

IMPOSSIBLE BY DESIGN

Design for Interaction MSc.
Master thesis
TU Delft

Nathan Douenburg



IMPOSSIBLE BY DESIGN

Designing educational exercises to integrate philosophy and form in design education, for broad and philosophic perspectives on contemporary issues.

“Vaak beginnen boeken met een ritueel...
... het is dat ene zinnetje of citaat dat op de eerste pagina wordt gezet...
...vaak klinken ze zo, dat wat voor onzin ze ook beweren, je ze gelooft.”

Allessandro Baricco (2006)

November 2025

Master Graduation Thesis

Impossible by Design

Designing educational exercises to integrate philosophy and form in design education, for broad and philosophic perspectives on contemporary issues.

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Master Graduation Thesis

MSc. Design for Interaction

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EN: “Books often begin with a ritual... ... it is that one sentence or quote that is placed on the first page...
...often they sound so convincing that, no matter what nonsense they claim, you believe them.”

Acknowledgments

It takes a village to complete a masters degree, let alone two. I could have not done it without all the support from the coaches throughout the bachelor and master. Who all put up with me, my antics, and provocations. This thesis is the result of six and a half years at ID, but most of all, the people I have met during this time.

First and foremost, I must shine the spotlight on my supervisors. Susie, who was my coach at the Identity & Portfolio course: Where I stated 'that I did not want to become a designer'. Look at where I am now, I do not want to become anything different. Maarten, who has helped me throughout the bureaucratic hell I made out of my studies. As well as priming me for the academic world and an eventual PhD.

A huge thanks to all the experts, coaches, and teachers who were involved in this project. Your enthusiasm made the chapters write themselves.

To all my friends who stood close during all these years. Who have seen me struggle with borderline, bureaucracy, and belonging. I could not have done this without you all.

To Marre, who has been there from the lectures of PO1 to Dutch Design Week 2023. I couldn't have done this without you,

To my partner Dion, who gives me endless joy as well as time and space for me to rant about books, philosophy, and design.

Finally, to my father:
☺☺ ☺☺☺☺☺☺ ☺☺☺☺☺☺☺☺

- Nathan



Executive summary

This thesis explores the integration of philosophy and the humanities approach to design into contemporary design and engineering education at Industrial Design Engineering. The final design is PanDora's Toolbox: a set of multiple philosophy & design exercises in different formats based on the exploration into philosophy and design in this thesis journey.

This thesis departs from The Philosophy of Technology to enhance current educational exercises and make students aware of their own normative ethics and assumptions. The research adheres to the technological viewpoint of *The Technical Condition* (as defined by Swierstra et al. 2022).

It attempts to structure the current academic discourse for a clear division for the Philosophy of/on/with/for/through/and Design. This thesis project is grounded in Delft and her efforts regards philosophy, technology, design, and responsible innovation: From peer-reviewing theses on design and philosophy, to highlighting current research projects. Rooting philosophy at TU Delft from an inter-faculty viewpoint.

The research approach is based on three pillars, to speak to (design) engineers 'in their own language': From **sensitizing** students for philosophic questions and disciplines, to **visualizing** philosophic waves and thought in diagrams and comics, and **materializing** philosophic theories through making and play practices.

Finally, the design part of the thesis focuses on the integration of specific philosophic cases, methods, and techniques to enhance the engineering case study. Through adopting different lenses as productive failure and pedagogy of discomfort, the design confronts students with their own normative ethics and assumptions.

Instead of teaching students what critical thinking is or should be, these designed case studies let students experience discomfort regarding their own worldview. Therefore, they feel the need to think critically themselves and are motivated to ask philosophic questions intrinsically.

The focus of the case studies are on a small part of a bigger societal theme. Three of them created are:

- Redesigning a VOC-ship attraction in The Efteling (to focus on Decolonizing design)
- Inventing mobility innovations for people in wheelchairs in the Anne Frank House (to focus on heritage, values, and inclusivity)
- Creating packaging designs and ad-campaigns for teeth whitening products (to focus on beauty, eugenics, and marketing)

The designed case studies are regarded as 'Impossible by design', because through applying their usual design/engineering skills, one will not be aware of the bigger theme hidden in plain sight. These designed case studies place the student 'inside' the systemic problems and topics they face instead of solving them from 'afar'.

Design goal:

"Create educational exercises that integrate philosophy and form in design education, for broad and philosophic perspectives on contemporary issues.

A VISUAL SUMMARY on Philosophy & Design

By Nathan Jansen BSc 2

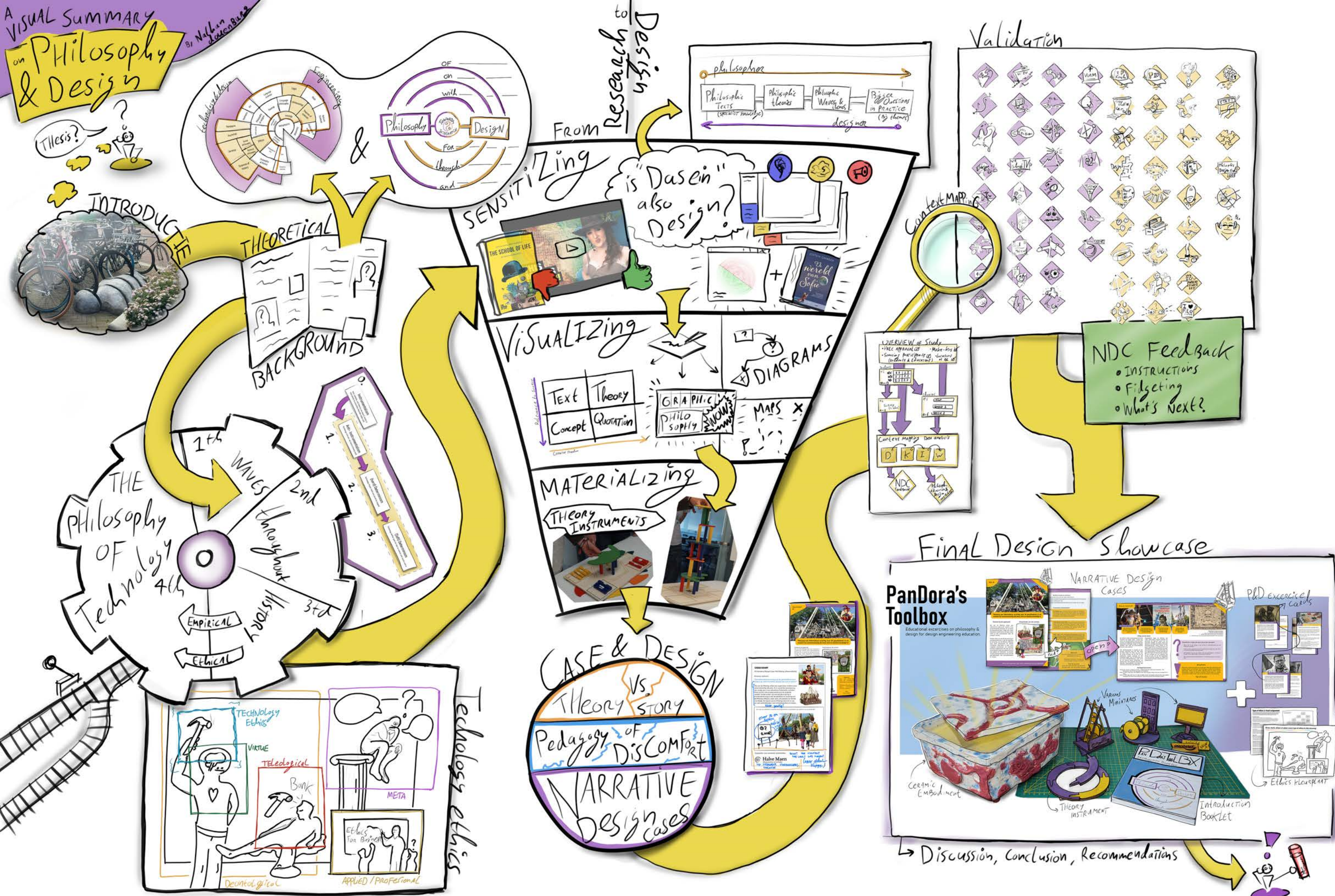


Table of contents

Project origin	p.10	H6. Materializing philosophy	p.71	H10. Embodiment design	p.145	Post Scriptum	ps.1
Reading guide	p.12	• The cutting edge of design and philosophy	p.72	• An embodiment to PerFORM	p.146	• Experts/Interviews/Acknowledgment	ps.2
H1. Introduction	p.13	• Diving into Theory Instruments	p.72	• Ceramic imaginaries of the Philosophy of Technology	p.148	• A critique on design for the systemic level	ps.6
• Design is the Problem.	p.14	• Designing an entangled theory instrument	p.74	H11. Final design showcase:	p.145	• A statement on the use of A.I.	ps.7
• <i>Van fiets parkeren tot filosoferen</i>	p.17	• Design implications	p.82	• PanDora's Toolbox	p.158	• Philosophy quotes: The tote bag test	ps.7
• Thesis positioning	p.22	H7. Narrative Design Cases	p.85	H12. Discussion, limitation, and recommendations	p.159	• Ways of seeing: A visual essay of this thesis	ps.8
H2. Project overview	p.25	• The need for new pedagogies	p.86	• Discussion and limitations of the research	p.160	• Research-through design prototypes	ps.11
• Visual summary of the approach	p.26	• Towards a pedagogy of discomfort and productive failure	p.86	• Interpreting the data	p.160	• An essay on design as a spiritual phenomenon	ps.14
H3. Theoretical background	p.29	• Aporetics in philosophy, design, and education	p.88	• On the integration of philosophy & design in education	p.161	• Working out an NDC into an essay: Efteling design and colonialism	ps.33
• A Philosophy-first approach	p.30	• On theory and story in design	p.95	• Recommendations and further research	p.162	• All contextmapping themes and results	ps.28
• The Philosophy of Technology	p.31	• Enhancing the case study with narrative	p.96	H13. Conclusions	p.163	• TU Delft In-house Philosophy & ethics courses	ps.47
• Contemporary perspectives on the Philosophy of Technology	p.33	• First iteration: Three case studies	p.100	• Subgoal: Exploring the Philosophy of Technology	p.164	• Sketch exploration for a possible 4TU minor	ps.48
• Philosophy, design, and education	p.36	• Second iteration of cases	p.102	• Subgoal: Sensitizing, visualizing, and materializing	p.164	• Sketch exploration for a possible IDE Philosophy & Design master	ps.50
• The role of the case study	p.39	H8. Validation & Contextmapping	p.111	• Design goal: Educational exercises	p.164		
• Design implications	p.42	• Contextmapping methodology	p.112	• Impossible by Design	p.165		
H4. Sensitizing designers for philosophy	p.43	• The research design	p.112	Personal reflection	p.167		
• Dasein & Design: a true philosophical pairing?	p.44	• Research part 1: Students and the NDC	p.114	Bibliography	p.170		
• Educational tools: Ethics for Designers Toolkit	p.46	• Research part 2: Design educators	p.116				
• The School of Life: Commodification of philosophy	p.48	• From Data to Information	p.118				
• Philosophy-it-yourself: Video essays, mainstream media, and digital tools	p.51	• From information to knowledge through clusters	p.120				
• Design implications	p.52	• On the necessity of Philosophy and Design	p.122				
H5. Visualizing philosophy for designers	p.53	• Discomfort and Design	p.124				
• Thoughtful images for philosophy and design	p.54	• Speaking a designers language	p.126				
• Diagrams & maps: visualizing histories and relations	p.56	• Concluding remarks	p.128				
• Towards designerly ways of visualizing philosophy	p.62	H9. Synthesis: From NDC to multiple educational exercises	p.129				
• Design implications	p.70	• Iteration on the NDC design itself	p.130				
		• An aporia theory instrument	p.138				
		• Introduction booklet	p.140				
		• Philosophy & Design exercise cards	p.140				

Project origin

Philosophy has always intrigued me. As a Gifted (Hoogbegaafd) person, thinking everything through has always been second nature. However, there was no time or space during my design studies to explore this. Philosophy has therefore always been my at home passion/hobby.

During my master at the Design Cultures programme at VU Amsterdam, I realized that there is a place for more critical views on design. To consider the history of design, culture, and practice through the lens of the humanities, opened up a whole new world of writers, critics, and philosophers. Then the question remains: What to do now?

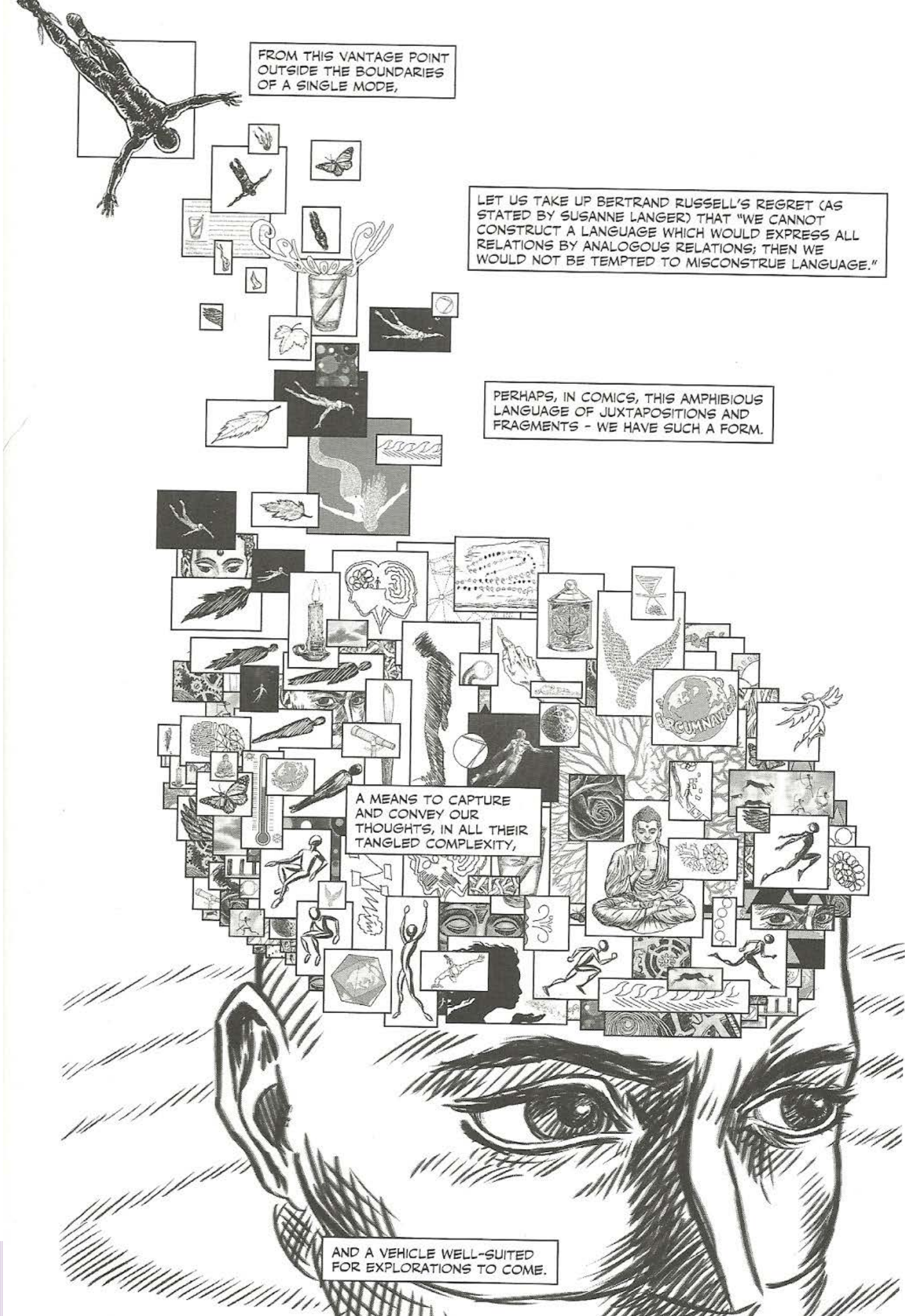
I realized that I did not want to leave the faculty of IDE without a final challenge. So, the quest to write a thesis on philosophy and design took a hold of me. My first hunch was to research form and ideology, on the grand scale of industrial design to the small scale of design students and portfolios.

Especially works as *Unflattening* by Nick Sousanis (2015) (see figure 1) urged me to do things differently, and find ways to apply to same principles in my studies, and design practice.

When I realized the field of philosophy and design is relatively young, fairly unstructured, and not explicitly interwoven in courses or curricula, I knew there was something else for me to do. My passion for design, education, making stuff, and my love for philosophy culminated in this thesis.

My ambition is to be the starting point for many students like me. For every student that had the ambition to explore philosophy in a likewise manner. For the student that wanted to make space for critical questions. And for every Gifted person that did not find their place in a system as this one.

Figure 1: A page from the comic book PhD thesis *Unflattening* (Sousanis, 2015)



Reading guide

This thesis is structured in three segments:

1. The Design thesis:

In this part we will dive into the research, main design goal, and move through the design cycle. The exclamation point is chosen as an illustration for the thesis, because this is what I have to say, and is most important in the narrative. Next to it being the main symbol of the converging approach through philosophy as a discipline.

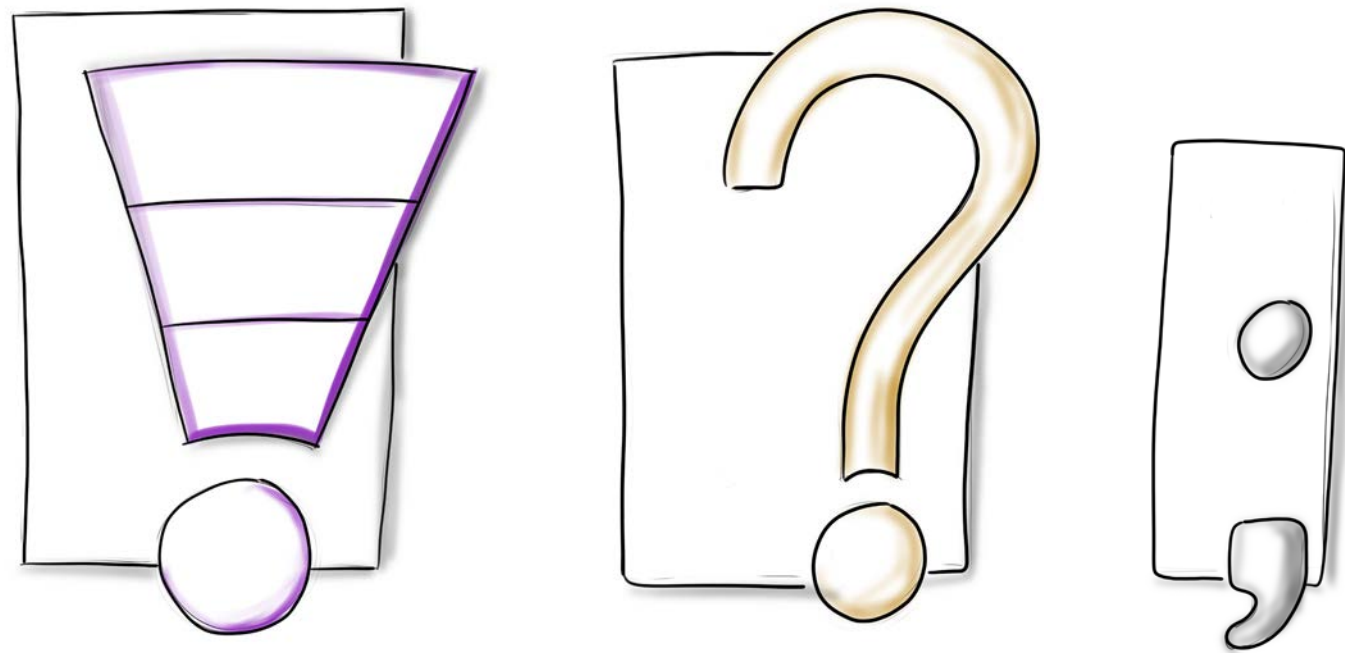
2. The Post Scriptum:

This chapter serve as a more in-depth look at various topics and side tracks in the thesis. It dives into the research and activities that have been part of the overall process. The question mark is chosen as an illustration to show the possibility of wanting to know more.

3. The Appendix

In this chapter all bigger visuals, data sheets, analyses, are situated. There has been a deliberate choice to split the in-depth chapters with the appendix. Because the appendix is where knowledge 'goes to die'. The illustration of the semicolon is chosen deliberately because the read can decide themselves if they will end their reading journey or continue.

Finally, all chapter covers (as seen on the right) all serve as a visual summary of the chapter. The covers will include a short explanation as well to elaborate on the choice and link with the content. Together combining them as a 'visual essay' as defined by John Berger (1972) in *Ways of Seeing*. This visual essay can be found in the appendix.



H1. Introduction

On uncomfortable objects that embody philosophical questions in their existence. Where critical questions are aimed at design, and the motivation for philosophy. As well as the positioning of this thesis in the field of Design.



Youtubers Aleksa Vulović & Alex Apollonov elaborate on the statement 'guns don't kill people, people do' regarding pro-gun discourse. The absurdity of the statement reveals itself when changed to 'Guns do not kill wheelchair-shaped targets, people do'.

When we say we 'design for our future', who is 'our'? When is this 'future'? Are we open to the fact that products in the past were better designed for more of 'our' people? What if the problems we now consider as wicked are a result of our past actions? What if we have been thought to think critically, without actually knowing how to do it? What if design is the problem?

WE SEEM TO BE DESIGNING EXCLUSIVELY FOR THE OLD, THE FAT,
THE RICH, THE WHITE, THE POWERFUL. THE ONES WHO
MANAGED TO GET US INTO EVERY SINGLE MESS AND
FRIGHTFULNESS MANKIND HAS SO FAR EXPERIENCED.
TO CREATE LIPSTICK FOR HONEST WHORES IS ONE
THING, BUT TO JEOPARDIZE HER PIMP IS ANOTHER.

**“De ontwerpers van onze brave new world
doen weinig anders dan alles zo mogelijk
iedere dag opnieuw illusies aan ons
verkopen... ..De wereld hoeft niet om de vijf
jaar van vorm te veranderen.”**

Throughout my studies people have described me as having 'a philosophical approach'. I always assumed this because of my many questions, in/around/on design. For instance: 'what is good design?', 'Why do we design?', 'Why must something be designed?', 'Why can't

I have noticed the need for designers and engineers to broaden their views on contemporary issues. The societal issues, systemic complexities, and wicked problems that are incorporated into design curricula have become the norm and design is still seen as a driver for change (Kolks, 2024). The main product of a design project is always something that is 'made', 'designed', or 'co-created', which to me still seems as 'one approach' or 'a solution' to these grand issues. I believe we need new ways of considering problems. As well as different results than pure 'a design'. A result that in its form acknowledges that problems are not solvable in the span of a 5 EC course, a three year bachelor programme, or two year master.

So this thesis aims to question everything that has not yet been questioned, and discuss the uncomfortable topics to which there is no comfortable answer. This ambition brought me to philosophy, an inherent passion that has always played a role in my design process and projects .



In this thesis, we will move through philosophy from the discipline level, to philosophic waves, and end with a specific method applied to design. A fitting definition by De Regt (2021) that applies to this thesis as a whole:

“Philosophy is the search for hidden assumptions that ought to be critically evaluated. Where others stop, a philosopher continues to find unarticulated opinions and argumentation. What others take for granted, the philosopher highlights and discusses.”

This is to me, what the plight of a designer ought to be as well. Therefore the design goal is to *create educational exercises that integrate philosophy and form in design education, for broad and philosophic perspectives on contemporary issues.*

To give ‘an answer’ on what then to make and design through this thesis, is not the goal. It is the way to a possible answer that I regard as most insightful. Otherwise this thesis would step into the same pitfall it accuses others of being in. Therefore, the goal is to open the eyes of a designer to philosophical perspectives in a way they are thought to recognize: **Sensitize, visualize, and materialize.**

This thesis has been the opportunity to dive into the philosophy around material culture, technology, and design itself. So, to answer the bigger questions that in times of design operating at the systemic level should be asked, or should be viewed in a different way.

Design goal:

“Create educational exercises that integrate philosophy and form in design education, for broad and philosophic perspectives on contemporary issues.

With design education at IDE moving to the systemic level (Voûte et al., 2020), more complex approaches, cross-disciplinary insights, and new ways of thinking are needed. Especially in times of grand societal issues and urgent changes in our world, from women’s reproductive rights to climate change, design can be a driver for change (Kolks, 2024). However, these societal issues are not solved with one solution. These contemporary issues require new ways of considering a problem. No approaches that involve ‘design-first’, but ways of prioritizing thinking, and moral decision making before starting a design process.

It is hypothesized that the integration of philosophy into design engineering education is beneficial to the design process for contemporary issues. Because in a sense, philosophy resides in the way we think, and what and how we know, it can be seen as omni-present and worth considering.

The exemplary outlook on design by Papanek at the beginning is considered to this day, as a push for designers to uplift their morals and standards in practicing design, as well as providing words, phrases, concepts, theories, practices and examples that aid students towards more advanced ways of describing their own views on designing (Thomas & Strickfaden, 2022). The essay of Pruys was a mandatory reading for IDE students in the 1980’s, and pleads against terms as ‘creativity’, ‘fake-innovation’, and ‘pseudo-progressivity’ (Simon Thomas, 2008). This thesis aims to provide likewise tools, and be one of such examples.



Figure 3: ‘Het Vergeten Bestaan (The Forgotten Existence) by Lucas Mergler (Verleije, 2025).

The next part of the introduction elaborates on a real life example, to illustrate the philosophic focus of this thesis. Whereas the example serves to showcase a provisional philosophic case and method applied to a design context: **The method of Aporetics, as defined by Nicholas Rescher (2009).**

‘Van fiets parkeren tot filosoferen’
To illustrate the concept of aporetics and its relevance to the study and practice of design, it will be introduced via a real-life example of a monument in Utrecht.

The in 2025 commissioned monument ‘*Het Vergeten Bestaan* (The Forgotten Existence)’ by Lucas Mergler seeks to create awareness around the lives of homeless people (as seen in Figure 3). Remembering the lives of the homeless that have lived in Utrecht’s shopping mall ‘Hoog Catherijne’ (Mergler, 2025).

However, since its placements it has been used as a bicycle rack. This sparked a lot of discourse around the message of the object and how it is used, with a focus on the ‘irony’ of the situation (Verleije, 2025).

This designed artefact is an excellent and contemporary example of the dissonance behind the philosophical thought of the artefact and its form. The ‘irony’ one speaks of consists of the mismatch in the intended interaction and the affordances of the statue. The intended interaction by Mergler was to make people aware of ‘how shattered’ the homeless people that lived there were, and remind them that they too were human (Verleije, 2025).

The general form of the human body shattered into pieces resembled this thought. However, the affordances of the form seem to resemble a bicycle-rack and in practice is used as a bicycle-rack. The slits in the monument are fit for a bike, and can be used for it as well, making it a (perceptible) affordance as defined by Norman (2013). The context of placement also encounters a lot of bikes. In material, colour, and height it resembles street furniture.

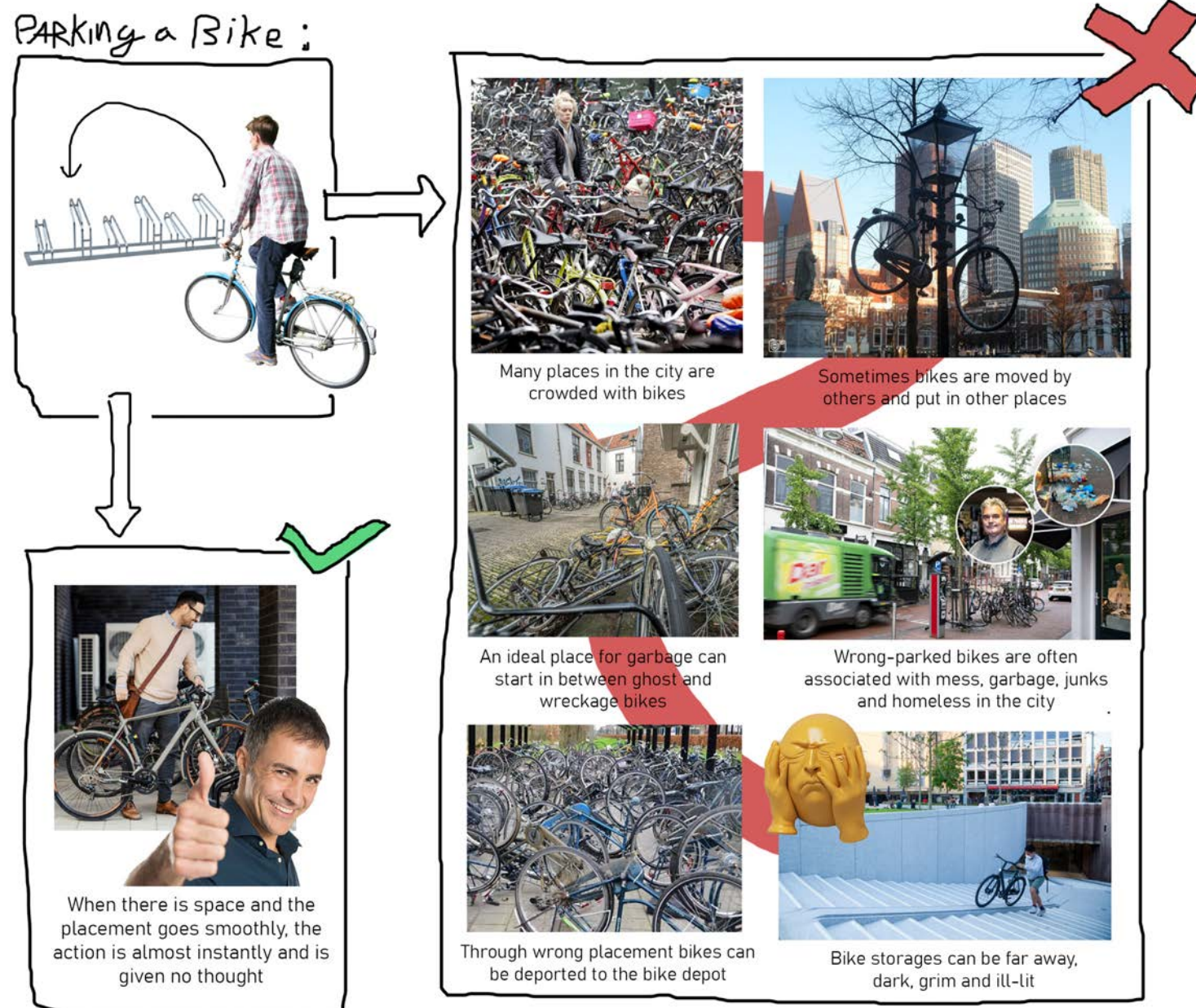


Figure 4: Parking a bike, a positive and a negative interaction scenarios

The affordances seem not in line with the intentions and the proposed message and values. However, it is not illustrated concretely enough. To dive into this further, we need to explore the interaction of parking a bicycle on its own. When we explore facets of the interaction of parking a bike (as visualized in figure 4), it can be seen that when the interaction is seamless and there are not many outcomes in return. When the act of parking a bike is obstructed because of other bikes, a whole lot of mostly negative connotations occur. While if there are none, the act and interaction of parking a bike is almost instant, no-thought, and not memorable.

So, we can conclude that the negative connotations of parking a bike in its interaction do not cohere with the intentions and the original idea of the artefact. The negative connotations people have with messy bike parking's also overlaps with a disdain for homeless people as portrayed in the media (Suijkerbuijk, 2023). Next to this, hostile design interventions or hostile architecture is a way of excluding homeless people from the public space. Therefore, public space and its design is inherently linked to these issues, of which 'het vergeten bestaan' is a part of.

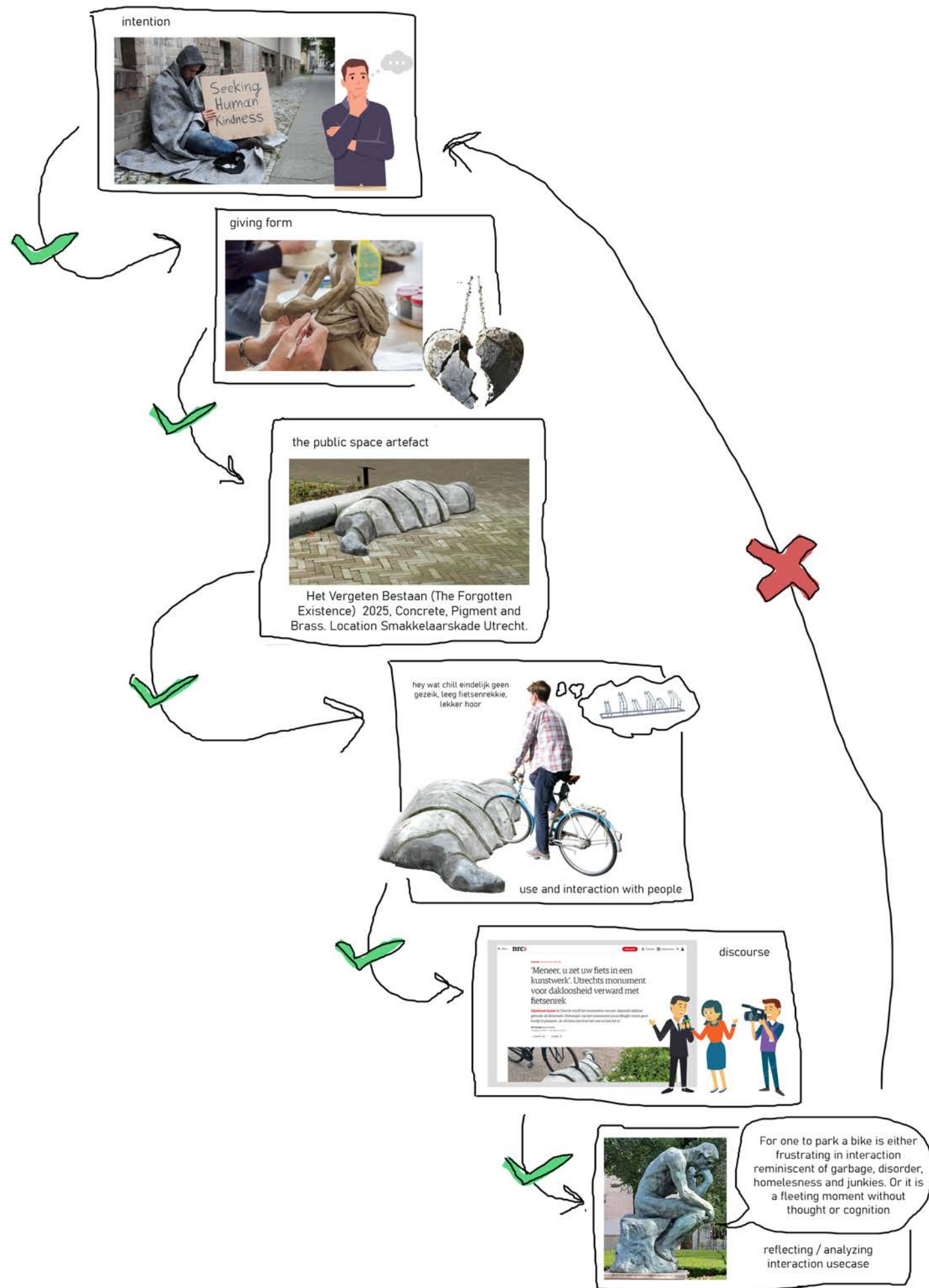
Is this a problem? And if so, what kind of problem? This is not a paradox, because the object exists. It is not a dilemma, because there is no choice or trade-off between two options that cannot exist together. It is neither a wicked problem because the start and end point are given. Nor is it a puzzle, because we cannot rearrange the pieces.

The key is that this example is inconsistent and (as seen in the discourse) evokes a form of discomfort in its existence. This inconsistency makes it an excellent example for the method of Aporetics by Rescher (2009).

When we structure the situation in an aporetic way (as in figure 5): The intentions of the artefact were pure, the design fits inside the context and the aesthetic of the city well, and the affordances facilitating bike storage is not a conscious act of evil or homeless-hatred. The dissonance or 'irony' we feel in this situation can be attributed to the incoherency between intention and the reflection on the artefact. Whereas every sequential step on its own does not create this dissonance, it is that the first argument does not support the last. In other words, the intention of making people aware of the suffering of homeless people, does not rhyme with the act of putting a bike down quickly without thought, or the frustration and connotations messy bike parking's bring with them.

So, the aporia is hypothesized to be a well fitted tool for design education, because as Rescher (1987) states the aporia and her resolution is one of priority and ultimately evaluation of thought patterns and choices, it is a matter of setting priorities, a preferential choice, and the weighing of values. This coincides with the move from products to the systemic level in the practice of design. Where design and her education can benefit from the aporia as an educational tool for analysis, reflection, and asking questions about the bigger picture of design and society.

An aporia is a collection of contentions, statements, or arguments that are individually plausible but together collectively inconsistent (Rescher, 1987). So, an aporia is an 'impasse' in thought patterns that individually are logical, while in its complete order is inconsistent. Figure 3 is given form in a scheme that makes the aporia visible. Aporias are everywhere, from mathematics to science, they are regarded as particularly prominent in philosophy, and therefore a driver in philosophical innovation (Rescher, 1987). In ordinary life they appear as well, therefore we propose that they inherently reside in design and her practice, products, and research.



This is not to be confused with the 'Socratic Aporia', which refers to a state of being, when a problem cannot be solved and challenges ones own assumptions and thought patterns. This can be part of the Aporetics process, however is not the same. It is also not to be confused with the poetic figure of speech Aporia, which refers to the author poses a question off doubt and confusion.

In this thesis we hypothesize that debating these aspects can lead to new design insights, as well a philosophic views on the problem at hand. As an example we can debate if the intention to make people aware of homelessness through a monument in the public space is beneficial to the situation of the homeless. Or if we debate the public space artefact itself, we can conclude that the context is not extreme enough: Should it not be placed in between bicycle rack so to incite bike parking? Could you make people more aware by making them do something awkward on purpose, and confront them with their actions? Structuring this problem in through the aporia, could lead to new insights and reveal larger questions in and around design.

What makes this casus so exemplary for the start of this thesis, is that deliberating on this case through a philosophic approach can lead to new, broad, and critical questions. All in a manner know to a designer: **Whereas ideally: the designer is sensitized for philosophic views in designed artefacts, visualized for better understanding, materialized and understood in a playful manner, to better understand specific philosophical methods and tools.**

Figure 5: The contentions of the example visualized in an aporetic way

Thesis positioning

The main design goal of this thesis is formulated as followed: *create educational exercises that integrate philosophy and form in design education, for broad and philosophic perspectives on contemporary issues.*

Next to this, the thesis sub goals are:

Analyze the role of the philosophy of technology, ethics, and relevant facets of the humanities in contemporary design education

Explore different sensitizing, visualization, and materialisation techniques for philosophical texts, thoughts and methods

Following the design labels construction by Stappers et al, (2024) this thesis and design project is 'Doing Design' by:

Departing **from** the philosophy of technology **by** enhancing the case study as philosophical and pedagogical tool **for** philosophical reflection **of** various design practices and levels of design analysis **in** design and engineering education.

So, this thesis creates useful perspectives, examples, and techniques for the field of critical-, social-, and speculative design. Next to new tools for teaching design and technology ethics, as well as value-based design practices. Next to critical approaches from the humanities regarding design analysis and discourse to be integrated in design education or curricula.

This thesis fits inside the domain of IDE by combining people, organisation, technology, and society, as seen in Figure 6.

Whereas the people this thesis is aimed at is **designers, engineers, scientists, and researchers**. The target audience has a predominant focus on students and educators, or developers of educational programs.

The stakeholders are organisations that make use and attribute to design and engineering education: such as Technical universities, applied universities, and art academy design programmes. Another important stakeholder are educational programmes in the Humanities, where there is a focus on material culture, Design cultures, or Design histories.

This thesis also concerns organisations such as research institutes that have a focus on the effects of technology and responsible innovation practices. For instance, Rathenau instituut, Stichting Toekomstbeeld der Techniek, or more practical and design oriented organisations as New Future Lab, RAAAF, or Waag Futurelab.

The technology facet is occupied predominantly with the study of the philosophy of technology, Human-Technology interaction (which encompasses of Human-Computer Interactions as well), as well as Science-and-Technology Studies (STS).

The aspect of society focuses on the further integration of the Humanities, as well as cultural values, and ethics into the design discipline. To add society to the three IDE domains was a conscious step further in the recognition of cultural systems and societal issues. What is desirable for people, viable for organisations, and feasible with technology, is not always responsible for society. As in line with the example given by van Kuijk (2024) of the smoking industry being desirable, viable, and feasible, however not responsible for a society.

Finally, what makes this thesis a Design for Interaction thesis is the focus on various learning goals seen in figure 7. There will be a focus on knowledge from the humanities, research and development on various products, ad well as experiential prototypes throughout the process.

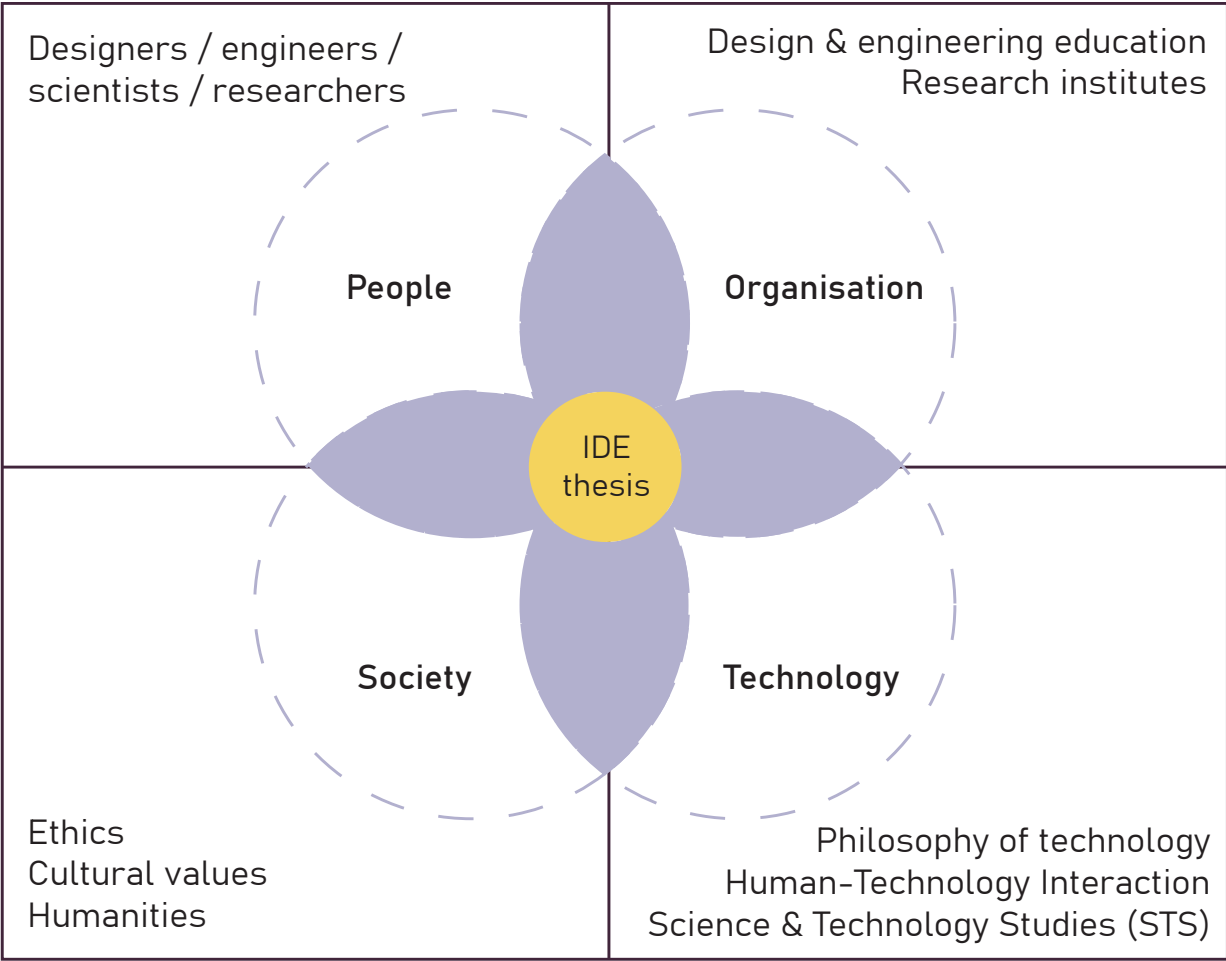


Figure 6: The thesis positioning regarding people, organisation, society, and technology

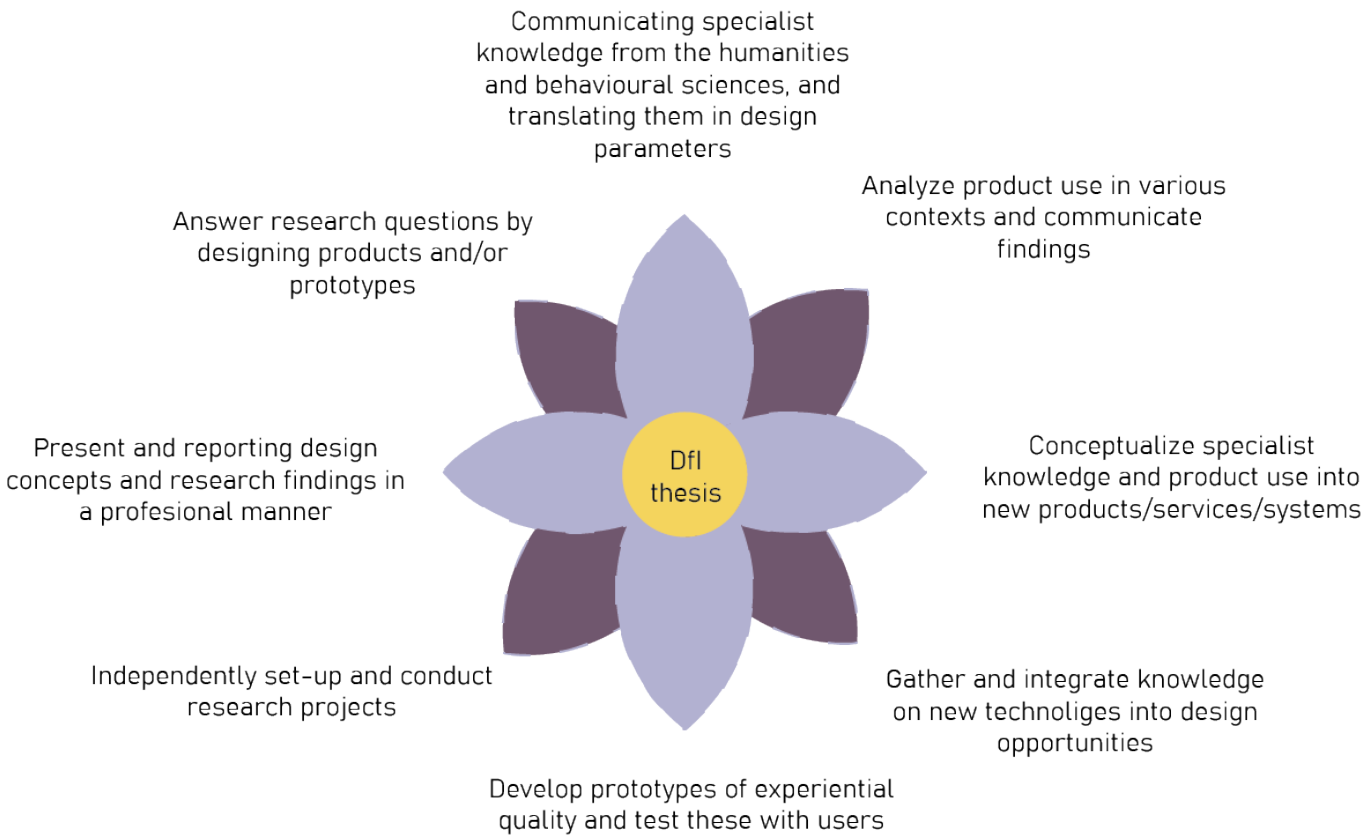


Figure 7: Design for Interaction thesis learning goals visualized

Regarding the meta-level of design research (Stappers & Sleeswijk Visser, 2014), this thesis moves through the levels from philosopher, to methodologist, and finally tool developer (as seen in Figure 8).

