Carving Out Space For Self-Expression in Academia with PhD Researchers

Mapping How Social Interactions Shape The Shift From Imposterism To Expression In Academic Life

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Mapping How Social Interactions Shape The Shift From Imposterism To Expression In Academic Life

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Summary

This thesis began with a **feminist curiosity** about the act of **self-silencing** - where we hold back our thoughts, needs, or identities - and how this is shaped by the **quality of our social interactions.** With a desire to question dominant social norms and **explore how our relationships affect our sense of self,** I investigated the **link between self-silencing and self-efficacy, which led me to the imposter phenomenon.**

To delve deeper into this phenomenon, I conducted **a case study with PhD researchers at the faculty of Industrial Design Engineering at TU Delft.** What started as an exploration of imposterism among PhDs gradually unfolded into a broader investigation into the social and contextual factors that cultivate silencing, isolation, and a lack of space for authentic expression in academic life.

Rather than **viewing imposterism as an individual flaw** - where the burden is placed on the person to "fix themselves" - this thesis instead asks:
What is it about academia that makes PhD researchers feel like imposters?

Using a **research-through-design and participatory approach**, I conversed with **eight PhD researchers** to understand their lived experiences. After having **open conversations and conducting spatial walkthroughs** with them, I mapped out their experiences using the **Matrix of Domination** as a framework. This approach revealed the **layers and nuances** of their experiences across **personal, communal, and systemic realms** within academia.

This mapping process uncovered patterns in how **imposter feelings and experiences are triggered at different social domains.** The PhDs also shared what could act as **catalysts to these feelings, creating a positive change to their social spaces.** These insights illuminate how institutional culture, relational dynamics, and internalised expectations come together to shape feelings of inadequacy, self-doubt, and perceived judgment within PhDs.

These stories not only revealed what was missing or triggering, but also **pointed toward what could be** - social spaces where **people feel seen, heard, and free to show up as themselves.** It was from this place of insight and reflection that the project moved into **co-creation and re-imagination.** I designed a workshop as a way to create a space for **self-expression and social connectedness.** Two sessions were held with three PhDs in each workshop, where they made **meaningful collages** from old magazines. These collages represented speculative futures where academia was designed to cater for expression. Here, **expression was framed** not as “being your best self”, but as the ability to show up authentically in academic environments - **to be able to say, feel and be who you nee**d to be in the moment.

As a result of the collaborative workshops, **six forms of expression were identified** - bodily, emotional, creative, personalised, professional, communal. Each form reflected a different way participants longed to exist more authentically in academic spaces. The findings also revealed what **inhibits expression** - such as fear of judgment or institutional pressures - **and what enables it** - like peer connection and personal rituals. PhD researchers wish to have space where they express themselves as the evolving individuals that they are - but are often **constrained by academic cultures that prioritise productivity, detachment, and conformity over care, connection, and authenticity.**

This thesis doesn’t propose a fixed solution. Instead, this research **paves possibilities** - for institutions to listen more deeply, for everyone to work collaboratively, and for PhD researchers to reclaim space for themselves and for each other. It contributes to the **reimagining of academic spaces as sites not only of knowledge, but as spaces for expression, belonging and connection.**

Acknowledgements

This journey with this project has been so meaningful, and it's all thanks to the amazing people I've had the pleasure of connecting with along the way. Each encounter has added something special to this project, whether it's been through inspiration, learning, motivation, or just through some good vibes.

The Mentors

Firstly, I would like to thank my mentors Virginia Tassinari and Ece Şekerli for their guidance, understanding and support throughout this research. Having two female role models - both powerful pillars, each with their own expertise and experiences - was an indescribable experience and made for, in my opinion, the perfect team for this project. Working with them was always collaborative, connective and thoroughly inspiring, and I will always be grateful for the opportunity to have worked with both of you.

The PhD Researchers

This project would not have come about if it weren't for the PhD researchers. I am very grateful for the time you've taken out of your days to share your experiences. They were a valuable contribution to understanding the layered social dilemmas one may experience in academia. Some of you gave me advice that helped shaped the process of this research, but also helped me build my confidence in doing research. I will always carry that kindness with me. Thank you all for being as curious and energetic about the workshops as you were. It was very contagious. Thank you for being safe spaces on campus. For being outspoken about your values. For being you.

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The Companions

I truly believe to have been shaped by the people I surround myself with and I consider myself very lucky to have such wonderfully unique and compassionate individuals around me at all times.

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Preface

> “As feminist killjoys, we could all write our own handbooks...we are not just telling killjoy stories; we tell them because we are in them.”
>
> SARA AHMED, THE FEMINIST KILLJOY HANDBOOK, 2023

> “There’s something epistemological about storytelling. It’s the way we know each other, the way we know ourselves. The way we know the world. It’s also the way we don’t know: the way the world is kept from us, the way we’re kept from knowledge about ourselves, the way we’re kept from understanding other people.”
>
> ANDREA BARRETT WRITER’S CHRONICLE, VOL. 32, NO.3, DECEMBER 1999

Being A Killjoy

For a large part of my life, I had been a closeted killjoy. A killjoy, according to Sara Ahmed, is someone who gets in the way of others’ happiness. disrupt norms and calls people out. She deems it important to do so in order to build a just world. I was closeted, because every time I did speak up against a norm or act in a way that was different from the norm, it would be met with discomfort, punishment or blame. It was curiosity and also restlessness that made me question them. I wanted to understand why they were so rigid and so black or white. But I did not like causing that discomfort in others. I did not feel like I had the space to raise my questions or talk about it, knowing it would be taken as if I were talking against it. Some spaces did not seem safe enough for me to share my opinions while some did. Spaces are perceived as safe and unsafe because of the people within those spaces. The people who I couldn’t share my questions with were not necessarily horrible people. It was their body language and invisibly verbal cues that felt like crumbs on a couch intended to be comfortable to sit on. Eventually, those crumbs caused discomfort, and that discomfort led me to withdraw from those communal spaces. It took me years to realise that subtle and invisible cues like those given through repeated remarks and questionable looks were the cause of what made me feel like I was doing something wrong. Like I was being something wrong.

Of course, like most people, I did act in the way that was deemed appropriate to society, for years, in order to avoid the remarks that pinched, or the looks that made me feel like retracting into a shell I did not have. However, the crumbs still built up, and the discomfort grew. Then one day I got up, dusted the crumbs off myself and walked away. It wasn’t as easy as it sounds. That space did not allow me to feel like myself and the couch didn’t seem like it was made for people like me either. It felt like I had become a version of myself that had to molded in order to “fit in”. To survive, to belong, I wore many masks and tucked away parts of myself. It wasn’t until I entered spaces that held space for me that I began to voice out my questions. To be curious. To be heard. To not be judged. To be who I was.

After being on an uncomfortable couch for years, it takes time to get used to a comfortable one - to slowly peel back the layers I had built around myself for protection. I found myself expressing opinions that had long stayed silent. I found myself being met with openness and curiosity. This new couch was one no crumbs. On this couch, conversations brewed and people took up the space they needed. They were honest and no concealed remarks seemed to fly my way. They welcomed all opinions and learnt from each other. There was freedom in that flexibility. A freedom from rigidness. It was here where I felt safe to come out of the closet - not just as myself, but as the killjoy I was always meant to be.

This research is a continuation of that journey. It is a way to build another couch - one within academia. I have questions that I use this thesis to answer:
What made me stay on the crumb-filled couch for that many years? What finally made me get up and find another one? How many types of couches exist in this world? How can we create safer couches?

Being A Interdisciplinary Designer

Spatial designer: I pursued my undergraduate degree in architecture back in India, where I learnt to see how every decision in spatial design shapes people’s experiences. Seemingly small details can influence how people live, learn, gather, or isolate. That sensitivity stayed with me as I moved into experience and interaction design. Looking back, it makes sense that my thesis ends up being about space - not physical spaces, but the social spaces we create and how they make us feel when we’re a part of it. This research is a way of relearning the sensitivity we have to spaces and how they shape our everyday experiences. Through this project, I explore how we can deconstruct, understand and re-imagine these spaces together.

Social justice designer: A course I took last semester called ‘Design Justice’, was where I began to see how design could be used as a tool to resist oppression and reimagine the world. It showed me the importance of performative and embodied learning. It emphasised on the importance of decolonial participatory design to deconstruct oppressive norms embedded in spaces. This thesis is my first act of putting these learnings into practice.

Feminist designer: Back when I was still on the crumb-filled couch, I noticed how women around me had different roles than men and how that one of the norms. The women held different expectations, often at a disadvantageous imbalance compared to the men. As a young child, seeing these repeated patterns made me normalise it, even when it felt unknowingly uncomfortable. I, too, had to shrink into small spaces while big heavy blocks of expectations were placed over my head. I, too, had to be okay with it. Feminism has long been part of my worldview, though I always lived as a silent ally. It wasn’t until I entered these spaces of trust and understanding that I was able to question it, remove the heavy blocks over my head and move out of the small spaces. I was showed by others how we can take up space and voice our opinions. We can do the things we want to do, even if the norms say otherwise. This thesis is the part where I question the norms by viewing it through a feminist lens. To finally step away from the silence. To finally step towards voice and understanding.

Artist: This part of myself knows what it tastes like to express oneself freely. To express the thoughts and emotions within my mind and body onto the material world. This thesis uses different means of creative expression to listen to the thoughts and emotions of those who speak.

Positionality Statement

Why Write A Positionality Statement?

To write a positionality statement is a small way where one can integrate a decolonising approach to their work (Homan S., 2023). A positionality statement is written to acknowledge that my work is influenced by my knowledge, my identity and my lived experiences.

By writing this, I showcase how various aspects of who I am come together to shape how I engage with the world, and how the project may be influenced by my knowledge, perspectives and work practices (Holmes, D. & Gary, A., 2020). This is written with aim to reflect on my role as a researcher and designer within this thesis, to promote transparency to the reader and to stay critically aware of any assumptions I make throughout the process.

About The Author

I, Harshita (she/her), am an Indian woman, born in Oman. I received my Bachelor degree in Architecture in India, pursued work in the field of user experience design, and am now writing my thesis to earn my Master degree in Design for Interaction.

Author's Positionality

In a research that is deeply relational and reflexive, like this one, I believe there to be no neutral observer. This thesis has been shaped by my perspective, not just as a researcher, but as a woman, a feminist, a designer, and as someone who has often navigated spaces where expression felt unsafe or unwelcome. My positionality is not something that can be separated from the work - it is embedded within it. It influenced the questions I asked, the relationships I built, and the way I interpreted what was shared with me.

This project began from a deeply personal place. I have spent many years internalising discomfort in spaces that seemed, on the surface, welcoming. I learned to read invisible cues - the silences, the body language, the looks - that made it feel unsafe to speak up or take up space. Over time, I became aware of how I had been shaped by these interactions, and how they led me to silence myself. It wasn't until I encountered spaces of curiosity, understanding and openness that I began to recognise what it felt like to be heard rather than judged. This part of my own experience is what planted the seeds for this research.

As someone who has been trained in the fields of architecture and interaction design, I've always been observant of how spaces, be it physical or social, affects how people feel and behave. My academic background, along with my interest in feminist and design justice discourse, provided me with the tools to question not just what is wrong with the systems we are part of and why individuals are held accountable for those issues. I brought this lens into the project, not to diagnose or to fix the issues, but as a way to design a space for reflection, dialogue, and co-creation.

Throughout the research, I worked closely with PhD researchers as collaborators rather than "research subjects". Through our conversations, I tried my best to be more of an active listener, in order to give them the power and control over the way they wished to share their experiences. I was aware that I wasn't one of them. However, I was also aware of the fact that there were overlaps and similarities in our experiences. While I did not experience the exact institutional structure they were in, I knew the feeling of quiet self-doubt and of carrying invisible weight. Being aware of this early on helped to build a trusting connection with them through relatability, while also maintaining distance to critically understand their position and experiences within the institution.

I am aware that my values may also bring assumptions. I often found myself resonating with the feelings shared by the PhD researchers, and I had to remain attentive not to project my own experiences onto theirs. I held space for nuances and contradiction, especially when their stories did not fit neatly into frameworks or even align with my way of thinking. I worked to let the PhDs' voices guide the insights, while also acknowledging that my interpretation, as a designer and a researcher, would play a part in shaping the final outcomes. To ensure that the research highlights their diverse experiences, I continued to critically reflect on my role with my supervisors. Throughout this project, I actively engaged in open dialogue with the PhDs after every analysis to ensure that my interpretations aligned what they wished to convey.

This thesis, ultimately, is an embodiment of my belief that voice is something we have to consciously make space for. My role was not to speak on behalf of others, but to co-create and share the conditions where expression can bloom on its own terms.



Note To The Readers

This book is for anyone who has ever questioned whether they truly belong in the spaces they occupy. It is for anyone who's felt the need to shrink, to stay silent, or to wear a mask just to get by. I hope you find parts of yourself in these pages and use that relatability to imagine, create, or find spaces where you can be your authentic self.

I may not have all the answers, but what I do have is data. Data in the form of insights, stories and moments from people like you. Data that is gathered through conversations and shared reflections. This thesis is my attempt to make sense of it all, to chart a path, even as I continue to walk it myself. Much of what I discovered along the way has surprised me, and honestly, challenged me as well.

As Brown B. (2021) writes, "We are meaning-makers." Part of making meaning is knowing where we are - not just physically, but emotionally and mentally. Just like reading a map, we can understand our lives by reading the connections between emotions and experiences that emerge in our social interactions. It's through these connections that our stories take shape.

As you make your way through this book, you'll notice that making sense of our feelings and experiences often requires us to slow down and pay attention - not only to where they come from, but also to how they show up in us. That means asking: What triggered this? Why did it trigger me? And just as importantly: How does it feel in my body?

I hope this book helps you find language for what has been unspoken, courage to share what has been hidden, and tools to carve out spaces where you can express yourself freely.

And with that, I welcome you in. I hope you enjoy your stay.

SECTION 1

Foundation

This section acts as the foundation of this research. A foundation of a building, hidden away beneath the ground, is what supports a building the most. Without it, a building would stand nor last for too long.

In this project, the foundation was necessary to be built as a strong, solid base, in order to support the thesis being built over it. Thus, to understand why the project focuses on self-expression, it is important for us to first understand self-silencing and how it affects our wellbeing because of the social interactions we have.

In the first two chapters, you will be introduced to the theories of self-silencing, imposter phenomenon, and the feminist lens through which the context of academia is explored.

This ties to the next chapter which showcases the overarching research approach this thesis takes. A research-through-design approach has been combined with participatory methods to uncover how the imposter phenomenon manifests in PhD researchers.

The section wraps up with addressing the scope of this research project, paving a path to the next section which dives into the PhD's lived experiences.

CHAPTER 1

Literature Review

This project begins at the intersection of feminist thinking and behavioural psychology - two domains that fundamentally influence my professional and personal life. Over the years, I have noticed how gendered imbalances, along with broader systems of power, influence people's perception of themselves. It often leads to internalised and detrimental behavioural patterns within women and other marginalised groups. Observing these dynamics around me - having experienced it to a certain extent myself - prompted me to explore how such experiences take root in our daily lives. As a designer interested in the subtle ways we interact with our environments and with each other, I wanted to dive in deeper to better understand how these interconnected social and psychological factors shape people's sense of self.

The first step in gaining deeper understanding on this was when I learned of the act of self-silencing.

Self-Silencing And Its Impact On Our Well-Being

What Is Self-Silencing?

A video I came across at the start of this journey discussed an article by Eyal (2023), titled "Self-Silencing is making women sick." In it, self-silencing has been described as the tendency to put others before oneself through acts of compulsive caretaking and people-pleasing.

This is done **to meet one's relational needs** by building a connection to others. It is a survival strategy that often comes at a cost to one's sense of self as it leads to the suppression of one's needs and expression, in order to meet others' needs (Jack, 1991; Harper et al., 2006). Dana Jack discovered, through her research, how this behaviour was a learned one - one that emerges as a result of strongly imbued gender norms, which later resulted in an increased risk of depression in women putting others before themselves.

As Maji & Dixit (2023) have stated, self-silencing can be understood by four main factors:

1. External self-perception, where women define themselves based on others' views.
2. Care as self-sacrifice, where care is seen as making personal sacrifices in relationships.
3. Silencing the self, which involves suppressing one's true identity.
4. Divided self, where one part seeks to fit societal "good woman" roles, while the other feels anger and guilt for not expressing their authentic self.

How Does It Affect Us?

Suppressing our needs in order to build a relation with another person leads to it affecting our physical and psychological well-being. A literature review showed how this occurs in a staggering percentage of women.

Women make 80% of the population of people with auto-immune diseases. As we read earlier, Dana Jack's research ties acts of self-silencing to depression in women. Another research links it to **eating disorders** (Buchholz et. al, 2007). A study from University of Pittsburgh discovered that women of colour who suppress their anger, had a **70% higher risk of having a heart attack, compared to men** (Jakubowski et. al, 2022). There are many other studies which have connected self-silencing to **irritable bowel syndrome, HIV, chronic fatigue syndrome, and cancer** among women (Maji & Dixit, 2019). Another shocking study says women who self-silence are linked to a **higher risk of premature death** (Jack & Ali, 2010). Women are diagnosed with **depression** (Albert, 2015), **anxiety** (McLean et. al, 2011), and **PTSD** (Vernor, 2019), **at rates that are double those of men.** Additionally, they are **nine times more likely to experience anorexia,** which is the most lethal mental health disorder (Hübel et. al, 2019).

Where Does It Emerge?

Self-silencing is not purely an individualistic experience - it is relational and deeply influenced by the spaces we inhabit. The environments we move through daily, carry unspoken expectations that shape our behaviours and restrict our expression. These expectations are often so subtle and habitual that they become invisible, even to those enacting or absorbing them. Our interactions with others within the spaces we occupy allows for self-silencing to emerge.

I would like to address these spaces as our social spaces. **Our social spaces are the spaces we occupy, often while interacting with other people** (Figure 1). Massey (2013), defines a social space as **the product of relations and connections we have with each other.** She emphasises how these **relations are filled with power** and how an imbalanced dynamic can come about because of some groups of people having more power over the other.

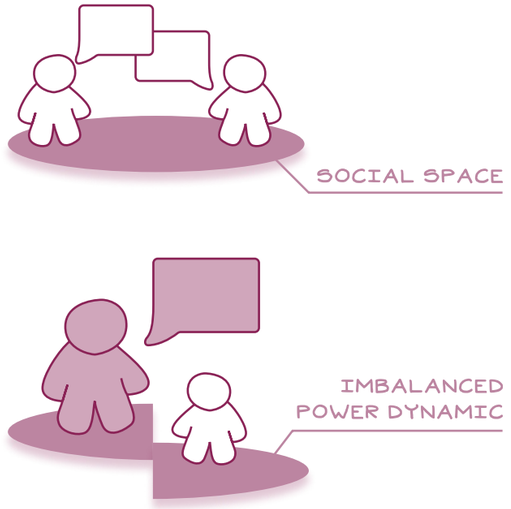


Figure 1. Our social spaces and the power dynamics within it

Unsaid expectations within our social spaces dictate how we are to behave, how to hold back the expression our emotions, what we are allowed to say, when to say it, how to be a giver and take nothing, etc. All of this taught us how to focus on the comfort of someone else at the expense of our voices and needs, leading to toxic relationships with imbalanced power dynamics.

Over time, this manifests biologically: the body begins to attack itself, mirroring the psychological self-erasure we've been taught. Treading back to our discussion on auto-immune diseases, it's important to emphasis that **we are literally creating cells in our bodies that are killing our own immune system,** all because

we've been taught to put everyone else first and our needs last. **Degrading societal norms have ingrained these small, daily, invisible interactions in our lives, oppressing us in a way that even we have been blind to.** We often hear people asking why "women fall sick so often". Well, this is why - we've been harmed for so long in quiet ways, where **systematic oppression has unfolded silently** from generations to generation.

Understandably, it is even more difficult for women within **cultures that celebrate and even reward self-silencing practices.** It is what creates a vicious cycle that feels eternally hard to leave, for the **fear of being separated from one's community.** As Eyal (2023) writes in her article, it feels easier for women to silence their needs, costing them their health, rather than "swimming against the prevailing cultural current."

Nomenclature-wise, "self-silencing" as a term is not fitting if we consider the cause of it. The root cause of self-silencing lies in the societal norms which quietly teach us to give all the space we have to others rather than equally share the space together. The root cause lies in the people who knowingly or unknowingly follow the norms like a script, benefitting unjustly from it.

It is those interactions that glorify suppressing our needs to cater to the needs of others, that use the fear of separation from one's community as bait. It is those interactions that are making a substantial amount of women in this world sick.

Thus, to emphasis on this dynamic, for the rest of the thesis, I **shift the weight from "self"-silencing, to "being" silenced. We are being silenced by the imbalanced dynamics in our** interactions along with the social norms that influence our well-being. The onus should fall on these factors in order for us all to collectively create social spaces that are grounded in honest discourse.

What Does This Lead To?

An article by Sharma et al (2024) uses Doreen Massey's perspective to consider the ways in which **our social spaces can become an obstacle to the development of women's identities**. However, it also examines how these spaces can exist as **a site to break away from patriarchal constraints** and **attain power back as a result.** Through their article, they look into the author Manju Kapur's work and how the women in her novels forge their own 'identity' and 'space' in a male-dominated world.

Yet in order for women to forge such spaces and reclaim voice within systems that suppress it, we must first understand how societal norms, particularly those shaped by stigma and gendered expectations, are internalised and begin to shape how individuals see themselves and their worth.

Let's see how this transition occurs.

Relation Between Gender And Self-Silencing

There is a relationship between gender and self-silencing which is complex and varies across cultural contexts (Sikka et al., 2010), with studies generally indicating that women tend to self-silence more than men (Jack, 1991), although some findings contradict this (Duarte & Thompson, 1999; Gratch et al., 1995; Page et al., 1996).

Internalisation Of Social Norms

Social Norms And Gendered Expectations

Research has shown that self-silencing is a product of internalised gendered expectations. In particular, women are more likely to silence their thoughts, needs, or dissent in order to maintain harmony or avoid disapproval. (Jack & Ali, 2010) This behaviour is then socially rewarded, which encourages them to continue catering to others at the cost of their health. Furthermore, awareness of gender-based expectations, sometimes called gender stigma consciousness, has been shown to increase the tendency to self-silence, particularly in environments where going against norms leads to facing rejection (Maji & Dixit, 2024).

This is not to say that men are immune to these dynamics. While the form and frequency may differ, **men too experience self-silencing, particularly when emotional vulnerability is seen as weakness.** However, social norms links masculinity to limited reflection or expression, resulting in a different but still harmful form of self-concealment (Mahalik et al., 2003).

In both cases, what emerges is a **pattern where social expectations shape internal beliefs,** and these beliefs, in turn, shape how we show up - or don't - in the spaces we occupy.

Stigma And Power Imbalances

In "Stigma: Notes on the Management of Spoiled Identity", Goffman (1963) describes stigma as "an attribute that is deeply discrediting" that reduces "a whole and usual person to a tainted, **discounted one."** A key element affected in the stigmatisation process is a person's **social identity,** as it occurs when an attribute or characteristic signals an **identity that is devalued within a given context** (Crocker, Major, & Steele, 1998). As stigmatization involves the devaluation of a person, it can have significant and lasting negative effects on a person's **psychological well-being** (Mak, Poon, Pun, & Cheung, 2007).

Stigma is rooted in power imbalances (Link & Phelan, 2001), because of which **individuals from marginalised social groups** - such as those defined by sexual orientation (Lewis et al., 2003), race (Brown & Lee, 2005), work status (Pinel & Paulin, 2005), and gender (Pinel et al., 2005) - often **develop a heightened awareness** of being stigmatised based on their identities.

This thesis focuses on issues observed across a particular social group, the PhDs, specifically with regard to their work status identity. Pinel & Paulin (2005) define "work status" as an individual's perceived position or identity within the workplace hierarchy. Because stigmatisation involves diminishing a person's value, it understandably has significant negative effects on the psychological well-being of those who are targeted (Mak et al., 2007).

Stigma, once internalised, along with the threat experienced due to stereotypes (Steele & Aronson, 1995), leads to lowering one's self-efficacy and warps their self-perception (Wood et al,. 2017). It becomes increasingly difficult to separate one's identity from their fear of judgement, failure, or not belonging.

Imposter Phenomenon: From Internalisation To Self-Doubt

When internalised norms become the lens through which we assess our worth, even our success begins to feel fake to us. This is the ground on which the imposter phenomenon takes root.

What Is Imposter Phenomenon?

"Imposter phenomenon" was the original term coined by Clance and Imes in 1978, as a result of their study on 150 high-achieving successful women. The term describes the **internally manifesting experience of feeling intellectually inadequate or irrelevant.** In other words, feeling like an imposter would mean to feel as though you do not belong in the space you have worked very hard to get into. It is when one believes themselves to be a fake amongst real professionals, where they lack in intelligence, despite the proof of many accomplishments that they have achieved over time.

Isn't This Called Imposter "Syndrome"?

The term "phenomenon" shifted to being called a "syndrome", in both academic research as well as popular culture. Most research focused on the internal effects that manifest as a result of this phenomenon in individuals, and consequently, how individuals can deal with it themselves. This emphasises the **over-individualisation of the imposter phenomenon** (Feenstra et al., 2020), showcasing how it focuses on the "symptoms" and "treatment". Language, when used in such a way, portrays subtle implications on the individual, **making them the cause of experiencing imposterism and responsible for "fixing" themselves** as well.

The fact that it has been called imposter syndrome, instead of phenomenon, over the years, shows us a shift in the weight and the narrative of the experience, showing us how this issue is perceived by society as something solely focused on the individual.

How Does It Manifest?

Research on the imposter phenomenon (I.P.) demonstrates that it is closely linked to lower levels of self-esteem and self-efficacy (Hutchins, Penney, & Sublett, 2018). A defining feature of the phenomenon is the difficulty in internalising one's accomplishments. Rather than recognising their own competence, individuals experiencing I.P. tend to attribute success to external or unstable factors such as luck, timing, excessive effort, or the ability to create a favourable impression (Harvey & Katz, 1985).

This external attribution pattern is reinforced by the characteristics of low self-esteem and self-efficacy, which make it challenging for individuals to see themselves as genuinely capable. Consequently, they often **live with a pervasive fear of being "found out" as less competent than others believe them to be.** This can take the form of chronic anxiety, as described in Clance and Imes' (1978) work. It is a fear that is not situational but rather **an aspect of their self-perception, shaping their professional behaviour, interpersonal relationships, and emotional well-being.**

Relation Between Gender And Imposter Phenomenon

Clance and Imes' (1978) work initially framed I.P. as particularly prevalent among high-achieving women. Despite having attained substantial academic and previous professional accomplishments, these women perceived themselves to be less intelligent and had a tendency to feel like they were "fooling those who thought otherwise." This perception can be said to be rooted in societal expectations of femininity and achievement, contradicting their situatedness within a context where the cultural construction of success was a predominantly masculine trait (Horner, 1974).

Subsequent research, however, has challenged the view of I.P. as a something only experienced by women. Numerous studies have found little to no significant difference in its prevalence between men and women, suggesting that I.P. is not necessarily tied to gender. (Bravata et al., 2020).

This may suggests that factors beyond gender, such as professional settings, social environment, and cultural context, may play important roles in shaping imposter experiences (Feenstra et al., 2020).

Social interactions that emerge within our everyday contexts can serve as the starting point for imposter feelings, sometimes functioning as their root cause. This is particularly evident in **environments where achievement is culturally coded as masculine** (Horner, 1974).

Although **individual-focused research has proved to be valuable** by providing us with frameworks that help us understand the phenomenon and seek help fot it, it is **increasingly important to consider the role of social and contextual factors in triggering imposter feelings** (Feenstra et al., 2020).

This way, more "structural and effective solutions" can be presented, **shifting the focus to the root cause rather than the internal effect that happens as a result of this experience.**

For example, let us look at a study by Michie & Nelson (2006) which evaluated the barriers women faced in information technology careers. **They made a few hypotheses on the link between self-efficacy and gender biases.** This study confirmed that:

1. **Self-efficacy is the most important factor for IT occupations, regardless of gender.** Self-efficacy is the **development of a strong sense of one's ability** and was found important for achieving success in one's career and thus, staying in it.
2. **Men were found to have greater self-efficacy than women in IT**, along with greater passion. However, passionate interest was found not to be a significant factor for choosing IT roles, irrespective of gender, as opportunities that IT roles may provide proved to be more valuable.
3. **Men had a lesser positive attitude towards women's capabilities in IT roles.** If a woman strongly believes that certain career paths are strongly associated to men, it may cause her to avoid being in those roles in order to **avoid confronting a lower perception of her abilities, even if it's at the same hierarchical level.** While this shows how important it is for women to stand against this belief, sometimes **the feeling of biasing others' expectations may occur even if we don't personally stand for this stereotyping.**

The study concluded how these above-mentioned findings linked to **discriminatory practices that acted as barriers against women trying to advance in male-dominated fields.**

This is one of many examples of a social space in a professional context **keeping women from feeling like they belong** (Council of Economic Advisers, 2000; Robinson and McIlwee, 1991; Wright, 1997).

This shows us how **gender bias can affect women when choosing and persisting to work in non-traditional, male-dominated or patriarchal careers/fields.** To attract, retain and advance women in the field of information technology, organisations must work on addressing gender bias by **bringing awareness and creating work spaces that cater to building self-efficacy levels of both women and men equally** (Michie & Nelson, 2006).

Martell, Lane, and Emrich (1996) mention how **small differences between social groups persist in organisations and are acted upon repeatedly. No matter how small or how visible these actions may be, they can have a lasting impact within organisations.** This may manifest in negative and positive ways. If we work to create unbiased social spaces within companies, the positive impacts will ripple over the social interactions and relations within the work environment forming lasting relations and healthy employees. The same goes for the other way around, which is unfortunately what we see in most companies today. Patriarchal norms are being reinforced, leading to unhealthy employees and superficial work relations.

If the **quality of social relations** and the **contextual factors that shape those relations and interactions** are the **root cause of imposter phenomenon,** how can we **shift our focus from the "over-individualisation"** of the phenomenon, **towards collectively expressing** these feelings of inadequacy?

From Isolation To Connection And Dialogue

Many of the strategies proposed to address imposter feelings focus on helping individuals "fix themselves", often through therapeutic or coaching-based methods like cognitive restructuring, self-reflection, or self-compassion practices (Para et al., 2024). But these approaches tend to overlook broader social and systemic contexts that contribute to those feelings, limiting their effectiveness by isolating the individual from their environment.

Research suggests that moving beyond individual interventions toward **fostering connection and dialogue** can be more transformative.

Development of one's self-esteem is affected by the **quality of attachments** one has (Brown et al., 1986; Surrey, 1984). For women especially, positive social connections are crucial for their well-being and healthy development (Jack, 1991).

When social contexts "distort" or "disturb" this need for connection, imposter feelings may intensify.

Jack (1991) describes dialogue as a form of relational engagement rather than mere speech. It offers a pathway out of isolation and self-doubt by enabling **new forms of relating to self and others.** Group settings provide opportunities **for individuals to share, reinterpret, and symbolically transform their experiences,** thereby breaking harmful patterns and **fostering collective strength and belonging** (Jack, 1991).

As we have seen earlier, **perceived self-efficacy,** which is the belief in one's ability to accomplish tasks, is **strongly influenced by their social context** (Bandura, 1977, 1995). Sociocultural forces such as **institutions, cultural norms, and personal relationships** shape not only **behaviors and health** but also **confidence** (Burke et al., 2009; Pasick & Burke, 2008).

Interventions that focus solely on individual attributes tend to ignore these nuanced, culturally-shaped realities. There are certain prioritisations that women make within their daily lives, that then go unnoticed as a result of this isolated perspective.

Designing imposter interventions requires understanding **how social capital that is built through meaningful connections and how it can translate into power, expression and efficacy for individuals.** Practitioners can strengthen outcomes by facilitating networks of support and connection, thus **addressing imposter feelings within their broader social and relational contexts** (Burke et al., 2009). This thesis aims to contribute to that shift, serving as a starting point for approaches centered on relational and systemic understanding.

Connecting Self-Silencing And The Imposter Phenomenon

Research exploring the link between self-silencing and the imposter phenomenon is very limited, this thesis being speculated as the second one to do so.

An existing study highlights how both, imposter phenomenon and self-silencing, were founded on feelings of self-doubt, fear of rejection, and a fragmented sense of self (Alvarado, 2015; Maji & Dixit, 2019). Notably, imposter feelings may increase the tendency to self-silence, particularly in relational settings where women fear being perceived as "not enough."

Both self-silencing and imposter phenomenon are not solely internal struggles. They emerge as responses to gendered social expectations and heightened stigma awareness. Without situating these experiences within their social contexts, any analysis risks misunderstanding the complex dynamics that give rise to them.

In the next section (The PhDs' Perspective), we dive into what these complex dynamics are that give rise to both imposter phenomenon and self-silencing that specifically manifest within academic environments. This focus on authentic self-expression is crucial in academic settings, where rigid norms and gendered expectations often silence diverse voices and hinder individuals' ability to fully engage and thrive (Clance & Imes, 1978; Ragins & Cornwell, 2001). This leads us to finally understanding why this thesis focuses on authentic self-expression.

The Need For Authentic Expression In Academia

Expressing yourself doesn't necessarily mean you have to be presenting the best or idealised version of yourself. It means that you are able to authentic by feeling what you need to feel, saying what you need to say and doing what you need to do, within the environment that you are in.

When experiencing imposter phenomenon and self-silencing due to social dynamics and power

structures, focusing our responses solely on individual change is insufficient. Instead, addressing these issues needs **collective, relational, and spatial strategies that recognise the interconnectedness of identity, community, and environment**.

Self-expression can be understood as **a powerful counter-practice** to both imposter feelings and self-silencing. It can be the act of **reclaiming one's voice, agency, and presence within contexts that often invalidate or marginalise it** (Sharma, 2024; Ahmed, 2023).

Carving out spaces for authentic expression is not only a therapeutic act but also a political one, which helps in **resisting the internalised narratives of inadequacy and conformity** imposed by societal and structural expectations (Clance & Imes, 1978; Horner, 1974).

This thesis, therefore, aims to understand **how PhD researchers navigate the journey from self-silencing and imposter feelings toward genuine forms of expression,** and **critically, how the social spaces and interactions they inhabit influence this transition.** The next section will explore these questions through participatory research and mapping tools, providing insight into how relational and spatial dynamics can foster authentic self-expression and community building.

KEY INSIGHTS OF CHAPTER 1

- Our social spaces are the spaces we occupy, often while interacting with other people. It is built on the relation and connection we have with another.
- Invisibly degrading societal norms, power imbalances and unsaid gendered expectations within our social spaces can cause us to self-silence in ways we may also not be aware of.
- The quality of our social spaces can impact the development of our identities, affecting how we see ourselves and our worth.
- Once internalised, stigma along with the threat experienced due to stereotypes, leads to lowering our self-efficacy and warps our self-perception.
- When internalised norms become the lens through which we assess our worth, even our success begins to feel fake to us. This is the ground on which the **imposter phenomenon** takes root.
- The **quality of social relations** and the **contextual factors that shape those relations and interactions** are the **root cause of both imposter phenomenon and self-silencing.**
- By designing for connection, dialogue and expression, we build pathway out of isolation and self-doubt by enabling new forms of relating to self and others.
- There is a **need for work spaces** that help **build self-efficacy** for **everyone, regardless of their gender identity**.
- **Carving out spaces for authentic self-expression is not only a therapeutic act but also a political one,** which helps in **resisting the internalised narratives of inadequacy and conformity** imposed by societal and structural expectations

CHAPTER 2

Overarching Research Approach

Types Of Methodologies Used

1. A Research-Through-Design Approach

In order to understand how self-silencing and imposter phenomenon manifest within academia, I adopted a research-through-design methodology. While the natural sciences are concerned with "how things are," design is inherently concerned with "how things ought to be" (Simon, 1996). This perspective made it possible to investigate the problem while also exploring how it might be reimagined.

While research-through-design is a methodology that encompasses many directions one can take, I chose to focus on conducting this research through "designerly activities", which invite reflection, dialogue, and co-creation, in order to elicit deep insight into the lived experiences of PhD researchers (Stappers and Giaccardi, 2014).

These activities were deliberately participatory in nature. Rather than designing for participants from an external or biased perspective, I worked with them to shape the process, gain experiential insights and derive the outcomes.

2. A Decolonial Participatory Design

Drawing from **decolonial participatory design**, my role was that of a **facilitator**: offering my skills, experience, and intuition to co-create activities which responded to the PhDs' expressed needs. This meant engaging in a **bottom-up approach** in which any design decisions were brought back to the PhDs, ensuring their perspectives and values were incorporated throughout the research.

My personal view of participatory research builds on the principle that the participants are the experts of their own lived experience. I wished to learn from them directly, using my design and research skills as tools for collaboration rather than intervention. As Thoring (2019) notes, "when participants are part of a real case that they are actually interested in, it results in better feedback than, for example, a laboratory experiment would generate". My aim was not to "rescue" the participants from the systemic issues they face, but rather, as Ahmed (2017) states, "to create conditions in which their voices could be heard".

3. An Ethnographic Learning Experience

At the beginning of this thesis, I contacted StudioLab (a design lab that focuses on research-through-design at the faculty of IDE) with a request and was granted a personal workspace for the entirety of this research. Situating myself in their environment helped in building relational trust with the PhDs over time, as I interacted with them regularly. This brought in the ethnographic dimension in my research. While I did not officially document anything from different conversations or interactions, there were many small yet significant observations that played a part in shaping my decision-making process along with my personal understanding of the social dynamics that emerge in the PhDs' work spaces. The PhDs' were informed of my existence in the **Lab and knew what I was working on.** They were very welcoming, curious and enthusiastic to help me understand their experiences throughout this research. Their positive vibe and inviting energy are what I will always be grateful for and how I will remember them.

This project also integrates certain **autoethnographic elements**, where I recognise **my own positionality, emotions, and embodied experiences and how it influences both the process and the insights.** You may find these elements take the form of the "personal reflection" sections or as the "disclaimers".

4. A Feminist Lens

A feminist lens shaped this work throughout.

Feminist approach to producing knowledge: This approach emphasises minimising power imbalances and creating spaces of trust between researcher and participant (Oakley, 1981; Pillow, 2003). Guided by it, I designed spaces and interactions intended to feel more like casual conversations rather than formal interrogations. Semi-structured interviews were framed as "listening sessions" and "spatial walkthroughs" to evoke openness, care, and mutual exploration. This aligns with feminist methodologies that privilege relational, embodied, and dialogic modes of inquiry, valuing participants' lived experiences and emotions, while resisting the researcher–subject hierarchy (Hesse-Biber, 2014; Moss & Donovan, 2017).

