Langley et al., 2018) and can privilege and iteratively reify those knowledges and practices that are already well-established and articulated instead of opening avenues for imagining futures 'otherwise' (Pihkala & Karasti, 2022).

Studies have scrutinised at the deeper level the significance of absences, silences, gaps, the invisible and what is not said. Star and Strauss (1999) discuss the politics of invisible work: they discuss people and work that are not noticed, and thus, not counted as relevant. Sefyrin and Mörtberg (2009) analyse silence in co-design, arguing that there may be dominant discourses offering a preferred way to approach a topic, but also many silenced viewpoints that should be acknowledged and voiced out. They follow Foucault's work, highlighting that in discourses, it is important to acknowledge both what is said and what is not said and associated power play (Foucault, 1972). Going further with the role of silences, Mörtberg and Stuedahl (2005) discuss how powerful silence can be in co-design. They point out that silence can indicate both power and powerlessness, it can indicate a lack of words, something unspoken as well as something unspeakable. Hence, silence can be seen to dominate and exercise power, to reproduce a dominant understanding of the world as well as to act as an indication of resistance or something one is unable or unwilling to voice out.

The potential of futures studies and co-design to elicit stakeholders' tacit knowledge has been highlighted, identifying various methods to make knowledge explicit and enable dialogue (Akama & Prendiville, 2013; Durall et al., 2022; Rossel, 2012; Stuedahl & Mainsa, 2019). Among these methods, personas and scenarios have been used to project alternative futures (Celi & Colombi, 2020; Morrisson & Chisin, 2017). Other popular strategies include methods based on making and enacting (Akach et al., 2021; Kelliher & Byrne, 2015; Sanders & Stappers, 2014; Spinuzzi, 2005). For instance, in methods like Make Tools (Sanders & Dandavate, 1999) and Collective Making (Langley et al., 2018), and through generative toolkits (Collard & Briggs, 2020), participants are invited to express their thinking through artefacts they generate in design sessions. These methods build on the materiality of the process and participant's creative making to reveal tacit assumptions that would be challenging to capture otherwise. Some voices outline the value of the stories

accompanying the artefacts, which enable facilitators to inquire about participants' thinking (Berger et al., 2019), others point at the speculative discussions surrounding the collaborative prototyping as an arena in which tacit assumptions become visible (Edwards & Korsmeyer, 2017).

Design futures and co-design have also been used to support embodied experiences, for instance through methods based on enacting such as e.g., in Brandt and Grunnet's (2000) adaptation of the Theater of the Oppressed. Bridging the "gulf of experience" has been considered valuable "to engage people more viscerally in futures conversations" (Candy & Dunagan, 2017, p. 2). In this study, we build on the assumption that such experiential futures approaches in co-design processes can help to reveal the unsaid about participants' and researchers' mind and bodies.

CO-DESIGNING GENDER IMPACT ASSESSMENT

This study was conducted in the context of a European Union funded project, Redesigning Equality and Scientific Excellence Together (RESET), that focuses on mainstreaming intersectional gender equality and equity in HEIs. The project outputs include a set of GIA tools to assist researchers include the gender dimension in their research practice, both in the design of research activities as well as products of those.

DATA COLLECTION

Three co-design workshops were organised with researchers and research specialists from a Finnish university to share and discuss the first version of a GIA checklist consisting of questions about the sex and gender dimension in research. The feedback obtained during the workshops would be used to inform further iteration rounds. The aim was to get a deep and nuanced understanding of how sex and gender as well as intersectionality are embedded with research work, structures and practices. The workshops included 11 participants from Technology, Social Sciences and Humanities, and Life Sciences. All participants had experience in research, and their roles ranged from tenured professors to lecturers, postdoctoral researchers, and research service specialists.

The workshop methodology was an adaptation of the Puppet Scenarios method (Kumar, 2012). This technique focuses on concept exploration and involves creating scenarios, which represent current issues and possible solutions to them, and then enacting these scenarios as narratives (Kumar, 2012). We adapted this method to take a future orientation to the sex and gender dimension in research, aiming to anticipate potential futures. Our rationale for using the puppets in the scenarios was to support playfulness and lowering the threshold for expressing one's thoughts, emotions, and reservations related to new requirements for academic

research applications. These were part of our efforts to create a safe space, where participants would feel comfortable to envision what could happen in the future world when a new solution is in use.