This thesis continues with a chapter discussing the project overview and activities (chapter 2). After which the theoretical background of The Philosophy of Technology is researched (chapter 3).

This is followed up by the foundational aspects of **Sensitizing** (chapter 4), **Visualizing** (chapter 5), and **Materializing** (chapter 6) respectively. These form the basis for the design cycle of this thesis: the design of Narrative Design Cases (chapter 7) and the validation of it through contextmapping methodology (chapter 8). Followed up by the final design iteration (chapter 9) and the embodiment design (chapter 10).

The thesis ends with a summary chapter on the final design (chapter 11), with a discussion, possible limitations, and recommendations for further research (chapter 12), ending with a personal reflection on my time at IDE (chapter 13).

All sources on which is built upon can be found in the bibliography (chapter 14)

After the end of the thesis, the in-depth chapters can be found in the Post Scriptum part of this document. Dead last is the appendix in which, bigger visuals, complete datasets and data-analyses sheets, can be found.

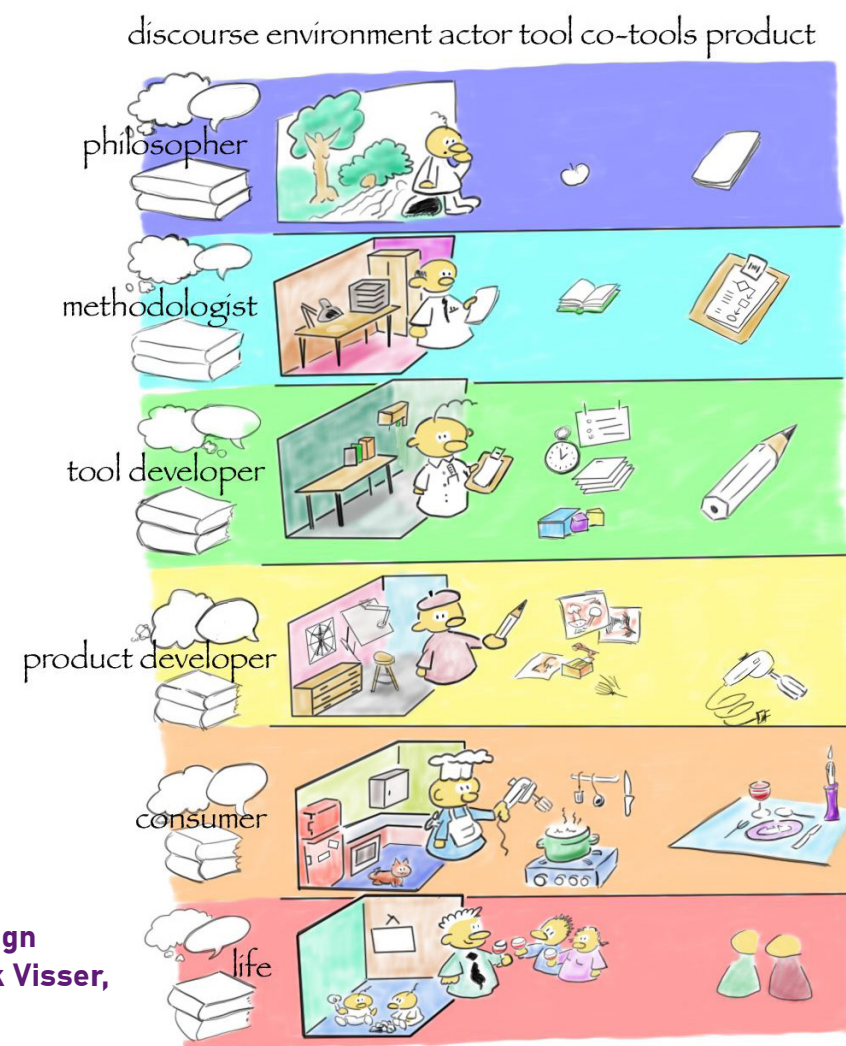


Figure 8: Various meta-levels of design research (from Stappers & Sleeswijk Visser, 2014)

H2. Project overview

In this chapter we elaborate and visualize the project activities in one overview.



This design project took place in multiple phases. These phases mostly happened simultaneously, but for the sake of visualization and storyline, it is presented in a linear fashion.

The initial idea for this thesis took multiple steps and iteration. After the kick-off the focus was on an explorative research-through-design approach. Various books, academic papers, multiple low-fidelity prototypes, museum visits, and interviews with experts, lead to a better formulated design goal.

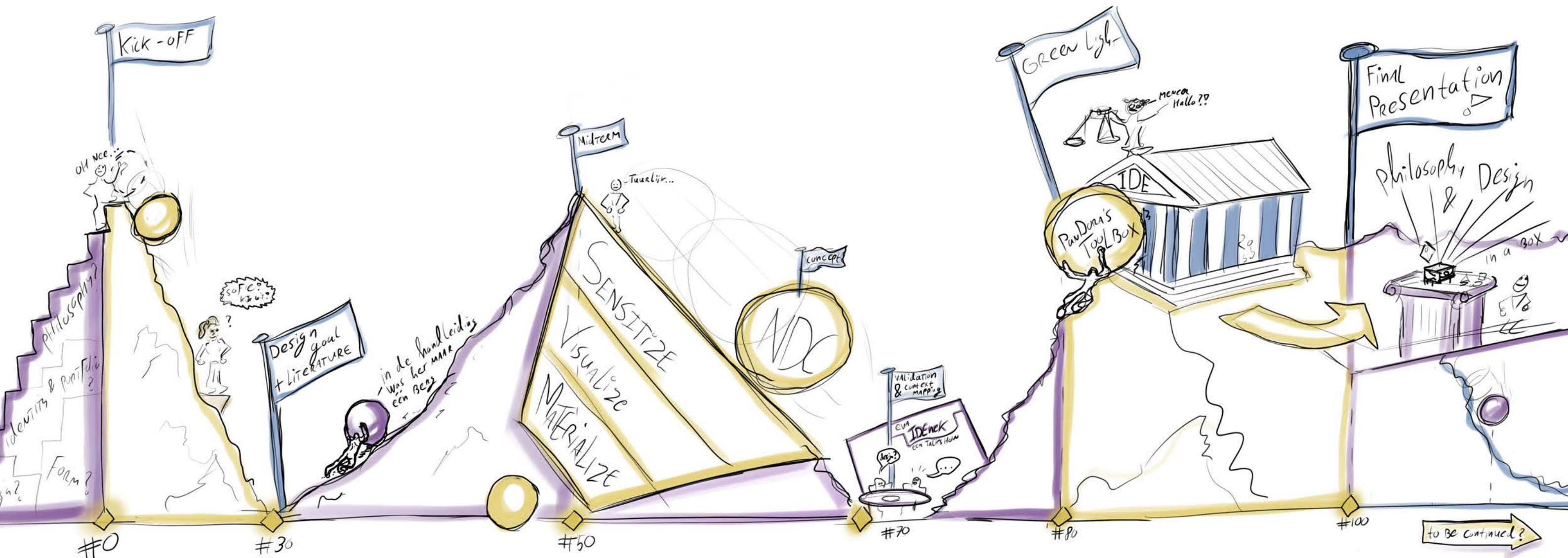
After the iteration on the design goal, the same research activities continued. While both can be considered diverging activities, the first effort had a converging function. During this period the initial sensitizing/visualizing/materializing approach was constructed, as well as a solid theoretical background on the Philosophy of Technology.

This was worked out further after the midterm meeting. Leading up to the initial concept of the Narrative Design Case, an enhanced case study for design engineering education.

The two iterations of the design, were tested through a thorough contextmapping exercises. This validation with students and educators served as the basis for the final iteration.

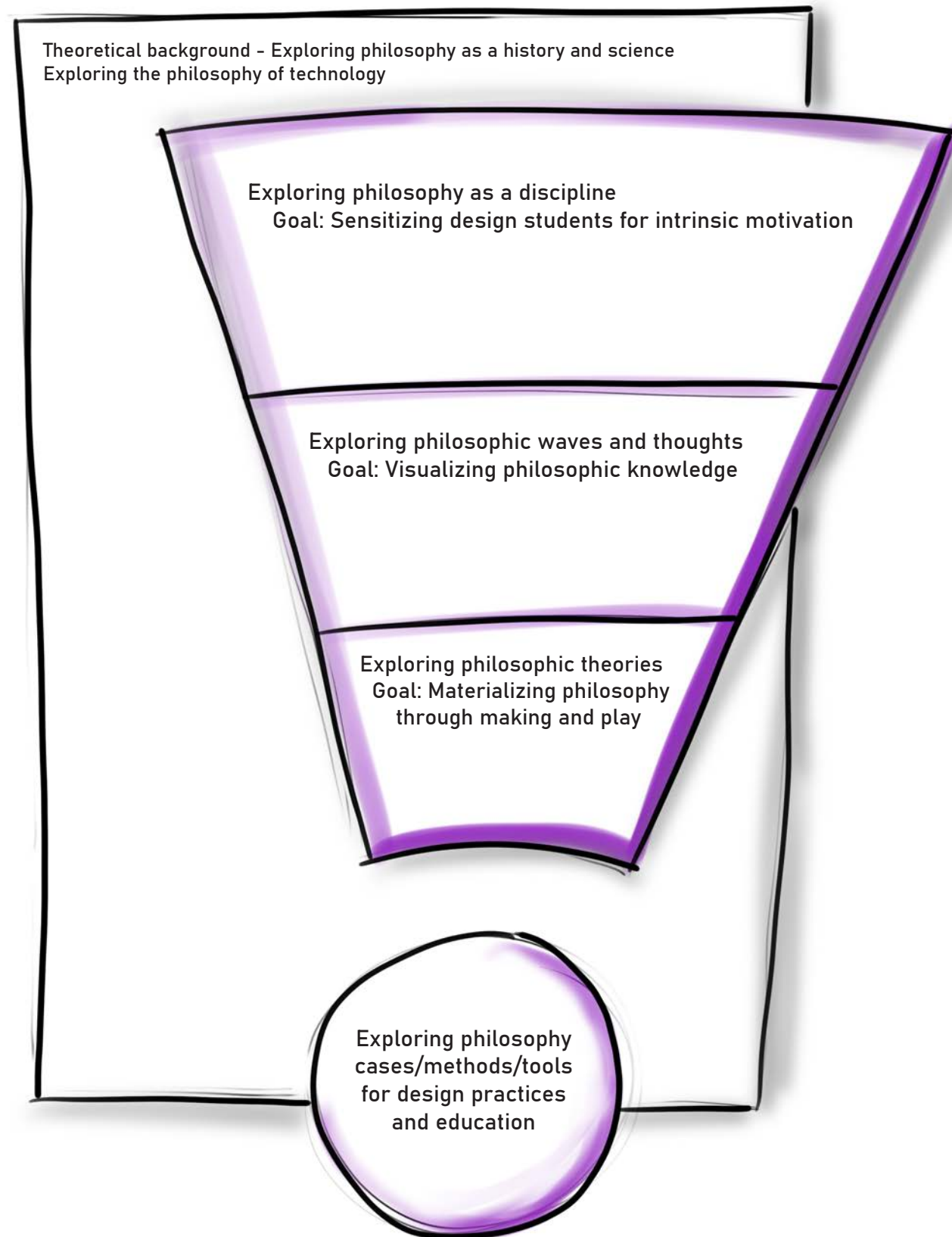
The final iteration consists of a ceramic embodiment, a renewed format for the Narrative Design Cases, and various extra exercises and add-ons.

The project closes with a final design showcase, concluding remarks, a discussion, and recommendations for further research. Finally, a personal reflection to round off the thesis project.



Visual summary of the approach:

In the next few chapters we will move from the theoretical background towards the three facets of sensitizing, visualizing, materializing, and then focus on specific cases and philosophic methodologies for design education.

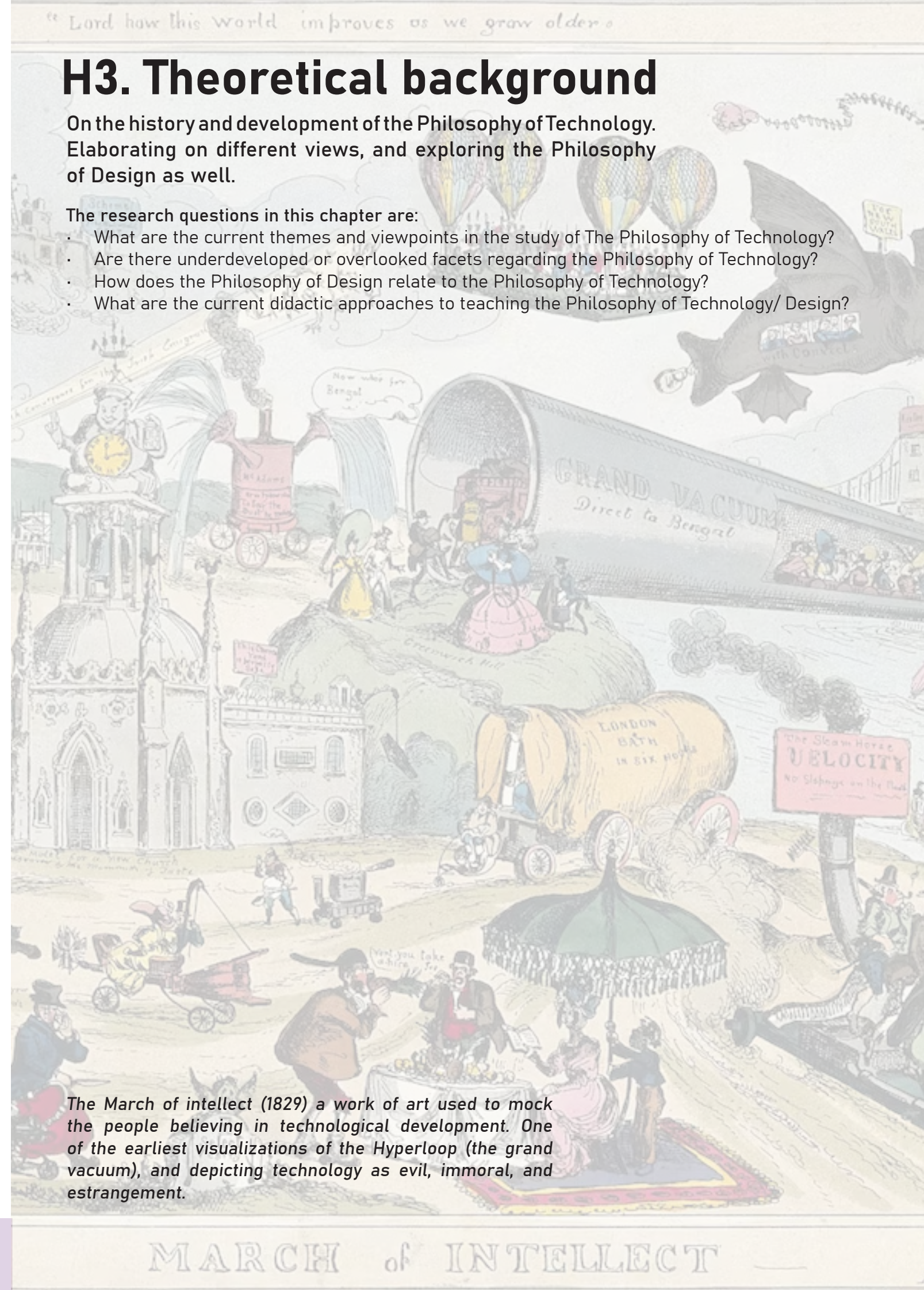


H3. Theoretical background

On the history and development of the Philosophy of Technology. Elaborating on different views, and exploring the Philosophy of Design as well.

The research questions in this chapter are:

- What are the current themes and viewpoints in the study of The Philosophy of Technology?
- Are there underdeveloped or overlooked facets regarding the Philosophy of Technology?
- How does the Philosophy of Design relate to the Philosophy of Technology?
- What are the current didactic approaches to teaching the Philosophy of Technology/ Design?



The March of intellect (1829) a work of art used to mock the people believing in technological development. One of the earliest visualizations of the Hyperloop (the grand vacuum), and depicting technology as evil, immoral, and estrangement.

This chapter elaborates on the definition of philosophy adhered to in this thesis. We are viewing the 'philosophy' in this chapter as a research discipline and a history. Followed up by an introduction to the Philosophy of Technology with a focus on The Technical Condition, and closes with considerations around design and philosophy and the Philosophy of Design. This chapter summarizes its insights through a segment of design implications as well as a visual summary.

The research questions in this chapter are:

- What are the current themes and viewpoints in the study of The Philosophy of Technology?
- Are there underdeveloped or overlooked facets regarding the Philosophy of Technology?
- How does the Philosophy of Design relate to the Philosophy of Technology?
- What are the current didactic approaches to teaching the Philosophy of Technology/Design?

A Philosophy-first approach

Philosophy is a tool to broaden the mind of the practitioner on their practice and other facets of human life, as Parsons (2016) states in The Philosophy of Design. Philosophy can be about anything, it can be practiced in many ways with different goals (De Regt, 2021). Philosophy seeks out to answer questions and understand the bigger picture. One is and has been throughout history driven to practice philosophy by doubt, wonder, clarification, questions of meaning and existence, being conscious of death, and the consequences of controlling the instinct (Kunzmann et al., 1996).

Science and philosophy originate from the 'philosophers of nature' in the Greek period, and have since the 17th century slowly been growing apart (De Regt, 2021). The philosopher Plato defined the elementary questions of philosophy to be the search for 'the truth', the good', and 'the beautiful' (Kunzmann et al., 1996).

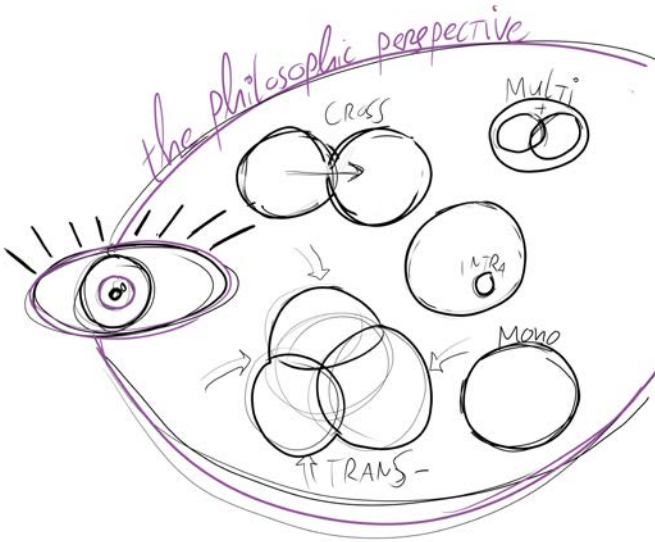


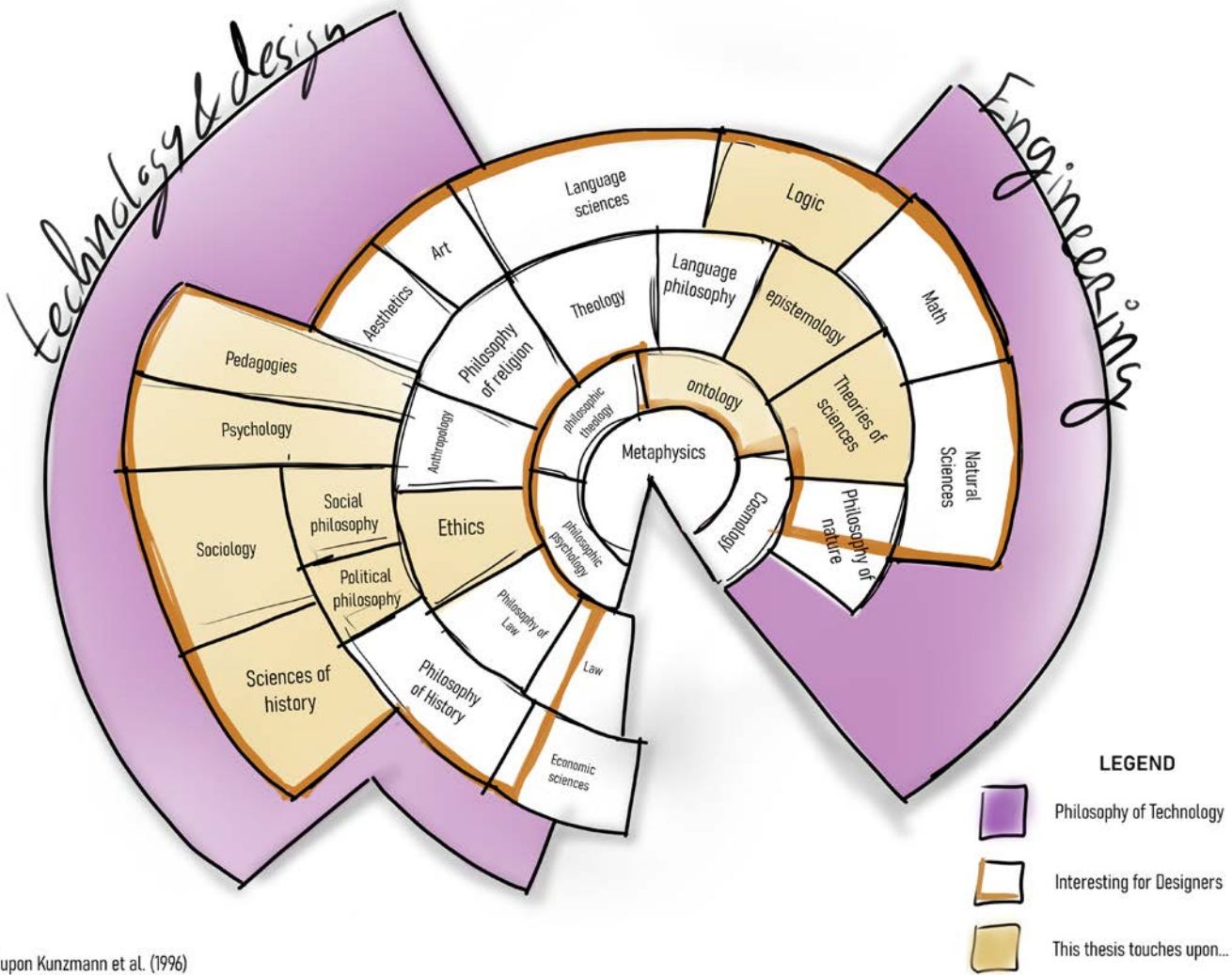
Figure 9: The philosophic perspective

Since then, philosophy has expanded throughout time into more disciplines, and became a longstanding tradition in the Western world of thinking through various subjects: from Anthropology, to Theology, and Ethics. It is important to note that this thesis departs from the history of Western Philosophy, and builds further on insights from this domain.

Philosophy strives to answer the questions that have a big as possible circumference around multiple disciplines of science (Kunzmann et al., 1996). In other words it does not solely answer questions on biology, math, or chemistry because these are governed by their own set of methods, assumptions, and thought-patterns. So, philosophy transcends all forms of disciplines. This is visualized in Figure 9.

With this in mind, a definition of philosophy that applies to all chapters of this thesis from De Regt (2021) is most fitting:

“Philosophy is the search for hidden assumptions that ought to be critically evaluated. Where others stop, a philosopher continues to find unarticulated opinions and argumentation. What others take for granted, the philosopher highlights and discusses.”



Based upon Kunzmann et al. (1996)

Figure 10: The Philosophy of Technology and its placement in relation to other disciplines

Practicing philosophy itself is exploring a set of (often historical) ideas, and charting the patterns of thought throughout time and space (Onfray, 2019). When reading philosophy it is important to not only see it in the time and space of writing, however also consider the 'mission' the philosopher had: The questions and themes they tried to answer or explain throughout their career and place it into their historic, social, and political context (Onfray, 2019). Therefore, philosophy also creates reflective value in educational settings: Become aware of assumptions in various disciplines and think critically (De Regt 2021).

In addition to this philosophical assumptions of scientists can contribute positively to their scientific practice (De Regt, 2021). Philosophy is regarded as important for science and engineering. On the notion that revolutionary or innovative scientific discoveries bring with them philosophical discussions on its cause and effects (De Regt 2021).

The Philosophy of Technology

In this thesis the focus lies in the artefacts and her effects, and the practice and process of designing such artefacts. Therefore it will use insights from the philosophy of technology and the philosophy of design, for its translation onto Design Theory.

The philosophical mission of this thesis is to uncover philosophical aspects and challenges that are hidden inside the artefacts that shape the background fabric of our daily life.

In Figure 10, we have added the Philosophy of Technology into a revised diagram by Kunzmann et al. (1996). As well as highlighting the topics on which this thesis touches (yellow) and which topics coincide with design (orange).

The philosophy of technology gained prominence as a field after the industrial revolution in 18th century England. Because before this industrial revolution philosophers managed to largely ignore the material dimensions of human existence (Swierstra et al., 2022). This is not the only field in western philosophy where there was a focus on the material reality.

The philosophy of existentialism was built around the concept of phenomenology, whereas the material reality was leading in finding insights on the phenomena that shape our daily life (Bakewell, 2017). It is important to note that texts and ideas by existentialist thinkers, practitioners of phenomenology, and philosophers of social sciences and technologies, such as Heidegger, Husserl, and Latour are considered the groundwork for modern day philosophy of technology even though they are not considered as explicit 'philosophers of technology' (Verkerk et al., 2016).

Technology has throughout time been viewed in three stages: First, technology as an extension of humans, second as technology intertwined with the personal lived experience, and third as an empirical and ethical turn in the consequences and existence of technology (Verkerk et al., 2016). The empirical turn refers to the step away from pure social and cultural aspects of technology, and focus on the concrete technologies themselves instead of

only theoretical assumptions (Tijink & Verbeek, 2023). Hand in hand with this empirical focus comes the ethical turn: The step away from the all encompassing term 'Technology' towards specific ethical questions in specific fields such as nanotechnologies or climate technologies (Tijink & Verbeek, 2023). Current academic works as 'The technical condition' by (Swierstra et al., 2022) plead for a new conviction, of technology being intertwined with society, and culture. This overlaps with the four main themes in the philosophy of technology itself: Technology as artefacts, as knowledge, as processes, and as part of being human (Verkerk et al., 2016).

The philosophy of technology is a branch of philosophy that focuses on the material dimension of everyday life: Whereas technology is seen as the (material) things that are selected or made to fill in a certain function, as part of a practice or activity (Swierstra et al., 2022). These technological artefacts, combined with the knowledge they embody, practices they inhibit, and other unseen background conditions, make up technological systems. Long before the 19th century this has been disregarded because there were little to no systematic, sustained, and shared discussions on technology and its effects (Swierstra et al., 2022).

Contemporary perspectives on the Philosophy of Technology

A defining feature of the philosophy of technology has mostly been anti-instrumentalism, or in other words the idea of technology as not neutral (Swierstra et al., 2022). As an example take Onfray (2019), in his chapter on technology he implicates that every technological invention that is deemed as positive has a negative consequence, whether immediately visible or not: The invention of the train gave the opportunity for a train crash, the computer gave way to new scamming practices, and the development of technology always impacts the poorest people in society. Even though this statement it is not wrong, it fits inside the tradition of anti-instrumentalism and clearly advocates for the critical and negative side of technology and her effects.

On the other end of the spectrum is determinism, whereas technology is seen as neutral, self-developing and shaping new technological realities that cannot be un-invented, influenced or ignored (Poel, 2020). Between these two extremes lies soft technological determinism. The belief that technology is both determining society and determined by it, which can be steered by human agency: engineers can inscribe their intentions within technology to shape human behaviour (De Cooman, 2023). In line with this thinking is the perspective by Poel (2020) that technology and society co-evolve, where some aspects of technology are hard to change or open to choice, others bring novelty and/or unexpected (sometimes unintended) consequences. This spectrum is visualized in Figure 11.

Works as Next Nature by philosopher Van Mensvoort (2019) show that it is not easy placing thought between soft- and hard-determinism: Technology is seen as our 'next natural future', and that we should control it 'better' while still developing it ever further. Mulder (2024) argues that in this pattern of thought there is a motive of colonialism and no acknowledgments of politics, power, and sustainability. Observations as these makes Next Nature lean more to the hard-determinist side of the technology debate.

This thesis adheres to this more balanced viewpoint of soft technological determinism and co-evolution. In support of this is the techno-philosophical concept of entanglement and shock as coined by Swierstra et al. (2022): Entanglement can be described as the omnipresence of technology is in itself neither good nor bad, but through technology's pervasiveness it is entangled with our own being, culture, and society, to a point where we cannot ignore it or think without it and it mutually shapes our relationship. The concept of shock can be defined as: The rearrangement of socio-technological systems and it's relations through novel or innovative introductions of technology.

Designing technology responsibly, or conversing on our entangled and technological condition cannot be done by philosophers or engineers alone. Van Dijk et al. (2019) states that humans and the relation they have to each other and the technical environment needs to be considered in the design of products, as well as needing an approach that goes beyond the technical. The practice of (industrial) design can be beneficial in such an approach. Whereas designers are intent to bridge the disciplines of people, organisations, technology, and society. This thesis argues that designers should be able to understand our entangled and technological condition through not only practice but a philosophical approach as well.

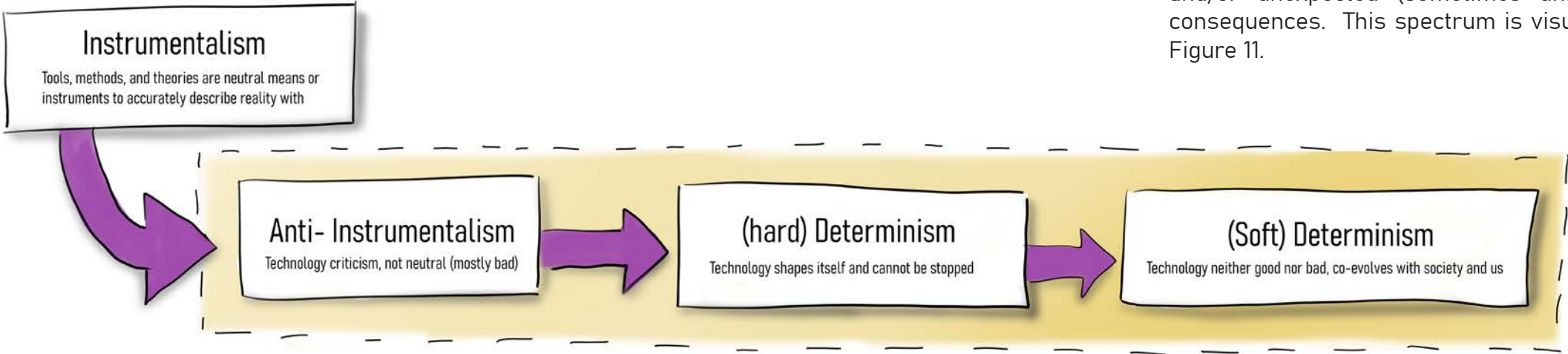


Figure 11: Waves of thought in The Philosophy of Technology

Considerations on the field of philosophy of technology itself

Finally, it needs to be addressed that the culture around the concept of technology itself is predominantly dominated by white men. There has been little attention to feminism and gender issues in mainstream philosophy of technology and vice versa (Loh & Coeckelbergh, 2019).

As an example, consider the Dutch academic introduction book of *The Philosophy of Technology: Denken Ontwerpen Maken* (Verkerk et al., 2016). Every in-depth chapter on the work of a philosopher, there is no woman or person of colour to be found. This could be attributed to the reformed Christian narrative found throughout the whole book, which even receives its own chapter.

One can say that this is recurrent in other fields of science. However, the second wave of feminism brought with it a growing awareness of the urgency of a critical reflection of technology and science within feminist discourse (Loh & Coeckelbergh, 2019).

The second wave of feminism took place halfway the 20th century, during the same time as the rise to prominence of the **Philosophy of Technology itself**. Wajcman (1991) proposes that the field of technology is intertwined with the ideology of masculinity, and therefore the focus has always been on men shaping technology.

To even out the balance there is the field of **feminist technoscience studies** (combining various disciplines from philosophy to science), with one of the main figureheads of feminist/queer science and technology studies being Donna Haraway (Åsberg & Lykke, 2010). Contemporary efforts such as the exhibition *Woman as technology* ("Vrouwen als technologie," 2025) aim to level the playing field around gender, technology, and the discourse.

Next to this advancements in various technologies have been driven by the Western world throughout history, and therefore unavoidable has its roots in colonialism, exploitation of indigenous lands, and contemporary structural racism. Financial technologies such as money, trading systems, and branding practices are all influenced and co-shaped with the trade of enslaved people (Pater, 2021). Jouwe (2015) states that the roots of racist thought and the danger of it are thoroughly intertwined with our society and our subconscious.

Therefore, the field of **postcolonial technoscience** is coined to critically evaluate global technologies and their practices (Anderson, 2002). This field also emphasizes the importance of acknowledging the western angle in the Philosophy of Technology.

There are great and inspiring thinkers outside of the **Continental philosophy traditions (western philosophy) also on technology**. Works as Wang (2020) on Chinese Philosophy of Technology, and Ndasauka (2024) on the need for an African Philosophy of Technology, illustrate the marginalization and dominance of western Philosophy of Technology and considerations for ethical, plural, and contextual philosophies of technologies

These considerations are important to acknowledge, because they have real world implications. There are many examples of technology being designed with men as the blueprint: Paracetamol, public toilets, and crash-test dummies for car safety are several examples illustrated in *Invisible Women* (Criado-Perez, 2020). These practical examples cannot be seen as 'a nuisance only'. We have to acknowledge that these products, public space designs, and methods for car crash safety are a result of our negligence.



Figure 12: The old speculum (left) in relation to the new speculum (right)

In turn, this bias not only shapes our practice but our thinking as well. Even in women-only technology and products, the experience of women has been assumed or neglected. For her Integrated Product Design master thesis Izcarra Gual (2024) designed a new 'speculum' to resolve the persistent discomfort and anxiety associated with pelvic exams, which are exacerbated by the current design of the speculum (as seen in figure 12).

Second example of bias, structural racism in the discourse on technology and consumption: Consumption patterns of people of colour regarding new technologies and luxury products is higher in households of colour, than white households (Currid-Halkett, 2017). If we do not think more critically these 'facts' shape our view on societal groups. What is missing in this 'fact' is the notion of aspirational consumption: whereas structurally disadvantaged people of colour have the tendency to consume more, so to aspire to be seen as equal (Currid-Halkett, 2017).

These value laden facts that are not critically assessed can not only be seen in consumption patterns, but in the IQ-tests and the contemporary discourses on intelligence and race to this day (Blauw, 2018).

We have seen that these biases do have real world implications, in research, development, technology consumption, and even the images we consume through media: It cannot be denied that these example shape our worldview, our bias, and our thinking. If this thesis departs from the philosophy of technology itself, and as stated develop new tools and viewpoints of design educations shift to the systemic level. The homogeneity of white men in the canon of the philosophy has to be acknowledged. As well as doing their part in highlighting and incorporating different voices throughout the process.

Philosophy, design, and education

In recent years, more and more academic publications in the field of design are inspired by philosophy. From design ethics inspired by Spinoza (Song & Jun, 2025), or design practices based on existentialist philosopher De Beauvoir (Gertz & Ozkaramanli, 2024), to even different practices to design such as a Foucaultian approach (Najar, 2022) or a 'pragmatist' one inspired by philosopher John Dewey (Dixon, 2021, 2023; Dixon and Kaszynska, 2025).

In conversation with experts, this 'looking through a philosophers eyes' towards design is seen as one of the hardest assignments. Because neither Spinoza or Foucault ever said anything concrete about 'design'. This is not only attributed to the fact that design was not a discipline during the lifetime of Spinoza (1632-1677), or as earlier discussed most philosophers did not bother with the material/empirical reality in their practice. However, philosophers as Foucault did use the metaphor of the theoretical architectural design of the panopticon to elaborate on his philosophy (Dai et al., 2025). This panopticon design was proposed by architect Jeremy Bentham as seen in figure 13.

The interesting facet at play is that the philosophy is elaborated upon through a material/architectural example, which can also be reasoned backwards. This backwards reasoning requires much specialist knowledge, and a thorough comprehension of the matter to view it through the lens of design. This is way too complicated, niche, and challenging as an assignment when coming into philosophy as a designer. This begs the question: Where to start as a designer when diving into philosophy and design?

First, it is important to make a distinction between 'philosophy and design' in relation to the 'Philosophy of Design'. Whereas 'philosophy and design' is attributed to the cross-disciplinary field of applying philosophical thought to design processes and projects, using design inquiry in philosophy, and practicing philosophy in research-through-design (Van Dijk et al., 2019).

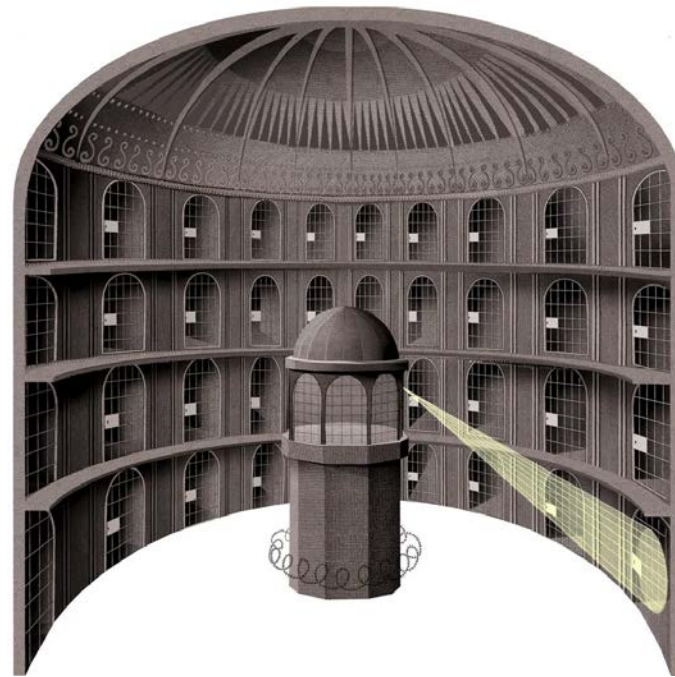


Figure 13: Foucault's panopticon a visualization from Shone (2013)

The 'Philosophy of Design' can be considered on the same foot as the Philosophy of Technology. Where questions regarding the bigger picture of design, knowledge creation, and ethics come aboard. To summarize, 'philosophy and design' is aimed at design inquiry, and the 'Philosophy of Design' is aimed at philosophical inquiry (Parsons, 2016). Visualized in figure 14. This thesis focuses on 'philosophy and design', with insights from the Philosophy of Design.

During the literature study, terms as 'design philosophy' (Yoshikawa, 1989) and 'the philosophy of design' (Vermaas & Vial, 2018) or even 'philosophy and design' (Vermaas, 2009) were used interchangeably. Outside of the realm of academia, the terms design and philosophy are derailed by marketers who are trying to promote 'branding' through constructing 'a philosophy of the design of your brand'.

Galle (2002) states that in the practice of philosophy and design, most researchers are half-amateurs: Either being schooled as a designer, or a philosopher. Being schooled in both is rather an exemption than the rule. However, it is argued that teaching a designer philosophy, is more beneficial than teaching a philosopher to design (Galle, 2002). This is also seen in developments of design curricula, where the humanities are more integrated to make designers more sensitive to such concepts in their practice (Voûte et al., 2020). The development of theories on philosophy and design has gone steady throughout time. However, following the meta-analysis of Love (2000): There exists confusion on the underlying basis of theories, concepts are often conflated, there is a multiplicity of design theories, and because of above reasons the terminology therefore has become unhelpful.

To further elaborate on this complexity: Design in it's definition has the problem of encompassing too much (Heskett, 2005). Therefore, it is an essential characteristic of the Philosophy of Design that it is cross-disciplinary (Galle, 2002). However, there is as of now not a clear structured and mapped terrain of this discipline (Parsons, 2016). Works as The design philosophy reader (Willis, 2019) elaborate on various philosophical facets on design. Core in all these chapters is that the philosophical texts it contains, are from different philosophers that do not directly mention design or design themselves. We see this same pattern, in the Philosophy of Technology. Where the most influential text that have put the groundwork in for the discipline, where never explicitly aimed at technology. Even so, it is argued in Philosophy and Design (Vermaas, 2009) that the ambiguous meaning of the word design, brings together different viewpoints of multiple activities and thoughts with a common root.

Following this rhetoric, the incoherency and spread of the knowledge in the Philosophy of Design is not a bad thing. Philosophy itself is considered a tool to broaden the mind of the practitioner, on their practice and other facets of human life, as Parsons (2016) states in The Philosophy of Design. Combined with the notion that philosophy can be about anything and practiced in many ways with different goals (De Regt, 2021). So we can conclude that even if there is no definitive field of Philosophy of Design, it can still be a worthwhile endeavor to explore various, essays, and thinkers relating to design.

To make an attempt to make this terminology discourse more structured, Figure 14 has been created based on the readings. The diagram shows the levels of prepositions and what they encompass. The arrows show the starting point or the lens through which the topics are viewed. This diagram is an effort to clear up the discourse and therefore never complete.

As of now, there is no clear starting point for a designer. A good starting point can be formulating a clear philosophical mission as discussed by Onfray (2019) and find likewise philosophers that can supply broader views and new insights during a design process. Another approach can be dissecting a question during a design process, and involve philosophy- and design-oriented literature. For instance 'what is good design' can be explored through the overview of varieties of 'goodness in design' as proposed by Ylirisku & Arvola (2018). It is helpful to be reminded that philosophy itself is seldom practical or concrete, this does not mean that philosophy is unimportant: there is an underlying philosophy at work in any endeavor, even if it is not fully articulated (Encinas et al., 2020)

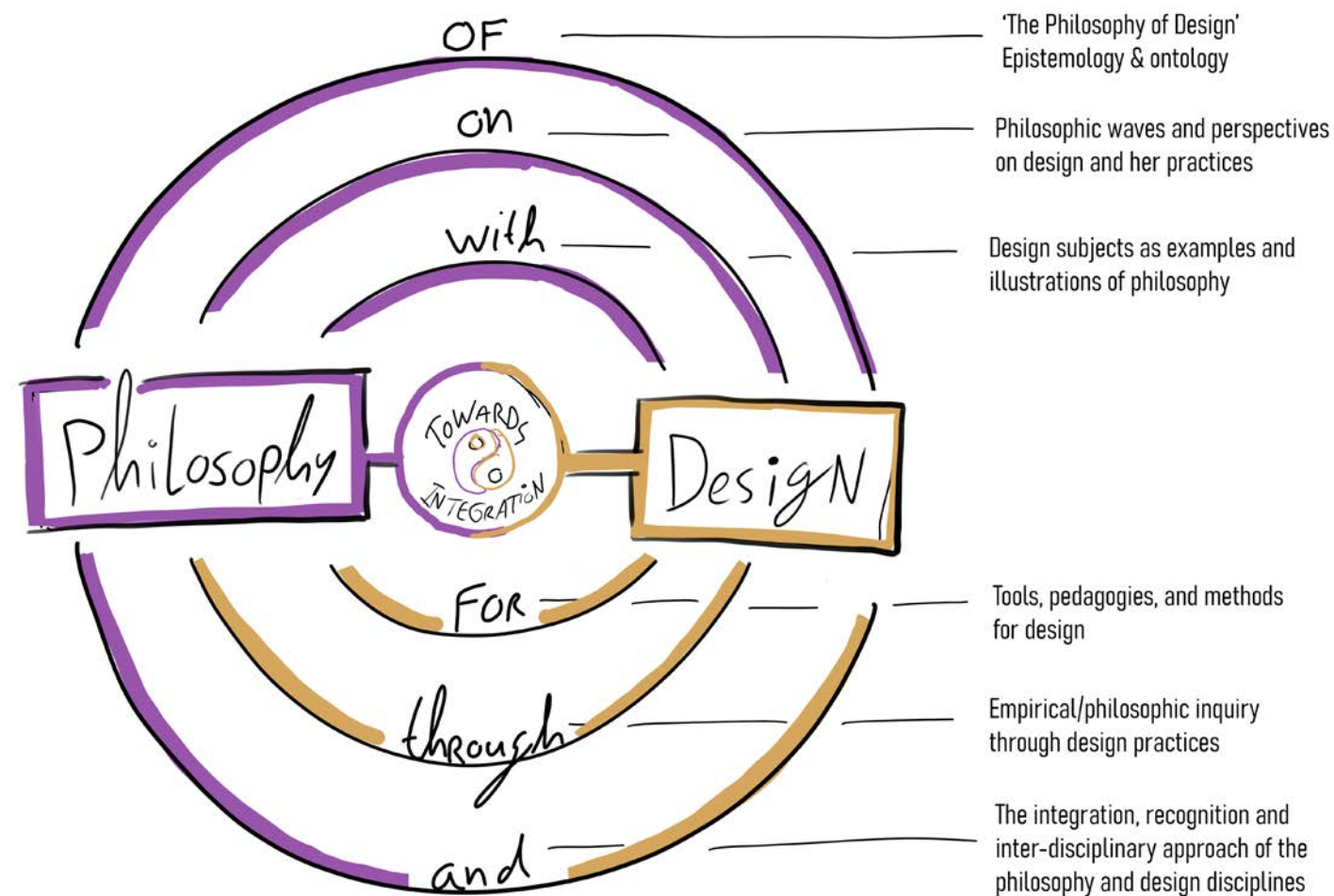


Figure 14: A possible taxonomy of various prepositions for Philosophy & Design

The role of the case study

How then is philosophy and/of technology taught in contemporary (design) engineering curricula? **First off, it is important to note that the philosophy of technology is not irreplaceable with the field of technology ethics.** Whereas the philosophy of technology is concerned with the rudimentary questions surrounding technology and its development, technology ethics is the applied lens concerned with safeguarding the development of technology over society (Tijink & Verbeek, 2023). This is a facet inside the broader field of the Philosophy of Technology, and these domains are needed both to focus on facets such as Responsible Research and Innovation, Design for Values, and Risk Ethics (Doorn, 2021).

Technology-ethics are interwoven with the development of technology itself, and because of this regarded as ever-shifting: Because the ethical frames we have to evaluate technology are influenced by technology development itself. (Tijink & Verbeek, 2023).

There are different theoretical ethical frames to analyze situations with: Deontological ethics (morality, wrong & right actions), Virtue ethics (plight, justice, wisdom), and teleological ethics (utilitarian and consequence-based). Next to these theoretical models there are also meta-ethics, and applied ethics. As mentioned technological ethics cannot be critically assessed by one frame due to its continuous development. Therefore it can be analyzed in relation to different ethical frames.

Ethics are taught in engineering programmes because with explicit intention or not, the decisions engineers make shape much of our modern world: the design, use, maintenance, and disposal of products, services, and infrastructures have far-reaching individual, socio-political, and ecological ramifications. This means that engineering decisions require explicit ethical reflection (Doorn, 2021).

At TU Delft the main mode to teach is the **case study**. Both for Philosophy of Technology in introductory courses, and especially for technology ethics applied in many curricula. Doorn (2021) elaborates on the advantages of the case study being:

1. It provides a good structure for introducing students to various relevant ethical concepts and theories (via lectures) while also being able to delve into the details of specific cases, plus an opportunity to retrace the steps in the history of technology.
2. The tutorials also serve to make abstract theoretical approaches more concrete. Next to opening up critical reflections on theoretical approaches, the engagement with concrete cases can also give rise to questions about the real-life applicability of deontological approaches to decision-making for large scale societal problems.