Language use: Throughout the journey, I paid close attention to the kind of language and narrative I was using as a researcher. From the literature review, participant accounts, and later analysis, shifts in language revealed shifts in meaning which allows for alternative perspectives to surface. Thus, incorporating this sensitivity was important in order to build relational trust with the PhD researchers, while also documenting insights in a mindful manner.

The Three Ms: While designing the activities, I paid attention to the how the **interplay of materiality, movement, and metaphors** helped in bringing to the surface the experiences of the PhDs'. Using these three elements in the activities also aided in the process of sense-making. Thus, I would like to introduce you to my own approach used to design the research activities - The Three Ms.

Materiality refers to using the hidden power that inanimate things or environments hold. Tangible objects and physical spaces allow us to relate back to memories of interactions within those spaces or our relations to those personal artefacts. Using interactions with these objects or spaces in the research sessions triggered narratives that brought about hidden tacit knowledge to the surface.

Movement was informed by feminist spatial theories that show how occupying and moving through space is not a neutral act, but a socially embedded one, which is shaped by, and shapes the dynamics of power, identity, and belonging (Massey, 1994; Rose, 1993). Certain designed activities used movement to help participants articulate how these embodied dynamics were felt and enacted in their everyday academic environments.

Metaphors emerged through activities that

invited participants to work with metaphorical elements such objects, images, or text. Doing so helped articulate tacit knowledge in ways that were relatable while also showcasing the nuances of their experiences through their creative interpretations. In this way, metaphors became a tool for both expression and sense-making, allowing insights to emerge that might have remained unspoken in more conventional formats.

Blending Of Methodologies

These practices combined helped shape spaces in which the interaction itself became a source of insight. As Gaver (2012) emphasizes on the generative, exploratory nature of design research, he notes that activities themselves can play a central role in the knowledge-generating process, enabling possibilities for interaction and dialogue that might not have occurred through traditional scientific methods. Ultimately, this blended approach uses:

- a research-through-design methodology,
- a decolonial participatory practice,
- an ethnographic contextual learning experience, and
- a feminist lens (Figure 2).

This allowed the thesis to move beyond documenting the problem toward imagining and materialising spaces for connection and authentic self-expression.

In the upcoming sections, I will provide more detailed information about the implementation of these approaches and the specific "designerly activities" involved. Each phase of the research incorporates this blend of methods in a way that is tailored to the objectives of that stage, which is why you will find a “research approach” chapter located within each section separately.

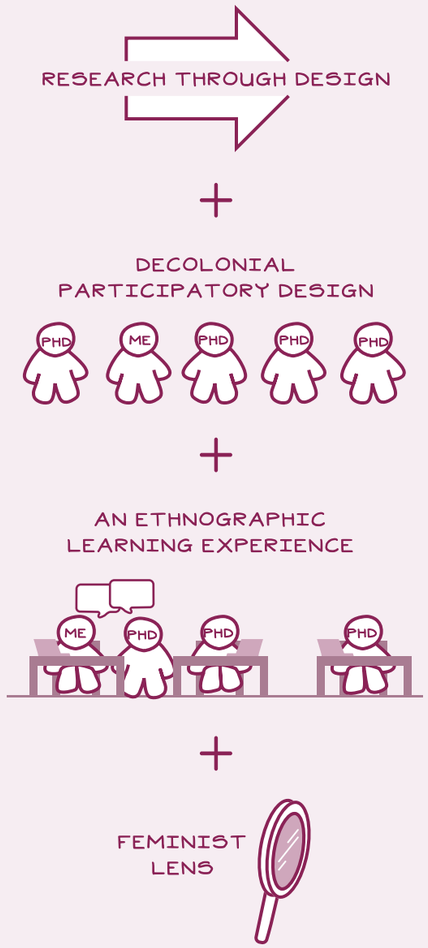


Figure 2. Combination of methodologies used for this thesis

CHAPTER 3

The Scope

The PhD Researchers As The Protagonists

PhD candidates have a unique position within academia. As early-career researchers, they are engaged in advanced, original research aimed at contributing new knowledge to their field. Reaching this stage typically requires sustained effort, academic excellence, and resilience, marking them as high-achieving individuals (Merriam-Webster, n.d.). As mentioned in the first chapter, imposter phenomenon is considered to occur in individuals who are high-achievers. Here lies our first connection.

In the Netherlands, PhD candidates are formally regarded as employees rather than students, a distinction that brings stability but also amplifies expectations for productivity and accountability. Studies have shown that individuals with weaker confidence in their abilities experience stronger imposter feelings, even when evidence contradicts that doubt (Jöstl et al., 2012; Tao & Gloria, 2019), and doctoral researchers often describe intense doubt, procrastination, or avoidance when confronting unknown tasks. These are signs of lowered research self-efficacy tied to imposterism (Chakraverty, 2018; Wao & Onwuegbuzie, 2011; Wester et al., 2020). This is our second connection.

Their position within the academic hierarchy is complex. They are situated above undergraduate and master’s students in experience and responsibility, yet below postdoctoral researchers and professors in authority. This creates a constant navigation between they professional identities. They may be considered as:

- students when attending courses to engage with existing knowledge and to develop research skills, or
- as independent researchers who are responsible for generating new insights, or
- even as educators who participate in teaching and mentoring activities, and
- in the Netherlands, as employees, where they constantly have to meet institutional demands and administrative responsibilities.

As Beardow and Barendregt (n.d.) observed in the later stages of their doctoral journey, the PhD is often considered the pinnacle of higher education, producing researchers equipped to contribute meaningfully to academia, industry, and society. Yet the role extends far beyond research alone. The continual shifting between the roles of a researcher, student, educator, and employee, creates competing demands and conflicting measures of success.

This in-between state of identities often brings uncertainty and can expose feelings of self-doubt and not being good enough during an important period of identity change and understanding (Golde & Dore, 2001; Nori & Vanttaja, 2022).

From a feminist lens, their position in academia makes the PhD researchers especially prone to self-silencing. Their limited institutional power, combined with continuous comparison to senior academics, can suppress their expression of

doubts or needs, further reinforcing imposterism.

While this is hypothesis:

H: Academic structures and spaces, through existing power dynamics, contribute to PhD researchers' self-silencing and reduced self-efficacy.

is made through connections found in literature, there is another reason for the PhD researchers being chosen as the protagonists of the case study that is this thesis.

Faculty Of Industrial Design Engineering As The Context

This thesis takes the form of a small-scale qualitative study, aimed at uncovering the subtle obstacles, hidden power dynamics, and often invisible hierarchies that shape the everyday realities of PhD researchers. The choice to focus on this group is both practical and intentional.

As an ethnographic element was central to my approach, it required being physically present in participants' spaces and interacting in ways that allowed their lived experiences to surface. This meant working within a familiar academic environment, one in which I could engage with PhD researchers in the same domain as myself.

By positioning myself within their

PERSONAL REFLECTION

Being an early career researcher

As someone with a growing interest in academia, I would consider myself to be an early career researcher as well. In the early phases of this research, I was not yet sure who to focus on or which context to explore. I was also quietly nurturing a growing interest in pursuing a PhD myself, though I hadn't said it out loud yet. To find direction, I reached out to some professors to discuss my interest in self-silencing. While their feedback was helpful, something felt off.

When the idea of focusing on people in academia was brought up in the discussion, PhD researchers in particular, the tone shifted. Some spoke of PhDs as fragile, as overburdened, as people on the edge of burnout. Sometimes there was respect - but sometimes, pity. It did not sit right with me. These were individuals deep in their research, passionate about their work, learning how to contribute new knowledge. Why were they being spoken of as if they were less-than?

That moment sparked a desire to understand their experiences from their own perspectives instead of being filtered through hierarchy. The hierarchal dynamic that came into view in those discussions is what made me see the social and contextual influences affecting the PhDs' perception. I wanted to understand and learn more, but about the PhDs. And so this thesis became a case study with PhD researchers - not as subjects of pity or pathology, but as collaborators in reimagining the social spaces they inhabit. In doing so, I hope to carve out space for my own voice as well as others within academic environments.

everyday academic world, I was able to build the relational trust necessary for casual conversations, gain access to their workspaces, and witness the nuances of their interactions with people, spaces, and institutional structures. This proximity not only facilitated richer, more grounded insights but also allowed me to approach the research from an insider–outsider perspective where I was close enough to understand their context, yet distant enough to critically reflect on its norms and tensions.

Thus the context of the study was selected to be the faculty of Industrial Design Engineering (IDE), at the Delft University of Technology (TU Delft) - an environment in which I am currently a Master's student.

As this is a Master's thesis, it was important to consider the research's limitations, given the time and resource constraints, which is why I restricted my scope to only the PhD researchers within this faculty, instead of involving those from other faculties as well.

Research Questions

Now that we have discussed the main user group and the scope of this thesis project, let us move on to what this research explores.

Based on the literature review, which acts as the foundation of this research, I had three main questions that I wished to understand from the PhD researchers themselves.

The first research question was to understand if the PhDs that work in the faculty of IDE relate to the imposter phenomenon and self-silencing tendencies. The aim of this question was to explore what are the systemic or social causes to their experiences of imposterism, if they had any. It was framed as:

"If and How do PhD researchers experience silencing and imposter phenomenon in academic spaces? What causes these experiences?"

The second question was created as a transition from understanding the causes and effects of imposterism in academia, to learning the factors of social interactions which make the PhDs feel safe to express themselves. The research question was:

"What elements of social spaces make them feel safe enough to connect with others and express themselves?"

The third question was as a personal prompt that catered to designing in a decolonial participatory approach with the PhD researchers, rather than for them. As the final question of this research, it also provokes us to think about the future of academia and how it can be re-imagined to cater to their expression and their needs. The question is:

"How can we design such spaces with them, instead of for them?"

#1

If And How Do *PhD Researchers* Experience *Silencing And Imposter Phenomenon* In *Academic Spaces*? What Causes These Experiences?

#2

What Elements Of Social Spaces Make Them *Feel Safe* Enough To *Connect* With Others And *Express* Themselves?

#3

How Can We *Design* Such Spaces *With* Them, Instead Of For Them?



#1

If And How Do *PhD Researchers* Experience *Silencing And Imposter Phenomenon* In *Academic Spaces*? What Causes These Experiences?

RESEARCH QUESTION

SECTION 2

The PhDs' Perspective

This section is all about understanding the PhD's perspective when it comes to the experience of imposter phenomenon. We take a journey of understanding the social and contextual factors that make academia a space where self-silencing and imposterism take root.

The first chapter explains the research approach taken to answer the first research question, where "listening sessions" and "spatial walkthroughs" were conducted with eight PhD researchers at the faculty of Industrial Design Engineering, TU Delft. The second chapter explores into the context of the PhDs to understand how they're situated in the faculty socially and professionally. In the third chapter, we see how the data gathered from these conversations were then mapped using a tool called "matrix of domination". This tool helps us understand the power dynamics present at various levels of the social relations experienced by the PhDs. It reveals how their experiences within communal and systemic spheres influence their personal experiences. This in turn shows us the many triggers that exist within each relational sphere, and how those triggers manifest as emotions and experiences linked to the imposter phenomenon among PhDs.

By understanding the social and contextual factors that allow for imposterism to emerge, we can make space for new ways of being, relating, and expressing ourselves within it - something which is explored in the section after this one.

CHAPTER 1

Research Approach

In the previous section, we saw how imposter phenomenon emerges from the quality of social relations and contextual factors that surround us. To understand what these factors could be in academia and how the PhD researchers experience it, a combination of two activities were conducted. Each activity took 30 minutes each, making the entire session an hour long. The findings from both the sessions were later turned into statement cards to create themes from a comprehensive thematic analysis.

Step 1: Recruitment Of PhD Researchers

The PhDs were recruited based on two factors:

1. their work status or professional position - that of being a PhD researcher,
2. and, their place of work was the faculty of Industrial Design Engineering at TU Delft.

The participants in this study were not selected based on whether they experience imposter phenomenon or not, in order to mitigate bias and promote inclusivity within the research. This approach helped collect diverse perspectives regarding the phenomenon, allowing for an exploration of the topic without the presumption that all participants experience it. After contacting some of the researchers through informal means, **eight PhDs** volunteered to talk about their experiences. Out of the eight, five were female and three were male participants.

The goal of the activities was to understand their lived experiences to gain insights on if and how they experience imposter phenomenon. The intent was to use open-ended questions as an initiator to the conversations, while holding space that allowed the PhDs to share their experiences freely, whether they wished to provide surface-level descriptions or delve into greater detail.

In this phase of the research, the PhDs had taken the form of "living tales" by embodying the memories and emotions of their experiences. From these living tales, we are able to truly listen and learn of first-hand encounters of how academia is truly experienced by the researchers who walk its corridors and use its spaces to interact with one another.

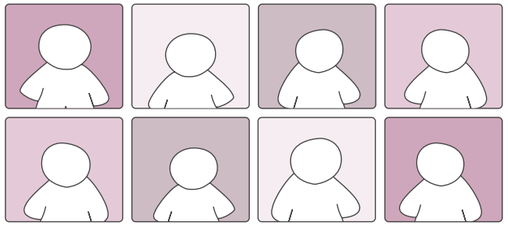


Figure 3. Eight PhD Researchers who volunteered to participate in the conversations

Step 2: Conversations With The PhDs

Guided by the feminist approach to knowledge production, which emphasises **minimising power imbalances and creating spaces of trust** between researcher and participant (Oakley, 1981; Pillow, 2003), I designed **semi-structured interviews intended to feel more like casual conversations rather than formal interrogations.** The designed interviews consisted of two parts:

1. Listening sessions
2. Spatial walkthroughs

Framing these conversations as "listening sessions" and "spatial walkthroughs" aligns with feminist approaches to knowledge generation, which prioritise **relational, embodied, and dialogic methods** that **value participants' lived experiences and resist hierarchical researcher–subject dynamics** (Hesse-Biber, 2014; Moss & Donovan, 2017).

In particular, feminist spatial theorists argue that **occupying and moving through space is not a neutral act,** but a socially embedded practice in which it shapes and is shaped by power, identity, and belonging. Thus, **spatial walk-throughs allow participants to surface how these dynamics are felt and enacted in their everyday academic environments** (Massey, 1994; Rose, 1993).

1. Listening Sessions

The *listening* sessions were labelled as such to consciously create a space where I show up as an active listener to them. Additionally, this session acted as a sensitising activity that allowed the participants to reflect on their understanding of the phenomenon and their experiences with it before going on the spatial walkthroughs.

These listening sessions were framed as intentional yet informal moments of dialogue, where I positioned myself as a curious and active listener to the PhDs' lived experiences. The aim **was to create a social space that felt safe, relaxed, and open to authentic expression,** rather than structured and distant. Holding these sessions **one-on-one** allowed for a deeper understanding of each individual's experiences without the influence or bias that might arise in a group setting.

There were conscious choices that were made in order to design this space for meaningful conversations to emerge. The listening sessions was a space for the PhDs to reflect on their experiences, with the following questions initiating the conversation:

> What Is Your Interpretation Of The Terms 'Imposter Phenomenon' And 'Self-Silencing'?

> If And How Do You Experience Imposter Phenomenon And Self-Silencing?

2. Spatial Walkthroughs

The spatial walkthrough was an activity focused on bringing about tacit knowledge to the surface by incorporating movement and exploration within the PhDs' work environment (Altunok, N., 2023). Altunok's work emphasizes walking as a performative spatial practice that serves to unearth the bodily, embedded understanding of place that often remains hidden when using traditional, representational research tools. The aim of the walkthroughs was

to gain a deeper understanding of their lived experiences as we moved through the many kinds of work spaces they inhabit daily. This links to the 2nd “M” of own method - the “Three Ms” - which was focused on incorporating movement.

In keeping with a decolonial, participatory approach where participants play a central, leading role in generating knowledge, I positioned PhD researchers as guides for these walkthroughs. They were to lead me through the spaces they inhabit in IDE instead of me leading them, which ensured that the research unfolded relationally rather than hierarchically (Smith, 1999; Denzin & Lincoln, 2008). By accompanying them on these walks, I could engage with them casually, while the objects and environments we encountered evoked memories and emotions related to their experiences.

To initiate the conversation and reflection, I asked them two questions, as we explored together. They were:

> Which spaces were ones where you felt like you were made to self-silence or where you felt like an imposter? What made it so?

A follow-up question was asked to the participants, transitioning from the first research question about experiencing imposterism to the second one that focuses on self-expression. To flip their perspective, I asked them:

> Which spaces were ones you felt like you could express yourself freely, voice your opinions openly and be your authentic self? What made it so?

Encouraging the PhDs to identify and reflect on spaces where they feel able to speak openly and act authentically is a crucial step when moving from imposterism to self-expression.

Maji and Dixit (2024) highlight that imposterism and self-silencing go hand-in-hand, where persistently doubting oneself can lead to the holding back one’s willingness to share ideas and participate fully. This is how the absence of authentic self-expression can perpetuate feelings of fraudulence. Thus, asking the second question helps break this cycle by prompting them to reflect on existing environments and experiences that have supported their psychological safety and self-efficacy.

Step 3: Documentation Of The Data

Recording The Sessions

Physical note-taking was not carried out to document the sessions in order to ensure that my attention was solely on our conversation. It was important to me, as the researcher, to completely show up to the conversation and engage with them in an attentive and meaningful way.

Thus, the sessions were **voice recorded. The device used to record was my mobile phone**,

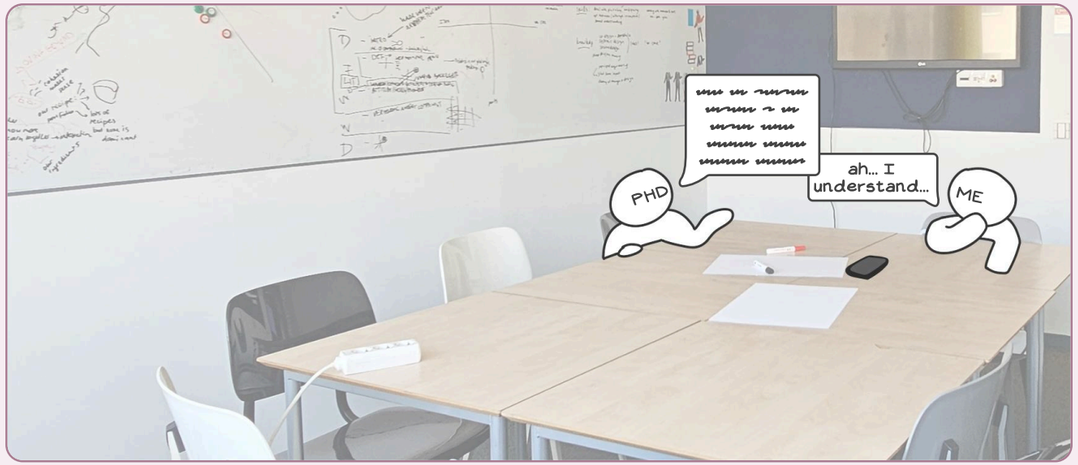


Figure 4. A glimpse of the listening sessions where the PhDs narrated about their experiences at IDE



Figure 5. A glimpse of the spatial-walkthroughs where the PhDs led me through their workspaces in order to talk about their experiences in relation with their environment

which seemed more **casual and familiar** than a recording device. It was reassuring to have the session documented with as voice recordings as it helped document their experiences as the PhDs explain it. Relying on note-taking might have also injected my bias and interpretation into the data. This would have not allowed me to document their experiences authentically. Additionally, voice-recording also captured all of the data, providing us with valuable insights - something that I may have lost had I relied on documenting the data manually during the session.

Transcription & Statement Cards

The voice recordings derived from the conversations were then put into the built-in transcription feature on MS Word. Due to the inaccuracy in the tool's output, the transcriptions were then manually edited to match the audio recordings. The task of editing also acted as means to familiarize with the content of the conversations.

The edited transcriptions were then read through carefully, and made into statement cards that would later help in clustering them into themes for the thematic analysis. **The transcripts were not shared with the research team**, as the team consisted of a PhD researcher and a supervisor who may have worked with or shared spaces with the participants. **To protect the identity of the participants**, their personal identifiable data was redacted from the transcripts. Any sensitive information that came about from the experiences of the PhD researchers has been showcased in an aggregated form within this report. This aggregated data from the analysis was shared with the research team and has been shared to you in the form of this report.

Consent Forms

To build the safe, ethical and casual space for the conversations, I chose to informally ask for verbal consent at the start of the session. The printed consent forms, with details regarding this research and the kind of data that will be documented, were provided to them at the end of the session for them to read through and sign.

Step 4: Thematic Analysis

As this empirical study prioritises an in-depth understanding through the means of qualitative data, thematic analysis was chosen. As a method, it systematically explores and explains the circumstances - such as when, where, and how - the PhD researchers experience imposter phenomenon within the spaces they inhabit (Braun & Clarke, 2006).

Thematic analysis is defined as the method used to identify and analyse a variety of patterns that may emerge in the data (Braun and Clarke, 2006). It gives the data clear, valuable and detailed meaning, from which key insights can be formulated. As Braun and Clarke state, this method uses six stages for analysis, which goes from familiarization of data to the reporting of it.

In the analytical process for this research as well, the data was first familiarized with (1) when the transcripts were edited, after which coding (2) was done in the form of statement cards. From the codes formed, themes are generated (3) and then reviewed (4). After reviewing the themes, they went through a few iterations. The refined themes were then defined and named (5). At last the report (6) is formed, where the findings are **documented clearly**, which can be seen in the Chapter 3 of this section.

As mentioned above, **statement cards** were made in the second step of the process. The cards were created from the narratives of the eight PhDs and included their experiences from **both the activities.** These cards consisted of their **quotations along with the paraphrased versions** of it. **Clustering** the statement cards together allowed for themes to emerge from these conversations.

The themes highlighted the phenomenological aspects of experiencing the imposter phenomenon, its connection to self-silencing along with how it relates to the power dynamics that arise within their spaces.

In order to dive deeper into these relations and connections, a tool called the Matrix of Domination was used.

The 'Matrix Of Domination' As A Tool

The Matrix of Domination is a tool that is used to "explain how systems of power are configured and experienced" (D'Ignazio & Klein, 2020). While it was originally used to evaluate power dynamics on the intersection of gender and race, the creator Patricia Hill Collins (1990) makes it clear that other dimensions of identity can also result in unjust environments and social dynamics across four domains.

The **four domains that indicate how power can be experienced in different ways.** The table (Table 1) showcases the four domains, which are the **structural, disciplinary, hegemonic and interpersonal domain** (Collins, 1990).

Structural Domain Organizes oppression through laws and policies	Disciplinary Domain Administers and manages oppression through enforcing laws and policies
Hegemonic Domain Circulates oppressive ideas through culture and media	Interpersonal Domain Individual experiences of opression

Table 1. Four domains of the Matrix of Domination (P. H. Collins, 1990)

This matrix has been used as it helps view the **data collected and organise it in a way that focuses on unjust social relations and power imbalances experienced by the PhDs.**

What Is "Power"?

The term "power" here, as used by C. D'Ignazio & L. Klein, describes **the current form structural privilege and oppression take, where certain groups - in our case, the management and institution - experience unearned advantages.** These advantages are reaped by the "higher-ups" because the systems in place have been designed by them or people like them, thus working in the way they would need it to. **The other groups of people who have not been considered in the design process of the system - in our case study, the PhDs - end up experiencing systematic disadvantages.**

This tool has been used to examine the power dynamics that the themes derived from the lived experiences of the PhDs showcase. To examine this power imbalance is to name and explain the factors that are invisible to us

because of how imbedded they are in our lives, yet experienced first-hand by the PhDs.

Why Examine Power Dynamics?

The current configuration of structures in place have been designed with and for the professors and management themselves. While they may have included PhDs and Master students from time to time, with the value of inclusivity gaining importance year by year, certain systems still don't work for people on the bottom strung of the hierarchal ladder, as they are not as involved in the design process. In the rare cases that they are, their voice doesn't hold as much weight as the current decision-makers, leaving their needs unheard and uncatered to.

The systemic disadvantages they experience, then bleed on to the physical and social spaces they occupy in the institute. This could manifest as their perception of the spaces they inhabit, where they may suppress their own expression, eventually leading to feeling like they don't belong, as they walk the same halls occupied by others with unseen privilege.

There is a tendency for those in the most advantaged positions, such as individuals with elite education, respected qualifications, and professional recognition, to be less able to recognize oppression when it occurs. This is known as the privilege hazard by D'Ignazio & Klein (2020). Those in positions of authority often lack the "empiricism of lived experience", which is the grounded understanding that comes from directly navigating such disadvantages.

Without this lens, it becomes harder for them to recognise the subtle forms of exclusion or harm embedded in institutional systems, or to imagine solutions that genuinely address the realities faced by those with less power.

In their research on data feminism, D'Ignazio, C., & Klein, L., (2020) also mention that identifying the forces of subtle oppression by those with higher power is how we start to understand "how they exert their potent force". After that, principles of data feminism such as "challenging power", "embracing emotion", and "making labor visible" become easier to implement and put into action.

This is why the most important insights of this thesis lie in Chapter 3 of this section. That is where we see the play between power dynamics and systemic disadvantages experienced by the PhDs. Furthermore, we will also see how those systemic disadvantages lead to affecting the PhDs' self-efficacy and self-expression.

Now is when bringing participatory and equity-oriented approaches mixed with empirical research to be crucial for bringing the voices of the unheard to the forefront. By meeting their needs, we often create solutions that not only benefit them but also extend advantages to a much wider group. This is a phenomenon known as the 'curb cut effect', where interventions designed for marginalised communities end up improving accessibility and outcomes for everyone (Blackwell, 2017; D'Ignazio & Klein, 2020).

Why Are The PhDs Considered A Minoritised Social Group?

The term "minoritised" emphasizes the process through which PhD researchers, as a social group, hold less institutional power and influence than dominant groups such as faculty, administration, and management, even if they aren't necessarily a numerical minority. This concept aligns with the matrix of domination which is used to illustrate how dominant groups maintain control over minoritised groups through systemic and structural dynamics that limit agency and shape experiences. As Naples (2003) explains, "minoritisation refers to the systemic processes that create and maintain social groups as subordinate or marginalized within societal structures." This captures the ongoing nature of these power imbalances.

I want to clarify my use of the term "minoritised." I do not apply it to frame the relationship between PhDs and institutional actors as being in direct opposition. Instead, I use it to highlight their relative position of diminished power within the academic hierarchy.

In our context, the institution holds significantly greater economic, social, and political power. Much of the academic system has been shaped by people in the "higher-up" ranks, often in ways that reinforce their position and, intentionally or not, make it more challenging for those in the minoritised position to have their needs fully addressed or their voices equally heard.

Leibowitz and Bozalek (2019) support this view by noting that, "doctoral students are minoritized subjects within academic institutions, often lacking full access to power, voice, and resources, which shape their experiences of inclusion and exclusion."

While marginalisation may describe PhDs' lived experience of being pushed to the periphery, due to having less autonomy, fewer opportunities for influence, and greater vulnerability, minoritisation more accurately captures the ongoing systemic power relations that sustain this imbalance.

CHAPTER 2

Understanding The Context

As established in Section 1 - Chapter 1, this thesis identifies the root cause of the imposter phenomenon in the social and contextual factors that shape academic life. In Section 2 - Chapter 1, we explored how power dynamics within these spaces can spark self-doubt and lead individuals to self-silence. From my conversations with the PhDs, it quickly became clear that their main triggers often emerged within the social interactions and relationships within their academic environments - sometimes with people within the faculty, and other times with those outside of it.

To understand what triggers the imposter-related experiences and emotions within our PhDs, we must first learn of their social spaces, which means learning of the people they interact with and the kind of relations they have with them. Thus, in this chapter we zoom into the PhDs' social spaces, and how they are situated in the context of IDE. After understanding how the PhDs are positioned in their context, we learn how their experiences are shaped by these relations, which we see in Chapter 3.

Experiential Spheres

A way I have visualised "zooming into their social space" is by layering the different kinds of connections and relationships that shape our lives, as shown in Figure 6. In this thesis, I refer to these layers as "experiential spheres", where each sphere represents a dimension of one's lived experience in relation to the people, systems, and contexts they interact with. The three spheres are:

- The Personal Sphere: The innermost layer, representing an individual's internal world. It consists of their thoughts, emotions, self-perceptions, and ways of making sense of their experiences.
- The Communal Sphere: The middle layer, encompasses the social interactions and relationships that an individual actively engages in. For the PhDs, this includes peers, supervisors, students, and others that they encounter within their work environments.
- The Systemic Sphere: The outer layer, representing the broader systems, structures, and institutional contexts that shape one's experiences - often in ways that are less direct but deeply influential.

This way of looking at experience allows us to both zoom in and zoom out. We can zoom in to see the intimate details of personal life while also zooming out to recognise how the other spheres may play a part in influencing one's personal experiences. The personal sphere is visualised as the core (the darkest shade) as seen in Figure 6, to show how it is where we spend most of our time and energy. Yet, by stepping back to consider the communal and systemic spheres, we can begin to see why certain feelings arise, and how they are connected to the environments we inhabit.

In this thesis, the focus is on the personal sphere and how it is shaped, supported, or strained by the communal and systemic spheres around it.

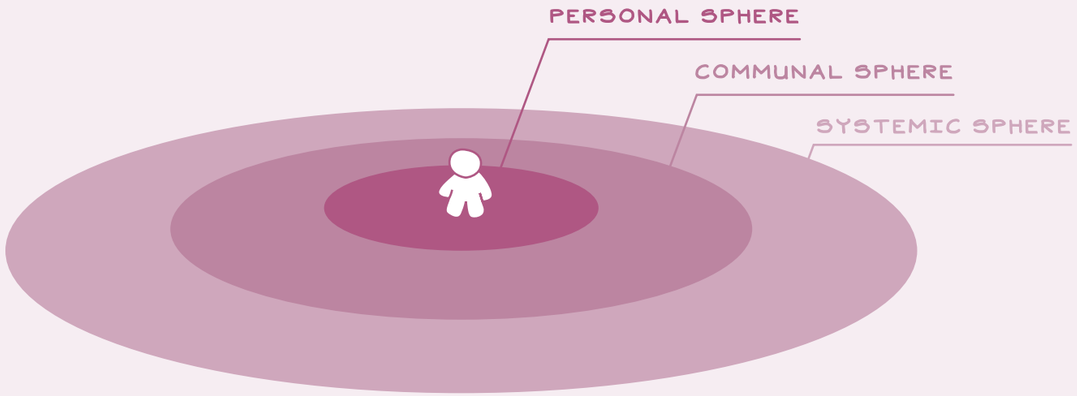


Figure 6. Experiential spheres as the layers of one's social space

Let's learn about the PhDs' systemic and communal spheres.

PhDs In Their Systemic Sphere

Structure Of IDE

Starting with the systemic sphere, let's understand what the structure of academia looks like for a PhD and how it is set up for the PhDs.

The faculty of Industrial Design Engineering (IDE) is made up of three main departments:

1. Design, Organisation and Strategy (DOS),
2. Human-Centered Design (HCD),
3. and Sustainable Design Engineering (SDE).

Each department is led by a head of department, who is a full professor responsible for overseeing research, education, innovation, impact, and daily operations. These departments are further divided into smaller sections acting as research units headed by full or associate professors.

PhD candidates at IDE are part of these departments and exist within the smaller sections, just as other post docs and professors do. They are supervised by at least two academic staff members: a full or associate professor with the authority to confer degrees (the promotor), and a daily supervisor or co-promotor. Additionally, each PhD is assigned a mentor from a different department to provide guidance and support during the first two years of their project (Figure 7).

Representation for PhD candidates is organized through the IDE Faculty PhD Council, which includes one PhD representative from each department. This council advocates for PhD interests within the Faculty Graduate School Council and collaborates with the broader University PhD Council on university-wide issues.

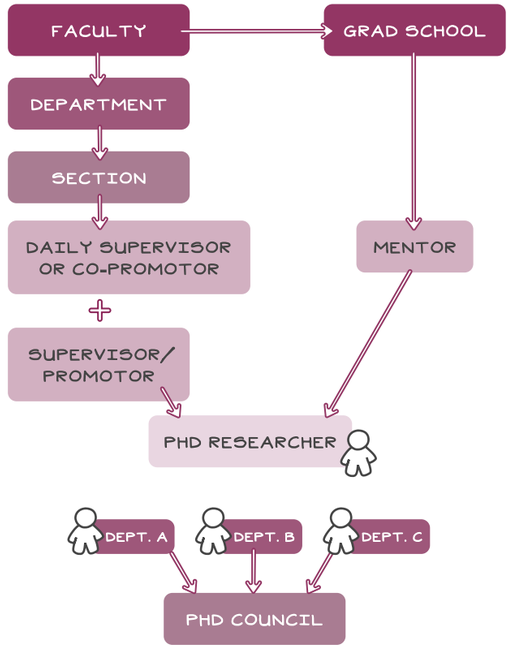


Figure 7. Layout of physical spaces in the faculty of IDE

Layout Of Spaces In IDE

To truly understand the spaces that the PhDs guided me through in the spatial walkthroughs, it's essential to become familiar with the faculty's layout and the location of their work spaces (see Figure 8).

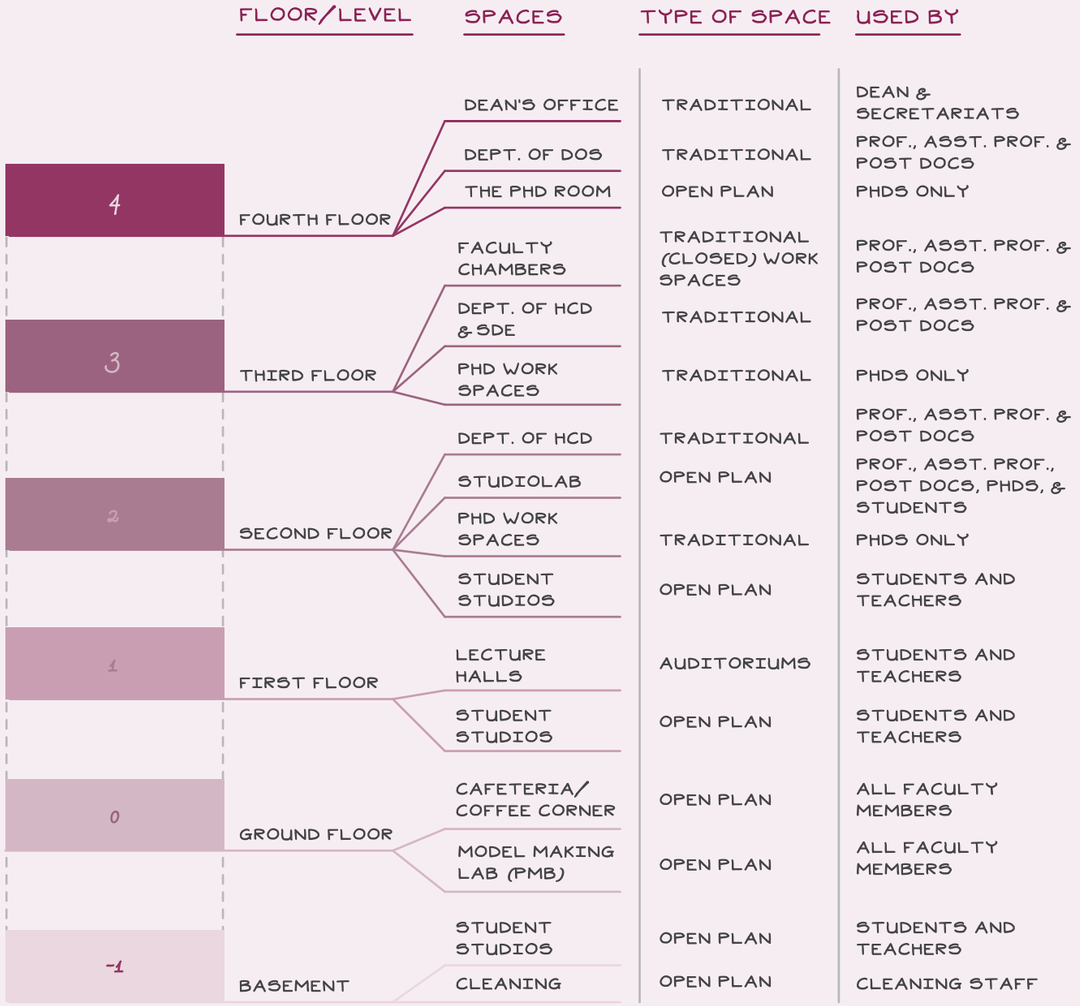


Figure 8. Layout of physical spaces in the faculty of IDE

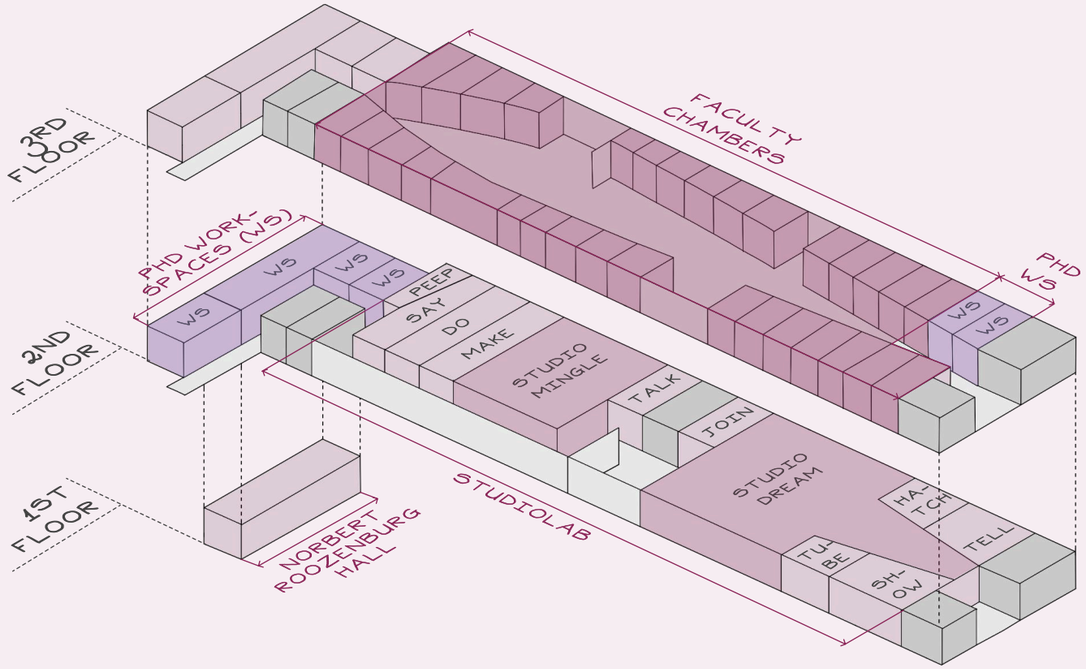


Figure 9. Spaces visited during the spatial walkthrough with the PhDs

The gradient shading seen in Figure 8 has been done intentionally, with the higher floors being darker in gradient compared to the lower floors. One PhD reflected on their observation of the building's clear hierarchical division - with the Dean at the top, faculty members on the floor below, and PhDs and students on the lower levels. Although the PhDs are currently distributed throughout the faculty, in our conversations, a few of them noted that the top-most floors often intensified their sense of not belonging, whether it was because of the kind of people present there, the physical environment, or the overall atmosphere or vibe. It is also important to note that there are ongoing restructuring and relocations happening within the faculty, where PhDs from the fourth floor may move to the lower floors to create equal spaces for each department. Even though the intentions for the restructuring are different, a PhD researcher mentioned how this may lead to strengthening the existing hierarchal layout, without people even knowing about it.