Before the workshop, participants received information about the project, the GIA checklist tool, the rationale for using a co-design approach for its development and were asked to give their informed consent. They were also asked to fill in a pre-workshop questionnaire on GIA when planning the research (n=11 answers).

During the workshops, participants shared their experiences when answering the questionnaire and discuss GIA and the value of the checklist to support reflection on the gender dimension in knowledge production. After this, they (individually and in groups) created stories portraying future uses of the GIA checklist in HEIs. The stories consisted of a persona (a fictional character) and a scenario (a sequence of events and actions performed or experienced by the persona) presenting a possible way in which the GIA checklist might be used in the future. The participants created their stories while crafting puppets that represented their personas, using various materials, such as papers of different colours, post-it notes, scissors, pens, and glue. Then, they presented their future scenarios to other workshop participants as puppet theatre performances. The workshop ended with a group discussion on the visions presented in the performances.



Figure 1: Participants crafting at the co-design workshop.

The workshops resulted in altogether 11 stories (personas with accompanying scenarios) and audio (336 min.) and video (145 min.) recordings of the workshop, photographs, and the researchers' observation notes. After the workshop, the participants answered a follow-up questionnaire (n=9 answers) on their reflections and potential change of practice after taking part in the GIA co-design session.

DATA ANALYSIS

The 11 stories produced in the co-design workshops form the core data for our qualitative analysis. We draw

on narrative inquiry, which allows us to investigate the stories as told with the future personas and scenarios, not as descriptive of reality but as representing participants' experiences, feelings, and beliefs (Kim, 2015) in their work related to use of the GIA checklist tool. In analysing, the "researcher's role is to interpret the stories in order to analyze the underlying narrative that the storytellers may not be able to give voice to themselves." (Riley & Hawe, 2005, p.227). The process of analysis involved reflexive, iterative reading (Squire, 2013) of the stories produced, guided by our research questions.

We first organised the data to produce concise narratives from the personas (represented as puppets) and the scenarios, which was followed by thematic analysis of the narratives. During the first level of analysis, in response to the first research question, attention was directed to identifying the work practices and embodied aspects that were present and privileged in the stories (the personas and scenarios). The second level of analysis focused on the identification of what is not explicitly said but implied in the stories. These two levels of approaching the narratives enabled us to bring analytical attention to the interstice of lived experience and future possibilities of the GIA.

RESULTS

Most of the personas created by the participants referred to university researchers, who were identified with various genders (three women, two men, one transgender, and seven non-defined) and with diverse levels of experience and responsibility: doctoral researchers, research project coordinators, research group leaders, research specialists providing in-house and external services to the institution such as grant writers, and people in leadership positions involved in defining the university strategy (see table 1).

The future scenarios focused on how the generated personas would engage with GIA in HEIs. In most of the scenarios (n=9), the GIA checklist was a tool to help researchers address a new mandatory requirement about the sex and gender dimension in research content. In other cases (n=2), participants opted to portray how GIA might be experienced in the academic community depending on the individual's roles and power inside the organisation as well as in their everyday lives (see table 1).

Table 1: Description of the stories created at the GIA co-design workshops

Persona	Futures scenarios
Horizon 2020 proposal coordinator (female)	A coordinator realises the day before the submission deadline that the mandatory section on gender and sex dimension has not been addressed in the proposal. When reading the GIA checklist, she feels