Most famous example of an engineering case study is the essay *Do Artifacts have Politics?* (Winner, 1980). Winner elaborates on the reflection of social relations onto artefacts and spatial arrangements, through showcasing the bridges deliberately designed to revoke access to schools for black people (Winner, 1980). This example has become a widespread staple of technology ethics case studies.

However, there has been much debate around if this example is even real. In the rebuttal *Do Politics Have Artefacts?* there is more deliberation on the casus itself. The narrative presented is seen as overly simplified, we should look more critically, and not repeat examples for our argumentation without reading it ourselves (Joerges, 1999). For this thesis it is not the factuality that counts. Both essays show in themselves a debate and discourse around the social effects, philosophies, and form.

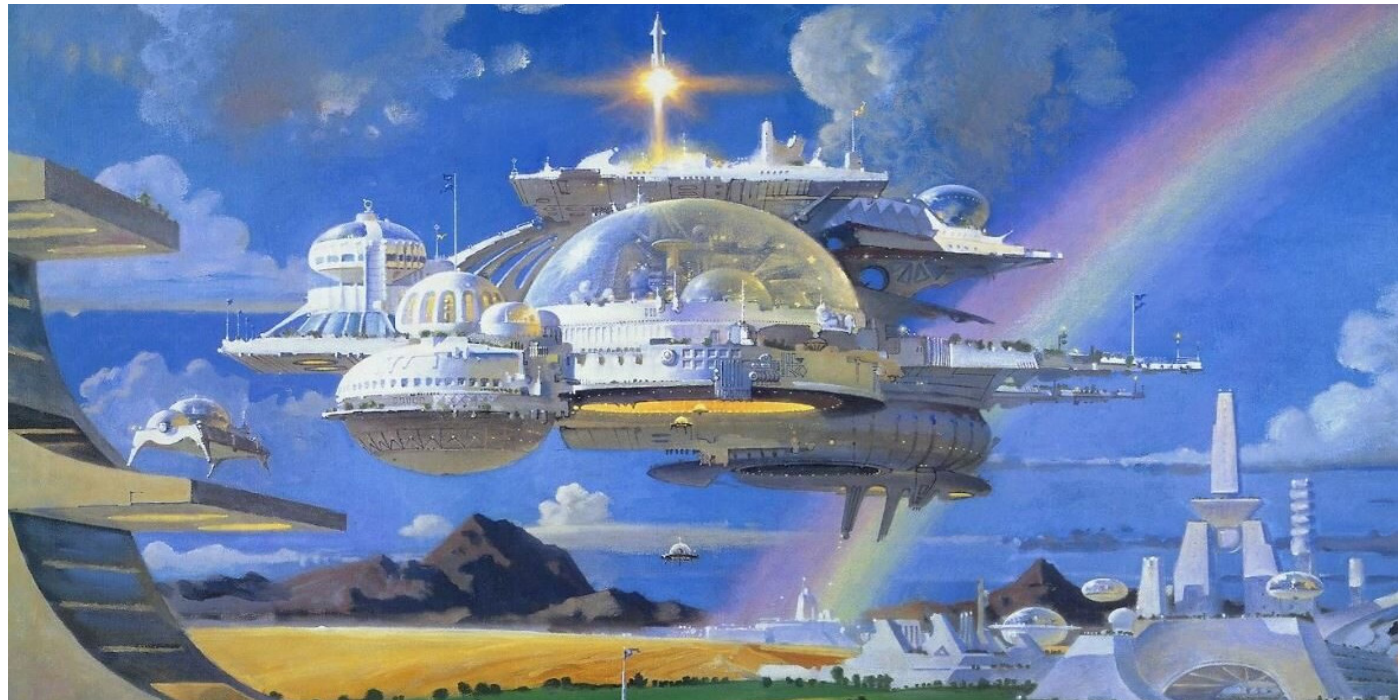


Figure 15: A retro-futurist imaginary of technology by Robert McCall

Especially this link with theory and practice is what makes this case study powerful: Portraying philosophy and ethics as a 'part of', and not 'part after'. In conversation with educators and experts this case study format is beloved, not only in engineering but also the humanities and their study of design. The case study serves as a bridge that goes both ways. There are concerns regarding the case study, that it does not fully place the student inside of the problem however at a distance. The problem is solved from afar, not always from within. Anecdotal evidence from educators on students that conclude the case study with 'the creation of an ethical committee to solve the case' clearly illustrates that the method still keeps some students at an emotional distance.

There are contemporary educational exercises that integrate emotion and the personal perspective. Fraaije (2025) elaborates on collage-making as a practice of self-discovery and moral sensitivity/creativity regarding technology ethics. Marin & Helden (2025) advocate for the ethical and philosophic relations between society and technology through creating science fiction narratives on one's own and reflecting on it. Science-fiction can also be useful in exploring historic future visions or retro-futuristic imaginaries as seen in figure 15.

Finally, an honourable mention goes to 'the trolley problem' devised by philosopher Philippa Foot (Thomson, 1984). This example lies in between a thought-experiment, and a case study. The trolley problem in short: A trolley is headed towards five people bound on the train tracks, you stand next to the switch which can divert the trolley to a track where it will hit only one person on the tracks. This specific case that throughout time have spawned many different variations, real life re-enactments, as well as video games (as can be seen in the figures on the right). Even though these variations are not a serious educational exercise, the fact of the matter is that games as these are serious matters presented in a kind of ridiculous and pseudo-ethical way (Bains, 2025). Although through its speedy decision making, simple choice mechanic, and absurd scenarios, one is confronted with their own moral compass and normative ethical assumptions.

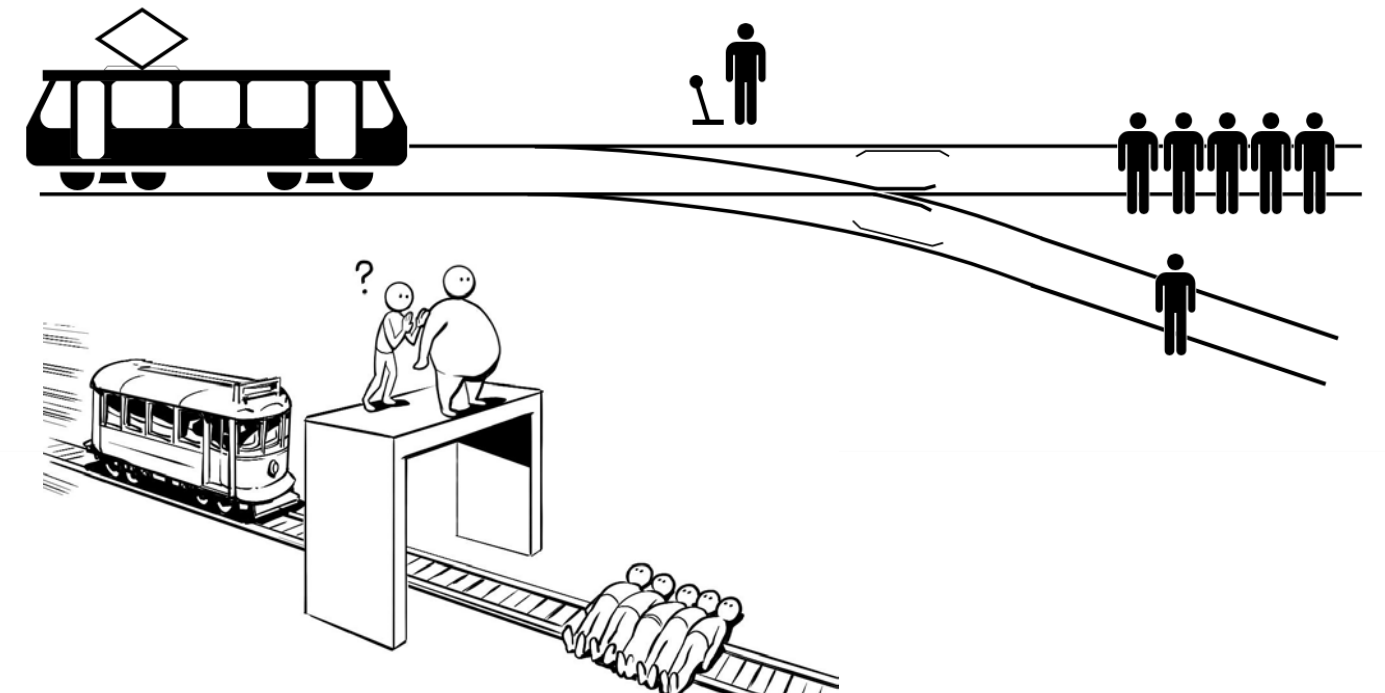


Figure 16: A diagrammatic illustration of The Trolley Problem, as well as the fat man version

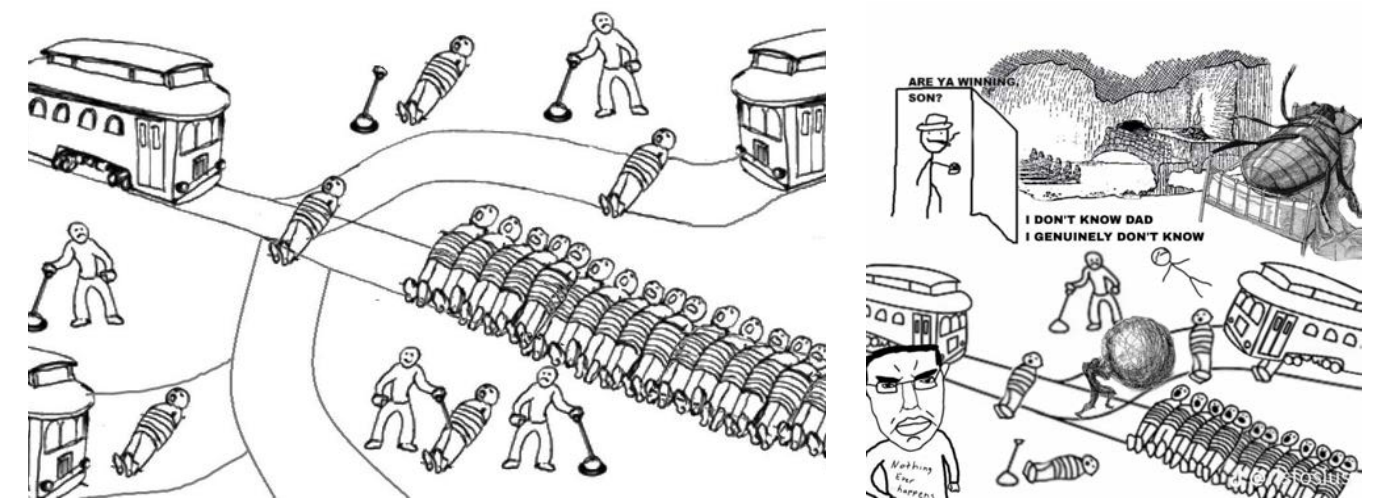


Figure 17: The Trolley problem is regarded as one of the most famous Internet (philosophy) memes

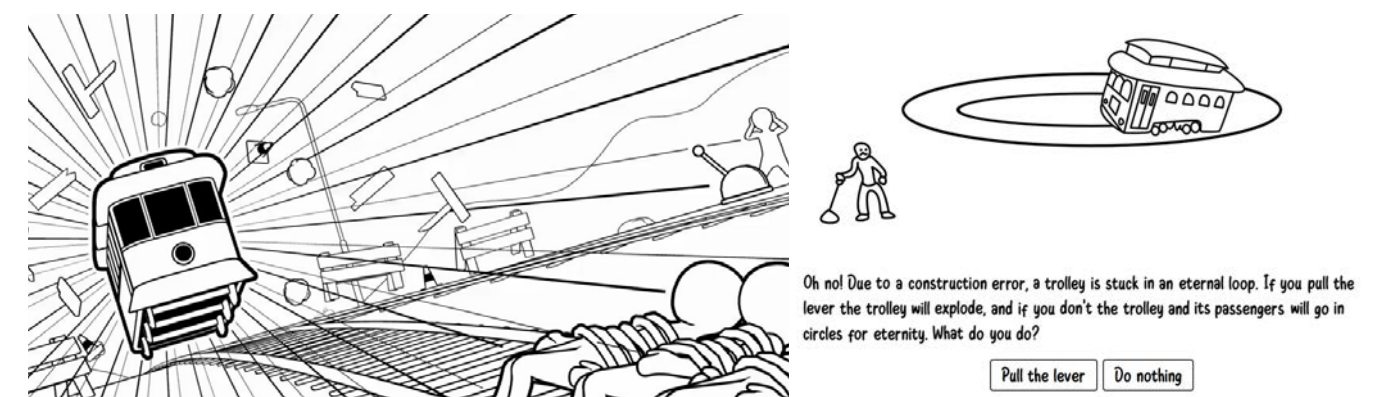


Figure 18: Two video games based on this example: the Trolley Solution & Absurd trolley problems

We can conclude this part by acknowledging that The Philosophy of technology is not interchangeable with technology ethics, however both important in the discourse regarding philosophy, technology, and design. Whereas technology ethics is part of the philosophy of technology, and is needed for various discussed domains of research and development. The main mode of teaching this is the case study, because it bridges the (perceived) gap between theory and practice as well as looking critically at the theories themselves. Because of these facets, this thesis will focus on further investigating and enhancing the case study for design and engineering education.

Design implications: Philosophy of technology

To summarize this chapter we can construct various implications for design:

- There needs to be a focus on systematic, sustained, and shared discussions on technology and its effect.
- Technology has become entangled with culture and society, and is not neutral and neither good nor bad. Therefore it cannot be evaluated in a vacuum without considering facets around it.
- Introductions of new innovative and/or disruptive technologies can cause shock: A reshaping of socio-technological relations
- There has been little effort in Philosophy of Technology to incorporate more diverse voices. The field of feminist technoscience studies and postcolonial technoscience can bring in more diverse, plural, and contextual perspectives to the field
- There is no one starting point when diving into philosophy and design. However, this can be seen as a benefit because the goal is to broaden the mind of a designer
- When starting to explore philosophy and design, formulate a mission on what you are trying to explain and answer. So, to find thinkers whose mission aligns to broaden your perspective and find new insights.

H4. Sensitizing designers for philosophy

In this chapter we elaborate on different sensitizing approaches through considering different toolkits, products, and educational material.

The research questions in this chapter are:

- How can you effectively explore philosophy in a design context?
- What are current (educational) products for teaching or exploring philosophy as a designer?
- Are there concerns regarding philosophy outside of its initial mode of teaching?



This particular Calvin & Hobbes comic is mentioned in relation to the pedagogy of discomfort in Boler and Greene (2004)

This chapter elaborates on attempts of sensitizing philosophy through design. It discusses various products with philosophic intent for the user. As well as considering different media examples. This chapter also elaborates on commodification as possible degradation of actual philosophy. This results in various implications for design, which serve the basis of an explorative research-through-design approach around creating various sensitizing objects myself found in the Post Scriptum chapter.

The research questions in this chapter are:

- How can you effectively explore philosophy in a design context?
- What are current (educational) products for teaching or exploring philosophy as a designer?
- Are there concerns regarding philosophy outside of its initial mode of teaching?

Dasein & Design: a true philosophical pairing?

Where to start? Personally, I have always had an interest in broad and philosophic texts on design. One thing I wanted to research was how to explore philosophy in a design context. Once I encountered the essay Dasein is Design (Bas, 2024), I wondered if this is a coincidental alliteration/rhyme that sounded fitting, or if this was an actual philosophical concept that can/should be translated to design. To research these questions and this proposed philosophic pairing, we will take this essay as a starting point. We will return to this essay to assess the claims made, with the tools and sensitizing examples throughout this chapter.

When searching for Dasein & Design one can find many works investigating this (Kamran, 2018; Macksey, 1962; Mitcham, 2001; Oosterling, 2009; Richard, 1981), visualized in figure 19. The concept of Dasein itself stems from Martin Heidegger's work Being & Time. Dasein is a concept that is a replacement for consciousness and refers to the fundamental question of 'being in the world' (Bakewell, 2017).

Following the essay *Dasein is Design* (Bas, 2024):

“As a design student coming into philosophy, it’s a phrase that felt true, despite me not knowing what Dasein meant.”

Then the question becomes, is this concept actually true? a truism? or does it just feel true? Heidegger also wrote on the Philosophy of Technology, but is this then inherently a match? Can concepts as this so easily be translated to design? To answer this question, and understand the idea of combining dasein and design better we will take a look at various examples. So to consider aspects that may interest or intrinsically motivate designers in various products and tools. **The goal of this thesis is to sensitize students and thus intrinsically motivate them to dive into philosophy and design.**

From the literature and interviews with experts conducted during this research, it can be stated that philosophy does not have a ‘sufficient depth’ that can be easily defined. In other words there is no baseline or metric to know if someone has enough philosophic knowledge to ‘practice philosophy’ or apply it.

However, when philosophy ‘changes’ you or the way you think, and that you cannot consider a problem without multiple viewpoints, it can be assumed that one is at a ‘sufficient depth’. Because there is no way to test or prove this we will keep on focusing on the ‘intrinsic motivation’ when regarding existing products and tools.

Dasein is design

8/5/2024

Essay: Moet design de wereld redden?

Dasein als design

Ons alledaagse leven is volledig gedesignd. Van Citroënpers tot vuilnisbak: alles moet esthetisch zijn. Het design speelt daarom een grote rol in het ADHD-consumptieve van deze tijd. Maar in de toekomst zal het rekening moeten houden met duurzaamheid.

HENK OOSTERLING

1 april 2009 - verschenen in nr. 14

Cadeau geven Delen Leeslijst

HOE INTELLIGENT kan design zijn? En hoe omvattend? Aaron Betsky en Adam Eeuwens schetsen in Design NL het designlandschap zoals dit zich in de afgelopen decennia in Nederland heeft ontwikkeld. Nederland steekt met zijn Gesamtkunstwerk de goden naar de kroon. Ieder design wil in zichzelf afgerond en daarmee een symbool van eenheid en perfectie zijn. Imperfectie is een teken van verval. Hoe ver je het idee van het Gesamtkunstwerk kunt oprekken toonde Karl-Heinz Stockhausen toen hij de aanslag op de WTC-torens in 2001 als het grootste Gesamtkunstwerk aller tijden typeerde: overlevingskunst en geopolitiek schoven daar catastrofaal in elkaar. De wens van maakbaarheid van de wereldsamenleving voltooide zich in de radicale omkering van het creatieve gebaar: als creatieve vernietiging van de gegeven wereldorde, creatief omdat industrieel design – een lijnvlugtuig – als vernietigingswapen werd ingezet.



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Dasein Versus Design: The Problematics of Turning Making Into Thinking

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ABSTRACT: Building on suggestions from the work of Martin Heidegger, a distinction is made between two ways of being in the world. One is associated with the unplanned particularity and care of *Dasein*, another with the planning and thinking-out of design; the former is characteristic of a more traditional way of life, the latter of contemporary life. Included are brief etymologies of ‘Dasein’ and ‘design’, along with some reflections on the two-fold history of design of internal structure and surface appearance (that is, of engineering and aesthetic design, respectively). The conclusion sketches out a problematics of engineering design as involving a disengagement from fundamental human experience, and suggests the need to discriminate between authenticity and inauthenticity in the world of design.

Keywords: aesthetic design, authenticity, Dasein, design, engineering design, Heidegger, history of design, problematics of design

The proper study of mankind [sic] is the science of design.
– Herbert A. Simon (1968, p. 83)

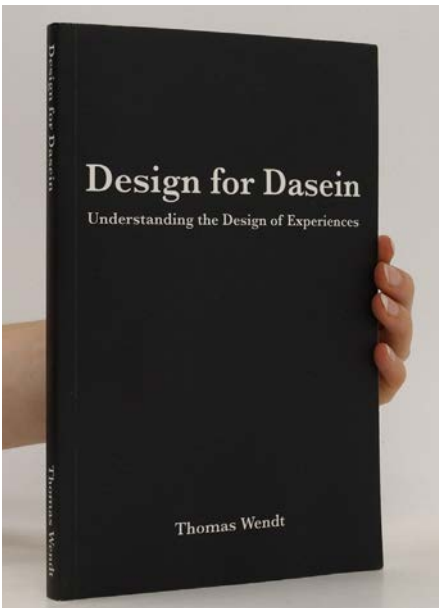
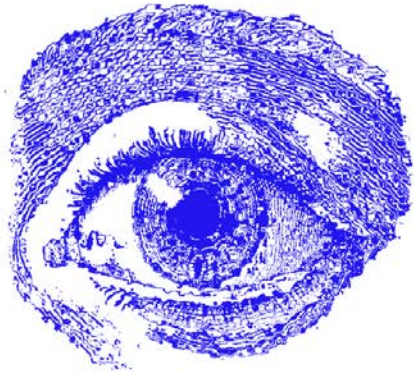


Figure 19: A collage of various prepositions between Dasein & Design. From blogpost, newspaper article, booklet, paper, and art exhibit.

Educational tools: Ethics for Designers Toolkit

One of the most prominent sensitizers of ethical questions in design is the Ethics for designers toolkit by Gispen (2017), that introduce various exercises for designers to incorporate ethics in their design practice. The toolkit itself consists of multiple tools to help develop **Moral sensitivity**, **moral creativity**, and **moral advocacy**. The form of this toolkit is in six paper templates regarding the aforementioned three themes, on which can be worked together on during a design case or process.

This kit clearly introduces specialist knowledge of ethical theory into the design process. The form itself does make it that this toolkit is only applied in the practice itself and is formatted for design education (as seen in Figure 20). Working through the whole kit is best done over multiple sessions. This kit has the advantage that the subject is not fixed. This can be applied to the design of a barbecue, or to social design for energy transitions. Therefore, this toolkit can be an add-on into design projects and likewise courses.

A critique of this kit can be that toolkits in general only work for design practitioners and is not very accessible for others. The toolkit is designed as multiple sheets that have to be worked through during a design process.

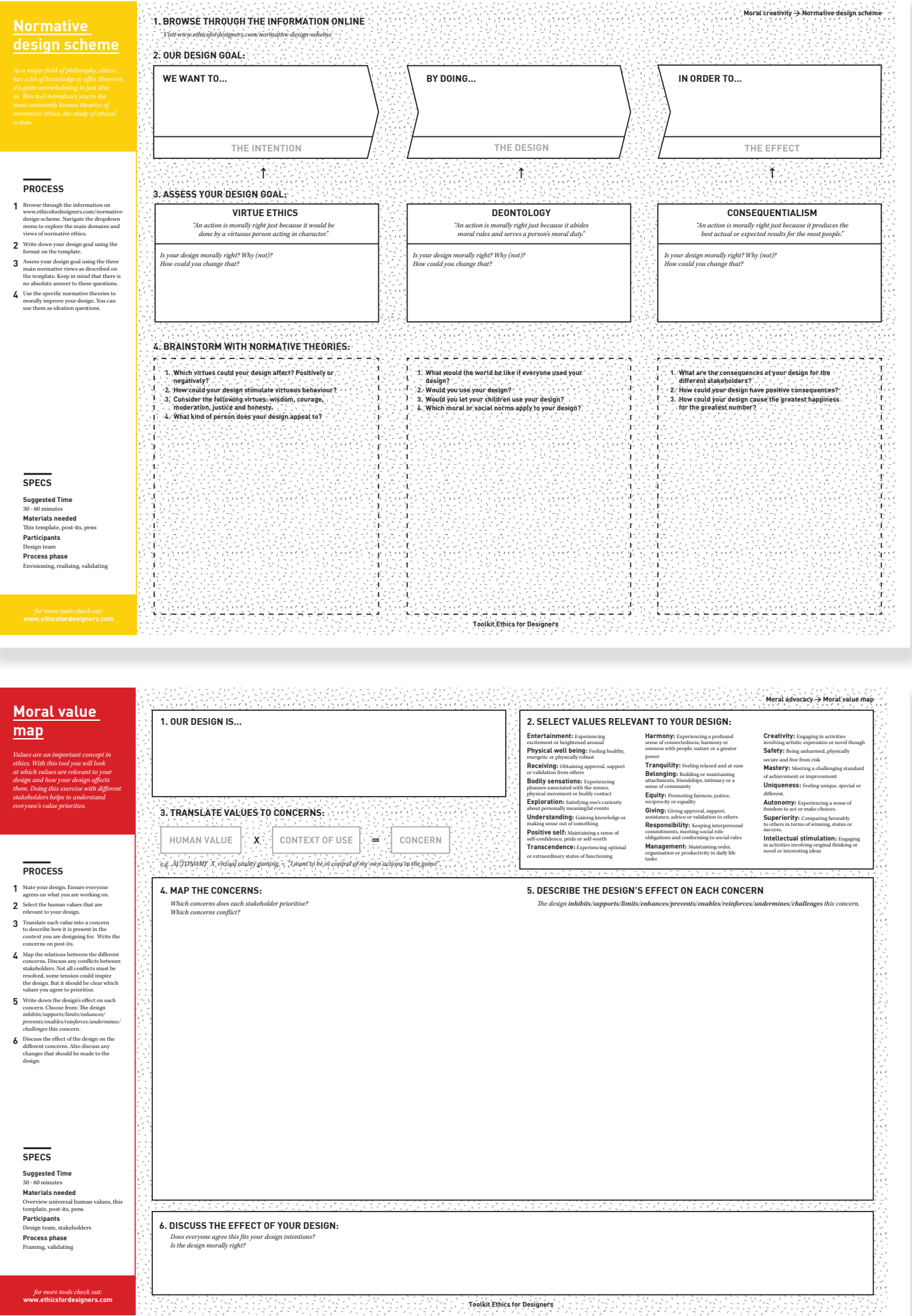
This is not the only kit regarding philosophy and design: Dilemma-finding Toolkit (Özkaramanli, 2013) Pyramid of Technology Toolkit (Mensvoort, 2013), or Value Based Deliberation toolbox (Oosterlaken, 2018) However, Gispen is chosen to highlight through its focus on a design student audience.

Concerns as these are not new, following (Csikszentmihalyi, 2014): “Young people will not want to become philosophers or scientists if their teachers do not enjoy philosophy or science, it is not the knowledge or prestige of teachers that I remember, or the correctness of their methods. It is, rather, the conviction they conveyed that what they were doing was worth doing, that it was intrinsically valuable.”

So, let us consider an example where philosophy is accessible, fun, and not only primed for designers.



Figure 20: An overview of Ethics for Designers toolkit by Gispen (2017)



The School of Life: Commodification of philosophy

Outside of the academic realm we encounter toolkits aimed at self-improvement through applying philosophy. For instance products from The School of Life (Figure 21 & 22). Already on first glance most 'philosophic products' they offer, seemingly have lost their critical edge. This loss of criticality can be better understood through commodification.

Commodification – a term coined by philosopher Karl Marx – is the process of estrangement of aspects of human life through expressing it in monetary or trade-able value. It describes the process by which something without an economic value gains economic value that replaces other social values, and therefore commercializes it in our daily life (Levesque, 2015). Philosophy can be commodified as well. Practicing philosophy has throughout time served a social value. However, in contemporary times there are many examples of it being commercialized for economic value.

As an example let us consider The School of Life, a philosophic school with design products founded by philosopher Alain De Boitton. The School of Life is inherently a profit-driven corporation, that uses popular figures and celebrities to offer quick fixes to individuals' problems: These quick remedies themselves are in effect embedded within the logic of pre-existing profit-driven structures of production and consumption (Karanfil & Gürsoy, 2020).

From a design perspective, we can argue that one of the reasons that makes it lose its philosophical strength is that the philosophy applied is turned into a card game, a book, or a boardgame. Again this is best defined by studying the interaction of the products, in relation to its philosophical roots and intentions. All products have a beginning and an end, therefore ensuing in form that the philosophy applied also has a starting point, as well as a clear finish line. A game can be rather quick, and is meant to be fun. Philosophy and critical thinking however, does not have to be fun and

there is no predetermined length at which it can be done. All products in its medium and form embody assumptions that do not cohere to the initial goal and subject.

Another relevant aspect to consider is that the products itself are not the problem solely. The organisation does not care for actual philosophy, because this is inherently not good for profit. To sketch an example: Mind & Body (The School of Life, 2021) elaborates on different philosophies as for self-improvement. Their short section on Japanese rain-walking stemming from Shinto practices is not there to educate the audience on Shinto religion and philosophy. Rather to show how the user can now easily change their negative emotions and attitude to rain while appropriating Shinto philosophy. The mindset of the maker/organisation plays a major role in the lens through which philosophies are viewed.

There have always been concerns of commodification around philosophy in different forms and on different levels. Throughout history various philosophers deemed new approaches, such as making philosophy empirical, as losing their critical quality and ethical qualities (Van Dijk et al., 2019). Such critiques also apply to the philosophy of technology, regarding the new focus on the material and technical world that was unusual at the beginning of this wave in philosophy (Swierstra et al., 2022). Again, this can also apply to education. So what to consider when philosophy is placed in other non-philosophy curricula formats?

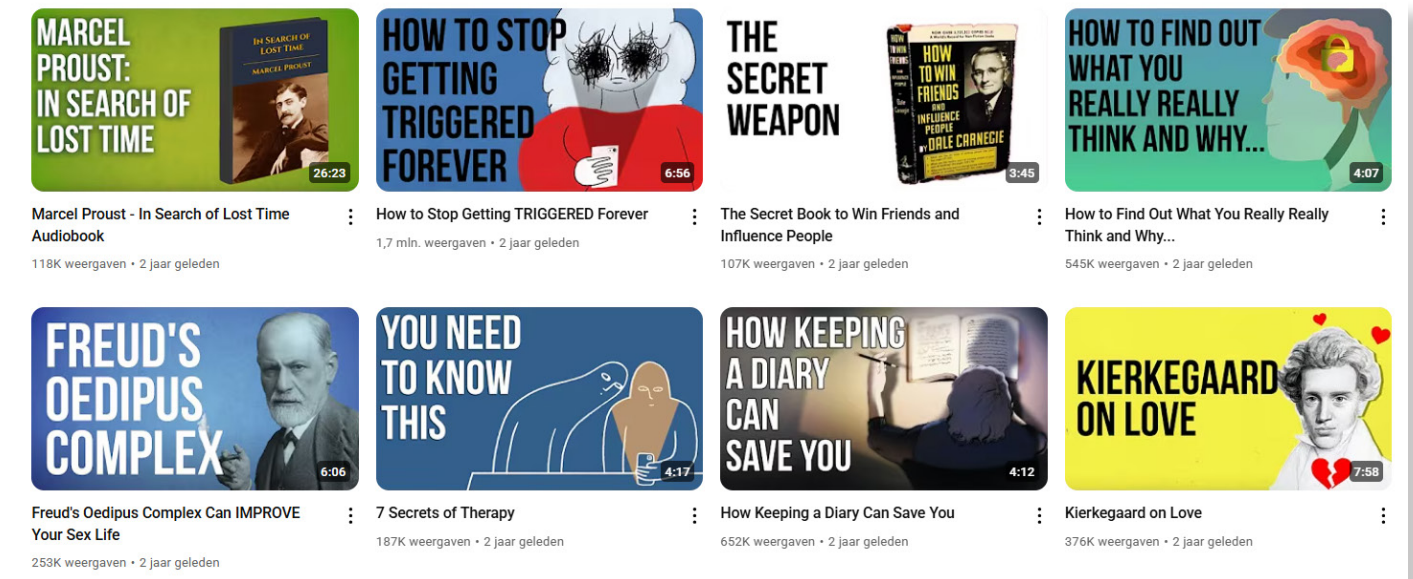


Figure 21: Collection of various YouTube videos from The School of Life

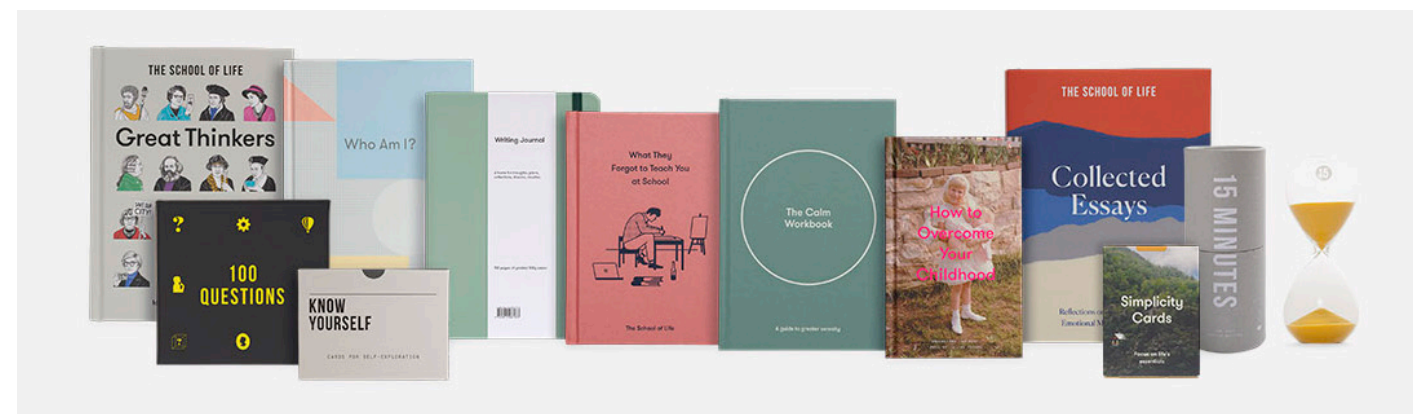


Figure 22: Product showcase from The School of Life webshop

Striving for no commodification is reminiscent of striving for true objectivity. This is not only the case in philosophy, but in other mediums such as journalism as well. The journalist Lewis Raven Wallace elaborates on objectivity in practice as 'the repetition of existing opinions and thought patterns from the pre-positioned systems of power' (Jongers, 2025). This again applies to philosophy as well, critics of different formats of philosophy are most often philosophy professors themselves (as seen in Moelle, 2021).

We have seen that taking philosophy out of it's domain can contribute to commodification and commercialization. Are there then examples in between education and commodification?

Philosophy-it-yourself: Video essays, mainstream media, and digital tools

Online education and digital learning tools are rampant: For philosophy this is no different. The format I like to highlight is video. There are numeral videos on philosophy on the internet. From Crash Course Philosophy (“Crash Course Philosophy,” n.d.), to PhilosophyTube (Philosophy Tube - YouTube, n.d.). Both examples explain philosophical theory in depth through the video essay format. However, there is much critique if these are ‘educational and critical’ enough.

It is argued by some that there will always be some form of loss when lifting philosophy outside of its heavy emphasis on text reading and thinking. In *The problem with video essays*, philosopher Abigail Thorn (2025) states that when creating a narrative, work out an idea, or presenting a story, there will always be something lost and something added. Thorn elaborates on her own work and commodification in a way, whereas philosophy is used to create educational narratives and content. The attempt to acknowledge what is lost and what is added onto the material, is not an attempt at true objectivity, but argued as an important acknowledgment for encouraging critical thinking itself. It is argued by (Raijmakers et al., 2006) that video formats such as documentaries can be beneficial for designers to explore critical topics.

When considering narratives and what is lost or added, we can see this in other examples as well. In *Sophies World* (Gaarder, 1991) the history of continental philosophy is explained in a children’s adventure novel. Even though this is not a ‘critical’ work, it does sketch out the grand lines of thought patterns and ideas through time in a captivating narrative. We can see that the narrative of the book is made more interesting through priming philosophical ideas and questions.

Or take the TV-series *The Good Place*, where philosophy lies beneath the plot lines. This show even gives lectures on philosophy through one of the characters. This makes it not only a fun, easily digestible, and applied lens for philosophy, but also a topic for many academic meta-analyses and observations on philosophy and teaching regarding the show (Giannini, 2022; Benko and Pavelich, 2019; Meyer, 2021; May 2022; Craven 2020; Van Esch et al., 2023; Lea, 2025, Holder 2025; Matthews, 2020)

In other ventures as *The history of philosophy: summarized & visualized* (Cem Önduygu, 2024) we can emphasize the transparency in intent. All philosophers are reduced to statements and indicators on who they build upon or contradict, so to digitally explore the relations. Through clicks and scrolls one can explore the history of (mostly) western philosophy in a simple and interactive manner (shown in figure 23). Cem Önduygu (2024) clearly states that this digital interactive system is a **thinking tool** to help people navigate the philosophical landscape.

To conclude the examples discussed: Philosophical toolkits with specialized academic knowledge that can be implemented in the design process can be beneficial. However, it does not seem as a clear intrinsic motivator through its stepwise assignment structure. On the other end, accessible and fun philosophic products lose their critical edge and are easily commercialized and commodified. Educational formats as videos can lose their criticality as well. However, when there is a reflection on what is lost and what is added, the viewer is primed to think for themselves. Next to this, digital formats as these have potential for the design practice. In the end, the thinking tools that are transparent in what is lost and what is added can be helpful sensitizers to explore philosophy themselves.

This is an ever-growing summary of the history of Western philosophy showing the positive/negative connections between some of the key ideas/arguments/statements of the philosophers.

The ability to see, clicking on a sentence and displaying its connections, what different things can be said on a subject independently of who said them and when – independently of a direct interest in the history of philosophy. It can function as a **thinking tool** that helps people, as it helps me, think through these ideas by showing different formulations and negations of them.

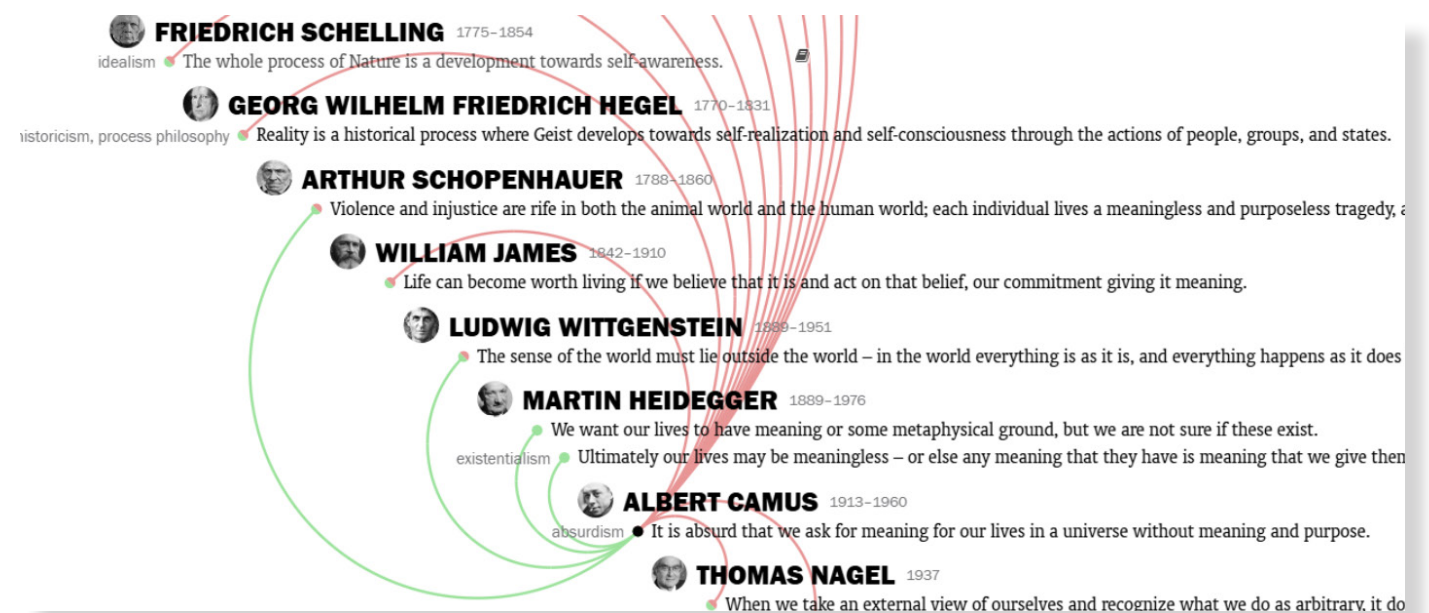
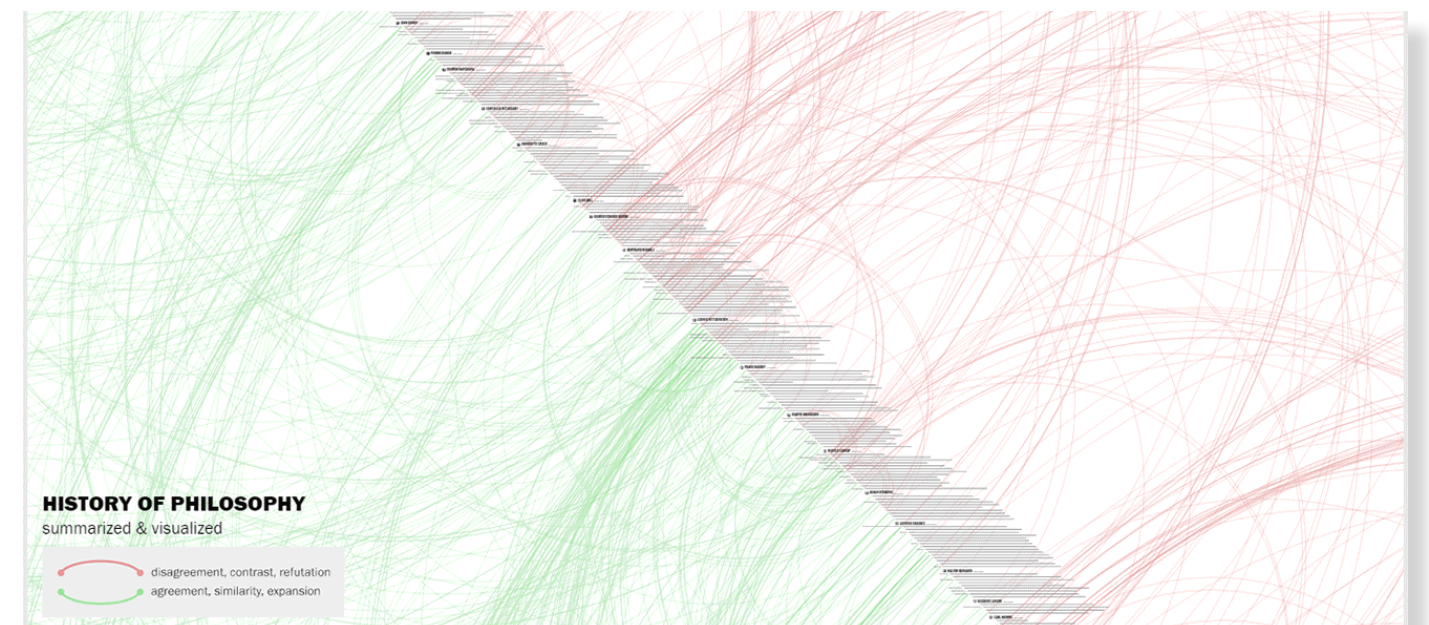
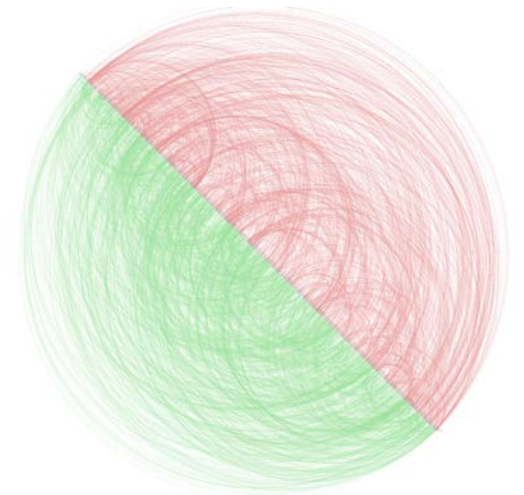


Figure 23: An overview of the digital website: *The history of philosophy: summarized & visualized*

Returning to the essay *Dasein is Design* (Bas, 2024) mentioned at the start of this chapter. To dissect this with what we discussed: we can use the History of Philosophy Visualized thinking tool (Cem Önduygu, 2024) to discover that the essay is well constructed. By getting a sense of what philosophers in the essay in summary have said and exploring their thoughts throughout history. Still it is important to note, that this is not a one size fits all solution. Next to considering these tools and essays on design and philosophy, it is always beneficial to read the reviews and monographs on philosophers as well as the texts from the philosopher themselves.

How then does this approach differ from philosophy pedagogies? Consider Figure 24. Most recurring strategy in teaching philosophy is getting handed a text, reading an interpretation of it, to then discuss the philosophic wave and then the bigger questions it tries to encompass. Because we are teaching designers philosophy, I propose we should do it the other way around. First, think of which big and broad questions surround the design project at hand, to then working backwards. Ending at the initial text we presume we have sensitized designers for.

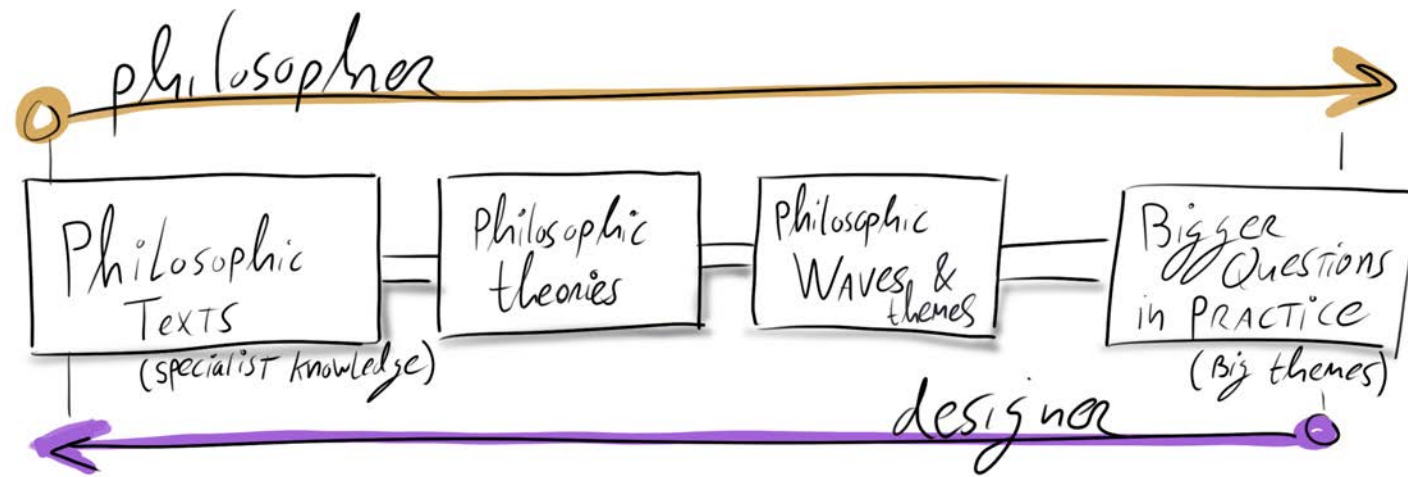


Figure 24: A strategy for designers to tackle philosophy, starting from the big questions towards specialist knowledge.

Design implications: Sensitizing designers

To summarize this chapter we can again construct various implications for design:

- Philosophical toolkits with specialist knowledge (such as ethics) can be applied to different design topics because they are not dependent on one product or service that is designed
- To motivate students intrinsically, a form of sensitizing is needed that does not force philosophy but can be enjoyable and transmitted with enjoyment.
- Philosophical products as card games and self-help books can easily lose their critical edge and be commodified / commercialized. Because the form and interaction can oppose the interaction of critical thinking.
- Intent of the company/organisation/maker also plays an important role in the creation of sensitizing/philosophy-oriented products.
- Only designing the same formats and educational methods can (in form) repeat existing opinions and thought patterns from the pre-positioned systems of power
- New educational formats such as video or digital thinking tools can be beneficial for sensitizing designers, when there is also a reflection on what is lost and what is added in the narrative.

H5. Visualization & philosophy

In this chapter we explore different visualization approaches, with a special focus on Wartenberg's *thoughtful images* (2023)

The research questions in this chapter are:

- How can a designer benefit from visualizing philosophy in their learning process?
- What modes of visualization are used to visualize different philosophic waves texts and thought?



NEMO Science Museum has a new floor about technology. But nowadays technology has become so obvious, we barely notice it. So how do we show people that technology is everywhere? Kesselskramer created an advertisement campaign where they visualized technology through giving our daily technology the same colour.