Spaces Visited During The Spatial Walkthroughs

During the spatial walkthroughs, only the spaces on the first, second and third floors were visited as shown in Figure 9.

The most visited floor was the second floor, which has the StudioLab and separate PhD workrooms. The StudioLab consists of open-planned workspaces occupied by professors, assistant professors, PhDs and even Master students who are doing their graduation thesis, like me. Everyone has their own desk, while sharing the same spaces, which creates a vibe that welcomes all kinds of interactions, where people at different points of their academic life can mingle. The lab also includes meeting rooms and workshop spaces that cater to the different needs of people working on this level, such as prototyping, brainstorming or presenting. There are break spaces in Studios Dream and Mingle as well as in the transitionary spaces. The vibe of the second floor has said to be more open, playful, relaxed and inviting.

The PhD work spaces are separate rooms on the second floor, where 4-6 (sometimes more) PhDs work in the same room while having their individual work desks. The PhDs in these spaces usually take breaks in StudioLab's break areas, in the break area on the other side of the building or in the cafeteria/café on the ground floor.

Few of the PhD work spaces also exist on the third floor. The third floor mostly consists of chambers that house faculty members such as professors, assistant professors, department heads, promoters and post docs. Most have their own individual chambers, while some share it with maximum one or two others. There are a few meeting rooms on this floor too. Like the second floor, they also have break areas in the transitionary spaces. The vibe of the third floor is seen as something that is very strict, closed-off and overly professional due to the "higher-ups" of the faculty members being majority of the occupants here. The closed-floor plan also affects the vibe, as people have their secluded and individual work spaces here, compared to the open-plan of the second floor. This vibe, stated by the PhDs, extends to the break areas on this floor as well, where only professional talk occurs.

On the first floor of the faculty, there is one meeting room that was brought to attention by PhDs during the spatial walkthroughs, called the

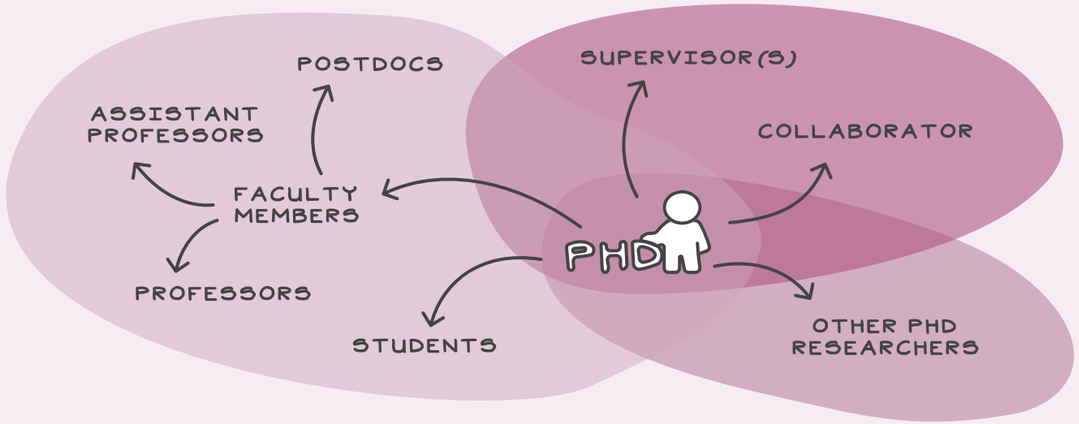


Figure 10. PhDs' communal sphere with the types of relations

Norbert Roozenburg hall. Since very formal meetings occur here with people who have a business-mindset or are at a higher hierarchal level, there is a corporate vibe experienced in this space. This, in turn, increases the hierarchy and distance experienced between the PhDs and the other members present.

While there is a big PhD workspace that houses many more PhDs on the fourth floor, it wasn't visited during this phase of the research. We will come back to this room later in the book.

PhDs In Their Communal Sphere

Figure 10 illustrates the different people PhD researchers engage with within their social circles. Their relations are organized into three distinct layers, based on proximity, professional dependency, frequency of interaction, and overall connection.

The Direct Circle: The direct circle includes those they communicate with regularly and rely on most throughout their PhD journey. This group typically consists of their supervisor or supervisors along with any collaborators that they work closely with. Some candidates may have two supervisors, or one supervisor paired with a collaborator, and occasionally a third supervisor who they consult daily when needed. In some cases, the direct circle also extends to fellow PhD researchers with whom they collaborate, share a cohort, or have a close working relationship.

The Indirect Circle: The indirect circle comprises of individuals who they might see daily due to shared workspaces but do not have any formal professional dependency to. These interactions usually involve faculty members such as postdocs, assistant professors, and full professors. It also includes other PhD researchers whom they interact with less frequently, in places such as departmental meetings, conferences, seminars, or social events.

CHAPTER 3

Mapping Their Experiences

> "We are louder when we are heard together."
>
> SARA AHMED, THE FEMINIST KILLJOY HANDBOOK, 2023

Now that we've understood their context and howe PhDs are situated in the faculty of IDE, let's move to understanding the tensions or triggers they experience in this context that give rise to the feelings of imposterism or the need for them to silence themselves.

DISCLAIMER

Here, I use the term "trigger" to mean a stimulus - a person, situation, or interaction - that elicits a particular emotional response or reaction. As defined in psychological literature, triggers are events or occurrences that elicit emotional responses and can vary greatly from person to person (Riachi et al., 2022). While an event that may trigger me may not trigger you in the same way or at all, the same event could still resonate across others who have faced similar events or feelings about it. In this thesis, we examine triggers as the qualities within interactions that ignite tensions and challenges which eventually lead to the experience of imposterism among PhD researchers.

In order to understand what are their triggers and how those lead to their experience of imposter phenomenon, the matrix of domination that was introduced in Chapter 1: 'Research Approach' will be used. As mentioned, it is a matrix that is used to evaluate power dynamics in certain contexts, in our case, it's the faculty of IDE. We use this tool to organise the many triggers, as stated by them in our conversations, into the four different domains. By doing so, we better understand the social dynamics that occur in the different domains or different relations, and how they act as triggers to the PhDs.

Here is how the Matrix of Domination has been used to examine power imbalances experienced by PhDs in IDE (Figure 11):

The Structural Domain (Systemic Sphere)

This domain relates to the formal laws, regulations, and institutional policies that govern the PhD experience. It forms and maintains the legal and procedural framework within which the PhD researchers operate. This, in turn, shapes everything from their rights and responsibilities to the milestones and evaluations that define their academic journey.

These structures influence how the PhDs navigate their day-to-day work, make decisions, and interact with different bodies within the

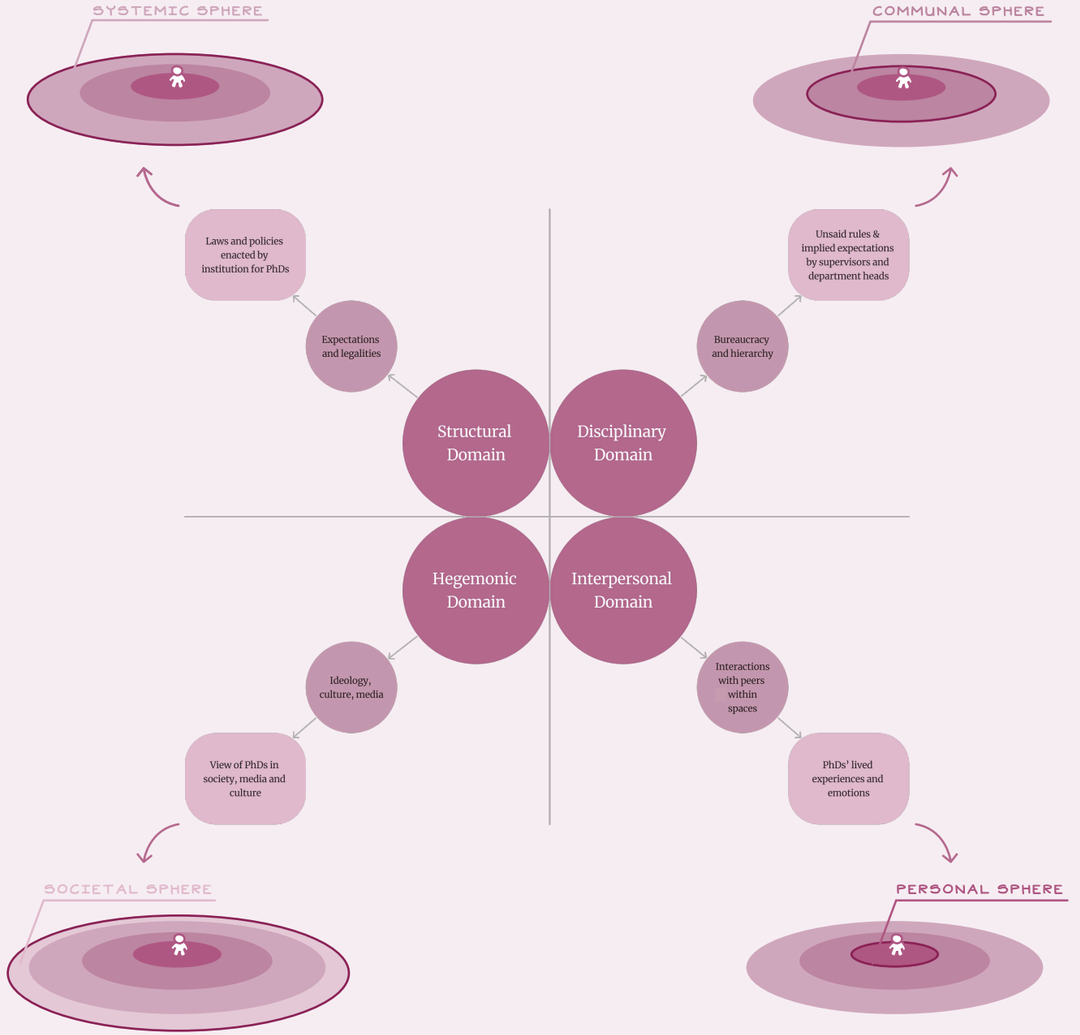


Figure 11. Matrix of Domination in the context of IDE

university. In this sense, **this domain directly connects to the systemic sphere** shown in Figure 11, as it outlines the boundaries, expectations, and formal relationships that define a PhD's place within the institution. As a result, it also impacts the communal and personal spheres.

The Disciplinary Domain (Communal Sphere)

This domain reflects how formal regulations and policies are translated into everyday practice by the various stakeholders involved in a PhD's journey. It encompasses the bureaucratic processes, hierarchical relationships, and informal social dynamics that shape the lived experience of doctoral research.

In the case of our research, this often takes the form of unspoken rules, implied expectations, and subtle norms communicated by supervisors, department heads, and other figures in management who hold authority over PhD candidates. These practices, while not always explicitly stated, play a significant role in influencing **how PhDs navigate their work and relationships.** In this way, **the domain connects to the communal sphere,** as it emerges through the **relations and interactions** that shape the social fabric of their academic environment.

The Interpersonal Domain (Personal Sphere)

This domain captures the lived experiences, emotions, and self-perceptions of PhD researchers, directly relating to the personal sphere. It encompasses how they navigate their relationships, responsibilities, and identities throughout their journey, offering insight into what it feels like to be a PhD researcher.

The Hegemonic Domain (Societal Sphere)

This domain showcases how the PhDs are perceived by media and across many cultures. It focuses on the broader and collective view of PhDs by society, which can be seen in various outlets of media such as in memes, television series, movies, news, etc.

In order to relate this domain to the experiential spheres, we would have to add an additional sphere that surrounds the systemic domain, thus encompassing all the other three domains within it. We could call it the "societal" sphere. This domain is outside the scope of this thesis and will only be touched upon briefly towards the end of this chapter.

Interconnections Between The Four Domain Or Spheres

As it goes with most of our experiences in life, the triggers that PhD researchers encounter within these domains are deeply interconnected. A trigger within the structural domain may give rise to tensions in the disciplinary domain, which in turn leads to experiences within the interpersonal domain. These connections mean that what happens in one sphere often ripples outward into others. As we move through the next few pages, keep this interplay in mind as it will help reveal how institutional structures and social interactions weave together to shape the frictions and tensions of the PhD journey.

While PhD life certainly holds many positive encounters, both with the institution and with the people within it, the upcoming pages focus on those moments that provoke challenge, **discomfort, or strain.**

The triggers that will be presented have been derived directly from the conversations with PhD researchers. They have been organised into the four domains, allowing us to zoom out and observe the power dynamics at play in each domain, while also zooming in to understand why they emerge as triggers.

In the pages ahead, their voices take centre stage, sharing with us what it feels like to be a PhD researcher at IDE.

The Results

The eight PhD participants provided a rich amount of data by elaborating on their experiences. Guided by the four key questions introduced earlier (see Chapter 1, Step 2), I was able to develop a deeper understanding of how imposter phenomenon (I.P.) and self-silencing (S.S.) are experienced and how they emerge within the spaces these researchers inhabit.

Through the listening sessions, I learned:

- how each participant understood the terms imposter phenomenon and self-silencing,
- if they experienced these phenomena, and
- if they did, how the phenomena manifested in their daily life, specifically addressing:
  - which people, situations, or dynamics contributed to I.P. and S.S.,
  - how does it impact their experiences as a PhD researcher,
  - what emotions arise as a result, and
  - what acts as catalysts for positive change.

The spatial walkthroughs added a new dimension to these accounts, revealing specific examples of how I.P. and S.S. materialised within the physical and social spaces of IDE. Seeing these spaces through the participants' eyes deepened my understanding of their experiences and made the connections between their social interactions and spatial relations more tangible.

The analysis process involved five iterative rounds of coding, interpretation, and connection-building to capture these relationships. To make the findings accessible and coherent, I organised them into three aspects of experience (Figure 12):



Triggers - Traits, interactions or situations where the cause of their experience becomes apparent. In certain situations, triggers can also act as aggravators to their negative experiences.



Experience and Emotions - How the causes take shape in the lived reality of imposter phenomenon in their daily life, along with the emotional responses that arise as a result of those experiences.



Catalysts - An event, interaction, or person whose words or actions spark positive change. These catalysts open possibilities for more inclusive, accessible, and growth-oriented spaces.

Before we dive into exploring the triggers, experiences, and catalysts in detail, it's important to first highlight some key insights about how these findings emerged. Understanding these will provide essential context to better grasp the connections and nuances that follow.

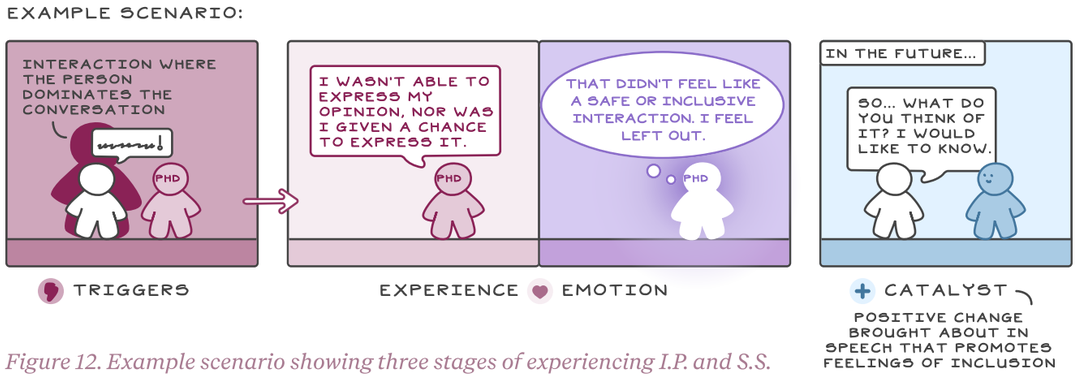


Figure 12. Example scenario showing three stages of experiencing I.P. and S.S.

Why "Experience *And* Emotions"?

In this thesis, I use the combined term "experiences and emotions" because, as Brené Brown points out in Atlas of the Heart (2022), what we consider emotions are actually thoughts that lead to emotional responses. There isn't a single agreed-upon definition of emotions. Experts from various fields such as neuroscience, psychology, sociology, and philosophy often disagree on what precisely counts as an emotion. As Joseph LeDoux, a neuroscience professor at NYU, notes, "there are as many theories of emotions as there are emotion theorists."

There are many directions currently being taken to study emotions and experiences, from brain imaging to cultural analysis, making it challenging to neatly separate feelings from the thoughts and experiences that shape them (Brown, 2022).

A Connection Found Between Objects, Physical Spaces And Our Experiences

How we feel can be shaped by the environments we inhabit - including the spaces, materials, and objects that surround us. Without even realising it, we may form meaningful attachments to the physical world, and that inanimate environment in turn can influence how we feel about ourselves.

Environmental psychology shows that even seemingly minor design elements can shape our emotional states and neural responses. For instance, blue hues in indoor spaces have been found to significantly modulate physiological markers linked to emotion, such as heart rate variability and brain oscillations (Bower et al., 2022).

Meanwhile, architectural forms, such as curved or complex spatial transitions, can elevate arousal and emotional engagement, illustrating how spatial dynamics themselves can evoke feeling (Xylakis et al., 2021). Our emotional connections also extend beyond spaces to the objects we have lying around us, such as **our possessions or personal belongings, and become intertwined with our sense of self.** A psychological research stated that objects are not merely functional. **Over time, they accumulate personal meaning and merge with our identity, affecting self-esteem and belonging** (Bower et al., 2022; Belk, 1988).

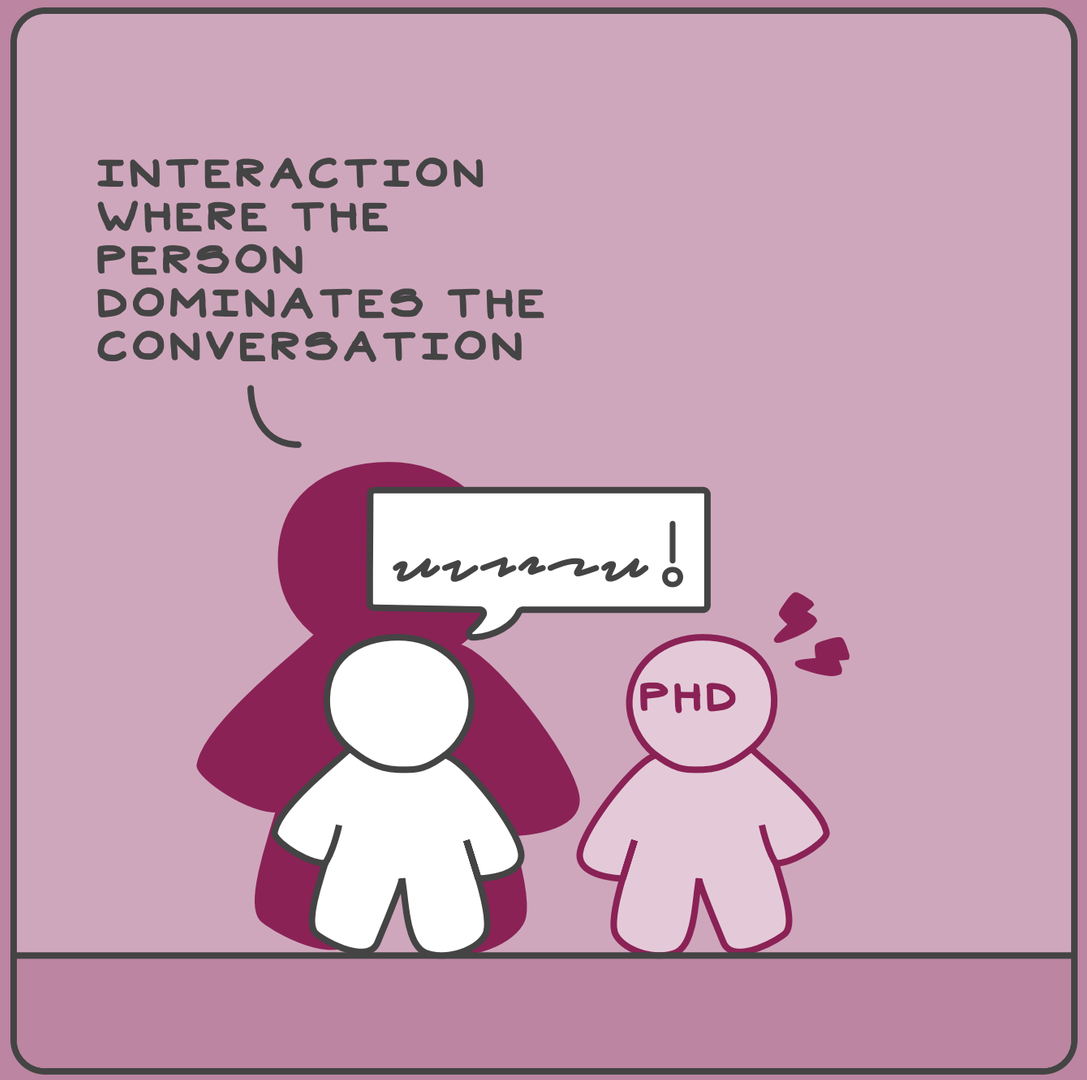
Even Pieter Desmet's research highlights how everyday objects, like **coffee machines, can foster social connectedness by facilitating informal interactions and emotional engagement in shared spaces.** Such objects go beyond functionality to create meaningful experiences that promote community and well-being (Desmet, 2002; Desmet et al., 2022).

Together, these findings inform us that objects and places can shape our mental states, our identity and even the way we engage with others.

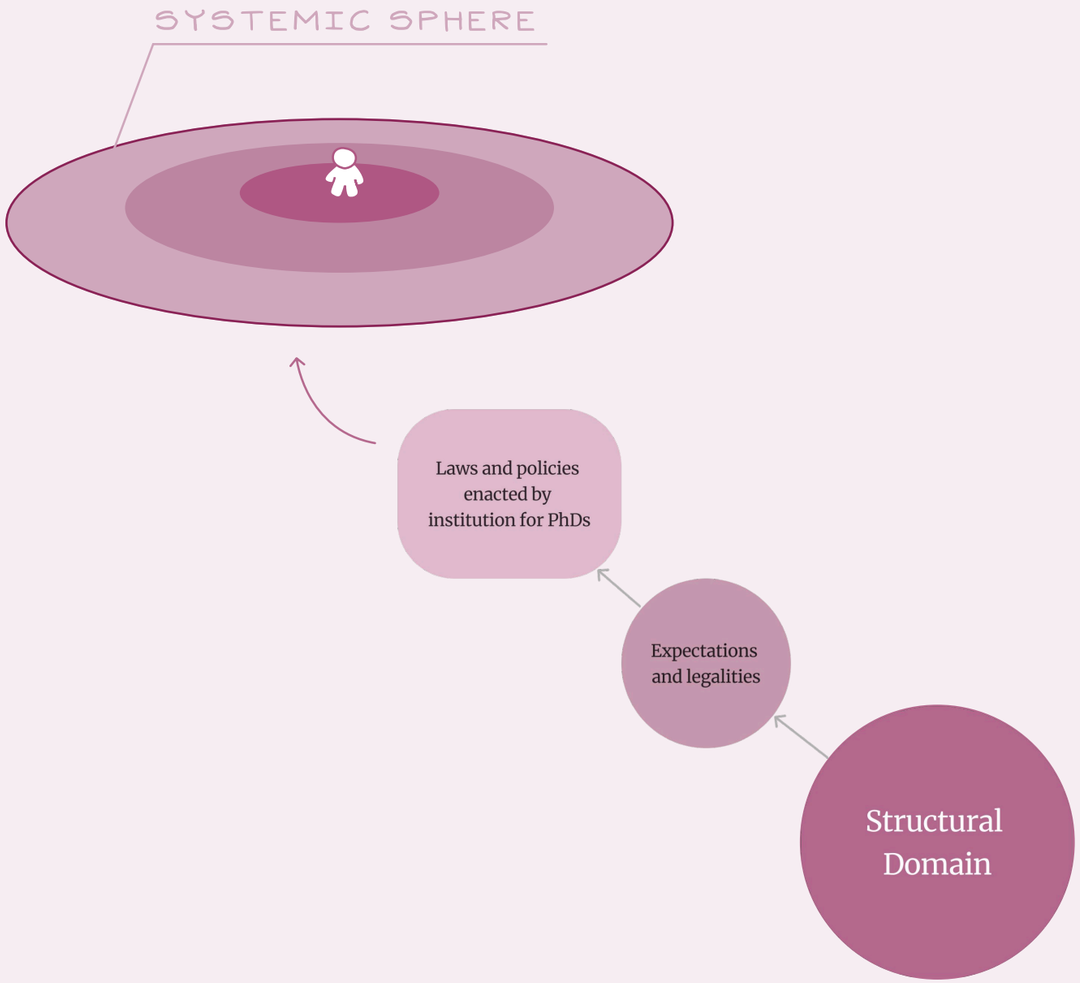
All of this is important to know as this was observed in **the way the PhDs related to spaces and objects during the spatial walkthroughs.** In the walkthroughs, we walked around and viewed many physical spaces, such as the studios, their work desks, and specific meeting rooms along with discussing about the objects within those spaces, such as sofas, pinboards filled with their work, or even their personal mug. As we approached each space or object, the PhDs' would narrate stories of their experiences related to those inanimate artifacts, clearly showcasing how these environments hold emotional value. **Physical spaces and objects** can act as initiators for reflection and conversation**, as they hold hidden memories of interactions, experiences and emotions within them.** This is how, through the means of tangible examples, tacit levels of understanding on the triggers and imposter-related experiences came to the surface.

The connection between objects, physical spaces and our experiences was the point in this research where the first "M" of the "Three Ms" method, mentioned in the overarching research approach (Section 1), emerged. This "M" relates to "Materiality" and how uncovering the relation we build with the material world leads to the hidden understanding of our interactions, experiences and emotions.

Finally, we now move from domain to domain, in the next pages, exploring the triggers and tensions within each, after which we then trace how these shape the experiences and emotions of the PhD researchers. We can also see what the PhDs have stated to be positive catalysts to a few selected experiences.



The Triggers Of Imposter Phenomenon



The Structural Domain (Systemic Sphere)

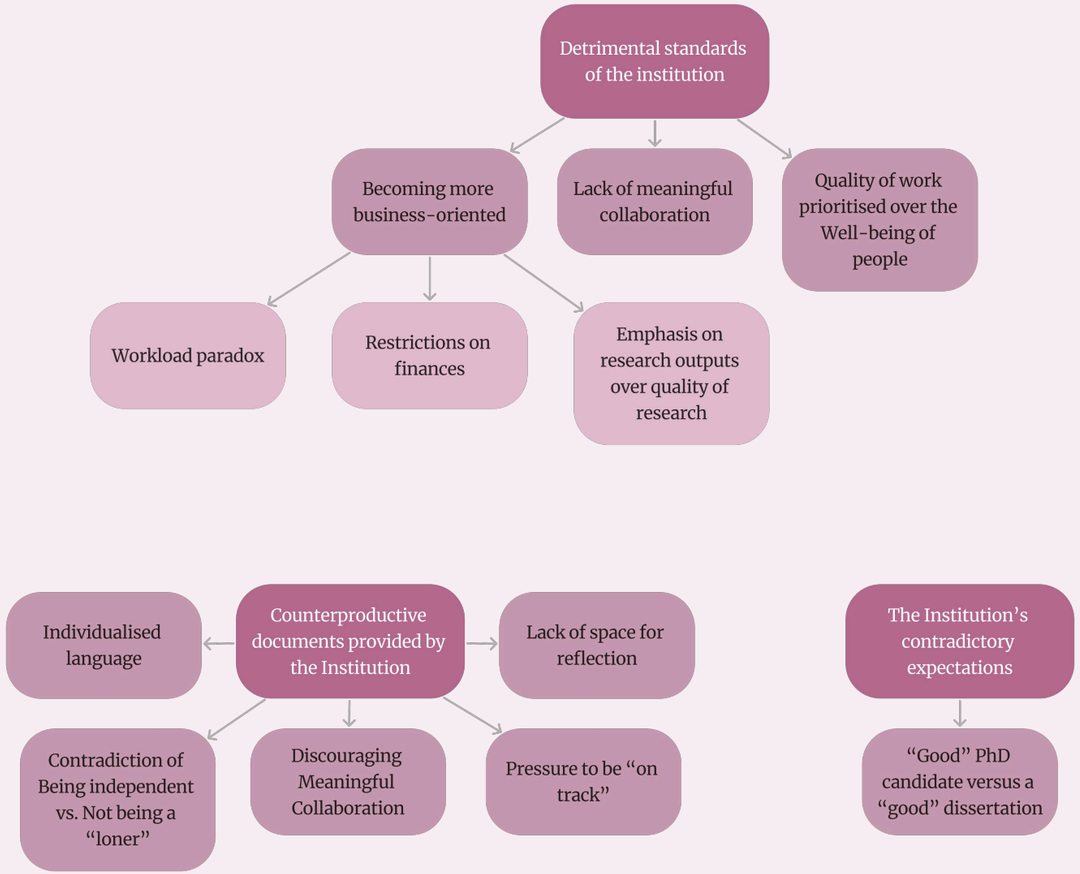


Figure 13. Triggers within the Structural Domain (Systemic Sphere)

CHAPTER 4

The Structural Domain

This domain covers the laws and policies that shape the PhD journey through formal rules and norms, setting out what the institution expects from them. Tensions in this space often emerges through the documentation and language used, as well as the broader structure of academia itself.

In one conversation with a PhD researcher, I used the metaphor of "a crack in the dam" to describe problems in this structure. The participant replied that it is now "a dam that has already been broken." This showcases the intensity by which the pitfalls are experienced.

Within the structural domain, there are three main triggers, each explored in detail to understand why and how they affect the PhD experience. These triggers are shown in Figure 13.

1. Counterproductive Documents Provided By The Institution

At the start of their journey, a PhD researcher receives documents, such as an employment contract, a manual and a document that outlines 'core competencies'. However, there are also documents, such as feedback or reflection forms that they are required to fill in at milestone moments during the course of their employment.

These documents hold value as they come from the institution, declaring what needs to be done to be a "good" PhD candidate at the university. It outlines the laws, policies and expectations that PhDs have to consider and abide by during their term of employment. The words printed on these documents have the power to shape the understanding of expectations put on the PhD researcher right from the beginning of their journey.

Through the conversations I had with the PhDs, three main issues were brought to the surface. The first issue elaborates on how these documents currently use language that is very individualised. The other issue lies in the misaligned expectations of what it means to be a "good" PhD researcher versus what it means to have a "good" dissertation. The third issue pertains to how the language used discourages meaningful collaboration. Let's dive into these friction points.

A. Individualised Language

"Individualise" means to treat or notice someone as an individual. The term also refers to the act of adapting something according to the needs of an individual (Merriam-Webster, n.d.).

This search on the definition of the term "individualise" revealed a relation between the institution's intention of the kind of language used versus how the PhDs experience that language. While the institution has used the language to modify guidelines so that it may suit the wishes or needs of a PhD researcher as a particular individual, this language has been perceived by the PhDs in a way that considers or

treats them as individual people, separating them from the collective.

> "I think, here, even in the language that we use at this university - like the formal documentation of the PhD process - it's all about the **individual candidate** and their **individual trajectory** and their **individual project and work**, which I just think for most people it's not helpful and it certainly is not for me."
>
> PHD RESEARCHER, IDE, TU DELFT

B. Contradiction Of Being Independent Vs. Not Being A "Loner"

The language in the documentation places heavy emphasis on being independent and organised, advising PhD researchers not to rely on others when making decisions. At the same time, it warns against isolating oneself from peers. For many PhDs, this feels like a contradiction. It places an expectation to remain socially connected without appearing dependent (as seen in the next trigger "The Institution's Misaligned Expectations"). This individualised framing creates an unspoken pressure to avoid being seen as a "loner" or "hermit," while also discouraging what might be perceived as "wasting time" engaging with others.

> "The overall picture is basically - **don't look like you're being a loner or a hermit**, but actually **don't waste your time on working with other people.**"
>
> PHD RESEARCHER, IDE, TU DELFT

C. Discouraging Meaningful Collaboration

There appears to be little to no documentation that speaks about meaningful collaboration. For PhD researchers, this absence feels almost as if the institution either overlooks or quietly discourages it.

Where collaboration has been mentioned, it is usually framed around research outputs rather than the interpersonal connections and shared learning that make the collaboration meaningful. As a result, communication within the institution tends to revolve more around academic work rather than bringing about genuine dialogue or relationships between people.

> "So much of that language is around the **PhD as an individual researcher**, being a representative of their work and and their research topic. And there's **so little about meaningful collaboration with other people**."
>
> PHD RESEARCHER, IDE, TU DELFT

D. Pressure To Be "On Track"

When a candidate's employment is tied to their residency status or serves as their only source of income, finishing their research "on time" becomes a matter of practical necessity (Beardow & Barendregt, n.d.)

For many PhD researchers, the pressure to stay "on track" can feel overwhelming. The language in the documentation mentions being "on track" many times, and it amplifies the consistent message that their success is entirely based on their individual performance. A PhD researcher mentioned how this reinforces the idea that their ability to produce research outputs is not only "a measure of their professional competence" but also a reflection of their "worth as a person".

Things inevitably don't go according to plan in life. Experiments can fail, writing takes longer than expected, or timelines slip. A participant mentioned how "it's difficult not to internalise that as a personal failure". What makes this even more challenging is that there's often little guidance on how to process or respond to these setbacks constructively. The structures around PhD work rarely normalise failure or provide space to reflect on it, leaving these experiences feeling shameful or something to hide rather than an inevitable and valuable part of the learning process.

> "It's not specifically in this faculty, but in general, the academic system does not accommodate (failures or mistakes) very well and so then it pushes you further as a PhD who's already in, like, a vulnerable position to **squish any expression of feeling like doubt or frustration or sadness or whatever,** and instead having to project this thing of "I'm in control of everything. Everything's fine. **Everything 's on track.**""
>
> PHD RESEARCHER, IDE, TU DELFT

> "This **'on track'** phrase comes up a lot in our **review forms** of, like, 'Is the project on track?' - that's how they ask it - **not 'How are you doing?', 'How do you feel about your research?'**. It's always **'Is the project on track? If there are delays, why?'** That's exactly what it says, or **'Please explain why (the delay).'**"
>
> PHD RESEARCHER, IDE, TU DELFT

> "Yeah, and also the fact that the obsession with the **'on track-ness' and 'on time-ness'** of it all that happens so much with PhDs here. It's like, **life happens you know?** Life happens.
>
> PHD RESEARCHER, IDE, TU DELFT

E. Lack Of Space For Reflection

There is a need for institutions to shift the focus of their annual reviews from a "what went wrong" approach to one that emphasises "what was learned."

Reflection is crucial for researchers because progress often comes from trying things out, facing challenges, and seeing which methods work or don't. We learn more from our mistakes than from getting things right without realising what worked. However, there is currently not enough support in institutions for this kind of reflective learning. This lack of support limits researchers' chances to engage with the research process in a meaningful way.

> "I wish there was a section that was just like, **'What didn't go to plan, according to the plan that you set up last year?'** and not 'Why didn't you manage that?' but **'What did you learn?'"**

> PHD RESEARCHER, IDE, TU DELFT

2. The Institution's Contradictory Expectations

A. "Good" PhD Candidate Versus A "Good" Dissertation

The ideal of a "successful" PhD candidate at TU Delft is built on the contradictory expectations of being independent without appearing isolated, and managing a multi-year research project while constantly adapting to shifting and sometimes unfamiliar circumstances (Beardow & Barendregt, n.d.).

The PhD researchers mentioned that official documents often define what it means to be a "good" PhD researcher and, separately, what constitutes a "good" dissertation. However, these two sets of criteria do not always align, which can feel disorienting for researchers who experience being both, a competent researcher and producing a strong dissertation, as inseparable. Their professional journey is deeply intertwined with their personal values, creating an overlap between their sense of self and their academic work. When these standards are presented as distinct, it can create tension and discomfort, as it highlights a separation between their identity as a researcher and the tangible outputs of their work.

> "But then there's other documents that pertain specifically to the dissertation where they use different words to describe like what **a good dissertation** looks like **versus** what **a good PhD** candidate looks like, **which makes sense that you would define this differently, but they don't really align necessarily, when they should.**"
>
> PHD RESEARCHER, IDE, TU DELFT

3. Detrimental Standards Of The Institution

This trigger focuses on the organisational system of the institution and how it is perceived by PhD researchers. Certain elements of this structure define the academic environment and establish the standards expected within it. By examining how these elements are interconnected and how PhDs experience them, we gain a clearer understanding of where friction arises. Specifically, it becomes evident that the institution is increasingly adopting business-oriented standards, reinforcing individualistic expectations and prioritising work outputs over the well-being of its members.

A. Becoming More Business-Oriented

The PhD researchers mention experiencing a shift in academia, where, as a field, it has shifted to being more "business-oriented".

> "But it's basically like higher education in the Netherlands has really **become a very business oriented system.** Academia in general, I feel, in a lot of countries around the world has become that way. "
>
> PHD RESEARCHER, IDE, TU DELFT

The PhDs mentioned the following three ways they experience this:

Workload paradox

The university acknowledges that there is high amount of workload on its staff members. However, there is a continuous need to seek out more revenue, to attain more efficiency and to reorganise systems. This leads to adding further strain on the amount of workload put on the staff members because:

- Increasing revenue leads to pressures for staff to take on more work,
- pushing for greater efficiency can mean doing more with less, which can again increase pressure on staff, and
- changes in structure often come with added responsibilities for staff, further

complicating their workload instead of simplifying it.

This showcases an unalignment or contradiction of the institution's goals with the consideration of the workload that is put onto its staff members as a result of these goals.

> "But yeah, it's very **paradoxical**. That the high workload is being acknowledged by the university. But at the same time, we need to get in more money. At the same time, we need to be more efficient. At the same time, we need to reorganise. They do not go hand in hand, right?"
>
> PHD RESEARCHER, IDE, TU DELFT

Restrictions on finances

In the structural domain, the institution has a restriction on finances, possibly due to budget cuts or financial revaluations that have been implemented by the government or by the institution itself.

While this affects all roles within the institution, the PhD researchers specifically experience a lack of security and support. They also experience a lack of freedom to pursue their research the way they wish to, in the "best" way possible (as is required by expectations put forth in the documentation provided by the institution). This leads to an impact on their well-being as well.