	irritated because the tool is not helpful. She panics, feeling unable to make a successful application.
Horizon 2020 proposal coordinator (female)	A coordinator needs to address the gender and sex dimension in a research application she is preparing with some partners. She goes through the checklist of questions, getting some ideas to discuss with the consortium partners.
Grant writer (man)	A grant writer is preparing applications for automobile research. He notices that GIA is a mandatory requirement in many competitive funding calls. To increase his chances, he systematically ticks the GIA checklist boxes.
Anxious researcher preparing research application (woman)	A researcher goes through the GIA checklist when preparing a research application. She feels the questions are very far connected with her research interests, feeling frustrated because she is not able to meet those requirements.
Research funding strategist	A researcher carefully reads the GIA questions and drafts the proposal strategically to meet all the GIA criteria and thus, increase the chance for getting funding.
Three different personas with different attitudes regarding GIA and decision-power.	The persona with high decision-power delegates GIA work to junior researchers and invites other researchers specialised in gender and equality to join interdisciplinary research applications. The persona with expertise in GIA is aware of the opportunistic uses of GIA in research, but still willing to collaborate with open-minded junior researchers.
Research services specialists	They work together with researchers to familiarise them with GIA, aiding them to approach the sex and gender dimension in research proposals. This close work results in high quality applications.
Research services specialists	Due to heavy workload and limited time, their support on GIA consists in sending researchers a link to the GIA questions checklist. This is not useful enough for the researchers, who get a negative impression of the specialists' work.
Young research leader	The researcher leader uses the checklist for preparing research proposals, but also as a tool to guide thinking on how to implement GIA in the group's research.
Researcher advocating for objective, facts-based research	The sex and gender dimension in research is seen as a strategy to filter applications in competitive research. The checklist is strongly rejected by the researcher who feels the tool sabotages their research. They complain to the university rector.
Transgender scholar	The scholar selected the workplace based on the institution's world-leading policies for integrating sex and gender in research. The researcher feels safe and proud to be

	part of an inclusive community committed to excellence in research.
--	---

The scenarios focusing on the GIA checklist anticipated futures in research can be classified as best and worst cases as well as opportunistic practices. In the best-case scenarios, the checklist is presented as a support tool when preparing research proposals. Researchers would go through the list of questions to get ideas and inspiration at early stages of the proposal preparation and structure the collaboration with partners by using the questions as a discussion agenda. In the worst-case scenarios, the checklist would not be up to the researchers' expectations and would not help them to address the sex and gender dimension in their research plans. Among the opportunistic practices are superficial uses of the checklist to increase the chances of receiving funding.

In the scenarios pointing at researchers' experiences on GIA and the checklist, participants highlighted power relations inside academia as well as differences in how GIA might be approached depending on the discipline and the knowledge paradigm. They also warned about the risk of outsourcing work to researchers with expertise in GIA, for instance by making them write the section on sex and gender dimension in the proposal, even if their role in the proposed research would have been limited. From a different perspective, the sex and gender dimension in research was linked with an institutional commitment for cultivating inclusive and caring environments. This was considered to have a positive impact in the academic community, but also in the external image of the institution.

The scenarios created by the participants at the workshop convey possible futures of GIA (and the checklist) in HEIs. In our analysis, we focus on participants' explicit and tacit views on the practices and bodies connected to the GIA checklist (see table 2).

Table 2: Explicit and tacit views on the GIA checklist futures in research

Views about the GIA checklist futures	Work practices	Bodies
Explicit	<p>Competition for obtaining research funding.</p> <p>Individual approach to the preparation of research proposals.</p> <p>The sex and gender dimension is one of the last sections to be addressed.</p>	<p>Researchers' gender.</p> <p>Responsibility for addressing the sex and gender dimensions in research applications.</p> <p>Researchers' emotions.</p>

	GIA contributes to research quality.	Sex and gender dimension in research as embodied.
Tacit	<p>Top-down approach to support change in research practices.</p> <p>The sex and gender dimension increases research bureaucracy.</p>	<p>Researchers' capability to control their work.</p> <p>Understanding the sex and gender dimension in research as a problem to solve.</p> <p>Well-being in academia.</p>