In this chapter we focus on philosophy as sub-disciplines and waves of thought. For instance, technology-ethics as a sub-discipline, and existentialism as a wave of thought.

The research questions in this chapter are:

- How can a designer benefit from visualizing philosophy in their learning process?
- What modes of visualization are used to visualize different philosophic waves texts and thought?

Thoughtful images for philosophy and design

Visualization is regarded as a useful means of achieving scientific understanding, even in the most esoteric and abstract areas of science (De Regt, 2014). Philosophy is deemed a 'very abstract discipline' and focused on academic research, however visual signs are more accessible than text in many ways (Wartenberg, 2023). One idea that has always been central to design studies is the aspect of communication (Buchanan, 1985) of which visualizations are an inherent part. The engagement with philosophical practice through non-textual means such as drawing, designing and creating art, seems to benefit not only the philosophical field but also the design research field (Hummels, 2022).

So, from design sketches, to infographics: How then can we visualize philosophy for designers, or the other way around? How can illustrations of philosophy become more than solely the portrait of a philosopher?

Most significant work in the field of visualizing philosophy is the concept of *Thoughtful Images* by Wartenberg (2023). In his eponymous book, Wartenberg elaborates on visual works that directly illustrate philosophic ideas, concepts, or theories. This theoretical framework forms the basis for this chapter. The theory of Thoughtful images constitutes of four types of philosophy illustrations: **Text-based**, **Concept-based**, **Theory-based**, and **Quotation-based** (Wartenberg, 2023).

We will work through this framework and evaluate which approach is most fit for creating philosophic visuals in a design context and approach, relating it to various contemporary examples. After which we will discuss a facet in Thoughtful images we regard as undervalued: maps and diagrams.

First off, Text-based illustrations are most frequent in the illustration of stories, they put forth the ideas in a certain portion of text. A common strategy in works as these is personification, where people depicted personify a certain quality or philosophic aspect. A clear example of Text-based illustrations is the collection of illustrations *Sesam Atlas van de Filsosofie* (Kunzmann et al., 1996) shown in Figure 25. This book presents a history of western philosophy and explanation of theories all accompanied with various forms of illustrations (on the left page) based on the text (on the right page).

Visualizing a certain portion of a text is a valuable learning experience. Houweling (2025) has shown that when applying visualization in pedagogical contexts that the focus shifts from simple facts and knowledge, towards the relation between sentences and the bigger picture. This relation between sentences and the bigger picture is needless to say beneficial for philosophy. Because practicing philosophy is not the numeration of dates of birth or complete texts.

Concept-based illustrations visualize an idea, concept, or theory that is important in a philosophers work. With these kinds of illustrations, one can rely on analogies to create a visual and explanatory visual. One example of a work filled with these concept-based illustrations is *De Verbeelding van het Denken* (Bor et al., 2004). This history is unlike the *Sesam Atlas van de Filsosofie*, more reliant on art, allegories, and drawings to explain and elaborate on philosophic thought and history (Figure 26).

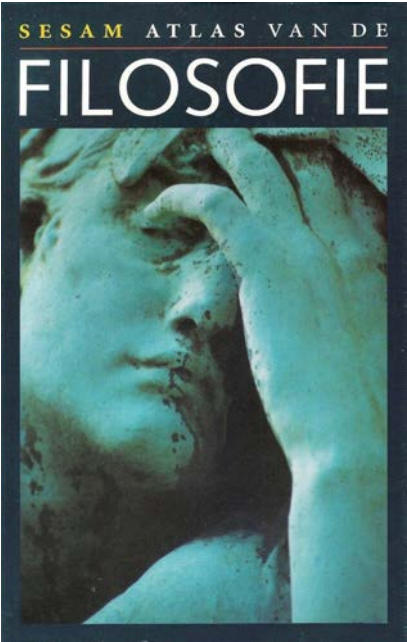


Figure 25: The Sesam Atlas of Philosophy (Kunzmann et al., 1996)

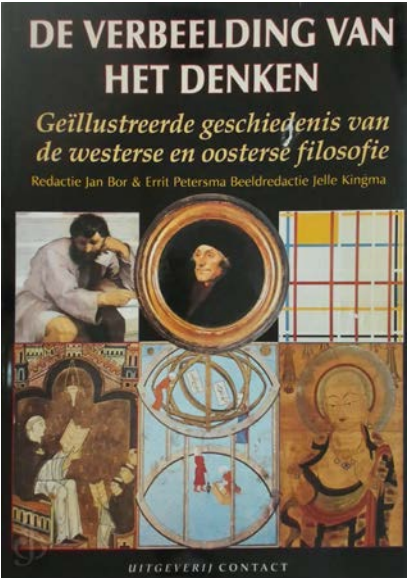


Figure 26: De Verbeelding van het denken, an illustrated history (Bor et al., 2004)

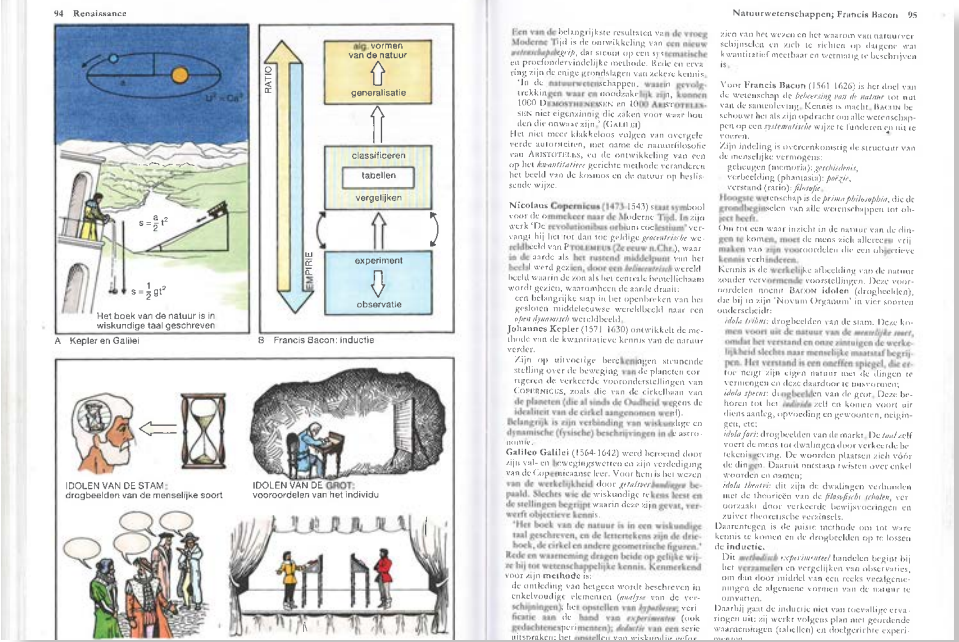


Figure 27: Martin Heidegger and the painting from van Gogh which explains his theory on art.



Figure 28: Philographics, quotation-based graphic design posters (Carreras, 2013)

Theory-based illustrations rely on using existing or new visuals that exemplify, explain, or help remember various facets of philosophic theories. These images have had a pedagogical function throughout history. One such image is Vincent van Gogh's painting of Shoes (Figure 27), use by Heidegger to illustrate how art can reveal 'truth' and uses the visual to interpret his thesis (Wartenberg 2023).

Finally, Quotation-based illustrations is when conceptual artists used the words of philosophers to create art. A work that fits inside this category is *Philographics* (Carreras, 2013). This collection of abstract iconography based on different philosophic words is a fitting example. However, due to its abstractness and one-liners it has no critical or in-depth qualities and better serves as a birthday gift.

An overview of all four types of illustrations are shown in a visual overview on the right (figure 29). In this visualization I juxtaposed the four categories regarding my perception of **creative freedom**, and **relevance to the source material**.

From these examples we can conclude that Text-based illustrations are useful for designers regarding visualizing certain concrete portions of text. Next, the notion of Theory-based illustrations can be of use as well. The theory based illustrations are especially a good fit through their pedagogical function.

One can argue that concept-based illustrations can also serve a purpose through the tendency of designers to use analogies as well as metaphors in the design process (Hekkert and Cila, 2015). However, the examples Wartenberg gives in *Thoughtful Images* remain abstract and of high artistic value. For this same reason quotation-based illustrations are regarded as a step too far for philosophy and design pedagogies. Nonetheless, I would argue that this is reminiscent of the educational exercise of Metaprobes: Designed objects embodying philosophic concepts as defined by Encinas et al. (2020). This exercise of Metaprobes will be shortly discussed in the next chapter on materializing.

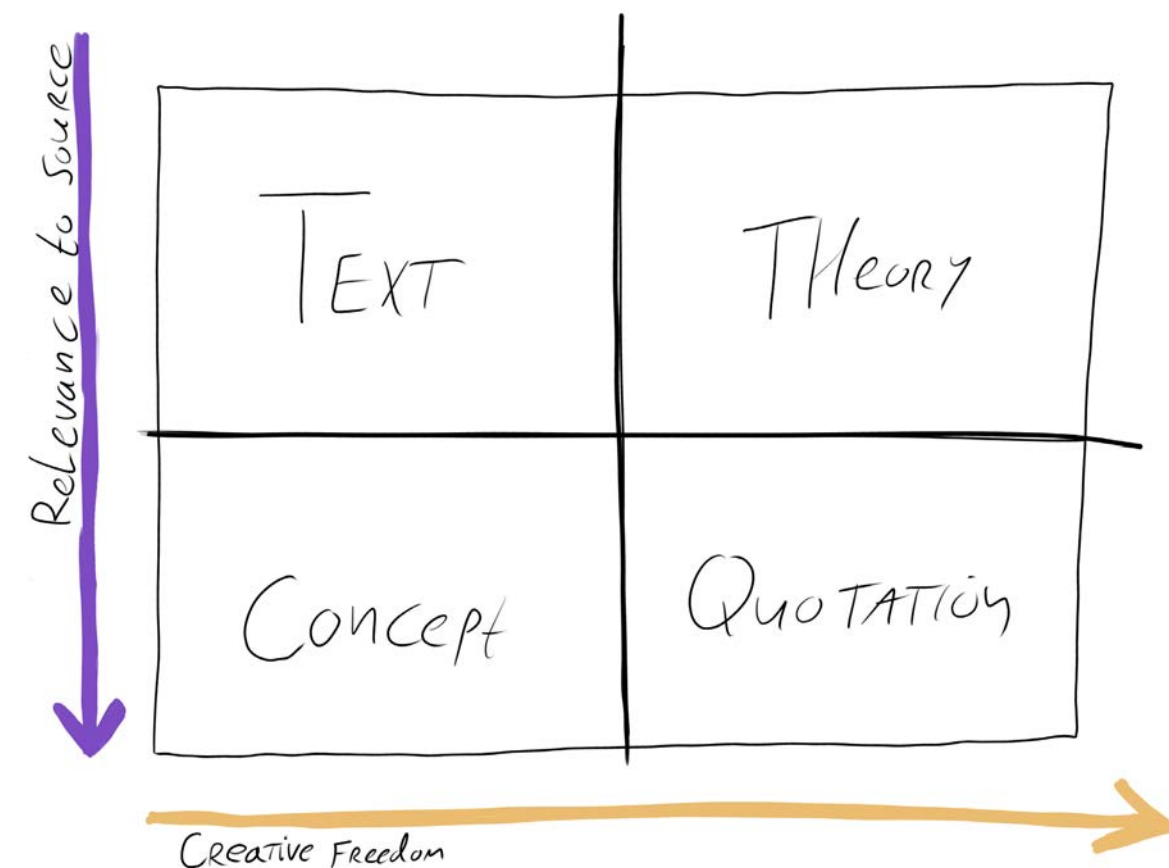


Figure 29: A simple visual depicting the four types of philosophy illustrations

Diagrams & maps: visualizing histories and relations

One common theme found during this research is the visualization of philosophy through maps and diagrams. This form of visualization/illustration is not discussed in *Thoughtful Images*. Wartenberg does elaborate on historic examples as illuminated manuscripts with special attention for works like Léonard Gautier's *Artificiosa totius logices* as seen in Figure 30 on the next spread).

This historic example is considered as a Text-based illustration with a pedagogical function. However, this illustration seems more fitting as an illustrated diagram. Reducing all diagrams to the notion of text-based illustrations does not do justice to diagrams themselves.

In conversations with philosophy-and-design academics it was brought up that recent philosophy papers include more and more diagrams and visualizations. It is outside of the scope of this thesis project to do an in-depth review of recent academic works.

However, during the exploration of philosophy and visualization, illustrative examples of this trend came up: For instance the Philosophy of Diagrams, is an emergent field of philosophy and visual representations. One example of this is the International Conference on the Theory and Application of Diagrams.

A diagram is a schematic and/or graphic representation of the topic at hand. Historically diagrams have been present, but not always dominant in reasoning and convincing: The diagrams of Florence Nightingale were one of the first examples of diagrams used to convince the government to better the health conditions of soldiers (Blauw, 2018). Next to this The Feynman diagram was one of the first examples of his scientific theory on quantum, without a mathematical proof (De Regt, 2014).

Diagrams as these are often influenced by Occam's razor, the idea that as much as possible has to be cut away to illustrate the core of the situation (Ball, 2016). Bramanti (2025) illustrates in *Conspiratorial Design* that this notion does not count for diagrams regarding conspiracies. In these diagrams the more complex, the more credible it is (as seen in Figure 31). This is reminiscent of Léonard Gautier's illuminated manuscript.

To move away from 'simple' diagrammatic visualizations, we can consider 'maps': Maps are a common visual theme inside the visualization of philosophy. Especially the relation between fields of philosophy and her history are fit for the 'mapping' approach. Maps can be more diagrammatic as we have seen in *The history of Philosophy summarized & visualized* by Cem Önduygu (2024). Or they can be more on analogies as in Concept-based illustrations, whereas the relations between philosophers is illustrated as a metro system map. The diagrammatic maps can also adopt different visual styles (Figure 32).

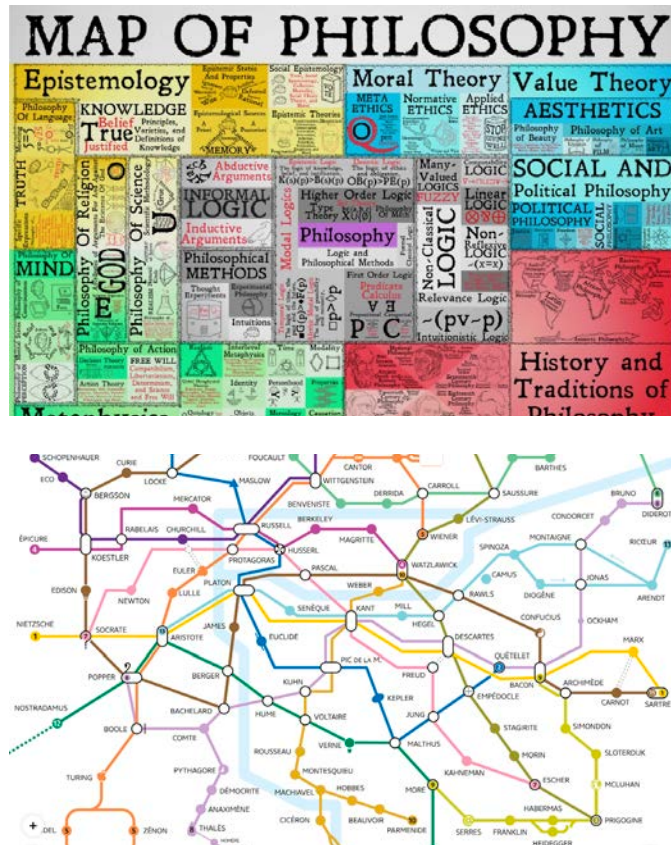


Figure 32: A sample of different mapping visualizations of philosophy (and her history)

However, there is one concern regarding the mapping approach: the use of actual geographic maps. Take for instance the map of technology ethics by Luppicini (as seen in figure 33). This map plots the sub-fields in the discipline related to each other onto a semi-accurate map of Europe. On first sight, an improvement may be that subfield of cyber ethics and computer ethics are far removed. However, we would argue that the main issue with these kinds of visualization is that it neglects real world political situations.

To better illustrate this neglect, consider satirical cartoons/sketches from the first world war. Here the countries at war are depicted through satirical imagery that reflect the stereotypical attitudes of the countries themselves. These political notions are clear in a visualization as this one, but in the technoethics visualization this is neglected. We can conclude that not every form of analogy, metaphor, or visual style is useful for visualizing philosophy. Especially not politically insensitive ones, so the used mode of visualization should be critically assessed itself.

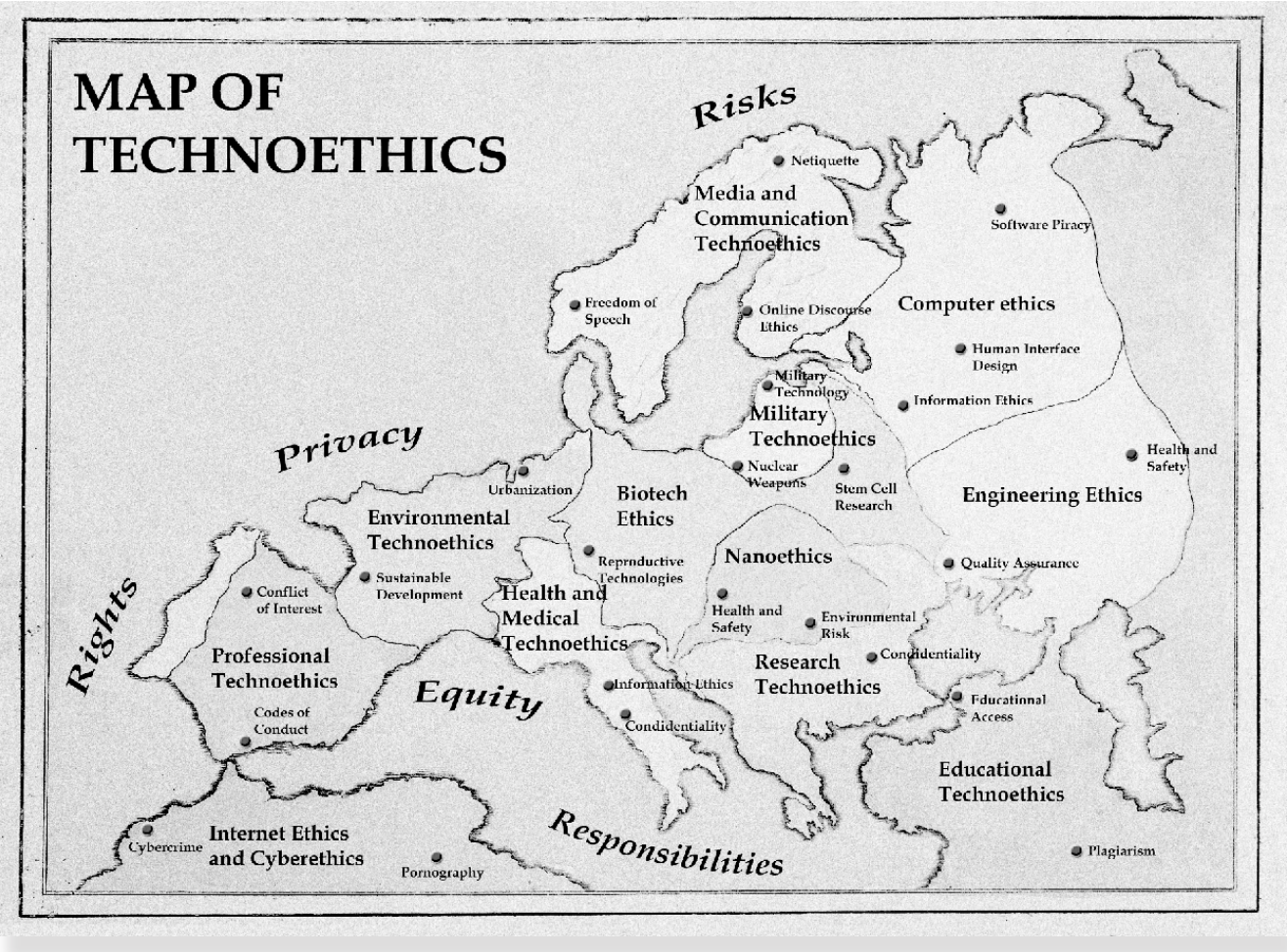


Figure 33: Conceptual map of technoethics by Luppicini R. (2009) from (So, 2024)

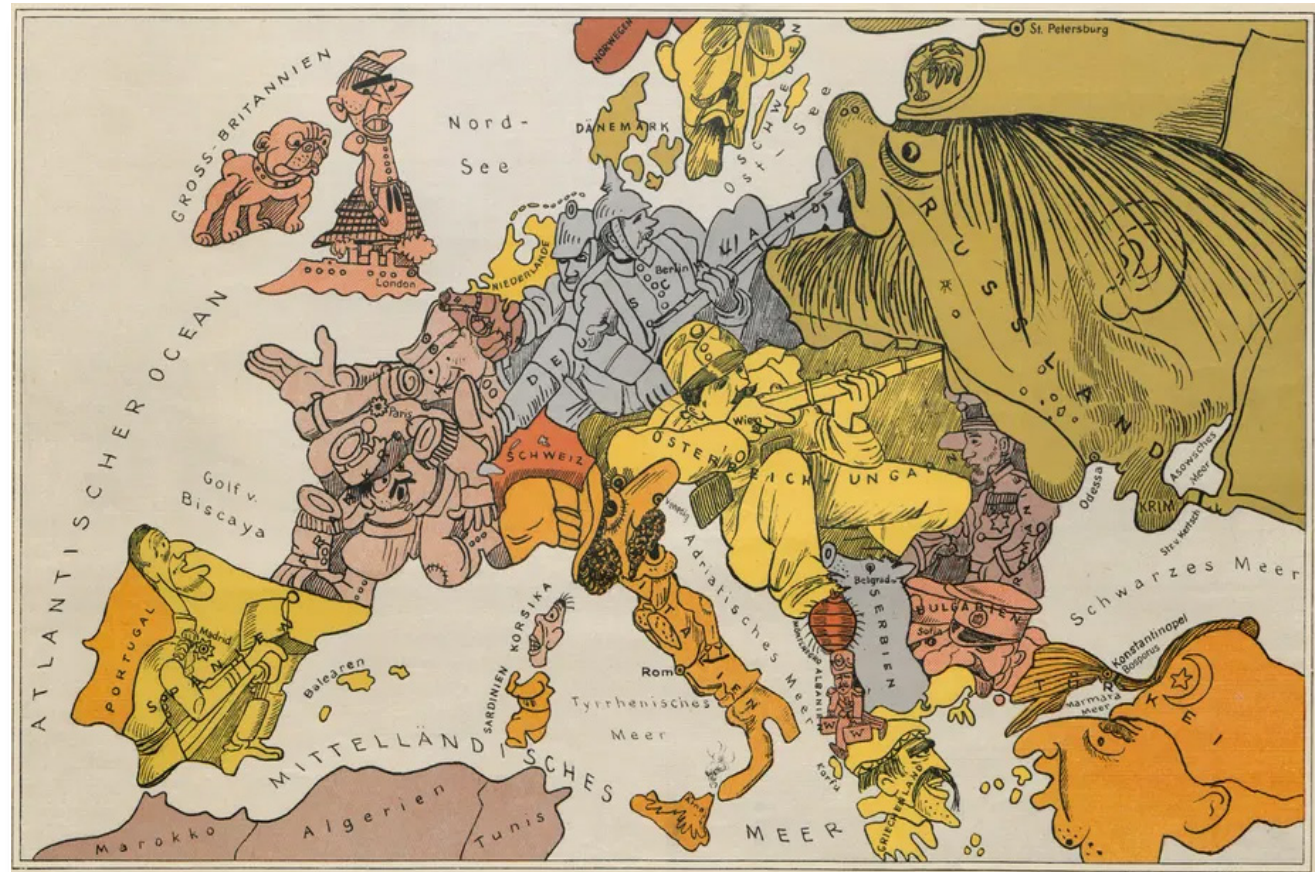


Figure 34: Karte von Europa im Jahre 1914 by Walter Trier.

Towards designerly ways of visualizing philosophy

To combine the theory from Thoughtful images and the lessons from diagrams and maps, we can conclude that the most fitting examples for philosophy are balancing between purely text, theory, or diagrammatic visualizations of philosophy.

How does this then translate to designers exploring philosophy? One contemporary field illustrated by Wartenberg (2023) is Graphic philosophy. The emergent field of philosophy expressed through graphic novels and comics. Most fitting example for this is Unflattening by Sousanis (2015) mentioned in the opening statements of this thesis. The main take-away by Wartenberg (2023) is that the comics privileges images above text. In Understanding comics McCloud (2017) states that a purely textual comic does not exist. Plus that in such pictorial space, words can become images themselves as well. Next to this the sequence of images presented juxtapose each other and so a single image or panel cannot exist. These aspects can clearly be seen in Unflattening or the comic book adaptation of Sophie's World (on the next spreads, figure 37 & 38).

An interesting aspect of graphic philosophy comics as these are that they 'work' outside of their initial book format. The spreads can also serve an explanatory function independently without having read the full book.

This concept of graphic philosophy can also start from diagrammatic representations, and move through the graphic format, and end in abstract quotation-based illustrations. Hummels (2024) presents a set of sketches regarding the philosophic wave of post-phenomenology. Elaborating on the sketching process from diagrammatic representations of Human-technology relations through the graphic stage where the words become images as well, towards abstract visualizations. This all seen through a post-phenomenological lens (as seen in figure 35).

Hummels (2024) proposes that the added benefit of visualization and sketching is that it has an emphasis on objectivity as well as a possibility for an open-ended and explorative manner of the creative process regarding philosophy and design.

These notions already overlap with the practice of a designer, as well as visualization techniques. in the IDE bachelor and master programme The praatplaat is an example of a design visualization technique which works with this juxta-positioning and visual dominance over text as well. An example of such drawing can be seen in Figure 36.

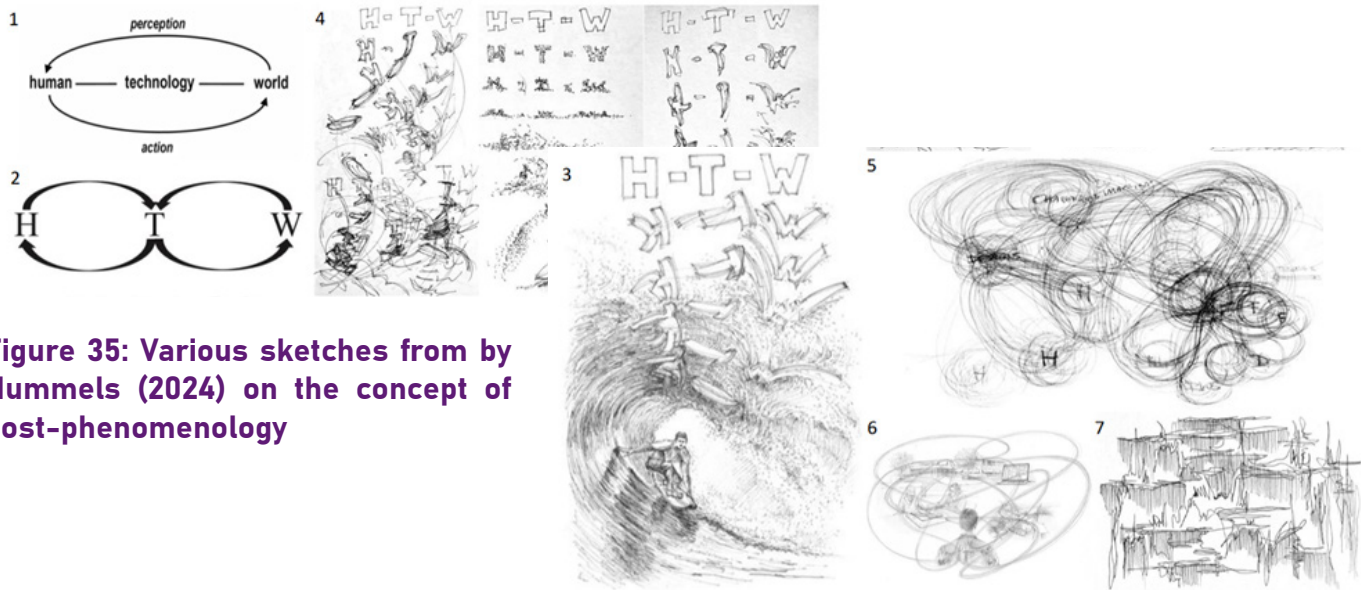


Figure 35: Various sketches from by Hummels (2024) on the concept of post-phenomenology

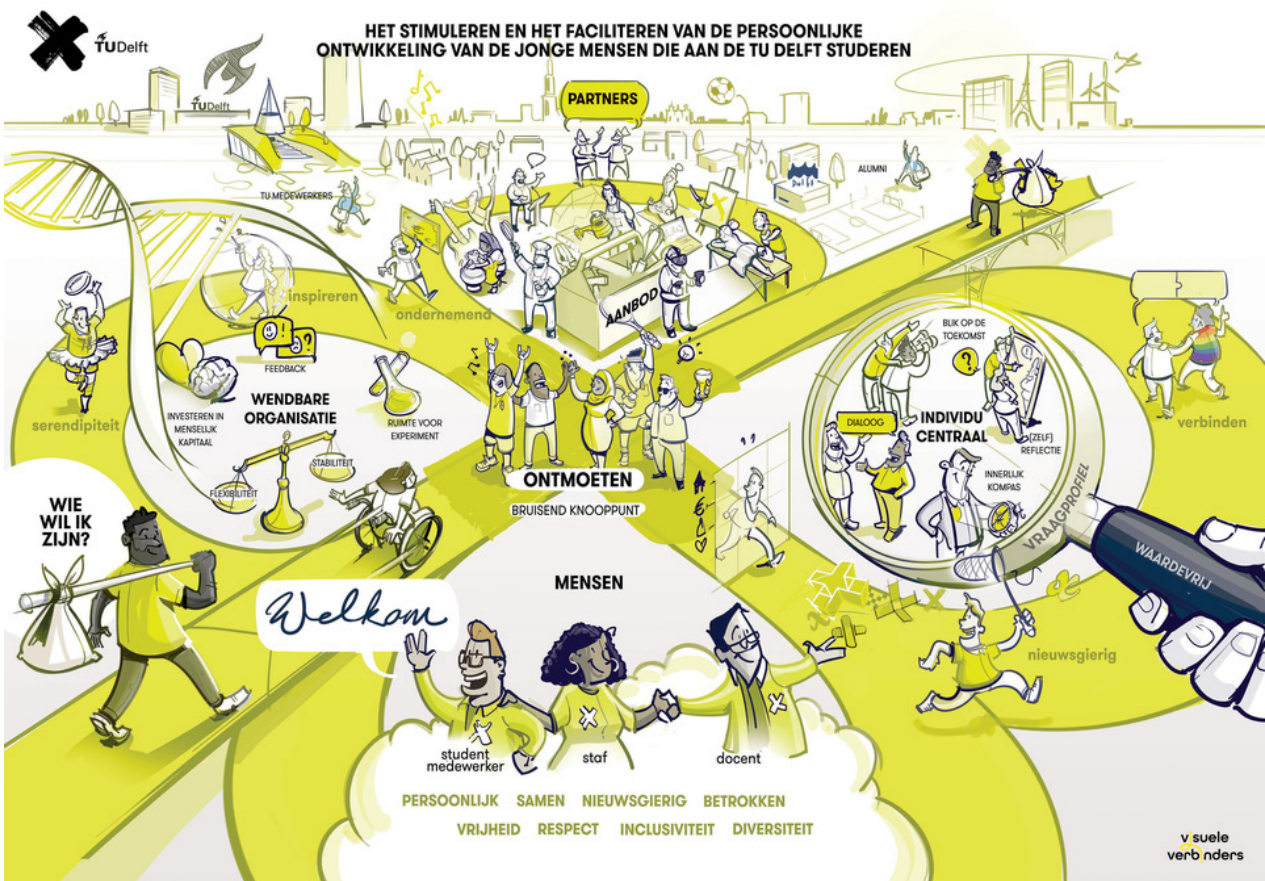
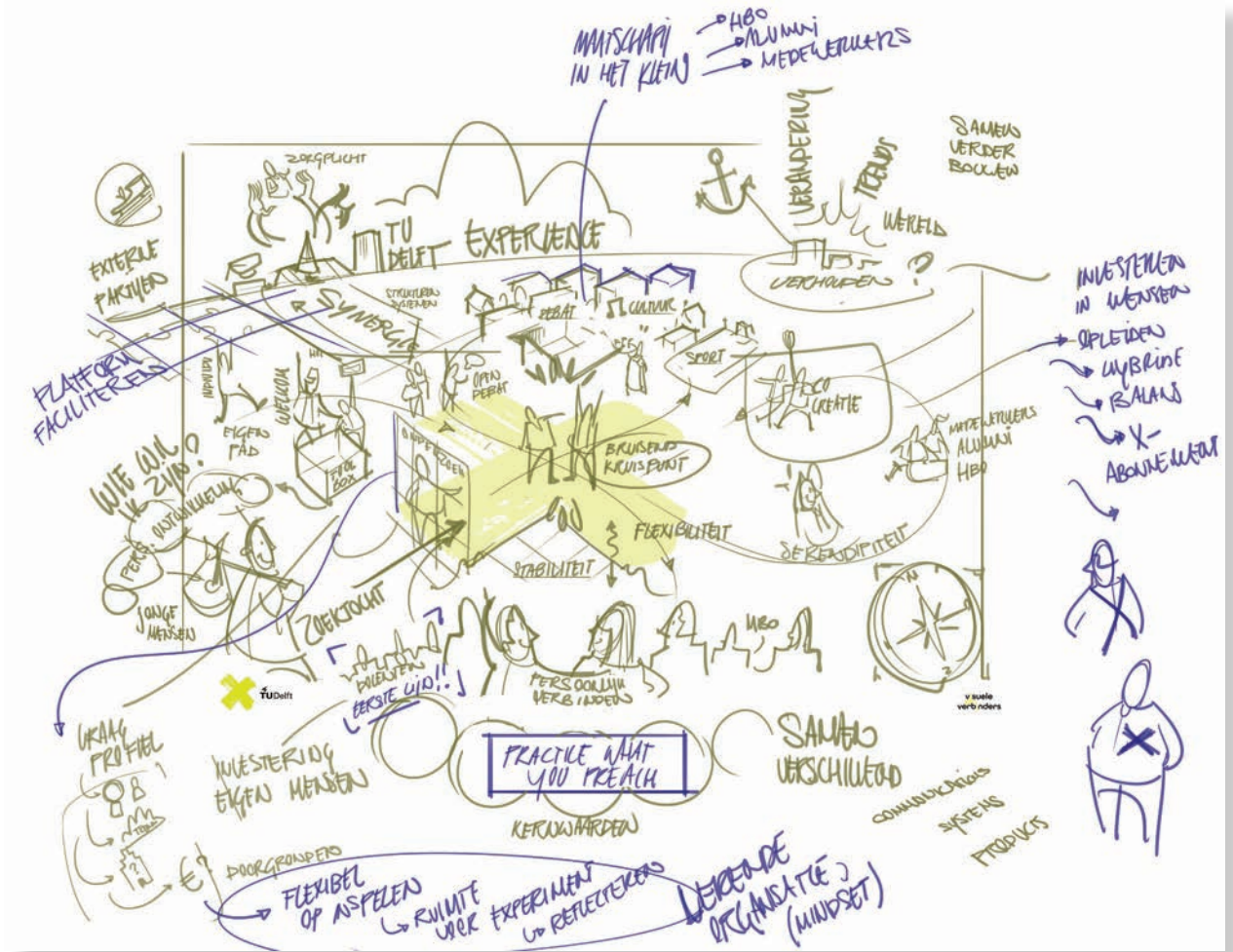


Figure 37: A praatplaat from Visuele verbinders, showing the initial sketch (above) and the end result (below) (Visuele verbinders, n.d.)

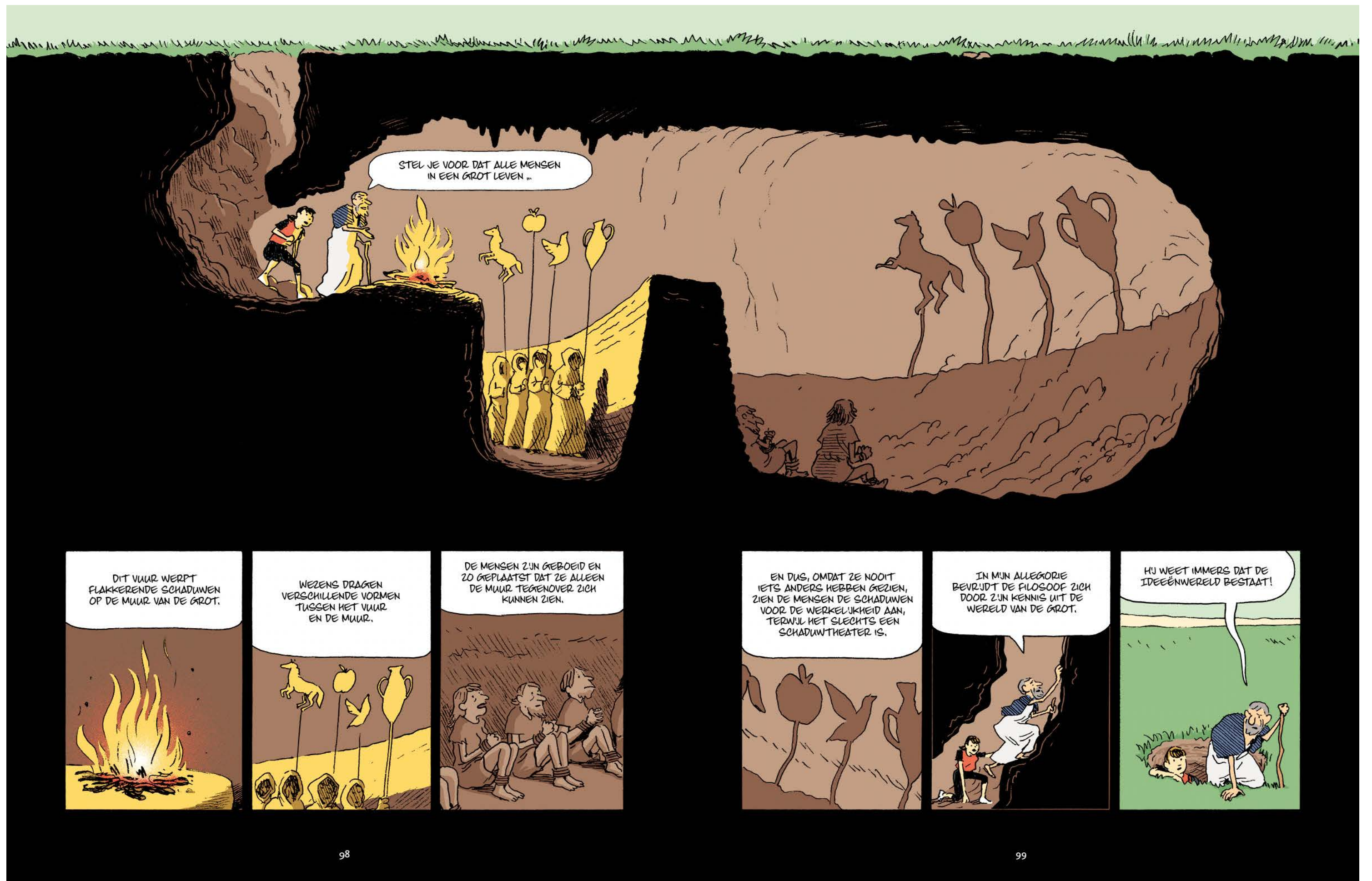


Figure 37: A spread from the comic book adaptation of Sophies world, this spread explains plato's cave allegory (zabus 2023)

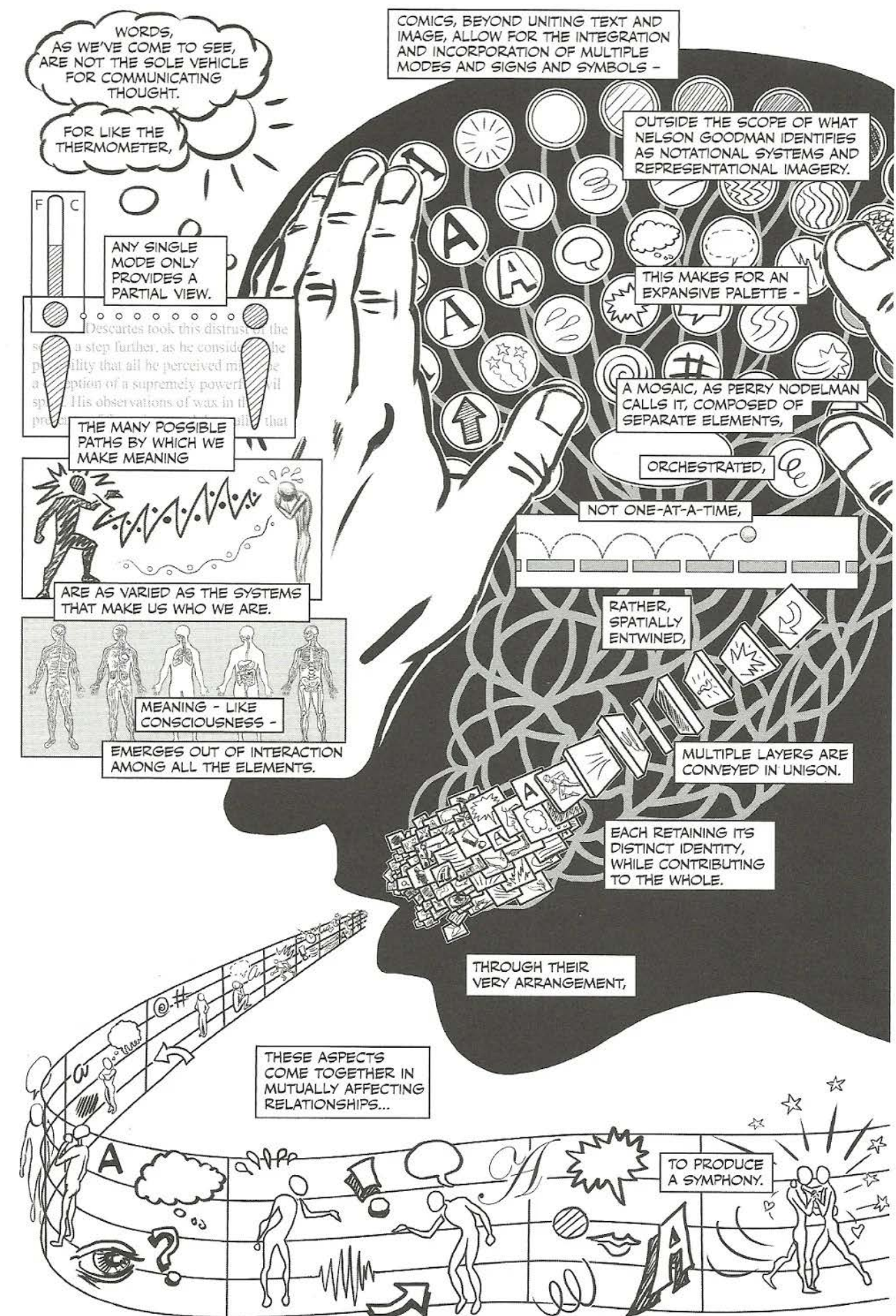
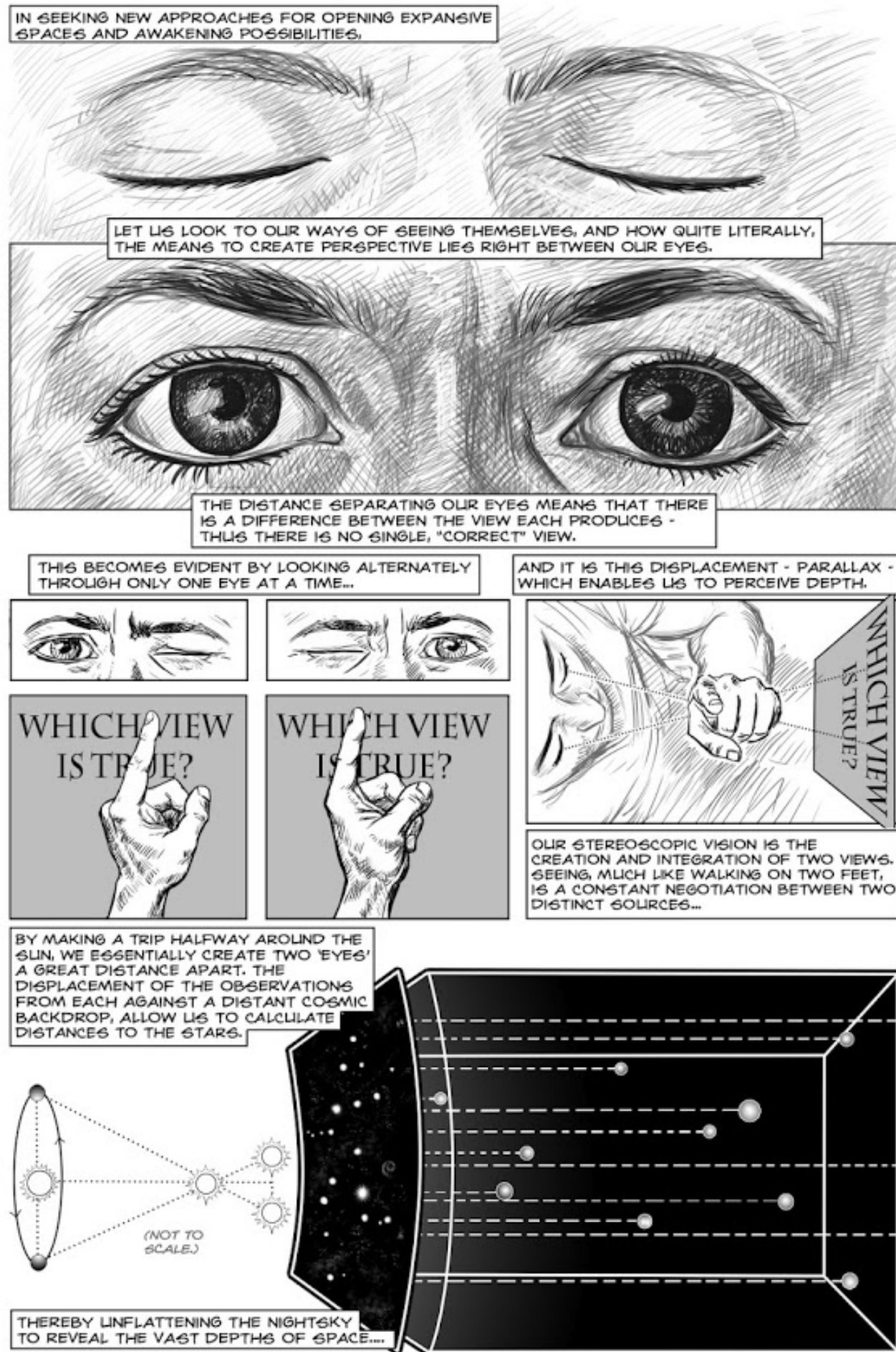


Figure 38: A spread from Unflattening (Sousanis, 2015)

To illustrate this: During this research process I made a *praatplaat* sketch of different disciplines of ethics. The diagram by (Karadağ & Koçyiğit, 2016) showed a clear division of various forms of ethics through a lackluster grey image.

Another critique can be that this image makes every facet even important, as well as of the same value. It only provides the taxonomy without a clear link to the examples throughout the whole text in. Next to this, technology ethics cannot be placed in this diagram because it does not adhere to one constant ethical frame.

However, for my own better understanding of the ethical theories I created the *praatplaat*/graphic philosophy illustration seen in figure 39. I started from Figure 38, and devised an illustration that could also fit technology ethics. As an extra I made a version that serves as a 'colouring plate' for in educational contexts (with explanation on the back, which can be seen fully in the Appendix).