> "But also right now, for example, with the **financial situation** - all the talk about the de-intensifying education and cutting people out and those kind of things. **It's not going to make things much better, in terms of well-being at least.**"
>
> PHD RESEARCHER, IDE, TU DELFT

Emphasis on research outputs over quality of research

A consistent pattern is found in the tendency to prioritise research above all other important aspects of the PhD journey (Beardow & Barendregt, n.d.)

Within this tendency, there is a greater emphasis on the quantity of research outputs produced by the institution as a whole, rather than on the quality or type of research. Beardow & Barendregt also mention how a PhD candidate's success is often evaluated based on their productivity, which is measured through the concrete outputs and labour they provide to meet institutional interests, whether this is done intentionally or not.

> "And I think it kind of it fits with that idea of research being a necessary evil, almost, to **produce research output that then could be leveraged in terms of the reputation** of a particular faculty or professor or university."
>
> PHD RESEARCHER, IDE, TU DELFT

> "You're evaluated based on, like, your **citation count** or like the **impact factor** of a journal."
>
> PHD RESEARCHER, IDE, TU DELFT

B. Lack Of Meaningful Collaboration

Meaningful collaboration is often limited in academia, leaving PhD researchers in a position where they must actively create the collaborative opportunities they need.

> "But what I find, and what my friends find as well, is that **academia in general, it's just not set up to support meaningful collaboration** in so many ways."
>
> PHD RESEARCHER, IDE, TU DELFT

> "**I have expanded effort to cultivate a relation to it,** whereas a lot of these consortia, my own included, are created with the clear, like, the **explicit aim** to cultivate specifically for PhDs, **more collaboration.**"
>
> PHD RESEARCHER, IDE, TU DELFT

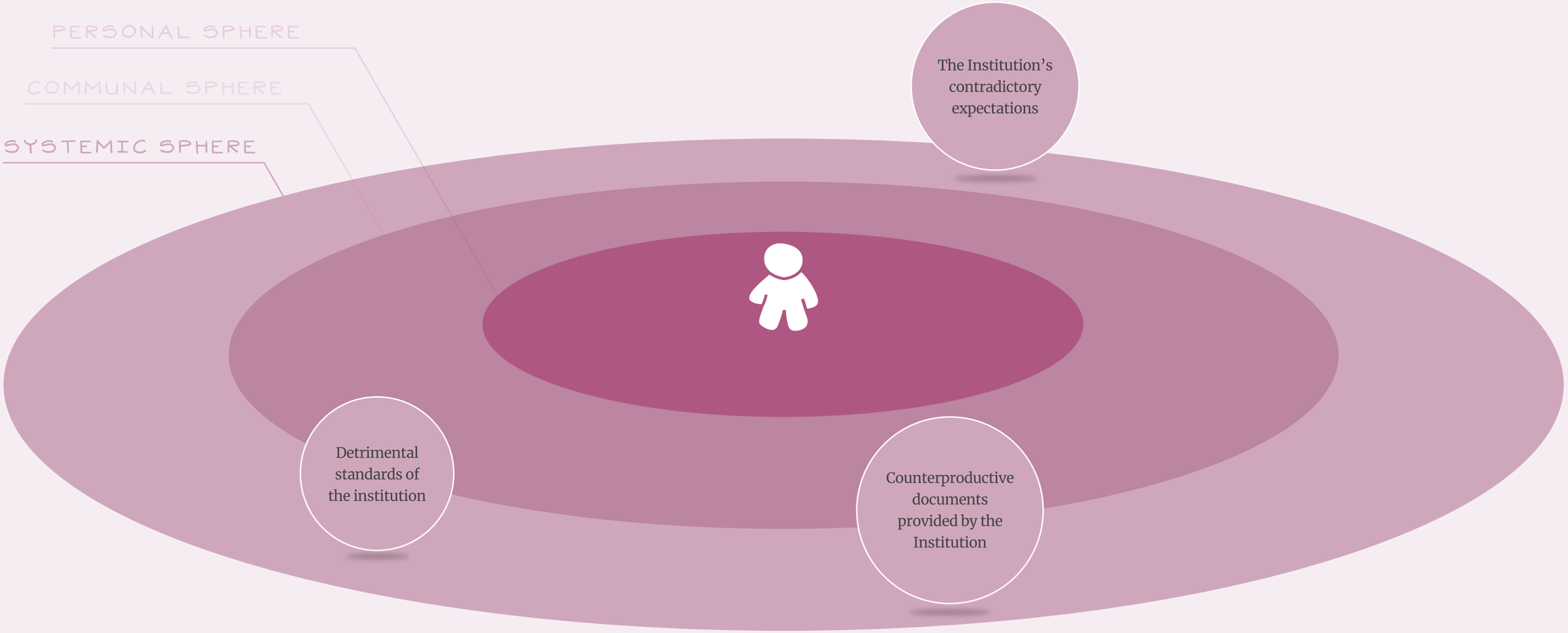
C. Quality Of Work Prioritised Over The Well-Being Of People

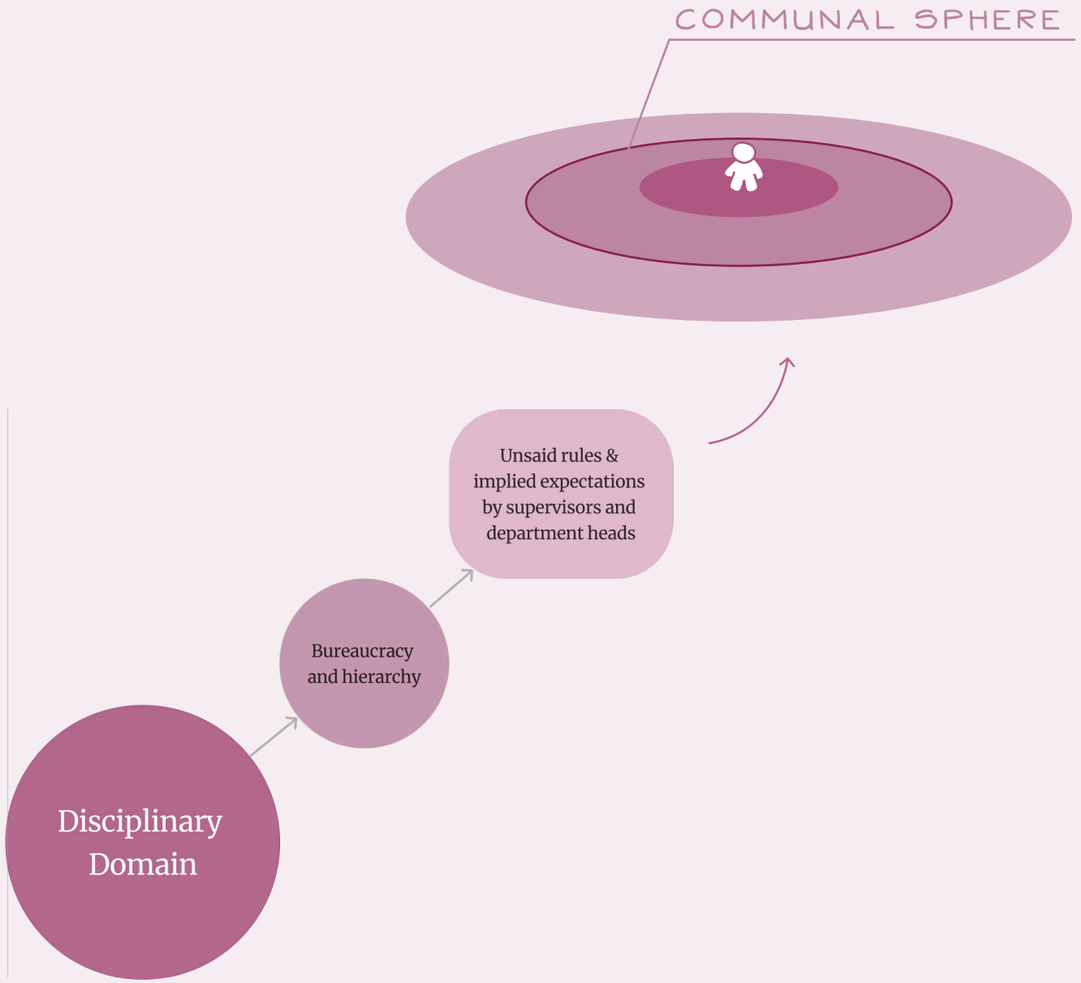
When the quality of work is considered, it's importance overrides the well-being of the people

Lack of space to make mistakes and learn through exploration

I think it plays into the kind of diminishing of the learning aspect of the PhD because to learn you have to make "mistakes" and you have to be comfortable with things not working out because that's when you learn. You don't learn when everything goes perfectly because you're like, "Well I don't know what I did, but okay."

Triggers Of The Structural Domain/Systemic Sphere





The Disciplinary Domain (Communal Sphere)

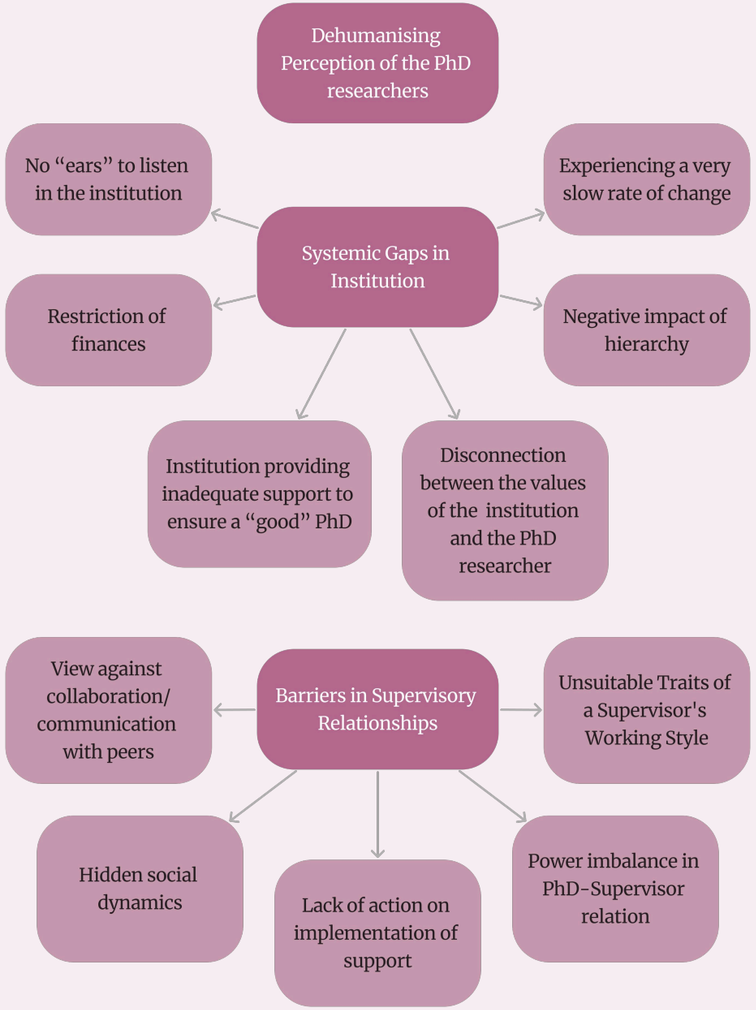


Figure 14. Triggers within the Disciplinary Domain (Communal Sphere)

CHAPTER 5

The Disciplinary Domain

In this domain, we look into how the PhDs' communal sphere is affected by the language, expectations and standards of the institution that were seen in the structural domain. We also dive into the tensions that emerge as a result of the social dynamics between the PhDs and the people who interact with them.

1. Dehumanising Perception Of The PhD Researchers

The perception of PhD researchers by supervisors and faculty members, particularly those in higher hierarchical positions, often feels dehumanising. As stated by some of the PhD researchers, they have been called “worker bees” or even “minions” of their supervisors. They are mostly viewed as people who generate multiple research outputs for those they are professionally dependent on (such as their supervisors or promoters), through rigorous deadlines while upholding high expectations. This quality is what the demeaning label of “worker bees” represents. This leads to the perception that they can be used to further some people in their professional journeys, and thus have an association to the degrading role of a “minion”. This also shows us a link to the theme of “detrimental values of the institution” from the structural domain, as shown in Figure 15.

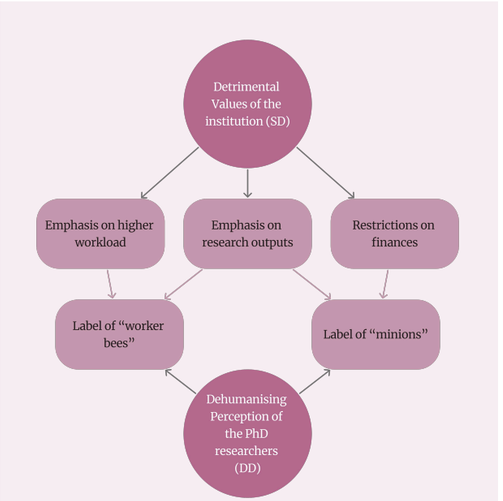


Figure 15. Link between detrimental values of the institution and dehumanising perception of the PhD researchers

> “Because they view PhDs as like **worker bees.** They're gonna buzz around and make loads of nice papers and then go away.”
>
> PHD RESEARCHER, IDE, TU DELFT

> “Well, once I was called a **“minion”** of my supervisor. Not

by my supervisor. By someone else, like, "Well, now that you have those minions, you can send them to do this." I was like, yeah, that's horrible."

PHD RESEARCHER, IDE, TU DELFT

2. Systemic Gaps In Institution

A. Restriction Of Finances

Restriction on finances implemented by the institution as seen in the Structural Domain is then experienced by the PhDs in the Disciplinary Domain, where they have to ask the institution for finances rather than having an allotted budget to begin with. This leads to experiencing an inability to do the "best" they can for their research in the Interpersonal Domain. They also experience a perceived lack of trust from the institution when it comes to managing their money. Additionally, this strengthens the hierarchal power differences that exist in the relation between the institution and the PhD researcher.

B. No "Ears" To Listen In The Institution

In the social spaces of PhDs, such as in meetings, PhD researchers often notice that the opinions of associate professors are given much more weight than their own, even when discussing a project led by the PhDs. While it is understandable to value the professional expertise of those with more experience or higher positions within the organization, tension arises when the views of these members are prioritised over those of the PhDs.

There is a significant lack of space within the institution for PhDs to voice their concerns regarding the detrimental standards and outdated norms that affect their experience. Although there are yearly review meetings and monthly departmental or sectional gatherings, these forums often do not provide the necessary environment for PhDs to express their worries. What is truly needed is a space that fosters genuine listening.

C. Institution Providing Inadequate Support To Ensure A "Good" PhD

In society (hegemonic domain), there is an accepted norm that pursuing a PhD or being a PhD candidate is substantially hard. This perception is reinforced by institutions that have embraced this cultural norm, resulting in the PhD journey often being filled with obstacles.

In order for the researchers to be "good" PhD researchers as mentioned in the documents provided by the institute, the institute should be able to ensure a "good" PhD journey in the first place by focusing on "intellectual difficulty" rather than a creating challenges that are unnecessarily difficult.

"There is a difference between a **PhD being hard** versus a **PhD being intellectually difficult.** It is the acceptance of the former that is the problem."

PHD RESEARCHER, IDE, TU DELFT

D. Disconnection Between The Values Of The Institution And The PhD Researcher

Being a "good enough" PhD candidate is largely determined by the quantity of research outcomes produced. This emphasis stems from the business-oriented mindset adopted by institutions within the structural domain. Universities that submit a larger number of research papers tend to achieve higher rankings and reputations. While prioritising numerical figures makes sense, the same importance is not consistently placed on the quality of research output. For PhD candidates, greater significance is placed on producing high-quality research or even exploring new ways of producing research rather than merely increasing the quantity of outputs. Achieving higher quality research requires time, effort, and adequate support. Unfortunately, support in terms of finance, collaboration, and networking appears to be currently lacking.

Furthermore, PhD candidates often experience a disconnect between the legal rules in their contracts versus the social norms upheld by their institutions. Contracts may state that a final outcome can take various forms, such as an exhibition or an art piece, as long as it can be defended before the supervisory panel. However, this flexibility is not reflected in the disciplinary domain, where the emphasis remains on the quantity of research output rather than its quality or form.

In other words, there is still a focus on the research outputs in terms of numbers rather than the quality or form of the research output itself, not only from the institution (systemic sphere) but also by the people within it (communal sphere). Most people within the PhDs' communal sphere work to uphold the institute's standards without questioning it, which is where the friction in their relation to the PhD researcher lies.

This situation highlights a clear disconnection between the structural domain and the disciplinary domain regarding the values of the institution versus those of PhD candidates. There is a disparity between the legal rules established and the socially accepted norms upheld by the institution.

"There's kind of like **unspoken rules or norms** as to the **number of papers you should be trying to publish** and **where during the course of your PhD so that it is good enough** even though it's not legally enforceable at all."

PHD RESEARCHER, IDE, TU DELFT

E. Negative Impact Of Hierarchy

The PhDs discussed the factors that lead to their negative experiences with hierarchy. They tend to feel hierarchical tension in the following situations:

1. When there is a well-reputed or famous male embodying their social level.

2. When there is a significant age gap between s PhD and the person they are interacting with.
3. When there is a considerable difference in years of experience between a PhD and the other person.

These factors tend to put more distance between the PhD researcher and the person they are interacting with, thus triggering their negative experiences. Additionally, a lack of familiarity and feelings of insecurity during social interactions further amplify these feelings. However, the PhDs' experiences can vary based on the person themselves and what kind of social space they create while interacting with the PhD researcher, as they also mentioned having had positive experiences with those with higher ranks or years of experience.

F. Experiencing A Very Slow Rate Of Change

In the case where the institution does have the "ears" to listen to the issues faced by their staff, the process of changing things to adapt to the staff's needs are extremely slow. While it makes sense for change to occur slowly, the problem lies in its underlying reason - is this reduced speed due to having a lack of time to adhere to the issues faced or from a lack of importance given to the issues?

There are fast-paced changes made when it comes to the issues where the institution's reputation is at stake, which brings us back to the business-oriented mindset being adapted by universities now. Unfortunately, due to this slow pace of change, a lot of those who ignite it don't get to taste the fruit of their own labour.

> "But I think what I see and hear from a lot of the people, the PhD students who are here, is that **things goes very slowly**. If you bring up an issue, like in my case, yeah, **it's been a year and things are only slowly changing**. Yeah, for many people, **they don't even get the fruit of this.**"
>
> PHD RESEARCHER, IDE, TU DELFT

3. Barriers In Supervisory Relationships

Here, we see the different tensions that come up in the relation that the PhDs have with their supervisors.

A. View Against Collaboration/ Communication With Peers

The individualised language, contradictory expectations and how meaningful collaboration is discouraged in the documents provided by the institution (as we have seen in the structural domain), leads to it being reinforced in the disciplinary domain by the supervisors.

> "But then the way that each PhD's project is set out is so individual that it **puts all the labour on the PhD to foster any kind of collaboration.**"
>
> PHD RESEARCHER, IDE, TU DELFT

Due to this, there is a responsibility that is put on the PhD to foster collaboration in order to meet their needs. The researchers then proceed to do this by creating spaces of collaboration themselves or by looking outward from the university for collaboration opportunities that may exist elsewhere. Some PhDs have also mentioned pursuing collaborative research in secrecy due to their professors seeing it as a distraction. They had been explicitly asked not to pursue such endeavours and to focus solely on their independent research.

> "It's like, yeah, **my supervisors didn't want me to do collaborative research, but I'm doing it on the side**."
>
> PHD RESEARCHER, IDE, TU DELFT

This eventually makes them feel restrained in the way they approach collaborative research, while also taking them away from the benefits that collaboration could bring in terms of shared knowledge, diverse perspectives, mutual support, and the potential for more innovative and impactful outcomes.

> "And you know a lot of PhDs now, myself included, are **hired into consortia** or some kind of collaborative group **outside of their own institution**."
>
> PHD RESEARCHER, IDE, TU DELFT

Often, the responsibility falls on PhD students to create and manage channels for building community within their circles as well. This expectation adds to their heavy workload and consumes a significant amount of their time, as they not only have to implement these channels but also maintain them afterward.

> "And I've done a lot of that myself in, like voluntary work in the past two years. Yeah. And I noticed in all of that, like, **if we don't do it, no one else is gonna do it for us.** Really, because, yeah, maybe pessimistic, but I do think **quite a lot of people just don't really care very much.**"
>
> PHD RESEARCHER, IDE, TU DELFT

B. Hidden Social Dynamics

There are social dynamics between certain

people in a department or section that are not known by all. This leads to hidden frictions or tensions that aren't spoken about openly or aren't addressed. While these dynamics can occur at all levels, tensions among supervisors, professors, and similar roles tend to have a greater impact on those who work with them.

PhD students often feel restricted in forming connections with others because they are unsure of the relationships their supervisors have with different individuals. The absence of clear boundaries and communication regarding these hidden dynamics leads to confusion and limits the autonomy of everyone involved in the same environment.

> "I mean I definitely **feel less freedom** in just going ahead and **making connections** myself, **finding collaborations**.
>
> PHD RESEARCHER, IDE, TU DELFT

To understand the relationships among individuals in the department, PhD students often need to learn from others or encounter unintended conflicts themselves. This lack of awareness about interpersonal dynamics can lead to feelings of helplessness. Although, over time, they can gain insight into the existing situations, unresolved tensions among people can still have an impact on the overall environment, affecting others who wish to explore connections and collaborations.

> "I think the difficulty for me is that there's **a lot of unsaid things** like this. So it's very much like **you just have to go through the experience of it or hear about something from someone**."
>
> PHD RESEARCHER, IDE, TU DELFT

C. Lack Of Action On Implementation Of Support

The PhDs mention a lack of follow-up on the provision of support by their supervisors. While there may be room for discussion about certain issues that the PhDs face, or the kind of support they may require, it is not always initiated or implemented by the supervisors.

> "A lot of the things that people higher up say they're going to do or they are doing to support PhD well-being and collaboration, community, et cetera, **saying it is one thing, doing it is another** and in my experience **the doing comes from the PhDs themselves. A lot of stuff we have at this university for PhDs is done by PhDs.**"
>
> PHD RESEARCHER, IDE, TU DELFT

PhD candidates express a need for support in several areas, including:

- community-building,
- clarity and structure in their work, and
- collaborating as a team with shared responsibilities

A supervisor can play a vital role in helping PhD candidates connect with academic circles. This support enables them to find collaborations and research opportunities, as well as build connections with their target groups and stakeholders. Additionally, supervisors can help PhD candidates engage with academic communities where they can present their research and establish valuable future relationships.

> "There isn't much, sort of, baked-in support in terms of **clear precedence for the work, clear publication communities,** then I think people in the supervisory team, for example, maybe other people in the project group or consortium or whatever, need to pay more attention to that and help to sort of bridge the gap there."
>
> PHD RESEARCHER, IDE, TU DELFT

There is a lack in the clarity, structure and way of working that the PhDs face alone. Without clear communication about their individual ways of working and how they can come together as a team, the PhD reseracher and their supervisor may face friction that will only grow if left unaddressed.

> "It's like OK, is that my job to connect with potential partners? Is it my supervisors job? Will they get annoyed if I talk to someone else?"
>
> PHD RESEARCHER, IDE, TU DELFT

It is essential for the supervisor to actively participate as a member of the team and understand their role in building a positive relationship with the PhD researcher. The **supervisor must take clear responsibilities** as well. While the PhD researcher is learning to conduct research, they are also producing outputs that contribute to the supervisor's professional development. Since these elements are interconnected, **it is crucial to foster a relationship based on trust and understanding, rather than uneven responsibilities and resentment.**

D. Power Imbalance In PhD-Supervisor Relation

An imbalance occurs in the relationship between a PhD researcher and their supervisor when one holds more power than the other. A PhD researcher is dependent on the supervisor professionally, which is usually the case with

most PhDs. However, this power imbalance becomes problematic when the supervisor exploits that dependency for their own advantage. This can happen when the supervisor:

- gains excessive ownership over the research project, and/or
- acquires more financial control over the project.

This situation arises because supervisors also depend on the PhDs. They rely on them to produce research that enhances their own professional portfolios and advances their status in their respective fields.

> "But at the PhD level it's like, **you're kind of someone's person**. You're their resource."
>
> PHD RESEARCHER, IDE, TU DELFT

Because of this power imbalance and dependency, the PhDs:

- maintain obligatory relations,
- avoid conflicts with their supervisors in order to protect their perception and/or their title, and
- are unable to bring up any emotional strain that they experience in their research journeys to their supervisors.

> "The promoter's **got the grants** for the project. He's the project leader. So in the end he has **more decision-making power**."
>
> PHD RESEARCHER, IDE, TU DELFT

All of this eventually leads to a superficial relation that doesn't cater to each of the members.

Having less ownership/reliance on the PhD's research leads to a more empathic relation. This has been experienced by a few of the PhDs, where they mentioned how they "silence" themselves less in the presence of such supervisors. Unfortunately, because only a few experience this, they mention how a freedom from such an imbalance is seen as a privilege.

Building a relation based on trust and communication is crucial for the well-being of both, the PhD candidate and the supervisor. It is also important for creating valuable knowledge collaboratively and for having shared learning experiences.

E. Unsuitable Traits Of A Supervisor's Working Style

From our conversations, a couple traits of the supervisor's working style were mentioned by the PhDs as unsuitable.

One of the traits was having an old-fashioned mindset. This refers to holding onto or preferring norms, values, and traditions that are characteristic of past eras, often contrasted with modern or progressive approaches. This manifests as behaviours that adhere to traditional moral and ethical stances. However, a couple of PhDs mention a traumatising experience with one such professor from their past who gave into old ways of teaching which mistreated and harshly spoke to individuals being taught.

Another trait is something seen more often in the faculty, which are supervisors who are very busy because of extremely high amounts of workloads. Busy professors are created by a system which expects its staff to have an endless checklist of skills and tasks that need to be achieved in order to keep the system running. Professors nowadays need to be able to do everything - supervise, write, teach, manage, organise, collaborate, attend meetings, conduct admin work, etc. - while also being the best at it all. This is a tremendous pressure put upon any individual. While there may be acceptance to the existence of niches and specialisations to the kind of research being done by supervisors, the concept of niches doesn't extend to skills. A professor could be great at writing, while wanting to grow in the teaching domain. However, the pressure to do the best in everything all at once is truly a lot. This is a systemic issue that is experienced in the disciplinary domain by the supervisors.

> "I also see that **my supervisor is super busy with other things**. Which on the one hand makes it understandable. On the other hand, it's like, "You got to understand your workload or your own limits" - which I think he doesn't."
>
> PHD RESEARCHER, IDE, TU DELFT

> "**Many other supervisors are overworked or don't have enough time.** So it's not just a personal thing. It's **a systematic institutional thing**, not just the faculty, but in academia."
>
> PHD RESEARCHER, IDE, TU DELFT

To the PhDs, this manifests as:

- a lack of availability in terms of time and resources provided by the supervisors to support the PhDs, and
- mismatched responsibilities created due to supervisor's lack of understanding of their own limits.

This lack of time and resources leads to the PhDs loosing out on opportunities which hinders their development and growth as a researcher.

The mismatched expectations lead to the PhD having to manage the supervisor's time and adds unnecessary responsibilities on their plate. The PhDs also experience friction and resentment with their supervisor as a result of the additional burden of tasks.

> "So I wrote a document... which my promoter asked me to write up. Which also is like, **"Oh yeah, you'll do that in an hour, right?" No, it doesn't take an hour.** Like, I have to go back and see what are all the things... So it took me a couple days in reality."
>
> PHD RESEARCHER, IDE, TU DELFT

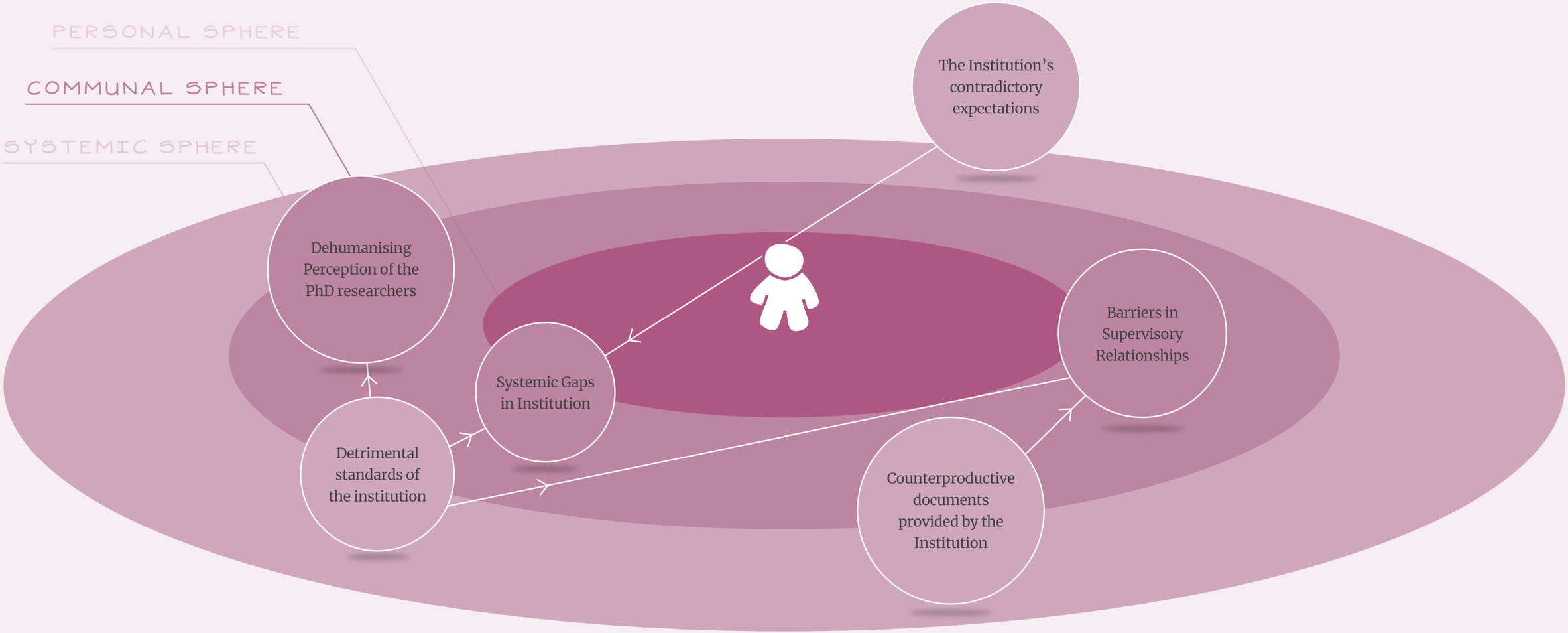
> "**I also had to manage him...** I had to kind of put him in his shoes, you know, **to make him do it.** I always felt like maybe he does the task, but he does it very slightly and very minimally and then he kind of disappears again and thinks everything is fine."
>
> PHD RESEARCHER, IDE, TU DELFT

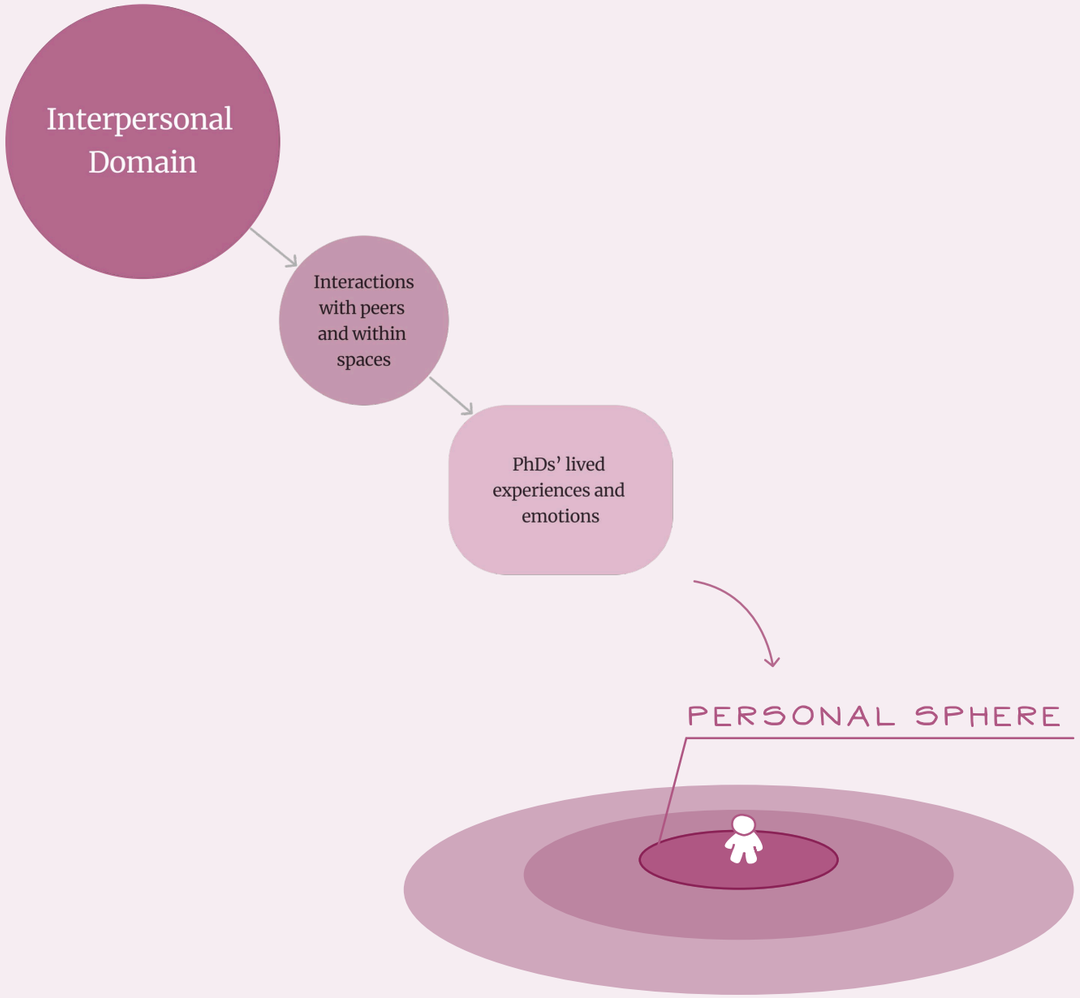
This particular issue also relates back to the power imbalance mentioned earlier. As the person with more power, the supervisor should take accountability for the mismatched responsibilities and work to address it whenever it arises along the journey.

By forming boundaries and addressing each team member's roles and responsibilities along with being honest about personal and professional limitations, would help resolve conflicts that arise in this relationship.

> "**I want him to take responsibility** because he's the project lead. He got all these partners on board, but **he leaves it up to me to manage them**. He made all these promises or like these agreements with them. But he never really kind of tried to enact them or try to figure them out."
>
> PHD RESEARCHER, IDE, TU DELFT

Triggers Of The Disciplinary Domain/Communal Sphere





The Interpersonal Domain (Personal Sphere)

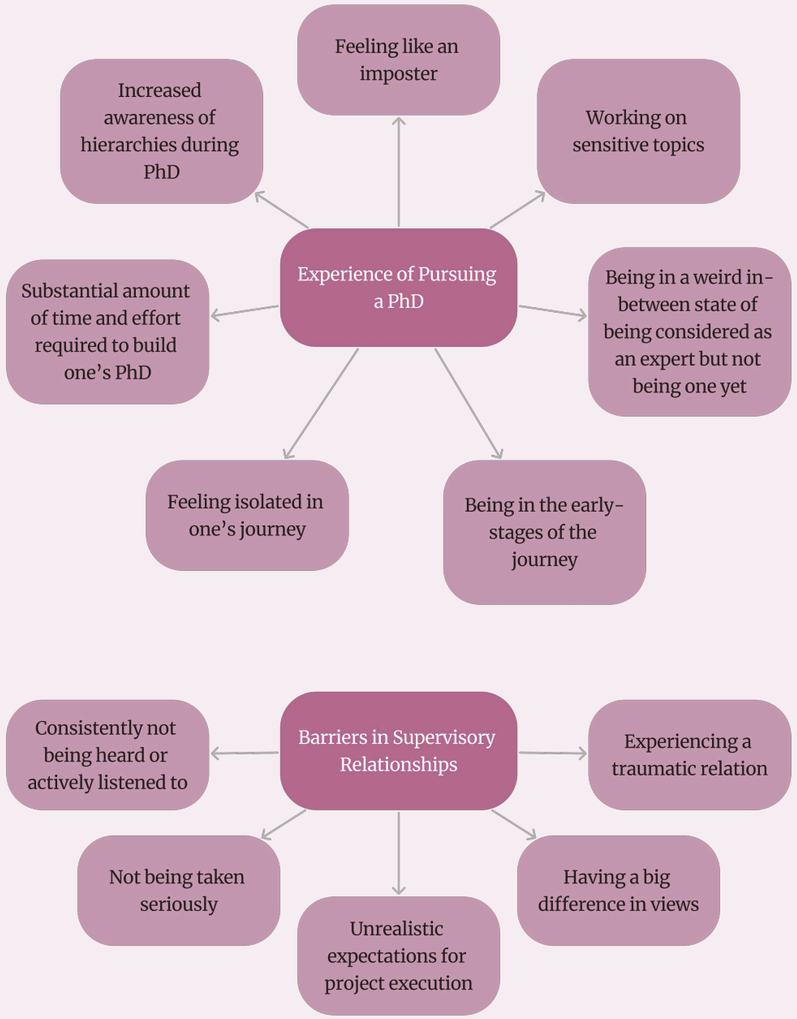


Figure 16. Triggers within the Interpersonal Domain (Personal Sphere)

CHAPTER 6

The Interpersonal Domain

In this domain, we see how the PhDs' personal sphere is impacted by the triggers in the other domains. This part focuses on the triggers that have emerged in their day-to-day life as an academic. While these triggers may be connected to the relations they have with others, such as the one with their supervisors, this domain predominantly focuses on how they experience being a PhD researcher.

1. Experience Of Pursuing A PhD

Here, we see what barriers emerge in the journey of pursuing a PhD.

A. Substantial Amount Of Time And Effort Required To Build One's PhD

As a part of their journey, the PhDs spend their time attending courses, holding meetings with their supervisors and other stakeholders, reading papers, conducting research, writing papers, attending conferences, etc. Apart from all these activities, there is a large amount of time and effort that is needed to be put into the building their PhD itself. One might ask, what goes into building one's PhD? It involves understanding one's research, having to manage expectations, managing relations with supervisors and peers, finding collaborations and opportunities, searching for others within their research niche, navigating frictions experienced within social circles along with overcoming obstacles that are put forth in their path due to the design of the system in place.

> "Because in my case, I feel that I have, basically, spent an **awful lot of my time in the PhD and building that myself**, at the **detriment of my ability to produce research** products."
>
> PHD RESEARCHER, IDE, TU DELFT

Due to this extra load of responsibilities that seem to be more related to the management of obstacles in their path, they experience a loss of time that is crucial to put into exploring and creating quality research. Creating quality research products, and many of it at that, is something that is the institution's goal as well (as we have seen in the structural domain). However, there are barriers from the institution that the PhDs face while trying to achieve that goal.