When presenting their stories, most of the participants used humour for envisioning a near-middle term future resembling their current practices. For instance, in these future scenarios research was strongly dependent on competitive external funding. The sex and gender dimension was mentioned as a section in the research proposal template, usually one of the last to be filled in. Participants were also outspoken regarding the work practices connected with the preparation of research proposals, which heavily relied on the coordinators' individual work. Even in the best-case scenarios describing a more collaborative approach using the GIA checklist at early stages, the writing of the section on the sex and gender dimension was assumed to be the coordinators' task and thus, their responsibility. If researchers were not aware of the interplay of sex and gender aspects throughout the research, not just in aspects connected with sampling and data collection, the GIA checklist felt overwhelming. This reflected in the personas' emotions, which ranged from feelings of failure and frustration to anger and resistance for having to address GIA in their research. Most critical scenarios acknowledged researchers' different levels of awareness on the sex and gender dimension in research, depending on the discipline and knowledge paradigm. The scenarios portraying positive futures about the GIA checklist referred to its value for increasing research quality and the need to understand sex and gender as embodied, also in researchers' lives.

Our analysis of participants' tacit views underlying the stories created at the co-design workshops revealed a generalised assumption that changes in research practice dealing with the sex and gender dimension would follow a top-down approach. Only in one scenario a bottom-up approach was mentioned through scholars' generational renewal. In most cases, the decision to address GIA was externally motivated through the inclusion of mandatory requirements in the EC calls for research funding. In most negative scenarios, instruments like the GIA checklist were seen as ways to impose practices, often considered irrelevant and not related to research quality. The fact that the sex and gender dimension was referred to as "another section"

of the template to fill in when applying to extremely competitive calls, led to associating GIA with increased bureaucracy in research. In the most sceptical cases, the additional paperwork was seen as a way of filtering and selecting proposals, and thus justifying the allocation of funding. From this perspective, the section on the sex and gender dimension was a problem to solve to increase the likelihood of getting funding. In all the scenarios, there were implicit assumptions regarding the researchers' capability to control their work. Considering that addressing the sex and gender dimension was perceived as mandatory (in some cases as an imposition), researchers felt they had little understanding and control over broader strategies (developed by the EC and HEIs), and this resulted in feelings of failure and anxiety. Researchers' acceptance of their limited agency in the academic system made them assume a tactical approach towards GIA, which consisted in, for instance, using the checklist to ensure the minimum requirements were met. Only in one case, GIA was presented as a strategy contributing to increasing research quality as well as the well-being of the academic community.

DISCUSSION AND IMPLICATIONS

In this section, we reflect on and discuss the implications of the anticipatory futures practices we collaboratively experimented within our co-design process, based on our analysis of the explicit views and implicit cues that we read from participants' stories about the GIA checklist's possible futures. In the analysis, we paid attention to what participants said as well as to what they implied or did not say, while we wish to underscore that our analysis of the silences, gaps and what remains not said is necessarily partial and heavily guided by our own perspectives, practices and bodies. Hence, in addition to the issues presented in this study, many more issues not explicitly mentioned by the participants would have been identified by other critical readers.

In our analysis, we observed that although participants' stories were explicitly about the future uses of GIA in research, implicitly these stories were firmly tied to their current practices and bodies in HEIs. In the stories, competition and individualism were assumed as persistent conditions of future academic work. The checklist, rather than being an instrument for a more radical change, was regarded just as a tool to make researchers' life easier by ensuring success in the constant struggle of obtaining external funding for research. Then again, in their stories the participants referred to negative emotions experienced in contemporary academic work, in line with what has been reported in research studies (see Brunila & Valero, 2018). Similar to other studies using personas in design-oriented futures (see for instance Morrisson & Chisin, 2017), this method allowed participants to embed their

biographies and personal stories in their creations, bringing a layer of complexity to their anticipated futures scenarios.

The implicit – and unintended – presence of the conditions of the current academic work reminds us simultaneously of the ways in which the work related to GIA is done within and entangled with the wider frames and structures of academia. Here, we want to highlight the challenges involved in interpreting the co-design outcomes. We speculate whether these personas and scenarios should be read as critical commentaries towards current and future practices related to the gender dimension in research and knowledge production, instead of a passive acceptance of them. We wonder if such futures scenarios should be seen as statements - displaying cynicism or criticality - regarding the persistence of particular bodies and practices in research. As for implication for future research and design, we underline acknowledgement of the strength of the existing institutional setting and culture with its power dynamics in anticipatory and futures practices in co-design, in line with Iivari and colleagues (accepted for publication), who show how co-design is embedded within and shaped by a variety of local, national and international practices, policies and politics.