This graphic philosophic illustration uses the frames from comics to show different ethical perspectives onto the same situation. The illustration was needed to show that technology ethics have instable and ever shifting frames and can exist within or next to other ethical theories.

This self-made example shows a 'designerly' way of not only visualizing philosophy in line with Wartenbergs Graphic Philosophy, but also a tool that is hypothesized to be of use during the learning process. This visualizing of philosophy fits inside the skill-set of an (industrial) designer, and should therefore help to make difficult topics as philosophy more approachable.

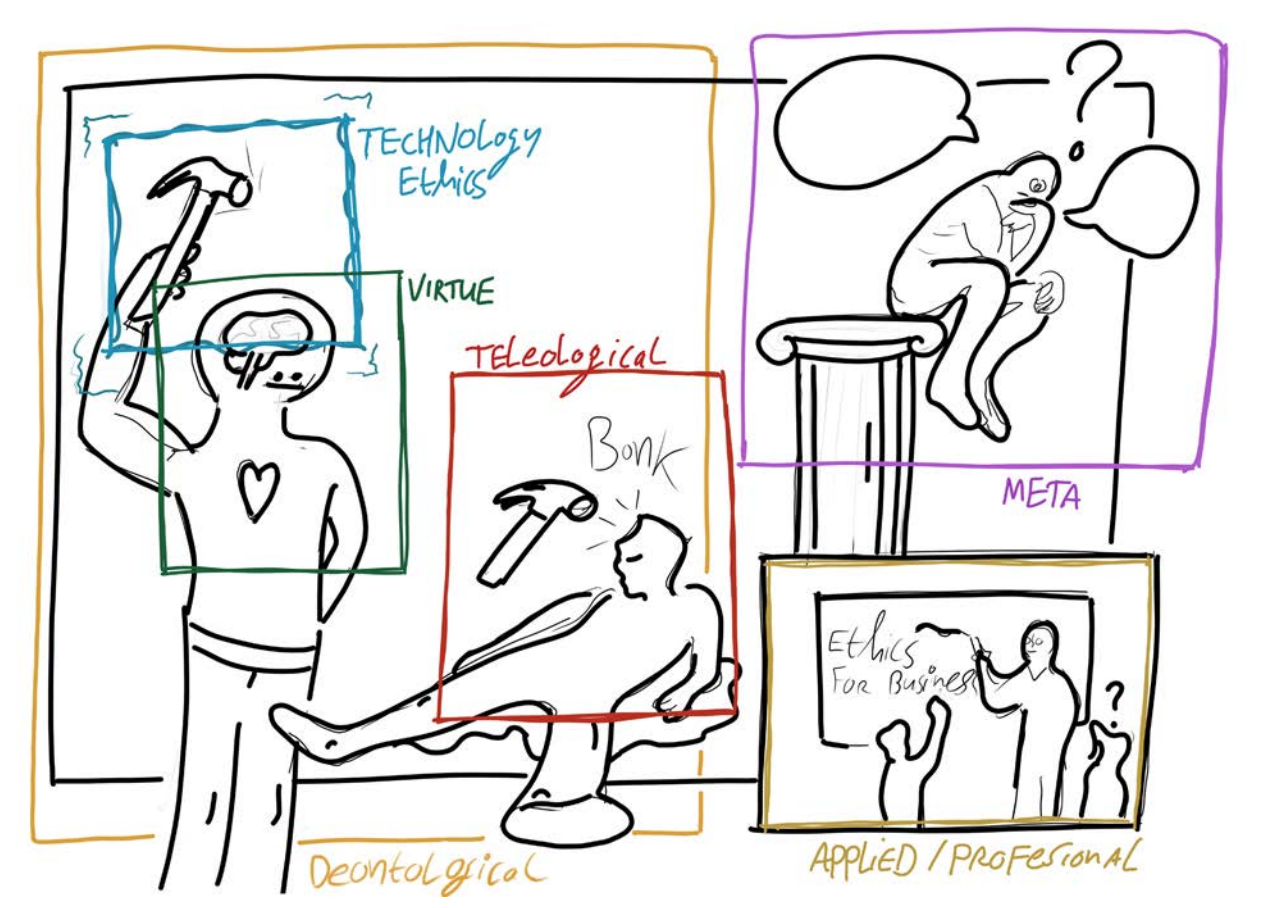


Figure 40: My own visual representation based on Karadağ & Koçyiğit (2016)

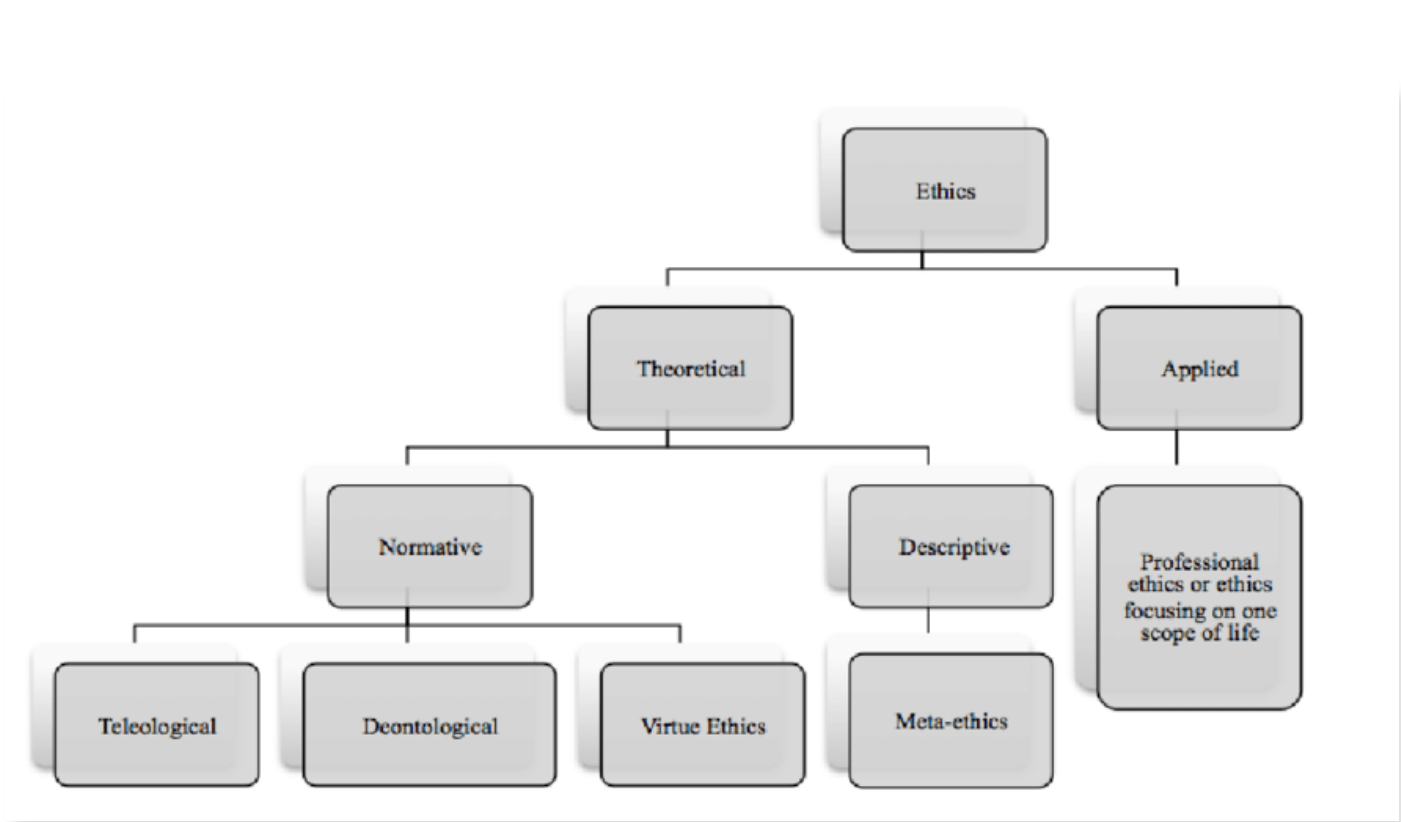


Figure 39: A visual representation of various forms of ethical theories

Draw, mark, colour, or place every type of ethics in this drawing!

Teleological ethics | Deontological ethics | Virtue ethics | Meta-ethics | (Applied or) Professional ethics | Technology ethics

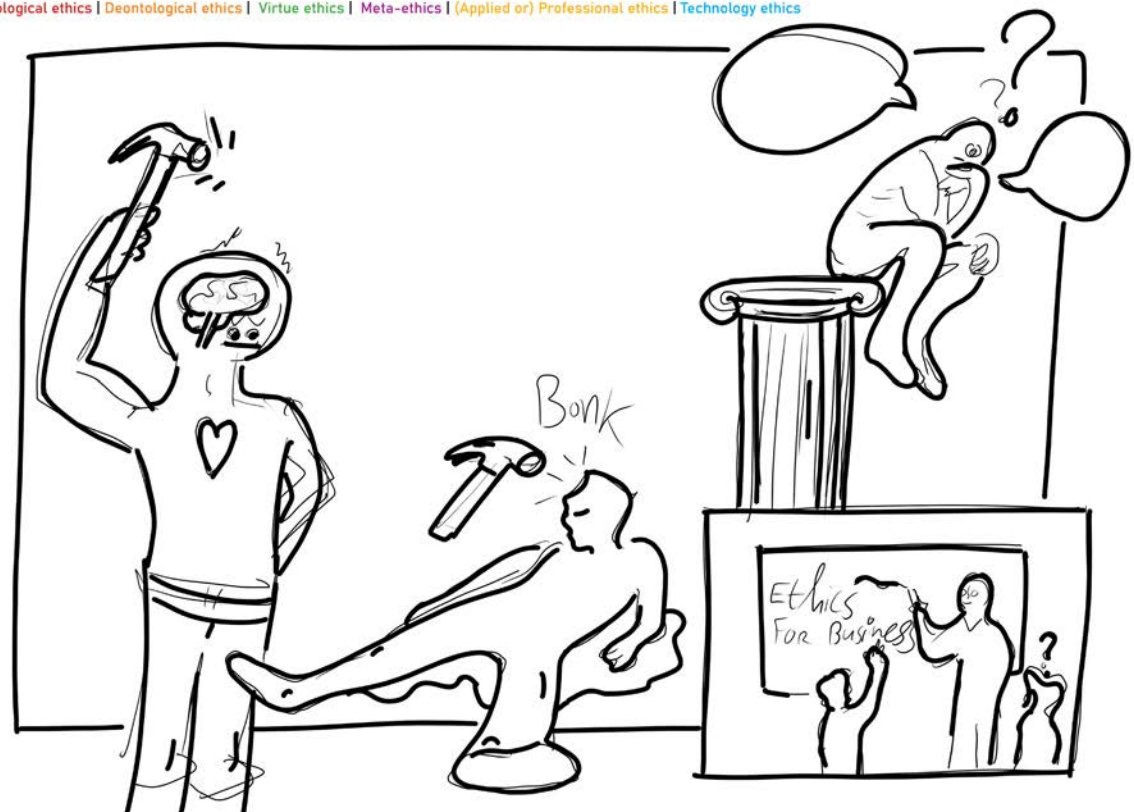


Figure 41: The initial drawing transformed into a colouring plate exercise

Design implications: Visualizing philosophy for designers

To summarize this chapter we can again construct various implications for design:

- The theory of Thoughtful images constitutes of four types of philosophy illustrations: Text-based, Concept-based, Theory-based, and Quotation-based we can conclude that Text-based illustrations are useful for designers regarding visualizing certain concrete portions of text. Next, the notion of Theory-based illustrations can be of use as well.
- Diagrams and maps can be an insightful way to visualize relations and histories. However, the way that it is given form should be critically evaluated as well.
- Graphic Philosophy (as proposed by Wartenberg, 2023) can be considered a designerly way of visualizing philosophy: Where the format of *praatplaat* is already on the level of skills of an IDE students, and can help create understanding for philosophic waves.

H6. Materializing philosophy

In this chapter we explore different materialization approaches, with a special focus on the development of Theory Instruments for The Philosophy of technology

The research questions in this chapter are:

- In what way can material objects and materialization practices embody philosophy and her theories?



This set-piece from the decor of KUNST, a 2023 theatre play by De Veenfabriek. This set-piece reflects the myth of Sisyphus: where in the contemporary day and age we have accelerated the never-ending task by putting the boulder on wheels. Photo by author, shot on 120 black and white film.

This chapter elaborates on tangible tools for design research and practice. In this chapter a theory instrument is designed with a focus on human-centred design principles and user-centred design.

The research questions in this chapter is:

- In what way can material objects and materialization practices embody philosophy and her theories?

The cutting edge of design and philosophy

Artefacts can be speculative and therefore they can also embed a philosophical reflection, even so some philosophical reflection need to be embedded in artefacts for better reflection (Singer & Tassinari, 2017). In general we take matter for granted, even though the objects, goods, fabrics, stuff and debris weave a complex web of meaning around us (Tynan, 2022). Singer & Tassinari (2017) state that:

“When both philosophers and designers become more aware of the philosophical potential of artefacts, this can lead to new experimental forms of interactions that can help to further shape ideas and find new expressive instruments.”

Eggink & Dorrestijn (2018) conclude that this counts for the philosophy of technology itself as well: it has to become practical if it wants to fulfil the task of answering its own questions. Therefore, a feasible compromise between philosophy and design can be to continue with philosophical reflection on questions about deeper principles and structures while simultaneously continuing with more practical and applied work in collaboration with designers (Eggink & Dorrestijn, 2018).

There have been multiple of such efforts for this co-creation of instruments between philosophers and designers. From **Metaprobes** that tangibly sketch philosophical ideas through design (Encinas et al., 2020), to **Theory Instruments** that make anthropological theories tangible for understanding (Buur, Karyda, et al., 2023). Where Metaprobes are (speculative)

design objects used for researching topics that deal directly with design (Encinas et al., 2020), Theory Instruments are similar however aimed at informing theoretical perspectives on and around design.

Noteworthy, that another effort in the IDE programme at TU Delft is the making of 'provocative prototypes'. The **Provotypes** challenge assumptions and disrupt normative thinking. They question the status quo and reveal underlying values and tensions in a given design space (Boer et al., 2013).

Diving into Theory Instruments

Theory Instruments are proposed to be novel tangible tools for perspective shifts, introducing new vocabularies, and bridge disciplinary gaps (Buur, Karyda, et al., 2023). These tangibles help see the interconnectedness of products, use contexts, and user experiences, while also unfolding internal interaction with design practices (Buur, Karyda, et al., 2023). The main focus on current research and development is around 'anthropological theories' that can be useful in the practice of design, for instance Latour's Actor-Network-Theory or Bourdieu's forms of capital (Buur, Kjærsgaard, et al., 2023). The design of the Actor-Network-Theory instrument by Agca & Buur (2023) is a well-illustrated example of the process of making such a theory instrument.

Next to this, there is also an example of which the focus is on complex design theory instead of pure anthropological theory (Özge Ağça et al., 2024). Examples as these make the young field of theory instruments interesting, (as seen in the overview in Figure 42) and the preferred choice in this thesis for materialization of theories for the philosophy of technology.



Figure 42: A collection of theory instruments by Buur, Kjærsgaard, et al. (2023)

Buur, Kjærsgaard, et al. (2023) state that one should regard the following aspects when designing a theory instrument of one's own:

- **Materialization:** Provide an opportunity to reflect on materialization. Finding ways of conveying theory in material form is a challenge. With each theory instrument, the specific materials chosen highlight and de-emphasize particular aspects of the theory.
- **The message:** the design process itself is a process of boiling each theory down to its core and deciding which core qualities needed to be embodied in its corresponding instrument. Be aware of how you approach theories, and how faithful you represent them
- **Bias:** The design of a theory instrument coincides with the backgrounds and orientations of the design team. A cross-disciplinary approach diminishes bias.

It is stated that Theory Instruments create new ways of thinking with materials allowing designers to see 'the invisible', and are therefore a well-fit tool for design research and practice (Agca & Buur, 2023; Buur, Karyda, et al., 2023; Buur, Kjærsgaard, et al., 2023). Exactly this aspect of 'the invisible' is what makes it well fit for the theory of Entanglement & Shock by (Swierstra et al., 2022) discussed in the theoretical background chapter.

One overlooked aspect in the literature of theory instruments is that with this tangible interaction and materialization comes the notion of **design aesthetics**. Interaction and aesthetics are interwoven concepts (Djajadiningrat et al., 2000) and we should therefore elaborate on.

One example of considering physical interaction and sociocultural roles is the method of **Extreme Characters** by Djajadiningrat et al. (2000). Here products are given form to niche and grand characters such as a drug dealer or a pope. Most instruments in Buur, Karyda, et al. (2023) still have a 'low-fidelity prototype aesthetic' (as seen in figure 42) and could benefit from an iteration on aesthetics. This low-fidelity feel is inherently linked to the material use of cardboard, wood, and printed paper. Which is logical considering that materials in themselves carry an aesthetic. The Extreme Characters method in particular can be used to construct a philosophic theory instrument based on the aesthetic of the philosopher or on the aesthetic of the technology under investigation. **So to add onto the aspects of designing a theory instrument, it should be materialization, messaging, acknowledging possible bias, and fitting aesthetics.**

Designing an entangled theory instrument

To start, we need to explore the aspects of the theorem, and set a goal for the instrument itself. The technical condition itself is based around the concept of Entanglement, and Shock. In it's most basic form and definition:

Entanglement: The relation between technology, society, and culture in its mutual shaping

Shock: The re-arrangement of socio-technological systems in its mutual shaping.

These two elements can seem arbitrary and vague, and are better explained through examples. So, all concepts for a theory instrument should therefore rely on the same content, and be evaluated on the materialization, message, and bias as stated before.

Next to this we can see that the theory instrument in it's interaction should...

- Materialize the relation between, technology, society, and culture in a fitting way. (entanglement)
- Show the interaction of the three facets as one that mutually shapes each other: An interaction with one part, should influence the other. (entanglement)
- Be able to rearrange these relations when a new facet is added, without having to do this manually (shock).

Besides these demands from the theory in question, the instrument needs to...

- Not rely on electricity or computing power.
- Be transportable to different locations (from an office to classroom for instance)
- Different cases regarding social-technological systems need to be able to be swapped out
- Not be useless when a piece is lost
- These are clear demands of which the instrument itself should fulfill. We can also formulate wishes regarding the product:
- The instrument needs to have the most fitting material for the theorem
- The use of the instrument should be considered as fun/insightful/playful or likewise emotions
- It should be clear in what way the theory and case is diluted

Within these parameter, different ideas have been sketched out (as seen in Figure 43). All inspired by phenomena of physics: Springs, magnets, marbles, and other moving parts. From this ideation session initially six were chosen. These six were chosen on own preference, in combination with estimates on feasibility of making these prototypes. With the help of a semi-structured harris-profile/evaluation matrix a choice was made to converge to four concepts. During this evaluation I realized that one of the concepts did not have a clear goal. Just as in game design, a game needs to have a clear goal or target to achieve.

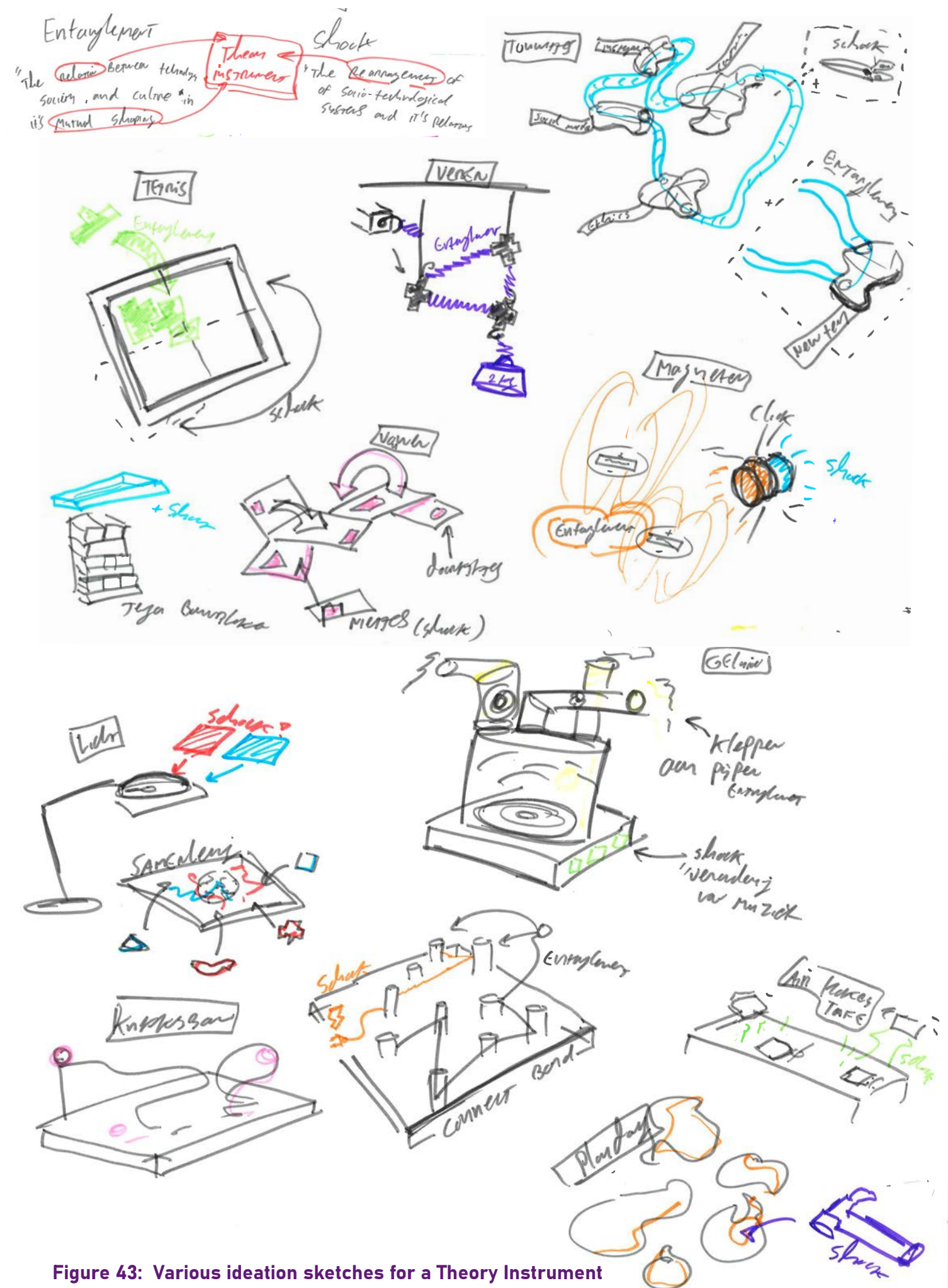


Figure 43: Various ideation sketches for a Theory Instrument



Figure 44: Connecting nodes prototype



Figure 45: Placing magnets prototype

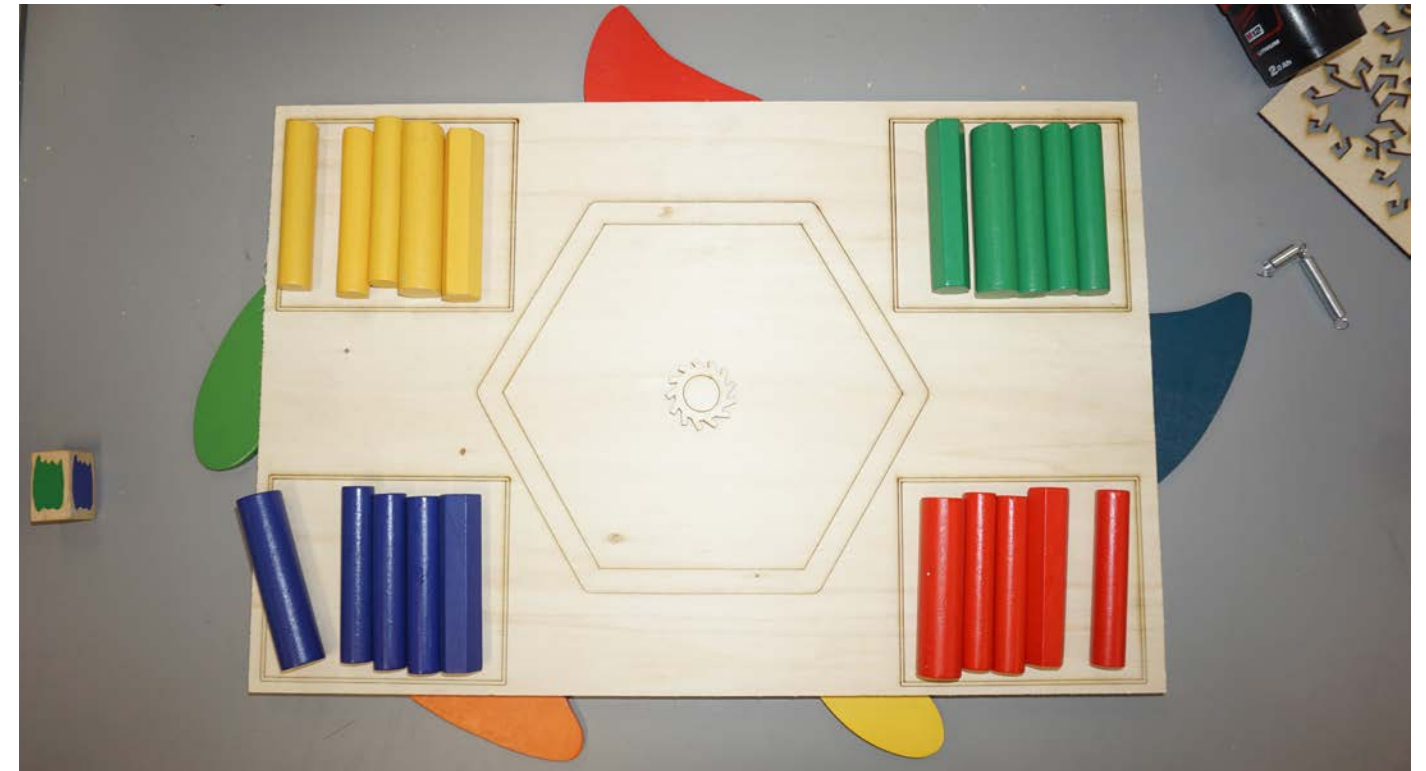
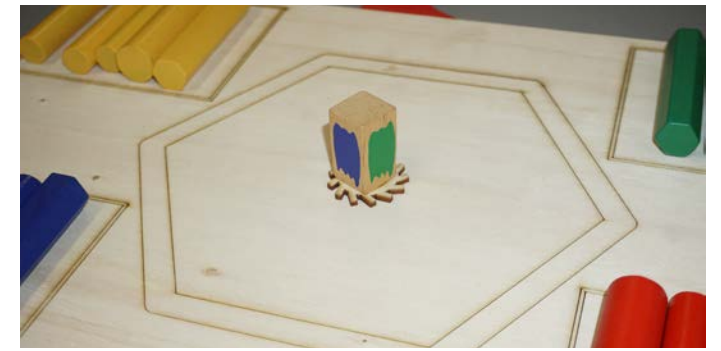


Figure 47: Tower building prototype

In the end, this led to three concepts:

#1 Connecting nodes (figure 44) – A wooden frame with hooks, where connections need to be made between cultural aspects, technologies, to shape society. This mechanism is reliant on connecting different nodes through springs. Weights act as a way to dis-balance or reshape the system.

#2 Tower building (figure 46)– Building blocks, reminiscent of Jenga, where 'society' is advancing through using new technologies as building blocks. After a set of placing blocks, a new panel appears that has to be placed on top. Where the rearrangement means building in a different direction, because of the panel shape.

#3 Magnets (figure 45) – A set of magnets with labels that can be placed on a board, and click together or push each other away. One new magnet not placed carefully in the system can 'shock' it and combine facets that weren't thought to be combined before.

The prototypes were made tangible through an **explorative thinking-through-making approach**. The initial concept sketches could not be translated immediately. Therefore during the process of making, I tested and re-evaluated the concepts. For example, the initial sketch was inspired by Jenga. Because I could not easily get my hands on a Jenga set, I let myself be inspired by other forms of similar games. I chose to make use of a mix of second-hand materials, ready-made board games, and various prototyping materials such as wood, glue, and screws.

Every prototype had to consist of the same content. The same words, concepts, and ideas are essential for evaluating the prototypes after testing. To illustrate the technical condition, I took Baricco's THE GAME (2019) a work on the history of internet and digitalization through various products and technologies as a baseline. This work already existed before the technical condition, but is an excellent example of the theory. This book consists of multiple chapters on societal themes that emerged through the invention of various technologies, influences of organizations and businesses, and various innovations. These mentioned societal themes, technologies, and organizations became nodes or parts.

Through this user-centered approach we can evaluate the materialization, messaging, and our proposed design aesthetics of the prototypes. This has been tested with eight students that had to first choose which of the three prototypes they found most attractive to play with. Next to this they had to speak their mind during the interaction. Some were tested in duo's some alone. The insights of the tests are summarized in Figure 48.

Regarding In every theory instrument, the user has to place four pieces (nodes, pillars, or magnets) relative to each other in the playing field. After the placement they had either together or alone think of a narrative that circumferences the words on the nodes. Most cases the theory was understood, but the difference was in the way how. This was dependent on the interaction they experienced.

Prototype	User preference	Main observations during use	User consensus
Magnets (Figure 49)	Almost all of the times last chosen: The colours and form did not stand out, or show how it can be used.	The magnets were way too strong, and sometimes repelled each other when the user wanted to connect them	Too clumsy and hard to control. When everything clicks together it goes way too fast and uncontrollable.
Tower building (Figure 52, 53 & 54)	First chosen through its colours, and building something is recognized as exciting.	The narrative exercises worked the best through and made the users excited to build further.	Fun to build a colourful tower, and the 'fight against gravity' made it a real challenge
Node-connecting (Figure 50 & 51)	Second in line through its wooden aesthetic deemed not interesting.	The tension was not big enough to spark the 'shock' reaction. They could all be connected without breaking and therefore be done way too quick before understanding the theory	Too much nitpicking through the small components, scared to break something.

Figure 48: An overview of the evaluation with participants



Figure 49: The interaction of the magnets

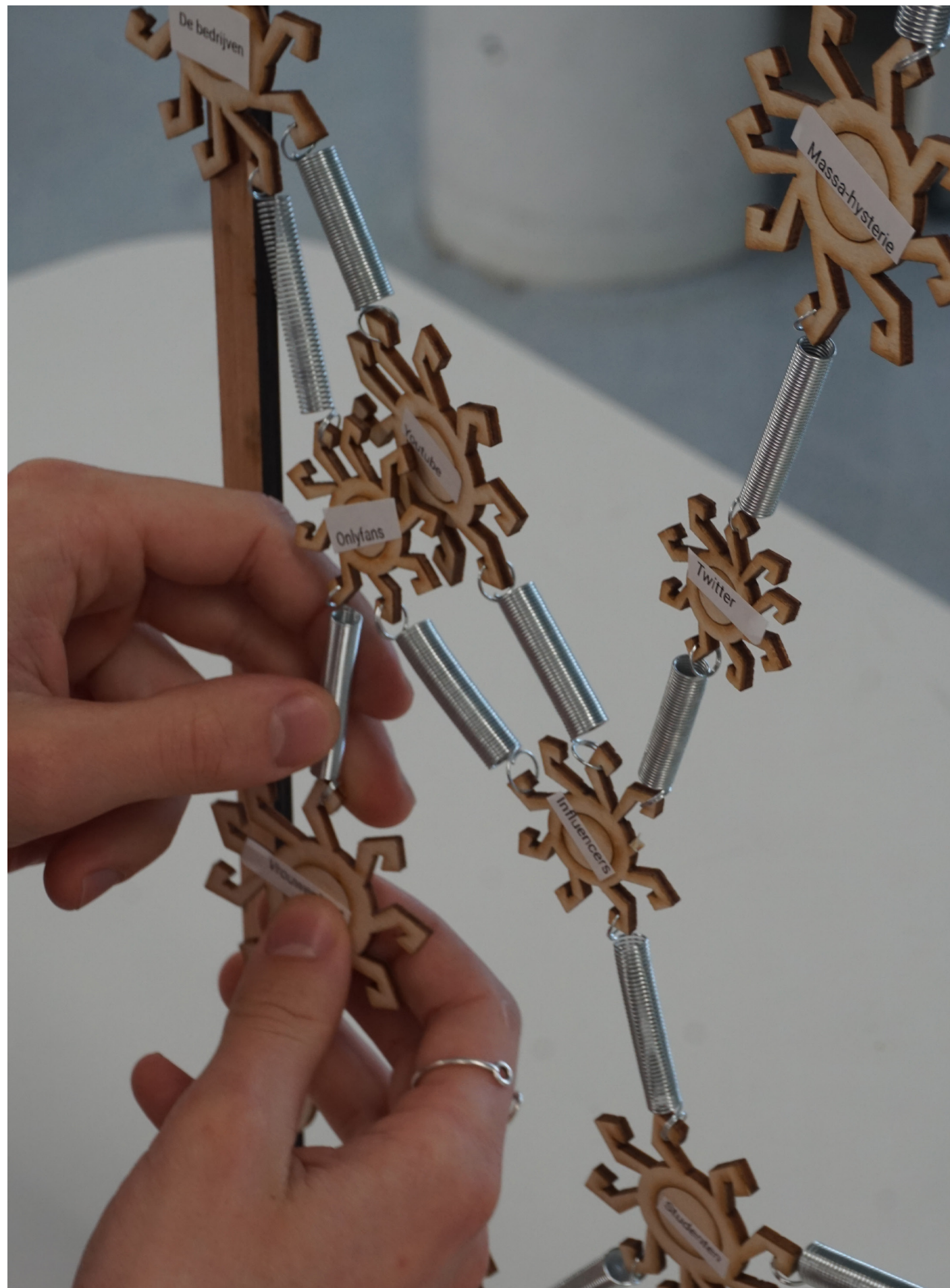


Figure 50: The stretching of the springs

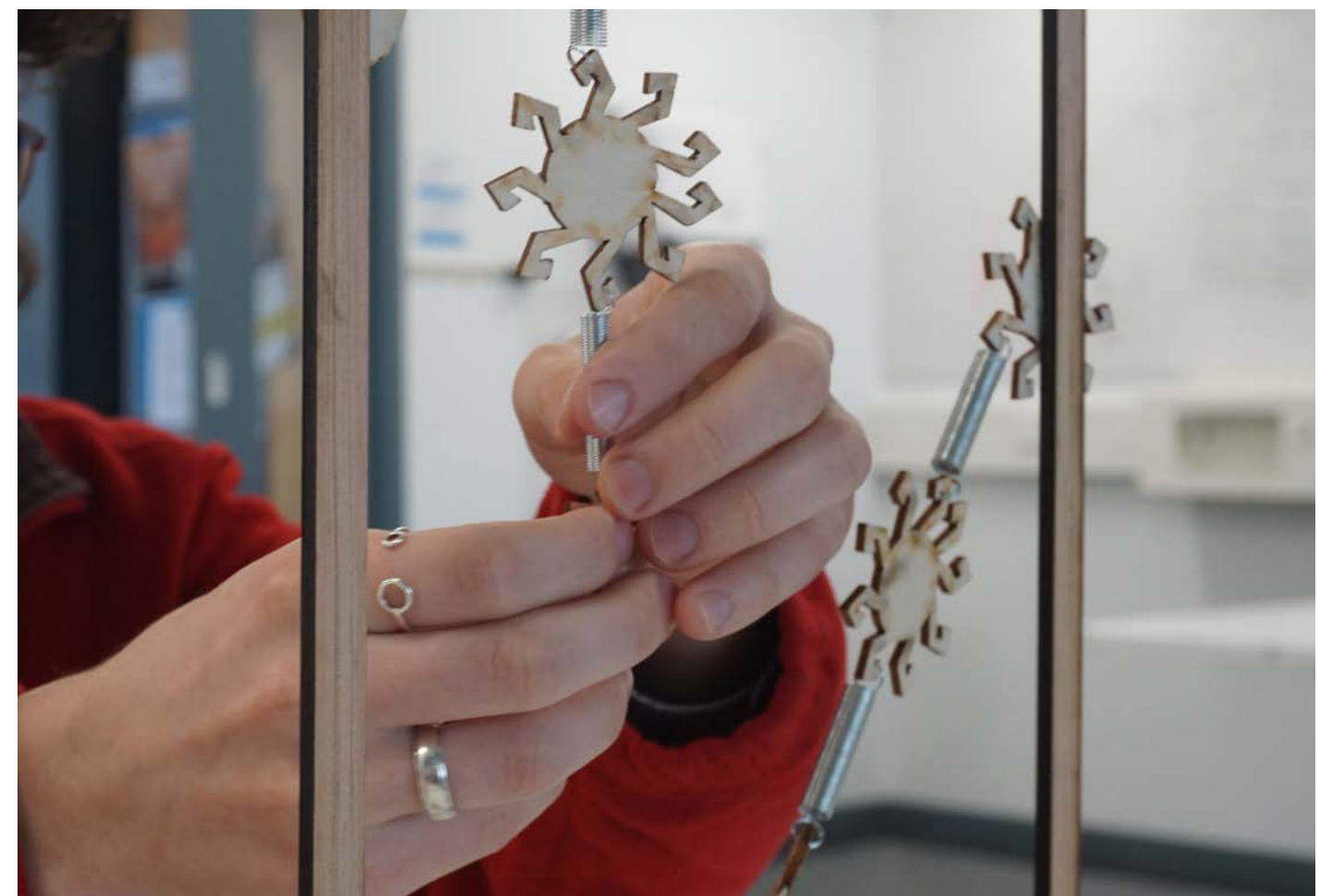


Figure 51: Connecting the nodes



Figure 52: The initial lay-out of the board

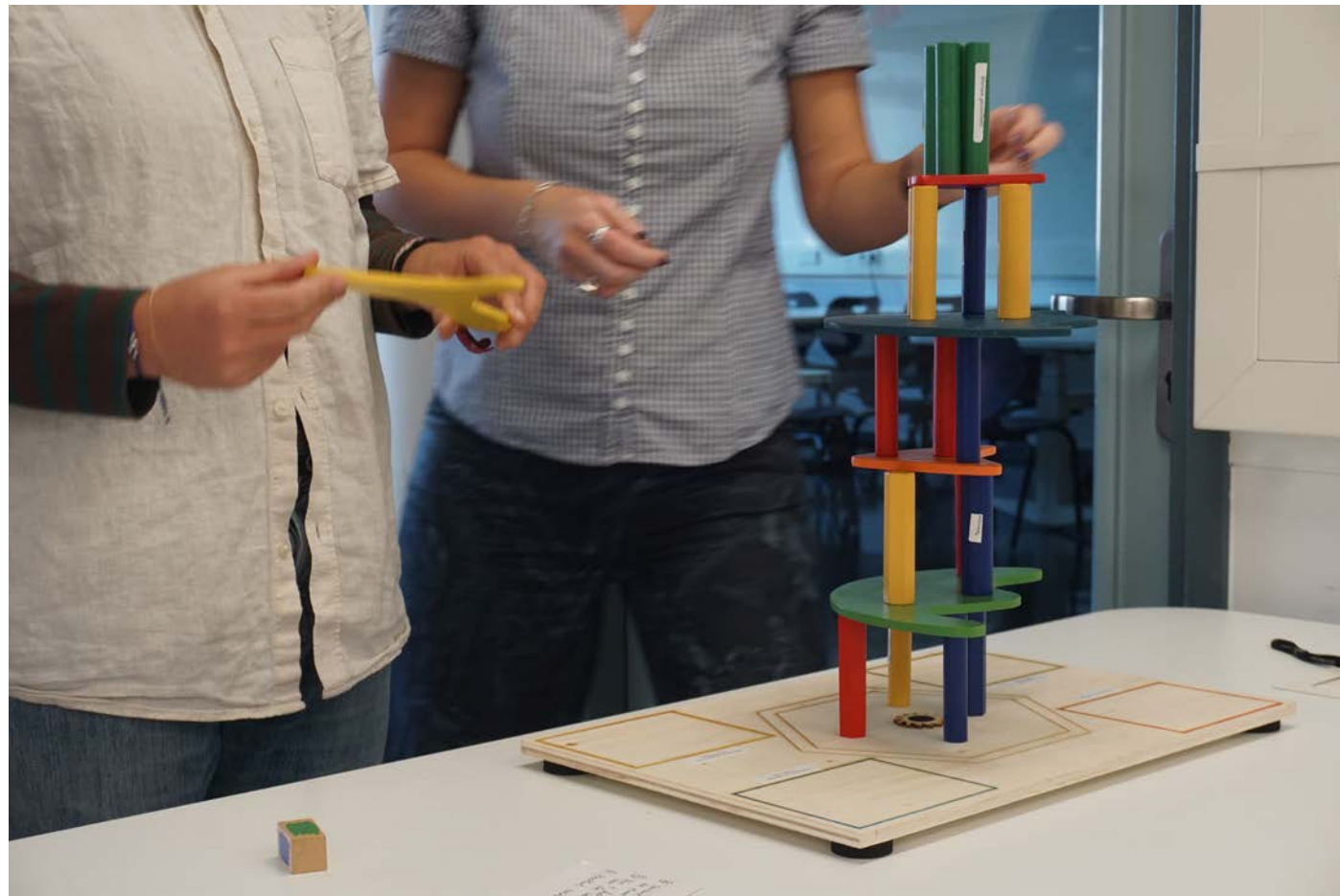


Figure 53: Building a tower of technology

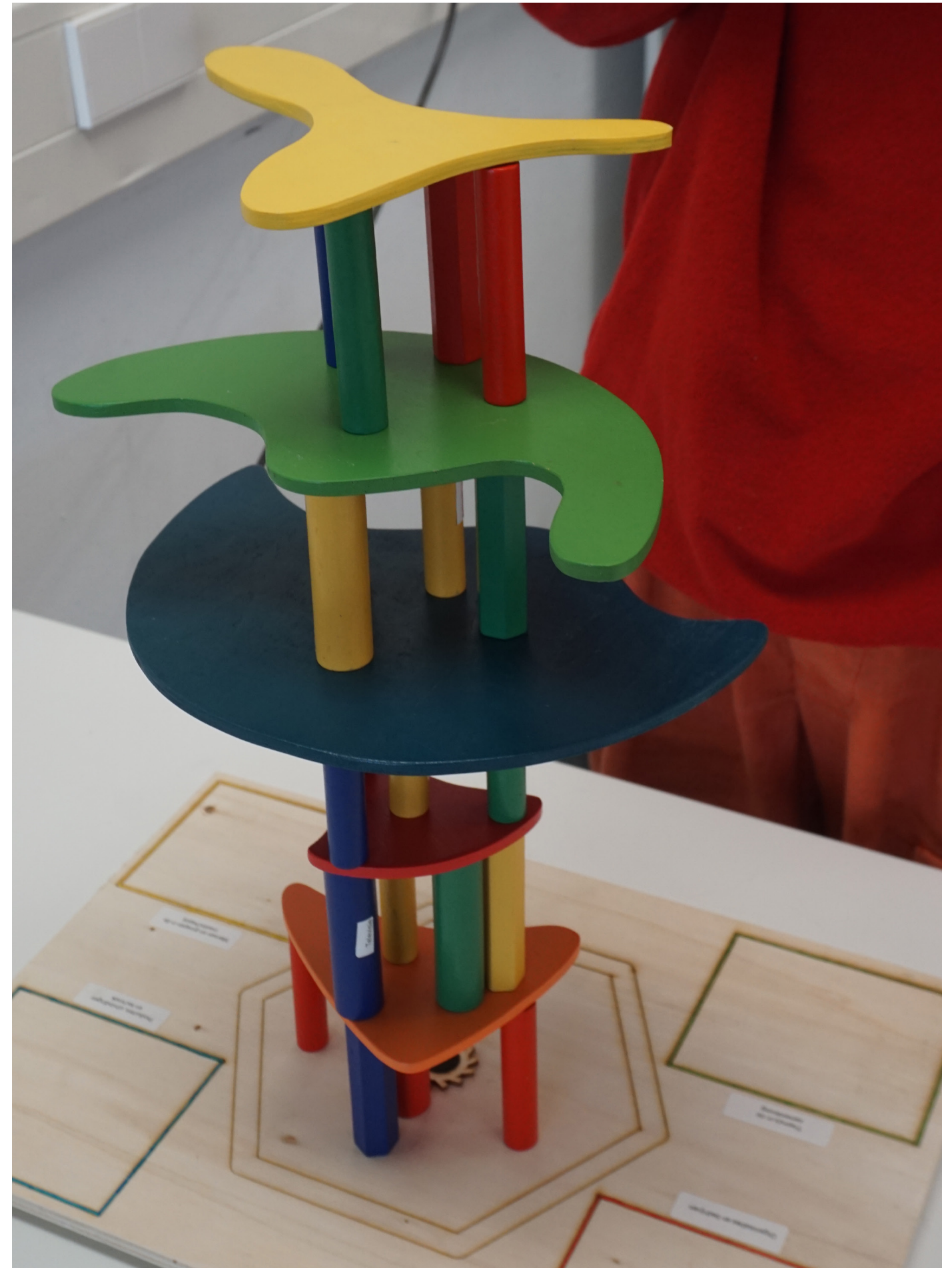


Figure 54: A finished tower of technology

From this design process we can conclude that indeed **design aesthetics** is a facet that is important in considering theory instruments. The use of colour, and playful forms can also incite a feeling of curiosity and playfulness. Rather than the aesthetic of bare wood, or simple dark stones. The tower building was perceived as most intriguing, and brought with it an intrinsic motivation to explore it. Design aesthetics is inherently intertwined with the choice of materialization, therefore clear intended considerations can benefit the theory instrument design.

In addition to this, we can conclude that the **depth of the interaction** is also a facet that should be considered. Whereas the interaction can also be unintended, as seen in the magnets working against the user. The interaction can also be more rich in one prototype over the other. The tower building clearly had a more in-depth through the element of surprise. Retrieving a panel underneath the board which shape is unknown gives the prototype a twist. In the tower building prototype the possibilities were also open-ended, in contrast to the node-connecting.

Design implications: Visualizing philosophy for designers

To summarize this chapter we can again construct various implications for design:

- Artefacts can be speculative and therefore they can also embed a philosophical reflection, even so some philosophical reflection need to be embedded in artefacts for better reflection
- Awareness on this can lead to new experimental forms of interactions that can help to further shape ideas and find new expressive instruments: a feasible compromise between philosophy and design can be to continue with philosophical reflection on questions about deeper principles and structures while simultaneously continuing with more practical and applied work in collaboration with designers
- Theory instruments are focused on understanding theory through making practices and playful interactions. In materializing theories one should consider: Materialization - Messaging - Possible bias
- We propose that an overlooked aspect of the design of theory instruments is Design Aesthetics and Depth of the interaction.

In the next chapter we will move from researching theory, to designing for practice. The concept devised during the exploration of earlier chapters is the concept of Narrative Design Cases.

H7. Narrative Design Cases

In this chapter we work through the proposed concept of Narrative Design cases. While elaborating on relevant design education literature as well as creating a student journey framework.



Monsieur cannibale (designed by Henny Knoet) is a racist stereotype/caricature, which was the main centerpiece of one of the Efteling attraction (Dutch Disneyland theme park). This ride has remained standing for almost 30 years until the summer of June 2021. Having sparked much international outrage throughout its product lifetime.

This chapter elaborates on the *raison d'être* of the Narrative Design Cases. By first elaborating on different forms of pedagogies and the creation of a framework for a student journey. After which

The need for new pedagogies

Contemporary design education is not solely focused on the creation of products anymore. Throughout time, design has moved away from pure product design, and has moved to the systemic level, as illustrated by Voûte et al. (2020) in Figure 55. However, we can clearly see that design and the systemic level are relatively young.