Additionally, there is a mismatch in the level of expectations a PhD burdens, which does not align with the amount of resources they have fulfil those responsibilities. The lack of support, power imbalances, and mismatched responsibilities experienced by PhD students with their supervisors can create additional obstacles. This situation highlights an opportunity for supervisors with resources to enhance support by actively sharing those

resources with their teams.

In conclusion, PhD candidates are often left to independently shape their own education, a reality that is both surprisingly common and detrimental to their progress (Beardow & Barendregt, n.d.)

B. Feeling Isolated In One's Journey

The journey of a PhD is something that is experienced as "very isolated" because of individualistic structure of it. With the university emphasising on this individualistic nature in it's documents, language and expectations (as seen in the structural domain), this isolated feeling is amplified.

Another space where one may feel isolated is while researching within a small niche. While it is something that can be a positive aspect to doing research and creating new knowledge, they mention "being stuck in their own brain". This can be interpreted as a way to say that there is a lack of people around within that niche to talk to and share ideas with. They do have peers from other niches to interrogate their thinking with, which is often beneficial to their work and way of sense-making. However, this trigger emphasises on the isolation on can feel from the experience of doing something specialised - something that not many people are doing.

> "Because I think a lot of what we do is by ourselves. For most of us, it's **very isolating.** You're just stuck in your own brain."
>
> PHD RESEARCHER, IDE, TU DELFT

C. Increased Awareness Of Hierarchies During PhD

There is an increased awareness and experience of hierarchies as a PhD researcher, when compared to being a Master student.

> PERSONAL REFLECTION
>
> As a Master student, you accept your role as purely a student, knowing there are professors who come to teach you. In my case, there was more hierarchy felt when I was a Bachelor student back in India, as over there the teachers were really above you and enforced their own rules that needed to be followed to a tee. In your Bachelors, you aren't aware of the different roles or positions in the institution. If you are, you don't understand how they differ or what the weight of each role is. For example, all professors were perceived to be professors, instead of PhDs, post docs, assistant professors, professors, etc. I did know that some of my teachers were PhDs, however, they held the same level in my perception that a professor may have, as both taught me.
>
> However, as a Master student here, I did experience a sort of equality I had not experienced before while also being more aware of the different roles. The professors were as keen to learn from us as we were from them. There was an openness to the discussions which I had not felt before. We were able to voice our opinions and have it be considered as well.
>
> As I do my thesis now and gain understanding of the PhDs' experiences from them, I do see this difference in how they are a part of the system while we, the Master students, are still separate from it.

This experience of being a part of the system, a part of the institution, and a part of the employed staff, does make a PhD researcher experience hierarchy, as they become a part of it.

> "Coming from your masters I think there is sort of a...I would say, I guess I felt more removed from academia and how it works and the hierarchies and the bureaucracy and, like, you really **don't notice it as a master student.** But I don't think I was prepared for how much it's actually **super noticeable, like immediately sort of, while you do your PhD.**"
>
> PHD RESEARCHER, IDE, TU DELFT

As a result of it, they have mentioned having to "self-minimise" one's extroverted qualities in order to fit in "appropriately" in the presence of people who embody their hierarchal role.

> "I do feel **my nature of being super connected and networking** is probably getting a bit, yeah, **minimised.** I don't know, maybe I'm **self-minimising** it because I'm, like, **I don't know if it's appropriate** or not."
>
> PHD RESEARCHER, IDE, TU DELFT

D. Being In The Early-Stages Of The Journey

There are certain triggers that a PhD researcher experiences which are felt more intensely at the beginning of their journey.

As a new researcher, they feel left out from academic discourse due to unfamiliar language that they encounter in conversations. This happens especially when the PhD researcher comes from a different professional background or when they experienced the field

differently because of where they studied last. The difference in the type of academic conversations and academic culture is what makes them feel cut out of conversations. Not being able to contribute to the conversations because of not being able to understand what is being talked about can leave them feeling more isolated and even inadequate.

> "So there's all these conversations but obviously, as a new researcher, I'm not in that space yet. **I don't know quite a lot of these acronyms.** So it's like a very small thing like that where **you're immediately cut out of the conversation** because you're currently not contributing to it."
>
> PHD RESEARCHER, IDE, TU DELFT

E. Working On Sensitive Topics

Working on sensitive topics could include pursuing projects in the domain of healthcare or personal trauma.

PhDs who work on sensitive topics experience emotions that are "strongly connected" to their work. High levels of relatability to the topic or emotional engagement to it leads to having deeper emotional connection with the research. On one hand, these emotions indicate having levels of care, understanding and empathy for the stakeholders and for the research. It builds a meaningful connection to one's work.

However, holding onto a lot of emotions at once, without the space to release or talk about them leads to suppressing them till a "floodgate" opens. It is crucial to acknowledge the stress and pressure experienced in their journey, where they face physically and mentally challenging experiences. They mention having the need of a space where they might work on these emotions "as an academic and as a human".

> "It's also weird, because it's **emotions that are very strongly connected to my work**. It's not separate from the work. I can never separate it. So these emotions are both a blessing and a curse, and I **need to work with them as an academic and as a human.**"
>
> PHD RESEARCHER, IDE, TU DELFT

They also mention holding onto a fear where they may harm others if they share the challenges they have been experiencing with these sensitive topics. This is why it is important to consider how the institution may support them professionally as they conduct this type of research. There is a lack of support and lack of space for them to address these issues in professional circles or receive training for it. While they may be trained to be designers or researchers, there needs to be the existence of the right tools and professionals to guide them in understanding how to deal with researching within sensitive domains.

> "**I don't think there is the right support at this faculty to do sensitive work.** I'm not the only one who struggles with sensitive work. There's also people doing research in healthcare that get to see patients and get to see some really horrible things happening in hospitals. And unlike the medical staff that get trained on how to deal with these things, **we're not trained.**"
>
> PHD RESEARCHER, IDE, TU DELFT

F. Being In A Weird In-Between State Of Being Considered As An Expert But Not Being One Yet

Being a PhD researcher comes with having paradoxical states of existence. While a researcher may be recognized as an "expert" in their field, the reality during much of the PhD journey is that they often feel uncertain and inexperienced. Alongside this, there is a need to be confident in their expertise while simultaneously recognizing that learning is an ongoing process. This can be difficult to balance at certain points of the journey.

> "The fact that apparently I am...
>
> **I should be considered an expert in what I do**, and I think that for a big part of a PhD, **you are not an expert.** You don't know what you're doing. But you have to be able to defend it. And the same time acknowledge that you don't know it all."
>
> PHD RESEARCHER, IDE, TU DELFT

G. Feeling Like An *Imposter*

Lastly, all of these triggers boil down to one of the main triggers we address in this thesis - the trigger of feeling like an imposter.

While not all PhDs that I had a conversation with mentioned experiencing imposter phenomenon, most did experience it at different intensities and in different contexts.

The way this feeling emerges in the PhDs is caused in some way or the other by the triggers mentioned throughout the domains. We will look more into how it manifests in them in the "The Experience and Emotions of Imposter Phenomenon" part.

2. Barriers In Supervisory Relationships

Here, we see what barriers emerge in the relationship between the supervisor/promoter and the PhDs. The relationship between a supervisor and a PhD candidate is one that has nuances in the dynamic where they learn from each other while also holding space to be vulnerable and open with them about the process and their experience of it. As it goes with every kind of relationship, there are positive approaches that heal and negative triggers that harm the relation. Let's dive a bit deeper to see how and why the negative triggers manifest in the interpersonal domain from what we have discussed in the disciplinary domain.

There are five triggers that are going to be mentioned which cause a disconnection in this relationship. This disconnection leads to building a passive relationship with their supervisor that lacks engagement, meaning and connection.

A. Consistently Not Being Heard Or Actively Listened To

Many PhDs encounter a disconnect with their supervisors, which often stems from a lack of active listening on the supervisor's part. This could occur because of a busy supervisor as we have seen in the disciplinary domain. A busy supervisor might have an occupied mind and as a result not have the time or space to listen to the PhD or heed to their needs.

PhD programmes **often frame supervisors either as "apprentice-masters"** or as **"role models,"** roles that can, in turn, result in candidates being exploited or overlooked (Beardow & Barendregt, n.d.) This shows us how the structural domain impacts this relationship as well.

> "I try to address and give feedback in some different ways, but I didn't feel my supervisor was very open to it or like almost kind of like, **closing his ears for it**. You know, like, he would be deaf to it."
>
> PHD RESEARCHER, IDE, TU DELFT

Another issue that arises due to the lack of alignment between the PhD and their supervisor is the supervisor's "band-aid" solution to tasks that act as superficial means to address issues or tasks rather than understanding how the PhD would like to be helped.

> "Yeah, it is always a build-up, right? Like all of these things individually, they're not problematic per se. If they happen one time, alright. But if they happen, indeed, in many different contexts, many different situations then, I mean, it's about losing trust in a person, right? **I do not trust them to do a good job or to help me in the ways that I want to be helped.**"
>
> PHD RESEARCHER, IDE, TU DELFT

> "For example, he asked me to make a planning, and I told him, "My process is very slow. I **have many other things to do, so probably I can't work on it right now.**" But he was like, "Yeah, **make a milestone... thing... structure... whatever. It will help you.** You will have a sense of control over your project." And I was like, "Okay." And I sent over a schedule to him but it was not for me because **I'm not using it for planning. But then he also doesn't use that planning, I'm pretty sure.**"
>
> PHD RESEARCHER, IDE, TU DELFT

Due to this, the supervisors may not know of the latest updates of the project due to lack of time given through meetings or the lack of attention given in those meetings. This leads to the PhDs self-silencing as a protective mechanism. The supervisors not showing up mentally and physically to the discussions leads to the PhD researcher withholding their opinion from supervisors. Eventually, they learn to work without the supervisor, ending up being a one-person team. They keep their opinions to themselves or cancel meetings. They feel disconnected from their own way of working, where they end up performing tasks mindlessly, especially those tasks that have been mindlessly designated by the supervisor themselves. This leads to the PhD researcher's journey being one which feels frustrating.

> "Yeah, sometimes, for example, maybe a couple months ago like, he pitched ideas to me. And I just do not... I just will not go further down his train of thought. I would just be like, "Okay" and **I will not say what my opinion is on this. Because he won't listen anyways and it will just frustrate me.**"
>
> PHD RESEARCHER, IDE, TU DELFT

> "I've **cancelled two meetings with my supervisors**, mostly because of the reason that I do not feel like their input would help me at this point... So, I do not inform them about what I'm

doing. **I give them brief, surface-level summary. I'm just putting my head down."**

PHD RESEARCHER, IDE, TU DELFT

B. Not Being Taken Seriously

In certain relations, the supervisors do not take the PhD researchers seriously. This could occur because of the old-fashioned mindset that enforces hierarchy or the busy nature of the supervisor discussed in the disciplinary domain, both of which work to strengthen the gap between the two. The PhD researcher, then, ends up loosing trust on their supervisor when they're not taken seriously or when the supervisor is disengaged with the process and research.

"Yeah, there's been **no follow up on it anyway**. So then I mean, those are the kind of things that make me **lose my trust** in my promoter, that yeah, I also feel like **you're not taking my work seriously** or like **you're not really on board with the process here**, so that makes me very disillusioned with my supervisor by **having a very negative attitude towards them**, in this case."

PHD RESEARCHER, IDE, TU DELFT

This triggers feelings of being judged which then leads to building a relation that has a lack of faith, trust and positivity. A resentment grows within the PhD with a negative attitude growing towards the supervisor. This may also enhance the feeling of isolation if you feel like the members of your team are not engaged with the project.

This occurs because the supervisors may have a perception of the PhDs as someone who are here only to produce research for them. However, the PhD researcher wish to be seen as more than just that.

C. Unrealistic Expectations For Project Execution

Certain supervisors who are disengaged with the research process, and who are overly occupied with their own work, may develop unrealistic expectations about the timeline for certain tasks. This arises due to a lack of communication and misunderstanding as well.

"I think his idea of what the project is supposed to be like is way too optimistic. And yeah, underestimating the amount of work tasks take, basically. Being **overly optimistic about how quick or how fast or how easy tasks are to execute** basically."

PHD RESEARCHER, IDE, TU DELFT

D. Having A Big Difference In Views

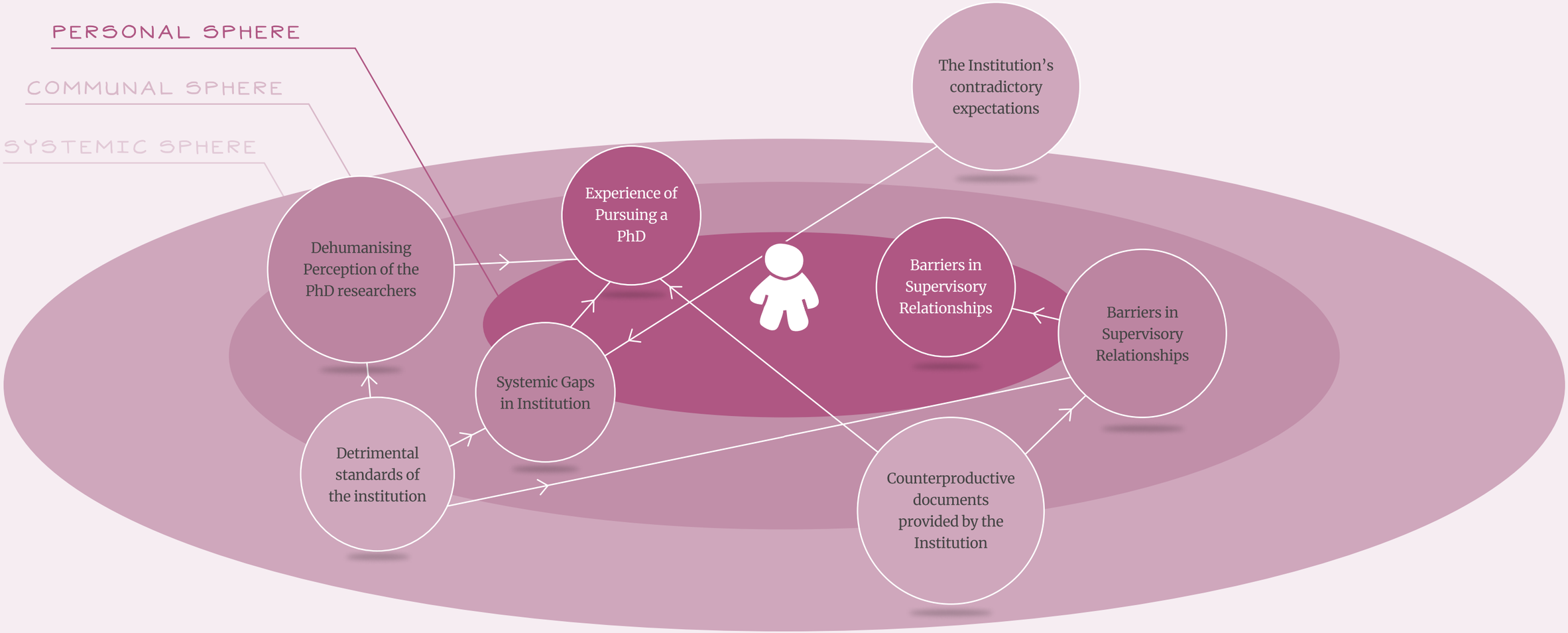
Experiencing a big difference in views leads to making a lot of compromises for the sake of the research, creating more distant between the two members of the team. Because of the uneven power dynamic, if the PhD candidate puts their needs aside to adhere to the requirements of the supervisor, it manifests as another form of self-silencing. This leads to causing more frictions and causing further disengagement with the PhD's own research journey and way of working.

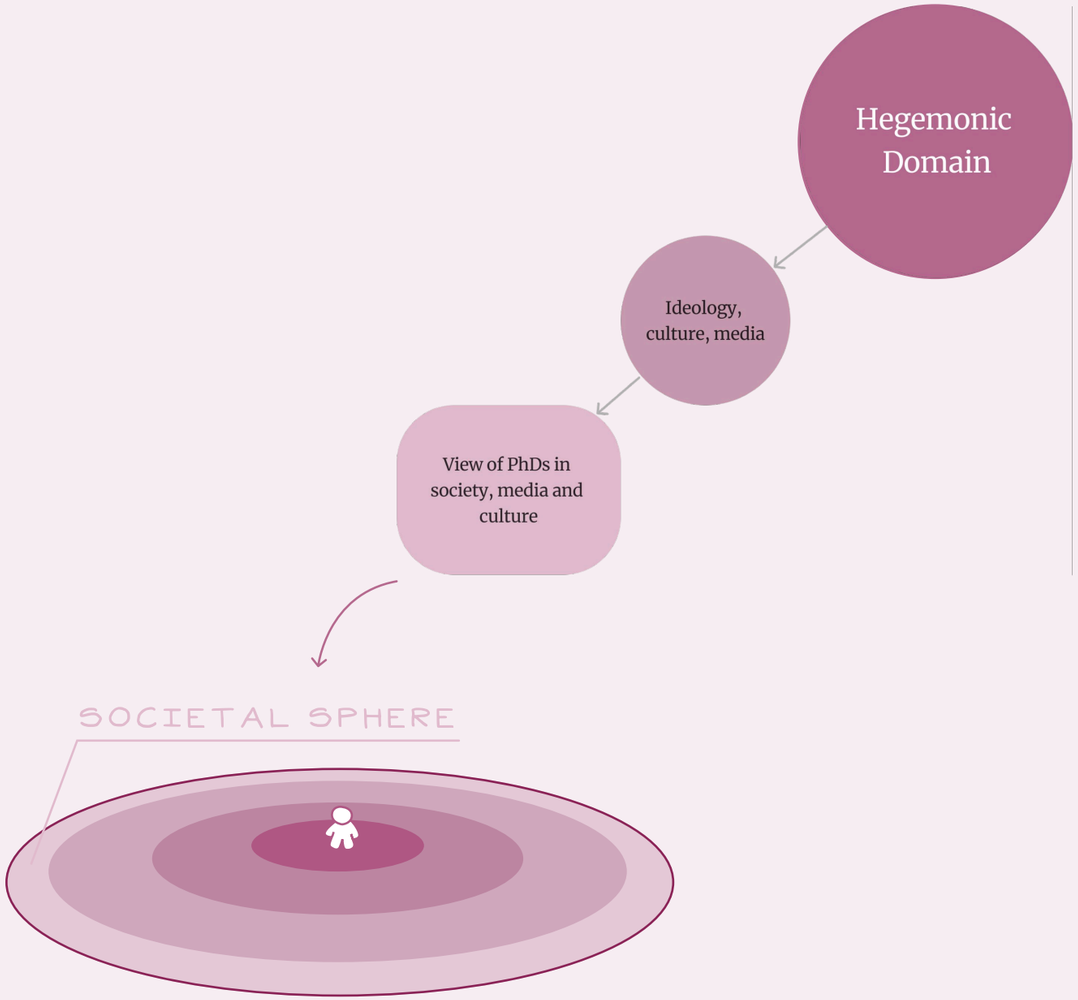
E. Experiencing A Traumatic Relation

In the worst case scenarios, when a PhD experiences a supervisor who causes a traumatic experience, it can have long-term effects that may sustain over the years. Experiencing oppression and abuse, consistently and systematically, ingrains feelings of imposterism along with the lack of self-belief.

All of these triggers showcase the importance of this relationship and how crucial it is to maintain trust and connection in order for both to thrive rather than survive.

Triggers Of The Interpersonal Domain/Personal Sphere





The Hegemonic Domain (Societal Sphere)

CHAPTER 7

The Hegemonic Domain

This domain is out of scope for this thesis. However, since a few points did emerge in the conversations with the PhDs that pertain to the the societal sphere, it is briefly mentioned here.

1. Perception Of PhDs In Media

Across the meme corpus, the doctoral experience is represented as difficult, exhausting, and filled with contradictions.

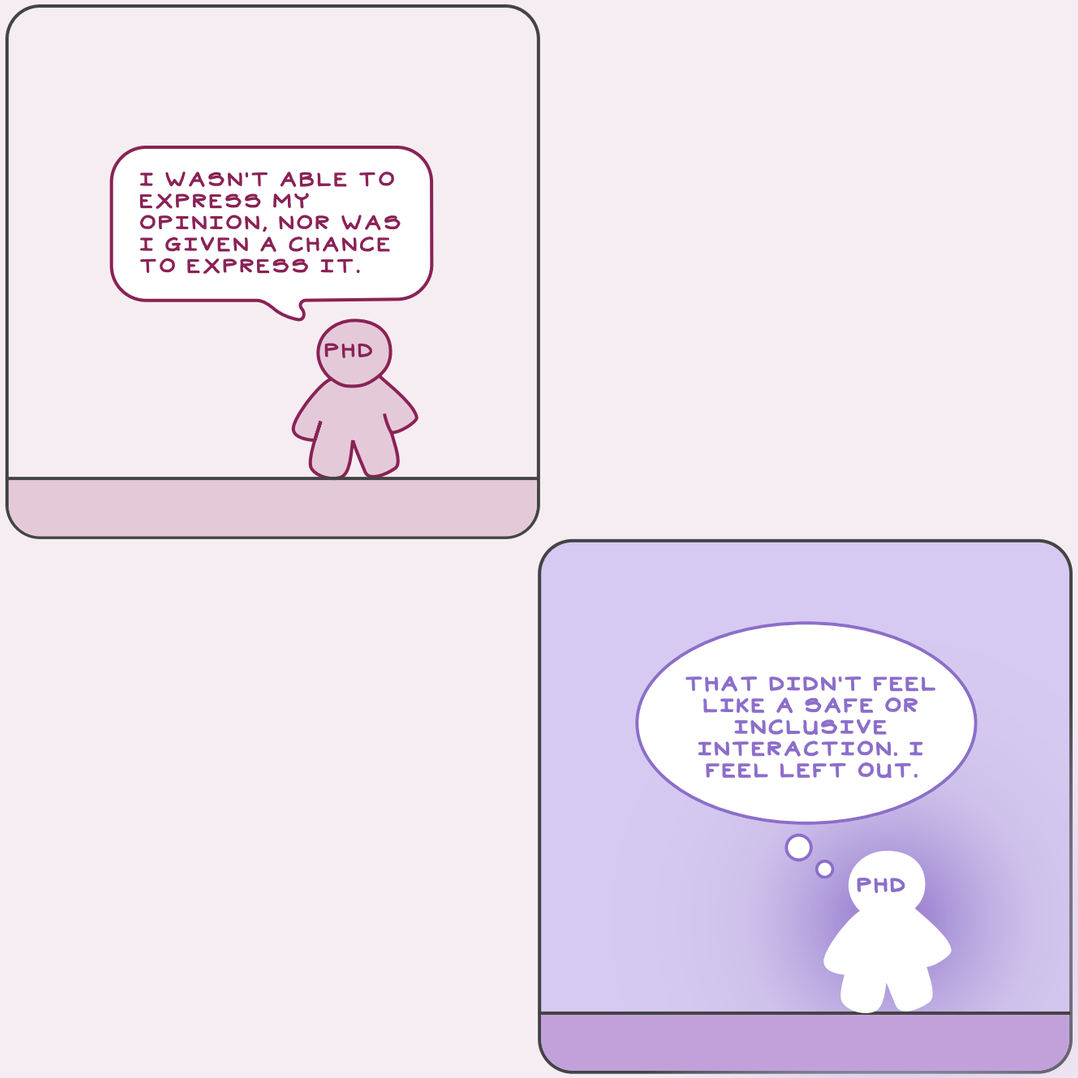
A meme, in its simplest sense, is a cultural artifact, and often takes the form of an image, video, or phrase, that is circulated and adapted across digital platforms to communicate shared experiences or emotions in humorous, ironic, or critical ways (Shifman, 2014). In academic contexts, memes often capture collective struggles, frustrations, or insider jokes, making them a powerful form of cultural commentary.

Even the PhD researchers I had conversations with described the journey of doing a PhD as one with several obstacles. This perception is reinforced and normalised by the widespread circulation of academic memes. Popular media also contributes to this narrative. For example, in The Simpsons, PhDs are depicted as “people who have made a terrible life choice” and who are constantly scrambling for positions to survive.

However, research also shows that memes can serve as tools for community building, emotional release, and resistance to dominant academic norms (Nissenbaum & Shifman, 2017; Burrows, 2024). They allow PhD researchers to laugh at their struggles, to find solidarity with others in similar situations, and to critique the structural inequalities of academia in a way that feels safe and accessible. This has also been stated by a PhD researcher during the listening session as well.

However, the normalisation of these struggles through memes also carries risks. When institutions adopt this cultural narrative without questioning it, they implicitly accept difficulty, burnout, and alienation as unavoidable parts of doctoral education, rather than conditions to be addressed or changed (Burrows, 2024). In this way, what emerges as a form of coping and critique among PhD researchers is often left unchallenged by the structures that perpetuate it.

> “You should look into **PhD memes.** I think you will see a lot of the same (imposter-related) patterns.”
>
> PHD RESEARCHER, IDE, TU DELFT



The Experiences And Emotions Of Imposter Phenomenon

CHAPTER 8

The Experiences And Emotions

Now that we have seen all the triggers mentioned by the PhD researchers and how they link to each other across the domains, we move on to understanding how those triggers may manifest imposter-related feelings within the PhDs.

Do They Experience Imposter Phenomenon And Self-Silencing?

Out of the eight participants, six said they had experienced imposter phenomenon, while the remaining two still recognized issues that stem from it. What stood out was how strongly they linked these feelings to the social and contextual factors of academia, which can be seen in the triggers. All of them were familiar with the term "imposter syndrome" rather than "imposter phenomenon," and they often connected it to the idea of being a high-achieving individual.

When asked about self-silencing, most initially claimed that they did not engage in it. However, once I explained the concept more clearly, many began to recognise themselves in it. They even made their own connections between imposter feelings and self-silencing, pointing out how feeling like an imposter in their academic environment often led them to hold back their opinions, suppress their needs, or remain quiet in certain situations. In this way, imposter phenomenon was not seen as a separate experience, but one that directly fed into patterns of silencing. The relationship between the imposter phenomenon and self-silencing has been demonstrated by this research, as well as existing literature, as discussed in Section 1.

What Is Their Interpretation Of The Terms 'Imposter Phenomenon' And 'Self-Silencing'?

The answer to this question can be seen in Figure 17. This figure showcases their interpretations of the both the terms.

For imposter phenomenon, the participants described it as feeling like a fraud, believing they don't deserve their achievements, doubting their qualifications, and thinking they are "failing up through life." They also shared the perception that others see them with high regard, while they themselves don't believe they deserve that recognition.

For self-silencing, the participants described it as having to "protect" themselves, being unable to voice their opinions, and limiting the ways with which they express themselves.

Together, the visual highlights how imposter phenomenon and self-silencing are connected, where feelings of being undeserving or fraudulent (imposterism) often lead to withholding opinions or muting one's expression (self-silencing).

When Do They Experience Imposter Phenomenon And Self-Silencing?

Imposter phenomenon was found to be most strongly felt in moments of transition or uncertainty. For example, when changing fields,

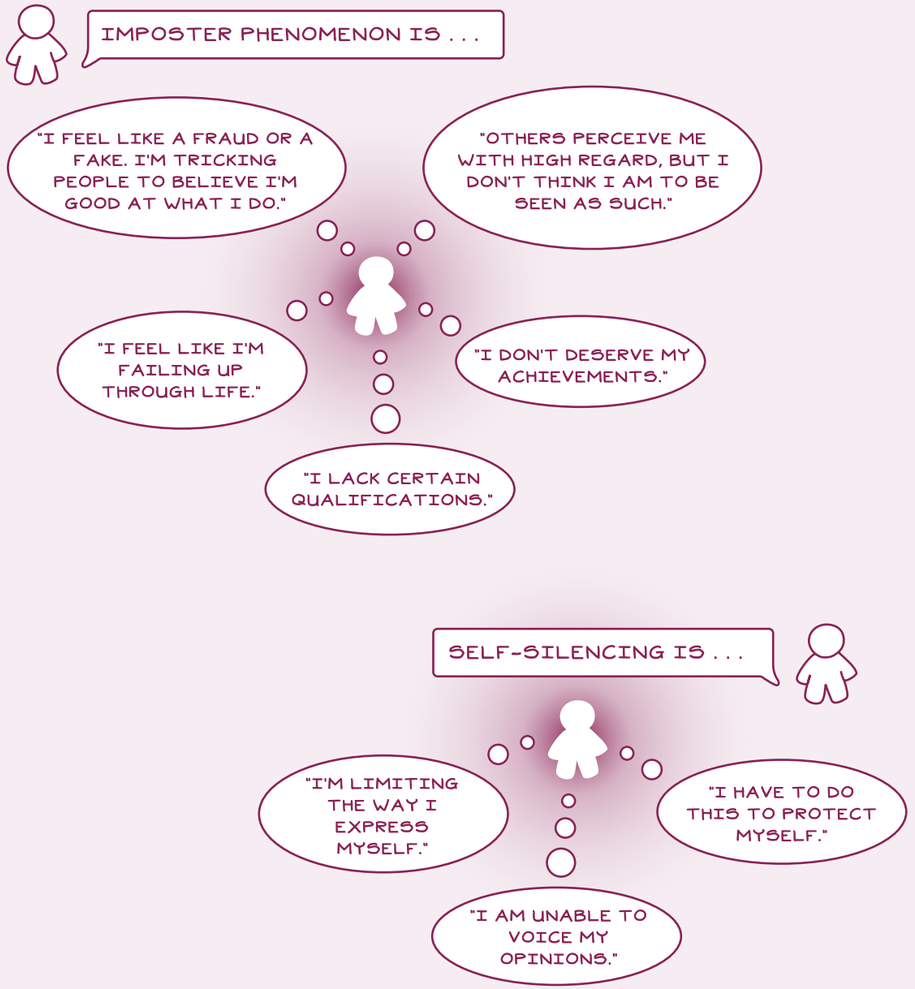


Figure 17. PhDs' interpretations of imposter phenomenon and self-silencing

starting the PhD, entering unfamiliar environments, or stepping into formal academic spaces. Although it can persist throughout the doctoral journey, participants described it as more intense and frequent at the beginning than toward the end. Six of the PhDs pointed out that imposter phenomenon is widespread across academia, and three specifically noted how women are more likely to experience it.

Self-silencing, on the other hand, often emerged in response to hierarchies, whether in relation to supervisors, collaborators, or faculty members who were higher in skill, experience, age, or position. It was also tied to the spaces where these hierarchies were most visible, such as meeting rooms, shared offices with senior staff, or male-dominated environments. Participants explained that silencing could happen unconsciously, especially when they were stressed or at the start of their PhD, surrounded by people who seemed to have more knowledge and fluency in academic language. As time goes on, self-silencing may increase, especially if relationships with supervisors deteriorate.

Importantly, some participants described silencing as a deliberate act of protecting oneself. They mentioned how it was an act of "closing the bridge temporarily" rather than "burning the bridge" entirely. These stories show how imposter phenomenon and self-silencing are not just internal struggles, but are deeply shaped by social dynamics and spatial conditions. The memories, both positive and negative, that accumulated from the spatial walkthrough within these spaces added further nuance to how PhDs experience belonging and expression, or silencing and doubt.

How Do They Experience Imposter Phenomenon And Self-Silencing?

The PhDs used metaphors to describe how imposter phenomenon is experienced by them. They state how it:

- is messier "behind the curtain" than how they appear on the outside,
- occurs as a "knee-jerk" response, and
- exists on a spectrum of feelings and isn't "black or white".

Imposterism and self-silencing encompass a wide range of feelings and experiences, which arises from the many triggers we previously explored in the various domains. While some PhD candidates have linked specific experiences and emotions to these triggers, here we explore the spectrum of emotions and manifestations that arise due to imposterism and self-silencing.

Experiencing Imposter Phenomenon

Figure 18, on the next page, showcases how imposterism can manifest within PhDs. Just as the triggers, these findings have also been derived from the conversations with the PhDs.

The figure shows many ways that a PhD researcher may feel about themselves as a result of experiencing triggering situations in their work spaces. Take some time to look over and read each one of them. You may find some of the experiences described relatable, or you might discover emotions that you haven't considered before. If you're a PhD researcher reading this, use these pages to know that you're not alone in your experience. There are others feeling this way as well.

In the image, each speech bubble holds an experience or an emotion that a PhD researcher mentioned during the listening sessions or spatial walkthroughs.

It showcases feelings of anxiety and fear of being judged or perceived negatively, often accompanied by the sense of being "too much." This fear fuels self-doubt, leading them to question whether their opinions are valid contributions.

As this doubt grows, they feel more isolated, and their negativity bias strengthens, reinforcing the belief that they are imposters. At the same time, rejections or setbacks are taken as "proof" of inadequacy. The longer this cycle continues, the more evidence seems to accumulate against them, making the feelings of self-doubt and imposterism even stronger.

Studies have shown that we have an inbuilt negativity bias, where negative news is more likely to be perceived as truthful. Since negative information draws greater attention, it also may be seen as having greater validity (Hilbig, 2011). This might be why gathering "proof" against ourselves seems to be easier.

Overall, this visual illustrates how anxiety, fear of judgment, and institutional pressures feed into a self-perpetuating loop of self-doubt, isolation, and imposter feelings, making it difficult for PhDs to express themselves authentically.

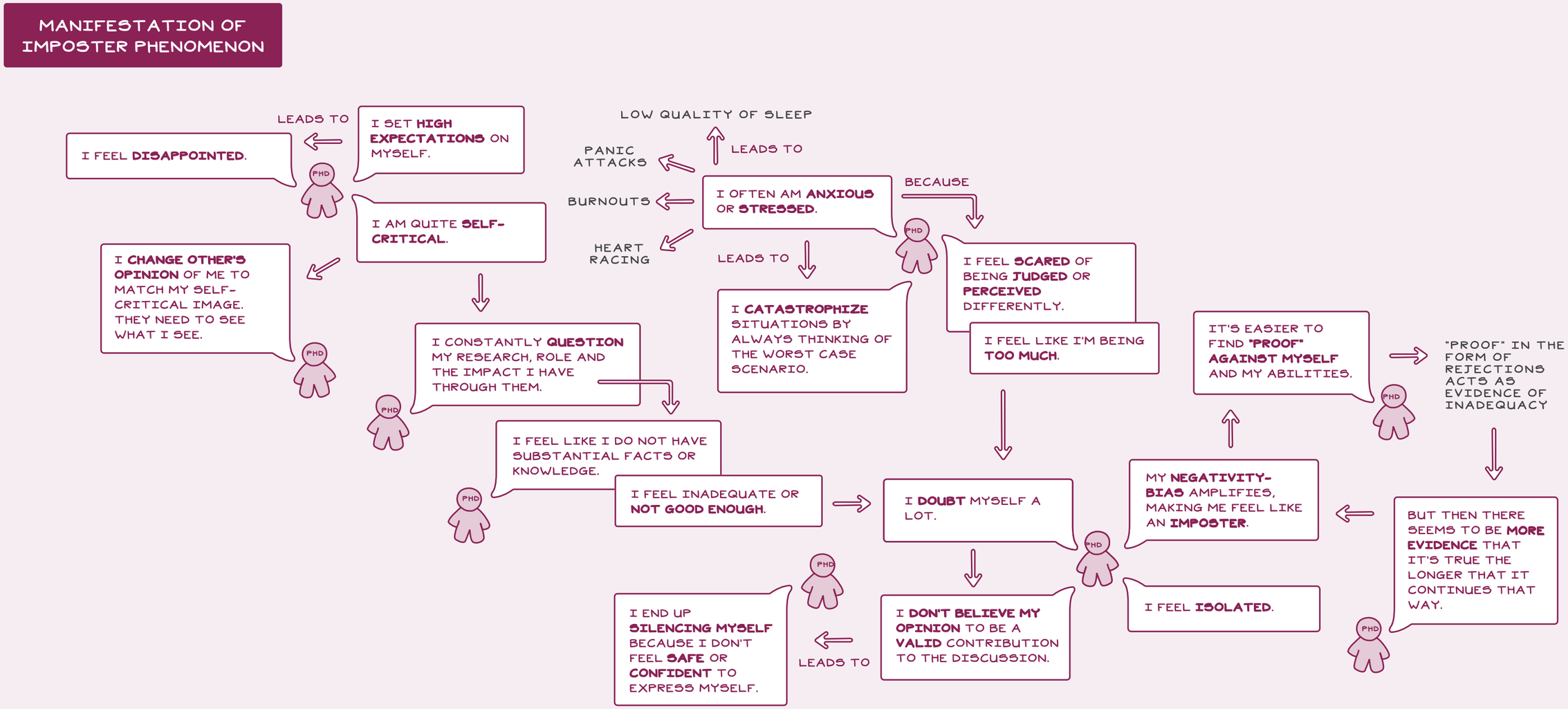


Figure 18. Manifestations of Imposter Phenomenon in PhD researchers

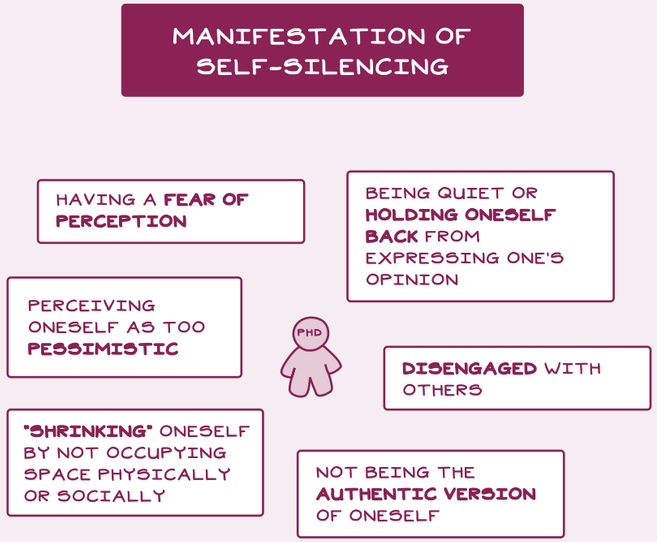


Figure 19. Manifestations of Self-Silencing in PhD researchers

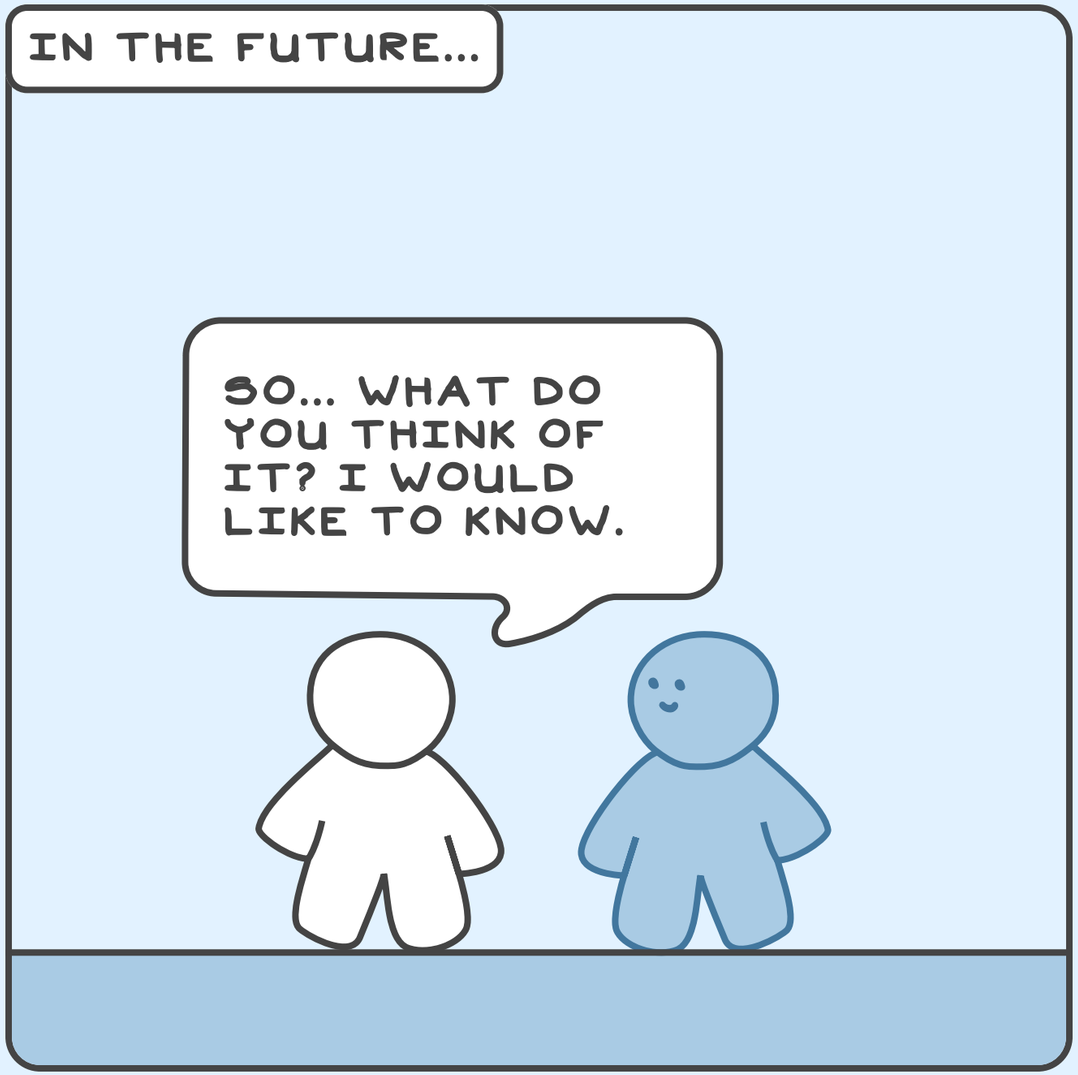
Experiencing Self-Silencing

Figure 19, **showcases how self-silencing can manifest within PhDs**. As we know now, self-silencing is one of the many ways imposterism manifests. However, the PhDs mentioned some specific traits of silencing that they experience. They mentioned experiencing a fear of perception, where they worry about how others will see or judge them. They may hold back, staying quiet or refraining from sharing their opinions, even when they have something valuable to contribute. Some start perceiving themselves as too pessimistic, which makes them hesitate to speak up.