We maintain that our anticipatory futures practices experimented with in the co-design workshops succeeded in inviting and encouraging the participants to consider alternative, desirable as well as undesirable, futures with the GIA checklist, providing a safe and playful space to address as well as to critically scrutinise a sensitive and power-laden topic. When looking at the implied or tacit, absent, or silenced issues (such as the precarity of research funding or researchers' stressful work conditions), we argue that the personas might have worked as a mask that enabled the participants to talk about close uncomfortable presents from a safer place. Citing Oscar Wilde, "Man is least himself when he talks in his own person. Give him a mask, and he will tell you the truth." (1981, p.60). Thus, we may speculate that the persona-mask enabled more honest feedback on the GIA checklist and the current academic system. As a related issue, we observed participants' use of humour when discussing their personas and scenarios. This can be read as an indication of them approaching the current power structures and gendered practices and bodies in the academic world playfully to challenge and even question them. Such use of humour aligns with existing literature describing humour as a powerful, empowering tool for questioning the status quo (Case & Lippard, 2009) as well as a valuable resource in (design) interaction (Iivari et al., 2020). The implications of these findings allude to the importance of a safe place and various usages of humour for futures-making and anticipatory practices in co-design.

As co-design literature shows, the introduction of tools in workplace settings involve a change in the practices, and the place culture (Bødker et al., 1988). Likewise, the introduction of a tool like the GIA checklist involves both a new epistemic demand for a rigorous analysis of sex and gender in knowledge production and a sociocultural change towards gender equality. Such a change might not be "easy" as it requires a critical discussion of the status quo in HEIs, creating a space to negotiate values, as well as reconsideration of who holds power and privilege in academic and research practices, with an intersectional perspective. Although our co-design workshops involved a limited number of participants, we already noticed some tensions. For instance, one of the tensions underlying the stories refers to GIA as an imposition leading to extra work when preparing research proposals, silencing the current system of power and privilege present in HEIs' practices. Finding tensions and resistance in controversial co-design processes such as those striving for gender awareness and gender equality should not be a surprise, but something that, as designers and facilitators, we need to be ready for (see for e.g., Korsmeyer et al., 2022). Narrative methods such as storytelling enable participants to express with a level of flexibility that enables interpretation (Talgorn & Hendriks, 2021). This is particularly useful in expressing discomfort and resistance or even confronting the purpose of the design. Following the spirit of agonistic pluralism (diSalvo, 2010) and feminist utopianism (Bardzell, 2018) in design practice, we argue that we need to accommodate plurality of voices by creating spaces in which stakeholders can express the conflicts and tensions that a new tool (in our case the GIA checklist) might generate. Leaving these conflicts unsaid or silenced doesn't make them disappear, but eliminates the possibility of having a discussion, key for co-creating shared futures.

This study contributes to the literature discussing absences, silences, and gaps in co-design (e.g., Mörtberg & Stuedahl, 2005; Sefyrin & Mörtberg, 2009; Star & Strauss, 1999); yet leaving many paths open for future studies. Our data indicates that in co-design sessions on power-laden and sensitive topics specific attention may be needed on creating a safe and playful place for futures-making. It is also important to acknowledge that such futures-making tends to be grounded in current realities, breaking away from which may need careful scaffolding. Our analysis was sensitised to the silenced viewpoints, revealing several of them, while unveiling quite stereotypical bodies and practices in the academic world. We are also happy to report the participants voiced out their frustrations and challenged many existing notions, but we speculate on whether and how we could have offered even a safer place for the participants for envisioning greater gender responsibility in HEIs and more equal futures in

research. How could one invite the participants to collaboratively scrutinise the unspoken and the unspeakable (Mörtberg & Stuedahl, 2005) or invite the participants to reflect on what it is that they are unable, unused or unwilling to voice out (Sefyrin & Mörtberg, 2009). Future work should also scrutinise the invisible people and work - those not noticed, not counted as relevant (Star & Strauss, 1999) - in the context of gender equality work in HEIs and in relation to GIA. A deeper analysis on gaps and silences indicating them is warranted in the future.