Core to the idea of the systemic level are values of societal challenges, behavioural change, and sustainability. These are not one solutions problems and require considerations of the complexity of human life and entanglement of technology. It is argued that a philosophical perspective on technology can enable the designer to reveal the core problem and design solutions that go beyond a technical compensation of side-effects during the development process (Van Dijk et al., 2019)). Whether intentional or not, the decisions made about design, use, maintenance, disposal of products, services, and infrastructures have far-reaching individual, socio-political, and ecological ramifications that require explicit ethical reflection (Doorn, 2021).

There have been multiple works that emphasize new ways for designers to embrace different viewpoints on social issues in design. Themes as Self-design (Gerritzen, 2020), Resilience (Price, 2023), Anti-capitalist (Wizinsky, 2022) all embody narratives around design and changing times (shown in figure 56). Where Self-design motivates designers to choose which societal themes they want to be busy with, Resilient Designers steers on authenticity and creativity in the contemporary field, and Design after capitalism considering examples where it can be done differently.

All these examples are aimed at discussing difficult topics, but through their passive design of reading only, they lack actual methodologies to incorporate in ones practice.

The core of the study of the humanities is to make time for critical debates, discourses, and reflections. In conversation with experts from design history and social sciences, this 'making time/space' is incorporated in the study programmes. However because these views focus on the socio-cultural aspects of design, these insights and critical views do not always find a place to land in the actual design process.

To create a new design pedagogy, we need to learn form existing pedagogies from the humanities and social sciences.

Towards a pedagogy of discomfort and productive failure

Big conversations on systemic issues can be uncomfortable. Discussions on sustainability make you aware of your own behaviour, systemic racism makes you consider your privilege, and grand complex issues can curb your thinking.

The Pedagogy of discomfort introduced by Boler & Greene (2004) aimed to explore the discomfoting process of questioning cherished believes and assumptions. Important in this process is that educator and student(s) en-groupe examine constructed self-image, taught values, and beliefs (Boler & Greene, 2004). This pedagogy is relevant in times when sensitive subjects confront people daily, such as immigration, the climate crisis, integration, Islamophobia, gender-identity, homophobia, racism, and above all the genocide in Gaza (Termeer & Smeets, 2024). The focus in this pedagogy is to move beyond the comfort zone, enduring a longer uncomfortable state which leads to discomfort (Zembylas, 2015). So, the transformative role of discomfort is needed to 'feel' the injustices in complex systems rather than to solely discuss (Boler & Greene, 2004).

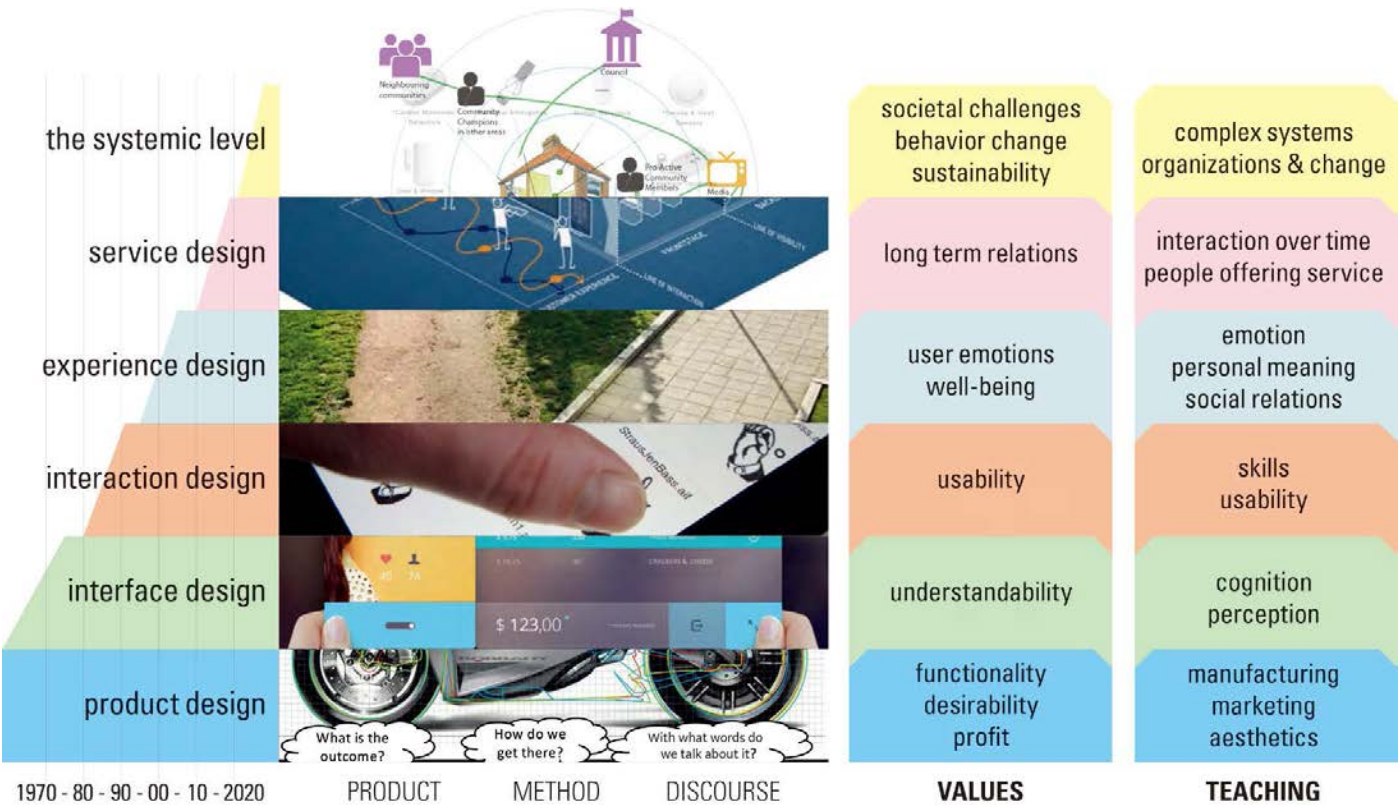


Figure 55: Broadening of design profession and education over the past 50 years Voûte et al. (2019)

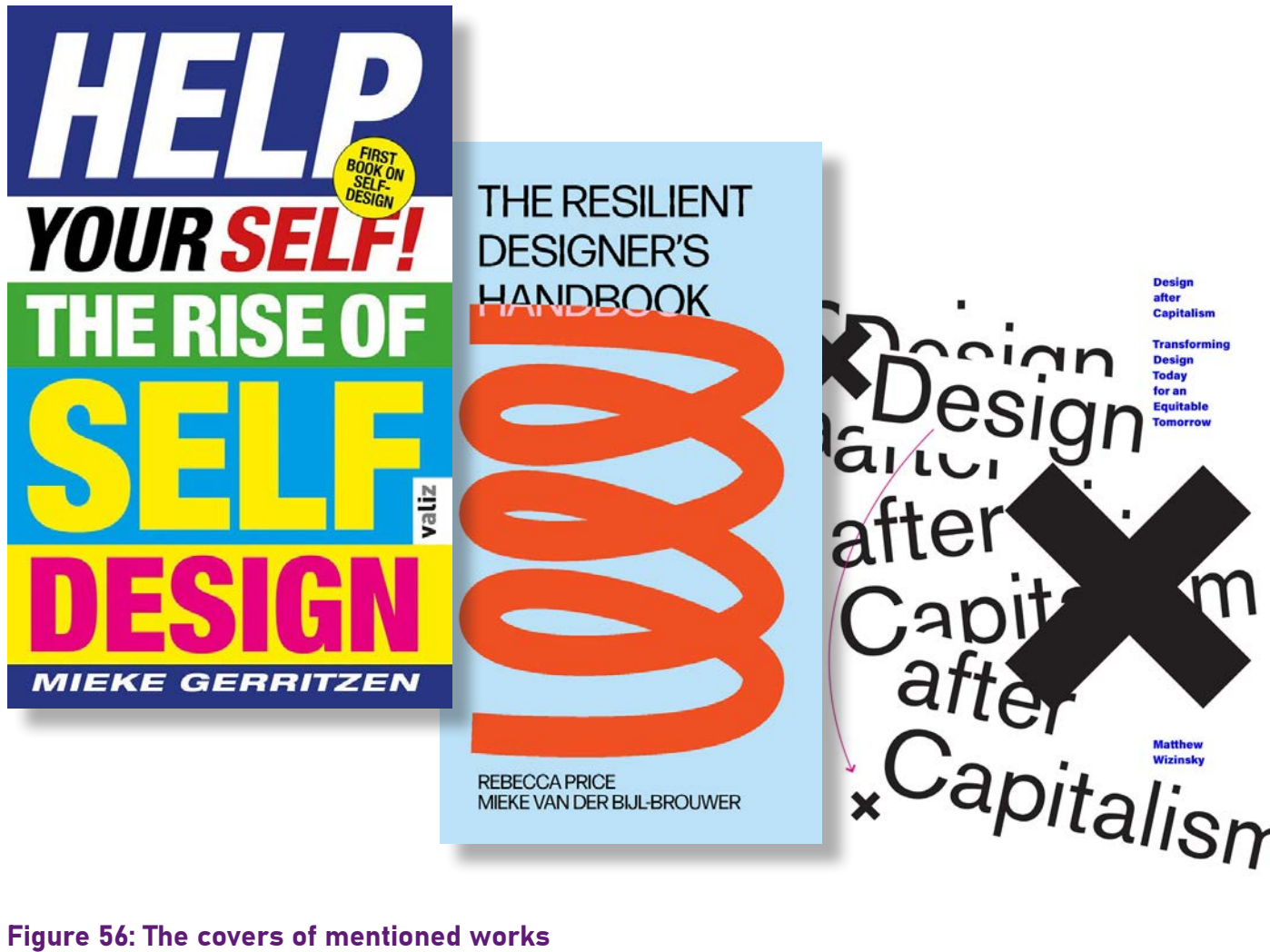


Figure 56: The covers of mentioned works

Regarding the ethical concerns around the 'harm' that can be afflicted, Zembylas (2015) elaborates on the fact that discomfort itself is always dependent and tied to 'the other' and that vulnerability between student and teacher is part of the process. The focus should be on learning how to have uncomfortable conversations, learn and hear from people who are suffering from the current dominant system at hand, and acknowledge connection between people instead of correction of beliefs (Termeer & Smeets, 2024).

To summarize, we can also reverse the question: Is exposing design students to only comfortable situations responsible? This seems counterintuitive for the design practice, where putting yourself into new situations is the key. But stating that the pedagogy of discomfort is not needed because uncomfortable situations are already essential in the design process is incorrect. Discomfort is persisting 'uncomfort'. This distinction is important because the pedagogy of discomfort preaches the integration of moving beyond the comfort zone for long periods of time. Activities therefore include discussing problems with the 'most dis-advantaged of the issue at hand', and questioning ones own assumptions over time.

This pedagogy overlaps with existing design education concepts as Minor design activism: where we start at a structurally embedded position and through open-ended experiments, challenge prescriptive agendas and to reconfigure group relations (Lenskjold et al., 2015). There are efforts aimed at incorporating the pedagogy of discomfort in design, to teach empathy during the problem identification stage, in young designers effectively (Gudur, 2023).

To apply the pedagogy of discomfort to the engineering case study, we will consider the notion of productive failure. a teaching method where designed guidance is introduced in the initial learning rather than guided instruction and problem solving (Persaud et al., 2022). In an exercise as this the student explores a problem based on their prior knowledge, so to notice the inconsistencies in their prior

knowledge and realize their current limits (Persaud et al., 2022). Then the missing link is given to solve the problem, think of a formula, theory, or concept. This is clear in a context of mechanics and mathematics, but still vague when considering problems and discourses that require philosophy, social sciences, or the humanities.

Aporotics in philosophy, design, and education

Now we return to the Aporia, as we have seen in the introduction. We regard the aporia (as defined by Rescher 2009) as the missing link for productive failure exercises and case studies. The aporia is itself a philosophic tool and form of logical formula, that shows the inconsistencies in ones' thinking.

Apories are not only frequent in philosophy but typical of the contexts in which the problems of the field arise (Rescher, 1987). The aporia is traditionally a perplexing state of mind and a problem at hand, a situation where we have lost traction with the problem at hand because we have discovered equally good reasons to think two or more things that appear to be in exact opposition to each other, preventing us from accepting them jointly (Kostić, 2022). In more practical terms (as illustrated in figure 57):

Whenever we frame an argument in logical steps from A to B, from B to C, and C to D, we can follow along. However, what if step A and step D contradict each other, even though all statements follow each other up 'correctly'?

This situation is one of conflict, even though it is not visible at first glance hence the perplexing state of the problem at hand. The set of statements that together form an aporia is called an aporetic cluster (Rescher, 1987). The friction we feel in encountering such an aporetic cluster in our own thinking is aporetic discomfort (McAllister, 2018). To solve an aporetic cluster Rescher (1987) states that one of the arguments have to be rejected or abandoned.

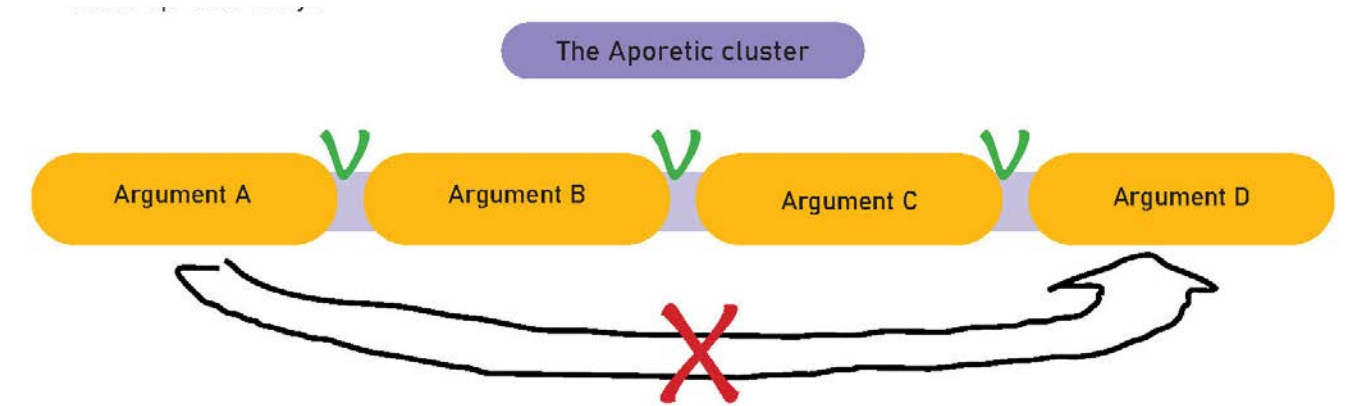


Figure 57: A visualization of an aporetic situation

This means that in the aporetic cluster, the weakest link should be debated and rejected. The aporia inhibits a 'reasonable' choice between 'rejections' of some which are more acceptable than others (Rescher, 1987). Therefore it is advised in providing a possible solution to be guided by being transparent of which values are at play in the decision making process.

In the end, is the aporia not a tool imported from philosophy that can mend all the troubles, but it can certainly help us understand better the difficulties and the complexities in and around a design problems better (Kostić, 2022) However, as with the pedagogy of discomfort, the nature of the content under discussion can play a large role and can cause Aporetic discomfort (McAllister, 2018). This can be a symptom of some prior deeply embedded worldview or epistemic framework especially in cases where the instructor is instead presuming some conflicting alternative (e.g., value-laden facts) (McAllister, 2018).

The aporia, and the pedagogy of discomfort both touch upon the same field of challenging worldviews and beliefs. So, making them rhyme in one design pedagogy is not hard to accomplish.

Problems that are impossible by designing first:

The enhanced case study is synthesized from three ingredients:

1. A systemic issue or theme to design (in line with pedagogy of discomfort)
2. An aporia hidden in plain sight (in line with productive failure)
3. Space and time for asking philosophic questions, and debating design insights

To start of, we consider existing literature and methods regarding philosophy and design in education. To then project these three ingredients on.

As a baseline the Philosophy-Through-Design model by Van Dijk et al. (2019) is considered. This framework shows the integration of philosophy and design, and combines it into a research-through-design approach as seen in Figure 58. This model is based on other models that focus on applying design to philosophy, and the other way around. This model can be easily projected on a case study.

A critique of this model is that it is dependent on a research question. So, it does not facilitate open ended-ness, or generative approaches in Design. Next to this, it is not representative of a student journey. Asking questions is not separate of designing.

We propose that this can be worked out further, because the goal is to mingle philosophy and design on equal footing. Enhancing the case study is not done through fitting research questions, or pure philosophical knowledge alone.

This model already creates space and time for philosophic questions and debating design insights. Therefore, the idea is to create an iteration of Van Dijk et al. (2019) with the last two ingredients

To continue, the proposition of the enhanced case study is that “systemic problems that are caused by design or are manifested by designed objects/artefacts, are in turn impossible to solve by applying design methods first.

Thus came the idea of cases that are ‘impossible by design’ into being. To illustrate the analogy of parking a bike in the introduction, this is one such case that is deemed ‘impossible by design’. Because, simply starting with designing a new form, proposing an iteration, or researching other design interventions ignores the philosophical thought process that is needed to critically evaluate such artefact.

This means that in the student journey of the case, one has to design first to realize it cannot be done. This confrontation with a systemic topic that cannot be solved by design needs to be in a way uncomfortable. The case studies need to embody systemic issues in such a way that the student does not realize the weight the topic has. After which there is a realization/reveal/surprise that it is not so easy. After having given this format some time, the analogy of ‘Deus Ex Machina’ came to me.

Deus Ex Machina (DEM) means ‘god from the machine’ and is a theatre mechanism from the ancient Greek plays. The DEM was used to solve situations that seemed unsolvable in a story to such an extent that only a divine intervention could solve it. In practice this meant that an actor would be mechanically carried in by a crane, and with ‘magical powers’ revive dead characters and smite the foes (as seen in Figure 59).

This analogy is very fitting for the both the productive failure technique, and the aporia as elaboration on the problem. When the aporia is introduced, there is no way back for the student. Just as that the story did not have a way back after the Deus Ex Machina.

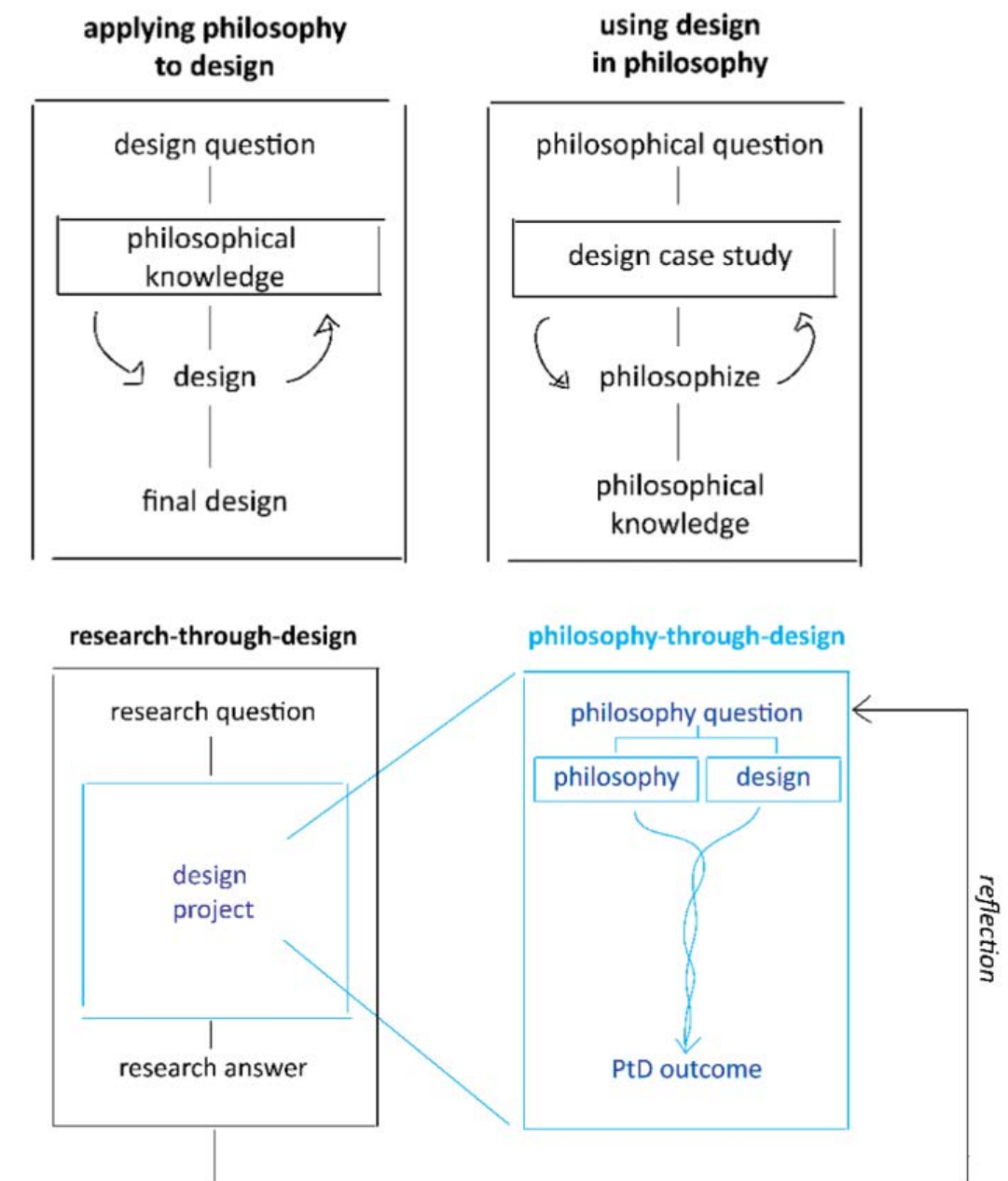


Figure 58: The philosophy-through-design framework (Van Dijk et al. 2019)

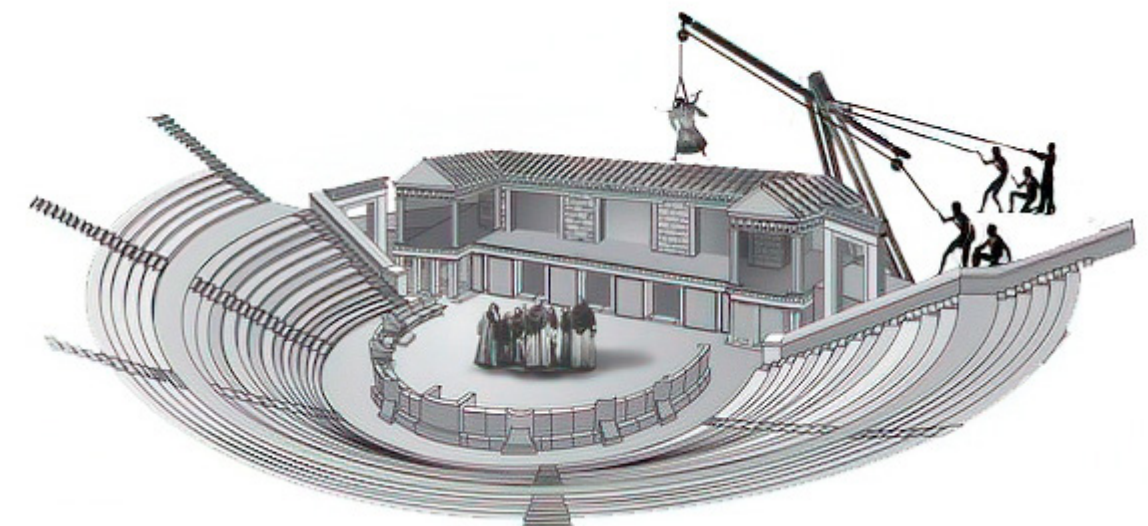


Figure 59: A diagrammatic representation of the historic Deus Ex Machina theatre mechanic

Now we can combine these ingredients onto the framework by van Dijk et al. (2019) with the desired student journey in mind. The initial sketch can be seen in Figure 60 below. To make this sketch more eligible and easier to discuss with peers and experts, a new digital iteration was made in Figure 61.

In short, the new 'impossible by design' framework consists of the principles of productive failure, where first a casus is given that cannot be 'solved' in the traditional sense because the aporia is missing. So, the casus itself will involve design students first applying their prior knowledge and process. Then halfway during the session, when designing is in full swing. The teacher/tutor/coach introduces an exemplary aporetic cluster that considers the problem from a philosophical angle. Therefore, there is no-way back and a new approach has to be explored.

This digital model was used for validation with multiple experts and students. This was done with people in and around the design education context. Three students with a philosophy and design background, and three teachers in and around design and the humanities. Of which figure 62 was a result. The blue markings were made by one of the participants, and the orange markings were added by me based on the feedback from the conversation.

Most feedback was centered around the scale analogy at the end: Where it seemed that the student journey would end in perfect balance. This was perceived as counterintuitive, and the result of what was made was not clear. The other main insight was that the educator perspective was not addressed.

These insights formed the basis for the next iteration seen in Figure 62.

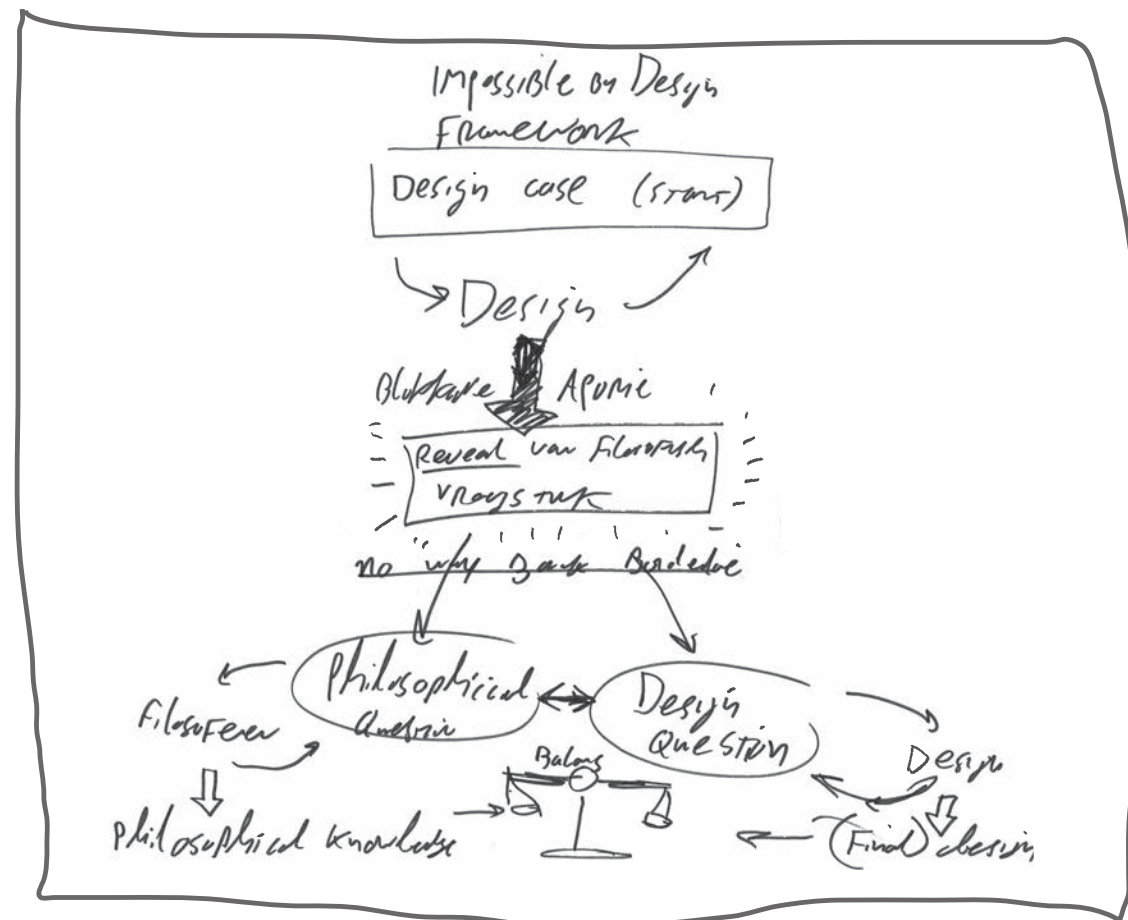


Figure 60: Initial back-of-the-envelope sketch of the framework

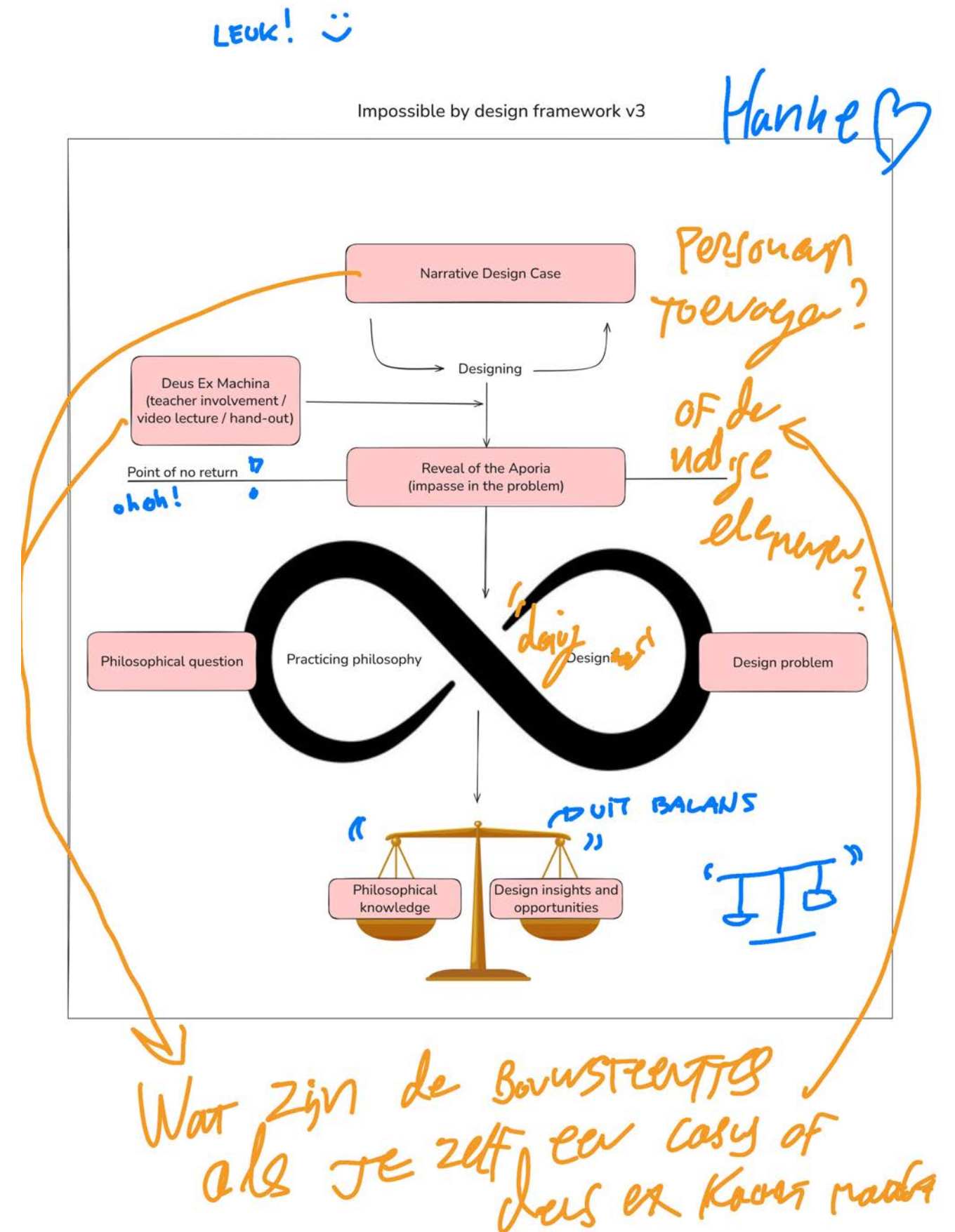


Figure 61: Second iteration with feedback notes in blue and orange

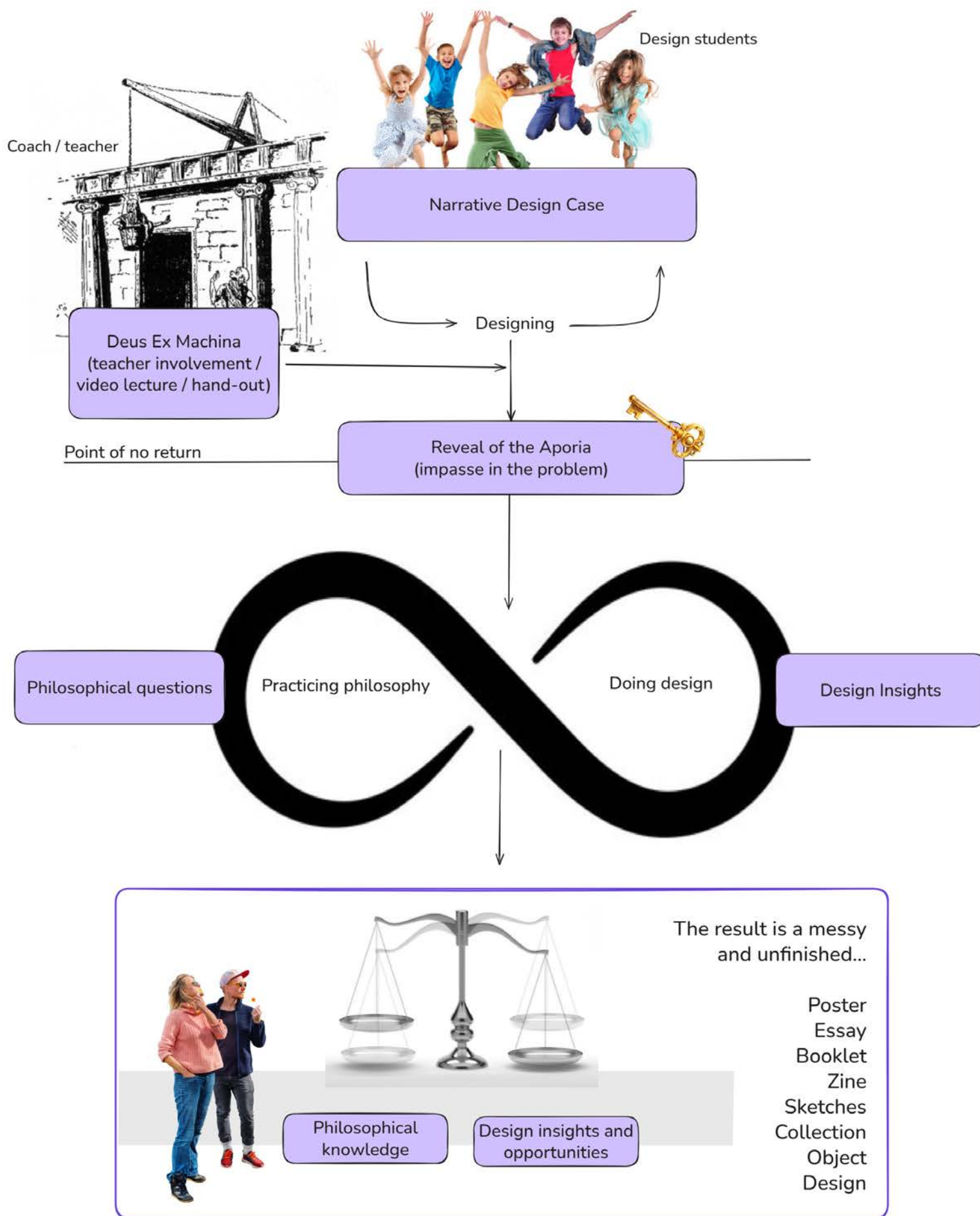


Figure 62: The final framework

This iteration (Figure 62) forms the basis of the design. Now the only thing left to elaborate on, is the design of the Narrative Design Cases themselves.

It has to be acknowledged that the frame creation happened simultaneously with the next part. However, intertwining them does not create a clear overview in the narrative.

On theory and story in design

My personal wish was for this project is to combine insights from Design is storytelling (Lupton, 2017) with the TU Delft TPM course Science fiction: Challenging the post-human, and the IDE course perFORM. This has inspired me in my design practice and understanding, and accentuated story and form in how I design.

Personally, I want to stay away from speculative design, critical design, or other design futuring practices. In my opinion, these fields of design are where many great insights and research come from. However, the eventual product itself seems out of touch with reality. As mentioned in the introduction there are problems that have material artefacts that surround us, but only if you are sensitive enough in seeing the philosophy in them.

When visiting an exhibition at Radius centre for contemporary art and ecology, a documentary by Dominique Koch (2017) stood out to me (as illustrated in figure 63). Especially the conversation with philosopher Donna Haraway and her take on theory and story:

“I think doing theory and doing story are very strong. They’re like faces of each other. It’s like foreground background.

Storytelling is not an illustration of thinking, but is a kind of thinking practice, is a kind of doing theory, is a way of doing theory.

Not all theory is story and not all story is theory, but the contact zone between the two is really thick. I don’t think a fable as the opposite of fact at all, but there’s a certain friction.

And I take facts very seriously. And I am not interested in making all facts into fables, But I’m interested in the friction between them.”

With this in mind, I realized that the case studies I have seen during this research do not rely on an interesting narrative. This overlooked aspect seems key in hiding the aporia and discomfort.



Figure 63: Holobiont society by Dominique Kocht (2017) at Radius

As philosopher Judith Butler writes in relation to the pedagogy of discomfort, ‘it seems true that we might well need narrative to connect parts of the psyche and experience that cannot be assimilated to one another’ (Zembylas, 2015).

As feminist writer Vivian Gornick (2002) proposes in her book The situation and the story that a good narrative consists of a clear situation or theme, and a personal story within: **“The situation is the context or circumstance, sometimes the plot; the story is the emotional experience that preoccupies the writer: the insight, the wisdom, the thing one has come to say.”**

In a design engineering case study there seems to only be a situation. In the earlier mentioned essay *Do artefacts have politics?* (Winner, 1980), in a nutshell the situation is focused on a bridge that is built too low, so segregation is continued. There is no acknowledgments for the personal lived experience of the people affected by the bridge.

I want to incorporate Gornick’s theory into the design engineering case study. Whereas the case is based on the emotional experience in the design process (story), and the reveal of the aporia is what places the student into the bigger context (situation). This acknowledgment of writing theory is needed, because we cannot deny that a good case study cannot do without a well written text.

Enhancing the case study with narrative

Eventually, this reflection on theory, situations, and stories prompted me for the concept of design cases that should:

- **The narrative and design assignment embodies philosophical views on problems**, however not when approaching the casus by designing first.
- **Exist in the ‘now’**. The material outings of the problems can be witnessed today, were there yesterday, and will be there tomorrow if a designer does not take action.
- **Are based on a narrative that could easily happen**. A design assignment based on such artefact is not a far reach in its proposed design assignment.
- **Are on first glance silly/easy/fun/exciting so to ‘hide’ the Aporia**
- **Balance on the cutting edge of moral and immoral design interventions**, so that there can be no ‘neutral’ idea.
- **Place the designer amidst the situation by engaging them through discomfort**.

These parameters and the impossible by design framework together form the concept on Narrative Design Cases: Enhanced design engineering case studies that rely on narratives to make students design first and then make space for philosophic reflections on design.

Within these parameters, we have to devise narratives and actual case studies. During the whole research process, many examples have been found, visited, or sent to me others. Some even came from the IDE bachelor/master programme. Seventeen ideas are summarized in Figure 64.

Every NDC has to have a situation or broader design theme, on which a story is projected that hides the actual problems (from apories, to inconsistent situations, or discomforts).

Situation / broader theme	Story	Aporia / inconsistencies / discomforts
Inclusive design & Artificial Intelligence	“Designer X wants to break free from A.I. models that are not inclusive, can someone create an inclusive dataset on which I can train my own model on?”	Does an inclusive dataset even exist? Is making choices around inclusivity not excluding people?
Inclusive Design	“A smart walking stick with interactive interface for the visually impaired”	The walking stick works because of its simplicity, not because of technology push. Adding technology makes the stick more dangerous to use for the target audience. Some cannot even see the interface.
Inclusive Design & heritage	“Mobility innovations for the Anne Frank House”	The whole Anne Frank house is part of WW2 heritage, so is it possible to make space for mobility innovations without touching the heritage?
Heritage & colonialism	“Design a public space artefact to remember the elderly Dutch People that have died while residing in Benidorm (Spain)”	Designing a statue to commemorate people from different countries in a country where they feed of the industries built for their pleasure: new-age colonialism
Sustainability	“Sustainable and durable fashion for every seasonal look”	Fashion operates in cycles and is an industry that needs ‘new’ to function. Clothing can be sustainable.
Sustainability	“Re-usable packaging for various fruits”	Most fruits already have packaging that can be re-used, their own skin.
Sustainability	“A design for a product service system so to be more efficient and sparingly with coffee in a household environment	The price we pay for coffee is not fair. Most coffee is still harvested by modern slavery, or subject to climate change. Coffee should be more expensive.
Multiculturalism & design	“A set of cutlery inspired by African rituals, for Ethiopian restaurants in the Netherlands”	Traditional Ethiopian food is eaten without cutlery (bare hands).
Multiculturalism & design	“Design sanitation solutions for the Philippines (we cannot visit)”	How can you do user-centered design from across the world if you are not able to visit the groups from different cultures, contexts, and countries.
Multiculturalism & design	“Social design interventions for the people of the Bijlmer (it is too dangerous to visit)”	How can you design social interventions when stereotypes on said neighbourhoods influence your thinking?
Multiculturalism & design	“Create a fence in the Bijlmer to honour and commemorate the diaspora of cultures living in this neighbourhood.”	How can a fence (something designed to split communities, lock away, divide) be used to foster connection?

Eugenics	"Inclusive marketing campaign and packaging design of a teeth whitening product"	How can something be designed inclusively when the foundation of teeth whitening is eugenics, colorism, or the beauty standard
Decolonizing design & The built environment	"An immersive and historical experience in the VOC-parkeergarage in Lelystad"	Why does a parking-garage have to represent the Dutch colonial past?
Decolonizing design & theme parks	"A fun, historic, and interactive experience at the Efteling 'Schommelschip' attraction"	Can a theme park incorporate colonial themes in their attractions without playing down the importance/tone/story of heavy historic events?
Queer & design	"Design a visual identity for bisexual fashion, without using existing symbols, colours, or clichés."	A visual identity for bisexual people that does not rely on stereotypes does not exist: There is only a flag, bad jokes, and cliché 's
Queer & design	"Design a decor for a TU Delft pride boat, where it reflects the identity of TU Delft."	Which identity are you first, TU Delft or queer? How do you mingle identities that do clearly fit together without diluting both or one solely?
Pseudo-scientific	"Create new social design interventions for the prison system of The Netherlands, without changing the system"	The academic literature on the prison system of The Netherlands clearly states that the system does not work. How then are you supposed to design or iterate upon it, while actively ignoring the research that has gone before.

Figure 64:

From this list, three cases were chosen to work out further. The selection criteria was based on:

- No two the same themes in the selection of three
- No cases that could have already been done by the people that test them, so to not make them cynical (such as cases inspired by IDE or TU Delft)
- No cases that could make me annoyed/irritated/hurt during the testing by the design interventions.
- It should not be too 'on the nose or too absurd.'
- Neither should it be too 'complex or nitpicky'

From this we can conclude that the themes of queer & design, IDE/TUD inspired cases, and inclusive design regarding the visually impaired will not be worked out. Next to this, the cases such designing fruit packaging feel on the nose, as well as Ethiopian cutlery, or the memorial for Dutch old people in Benidorm.

Cases such as sustainable fashion can be considered 'nitpicky', because it is the word fashion that can inherently not be sustainable. While clothing can be sustainable, fashion cannot because clothes only become fashion under consumerism. From this several cases regarding decolonizing design, multiculturalism, inclusive design, and one from sustainability and eugenics were left.



Figure 65: The 'multiculti' Bijlmer fence from Demakersvan Dutch Design studio

To exemplify the choice process with the example of the multicultural fence and why it was dropped: **It seems unwise to let students make the same mistakes from scratch themselves, instead of letting them iterate upon something that already exists.**

So, the multicultural fence for the Bijmer case (that already exists, as shown in Figure 65) was left behind. This fence was criticized for its lousy representation of different cultures, appropriating images and symbols without actual appreciation. Still this fence is considered as a Dutch Design icon.

In the end, after weighing the remaining cases, a combination of three cases in different themes remained:

- "A fun, historic, and interactive experience at the Efteling 'Schommelschip' attraction"
- "Inclusive marketing campaign and packaging design of a teeth whitening product"
- "Mobility innovations for the Anne Frank House"

These cases will be worked for a first iteration.

First iteration: Three case studies

The three chosen ideas for case studies had to be worked out further. First, a low-fidelity wireframe template was made in Excalidraw.

Every case had to be accompanied by with a fitting image, a design goal, a visual of the design parameters, and a narrative text elaborating the casus more in depth. The text itself was written so to hint towards the theme. However, not make any critical statements.

The DEM was made with the same template only with more text than image. Here I balanced the text with multiple sources, stakeholders, and questions in mind. The constructed aporia was shown, and a set of exemplary philosophical questions were proposed.

These cards were validated with multiple experts: An IDE student, IDE Teaching Assistant and alumnus, two current IDE coaches, and a IDE & philosophy student. These were chosen because they represent different parts of the educational context and the topic. So, we spoke through their views on the design of the cards, elements that were missing, and the phrasing in the narrative.

In one of the longer sessions where we had more than an hour, we worked through the prototypes annotating feedback on a tablet. In figure 66 can be seen what was written by the participant in blue, and in orange my own notes based on the conversation.

In the end one of the main questions was if these excercises would be given digitally, or analogue. Because this difference facilitates a different interaction with the material.

The redesign will be printed physically, so to encourage conversations without laptops or phones. As well as making it less attractive to search things online and just start designing. The feedback from these sessions resulted in the next iteration.