Self-silencing also looks like "shrinking" oneself, in a way where they're not fully occupying space, either physically (e.g., avoiding certain spaces) or socially (e.g., withdrawing from conversations). This often leads to disengagement from others, further reducing opportunities for connection and collaboration. Ultimately, the biggest impact is not being the authentic version of oneself, which creates a constant tension between inner thoughts and outward behaviour.

Their experiences show us that self-silencing is not a single act but a pattern of behaviors and feelings that are rooted in fear, withdrawal, and inauthenticity, which then restrict PhDs' ability to express themselves fully.

We have seen how our experiences and emotions often stem from our social circles and the larger system around us. However, we have the power to create positive change by making small adjustments to our environments or behaviors. These changes can serve as catalysts for addressing feelings of imposterism, which we will explore in the following pages.



BRINGING POSITIVE CHANGE TO INTERACTIONS

The Catalysts For Imposter Phenomenon

CHAPTER 9

The Catalysts

The listening sessions and spatial walkthroughs primarily focused on the experiences of imposter phenomenon and self-silencing. However, some PhD participants also shared positive experiences and relations they have encountered, which proved to be valuable insights as well.

Although these positive catalysts weren't explored in detail, I believe they deserve their own space within the thesis. Additionally, because we know of the triggers and of how they experience them, we can also see examples of what they mention as things that help . Highlighting these experiences allows us to transition from a focus on silencing and imposterism towards the possibility of change.

The Catalysts In Collaboration Or Communal Spaces

We can say that these catalysts can emerge in both disciplinary and interpersonal domains. The themes titled "collaborative research" and "peers saving one's life" lean more towards the PhDs' communal sphere. However, the theme of "being open to community" talks about how one can take on such an attitude in order to build a relation grounded on trust, thus making it fit within the personal sphere of experience.

From Figure 20, we can see how **collaboration** and communal spaces act as vital catalysts for PhDs' research and well-being. Collaborative and communal spaces act as vital catalysts for PhDs' research and well-being. Collaborative research not only enhances the quality of academic work but also fosters enjoyment, relatability, and motivation through shared interests and discourse with peers. Collaboration becomes a necessity, as working with both junior and senior colleagues reduces isolation. PhDs also mentioned "feeling energised" through engagement with their peers.

Equally important is being open to community, where trust and cooperation are built by accepting and offering help. Beyond academic benefits, peers play a crucial role in "saving one's life" by providing emotional support, encouragement, and guidance in navigating unspoken norms. A PhD researcher mentioned how "the veteran PhDs taught them about the politics and social dynamics" which saved them from conflicting moments.

All of these catalysts combined highlight how community and collaboration enable the PhDs to thrive both intellectually and personally.

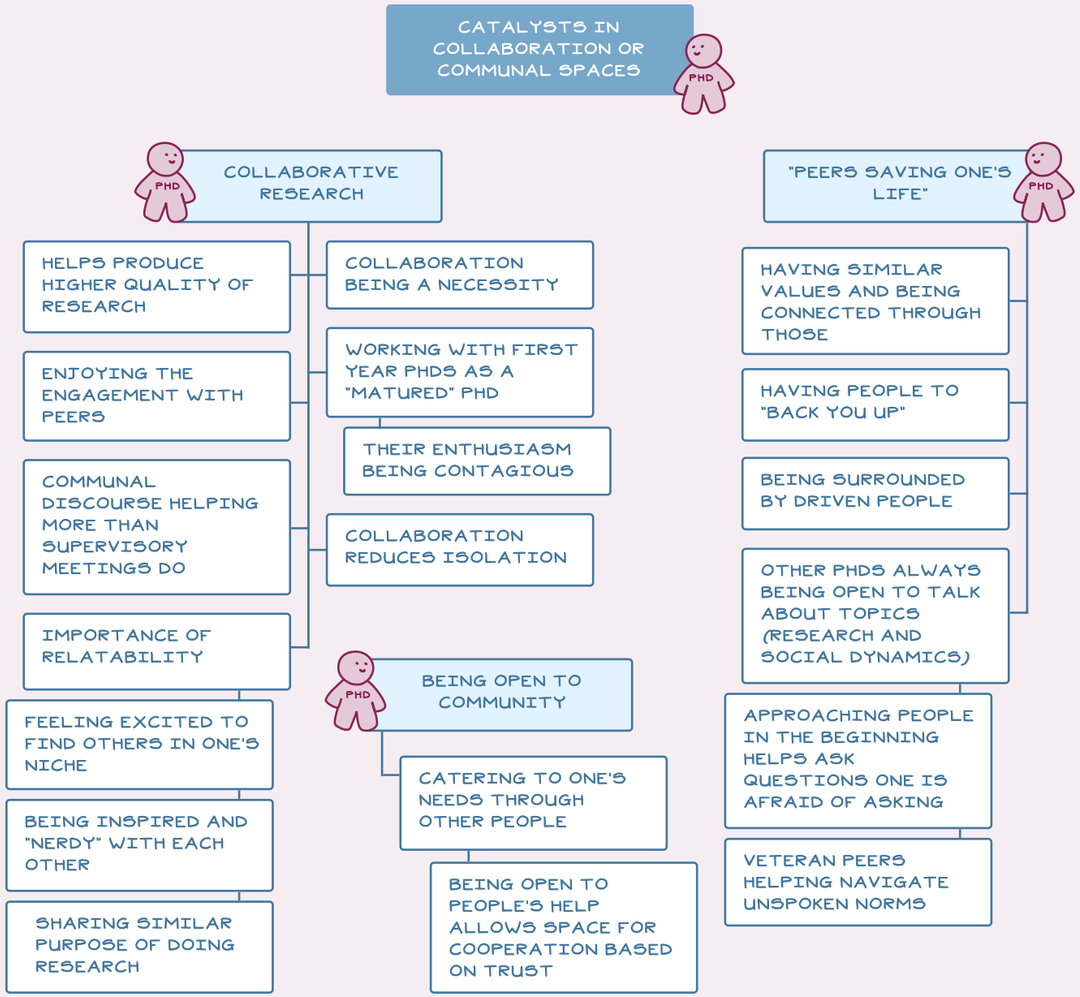


Figure 20. Catalysts that emerge in the context of collaboration or communal spaces

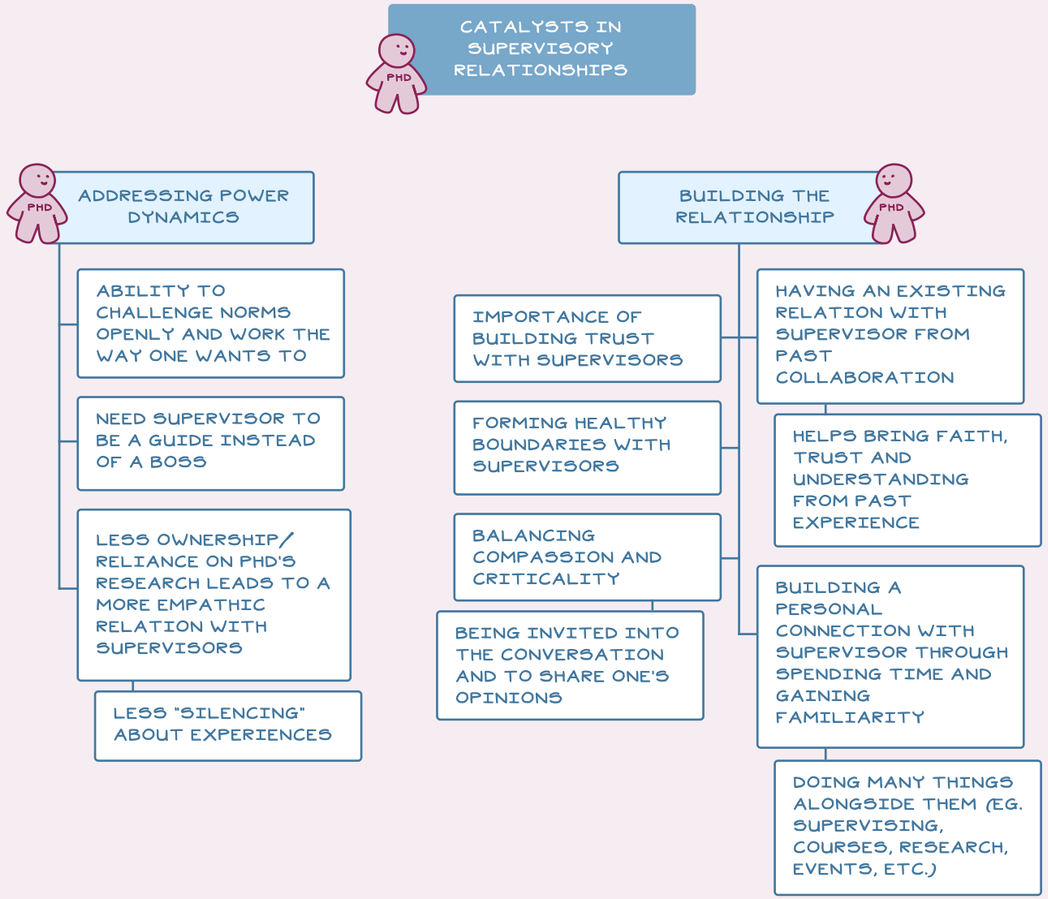


Figure 21. Catalysts that emerge in the context of supervisory relationships

The Catalysts In Supervisory Relationships

As we have seen previously, there are triggers that exist in the form of "barriers in supervisor-PhD relation", both in the interpersonal domain (personal sphere) and the disciplinary domain (communal sphere).

From Figure 21, we can see two main themes emerge in the catalysts within supervisory relationships. The first is about addressing the power dynamics. There is a need within supervisory relationships to shift away from hierarchical systems. The PhDs are able to build a healthy relationship to their work and their supervisors, when the latter act as guides rather than bosses. Through a healthy relation, PhDs would be able to challenge norms, work independently, and feel ownership of their research. If the supervisors has reduced dependency on the PhDs' work, it leads to the PhDs "silencing" less, which then creates healthier, more empathic relations.

The second theme is on specific catalysts that work to build the relationship. A strong relationship depends on building trust with supervisors and forming healthy boundaries with them. It also requires balancing compassion and criticality. For example, being invited into the conversation to share one's opinions, can have a positive impact in their interactions. However, it is important to consider the criticality aspect as well, as some PhDs mentioned how they dislike having things being "sugar-coated" to them, as this may lead to a lack of trust on the supervisor's opinion as well.

Having an existing relation with the supervisor from past collaboration helps bring faith, trust, and understanding. In case there is no past experience, supervisors and PhDs can also build personal connections by spending time and gaining familiarity, and by doing many things alongside each other (e.g. supervising, courses, research, events, etc.).

These catalysts show us ways in which both members can show up equally to a relationship that is a defining factor in the PhDs' journey.

The Catalysts In The PhDs' Way Of Working

These catalysts specifically emerge in the interpersonal domain (personal sphere) of the PhDs' experience. Figure 22 shows us what are the characteristics that positively shape the way they work, whether individually or in teams.

When working individually, PhDs benefit from being open, curious, and willing to be vulnerable, which helps them build self-awareness and reflect on their strengths from past experiences. Their approach is not only about progressing in research but also about valuing people over work and relationships over research outputs - an approach that is different from the standards of the institution that we have seen in the structural domain. Having control over their own project is important, as it allows them to take ownership of their work without prioritising the opinions of others before making decisions. Trusting in themselves and being honest about their own way of working creates authenticity and confidence in the process of gaining back control.

On the other hand, when working in teams, the catalysts are more about structure and collective effort. Having clear individual roles ensures that everyone knows their responsibilities, while the act of building something together strengthens collaboration and shared purpose. Regular discussion moments play a key role in keeping communication open, aligning goals, and maintaining connection among team members.

These catalysts tell us how the PhDs' ways of working thrives on a balance between independence and collaboration, where they can grow through self-awareness and autonomy while also benefiting from clarity, structure, and shared engagement in group work.

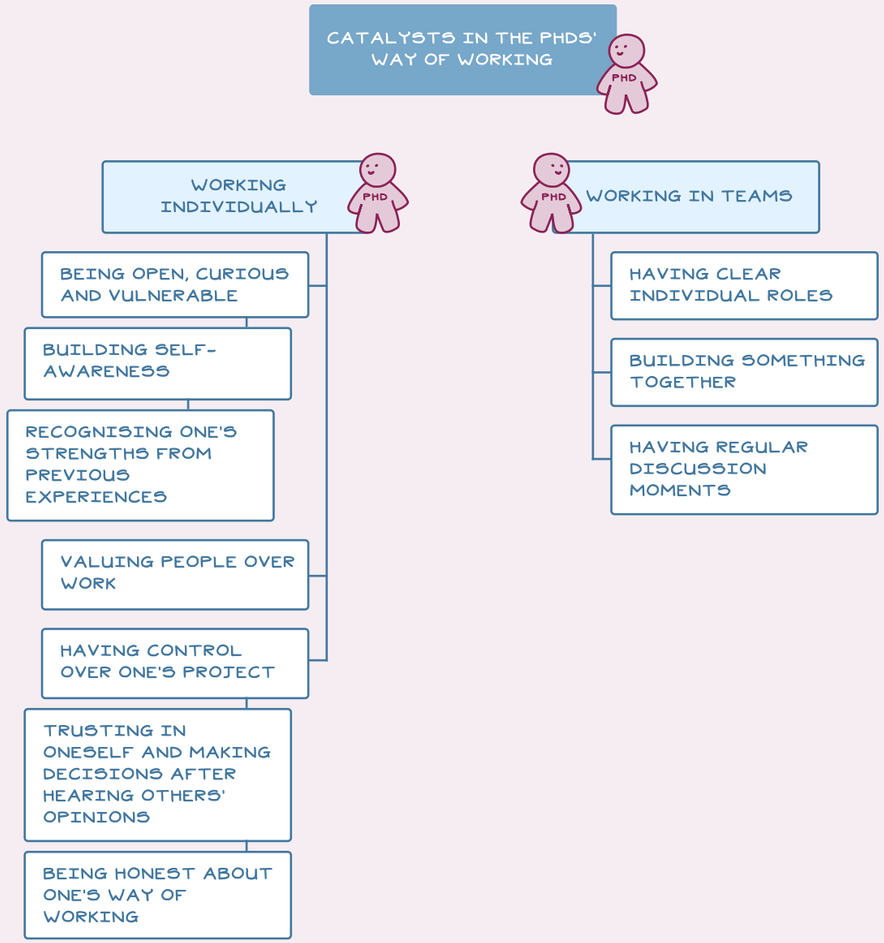


Figure 22. Catalysts that emerge in the PhDs' way of working

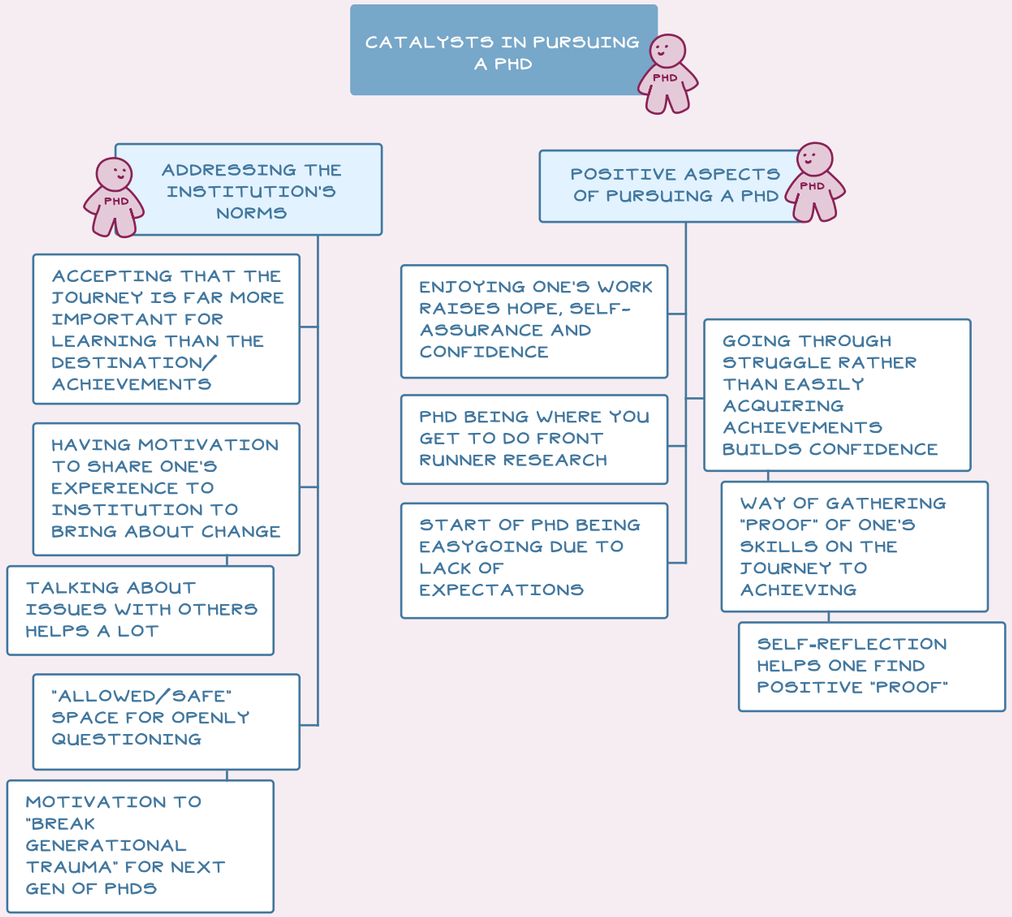


Figure 23. Catalysts that emerge or could emerge while pursuing a PhD

The Catalysts In The Journey Of Pursuing A PhD

These catalysts relate to the structural domain (systemic sphere) and how the institution could show up for the way the PhDs experience systemic issues in their interpersonal domain (personal sphere).

On one side, Figure 23 it points to the weight of institutional norms and expectations. Many PhDs realise along the way that the value of their journey is not only in the end goal of producing research, but in the learning, questioning, and growth that happen throughout. Some even feel motivated to speak up and share their experiences with their institutions in the hope of sparking change. When safe spaces exist for open discussion - ones that are without fear of judgment - these kind of conversations can be supported well. For a few, expressing their negative experiences to the institution also carries a personal or generational purpose, such as wanting to break cycles of silence or trauma, giving their work a meaning that extends beyond academia.

On the other side, we see the positive aspects of the PhD process. Finding joy in their work can raise confidence and bring hope, while the opportunity to do innovative research makes the journey feel worthwhile. The beginning is often described as lighter, with fewer expectations, giving PhDs some space to find their own rhythm. As the challenges build up, they are not only seen as obstacles but also as moments that strengthen resilience and give proof of one's abilities. Self-reflection plays an important role here, making progress visible and affirming one's growth along the way.

Altogether, we see that pursuing a PhD is not just about producing research. It is also about learning to navigate institutional norms, finding purpose, and building confidence through both struggles and achievements.

SECTION 3

Path To Expression

This section moves from silencing and imposterism towards collectively paving a path where academic spaces can be re-imaged as ones that nurture self-expression.

To understand what elements need to emerge in academia for the PhD researchers to be able to feel safe enough to express themselves, I chose to design such a space in practice. This led to the design of a co-creation workshop, where they could come together, express their needs and opinions while also engaging in conversations with other PhDs. In doing so, they were not only encouraged to articulate their own experiences and ideas, but also to interrogate and reflect on them as a collective.

The first chapter details out the process of designing the co-creation workshop, from the initial design, to the pilot testing and iterations. If you wish to directly see the part which showcases the final design, you may go to Chapter 2.

The second chapter is about the final workshop design, how it worked out and the final outcomes that resulted from it. The PhD researchers who attended the workshop created collages which shows us the elements required in academia for self-expression to emerge. The outcomes of this workshop then gave rise to seven ways a PhD researcher would like to express themselves within academic environments.

CHAPTER 1

Creating The Co-Creation Workshop

In this chapter, I narrate to you the process of designing the co-creation workshop. The findings from the previous sections show many layers to the experiences that PhD researchers have within academic environments. Some experiences foster connection, support and growth, while some interactions leave them feeling doubtful, inadequate or even isolated.

Now that the first research question was answered, the second research question needed to be addressed next, which was:

"What elements of social spaces make them feel safe enough to connect with others and express themselves?"

Putting my researcher cap on the shelf for a few days, and replacing it with my designer cap instead, I wished to practically explore how I could design a temporary space where the PhDs are able to express themselves and find connection through it. I envisioned this space to also act as a platform where the PhDs could collectively re-imagine and articulate the elements of expression that should emerge within academic environments.

Characteristics Of The Space

As a first step to this dual-aimed exploratory process, I had to decide what *kind* of space to create for the PhD researchers. There needed to be certain **characteristics** to the space that brought about **creativity and inspiration** while also holding space for **relatability and connection.** It was important for there to be a balance between newness and familiarity because this combination helps participants feel secure enough to share openly while still being stimulated to think beyond their everyday experiences (Sanders & Stappers, 2008).

A familiar setting, whether through the physical space, shared experiences, or the presence of peers, can lower barriers to participation by reducing the cognitive and emotional load associated with navigating an unfamiliar environment (Kagan, 2009).

At the same time, introducing elements of novelty, such as using creative tools, visual prompts, or unconventional activities, can spark curiosity, encourage playful exploration, and prompt participants to engage in more divergent thinking (Liedtka, 2015).

For this designed activity, the space needed to foster psychological safety, where participants felt free to express ideas and emotions without fear of negative judgment (Edmondson, 1999), while also nurturing mutual trust and empathy, which are essential for collaborative meaning-making (Björgvinsson, Ehn, & Hillgren, 2012). Additionally, the design of the space aimed to encourage relational connection so that the participants could recognise themselves in each other's stories, which counteracts the feeling of isolation and fosters a sense of belonging

instead (Hooks, 2003).

By carefully choosing to embed these characteristics within the space, it could serve as both a research method to explore the elements of expression within academia and act as an embodied example of what such an expressive and supportive environment might look and feel like in practice.

Thus, this led to designing a co-creation workshop that consisted of three main activities.

Why Design A "Co-Creation Workshop"?

Co-creation workshops are participatory spaces where stakeholders and researchers collaboratively generate ideas, concepts, or solutions, drawing on the lived experiences, insights, and creativity of all participants (Sanders & Stappers, 2008). Unlike traditional research methods where participants are primarily sources of data, co-creation treats them as active partners in knowledge generation, recognising the value of their perspectives in shaping outcomes that are relevant and grounded in their realities (Björgvinsson, Ehn, & Hillgren, 2012).

This aligned with the decolonial participatory approach I chose to take on for this research. Focusing on the designing of the co-creation workshop reflected the research-through-design approach for designing activities where insights about their current lived experiences (Section 2) and generation of new ideas (Section 3) can emerge.

By collaboratively mapping and reimagining their academic environments, the PhDs could interrogate existing power structures while envisioning alternative, more expressive futures. As Sanders and Stappers (2013) note, such generative methods can surface tacit knowledge that may remain unspoken in formal settings.

All this combined made the choice of designing a co-creation workshop particularly well-suited for exploring themes like belonging, identity, connection and expression in academia.

Designing The Activities: The *First* Iteration

Keeping in mind these characteristics for the workspace space, I started the design of the activities. Around this time of the thesis journey, I came across a workshop that was going to be hosted by Marieke Sonneveld, called the "Meaningful Collage-Making workshop". Curious and in need of inspiration, I viewed this as a destined opportunity and registered for it.

PERSONAL REFLECTION

Meaningful Collage-making Workshop

A workshop that was catered to creating meaningful collages seemed like the perfectly-timed opportunity to understand how an activity focusing on creatively expressing oneself in a meaningful way is conducted. And the best way to learn is by experiencing it first-hand.

The workshop had a low number of participants, with a total of three people which included two participants, (including myself) and our facilitator Marieke. As a result, Marieke joined the session as a participant, creating an intimate and cosy environment where deep conversations and connections emerged among the three of us.

Without giving away too much of the activities away, for those who may want to attend it later, here are some of the key insights I took with me from the workshop:

- Marieke mentioned how collage-making can be explorative as a process with the outcome of it being a form of expression.

- The process of selecting images from various magazines for our collage was very intuitive. We were encouraged to choose images that resonated with us based on our earlier discussion during the sensitising activity. This could include images or texts that aligned with our theme or even contradicted it. Essentially, anything that "spoke to us" as we browsed through the materials.

- Sharing our collages after creating them allowed a moment of collective reflection as we narrated the stories depicted in our collages. It was rather nice to have two stages of sharing - one at the beginning with the sensitising activity and one at the end with the collages. The second time

- brought about a deeper level of understanding of what is meaningful for us in our lives and how that has come about in our journeys expressed through in the abstract visuals we created.

The collage-making was truly a meaningful activity and this was, overall, an enjoyable workshop.

Inspired from this workshop, I designed three activities that went from sensitising the participants on the topic of "expression" to the creation of a collage that allows us to see how elements of expression can emerge in academic environments.

The First Activity: Symbolic Sharing

The first activity was deliberately designed as a sensitising activity, a concept that Sanders and Stappers describe as a means to prepare participants for the main activity. Sensitising activities are typically carried out with the aim to "sensitise" participants to the topic by encouraging them to notice, reflect, and become more aware of relevant aspects of their own experiences.

In this workshop, the sensitising task was connected to the first "M" of the "Three Ms" approach, which brings in our connection to the material world as a tool for reflection, as mentioned in the earlier sections.

Participants would be prompted to bring an object or a picture of an object that they have in their work environment, which embodies self-expression and/or connection. By doing so, they could reflect on what expression or connection means to them through the act of searching for a personal possession situated in their work environment prior to the workshop.

This activity would also act as an ice-breaker where the participants could first introduce themselves and then the item that they brought to the session.

The Second Activity: Picture Safari

In the last research phase, I had implemented the second "M" of the "Three Ms" approach, which involved incorporating movement into the designed activity in order to bring about tacit knowledge through embodied stimulation within their work environment. This approach seem to have worked really well for the previous phase of research.

At this initial stage of designing, I planned to bring it back into the co-creation workshop in the form of outdoor walks. Since the second activity of the workshop was aimed at gaining inspiration before the collage-making, I chose to bring the participants outside the faculty, away from their work environments. This was also inspired from when the PhDs mentioned (through informal conversations) how they longed for activities that were outdoors (since the weather was relatively "good" at the time, according to Dutch standards). They had also mentioned how many of their "meetings", be it casual or professional, occurred within workspaces, which felt monotonous to them. I believed that the addition of this activity would be a refreshing change for them as well.

During the walk, the participants would be invited to freely explore the neighbouring areas outside the faculty and take pictures on their mobile devices of anything that resonates with them in connection to the terms of expression or connection. They would also be informed of how their captured images would be used for the following collage making activity.

The Third Activity: Collage-Making

Creative activities that use intuition as a compass can bring forth deeper levels of knowledge and emotions to the surface.

PERSONAL REFLECTION

Coming back to this workshop, I would like to reflect on my personal experience of creating something through an intuitional journey.

There are layers to this journey. At first, you see images and text within magazines that speak to you. At this point, you don't know why exactly, but you tear it or cut it out of the magazine and keep it aside.

Then, after you feel like you have collected a sufficient amount of material, you start the process of pasting it. You may have already started pasting beforehand, but this part is when you reflect on the placement of each cut-out image. It goes from intuition to intention, where each placement is stitching up a story with intuitively-selected words and visuals.

The third layer of storybuilding is when you share your work. Giving it a voice allows you to hear your own reflection of the placements out loud, and gives others the chance to see your interpretation of the collage come to life.

I believe that the part where we share our work to be a crucial moment. It is when our collage - something that may look very abstract to another person - starts taking shape as something that holds meaning, purpose and emotion. It is also at this moment where relatability through creativity and connection can emerge.

Thus, the third activity was one where the participants would make collages. This also aligns with the third "M" from the "Three Ms" method, which stands for metaphors. Using metaphors (in the form of pictures or text) as a tool within the creative activity, would help articulate tacit knowledge in a relatable way while also showcasing the nuances of their experiences through their creative interpretations.

Prior to the session, I would set up a room to have a comfortable atmosphere with a cosy vibe, with snacks and drinks, with music playing in the background and an abundance of materials, like magazines, scissors, glue, etc for them to use.

During the session, I would prompt the participants to create a collage that depicted a space where they could express themselves or find connections. The participants could use images captured from the previous activity and share it with me, so that I could get them printed out, for them to stick on their blank sheets of paper.

As the facilitator, I would keep some prompts to initiate conversations among the participants during the activity, so that they could reflect and connect with each other while creating their collages.

Pilot Test Of The First Design

With the first version of the workshop ready, the script prepared, and nerves high, it was time to conduct a pilot test and see how this workshop would perform.

In order to do so, I needed participants. While I did wish to conduct the pilot with the PhDs, it was difficult to coordinate a date and time for their availability, as this was a workshop that was designed as a group activity. I would require their time for perhaps the next iteration along with the main event.

Recruiting The "Thesis Support" Group

Thus, for testing purposes, I contacted the "Thesis Support Group". This group is a collective of Master students at IDE, all of whom were doing their thesis projects. What began as a group of five friends has grown into a network of 24 members. The group communicates online, allowing its members quick access to answer each others' queries, assist each other during our thesis journey (through pilot sessions, presentation practices, form-filling, etc.), and arrange meetups to work collaboratively in-person.

While this group was an **accessible participant pool**, they were also **selected intentionally.** The process of completing a Master's thesis can be quite isolating. We transition from collaborative group work and multiple courses, where we see our friends daily, to working on a completely individual project. While this experience cannot be directly compared to pursuing a PhD, it reflects certain aspects of that journey. We also work with two or more supervisors throughout this process. We also feel a strong need for a community where we could express our needs and find connection through relatability. Thus, I made a poster and sent it on the group to recruit students who were willing to do a pilot test.

I recruited seven Master students for the pilot test of the co-creation workshop as the aim was to get a diverse range of perspectives on the experience of the session, along with testing out what dynamics emerge if the workshop is done with a larger participant group, in contrast to the intimate setting seen in the 'Meaningful Collage-making' workshop.

The workshop was conducted successfully, starting with the sensitising activity, followed by the 'picture safari' (Figure 24), and at last, the collage-making activity (Figure 25). The participants made beautiful artworks which showcased how they express themselves (Figure 26). Some collages even depicted a transition from a state of not being able to express oneself to showing one's various forms of expression.

Following the workshop, a group discussion about their experiences with each activity resulted in the feedback points listed below, along with my reflection on the session.

Review Of The Pilot Test

Overall Session

The overall duration of the workshop, which lasted one and a half hours, was considered too short by the participants. The activities put together felt overwhelming, resulting in a higher cognitive load for them.

Having seven participants was manageable for the collage-making activity, but it proved to be too many for the outdoor walk. Additionally, there was a **lack of engagement** between the participants and me, as the facilitator, because of the group size.

First Activity: Qualified

This activity was conducted outside IDE, on the metal tables that are situated opposite the entrance. The activity went well and the participants appreciated it. However, they felt it too open of a space for sharing about their personal items.

Some of the participants mentioned how they **enjoyed the sensitising activity** as scanning for meaningful objects and having to select one that resonated with them the most, made them **view their workspace in a different light.**

Second Activity: Disqualified

In the second activity, participants walked the route from the faculty of IDE, towards the faculty of Architecture and back. The weather on that day was a bit chilly, and the participants were still carrying their heavy backpacks, which left them feeling uncomfortable during the walk.

The participants also found the prompt to be too



Figure 24. Six participants in the pilot study seen on the "picture safari" capturing images for their collages

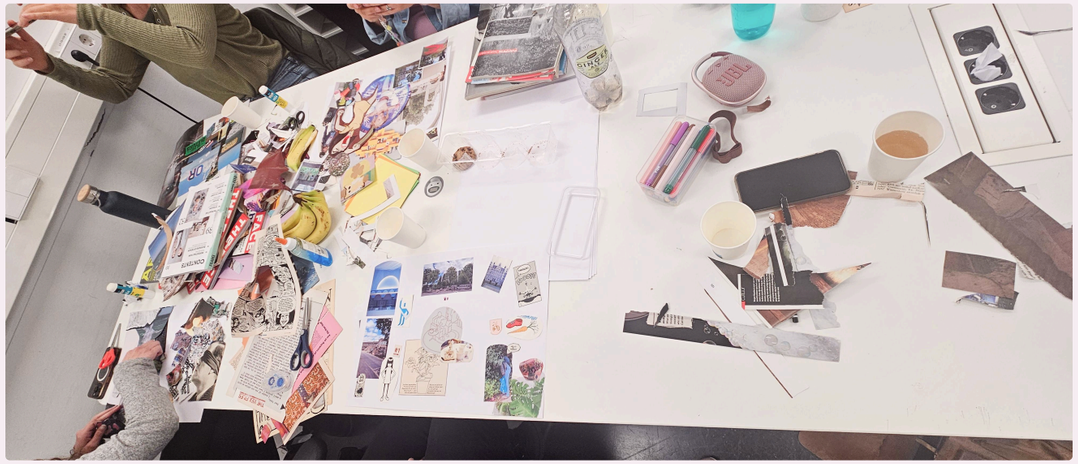


Figure 25. A moment from the collage-making activity during the pilot session



Figure 26. Seven collages made by the Master students during the pilot test

vague for this activity. It was difficult for them to search for things around that could be related to "expression" or "connection". They wished for a **more specific prompt or a purposeful route.** They also mentioned how it was **difficult for them to do it as a group,** as how one expresses themselves is quite personal. Although they were encouraged to search individually, they felt **reluctant to leave the group** and **were influenced by others,** causing them to photograph similar objects as their peers did. One mentioned how they "felt bound by what other people are finding rather than exploring myself."

Third Activity: Qualified, but requires some adjustments

For the final activity, I brought the participants back to the faculty, where I had booked a room for us to make the collages in. This closed studio space turned out to be appreciated by them, especially after coming back from the cold. I also observed how they moved around the studio and took up space to make the collages, which was refreshing. However, they also had to move away from the table onto other ones as collage-making required having a lot of space for each person in order for it to be comfortable.

This activity was enjoyed by the participants. While they were able to make the collages with the magazines, some didn't use the photos they had captured from the previous session. For those who wished to use them, got the prints a bit later in the process as it took me time to arrange them on a document and print them out.

Apart from that, there was more time that was needed for the collective discussion at the end of the activity. A few participants had to leave before the discussion as the overall session went above time. However, the ones who stayed on showed meaningful connections between the way they would like to express themselves along with how their form of expression changes with regard to the people in their life, within their collages. A few mentioned how they wished for the prompt to be a bit more specific in this activity as well.

Designing The Activities Of The *Second* Iteration

After successfully completely the first pilot session, I gained some valuable insights. The "Thesis Support Group" helped me understand which activities worked, which didn't and why. A complete redesign of the second activity, and an improved version of the third activity was required to improve this co-creation workshop.

The re-designing of the workshop activities was guided by the "Path of Expression" framework outlined by Sanders and Stappers in Convivial Toolbox (2012). This path uses a time-based approach, taking the participants on a journey from easy-to-remember and concrete present-day experiences toward a more abstract, speculative thinking. This creates a gradual deepening of reflection and imagination as you move from activity to activity.

Following this framework, the workshop would begin by focusing on the present (as it already did), then moved into a review of past experiences, and finally rounded off with future speculation and reimagination (through collage-making).

A reflection on their present experiences connects to the past and the future by means of their "memories" and "dreams" (Figure 27).