ACKNOWLEDGEMENT

We thank participants for their valuable contributions to the GIA co-design workshops. This study was conducted within the project Redesigning Equality and Scientific Excellence Together, funded by the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. ID101006560. The views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the Agency. Neither the European Union nor the granting authority can be held responsible for them.

REFERENCES

- Akach, J. A., Osanjo, L., and Maina, S. (2021). Co-Design: Tools, Methods and Techniques for Designing with Users. *Africa Habitat Review Journal*, 15(1), pp.2145–2156.
- Akama, Y., & Prendiville, A. (2013). Embodying, enacting and entangling design: A phenomenological view to co-designing services. *Swedish Design Research Journal*, 1(1), 29-41.
- Asaro, Bardzell, S. (2018). Utopias of participation: Feminism, design, and the futures. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 25(1), pp.1-24.
- Berger, A., Ambe, A. H., Soro, A., De Roeck, D., and Brereton, M. (2019, June). The stories people tell about the home through IoT toolkits. In *Proceedings of the 2019 on Designing Interactive Systems Conference*, pp. 7-19.
- Binder, T., Brandt, E., Halse, J., Foverskov, M., Olander, S., & Yndigegn, S. (2011). Living the (co-design) Lab. *Nordes*, (4).
- Brandt, E., and Grunnet, C. (2000). Evoking the future: Drama and props in user centered design. In *Participatory Design Conference*, pp. 11-20. New York: ACM.
- Brunila, K., and Valero, P. (2018). Anxiety and the making of research (ing) subjects in neoliberal academia. *Subjectivity*, 11(1), 74-89.
- Bødker, S., Ehn, P., Knudsen, J., Kyng, M., and Madsen, K. (1988, January). Computer support for cooperative design. In *Proceedings of the 1988 ACM conference on Computer-supported Cooperative Work*, pp.377-394.
- Candy, S., & Dunagan, J. (2017). Designing an experiential scenario: The people who vanished. *Futures*, 86, 136-153.
- Case, C. E., and Lippard, C. D. (2009). Humorous assaults on patriarchal ideology. *Sociological Inquiry*, 79(2), pp.240-255.
- Celi, M., & Colombi, C. (2020). Trends as future prompts in the anticipatory design practice. *Futures*, 121, 01-9.
- Collard, H., and Briggs, J. (2020, September). Creative Toolkits for TIPS. In *European Symposium on Research in Computer Security*, pp. 39-55. Springer, Cham.
- DiSalvo, C. (2010). Design, Democracy and Agonistic Pluralism. In Durling, D., Bousbaci, R., Chen, L, Gauthier, P., Poldma, T., Roworth-Stokes, S. and Stolterman, E (eds.), *Design and Complexity - DRS International Conference 2010*, 7-9 July, Montreal, Canada.
- Durall, E., Bauters, M., Hietala, I., Leinonen, T., and Kapros, E. (2019). Co-creation and co-design in technology-enhanced learning: Innovating science learning outside the classroom. *IxD&A*, 42, pp.202-226.
- Durall Gazulla, E., Martins, L., & Fernández-Ferrer, M. (2022). Designing learning technology collaboratively: Analysis of a chatbot co-design. *Education and Information Technologies*, pp.1-26.
- European Commission, Directorate-General for Research and Innovation. (2014). *Gender in EU-funded Research: Toolkit*. Publications Office. <https://data.europa.eu/doi/10.2777/74150> [Accessed 27 Apr. 2023].
- European Commission, Directorate-General for Research and Innovation (2020). *Gendered innovations 2: how inclusive analysis contributes to research and innovation policy review*. Publications Office. <https://data.europa.eu/doi/10.2777/316197> [Accessed 20 Dec. 2020].
- European Commission, Directorate-General for Research and Innovation. (2021a). *She figures 2021: gender in research and innovation: statistics and indicators*. Publications Office. <https://data.europa.eu/doi/10.2777/06090> [Accessed 27 Apr. 2023].
- European Commission, Directorate-General for Research and Innovation. (2021b). *Horizon Europe proposal evaluation Standard Briefing Version 4.0* <https://ec.europa.eu/info/funding->