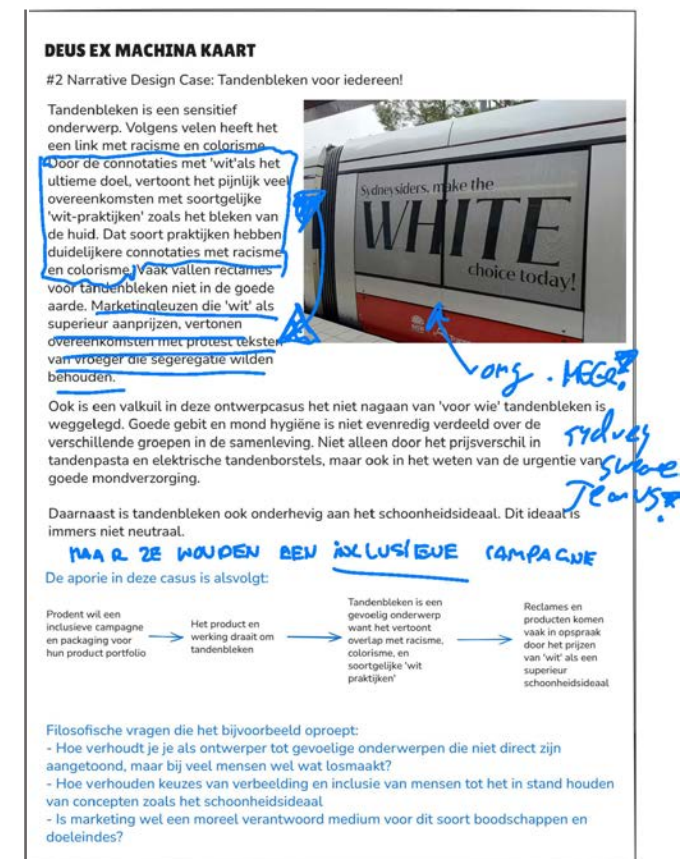
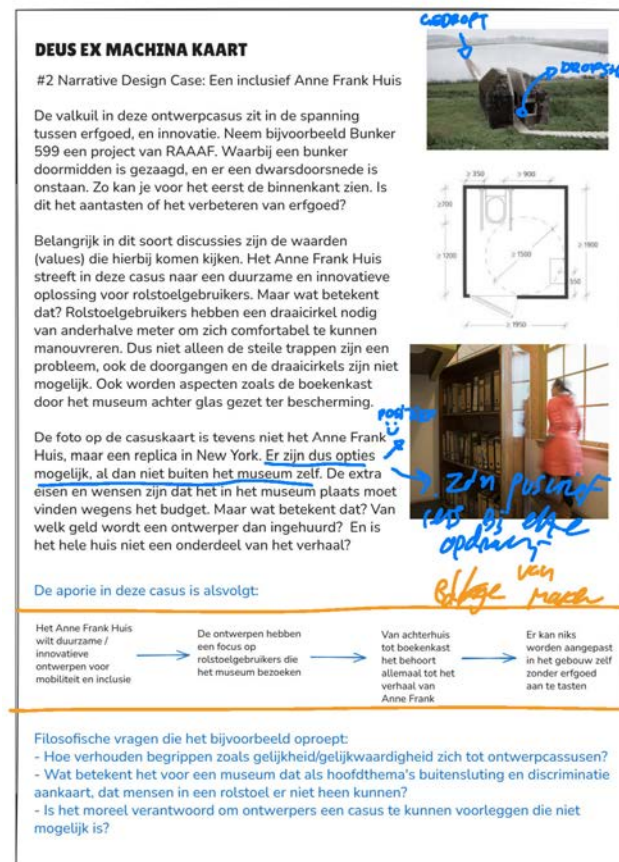
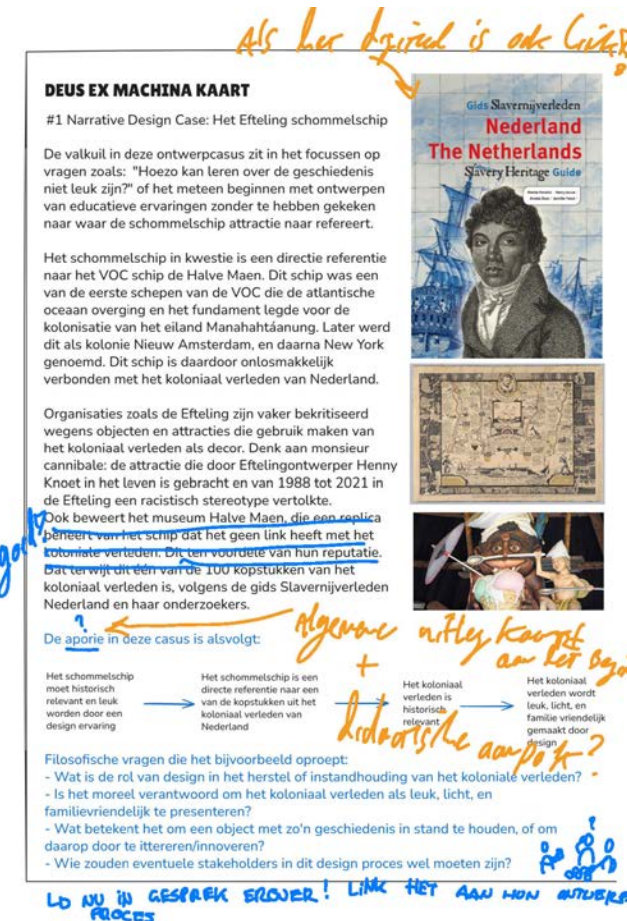
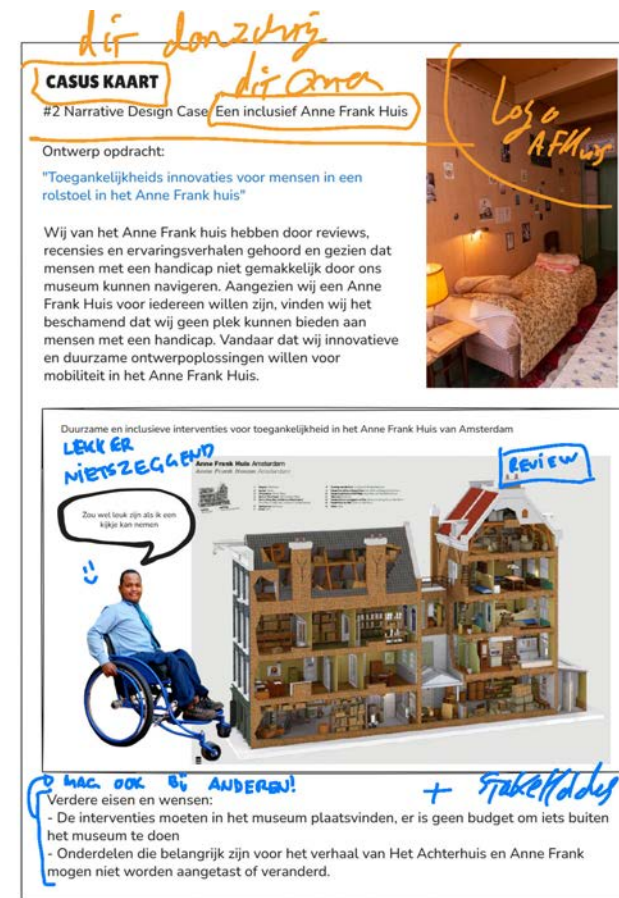
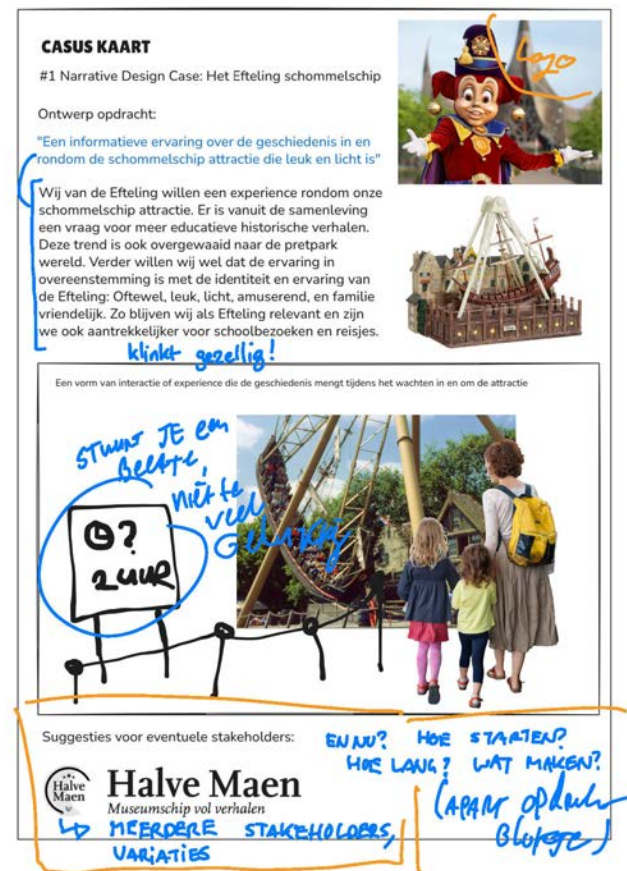


Figure 66: The first wireframe prototypes, again with feedback in blue and orange

Second iteration of cases

The second iteration was given a clear visual aesthetic with a purple-yellow colour palette. With purple being the base colour and yellow being complementary to steer attention to the important parts: Design goal, first assignment, the aporia, and second assignment.

The cards (shown on the next pages) follow a renewed template. Every case consists of an extra list of possible stakeholders. These stakeholders are carefully chosen. One is the company itself, the other is against the case, the other is in favour of the case. To exemplify in the first casus card: Museum-ship De Halve Maen is denying that the replica has anything to do with colonialism 'because it never moved slaves', while Studio Louter could be in favour of this case because they do critical history projects with historians and designers. So, the student has to navigate this landscape where one is denying the overarching theme, while the other is in favour of taking a critical stance.

The extra demands and wishes are there to 'block' the initial first ideas the student can have. They make the 'low-hanging-fruit of ideas' not fit through these extra parameters.

The assignment block on the bottom right, is also added to incorporate the classroom context of the educational exercises. The cards are put in this report in the same way as the physical cards would be printed.

The final double sided card in the set serves as an explainer card of not only the aporia, but also the impossible by design framework. This is given in between the NDC and the DEM, to introduce the notion of inconsistencies in design cases. This is proposed to make the switch from the designing, to the critical analysis a bit lighter.

In the next chapter we will test these cases in an educational setting. We will evaluate the design, as well as research themes around the integration of philosophy and design.

Casus kaart #1

Narrative Design Case: Het Efteling Schommelschip



“Ontwerp een informatieve ervaring over de geschiedenis in en rondom het schommelschip die leuk, licht en familievriendelijk is”

Context bij de opdracht:

Wij van de Efteling willen een 'interactive experience' rondom onze schommelschip attractie. Er is vanuit de samenleving een vraag voor meer educatieve historische verhalen. Deze trend is ook overgewaaid naar de pretpark wereld. Verder willen wij wel dat de ervaring in overeenstemming is met de identiteit en ervaring van de Efteling: Oftewel, leuk, licht, amuserend, en familie vriendelijk. Daarnaast is door onze stijgende populariteit, de wachttijd extreem toegenomen. Wij zien dit niet als probleem maar als opportunity om het publiek te 'infotainen'. Zo blijven wij als Efteling relevant en zijn we ook aantrekkelijker voor schoolbezoeken en reisesjes.

Visualizatie van de context:



Verdere eisen en wensen:

- Geen veranderingen aan de attractie zelf, die moet intact blijven.
- De experience moet in stijl aansluiten bij de attractie en thematisch deel van het park

Eventuele stakeholders:



Halve Maen
Museumschip vol verhalen

**studio
louter**

Opdracht:

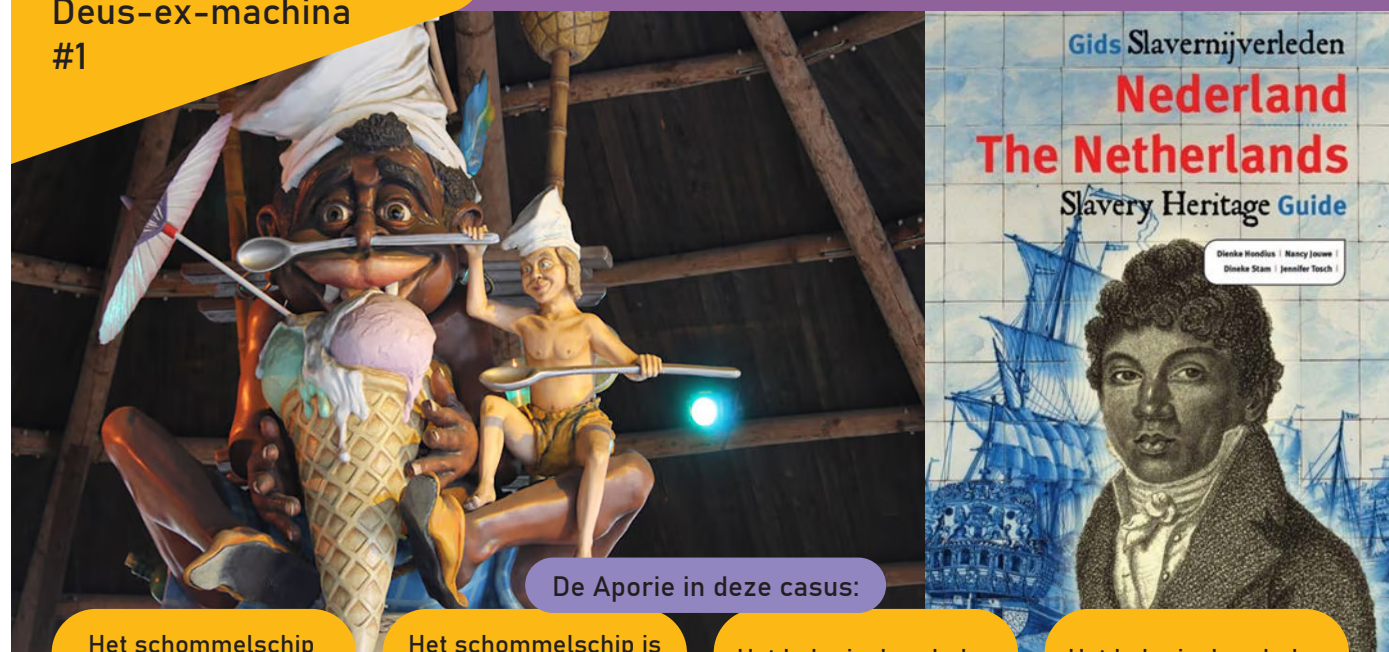
Kies een invalshoek voor de informatieve geschiedenis ervaring

+
Maak een A3 poster met daarop verschillende ontwerp-schetsen

Tijd:
30 minuten

Deus-ex-machina #1

Narrative Design Case: Het Efteling Schommelschip



De Aporie in deze casus:

Het schommelschip moet historisch relevant, licht en leuk worden door een design experience

Het schommelschip is directe referentie naar een van de kopstukken van het koloniaal verleden

Het koloniaal verleden is historisch relevant waarnaast ook van educatief belang

Het koloniaal verleden wordt leuk, licht en familie-vriendelijk gemaakt door design

Uitleg van de casus:

De valkuil in deze ontwerp-casus zit in het focussen op vragen zoals: "Hoezo kan leren over de geschiedenis niet leuk zijn?" of het meteen beginnen met ontwerpen van educatieve ervaringen zonder te hebben gekeken naar waar de schommelschip attractie naar refereert.

Het schommelschip in kwestie is een directe referentie naar het VOC schip de Halve Maen. Dit schip was een van de eerste schepen van de VOC die de atlantische oceaan overging en het fundament legde voor de kolonisatie van het eiland Manahahtáanung. Later werd dit als kolonie Nieuw Amsterdam, en daarna New York genoemd. Dit schip is daardoor onlosmakelijk verbonden met het koloniaal verleden van Nederland.

Organisaties zoals de Efteling zijn vaker bekritiseerd wegens objecten en attracties die gebruik maken van het koloniaal verleden als decor. Denk aan monsieur cannibale: de attractie die door Eftelingontwerper Henny Knoet in het leven is gebracht en van 1988 tot 2021 in de Efteling een racistisch stereotype vertolkte. Ook beweert het museum Halve Maen, die een replica beheert van het schip dat het geen link heeft met het koloniale verleden. Dit ten voordele van hun reputatie. Dat terwijl dit één van de 100 kopstukken van het koloniaal verleden is, volgens de gids Slavernijverleden Nederland en haar onderzoekers.

Filosofische vragen die deze casus bijvoorbeeld kan oproepen:

- Wat is de rol van design in het herstel of instandhouding van het koloniale verleden?
- Is het moreel verantwoord om het koloniaal verleden als leuk, licht, en familievriendelijk te presenteren?
- Wat betekent het om een object met zo'n geschiedenis in stand te houden, of om daarop door te itteren/innoveren?
- Wie zouden eventuele stakeholders in dit design proces wel moeten zijn?

De opdracht:

Besprek samen hoe jullie nu verder gaan. Neem een stelling in als ontwerpers rondom dit probleem.

Itereer op de poster: beweeg heen en weer tussen filosofische vragen en design inzichten. Schrijf alles op de poster, het hoeft/kan niet af.

Tijd:
30 minuten

Casus kaart #2

Narrative Design Case: Een inclusief Anne Frank Huis



"Ontwerp toegankelijkheids-innovaties voor mensen moeilijk ter been, voor een inclusief Anne Frank huis"

Context bij de opdracht:

Wij van het Anne Frank huis hebben door reviews, recensies en ervaringsverhalen gehoord en gezien dat mensen met een handicap niet gemakkelijk door ons museum kunnen navigeren. Aangezien wij een Anne Frank Huis voor iedereen willen zijn, vinden wij het beschamend dat wij geen plek kunnen bieden aan mensen met een handicap. Vandaar dat wij innovatieve en duurzame ontwerp-oplossingen willen voor mobiliteit in het Anne Frank Huis. Daarnaast is dit een van de meest gewaardeerde erfgoed plekken van Amsterdam. Dat willen we graag zo houden.

Visualizatie van de context:



Verdere eisen en wensen:

- De interventies moeten in het museum plaatsvinden, er is geen budget om iets buiten het museum te doen
- Onderdelen die belangrijk zijn voor het verhaal van Het Achterhuis en Anne Frank mogen niet worden aangetast of veranderd.

Eventuele stakeholders:



Opdracht:
Onderzoek huidige toegankelijkheids innovaties

Maak een A3 poster met daarop verschillende ontwerp-schetsen

Tijd:
30 minuten



Het Anne Frank Huis
wilt duurzame /
innovatieve ontwerpen
voor mobiliteit en
inclusie

De ontwerpen hebben een focus op rolstoelgebruikers die het museum bezoeken

Van achterhuis tot
boekenkast het
behoort allemaal tot
het verhaal van Anne
Frank

Er kan niks worden
aangepast in het
gebouw zelf zonder
erfgoed aan te tasten

Uitleg van de casus:

De valkuil in deze ontwerp-casus zit in de spanning tussen erfgoed, en innovatie. Neem bijvoorbeeld Bunker 599 een project van RAAAF. Waarbij een bunker doormidden is gezaagd, en er een dwarsdoorsnede is ontstaan. Zo kan je voor het eerst de binnenkant zien. Is dit het aantasten of het verbeteren van erfgoed?

Belangrijk in dit soort discussies zijn de waarden (values) die hierbij komen kijken. Het Anne Frank Huis streeft in deze casus naar een duurzame en innovatieve oplossing voor rolstoelgebruikers. Maar wat betekent dat? Rolstoelgebruikers hebben een draaicirkel nodig van anderhalve meter om zich comfortabel te kunnen manoeuvreren. Dus niet alleen de steile trappen zijn een probleem, ook de doorgangen en de draaicirkels zijn niet mogelijk. Ook worden aspecten zoals de boekenkast door het museum achter glas gezet ter bescherming.

De foto op de casuskaart is tevens niet het Anne Frank Huis, maar een replica in New York. Er zijn dus opties mogelijk, al dan niet buiten het museum zelf. De extra eisen en wensen zijn dat het in het museum plaats moet vinden wegens het budget. Maar wat betekent dat? Van welk geld wordt een ontwerper dan ingehuurd? En is het hele huis niet een onderdeel van het verhaal?

Filosofische vragen die deze casus bijvoorbeeld kan oproepen:

- Hoe verhouden begrippen zoals gelijkheid/gelijkwaardigheid zich tot ontwerpcassussen?
- Wat betekent het voor een museum dat als hoofdthema's buitensluiting en discriminatie aankaart, dat mensen in een rolstoel er niet heen kunnen?
- Is het moreel verantwoord om ontwerpers een casus te kunnen voorleggen die op dit moment niet mogelijk is?

De opdracht:

Besprek samen hoe jullie nu verder gaan. Neem een stelling in als ontwerpers rondom dit probleem.

Itereer op de poster: beweeg heen en weer tussen filosofische vragen en design inzichten. Schrijf alles op de poster, het hoeft/kan niet af.

Tijd:
30 minuten

Casus kaart #3



Ontwerp een inclusieve marketing campagne en packaging design voor een nieuw tandenbleek product portfolio"

Context bij de opdracht:

In 2011 heeft Prodent 'White Now' geïntroduceerd. Deze exclusieve tandpasta's zorgen voor zichtbaar wittere tanden. White Now tandpasta werkt volgens Blue Light Technology en bevat miljoenen delicate Blue Light deeltjes. Doordat blauw en geel contrasterende kleuren zijn, heffen de kleuren elkaar op en ontstaat er een direct visueel wit effect. Dit optische effect blijft werkzaam, zelfs na het wegspoelen van het tandpastaschuim. Nu willen wij de White Now! lijn uitbreiden tot een abonnement based tandenbleek set voor thuis. Daarvoor hebben wij een inclusieve marketing campagne nodig en een packaging design voor de set aan tandpasta, bitjes, elektrische brostel met opzetstukjes, en een lookbook.

Verdere eisen en wensen:

- Reclames moeten ook publiekelijk zichtbaar zijn, denk aan billboards, openbaar vervoer, of ludieke acties.
- De merknaam White Now! moet centraal staan

Eventuele stakeholders:



Fabrique



Visualizatie van de context:



Opdracht:

Kies een visuele stijl voor de campagne

Maak een boekje met daarin verschillende ontwerp-schetsen en visueel materiaal

Tijd:
30 minuten

Deus-ex-machina #3

Narrative Design Case: Tandensbleken voor iedereen



De Aporie in deze casus:

Prodent wil een inclusieve campagne en packaging voor hun product portfolio

Het product waarvoor een identiteit moet komen draait om tandensbleken

Tandensbleken is een gevoelig onderwerp: er is overlap met racisme, colorisme, en eugenetica

Reclames en producten komen vaak in opspraak omdat ze gevoelloos dingen aanprijzen

Uitleg van de casus:

Vaak vallen reclames voor tandensbleken niet in de goede aarde. Marketingleuzen die 'wit' als superieur aanprijzen, vertonen overeenkomsten met protest teksten van vroeger die segregatie wilden behouden. Tandensbleken is een sensitief onderwerp. Volgens velen heeft het een link met racisme en colorisme. Door de connotaties met 'wit' als het ultieme doel, vertoont het pijnlijke veel overeenkomsten met soortgelijke 'wit-praktijken' zoals het bleken van de huid. Dat soort praktijken hebben duidelijkere connotaties met racisme, colorisme en eugenetica.

Ook andere producten komen soms in opspraak van deze manier van design. Denk aan de 'Sydney Sweeney has great jeans' campagne, die impliceert dat ze ook goeie 'genen' heeft. Dit heeft een polariserend effect in het publieke debat ondanks dat het over spijkerbroeken gaat.

Ook is een valkuil in deze ontwerpcasus het niet nagaan van 'voor wie' tandensbleken is weggelegd. Goede gebit en mond hygiëne is niet evenredig verdeeld over de verschillende groepen in de samenleving. Niet alleen door het prijsverschil in tandenpasta en elektrische tandenborstels, maar ook in het weten van de urgentie van goed mondverzorging. Daarnaast is tandensbleken ook onderhevig aan het schoonheidsideaal. Dit ideaal is immers nooit neutraal.

Filosofische vragen die deze casus bijvoorbeeld kan oproepen:

- Hoe verhoudt je je als ontwerper tot gevoelige onderwerpen die niet direct zijn aangetoond, maar bij veel mensen wel wat losmaakt?
- Hoe verhouden keuzes van verbeelding en inclusie van mensen tot het in stand houden van concepten zoals het schoonheidsideaal
- Is marketing en packaging design wel een moreel verantwoord medium voor dit soort boodschappen en doeleindes?

De opdracht:

Bespreek samen hoe jullie nu verder gaan. Neem een stelling in als ontwerpers rondom dit probleem.

+
Itereer op het boekje: beweeg heen en weer tussen filosofische vragen en design inzichten. Schrijf alles op de poster, het hoeft/kan niet af.

Tijd:

30 minuten

Explainer cards: Aporia

The Aporia explained

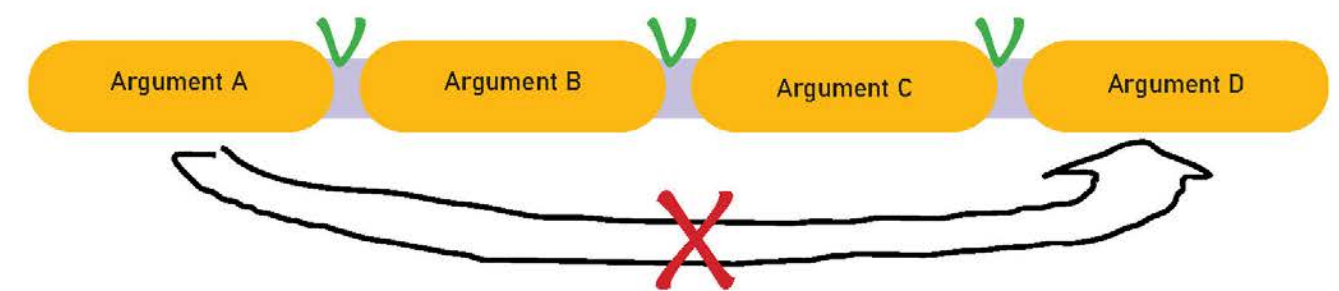
What we have encountered in this Narrative Design Case, is a concept from philosophy called: Aporia. An aporia is a collection of contentions, statements, or arguments that are individually plausible but together collectively inconsistent (Rescher, 1987). This tool is applied is shown to explain the design problem at hand on a philosophical level.

"Philosophy is the search for hidden assumptions that ought to be critically evaluated. Where others stop, a philosopher continues to find unarticulated opinions and argumentation. What others take for granted, the philosopher highlights and discusses." (De Regt, 2021)

So, an aporia is an 'impasse' in thought patterns that individually are logical, while in its complete order is inconsistent. Aporias are everywhere, from mathematics to science, they are regarded as particularly prominent in philosophy, and therefore a driver in philosophical innovation (Rescher, 1987). In ordinary life they appear as well, therefore they inherently reside in design and her practice, products, and research.

Aporias are not only frequent in philosophy but typical of 'the contexts' in which the problems of the field arise (Rescher, 1987). The aporia is traditionally a perplexing state of mind and a problem at hand, a situation where we have lost traction with the problem because we have discovered equally good reasons to think two or more things that appear to be in exact opposition to each other, preventing us from accepting them jointly (Kostić, 2022). In more practical terms: Whenever we frame an argument in logical steps from A to B, from B to C, and C to D, we can follow along. However, what if step A and step D contradict each other, even though all statements follow each other up 'correctly'?

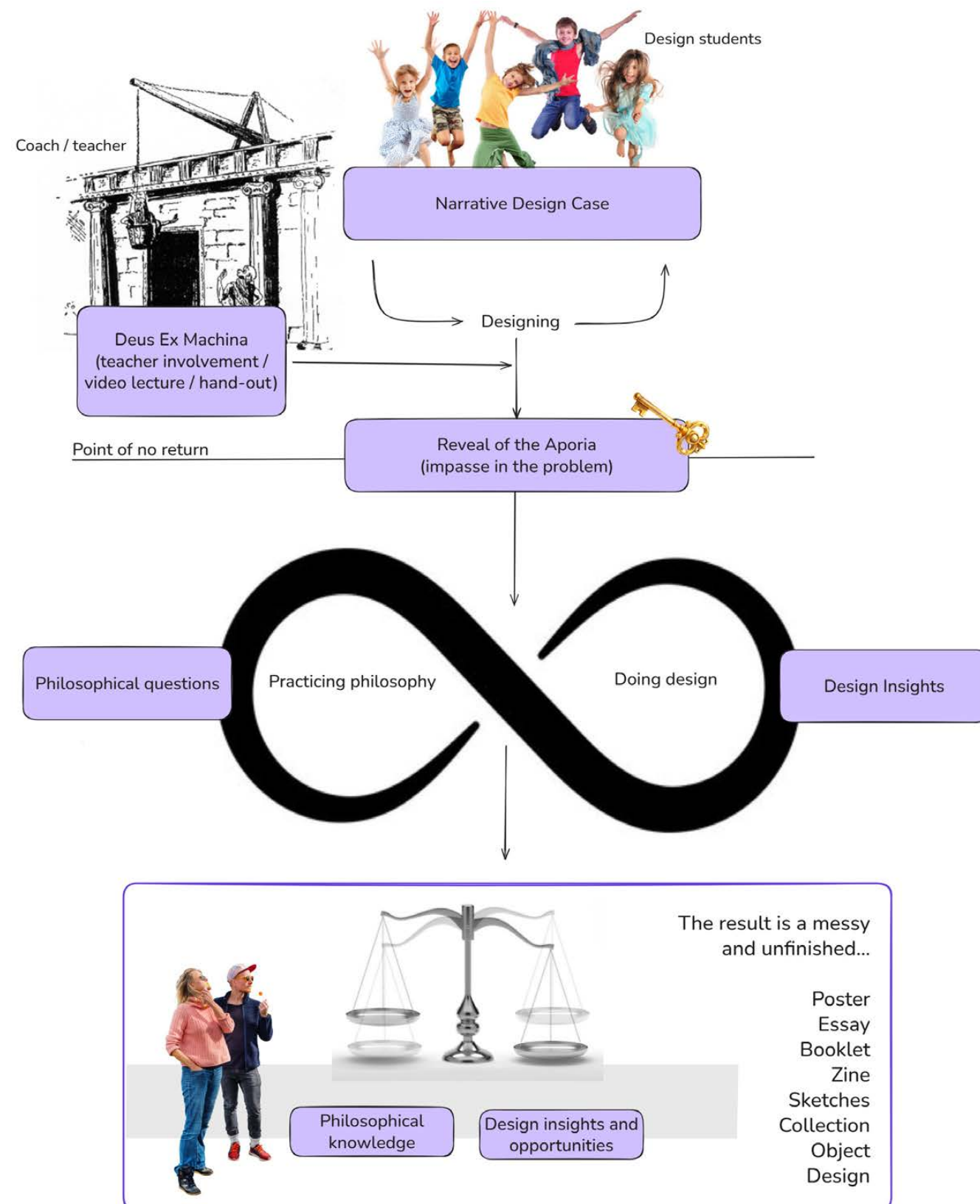
The Aporetic cluster



This situation is one of conflict, even though it is not visible at first glance hence the perplexing state of the problem at hand. The set of statements that together form an aporia is called an aporetic cluster (Rescher, 1987). The friction we feel in encountering such an aporetic cluster in our own thinking is **aporetic discomfort** (McAllister, 2018). To solve an aporetic cluster Rescher (1987) states that one of the arguments have to be rejected or abandoned. This means that in the aporetic cluster, **the weakest link/argument should be debated and rejected**. The aporia inhibits a 'reasonable' choice between 'rejections' of some which are more acceptable than others (Rescher, 1987). Therefore it is advised in **providing a possible solution to be guided by being transparent of which values are at play in the decision making process**. In the end, is the aporia not a tool imported from philosophy that can mend all the troubles, but it can certainly help us understand better the difficulties and the complexities in and around a design problems better (Kostić, 2022).

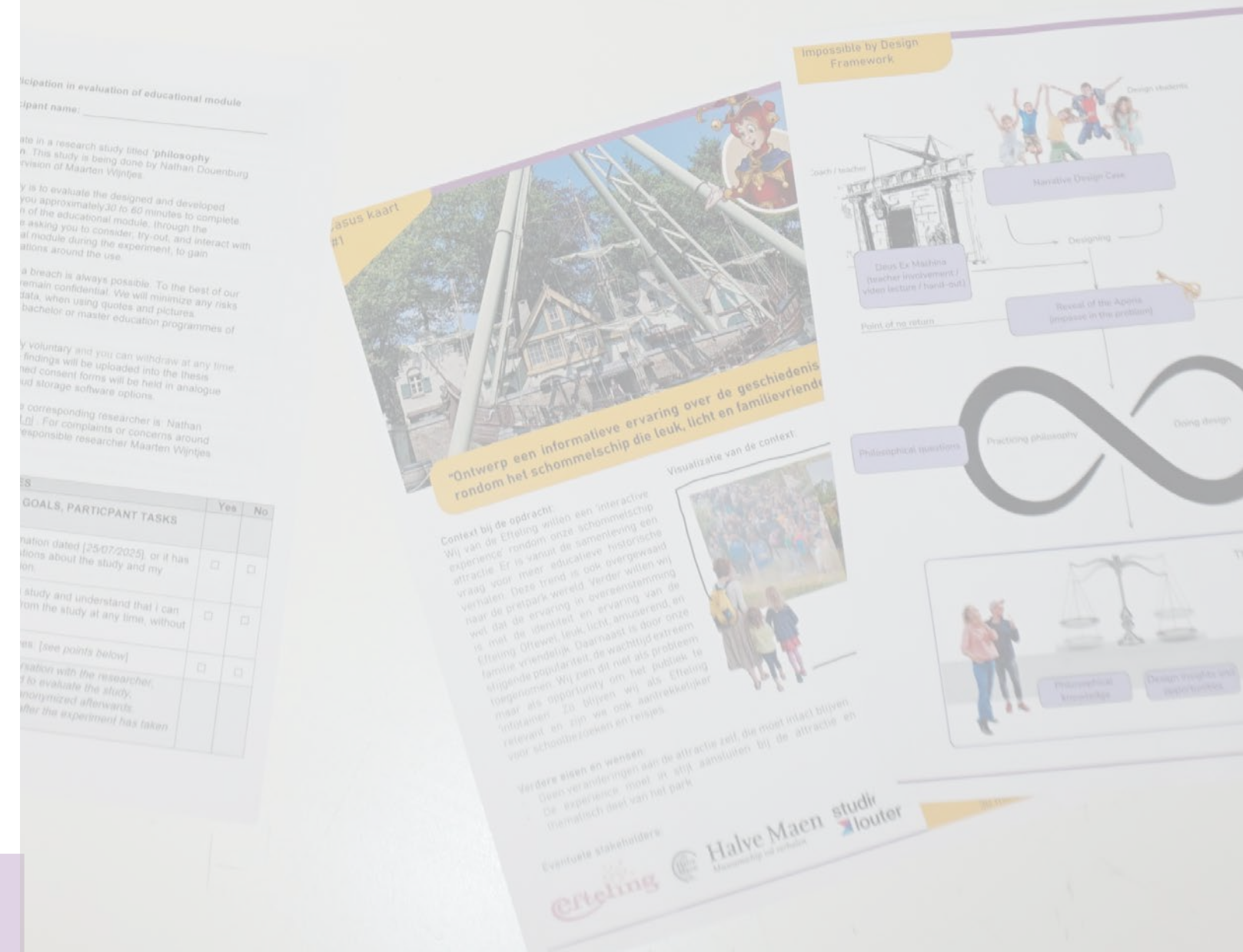
Impossible by Design Framework

Explainer cards: Framework



H8. Validation & Contextmapping

In this chapter we will apply contextmapping methodologies to validate the Narrative Design Cases in context and discussion



In this chapter we elaborate on the validation of the design, done through the contextmapping method.

Contextmapping methodology

The contextmapping method gathers information about the context of product use for the evaluation of a future product or service. Next to this the mapping refers to the mode of information gained from the generative tools (Sanders and Stappers, 2012). During the data analysis we will use the DIKW-model as a baseline. Here the emphasis is on interpreting Data towards Information, using the Information for creating Knowledge, and eventually acquiring Wisdom on the topic at hand (Sanders and Stappers, 2012)

The focus in this method is **tacit knowledge** (personal/experience based) and **latent knowledge** (not currently recognized as useful knowledge) about the context of use (as seen in figure 67). One of the main advantages of this method is that through its intensity a qualitative study with a low number of participants can still supply rich information (Sleeswijk visser et al., 2005).

Contextmapping is regarded as a method for the 'front-end' of design research, so why is it employed now? The reason why this method is chosen is threefold:

1. Contextmapping goes a step further than user-centered design research by acknowledging insights from what people 'make' instead of only 'say', and 'do'.
2. Through a generative design research approach, overlooked and underrepresented facets of the context regarding philosophy and design can come to light.
3. In line with my initial ambitions, this thesis can serve as a starting point for others. So, next to validation data for the iteration, the resulting themes can inform and inspire new research projects.

The research design

The main study revolved around the student perception and journey, with the goal to explore the integration of philosophy into design with the NDC. This was done through hosting multiple sessions where groups of two to four students would do one of three cases. The second part of the study involves the data and results from the students to discuss and debate with design teachers. Next to this they will do small 'make' assignments in the contextmapping manner.

A visual overview of the study is shown in Figure 68. First we will elaborate on the student part, and second the educator part.

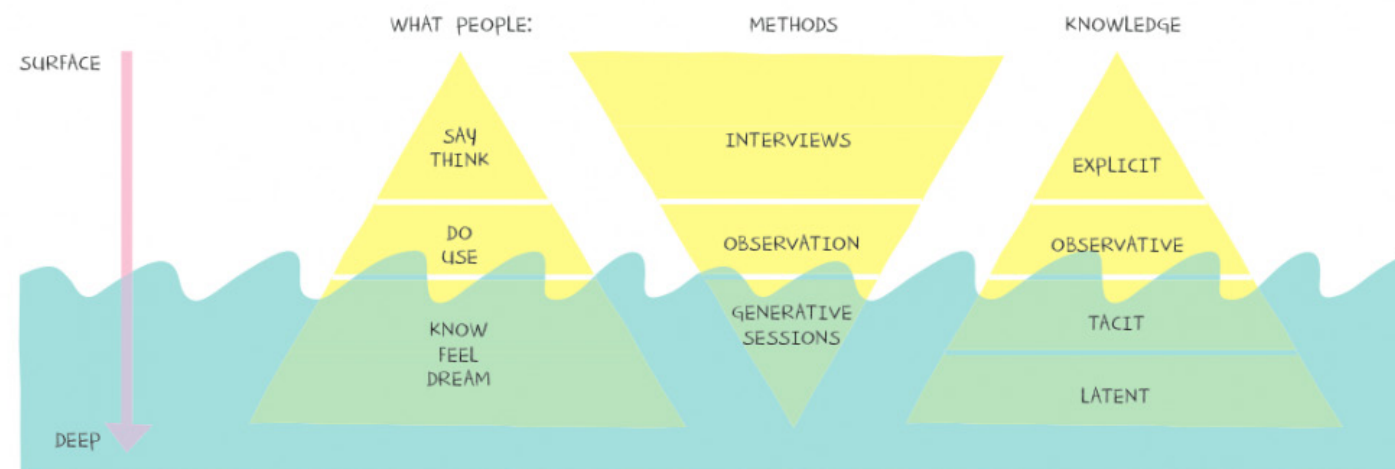


Figure 67: The main principles of say-do-make methods (Sanders and Stappers, 2012).

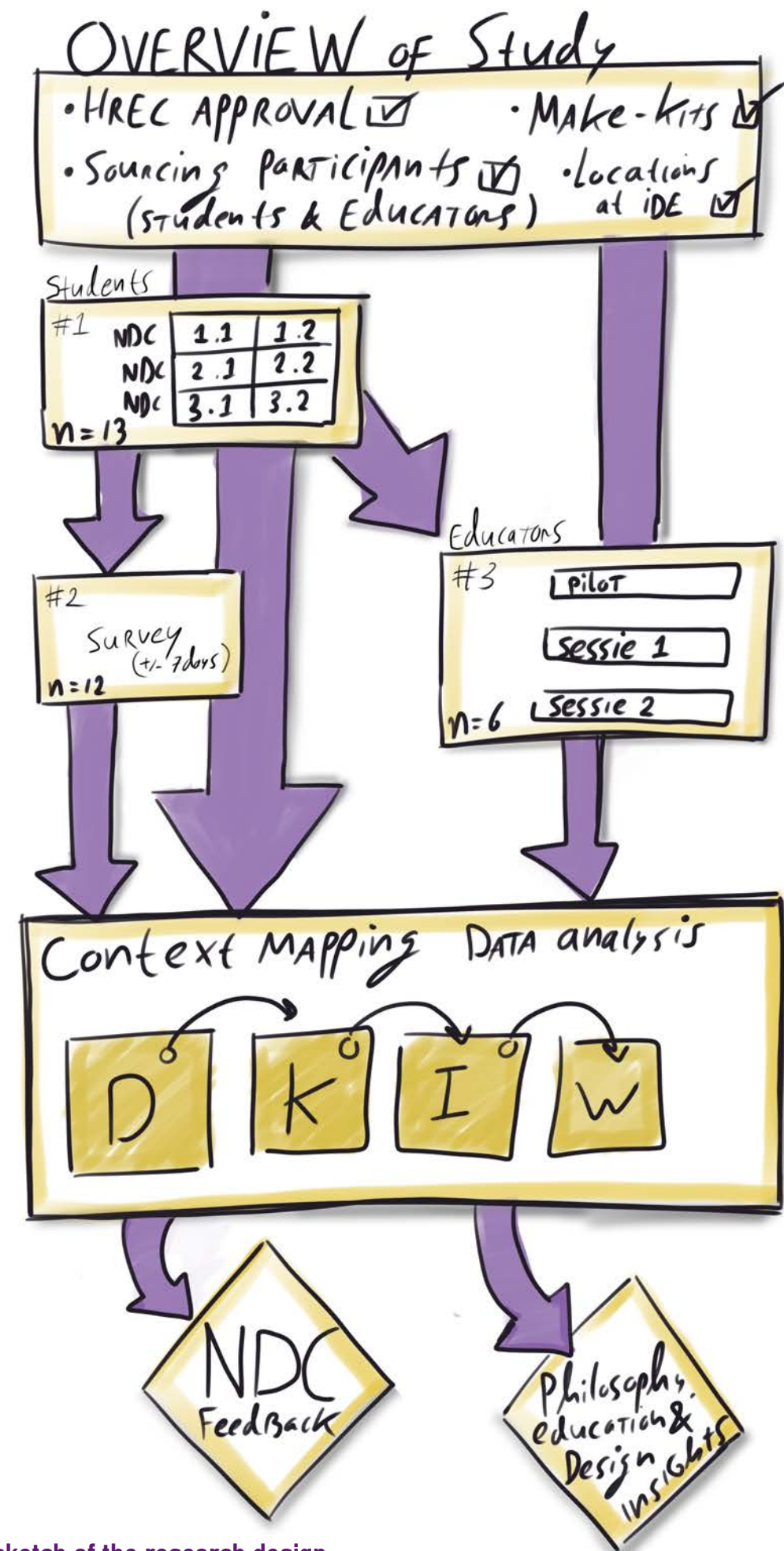
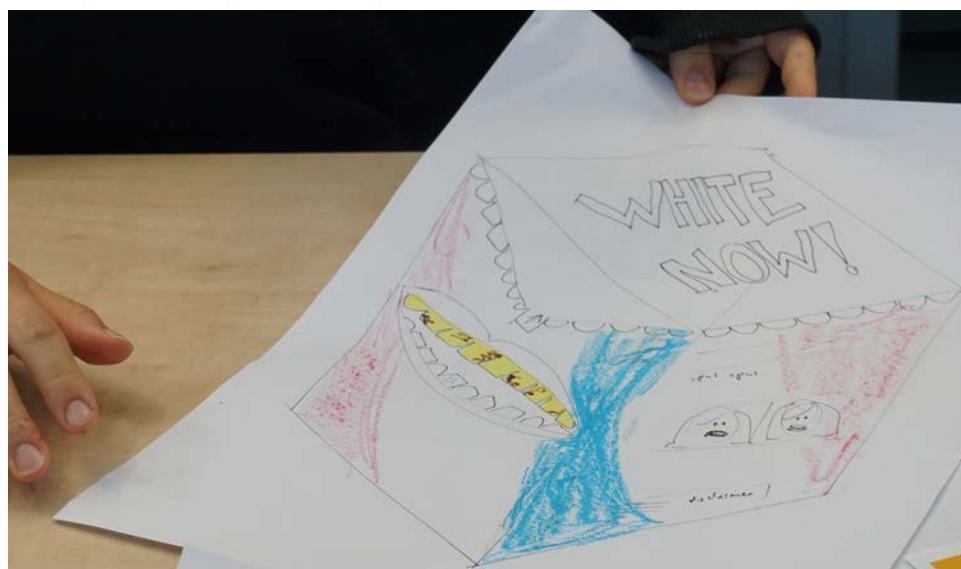
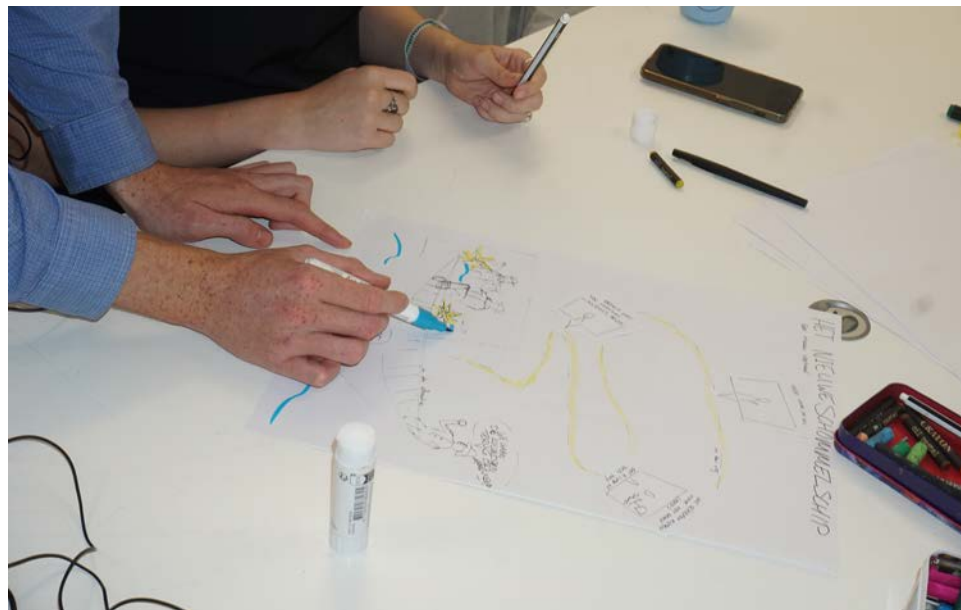


Figure 68: A sketch of the research design



Research part 1: Students and the NDC

The students are tasked to do the design-part of the NDC in the first half hour, after which a small explanation happens around philosophy and the theory around the NDC. Afterwards they will have again a half hour to discuss (shown in Figure 69).

The groups are randomly assigned to a case, so that every case is tested twice. The students are sourced from IDE from different years of study, mainly from the final year of the bachelor towards the final master year. This range is chosen because a. the students are still inside the IDE programme and b. it is presumed that from that point they have enough experience to autonomously do design cases without much help.

The students were sourced from IDE itself and have some form of relation to the author. They are asked to bring people along to participate. So that they are acquainted with each other and comfortable enough to discuss bigger topics without having to get to know each other first. This was decided in part through ethical concerns, as well as sourcing enough people for the study. The study itself is quite intensive regarding participation and time. Each session takes around 90 minutes with starting and rounding off time.

The sessions started with an introduction to the study and the informed consent form. Next, the NDC assignment is done in half an hour. After which their created materials were put aside, and an explanation on the theory behind the NDC ensued. After which the materials were returned into the group. The second NDC assignment was to discuss what was made, iterate, and work through philosophic questions. With a small interview afterwards.

The sessions were recorded through a clip on microphone to make a transcript afterwards as a back-up. While notes were made during the observation of their behaviour, attitude, and emotions. In the second part of the NDC, their philosophic questions and design insights were noted down by the researcher.

During the workshop setting, the same materials were provided:

- Informed consent (As seen in the appendix)
- Various drawing materials, white board markers, and glue
- A3 and A4 paper, as well as post-its
- NDC card on which can be drawn
- Explainer sheet for in between the two parts

Around a week after the session, the students received an anonymous and small questionnaire asking them to recall the NDC experience. This longitudinal aspect tries to uncover if the experience and/or theory stuck with them, or resurfaced in the week after.

Figure 69: An overview of the first study

Research part 2: Design educators

The examples and insights of the student sessions served as the basis for the validation session with design educators. These sessions were set-up differently, still with the NDC in the center (as shown in Figure 70).

The goal of these sessions was to evaluate and reiterate on the educator perspective of the NDC journey. Beforehand, a make-kit was devised. The function is to give the participant structured spaces for notes and drawings.

Because educators, teachers, and coaches are a difficult audience a pilot was held with two IDE alumni who both had Teaching Assistant experience, as well as one working at the TUD Teaching Lab. So, to simulate the experience. The insights from this pilot also are of use, because of their teaching experience.

The reason why these educators are a difficult audience is because their job is to be critical. Next to this, they have their own view on teaching and how it should or should not be done. Their feedback has to be taken with a grain of salt.

Another aspect to consider is that this audience has in the context of the TU Delft, a bigger risk in being critical. Therefore, special attention has been given to the research ethics. Educators will be protected and remain anonymous so that they can voice critical notes at the TU Delft. Without having them compromise their job, integrity, or place inside the university.