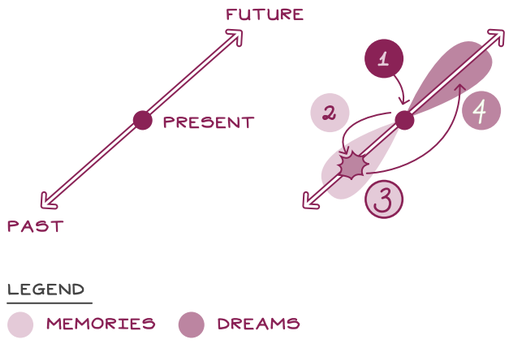


Figure 27. Path of expression as illustrated by Sanders and Stappers (2020)

1. The path of expression guides a participant's awareness by making them think first of the present,
2. followed by the past,
3. during which they may look for underlying layers in their part experiences.
4. The exploration of their present and past is required in order for them to **move toward thinking of the future** (Sanders and Stappers, 2012).

This time, I needed to realign the workshop's focus on the PhDs and their experiences with expression and connection. After revisiting my initially laid out characteristics and incorporating the feedback from the pilot test, I redesigned the activities.

The First Activity: *Unchanged*

This activity was kept the same. As a sensitizing activity that focuses on the PhDs' present connection to the objects in their work environment, it aligned with the "path of expression" framework as well.

The Second Activity: *Redesigned*

In this iteration, the activity was designed to focus on the past experiences of the PhD candidates. There were two layers to this activity.

In the first part, I would ask them to reflect on spaces where they could or could not express themselves authentically in the past or even in the present. This activity would prompt them to think about spaces where they could be who they wish to be but also where they could not. These spaces could be physical or social spaces, for which I would provide them with some examples. The participants would be prompted to write down a few of these spaces on sticky notes.

By examining the examples of such spaces, the participants would then be able dive deeper into where their expression emerges in their lives and where it doesn't. This takes us to the second part, where I would ask them to put the sticky notes on a paper, and write down the characteristics of these spaces which allow for self-expression to emerge or for it to be restrained, around the spaces they have laid out.

This allows them to reflect on what it is about these spaces that make them feel safe to express themselves and what doesn't.

The Third Activity: *Redesigned*

The third activity was given more time. This was identified as necessary during the pilot session. With the walk now removed, participants would have ample time (along with less physical discomfort) to find images in magazines that resonate with them. They would also have plenty of space and time to create their collages. The prompt was also rewritten to be more specific, focusing solely on "expression" in the context of academia.

Pilot Test Of The Second Design

Once the iterated workshop was ready, I wanted to test it before conducting the final session. An additional change I had made from the first iteration was regarding the number of participants and the total number of workshops.

In the pilot session with seven participants, I noticed that this larger group created a distance between me as the facilitator and the participants. I aimed to conduct these activities in a more intimate and comfortable setting, where we could learn from each other and build connections, as I have mentioned in Section 1. Therefore, I decided to limit each workshop to 3-4 participants and plan for 2-3 workshops overall.

By this time of the process, I had already started recruiting PhDs for the **final workshop**. Since they were people who were busy with a lot of tasks and deadlines, I made sure to be mindful of their time by sending invites and spreading posters around the faculty two weeks in advance to the week of the co-creation workshops. I created a poll where they could choose their preferred date and time for the workshops.

Recruiting The PhD Researcher

As the workshops neared, only 7 PhD researchers signed up for the three days I had scheduled. There was one on the first day, 3 on the second, and 3 on the third. Due to low participation on the first day, I reached out to see if they could join on other days, but they were busy. We decided to proceed with the first workshop with just one participant, using it as a pilot session to test this iteration before the final workshops.

Review Of The Pilot Test

This time around, the session went far better than the first pilot did. However, I did observe one main issue with the prompts of the second and third activities.

The prompt focused on both, the positive and the negative experiences of self-expression that the PhD researcher had. As we have an inbuilt negativity bias, I noticed how most outputs of the session were focused on how expression is inhibited or limited by our spaces.



Designing The Activities Of The *Third* Iteration

After reflecting on this, I realised that perhaps we should just **focus on the positive,** so as to truly **re-imagine academia as a space that allows authentic expression.** Additionally, we already had captured deep insights on how expression is limited or restrained in academia.

It was time to move forward.

Thus, **the script was revised,** and **the prompts for the second and third activities were changed** to focus solely on **spaces that allow for expression in their current or past environments, along with how expression may emerge in academic environments.**

As they say, third time's the charm. The final design of the co-creation workshop was ready, confidence was high and I was ready to welcome the PhDs into the space for expression.



CHAPTER 2

The Space For Expression: A Co-Creation Workshop

The research approach consisted of four steps:

Step 1: Recruitment Of PhD Researchers

Similar to the previous research activity, the PhDs were recruited based on two factors, that,

1. their professional position - that of being a PhD researcher, and
2. their place of work was at the faculty of Industrial Design Engineering at TU Delft.

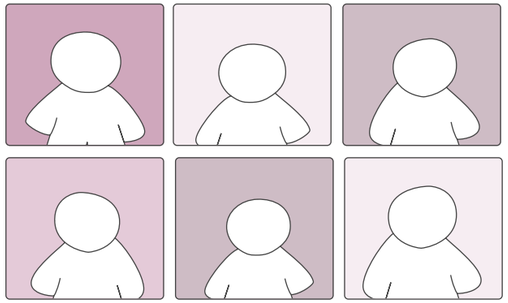


Figure 28. Six PhD Researchers who volunteered to participate in the co-creation workshop

In order to recruit a diverse participant group, I shared invitation and posters with all of the PhDs in the faculty. However, the six participants that volunteered were all women.

As mentioned earlier, a total of 6 participants were recruited for two sessions of the co-creation workshops. This meant having 3 participants for each session. Including me, that made four people in the room, which was the perfect amount for still keeping with the "intimate and cosy" vibe.

Step 2: Conducting The Co-Creation Workshops

Setting The "Vibe"

Prior to the start of the workshop, I set up the space to be welcoming and relaxing. This was done by:

- adding some flowers to the space (which was intended for the PhDs to take at the end of the session),
- playing some jazz instrumental music in the background,
- arranging for some snacks and drinks,
- gathering all the creative materials required for the sessions, and
- placing blank sheets of paper on the walls of the room, ready for creating or exhibiting on.

This preparation also allowed me to connect to the space, gain familiarity with it and rehearse the script for the activities.

And then, it was time for the session to start.

Activity 1: What I Have

As mentioned earlier, this activity was



Figure 29. The before and after pictures of the co-creation workshop

unchanged from the first iteration. However, what I did change was it's name. To emphasis on the "present" experience the PhDs have with being able to express themselves authentically, I labelled this activity as "What I Have".

The prompt for this activity was:

> What Object Do You Currently Have/Bring To Your Work Environment That Allows For Expression/Connectedness?

The activity went swimmingly. Participants introduced themselves, along with the objects they had brought. For this activity, as they narrated their stories, I wrote it down on sticky notes and later stuck it on the wall (Figure 30). This also helped introduce them to the way we were going to use the walls during the workshop.

Figure 31 shows the results from the workshop, which presents a collection of everyday objects such as mood pebbles, puzzle, hairclip, mugs, and a cup. Each object has personal meanings and values that the PhDs attach to them. For instance, mood pebbles act as physical reminders of the various moods one can have in



Figure 30. The outcome from the first activity "What I Have"

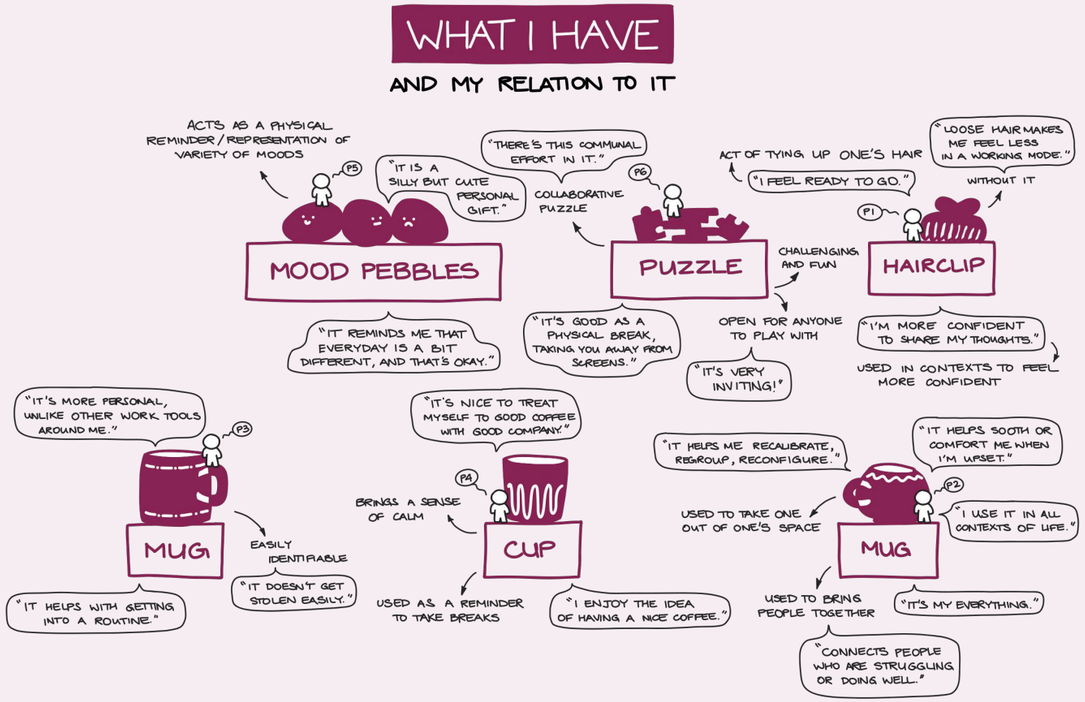


Figure 31. The results from the first activity "What I Have"

a day, while also represent a “silly but cute personal gift,” while a puzzle symbolizes communal effort, fun, and an inviting way to take breaks from screens. The hairclip is tied to confidence and readiness, helping one feel more in control, while mugs and cups carry deeper connections to routine, comfort, and social interactions. They serve as reminders to take breaks, bring people together, and even provide emotional grounding.

This activity really helps highlight how ordinary objects can hold such significant personal, emotional, and social value for us.

Activity 2: Where I Am, What I Need

The second activity focuses on the past experiences of the PhD researchers. By asking them:

> Which Physical Or Social Spaces In Life Make/Have Made You Feel Like Your Most Expressive/ Authentic Selves?

we get to learn of the examples of physical and social spaces where they feel safe enough to be their authentic selves. The participants wrote these spaces down on sticky notes, and placed them on the wall seen in Figure 32.

To take them a level deeper into their understanding of the connection between these spaces and their expressive selves, I asked them:

> What Are The Characteristics Of These Spaces That Allow For Expression Or Authenticity?

Using markers, they went to the wall and started writing out the characteristics of these spaces, making links and connections between each. These connections showcased “what they needed” from these spaces for expression to emerge, thus the name of the activity.

After they were done, we had a round of discussion, where each participant shared insights about their spaces and the reasons why those spaces were chosen by them for this activity. Once the discussion rounded off, I asked them to write one or two words that represented their individual clusters and write those words down on a sticky note. This was to be their anchor for the next and final activity.



Figure 32. The outcome from the second activity “Where I Am, What I Need”

Activity 3: When I Have, What I Need, Where I Am

The third and final activity was the one where they made collages. This activity was called "When I Have, What I Need, Where I Am" and it stood for:

- When I Have: Sometime in the future
- What I Need: Individually resonating characteristics of expressive spaces (from the last activity)
- Where I Am: In academia

The prompt used for making the collages was:

> Through This Collage-Making Activity, We Will Build A Space Where Your Individually Selected Characteristics Can Exist In Academia.

The collage-making activity was a relaxing session where participants were creating and also conversing with one another. A lot of valuable insights arose from these discussions - insights about their current experiences as a PhD researcher, and about what they wish for academia to be like for them.

Once the collage-making part of the activity was completed, we placed the collages on the wall (as seen in Figure 33) as part of the exhibition, and started a discussion about their experiences and desires for academic environments.

The discussion really brought the collages (Figure 34) to life, and it showed us deep connections between the needs of the PhD researchers, the spaces and objects that surround them and the various ways in which they wished to express themselves within these professional spaces.

At the end of the first workshop, I had asked the participants to write a message or question for the participants of the next day's workshop. This was done so as to continue the conversations that occurred in the first workshop to the next one, creating a connection among the six participants, even if they didn't really meet one another in person.

The overall workshop added several layers to the existing understanding we had about the PhDs' experience in this faculty.

Step 3: Documentation Of The Data

Physical note-taking was not carried out to document the sessions in order to ensure that my attention was solely on our conversation. It was important to me, as the researcher, to completely show up to the conversation and engage with them in an attentive and meaningful way.

Thus, the sessions were **voice recorded. The device used to record was my mobile phone**, which seemed more **casual and familiar** than a recording device. It was reassuring to have the session documented with as voice recordings as it helped document their experiences as the PhDs explain it. **Relying on note-taking might have also injected my bias and interpretation into the data.** This would have not allowed me to document their experiences authentically. Additionally, **voice-recording also captured all**



Figure 33. The outcome from the third activity "When I Have, What I Need, Where I Am"



Figure 34. The six collages from the third activity "When I Have, What I Need, Where I Am"

of the data, providing us with valuable insights - something that I may have lost had I relied on documenting the data manually during the session.

The only other type of data that was documented was in the form of photographs. Photos were captured only of the exhibited outcomes of the activities, that is, everything that was on the walls of the room. There were no photos recorded of the PhDs during the session, in order to maintain anonymity.

Both these forms of data were documented only after gaining consent from the participants.

Step 4: Thematic Analysis

To analyse the data collected from the two workshops with three PhDs each, their narratives and viewpoints were documented on sticky notes, in the form of statement cards. After creating these cards which documented their quotations and paraphrasing of the quotes, I placed the sticky notes on a wall, in order to make clusters from them. The clusters showcased the themes that emerged from both of the workshops combined.

Figure 35 showcases all the themes that were derived, where the pink sticky notes represented the first workshop, the yellow ones represented the second and the blue ones were my own thoughts and labels for the clusters. Now that I could visualise the themes from the discussions and the outcomes of the activities, I moved on to the next phase of clustering.

In this next phase, I went through each of the statement cards, theme by theme. The clusters went through another couple rounds of analysis and reorganisation, giving rise to six evident forms of expression (Figure 36).

The six forms of expression helped answer the second research question we had introduced at the start.

"What elements of social spaces make them feel safe enough to connect with others and express themselves?"

Figure 37 shows the way each form of expression is clustered, where it outlines:

- what form is expression it is,
- how expressing it feels like to the PhDs,
- what acts as inhibitors or barriers to this form of expression,
- what spaces or conditions are needed for it to emerge,
- what are consequences of not expressing it, and
- what are underlying needs to express it.

The co-creation workshop was not only a space where PhD researchers could express themselves freely, but also a process through which these nuanced findings emerged. It enabled participants to reflect on their experiences collectively. In this sense, the workshop functioned both as a site of expression and as a method of inquiry. It allowed tacit, emotional, and relational knowledge to surface in ways that conventional interviews or surveys might not have captured.



Figure 35. The results from both the co-creation workshops, clustered into themes for the thematic analysis



Figure 36. The six forms of expression emerge from the second round of thematic analysis and clustering

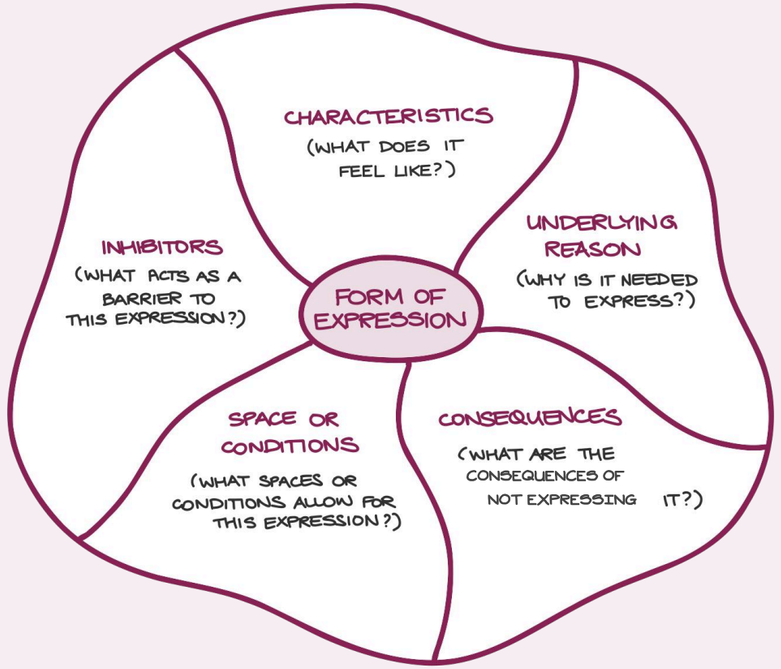


Figure 37. Explanation of each cluster showing a form of expression

#2

What Elements Of *Social Spaces* Make Them *Feel Safe* Enough To *Connect* With Others And *Express* Themselves?

RESEARCH QUESTION

CHAPTER 3

The Six Forms Of Expression



Figure 38. The cluster of "bodily expression" containing insights derived from the thematic analysis

1. Bodily Expression

Bodily expression refers to expressing oneself by using one's body. This includes performing activities that allow them to use their body in the way that they wish to. They also mentioned how using their body could be used as a form of communication with others.

Figure 38 shows the many examples of bodily expression that emerged from this workshop. The act of taking breaks, where one physically takes themselves away from their digital screens and work space is also a form of bodily expression. Another example was engaging in any direct form of movement, such as jumping, walking, boxing, or even playing. Playing was an activity where they specified "using their hands" in order to build something. They also mentioned how their hands and bodies could be used as a communication tool that allows for connection with others in their work environments. This could be done by using their hands to express themselves, as one participant mentioned how "everyone in the design faculty should learn sign language", which would add a physical dimension to the conversations we have.

What Spaces Or Conditions Are Needed For This Expression?

The PhD researchers showcased how certain objects within their work environment can act as initiators, where they allow for this kind of expression to emerge in their environment. For example, a trampoline. From the spatial walkthroughs done earlier in this research, a PhD researcher mentioned how there was a trampoline in one of the meeting rooms of StudioLab. This trampoline was used by them to jump and release some stress before their meetings. By just the existence of the trampoline, they felt like "jumping" as an activity was allowed within their professional environment. Similarly, bringing objects such as "yoga balls" or a "punching bag" to their workspaces were proposed by the PhDs, so that they were able to move in the way they individually like.

Objects can also play a supporting role, where "mugs" can be used to take one out of their workspace (in order ot fill it up with a preferred beverage). Objects can also act as reminders, where the presence of a mug on a PhD's work desk can remind them to take a break once in a while. These relate to bodily expression as they bring about awareness of one's bodily needs, that of taking a (physical) break or needing a beverage.

A PhD researcher also mentioned needing to "take off their shoes" in order to sit comfortably and work. This point may also link to other forms of expression that we will see in the following pages, specifically the personalising expression and the sensory expression.

To add to what was mentioned earlier about building connection through bodily forms of expression like learning "sign language" by the means of using one's hands, a PhD researcher also mentioned incorporating "hugs" into the culture of professional environments. They mentioned how they feel that "people are not expressing themselves in academia" and that **"it is controversial to hug others."**

Building connection can also be done through collective participation in activities where they move together. A PhD mentioned how they had "some of the best days doing aerial yoga with my

friends." Additionally, activities that encourage **collective play** allows for **spaces for failure and learning to emerge,** thus helping them build a **healthy relation to mistakes and collaboration.**

Bringing in such objects, creating designated environments to "move in", or just **being openly accepting about bodily expression as people sharing spaces** are ways that could allow for this expression to emerge.

What Acts As A Barrier To This Form Of Expression?

Professional environments that really abide by their unsaid norms create an atmosphere that is rigid and filled with tension. People within these environments may feel restricted in the way they wish to move.

The PhDs mentioned that the "default work setting is to sit upright." However, some PhDs, who have chronic pain, who may be menstruating or even some people who need to be in different positions in order to focus better, end up feeling awkward and uncomfortable having to abide by this "default setting". They also mentioned having a fear of being perceived as "not working or not being productive or professional". Work spaces are areas where we spend many days and hours in. Logically, it seems ridiculous to box people into a standard. However, in reality, we are all stuck in a professionalism or productivity culture that is actually going against our productivity, comfort and well-being.

An interesting insight was how objects can also act as restrictors. A PhD researcher mentioned being, "forced to fit into a chair, instead of listening to my body and sit the way I want to."

What Does Expressing Bodily Feel Like To The PhDs?

This expression has been mentioned by them to feel "freeing". It is a way for them to "connect back to their body from the mind". It also allows them to "rest" in between work sessions.

This expression has been mentioned by them to feel **"freeing"**. It is a way for them to **"connect back to their body from the mind"**. It also allows them to feel **"rested"** and **"re-energised"** in between work sessions.

What Are The Underlying Needs Behind This Expression?

A PhD's life is quite sedentary, where they sit at their desks all day. Getting up to move around doesn't just help them release stress, but also gets "some blood flowing in their bodies", making them feel more energetic or refreshed.

This reinforces the ideology of "breaks being a part of working" rather seeing it as something separate from work. Breaks, as mentioned by them, "is used to recalibrate, regroup and reconfigure". As mentioned earlier, it also helps increase their focus and productivity when they do come back to their work sessions.

Movement, for some individuals, is very important for the way they wish to live their life. It also acts in a way of gaining their autonomy and freedom back, to move in the way they wish to, when they require to, no matter where they are.

What Are The Consequences Of Not Expressing It?

The PhDs mentioned how the "productivity culture" leads to them "not being able to move in the way I want to". As a result of needing to look professional or with the pressure of needing to complete their work, they hold themselves back from taking breaks. This affects their health and well-being, leading to "burnout", and "feeling fatigued". They also feel "restricted", "a lack of freedom" and a "lack of connection", with their body, but also with the people around them.

Sensorial Experience

Sensorial experience involves the experience of our senses - such as sight, sound, touch, smell, and taste - and how it affects the way we experience our work environments.

This experience is related to "bodily expression," where we establish a relationship with our environment through our bodies. The key distinction between "bodily expression" and "sensory expression" is that bodily expression emphasizes the physical use of the body in space, while sensory expression delves deeper into the experiences we have based on our specific senses.

The cluster in Figure 39 emerged as a result of the instances where PhDs mentioned anything related to how they experience the elements in their environment.

What Spaces Or Conditions Are Needed To Bring About A Positive Experience?

Quality sensorial experiences can be brought about by understanding the PhDs' current relationship to their physical work environment. There are a few examples of what brings them comfort at work. For example, when they enjoy their favorite beverages like coffee or tea, holding the mug and feeling its warmth can be very comforting. This sensation is especially soothing when the air conditioning has cooled the environment significantly or on a cold winter's day.

They have also mentioned other comforting objects, such as "pillows" and "comfortable chairs", that help them feel at ease in their workspaces.

The type of lighting - where it's natural or artificial, as well as its color and intensity - affects the comfort levels of the researchers, though preferences can vary from person to person. There is a desire to have the option to adjust lighting according to individual needs or to choose workspaces that align with their ideal comfort levels. Ensuring a comfortable environment is important to them in order to maintain focus and productivity. This is where bodily expression may come in, as they may move to different locations or even spaces within other faculties in order to cater to their sensorial needs and comfort levels. Some of them mention working from home more often if they are not able to feel comfortable in the faculty.

Apart from their workspaces, couches serve as a space for "retreat", where they may rest or take breaks from overstimulation or stress. Another space mentioned by participants during the spatial walkthroughs as a "retreat" space is the hanging pod in the hallway of StudioLab, which they identified as a designated napping spot. It is important to note this as a bodily need as many PhDs, from both research phases, have mentioned the need for a **space to nap in.** Napping is an important part of the day for some

cultures, and also an important need for those working many hours in the office.

Zooming out from spaces within the faculty to the faculty itself, one PhD researcher commented, “For a design faculty, the architecture and design of the spaces aren’t as vibrant or inspiring as they could be.” Incorporating dynamic features or, better yet, collaboratively re-designing spaces could enhance the experience for those occupying them while making them feel more involved in the process.

What Hinders The Positive Experience Of The Spaces?

A PhD researcher mentioned how there is a difference in the experience of artificially-created natural spaces versus the real natural spaces. When comparing to their previous place of work, they mentioned how the faculty and campus lack real natural spaces around it.

Along with this, the current tram line construction separates the campus into two, while also giving it a very “industrial vibe”. This leads to the feeling of disconnection with the campus and the people from the other faculties as well. This “vibe” has been said about the faculty as well.

What Do Positive Sensory Experiences Feel Like To The PhDs?

The PhD researchers mention “feeling very connected” to their environments, the people around and themselves. They feel more “at ease”, not having to think about their comfort levels continuously.

When there are naturally open spaces around them, in the form of break spaces between buildings or even forests, they tend to “feel calmer”. The use of natural materials in the faculty, such as wood or plants, makes them feel more “safe”, “confident” and “expressive”.

What Are The Underlying Needs Behind This Experience?

The PhDs reflected on their experiences of being in nature, where they felt “more in their body and less in their mind”. PhD researchers often need to improve their bodily awareness because their academic work focuses heavily on thinking and analysis. They spend many hours on research and writing, which can disconnect them from their physical sensations and movement. This disconnection can, then, affect their physical well-being, as they may prioritize mental work over maintaining a good relationship with their bodies.

Another reason given by the PhDs is how the simple addition of plants to their work spaces can heighten the experience of the space while also feel like an act by the faculty that caters to their mental-wellbeing.

Bringing about these changes allows the physicals spaces to emerge as sites of inspiration, creativity and comfort. It may also act as a space for belonging, as the PhDs would spend more time in these spaces comfortably.

What Are The Consequences Of Not Positively Experiencing Spaces?

Some of the PhDs currently work in grey-scale, traditionally designed office spaces, which feels isolating and monotonous to them. These



Figure 39. The cluster of “sensorial experience” containing insights derived from the thematic analysis



Figure 40. The cluster of "emotional expression" containing insights derived from the thematic analysis

spaces, with their stark walls and uninspired furnishings, can leave them feeling disconnected and uninspired by the dull ambiance.

2. Emotional Expression

Emotional expression is the outward display or communication of one's emotions, regardless of whether it's consciously or unconsciously expressed.

What Spaces Or Conditions Are Needed For This Expression?

The PhDs mention how they are able to express themselves emotionally when they are in the company of people who feel safe enough to express to. As one can feel vulnerable expressing themselves this way, especially in an academic or professional environment, this form of expression requires certain qualities within people themselves, rather than physical objects. The physical environment, however, can influence the expression of one's emotions, along with the vibe that is created by the people within the environment. There were a few spatial traits that were talked about by the PhDs.

There needs to be "space for joy and laughter" in academia, as someone laughing out loud can also be seen as something against professional etiquette. Similar to this, is the need for the emergence of the **"space for light-heartedness",** in **contrast** to the **"seriousness" of the work atmosphere.** By being able to express our emotions to each other, we can bring about light-heartedness, as we won't be holding our tensions and stress inside ourselves.

However, in case of severe stress and anxiety, it is important for there to "reliable and professional spaces" where they can express their emotions. This may come in the form of therapists, counsellors or reflective groups that come together to recognise and relate their experiences in the presence of a professional counsellor. These social spaces need to emerge in the institution, especially for those conducting sensitive research.

Another spatial trait that was mentioned was the "space to soften". The PhD journey is seen as something that is hard, and because of this perception being widely accepting by society and the institution, it stays that way. Thus, there is a need for academia "to soften", where PhDs could challenge their intellectual abilities instead of facing obstacles that make the journey unnecessarily rough. We can look back to the triggers (found in Section 2) they experience to understand where this "softening" can emerge.

What Acts As A Barrier To This Form Of Expression?

The main inhibitor to one's emotional expression in academic environments is the fear of being perceived or judged. The outward expression of one's authentic feelings can come across as something that is not in line with the "professional" culture which shapes academic spaces and people.

What Does Expressing Emotionally Feel Like To The PhDs?

Being able to express their emotions leads to the PhDs "feeling confident". Sometimes you have to express what you're feeling in order to get through it.

As mentioned earlier, expressing oneself to another within professional settings also makes one “feel vulnerable”. Vulnerability comes from being honest and open about their experiences and emotions, away from the professional mask they have on. It is also trust in the person they are expressing to - trust that the person won’t judge or perceive them differently purely on the basis of their emotional expression.

What Are The Underlying Needs Behind This Expression?

Expressing one’s emotions is a fundamental human process that supports well-being. It leads to processing our emotions rather than “storing it within ourselves”. It helps regulate the intensity of the emotions by giving it an outlet.

A key point that was addressed by the PhDs is that there is a need to normalise “feeling many moods in a day.” One participant mentioned, “There are days where you’re menstruating or where it’s that time of the year where stress is high at the workplace. Many things influence your energy levels, and that’s normal. It’s important to normalise not being at a hundred percent all of the time.”

Expressing our emotions and needs to each other creates a connection that is built on intimacy, trust and empathy. It also helps resolves conflict by bringing it to the forefront rather than suppressing it, which would only lead to building resentment.

What Are The Consequences Of Not Expressing It?

If they find themselves in spaces where they cannot express themselves, they may feel the need to bottle up their emotions, putting their needs aside. This can only lead to consequences that are harmful to their physical and mental well-being, as we have seen in Section 1.

Gross (2002) mentions how emotional suppression may reduce visible emotion signs but can impair memory and increase physiological stress for both oneself and others. This may also lead to strained and difficult relationships with colleagues and supervisors.

3. Creative Expression



Creative expression is done by expressing oneself through the use of artistic mediums in order to convey experiences, emotions, or ideas.

What Spaces Or Conditions Are Needed For This Expression?

Expression emerges through the existence of tools, materials and resources that one needs in order to be creative. As we have mentioned earlier, the presence of these objects can act as initiators to be creative, as well as reminders to take out time for this kind of expression.

Novelty can also spark expression. A small change in the space that brings in something unfamiliar or surprising can shift perspectives and invite play.

Some spaces embody these conditions naturally. For instance, pole-dancing studios emerged as a powerful example, not only supporting bodily expression but also bringing about creative and communal expression. When the social dimension is added, activities tend to feel more enjoyable and often strengthen bonds between people. This was clear in the example of the collaborative puzzle, from the first activity of the co-creation workshop, where the PhD mentioned the puzzle acting as a way to bring connection through play.

Bringing these principles into a work environment by making space for creative breaks, could help refreshing their minds, restore their energy levels and provide them with fresh perspectives.

And at last, there is the value in creating a mess. **Messy spaces** often invite **exploration** and **experimentation** without the pressure of perfection. In the spatial walkthroughs, participants described their admiration for “Studio Do” (a prototyping area located in StudioLab) precisely because it allowed them to **explore freely** and **create without constraints.** This led to the PhD researchers **“feeling confident”** and completely **“in their element.”**

What Acts As A Barrier To This Form Of Expression?

One PhD researcher mentioned, “without objects, we hold back or don’t get ideas or the space to do what we want to do.” This is especially true in professional environments, where the absence of such objects reinforces a toxic “productivity culture” that views these activities as “a waste of time.”

There’s also the fear of being seen as “goofing around” instead of working. Time pressure plays a role too. Creative activities like crocheting or puzzling take time, and while short breaks are generally accepted, there’s often an unspoken rule that anything longer than 20–30 minutes feels unacceptable. This creates stress and makes it harder to continue taking a break, especially when one needs it.

Sometimes, to avoid this judgement, PhD researchers link their creative activity to their work. But if the main reason for doing it is to make it “acceptable” rather than for genuine creative expression, then the space is still limiting rather than freeing.

What Does Expressing Creatively Feel Like To The PhDs?

For PhD researchers, creative expression often feels like building a connection to themselves. It’s a way of bringing their thoughts and emotions into reality through any form of artistic or creative expression. When it’s done with others, it also creates a sense of connection to the people they’re collaborating with.

One PhD researcher shared, “I feel more in my space when I have my craft supplies near me.” This shows how creative expression can be tied to a sense of self, which links closely to what I later describe as “personalised expression.”

Expressing in this way can also boost confidence. One researcher, from the spatial walkthroughs, described feeling “like an expert” when engaging in creative activities like prototyping and physical exploration. They did not feel like an imposter or inadequate. Instead, they enjoyed being asked questions about what they were doing as they felt confident in their skills within this explorative space.

What Are The Underlying Needs Behind This Expression?

PhD researchers said they often express



Figure 41. The cluster of "creative expression" containing insights derived from the thematic analysis

themselves creatively to reconnect with their work. When their work feels uninspiring, they step away and get into a creative flow through an enjoyable activity, which helps new ideas and connections emerge. Sometimes this happens by taking a break and putting distance between themselves and their research.

Creative expression also strengthens their sense of self in the work environment. As one PhD researcher said, "I feel more like myself when I'm able to do my hobbies." Bringing hobbies or familiar activities into their workspace can make new or challenging tasks feel more approachable.

When work feels monotonous or the day is slow, activities like doing a puzzle act as a "brain teaser," satisfying the need for a challenge while also being relaxing. It also gives them a physical break away from their screens or desks.

What Are The Consequences Of Not Expressing It?

When PhD researchers can't express themselves creatively, they often start to feel restricted in their workspaces. Over time, this may lead to losing interest in their work, as there's no outlet to break monotony or spark inspiration. Without their personal craft supplies or familiar activities, they may also feel less connected to their workspace and less "at home" in it.

Not expressing themselves can also mean missing out on moments of inspiration that come from play or experimentation. It can reduce chances to connect with others, as creative activities often become shared experiences that build relationships and community.

4. Personalised Expression

Personalised expression refers to the act of communicating one's identity, feelings, and values by incorporating elements of familiarity, intimacy, and personal significance into one's environment. It is a process of personalisation, where PhD researchers may adapt or shape their surroundings in physical, symbolic, or social ways, to reflect their sense of self.

In their words, it is the process of feeling "at home" in their work spaces.

What Spaces Or Conditions Are Needed For This Expression?

Time is the biggest factor for personalised expression. It takes time to feel a sense of belonging in a place and time to get familiar with the environment, its rhythms, and the people in it. While this familiarity naturally grows over the months and years, there are things that can be done to make a space feel comfortable and "yours" much earlier, especially for newer PhDs.

Knowing the layout of the environment, where things are and what spaces exist, helps a lot. One researcher mentioned if they were shown around in the beginning ("here's where we have coffee… here's where we have lunch") it would have made a big difference. These small introductions, along with meeting people in the space, help break the ice and build familiarity faster.

Flexibility is also important. Being able to adapt the space to your current needs, or move between spaces with different functionalities, allows for variety and flow instead of feeling

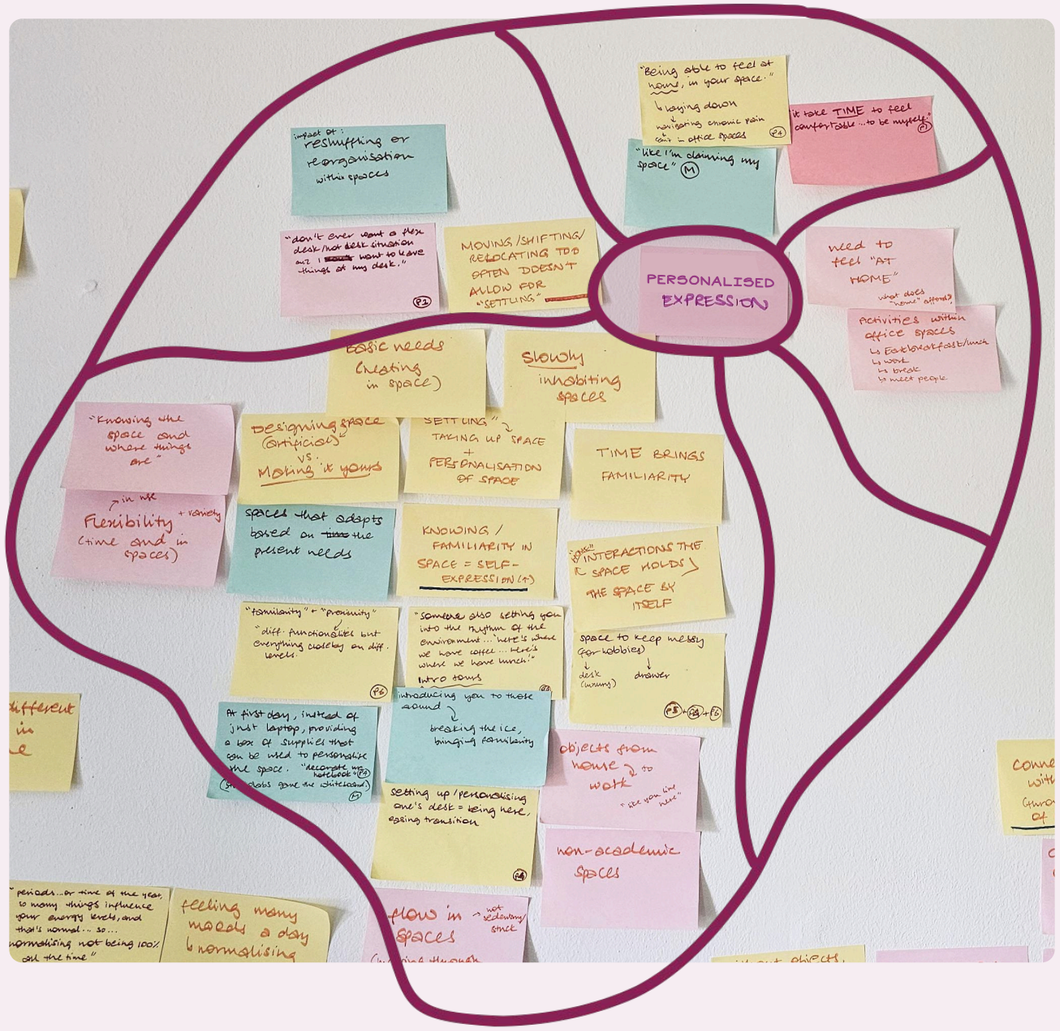


Figure 42. The cluster of "personalised expression" containing insights derived from the thematic analysis

stuck in one spot. Some researchers said they feel "in someone's way" in certain hallways, while in other spaces they could move freely without that tension.

Personalising a desk or workspace adds intimacy and comfort, though this is harder to do when desks are shared. Bringing small objects from home to the workplace can make it feel like "you live here" and helps create a sense of home. Some researchers even spoke about "home" being found more in the people and interactions in a space rather than by the physical environment itself.

Messiness plays a role too. Having a space where you can leave things out, experiment, and play can make it easier to feel at ease and more connected to your surroundings. And having non-academic spaces nearby can make it easier and more accessible to take breaks - something that the PhDs said is available at home and not really at work.

What Acts As A Barrier To This Form Of Expression?