- tenders/opportunities/docs/2021-2027/experts/standard-briefing-slides-for-experts_he_en.pdf [Accessed 27 Apr. 2023].
- European Institute for Gender Equality EIGE. (2022). *Gender Equality in Academia and Research - GEAR tool*. <https://eige.europa.eu/gender-mainstreaming/toolkits/gear> [Accessed 27 Apr. 2023].
- Edwards, A., and Korsmeyer, H. (2017). Communication with self, with others, and with futures: Making artefacts in design thinking workshops. *LEA-Lingue e Letterature d'Oriente e d'Occidente*, 6, pp.157-176.
- Foucault, M. (1972). *Archaeology of knowledge*. London: Routledge.
- Gatehouse, C. (2020). A hauntology of participatory speculation. In *Proceedings of the participatory Design Conference*, 1, pp.116-125.
- Heikkinen M., Paoletti, M., Radchuk, M., Junca, N., Lopes, A., Matias, M., Magalhães, S., Rozalska, A., Karachaliou, E., Niebel, V., and Forest, M. (2021). GIA checklist and protocol in all project languages (1.0). *Zenodo*. <https://doi.org/10.5281/zenodo.6906348> [Accessed 27 Apr. 2023].
- Herbert, R., Falk-Krzesinski, H. and Plume, A. (2020) Sustainability Through a Gender Lens: The Extent to Which Research on UN Sustainable Development Goals (SDGs) Includes Sex and Gender Consideration. *SSRN*. <http://dx.doi.org/10.2139/ssrn.3689205> [Accessed 20 Dec. 2020].
- Iivari, N., Kinnula, M., Kuure, L., and Keisanen, T. (2020, April). "Arseing around was Fun!"—Humor as a Resource in Design and Making. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*, pp. 1-13.
- Iivari, N., Tervo, E., Käsmä, M. & Heikkinen, M. (accepted for publication) Participatory Design meets Gender Equality at European Higher Education Institutions. *CoDesign*.
- Kankainen, A., Vaajakallio, K., Kantola, V., and Mattelmäki, T. (2012). Storytelling Group—a co-design method for service design. *Behaviour & Information Technology*, 31(3), pp.221-230.
- Kelliher, A., & Byrne, D. (2015). Design futures in action: Documenting experiential futures for participatory audiences. *Futures*, 70, 36-47.
- Kim, J. H. (2015). *Understanding Narrative Inquiry: The Crafting and Analysis of Stories as Research*. Sage publications.
- Korsmeyer, H., Light, A., and Grocott, L. (2022). Understanding feminist anticipation through 'back-talk': 3 narratives of willful, deviant, and care-full co-design practices. *Futures*, 136, 102874.
- Kumar, V. (2012). 101 *Design Methods: A Structured Approach for Driving Innovation in Your Organization*. Hoboken, NJ: John Wiley & Sons, Inc
- Langley, J., Wolstenholme, D., and Cooke, J. (2018). 'Collective making' as knowledge mobilisation: the contribution of participatory design in the co-creation of knowledge in healthcare. *BMC Health Services Research*, 18(1), pp.1-10.
- Light, A. (2019). Redesigning design for culture change: Theory in the Anthropocene. *Design Research for Change*. Design Museum, London.
- Light, A. (2021). Collaborative speculation: Anticipation, inclusion and designing counterfactual futures for appropriation. *Futures*, 134, 102855.
- Morrison, A., & Chisin, A. (2017). Design fiction, culture and climate change. Weaving together personas, collaboration and fabulous futures. *The Design Journal*, 20(sup1), S146-S159.
- Mörtberg, C., and Stuedahl, D. (2005). Silences and sensibilities: increasing participation in IT design. In *Proceedings of the 4th Decennial Conference on Critical Computing: Between Sense and Sensibility*, pp.141-144.
- Nielsen, M. W., Bloch, C. W., and Schiebinger, L. (2018). Making gender diversity work for scientific discovery and innovation. *Nature human behaviour*, 2(10), pp.726-734.
- Pihkala, S., & Karasti, H. (2022, August). Towards Response-able PD: Putting Feminist New Materialisms to Work in the Practices of Participatory Design. In *Proceedings of the Participatory Design Conference 2022-Volume 1* (pp. 98-108).
- Riley, T., and Hawe, P. (2005). Researching practice: The methodological case for narrative inquiry. *Health education research*, 20(2), pp.226-236.
- Rossel, P. (2012). Early detection, warnings, weak signals and seeds of change: A turbulent domain of futures studies. *Futures*, 44(3), 229-239.
- Sanders, E.B.-N. and Dandavate, U., (1999). Design for experiencing: new tools. In *Proceedings of the First International Conference on Design and Emotion*. Delft, The Netherlands: Delft University of Technology
- Sanders, E. B. N., and Stappers, P. J. (2008). Co-creation and the new landscapes of design. *Codesign*, 4(1), pp.5-18.
- Sanders, E. B. N., and Stappers, P. J. (2014). Probes, toolkits and prototypes: three approaches to making in codesigning. *CoDesign*, 10(1), pp.5-14.