One of the biggest barriers to personalised expression is when the spaces in the organisation are constantly reshuffled or reorganised. It's hard to feel "at home" when the environment keeps changing.

Another issue is the lack of dedicated desks. When people have to share workspaces because there simply isn't enough room in the faculty, it can be difficult to make the space feel personal. One PhD researcher said, "I don't ever want a flex desk or hot desk situation because I want to leave things at my desk." Another mentioned feeling like their space was "invaded" when the person they shared a desk with left their items there.

This gets even trickier when you don't actually know the person you're sharing with, often because you're in the office on different days and never cross paths. Without a relationship or familiarity, it can feel even more like you're borrowing rather than belonging.

These situations make it harder to "settle" into your space at the university. For many, this pushes them to work from home instead. While that might be more comfortable, it can also mean missing out on opportunities to connect with the faculty, build relationships with peers, and feel part of the academic community.

What Does Personalising Feel Like To The PhDs?

For many PhDs, personalising their space feels like creating a sense of home within the faculty. It's about feeling comfortable, settled, and able to be themselves in the environment. One described it as "claiming my space," while another said, "It takes time to be comfortable, and to be myself," especially when they're new to the place.

When they're able to add personal touches, whether that's setting up their desk, bringing in familiar objects, or arranging things in a way that works for them, it feels like an invitation to belong. It's a signal that they're not just passing through, but a part of a whole. In this way, personalisation becomes both a practical and emotional way of feeling connected to the faculty.

What Are The Underlying Needs Behind

This Expression?

The main need behind this form of expression is to “feel at home” in the workplace. For the PhDs, home isn’t just about a physical space. It’s about comfort, belonging, and feeling like you have a place where you can be your authentic self.

The PhDs come to office not only for research or writing. Some start their day there with breakfast, share lunch or coffee with colleagues, teach classes, and meet with others. These spaces are where they hold multiple identities, build relationships, and go through both highs and lows. Anyone navigating this much in one space would need some room to be themselves and feel comfortable in doing so.

Because of this, they need an environment that doesn’t just function as a desk or a room, but one that makes them feel comfortable, included, and rooted, just like home does.

What Are The Consequences Of Not Expressing It?

Not being able to feel like they belong. Not feeling like they have room to express themselves as a result of not feeling like they belong.

Lack of relations and connections. Feeling disconnected. Staying at home more often.

Lower self-efficacy because of feeling “out of place”. Lack of confidence in engaging with others because they feel like an outsider. Lack of familarity that comes time and engagement. Not knowing who is doing what and not feeling like a part of the research community. Having to feel more isolated as a result.

5. Professional Expression

This expression refers to the ability to communicate one’s ideas, expertise, and perspectives within a formal or work-related context, while navigating the norms, expectations, and power structures of that environment.

While this involves adapting one’s self-expression to align with disciplinary conventions, institutional cultures, and audience expectations, we discuss how the PhDs wish to express themselves as professionals and how they experience the context of their work environment.

What Spaces Or Conditions Are Needed For This Expression?

PhDs shared that to express themselves professionally in the way they want, they first need stability, which means knowing they have a place that will not suddenly be taken away. This sense of security allows them to live their daily lives through what the job offers while also enjoying the work itself. They also need support that comes from the systemic and communal spheres rather than something they have to initiate themselves.

They emphasised the need for spaces that allow them to “develop skills and expertise within their own niche” instead of being limited to generalised skills training that currently exists. A “reasonable workload” is also important, along with transparency in work relationships, especially regarding “ethics” and “expectations”. In their supervisory relationship, they emphasized the importance of maintaining



Figure 43. The cluster of “professional expression” containing insights derived from the thematic analysis

healthy boundaries, so as to not let unhealthy work behaviours manifest.

Many prefer open-plan offices that feel non-hierarchical, where everyone from the faculty can occupy the space and learn from each other. A PhD researcher suggested, “If section meetings exist where you get to meet people from your own section, then we could share office spaces with people from other section.” They wish to interact freely, pursue opportunities within the university, and collaborate without barriers.

They also addressed needing the space for reflection in their PhD journeys, where they could step back, see their progress, and plan their next steps. There was mention of how having the freedom to express themselves outside traditional norms, whether through clothing choices or other non-standard professional behaviours, could allow them to show up in the way they wanted to, which could boost their confidence as well.

Several felt the university could be more intentional in fostering interdisciplinary connections. While some universities pride themselves on being interdisciplinary, here, people often remain within their own sections. One PhD described how refreshing it felt to meet people from other sections, who were “not talking about the same conferences and topics”.

A final and interesting suggestion that was noted was having shared university-related objects given to all faculty members, which can build a sense of collective belonging. These items act as subtle reminders that everyone is part of the same academic community.

What Acts As A Barrier To This Form Of Expression?

PhDs shared that one barrier to professional expression is the misunderstanding or miscommunication about what different departments and sections do. Over time, this can leave them feeling disconnected or out of place, especially if the work turns out not to align with their interests. Another challenge is the “territorial” feeling within the PhD-supervisor relationship. Some felt they lacked the freedom to connect with other faculty members, as if doing so would step outside unspoken boundaries. This is tied to a toxic dependency on supervisors, which can make them hold back their opinions or ways of working. Departmental politics can also make them feel “caught off guard,” unsure of how to navigate certain situations.

There were many PhDs throughout this research journey that mention the importance of “firsts” - their first day, first meeting, first connection, first paper. The tone is often set from day one, but in some cases, their first experience was being handed a laptop with the intention for them to immediately start working, with no welcome, introductions, or sense of belonging. In “first meetings” with other faculty members, they have felt intimated because of a corporate vibe, with people questioning them and addressing them with demeaning or unfamiliar vocabulary, which makes them feel out of place. There is no space set out for them to build familiarity with people over time.

Physical space arrangements also play a role. Some recalled when office rooms used to be mixed, with PhDs, postdocs, and professors sitting together. This made interaction easier and interesting as well. Now, the spaces are separated by role, with each group (PhDs, postdocs, professors) in their own rooms. There were even talks of moving all PhDs to the second floor, which one researcher pointed out would “literally build a hierarchy” and “physicalising the feeling of - you are above us.” Such arrangements risk reinforcing the very divides that make professional expression and connection harder to achieve.

What Does Expressing Professionally Feel Like To The PhDs?

When PhDs are able to express themselves professionally, they feel acknowledged and valued, not just for the work they produce, but for their ideas, values, and skills. It’s a feeling of being seen as a capable and trusted member of the academic community. They notice when their supervisors trust them to make decisions and even show a willingness to learn from them. This trust creates space for personal and professional growth, making their work feel more meaningful. It turns their research from something they simply “do” into something they feel deeply connected to and proud of.

What Are The Underlying Needs Behind This Expression?

PhDs spoke about wanting an environment that feels open and enjoyable, by saying “I don’t want fear in the office, I want fun.” They want to feel on equal footing with other faculty members, to be respected, welcomed, and included. Healthy relationships matter to them, along with the chance to connect, collaborate, and support one another. They see value in learning and growing together, with the possibility of progress as a collective rather than just individually.

Professional expression, for them, is also about being able to shape the kind of professional they want to be. Without the right spaces and conditions for this, they risk feeling stuck and unable to grow in their work, which goes against what pursuing a PhD is all about.

What Are The Consequences Of Not Expressing It?

If PhDs aren’t able to express themselves professionally, they may miss out on meaningful connections and valuable opportunities. Without these moments of exchange, they can feel isolated within their work environment, disconnected from potential collaborators, and overlooked for projects or roles that align with their skills and interests. Over time, this can limit their visibility within the faculty and reduce their chances of building collaborations or advancing in their field. This, in turn, reduces their motivation to show up and makes their work feel less fulfilling.

6. Communal/Collective Expression



When shared acts of expression emerge through group interactions or activities, it is referred to as communal expression.

Through this part, we explore how the PhDs wish to interact and form connections with the members of their communal sphere, and how collective expression can emerge in academia.

What Spaces Or Conditions Are Needed For This Expression?

For collective or communal expression to thrive,



Figure 44. The cluster of "communal expression" containing insights derived from the thematic analysis

the PhDs described the need for spaces that naturally bring people together, such as places where there is room for movement, reflection, exploration, and play. While physical spaces matter, they also emphasised that it is often the people who create a sense of community, not just the place itself. In their personal lives, they noticed how digital spaces, such as recurring calls with loved ones, could feel like a constant source of connection even when the physical spaces kept changing. This reinforced the idea that the relationships and interactions within a space matter as much, if not more, than the space itself.

They also spoke about the need for time and opportunities to connect with master's students, creating small but meaningful moments of exchange. Some wanted to be around others for engagement, but also to have the option to step back and "retreat" when needed. A good example of this was Studio Hatch (previously Studio Write), where later-year PhDs could sit together to write. This space allowed them the choice to connect with others while also having the choice to retreat. Having this autonomy was also important to build healthy relations, as is boundary-setting.

They also valued spaces of "anonymity", free from the constant gaze of peers or supervisors. Such places include the library, or transitional spaces such as bus rides or quiet walks around campus. One PhD even described occasionally visiting the coffee corner where master's students gathered, as it gave them a sense of retreat while still being around others.

The importance of balance came up often - having spaces that allow for both openness and privacy, collaboration and independence. A collage from the co-creation workshops showed a cluster of unique chairs, each unique and all huddled together. For one PhD, this image perfectly captured the beauty of "coming together with different perspectives in a professional context", something they cherished and felt was missing at times.

They also stressed the need for informal spaces to connect outside of purely professional settings. In the faculty, communal areas like coffee corners are physically attached to the workplace, which means they rarely function as true rest spaces. Many people also simply leave after finishing their work. In contrast, some recalled experiences at other universities where there was a single, dedicated communal area for all faculties. This space layered different activities together and encouraged people to "linger" after the workday, creating opportunities for what they called "cross-pollination". They described it as the chance for people from different disciplines to meet, talk, and just hang out. While the current university does have examples of such a space, like the building "X," some PhDs are unaware of its existence.

Moments of communal creation also add an enjoyable dimension to their work life. During the spatial walkthrough, one PhD recalled a collective project in StudioLab where members worked together on the exhibition displayed in the hallways. Not only was the process enjoyable, but seeing their contributions on the walls each day reinforced a sense of belonging and pride. It showed how professional, creative, and communal expression could all merge into one experience.

Even simple situations, like sharing a beverage

or taking a break together, can bring people together. These shared moments, whether planned or spontaneous, help build a sense of connection that extends beyond work tasks. In many ways, this expression can be linked with any other form of expression to bring about an additional layer or dimension to their experience within the faculty.

What Acts As A Barrier To This Form Of Expression?

One of the biggest barriers to collective or communal expression is the lack of choice in how and when PhDs connect with others. Many described how current interactions often happen in the form of mandatory meetings or organised hangouts, rather than through informal, naturally occurring encounters. Without autonomy over when and how to engage, connection can feel forced rather than genuine.

The physical layout of the campus also plays a role. The different buildings feel separate from one another, and with the ongoing tram line construction, the perceived distance has grown even more. This sense of separation also emerges from spaces or activities that create both physical and mental barriers to interaction. For example, small offices can feel warm and intimate when shared with familiar people, but cramped and uncomfortable with those you don't know well. Many PhDs share such rooms on the 2nd and 3rd floors, which can make personal comfort dependent on who occupies the space.

The linear and narrow layout of the faculty's rooms adds another layer of challenge. People often feel like they're "in someone's way" as colleagues rush by. This "rushing", emerges as a result of demands of the institution (as seen in Section 2), which leads to the literal passing by of opportunities to connect and engage with others in their vicinity.

Trust, or rather the lack of it, is another obstacle. While PhDs may trust people sitting right next to them, for example, in the library where they might ask a nearby person to watch their belongings, they often don't feel that same trust toward the larger collective in the space. This creates a sense of social caution that limits openness.

Underneath all of this is a deeper tension. We are social beings with an inherent need for connection, yet in an increasingly individualistic academic culture, that need is often pushed aside. As a result, moments of potential community are missed, and the spaces that could nurture them remain unused.

What Does Expressing Collectively Feel Like To The PhDs?

For the PhDs, expressing collectively feels like "being each other's safe spaces". When they emotionally express themselves to colleagues they trust, those colleagues become a place of safety and understanding. These moments of sharing don't just strengthen relationships, they also create a sense of community that feels like it's "taking you inside," offering comfort, freedom, and a sense of belonging.

There's also a connection between collective expression and authenticity. One PhD described, "When I hold space for a friend, I really feel like myself." In moments of listening, caring, and relating to someone else's experience, they not only build a meaningful bond with the other person but also reconnect with their own sense of self. Over time, the repetition of meeting, checking in, and caring for each other, whether in formal or informal settings, nurtures a shared space that feels dependable, warm, and human. This is what gives collective expression its depth and meaning.

What Are The Underlying Needs Behind This Expression?

The need for collective expression comes from a deep desire for connection, reflection, and shared growth. Talking with others, especially those from different departments, can "give sanity" and offer "new perspectives". These conversations act as a space for reflection, where PhDs can "interrogate their own thinking", learn from each other's unique experiences, and gain insights they might not find on their own. Even small exchanges, like recommending a café or a quiet spot on campus, can open doors to new places, opportunities, and ways of seeing their environment.

Having the kinds of physical spaces described earlier also helps counter the isolation that often comes with doing a PhD. Informal connections break down some of the rigidity and tension within academia, making interactions feel more natural and fluid. This not only creates a sense of belonging but also brings more meaning to their work.

At its core, community is not an indulgence. It's a necessity. Yet, in its absence, it often feels like a privilege rather than a given. For many PhDs, finding people they can relate to makes them feel less alone when facing challenges. The PhD journey can be a challenging one, but having supportive peers can make it much easier.

What Are The Consequences Of Not Expressing It?

When PhDs are unable to express themselves collectively, it can leave them feeling isolated, especially in spaces where they don't know the people around them. As one person put it, "If I don't speak to people, I will completely dissolve." Without these connections, they miss out on opportunities to build healthy relationships and to grow both personally and professionally. Over time, their workplace can lose its sense of meaning, making them feel like they don't belong. The feeling of isolation can become more intense when familiar peers leave. As a PhD stated, once familiar peers leave "it does not feel like a home anymore".



Interconnections Among The Six Forms Of Expression

The six forms of expression are deeply connected, often overlapping and feeding into one another in ways that shape the PhD experience. For instance, a space that allows for personalised expression can make someone feel more at home, which in turn makes it easier to express themselves professionally and build stronger communal bonds. Collective expression can open doors for creative expression, while creative moments can inspire new perspectives in professional work. Emotional expression often flows naturally in safe, trusted relationships, and these relationships are strengthened through communal and collaborative spaces. These forms of expression don't exist in isolation...

Instead, they bloom together to create a sense of belonging and possibility. When one form is nurtured, it often unlocks or strengthens the others, creating a ripple effect that enriches both personal and collective experiences. As these forms of expression continue to grow together, they can replace isolation with connection, strengthen self-belief, and encourage people to share their authentic selves, which builds a future where imposter-related feelings and self-silencing have less space to take root.



#3

How Can We *Design* Such Spaces *With* Them, Instead Of For Them?

RESEARCH QUESTION

SECTION 4

Future Possibilities

As the PhDs have reimagined academia as a context that holds space for many forms of expression, I do so too in this section.

I delve into the many future possibilities that this thesis may open doors to, with the hope that there is an opportunity to continue this meaningful work and bring about the six forms of authentic expression within institutions and the people who are a part of them.

Future Possibilities

To express, as Sarah Ahmed reminds us, embodies the act of “pressing out”, like clay under pressure taking shape. Expression is not only about shaping ideas, but also about resisting the pressures that try to shape us in ways that don’t feel authentic. For PhD researchers, this means finding ways to voice themselves despite the institutional and social pressures that often silence them, and learning to reclaim spaces where they can grow, belong, and be seen. This thesis has shown that expression takes many forms - bodily, emotional, creative personalised, professional, and communal - and each of these forms opens up new ways to resist silence and make room for authenticity.

Designing Communal And Systemic Spaces *For* Expression

Future work must take this further by looking not only at individual acts of expression but also at the communal and systemic conditions that make them possible. Just as clay is shaped by the hands that hold it, researchers are shaped by the institutional and social structures they inhabit. This means we must reflect on how we collectively design those structures: How do we show up in shared spaces? Do we create environments that include or exclude? Are we willing to interrogate the systems we inherit, and to reshape them in ways that allow all members to take up space?

The co-creation sessions, having been designed as spaces for expression and connection to emerge, have already pointed towards what is possible. By engaging in collective, bodily, and creative activities, the PhDs were able to surface dynamics that often remain hidden, but also the potential for connection, play, and belonging.

Design As A Method

Design, here, becomes more than just a tool for making things. It becomes a method for surfacing the unseen, for provoking reflection through materiality, movement, and metaphors. It allows us to ask the uncomfortable but necessary question: What does it mean to belong, and what gets in the way of it?

Questioning The Current Norms

This aligns with Donna Haraway’s call to “stay with the trouble” which encourages persisting in the discomfort of messy realities rather than rushing to easy solutions. For institutions, this means openly acknowledging the cracks in their structures and committing to doing better, even if it means stumbling along the way.

For researchers, it means recognising that the PhD journey is not only about producing knowledge but also about shaping identities, building communities, and resisting silence. Justice, like expression, is not a finished state but a continuous process.

Expression And Institutional Practices

One future direction for this work is to explore how expression can be more deeply tied into institutional practices. For example, how might professional expression be redefined in ways that move away from toxic productivity culture and instead highlight wellbeing, creativity, and collaboration? How might both physical and digital communal spaces be designed as “cross-pollination” spaces that bring people together across disciplines? How can supervisors, faculties, and institutions cultivate systemic conditions that enable PhDs not only to survive but to thrive?

Proposals And Interventions

Another direction is to explore the long-term impact of these findings through proposals and interventions. This could include designing sensitising activities for incoming PhDs to help them familiarise themselves with spaces, people and possibilities of expression. It could mean developing provocations that highlight the tensions between productivity and wellbeing, or creating interventions in social spaces that encourage openness and reflection rather than silence. Using an interdisciplinary approach, researching through participatory design, and learning from feminist theory, will be crucial to carry this work forward.

Expression Across The Three Spheres

At its core, the future of this research lies in creating pathways where expression is not seen as a privilege, but as essential to both

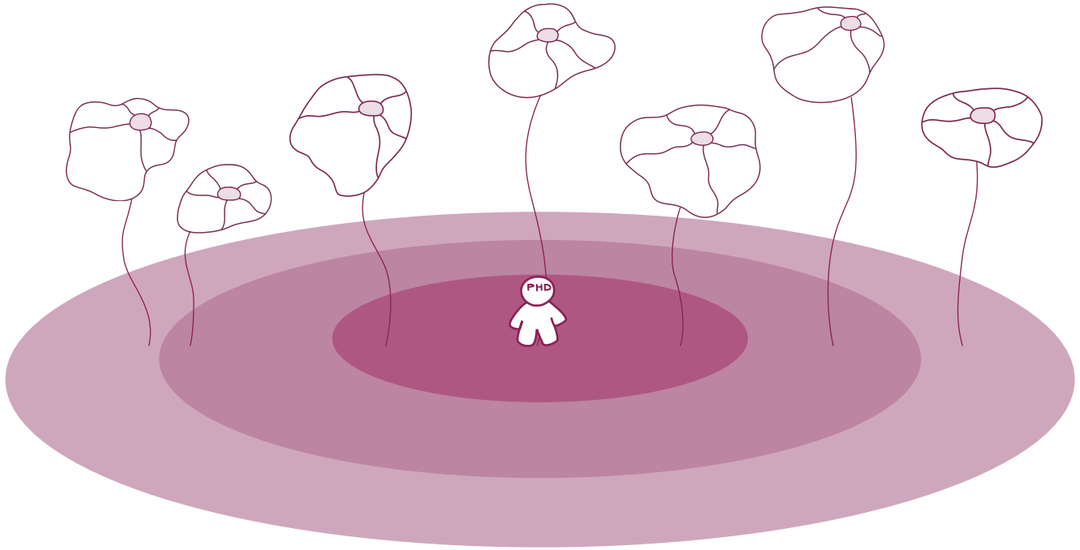


Figure 45. The six forms of expression blooming across all three domains or experiential spheres

personal and academic flourishing.

The six forms of expression mapped in this thesis can bloom across the three experiential spheres: systemic, communal, and personal (Figure 45). For example, bodily expression be supported systemically, where the institution can provide spaces for it to emerge. It can also thrive when communities normalise movement, play, and rest.

Creative expression may begin as a personal practice but gains strength when shared in collective settings. Professional expression, often constrained by institutional expectations, can be reimagined when PhDs are given the agency they need to define their own standards of productivity, belonging, and growth.

In this way, the future possibilities can extend beyond this thesis. They point towards a cultural shift. A shift from isolation to belonging, from silence to expression, from rigid productivity to holistic wellbeing.

Call To Action

This is also a call to action. For institutions, to create spaces that do not simply demand productivity, but foster connection, support, and reflective learning. For supervisors, to move beyond their role, into that of collaborator, ally, and co-learner. For PhD researchers, to see themselves more than imposters struggling to fit in, but as co-shapers of academia's present and future.

I hope that the new generation of PhD researchers can learn from the voices that live between the pages of this thesis to carve their journey the way they want to. To express themselves in the ways they wish to. I hope for institutions to listen and for those within the systems to encourage collective change. Perhaps, when this happens, the meaning of "professionalism" and "productivity culture" itself can evolve into something that centres connection, belonging and expression.

SECTION 5

Dwelling

To “dwell” is to live within a space, to exist, to linger, to inhabit it and make it your own. To “dwell” is also to think and keep one’s attention directed on something - to reflect on it over a period of time.

Academia is a space I consider to have dwelled in for a while now - a space which I have inhabited and a space that I have made my own. Through the interactions within it, by occupying space, and by forming strong meaningful connections with those around me, I carved a space for myself.

This thesis was a means to dwell on societal structures and how its influence on us can be deeply embedded, while also being invisible. I have reflected on how spaces and objects shape us and how we, in turn, shape those very spaces. Thus, this chapter is one of the many spaces carved out as a result of this thesis - a space of reflection, a space where I “dwell”.

Reflection

The Aim

In a broader sense, this project was aimed at understanding how the interactions we have in our everyday lives shape us. More specifically, it looked into imposter phenomenon (also known as imposter syndrome) and how social interactions within many contexts can impact the way we feel about ourselves and our connections to others. This was done through a case study that focused on the lived experiences of PhD researchers at Industrial Design Engineering, TU Delft.

We learned of the many ways in which people or systems in academia can contribute to making someone retract into their shells or express themselves and feel as they are a part of a community. Conversations and co-designing with the PhDs helped develop practices that carve spaces for meaningful connections to be built - both with oneself and with others co-existing in the system.

The Process

A research-through-design approach was used in this project, where insights were derived from designed activities. These activities were designed with a feminist lens where importance was given to bringing about familiarity and comfort through making the context of the activity informal and relaxed. By bringing informality, it helped me engage with the participants in a relaxed manner, while also giving them the space to share deeper levels of emotions and experiences that went beyond surface level discussions.

As we navigated through various themes and topics, I noticed how the absence of rigid structures encouraged vulnerability, resulting in meaningful exchange of our experiences. By bringing myself to work beside the PhDs in their context during the timeline of this thesis, it helped create a bond with them based on relational trust. This not only enhanced their willingness to contribute to the study but also deepened my understanding of their perspectives and the challenges they faced by meeting with them through informal means in different contexts.

I believe that the methods I chose were effective for this particular thesis. Through practical application, I have gained a significant understanding of these methods, as I had wished to when I outlined them in the project brief at the beginning of the thesis.

The Outcome

I believe the outcomes of this project to be manifold. One of the outcomes has been the design of the co-creation workshop, where it acted as a space for creative and communal expression to emerge, while also bringing about in-depth insights. Those insights led to the creation of the six forms of expression that PhDs need to emerge within the context of academia, which I consider to be another designed outcomes.

Apart from these, I had also created the methodology of the “Three Ms” approach which advocates for bring Materiality, Movement and Metaphors, into our designed activities so as to bring to surface tacit knowledge. I consider to also be a feminist approach as it has been backed by feminist scholars. Additionally, it allows for the generation of new forms of knowledge by prioritising the lived experiences and emotions of our participants.

This thesis contributes significantly by the combination of methodologies used which allowed me to form meaningful connections with the participants themselves and learn of their lives in academia. It is also one of the very limited studies that showcases a connection between imposter phenomenon and self-silencing, while also moving towards a speculative future where self-expression can be found.

Finally, the future possibilities presented earlier, along with the reflective questions they raise, unify the thesis and pose significant questions that could create a ripple effect contributing to changes in the social spaces of academia.

Key Challenges

There were many key challenges I faced during the course of this thesis, which acted as valuable learning points for me. One of the first was the scope. In order to not begin the thesis with assumptions, I started out with a fairly broad scope. While this openness allowed me to navigate uncertainty and remain responsive to what emerged, it also made planning difficult, as I could not predict what would come out of the conversations or the co-creation sessions. The outcomes remained unclear until the very end. It was always going to be the process of research, rather than a fixed product. The absence of a tangible outcome gave rise to feelings of uncertainty, but accepting that this was a research-oriented thesis allowed new perspectives to come in and gave me the freedom to follow unexpected directions.

Defining the problem itself was another challenge. Self-silencing and imposter phenomenon are not only personal struggles but are deeply tied to the social, cultural, and institutional structures of academia. Much of what I was trying to study was invisible. Even though it is felt, it is not spoken about openly and is even hidden in everyday interactions. The challenge was to make this invisible layer visible without reducing it to oversimplified definitions. This also meant holding together the tension between individual experiences and broader systemic dynamics, and even reflecting on the language I used. For example, deciding to refer to “imposter phenomenon” instead of “imposter syndrome” became an important step in pointing to systemic rather than individualised causes.

Designing the workshop as both a method and a safe space brought its own difficulties. It could not simply function as a tool for collecting data. It also needed to create a sense of care and trust for the participants. This was essential, since the very issues I was exploring revolved around fear of judgment and lack of belonging. Balancing research aims with ethical responsibility was therefore a constant consideration. Another challenge was translating abstract theoretical ideas, such as expression, metaphors, or convivial design, into concrete activities that participants could actually engage in. This required moving between theory and practice, often revising and adapting, and accepting that not everything would work as planned, which was honestly hard to accept at certain stages.

Finally, my own positionality helped shape the process. Being part of the same environment as the PhDs I was working with came with both benefits and challenges. It gave me access and relational trust, but it also meant constantly reflecting on my role as both insider and researcher. What they say about "you becoming your research" stands true, as I did feel like an imposter many times during this process. In the end, this positionality became part of the learning. The thesis was not about arriving at a neat solution, but about opening up spaces of questioning and possibility.

The Impact

The societal impact lies in how the project challenges the culture of silence in academia. By showing that expression is a need rather than a luxury, it points towards institutional responsibility in shaping environments that nurture belonging and authenticity. While small in scale, the findings move beyond this context, highlighting how toxic productivity cultures can be resisted through collective, creative, bodily, and professional forms of expression.

For design research, the project advances new approaches that treat expression as both process and outcome. Rather than aiming for fixed solutions, it demonstrates how co-creation and metaphorical tools can surface hidden dynamics, provoke dialogue, and help reimagine academic life in more humane, relational, and inclusive ways.

Towards the end of this thesis, I had a few additional informal talks with the PhD researchers who have been involved right from the beginning. One PhD researcher shared that this project sparked conversations about hidden tensions and imposter feelings among their peers. These were conversations that continued even after I had left the room. Realising that the work could create ripples like this has been deeply moving, and it reminds me that impact often lies in the moments of connection we leave behind.

Personal Growth

This thesis has been as much a journey of personal growth as it has been a research project. Going into it, one of my main ambitions was to learn how to design with, not for, people, and to let their voices shape the direction of the work. The co-creation approach taught me how to step back from the role of a "problem-solver" and instead act as a facilitator of expression. This was both challenging and rewarding, because it required me to trust the process, embrace uncertainty, and recognise that meaningful outcomes often emerge in unexpected ways.

Throughout this process, I was building meaningful connections outside of the thesis as well. Those connections showed me the reality of how care, companionship and trust can show up in our relations. It is what drove me to create spaces where meaningful connections could emerge among PhDs as well.

On a personal level, this project has shown me how deeply I care about academic well-being, collective care, and feminist approaches to research. It has shaped my future goals and ambitions as well. I wish to continue working at the intersection of design, research, and care. To be able to creating tools, spaces, and methods that help people express themselves and reimagine the systems they are part of, would be a great direction to tread along.

Professional Growth

In the beginning, the more I talked to people about what a thesis entails, the more I realised that a Masters thesis does not necessarily need to be aimed at "solving" a problem. It exists as a space that gives you a chance to develop skills you are intrigued to explore along with topics that you may have built an interest in over the last three semesters.

There have been many courses that have shaped my journey so far. I do believe that the learnings and reflections from each of those courses paved a path that led me to this thesis. One of my elective courses called 'Design Justice' inspired me greatly. The performative mock trial was a great way of learning through enactment and embodying personas. Through these electives, I learned of many concepts and methods that I needed a space to learn through implementation and practice. A way to be a designer and researcher simultaneously.

I also learned about my own strengths and weaknesses as a researcher. My strength lies in **creating spaces where people feel comfortable to share,** and in **converting their experiences into insights that reveal bigger systemic patterns.** At the same time, I struggled with the uncertainty of not having a fixed outcome and with the difficulty of setting boundaries around the scope. Accepting this ambiguity has helped me grow into a more **reflexive and resilient researcher, one who values the process as much as the product.**

The realms of behavioural psychology and feminism appealed to me as well. This thesis emerged as a space for me to learn how to design meaningful interactions for PhDs, while also trying to understand their experiences through those designed interactions.

I have learned a lot throughout this meaningful journey alongside many wonderful people. It has been a deeply collective journey and I wouldn't have it any other way. I have a lot more to learn ahead, and I cannot wait for that part to begin.

“

Carving Out Your Own Space Is A Collective Journey; You Are Shaped By Those Who Surround You.



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Section 1: Foundation

Chapter 1

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Section 2: The PhDs' Perspective

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Appendix I

Project Brief

DESIGN FOR our future

TU Delft

IDE Master Graduation Project

Project team, procedural checks and Personal Project Brief

In this document the agreements made between student and supervisory team about the student's IDE Master Graduation Project are set out. This document may also include involvement of an external client, however does not cover any legal matters student and client (might) agree upon. Next to that, this document facilitates the required procedural checks:

- Student defines the team, what the student is going to do/deliver and how that will come about
- Chair of the supervisory team signs, to formally approve the project's setup / Project brief
- SSC E&SA (Shared Service Centre, Education & Student Affairs) report on the student's registration and study progress
- IDE's Board of Examiners confirms the proposed supervisory team on their eligibility, and whether the student is allowed to start the Graduation Project

STUDENT DATA & MASTER PROGRAMME
Complete all fields and indicate which master(s) you are in

Family name	Sethi	IDE master(s)	IPD ☐ Dfl ✔ SPD ☐
Initials		2nd non-IDE master	
Given name	Harshita	Individual programme (date of approval)	
Student number	[redacted]	Medisign	☐
		HPM	☐

SUPERVISORY TEAM
Fill in he required information of supervisory team members. If applicable, company mentor is added as 2nd mentor

Chair	Virginia Tassinari	dept./section	HCD, Society, Culture & Critique
mentor	Ece Şekerli	dept./section	HCD, Human Factors
2nd mentor			
client:			
city:	Delft	country:	Netherlands
optional comments			

! Ensure a heterogeneous team. In case you wish to include team members from the same section, explain why.

! Chair should request the IDE Board of Examiners for approval when a non-IDE mentor is proposed. Include CV and motivation letter.

! 2nd mentor only applies when a client is involved.

APPROVAL OF CHAIR on PROJECT PROPOSAL / PROJECT BRIEF -> to be filled in **by the Chair** of the supervisory team

Sign for approval (Chair)

Name Virginia Tassinari Date 03-02-2025 Signature Virginia Tassinari

DESIGN FOR our future

TU Delft

Personal Project Brief – IDE Master Graduation Project

Name student Harshita Sethi Student number [redacted]

PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT
Complete all fields, keep information clear, specific and concise

Project title Enhancing Self-Efficacy and Building Empowerment in Communication Skills to Support Academic Collaboration for Women Researchers

Please state the title of your graduation project (above). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

Introduction

Describe the context of your project here; What is the domain in which your project takes place? Who are the main stakeholders and what interests are at stake? Describe the opportunities (and limitations) in this domain to better serve the stakeholder interests. (max 250 words)

The project's context lies within academic institutions like TU Delft, where multidisciplinary research is conducted. Focusing on the intersection of feminism and behavioral psychology, this project aims to address the challenges faced by women researchers, particularly in developing self-efficacy in communicating their research. The main stakeholders are women researchers, especially PhD candidates, whose interests include overcoming barriers to self-efficacy and confidently sharing their work.

One significant contributing factor to this issue is self-silencing, a detrimental behavior where women suppress their emotions and prioritize others' needs over their own. This tendency, as physician and author Gabor Mate notes, can be detrimental to women's health, perpetuating toxic societal norms that impose significant health costs. In academic settings, self-silencing may hinder women researchers' confidence in expressing their ideas and engaging in productive dialogue with their peers.

Enhancing self-efficacy is crucial for breaking this cycle and enabling women researchers to communicate their research effectively. By designing interventions that support women and empower them to share their work, we can challenge societal expectations and create healthier academic communities.

Opportunities within this domain include researching and co-creating interventions with women researchers to support their communication skills and self-efficacy. Comparing experiences across disciplines can uncover common barriers and opportunities for fostering self-efficacy. Although potential limitations could involve resistance to change, limited resources, and addressing deeply ingrained societal norms, working collaboratively with women researchers can help develop tailored solutions that promote more inclusive and equitable academic environments.

→ *space available for images / figures on next page*

DESIGN FOR our future

TU Delft

Personal Project Brief – IDE Master Graduation Project

Problem Definition

What problem do you want to solve in the context described in the introduction, and within the available time frame of 100 working days? (= Master Graduation Project of 30 EC). What opportunities do you see to create added value for the described stakeholders? Substantiate your choice.
(max 200 words)

In the context of academic institutions, women researchers often face challenges in developing self-efficacy, particularly regarding their ability to effectively communicate their research. This issue arises from various factors such as lack of resources, time taken to gain necessary skills, societal expectations, patriarchal norms, and the prevalence of self-silencing behaviors.

Within the 100 working days of the Master Graduation Project, the aim is to address this problem by researching and designing interventions that specifically target the enhancement of self-efficacy among women researchers. These co-created interventions will be made to ensure they are tailored to their unique needs and foster open communication, assertiveness, and confidence in sharing their valuable work.

The opportunity lies in creating added value for these stakeholders by empowering them to overcome barriers, contribute more confidently to their fields, and cultivate a more inclusive and equitable academic landscape. By focusing on building self-efficacy, the project's impact can be more effectively measured and assist in the development of evidence-based strategies to support women's academic success.

This project could lay the groundwork for long-term change by challenging societal norms and empowering women researchers to assert their voices, ultimately benefiting both the individuals and the broader academic community.

Assignment

This is the most important part of the project brief because it will give a clear direction of what you are heading for. Formulate an assignment to yourself regarding what you expect to deliver as result at the end of your project. (1 sentence) As you graduate as an industrial design engineer, your assignment will start with a verb (Design/Investigate/Validate/Create), and you may use the green text format:

Design an intervention to enhance the self-efficacy in communication for women pursuing research in multidisciplinary academic institutions.

Then explain your project approach to carrying out your graduation project and what research and design methods you plan to use to generate your design solution (max 150 words)

Starting this graduation project with a comprehensive literature review could help build a solid foundation. It would help us gain a deeper understanding of self-efficacy, self-silencing, and existing interventions. Following this, interviews and focus groups can be conducted with women researchers to identify their specific challenges and needs. This qualitative data will inform the co-creation process in the second phase, where I will collaborate with the stakeholders to come up with ideas for tailored interventions.

The design methods could involve workshops and brainstorming sessions taking place through the iterative process, while the research methods could potentially include ethnographic observations, surveys, and semi-structured interviews. At the final phase, prototyping and user testing could help ensure the intervention's effectiveness and usability.

By involving women researchers throughout the process, the project will result in an intervention that addresses their unique challenges and supports them in building self-efficacy for communicating their research.

(It would be nice to explore the use of autoethnography as a complementary research method to triangulate data and deepen my understanding of the challenges faced by women researchers while also gaining deeper empathy).

Project planning and key moments

To make visible how you plan to spend your time, you must make a planning for the full project. You are advised to use a Gantt chart format to show the different phases of your project, deliverables you have in mind, meetings and in-between deadlines. Keep in mind that all activities should fit within the given run time of 100 working days. Your planning should include a ***kick-off meeting****,* ***mid-term evaluation meeting****,* ***green light meeting*** *and* ***graduation ceremony****. Please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any (for instance because of holidays or parallel course activities).*

Make sure to attach the full plan to this project brief.
The four key moment dates must be filled in below

Kick off meeting	03-02-2025
Mid-term evaluation	17-04-2025
Green light meeting	12-06-2025
Graduation ceremony	18-07-2025

In exceptional cases (part of) the Graduation Project may need to be scheduled part-time. Indicate here if such applies to your project

Part of project scheduled part-time	
For how many project weeks	
Number of project days per week	

Comments:

Motivation and personal ambitions

Explain why you wish to start this project, what competencies you want to prove or develop (e.g. competencies acquired in your MSc programme, electives, extra-curricular activities or other).

Optionally, describe whether you have some personal learning ambitions which you explicitly want to address in this project, on top of the learning objectives of the Graduation Project itself. You might think of e.g. acquiring in depth knowledge on a specific subject, broadening your competencies or experimenting with a specific tool or methodology. Personal learning ambitions are limited to a maximum number of five.
(200 words max)

1. Personal Motivation: As a woman interested in research and designing for people, this project personally resonates with me. It allows me to delve into the experiences of women in research fields and address the challenges they face in self-expression and communication. I'm fascinated by the role personal experiences play in shaping our understanding of these issues, giving value to introspection and ethnography.
2. Feminist Lens: I believe more research from a woman's perspective is essential to support and empower women in academia. Feminism is a personal value that I would like to explore in the field of design and how I could contribute to enhancing the voice of women as a researcher and designer. This project could let me contribute to a more inclusive and equitable academic landscape.
3. Behavioural Psychology: My background in architecture and IDE research projects has fueled my existing interest in behavioral psychology. I've delved into projects exploring how spatial elements impact people and conducted a research elective on the 'Experience of Sunday Blues' with Zhuochao Peng, under Haian Xue's guidance. This project would further enhance my research interest through the focus on self-efficacy.
4. Developing Skills: I am eager to learn more about facilitating co-creation sessions. I value design informed by research, and designing for people with people. I aim to experiment with specific tools or methodologies in this project to create meaningful solutions that amplify women's voices in academia and promote self-efficacy in multidisciplinary research environments.