- Schiebinger, L., Klinge, I., Sánchez de Madariaga, I., Paik, H. Y., Schraudner, M., & Stefanick, M. (2011-2020). *Gendered Innovations in Science, Health & Medicine, Engineering, and Environment*.
- Sefyrin, J., and Mörtberg, C. (2009). We do not Talk about this: Problematical Silences in e-Government. *Electronic Journal of e-Government*, 7(3), pp.259-270.
- Slaughter, R. A. (2018). Two fine additions to the futures literature. *Foresight*, 20(4), pp.443– 446.
- Spinuzzi, C. (2005). The methodology of participatory design. *Technical Communication*, 52(2), pp.163– 174.
- Spinuzzi, C. (2002). A Scandinavian Challenge, a US Response: Methodological Assumptions in Scandinavian and US Prototyping Approaches. In *Proceedings of the 20th Annual International Conference on Computer Documentation - SIGDOC '02*. New York, NY: ACM.
- Squire, C. (2013). From experience-centred to socioculturally-oriented approaches to narrative. *Doing Narrative Research*, 2, pp.47-71.
- Star, S. L., and Strauss, A. (1999). Layers of silence, arenas of voice: The ecology of visible and invisible work. *Computer-supported Cooperative Work*, 8(1), pp.9-30.
- Steen, M. (2013). Co-design as a process of joint inquiry and imagination. *Design Issues*, 29(2), pp.16-28.
- Stuedahl, D., and Mainsah, H. (2019). Caring for Diversity in Co-Design with Young Immigrants. *Nordes*, (8).
- Talgorn, E., and Hendriks, M. (2021). Storytelling for Systems Design: Embedding and communicating complex and intangible data through narratives. In *Proceedings of Relating Systems Thinking and Design (RSD10) 2021 Symposium*, 2-6 Nov 2021, Delft, The Netherlands.
- Thomson, A., and Rabsch, K. (2021). ACT - Community of Practice Co-Creation Toolkit (2.0). *Zenodo*. <https://doi.org/10.5281/zenodo.5342489>.
- The United Nations Educational, Scientific and Cultural Organization [UNESCO] (2017). *Cracking the Code: Girls' and Women's Education in Science, Technology, Engineering and Mathematics (STEM)*.
- Van Mechelen, M., Derboven, J., Laenen, A., Willems, B., Geerts, D., and Abeele, V. V. (2017). The GLID method: Moving from design features to underlying values in co-design. *International Journal of Human-Computer Studies*, 97, pp.116-128.
- Wilde, O. (1891). *The Critic as Artist*. <https://archive.org/details/TheCriticsAsArtistByOscarWilde/page/n1/mode/2up> [Accessed 27 Apr. 2023]