Two sessions were held at the faculty of IDE. These two sessions of an hour consisted of:

- Presenting the NDC, aporia for philosophic design analysis, and talking through the pedagogy of discomfort. So to discover where on first glance possible uncertainties, approaches, and pitfalls lie from the educators side. (15 min)
- After which the role of philosophy will be discussed in design education through an interactive handout. (15 min)
- Then, the design educators will be asked to create their own aporia in an NDC, to visualize the themes they find important in design. (20 min)
- Finally, they will be asked to place 'their view on philosophy' inside the IDE bachelor or Master curriculum (10 min). Acknowledging that something has to go, for philosophy to be integrated into design education.

During the dialogue/debate setting, the same materials were provided:

- Informed consent (As seen in the appendix)
- Various drawing materials, white board markers, and glue
- Handout for notes, drawings, and exercises.



Figure 70: An overview on the second study

From Data to Information:

All results and data-sheets serve as the basis for the analysis. For the data analysis Miro was used through its quick and visual tools to structure information.

We move through the data analysis by extracting all the data points and arranging them based on categories (as supported by Figure 71):

Data regarding the students sessions:

- General / Uncategorized (Purple)
- Insights on the thought process (Yellow)
- Insights on the design process (Teal)
- Philosophic questions raised: (Light blue)
- Design insights devised in part two (Red)
- NDC feedback (Dark green)
- Answers on questions at the end of the session (White)
- Insights from the use of A.I. (Black)
- Answers from survey a week after (Pink)

Data regarding the educator sessions:

- Insights about the curriculum (Light green)
- Answers on the statements (Dark pink)
- Insights on the NDC use and perception (Orange)

This resulted in around 378 data-points acquired that then were used to cluster the information. Some data-points were larger than others, this is because some quotes cannot be taken out of context. A long answer to a question weighs the same in the visual and numerical overview even though some are more dense and useful than others. Therefore it seems of no use to analyze the amount of data in each category in relation to each other.

In the end, through the sometimes questionable or precarious statements the participants made: It was decided to leave the transcripts out of this thesis for the participants protection. So to not compromise their teaching position or further academic career.

LEGEND

General / uncategorized: 33 Datapoints	Insights on thought process: 53 Datapoints	Insights on design process: 30 Datapoints	Philosophic questions raised: 46 Datapoints	Design Insights devised: 20 Datapoints	NDC design feedback: 24 Datapoints	Answers to questions at the end of the session: 36 Datapoints	Insights from the use of A.I. 7 Datapoints	Answers from survey a week after: 38 Datapoints	Insights about the curriculum: 21 Datapoints	Answers on the statements: 39 Datapoints	Insight on NDC use and perception: 22 Datapoints
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Inzichten uit casus 1 - onderzoek 1



Inzichten uit casus 1 - onderzoek 2



Inzichten uit casus 2 - onderzoek 1



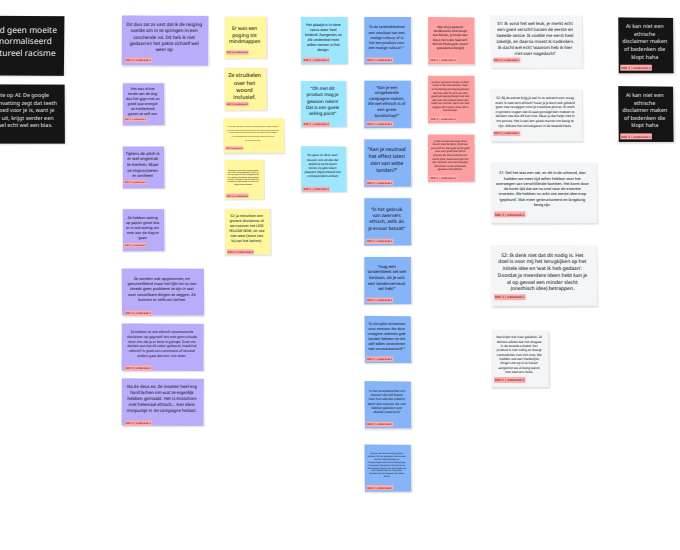
Inzichten uit casus 2 - onderzoek 2



Inzichten uit casus 3 - onderzoek 1



Inzichten uit casus 3 - onderzoek 2



Inzichten uit studenten enquête na een week +/- 7 dagen



Inzichten uit educator sessie - Pilot, 1 en 2



Figure 71: A general overview of labeled data points

All data points from observation, transcripts notes, and the result, were first clustered. These clusters resemble an overarching theme that emerged during the tests.

All insights that weren't categorize-able because they refer to specific facets of the cases themselves, were ordered following Gispen's (2017) model of **Moral sensitivity**, **Moral creativity**, and **Moral advocacy**.

Feedback specific to the design of the NDC cards, a possible translation into an educational module, and better explanation of the aporia, are shown in the next chapter for a new iteration.

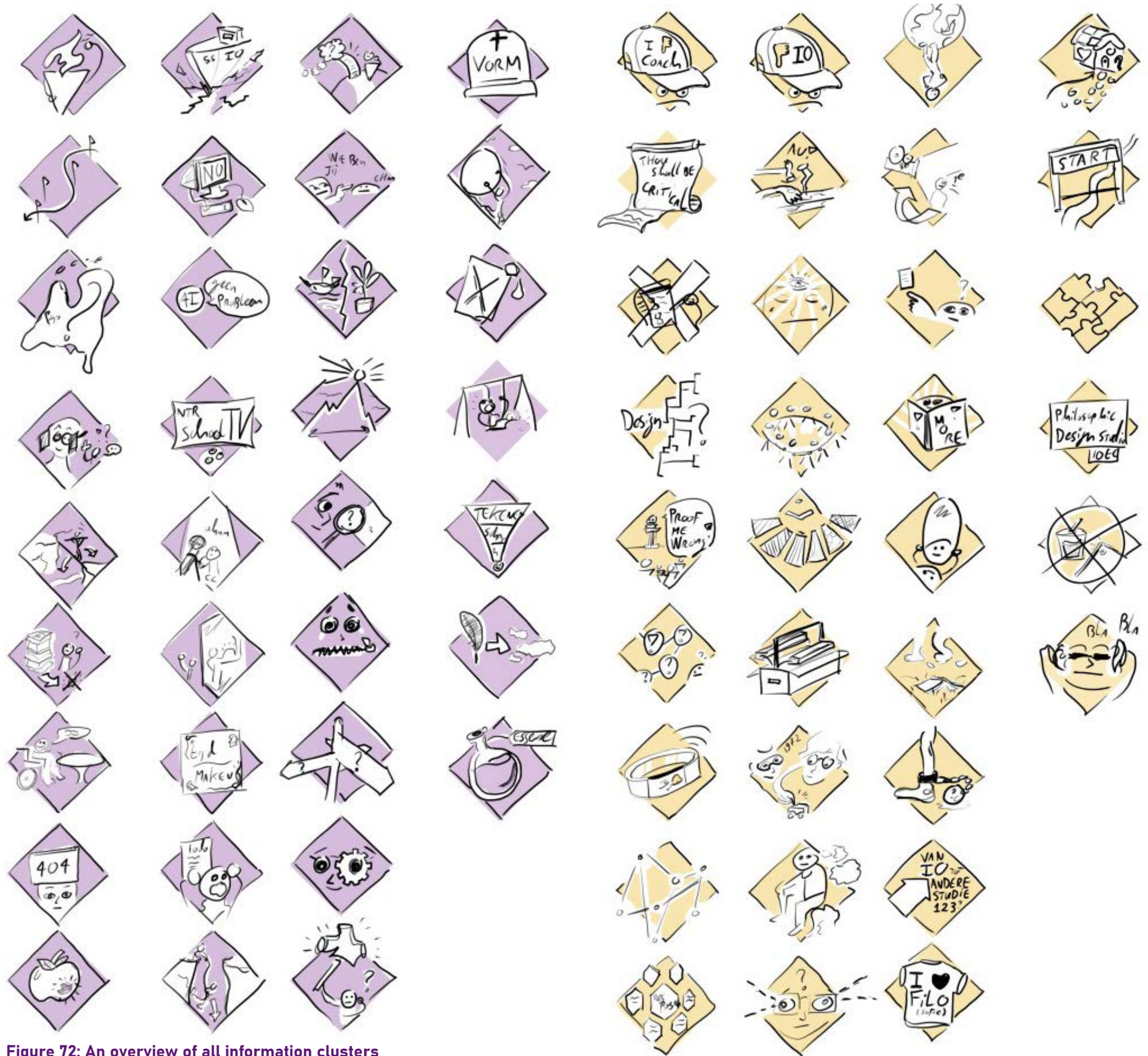
After this, the overarching clusters serve as a basis for smaller themes. These are illustrated in a rapid prototyping manner: Through an image from the internet, a descriptive title, an actual description, and the data-points it encompasses

These quickly sketched out themes were evaluated and iterated upon a couple of days later. So to clear them up, evaluate them critically, and avoid repetition.

This resulted in 67 themes in/on/around various aspects of the IDE curriculum, perception of philosophy, and views on contemporary design practices (shown on the right in Figure X).

For now we will highlight a selection of the most valuable insights of this contextmapping effort. One set based around **the necessity for philosophy in design education**. The second theme is based on **discomfort and design**. The third is based around the thesis approach of **Sensitizing, Visualizing, and Materializing**.

A complete overview of the themes can be found in the Post Scriptum, where they will be presented in bigger themes for different audiences.



On the necessity of Philosophy and Design

From these insights we can conclude that:

Philosophy can be a fitting part of a design education programme, and is in a way much needed. The critical and questioning traditions of philosophy can be fit into the curriculum. Because philosophy is something that forms the student in their learning journey in one way or the other.

It can be stated that philosophy is in a way a necessity. IDE wants to move to the systemic level, but cannot do this with the classic IDE-mindset of cause and effect on product level. Practicing philosophy can be a benefit for reflexive practice, as well as facing hard question head-on.

Many students embody a sense of moral sensitivity, however miss the link to the moral creativity and advocacy. This is an aspect of where design education should focus on. Next to questions on how to bridge philosophy and practice in a design project or process. Philosophy can also help facilitate critical evaluations on the various kinds of problems, as well as looking to oneself from a different angle.

Main blockade between this integration is the perception of philosophy. There seems to be an essence of 'what makes a philosophic question'. This sturdiness around the topic of philosophy is not beneficial. It results in conversations where philosophy itself is endorsed and recommended, but halfway they realize they have different definitions or ambitions.

In the end, if there is explicit time made for critical reflection (in a group- or studio-setting) people will do discuss it. Whenever this time is not given, critical thinking, asking more broad and philosophic perspectives does not take place. Because it is then seen as one of many parts of the design project and process.



Explanation of themes

Classic IDE-mindset

The approach to the 'problem' in these cases is strongly guided by the classic IDE/engineering mindset. It must be executed "properly", with little questioning of the assignment itself. The questions that are asked concern 'cause and effect' at the product level.

Reflexivity

Reflexive practice is contemplating implications of what they have learned and done as opposed to reflecting on the process. The DEM plus considering own work seem to increase reflexivity. They themselves indicate that they normally block this: Since they are not asked to evaluate the entire process, but to go back and forth several times between design and philosophy, it seems to be taking off. They are also more attentive to what they say and write down

Dodging the hard questions

The general consensus seems to be that saying 'no' blocks your creativity. The methods that IDE entails are therefore not about bad ideas, but about ideas that need to be considered later in the process. This does not seem to be beneficial for an ethical process.

The link between moral sensitivity & creativity/advocacy

After the deus ex, many of the ideas were in line with the principle of moral sensitivity. Questions and design ideas also emphasized this sensitivity, but the translation into action often remained lacking. They also find the part about how to communicate this (advocacy) difficult. How do you make it credible?

Making critical time

One of the most important takeaways is that if you make room for critical thinking, allow time for it, and let people reflect on what they have just done, it will happen naturally!

The essence of "philosophy"

Almost every student gets stuck on the word philosophy, especially when something is a bigger question. Even after De Regt's definition, there still seems to be a tendency to say "this is not philosophical". They do not see their own questions as philosophical either. This seems to be a consequence of an essentialist view of philosophy. In other words: There is an essence/word/construction/feeling that, if it is present in a question, it can be labeled "this is philosophy". In addition, philosophy is an activity of great thinkers, and we do not engage in that here. This does not assist the thought process or critical thinking skills.

No time no critique

It is important to note that the students themselves sense that something is missing, or that they need to think about something for longer. Then there must be time for that. Otherwise, it is one of many facets that must be taken into account during the design process.

The bridge between philosophy & practice

There is a demand for more knowledge, vocabulary, and explanations of different thought processes and tools. How do you apply philosophy in your design process? Where do you make room for it? And how can you find a word that you feel but don't know if it's a thing? In addition, some people are familiar with certain concepts, but that's not quite what they want to say or aim for.

Meta-moments

People can and want to explore the philosophy of design itself. What does it mean to design? To believe in material interventions for social change? Is design a being or a doing? Where should you go to contemplate these kinds of meta moments? Many seek refuge in philosophy.

Necessity without a consensus

Everyone interviewed in this study was immediately convinced, in terms of emotion and initial reaction, that philosophy should be integrated into the IDE curriculum. The necessity of this is also recognized. However, there is disagreement about what it is, what it should be, what it would yield, and how and where.

Kinds of problems

There is confusion about what kind of problems exist. People think of wicked problems, dilemmas, paradoxes, but the question is whether behind those big words there is actually an understanding of how such a problem works. Naming it is not enough to deal with a situation tactically and effectively.

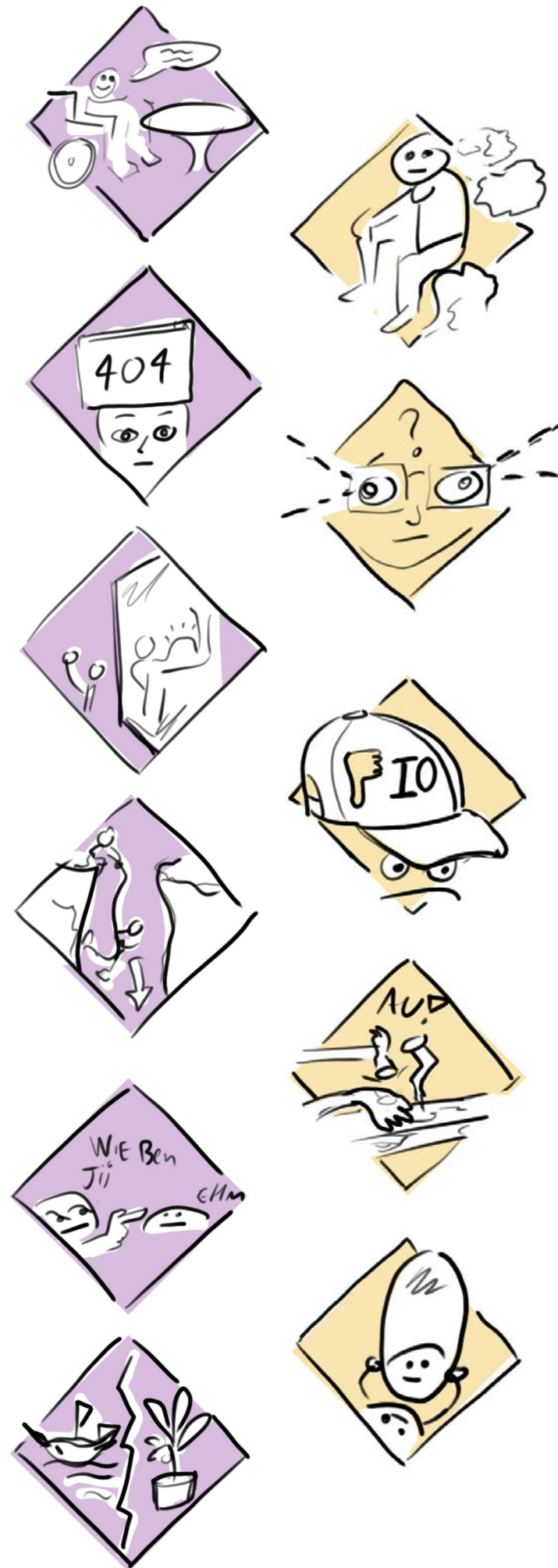
Discomfort and Design

From these insights we can conclude that:

Discomfort is necessary in the design process. Learning is not done in a safe and comfortable environment where everything stays the same. Where the voices of people in need are ignored. Especially in the field of design, the voices of people for whom is designed are needed. When these people are unknown, they are also unwanted at the table of the design process. Because we don't know how to deal with their existence, what questions we should ask, and how to incorporate their voice.

This cannot be done alone, there needs to be time to critically reflect together. Together we can work through complexity, and help each other when our own system encounters and error. Only then we can discover unseen parallels between the topic at hand, and look our overconfidence in the eyes.

Without becoming cynical, we should look at our past actions. Reflect on earlier designs, and think of how we can do better. Discomfort is and should be emphasized as essential for a well-off design process.



Explanation of themes

Most disadvantaged at the table

In the process, there is a demand for a voice from the most underrepresented. They lack someone to whom they can offer their stories. If one of them turns out to be that person, then there will be more support for personal experiences to reflect on.

More practice, more depth

One of the themes is that there must be room for depth. Philosophy is seen as a tool/method/context for this depth. Room must be made for depth with philosophical tools throughout the entire study programme. This does not necessarily relate to teaching Western history of philosophy, nor to understanding a particular lens. You should have a set of philosophical skills in your IO toolkit.

Pat positions and system errors

Students can find themselves in a state of "being stuck", whereby they exceed their own ethical boundaries. This leads to tension, which can also result in self-punishment. It also does not lead to a desirable or constructive conversation if they (or each other) cannot help each other through it. Cynicism and fatalism must be avoided, as they get in the way of learning and reflection.

Working through complexity

Another perspective on philosophy is to consider the problem and its complexity. In other words, to weigh up both sides in a particular field, to apply ethical dilemmas, and to reflect on certain design trends and problems and to have a broader view of them.

Overconfidence and accomplishments

Being confident about what you have done is part of the design profession. However, in contexts such as this, it is misplaced. During concept pitches, some people improvise. But these unfounded claims and ideas, brought up at the last minute, miss the mark even more. The designer overestimates themselves, making the situation even more difficult to resolve.

IDE-rony

An important insight is that if we critically review projects from the bachelor's programme in the master's programme, we may become frustrated. The irony and new perspective on design can make you cynical about why we didn't do it that way back then. This is an effect that should be avoided.

No journey alone

On your own, you cannot reflect, you cannot engage in dialogue, nor can you discuss what you are thinking. The best way to achieve depth (quality or quantity) is to do it together.

Constructing discomfort

Learning does not take place in a comfortable environment, nor in an environment where nothing new happens. In other words, there must be a balance, or sometimes things must be thrown off balance in order to feel where the boundaries lie. Given that taboos and people change over time, tackling uncomfortable topics (even if only as an educator) seems wise to reflect on.

Unknown makes unwanted

Students have an idea about historical stories, but they lack depth. When they read about them "on paper", they don't feel motivated to learn more. This makes it an abstract story that is only worth a Google search, and they mainly continue with their own experiences or similar experiences that they have already had,

A moment to reflect

There are some examples of discussing the problems we are trying to solve. It links to the design for current themes. The emphasis is also on what kind of problems they are.

Unseen parallels

During the process, other parallel examples are constantly being discussed. These seem perfectly fine to the designer, but they too deserve critical scrutiny. One example is that in a discussion about the colonial past, a design intervention is based on initiatives in a botanical garden. But this too is part of the problem.

Speaking a designers language

From these insights we can conclude that:

When regarding philosophy and design, it is not only beneficial: It can already encompass skills and practices the designer has. Through speaking the language of designers.

Many designers are already sensitized for philosophy but do not yet know how to ask deal with said questions. Visualizing not only their design interventions but their own thoughts, gives more material to reflect upon. Materializing was relatively unexplored, however it was discussed widely that some products have forms that already bring philosophic assumptions with them.

Philosophy is regarded as a starting point for a design process. Where some students have an inherent love for philosophy and already feel the drive to explore, some students want to try it and expand their knowledge.

Furthermore, philosophy is seen as a tool to better understand systemic issues. Students would rather have philosophic practices as skills than discussing trends in the design landscape.

In the end, the TU Delft has enough knowledge, courses, and staff available to set up an inter-faculty master/minor regarding philosophy and design/built environment. A bridge between practicing philosophy and making/engineering can be beneficial. Especially when critical questions and critique are regarded as a 'creativity blocker'.



Explanation of themes

From the head, to the paper, for more reflection

The more people draw things, the more can be discussed. Paper does not judge, but once it is there, you can judge it yourself later. In addition, writing something down is less confrontational than drawing something. The transcripts also show a lot of stammering and uncertainty. You cannot pin each other down on what was said, but you can on what is written down.

Playful materials

It is precisely the playfulness of the materials that creates a sense of lightness in the creative and reflective process. This allows them to create more and gives them more to reflect on later, and to pass through their hands. The playfulness also enhances the atmosphere by bringing a sense of lightness through the action.

A love for philosophy

Many people emphasize the depth they want, and that this should be offered in practical design case studies and design education. Or an elective course where you can make a (semi-)conscious choice for depth and venture into it in a structured environment. A minor is not mentioned either, but could offer the space for this. Philosophy & Design in its broadest form could well be broken down into smaller pieces.

Form, sensitivity, and consequence

There are contradictions or dissonances in concepts. Coming up with a design can already raise philosophical questions. There seems to be no room for this in the ideation process, nor in the concept selection process. A wearable device used for safety already has consequences in terms of design. Sensitivity to types of design does not seem to be sufficiently developed, in contrast to the responsibility issues that are recognized and raised.

The world of Sofie

Furthermore, philosophy can also be seen as an exploratory starting point. Here, the emphasis is once again on great thinkers and history. It involves adopting a certain school of thought in philosophy and, from there, reasoning and seeking depth.

Actual systemic thinking

Designers want to interfere with the system level. This in itself is a contradiction. At the system level, you can only relate to "problems" and take a position. In the humanities, this is a given; everything is a debate for which there is space and time. At IO, it is also seen (for example, in graduation projects) that the complexity of the problem is underestimated and that students overestimate their own abilities.

Not trends but fundamentals

There is criticism of the so-called trend subjects. Broad skills should be taught rather than immediately focusing on hypes. Alumni also indicate that they would rather have basic knowledge and tools than a focus on wearables or a specific method that is not used in the field.

An inter-faculty master/minor

We have enough TU Broad subjects to set up an overarching master or minor programme. By combining Dare to Design + a philosophical design studio + free choice options + and a mix of IDE and TPM, you can set up a master's programme that really focuses on thinking and applying philosophy in the process. With only one design project you can have a well-balanced minor. The only link that is really missing is an introductory course on the philosophy of technology itself. Possibly also a history of Western/Eastern philosophy.

Critique is a creativity blocker

Criticism is seen as an obstacle to creativity. This is quite a difficult proposition because, as a designer, you also want to be morally creative. But if you cannot find a balance, you can also become cynical about your own role in the whole process.

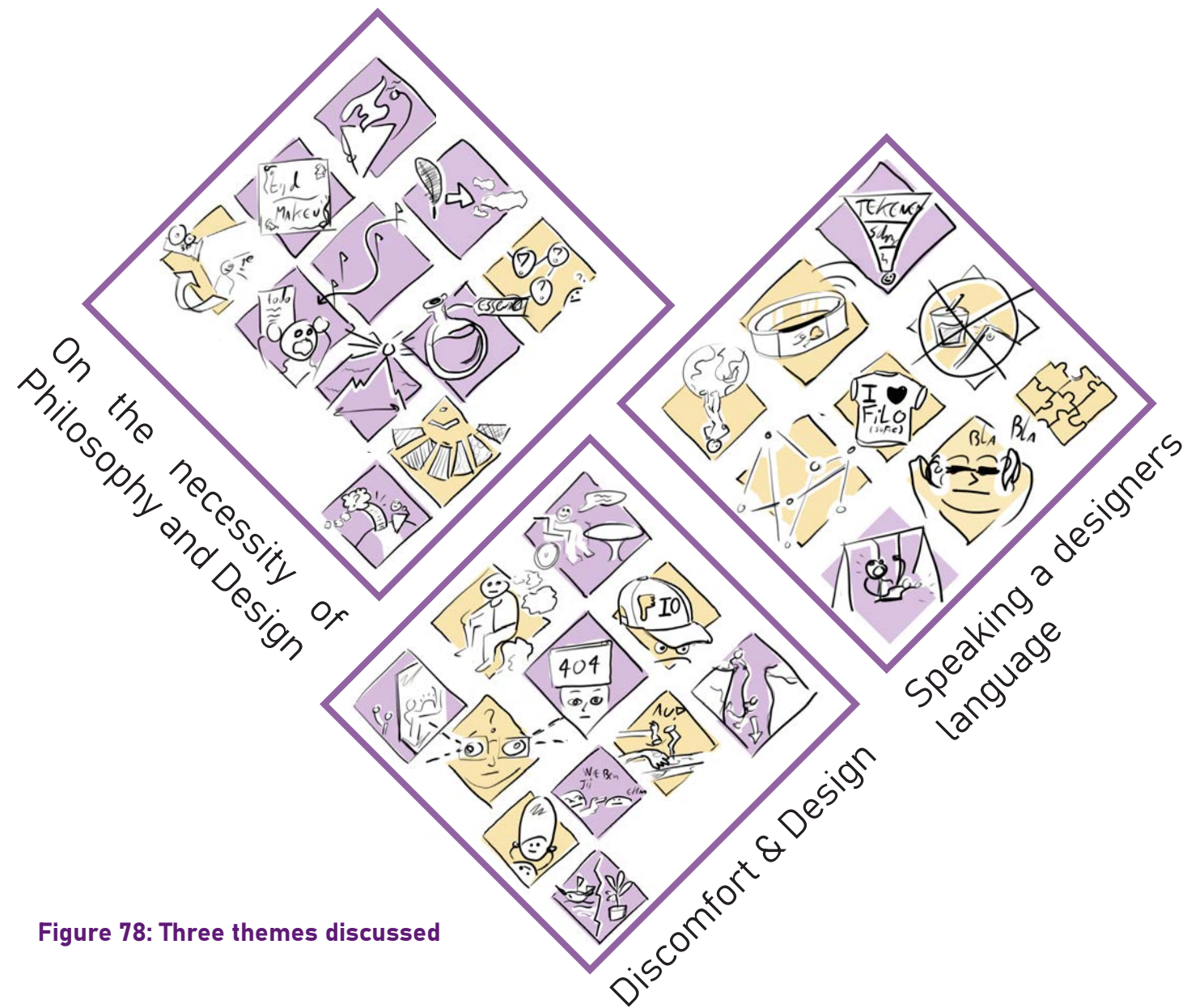


Figure 78: Three themes discussed

Concluding remarks

We can conclude this contextmapping and validation effort with three distinct themes on philosophy and design. As seen above in figure 78: Discomfort & Design, The Necessity of Philosophy for Design Education, and Speaking a Designers Language.

These themes serve on one hand as a validation of earlier chapters, where the assumptions made are reflected in various clusters. While on the other hand it also serves as a broad exploration with multiple starting points for new research projects or philosophy and design efforts

In the next chapter the feedback regarding the NDC will be elaborated upon. A final iteration will be made and the project will be rounded off.

H9. Synthesis: From NDC to multiple educational exercises

In this chapter we will design multiple new assets around the Narrative Design Cases based on the feedback, observations, and insights of the validation effort.

In this chapter we iterate on the Narrative Design Cases, based on insights of the contextmapping effort. First we will look at the design of the NDC itself, hereafter we will look at the NDC journey.

Iteration on the NDC design itself

From what is said and done, we can sum up the main points of improvement:

- Reading together with more than two people is a challenge.
- More 'white space' to make annotations and markings on the cards themselves.
- New forms of assignments to do in the first part, with a more in depth explanation.

From what is made and observed we can also deduce that

- There is much fidgeting done during the uncomfortable silences, an opportunity to make something to interact with.
- In the session where the NDC card had the DEM on the back, the turnaround moment gave it a performance-aspect.
- The explanation card with the theory and images was not read.

With these aspects a new iteration was made. First the idea of wooden miniatures accompanying the cards was worked out. In part, because it felt as if the material component was missing: There was no 3D component to the cases.

A wooden miniature with an interactive component for each of the three cases was devised. All were made intuitively in the software of the laser-cutter. For the Efteling casus a wooden schommelship that moves is made. The teeth-whitening case, a miniature billboard with re-arrangeable components was created. And finally for the Anne Frank House a simple replica of the house was made in combination with too large people and wheelchair figures.

To make the miniatures more than just laser-cut wooden figures, I decided to paint them (Figure 79, 80, 81, and 82). Using the same colour palette as the NDC cards. Yellow indicates the moving and interactive parts, and purple the static. In the end the acrylic paint did not look as clean as I had envisioned, but it was still better than the unpainted prototype-look it had at first.



Figure 79: Painting the wooden lasercut miniatures



Figure 80: The Efteling Schommelschip miniature

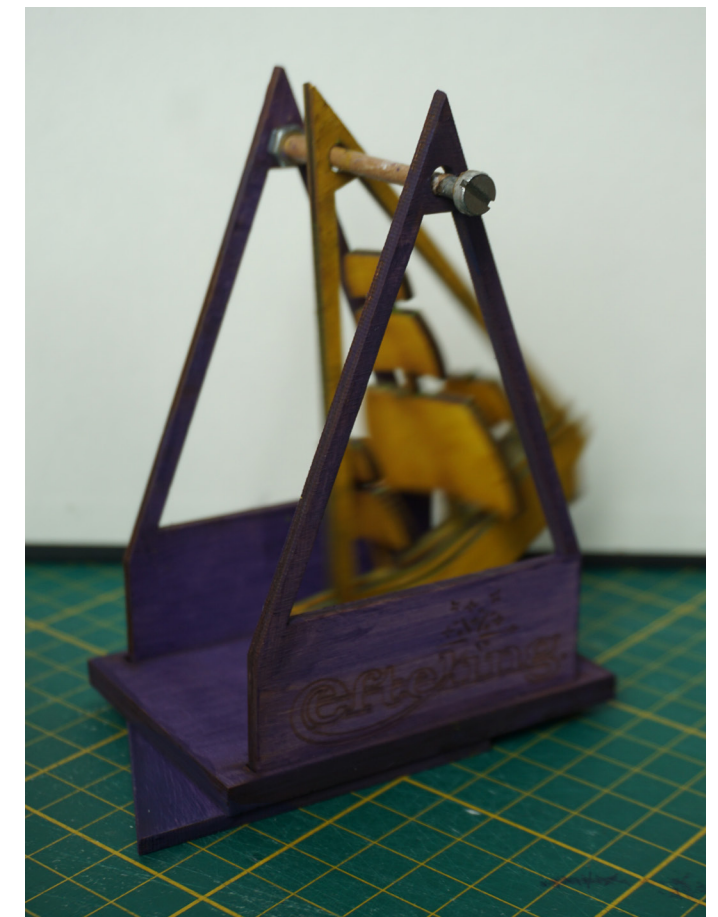


Figure 81: The Anne Frank house and wheelchair miniature



Figure 82: The Prodent billboard campaign miniature

After this, a redesign of the casus cards was made through a new paper prototype with wire-frames (seen on the next spread/figure 83, 84, 85, and 86).

In addition to this there is more 'white space' for notes, and the DEM is hidden inside the casus card. This means that the NDC has become a folded A3 instead, that is taped or glued shut. A pair of scissors is needed to cut it open and reveal the depth of the casus.

The choice of paper needs to be thicker than the design used in the tests, but not too thick or laminated that there can be no notes or markers used on it. In the end this is a balancing act: Thicker paper feels more 'professional', rather than something quickly printed. However, it does not need to scare away students and keep it 'untouched'.

This wire-frame serves the basis for the final iteration of the NDC's, shown on the next spreads. The narrative has stayed consistent with only slight improvements such as a reference list, explanation of possible stakeholders, and a better worked out 'assignment section'.

It also has a place for the miniature of said casus to be placed onto the card.

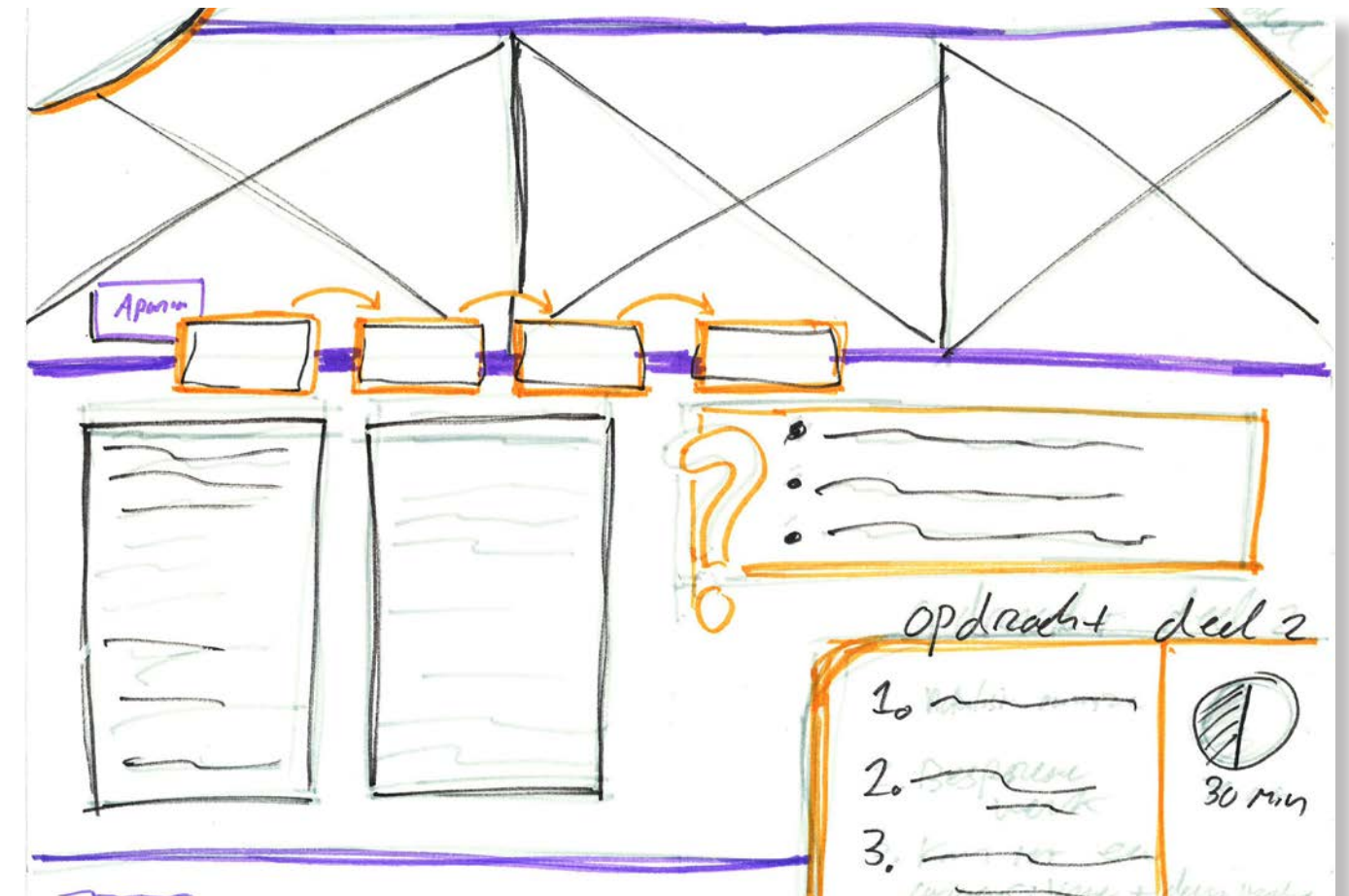
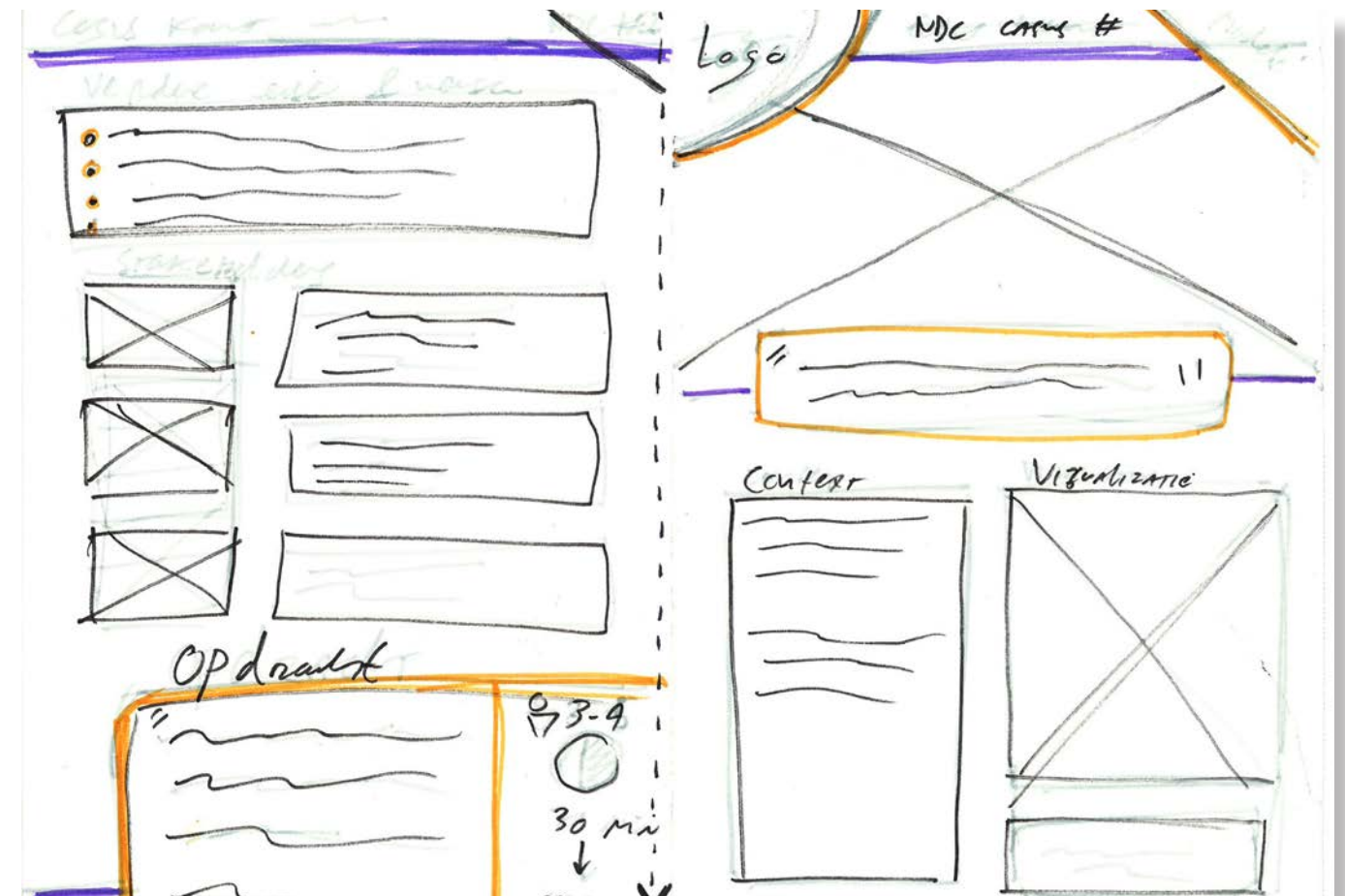


Figure 83: Front and back of the wireframe paper prototype



“Ontwerp een informatieve ervaring over de geschiedenis in en rondom het schommelschip die leuk, licht en familievriendelijk is”

Context bij de opdracht:

Wij van de Efteling willen een 'interactive experience' rondom onze schommelschip attractie. Er is vanuit de samenleving een vraag voor meer educatieve historische verhalen. Deze trend is ook overgewaaid naar de pretpark wereld.

Verder willen wij wel dat de ervaring in overeenstemming is met de identiteit en ervaring van de Efteling: Oftewel, leuk, licht, amuserend, en familie vriendelijk. Daarnaast is door onze stijgende populariteit, de wachttijd extreem toegenomen. Wij zien dit niet als probleem maar als opportunity om het publiek te 'infotainen'. Zo blijven wij als Efteling relevant en zijn we ook aantrekkelijker voor schoolbezoeken en reisesjes.

Visualizatie van de context:



Draai de kaart om voor extra informatie en de opdracht

Figure 84: The front of the final iteration of NDC

Verdere eisen en wensen:

- Geen veranderingen aan de attractie zelf, die moet intact blijven.
- De experience moet in stijl aansluiten bij de attractie en thematisch deel van het park
- Tevens moet de experience 'hufterproof' zijn.
- Ook moet het ontwerp tegen het Nederlandse klimaat kunnen: Wind, kou, en regen.

Eventuele stakeholders:



De Efteling begon in de jaren '30 als een sport- en wandelpark, het opende officieel op 11 mei 1951, en groeide met de opening van het Sprookjesbos op 31 mei 1952 uit tot een wereldberoemd attractiepark. Tegenwoordig staat de Efteling voor sprookjes, verbeelding, en een pretpark voor iedereen!



Museumschip de Halve Maen is een replica van het historische schip waarmee kapitein Henry Hudson in 1609 de Hudsonrivier opvoer. Het schip, oorspronkelijk gebouwd in 1608, was een verkenningsschip en is nu een museumschip dat voor publiek toegankelijk is en regelmatig van ligplaats wisselt. Het museumschip ligt in Hoorn, Noord-Holland.



Studio Louter is een Amsterdams ontwerpbureau dat zich richt op het ontwerpen van onvergetelijke bezoekerservaringen voor musea en erfgoedinstellingen. Ze gebruiken hiervoor een methode genaamd 'Emotion Design'. Op lokaal en internationaal niveau ondernemen ze verschillende projecten rondom geschiedenis.



Opdracht:

Kies een invalshoek voor de informatieve geschiedenis ervaring

+

Maak een A3 poster met daarop verschillende ontwerp-schetsen

Tijd: 30 minuten

Knip na het presenteren van de poster de kaart open voor de tweede opdracht



Figure 85: The back of the final iteration of NDC

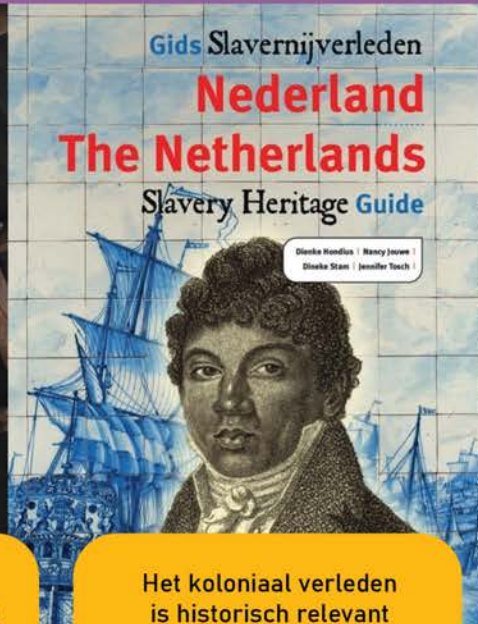
Deus-ex-machina #1



De Aporie in deze casus:

Het schommelschip moet historisch relevant, licht en leuk worden door een design experience

Het schommelschip is directe referentie naar een van de kopstukken van het koloniaal verleden



Het koloniaal verleden is historisch relevant waarnaast ook van educatief belang



Design maakt het koloniaal verleden, licht, leuk en familie-vriendelijk



- schaalmodel -

Afbeeldingen van links naar rechts:

1. Monsieur cannibale in de Efteling
2. Kaft van de Gids Slavernijverleden Nederland
3. De Halve Maen replica in de grachten van Amsterdam
4. Historische kaart vanuit de expositie Manahahtaanung of Nieuw Amsterdam?

Uitleg van de casus:

De valkuil in deze ontwerp-casus zit in het focussen op vragen zoals: "Hoezo kan leren over de geschiedenis niet leuk zijn?" of het meteen beginnen met ontwerpen van educatieve ervaringen zonder te hebben gekeken naar waar de schommelschip attractie naar refereert.

Het schommelschip in kwestie is een directe referentie naar het VOC schip de Halve Maen. Dit schip was een van de eerste schepen van de VOC die de atlantische oceaan overging en het fundament legde voor de kolonisatie van het eiland Manahahtaanung. Later werd dit als kolonie Nieuw Amsterdam, en daarna New York genoemd. Dit schip is daardoor onlosmakelijk verbonden met het koloniaal verleden van Nederland.

Organisaties zoals de Efteling zijn vaker bekritiseerd wegens objecten en attracties die gebruik maken van het koloniaal verleden als decor. Denk aan monsieur cannibale: de attractie die door Eftelingontwerper Henny Knoet in het leven is gebracht en van 1988 tot 2021 in de Efteling een racistisch stereotype vertolkte. Ook beweert het museum Halve Maen, die een replica beheert van het schip dat het geen link heeft met het koloniale verleden. Dit ten voordele van hun reputatie. Dat terwijl dit één van de 100 kopstukken van het koloniaal verleden is, volgens de gids Slavernijverleden Nederland en haar onderzoekers.

Verdiepende bronnen

- Hondius, D., Jouwe, N., Stam, D., & Tosh, J. (2019). Nederland: Gids Slavernijverleden - The Netherlands: slavery heritage guide. LM Publishers.
- Pater, R. (2021). Caps Lock: How capitalism took hold of graphic design and how to escape from it. Valiz.
- Sens, N. (2025, March 29). Van J.P. Coen tot Aletta Jacobs: Wie bepaalt welke smetten onze sokkels verdragen? De Groene Amsterdammer. <https://www.groene.nl/artikel/lege-sokkels>

Filosofische vragen die deze casus kan oproepen:

- Wat is de rol van design in het herstel of instandhouding van het koloniale verleden?
- Is het moreel verantwoord om het koloniaal verleden als leuk, licht, en familievriendelijk te presenteren?
- Wat betekent het om een object met zo'n geschiedenis in stand te houden, of om daarop door te itteren/innoveren?
- Wie zouden eventuele stakeholders in dit design proces wel moeten zijn?

De opdracht:

Besprek samen hoe jullie nu verder gaan. Wijs één iemand aan als notulist. Neem een stelling in als ontwerpers rondom dit probleem. Daarnaast, itereer op de poster: Beweeg heen en weer tussen filosofische vragen en design inzichten. Schrijf alles op zonder oordeel! Het hoeft en kan ook niet af. Presenteer jullie conclusie.

Tijd: 45 minuten

Figure 86: inside of the final iteration of NDC

Next to the design itself we also have to look at the student and educator journey. We can again consider the explicit and implicit insights and observations for iteration:

- The need for extra explanation of ‘types of problems’ in design contexts: From an in-depth and simple explanation of the aporia, towards what a wicked problem paradox or dilemma actually is.
- The role of the coach is not clearly defined in the NDC process, what do they have to explain? Where do they need to coach?
- How does one make an NDC themselves? Clear guidelines and considerations are needed.
- Everyone wanted to peak at the other NDC cards created, in other topics.

An aporia theory instrument

To tackle the first point of improvement a theory instrument of the aporia is devised.

Already earlier on in the process, I had the idea to visualize it as a puzzle that does not fit. Because the aporia is about the sequence of arguments not lining up in the bigger picture: I chose to make it a circle-puzzle where the final piece looks like it fits. But when you try to place it, it will not fit.

The first iteration did not work, because the margins were not tight enough. Therefore, even though one piece was designed to be bigger and not fit, it still did (Figure 87).

The second iteration did work, because I made the noddges longer so it would have less wiggle room. Plus, I glued one piece onto a square so that it had more resistance and the final piece could not be squeezed in. I painted it in the same style of the miniatures. Not only to project other design aesthetics onto it. But to use colour to show that the weakest link has to be debated and rejected, and thus replaced by a yellow ‘fitting’ argument (Figure 88, 89, and 90).

This theory instrument materializes the theory of Aporetics as described by Rescher (2009), and replaces the explanation sheet with an easier to understand and interactive instrument.

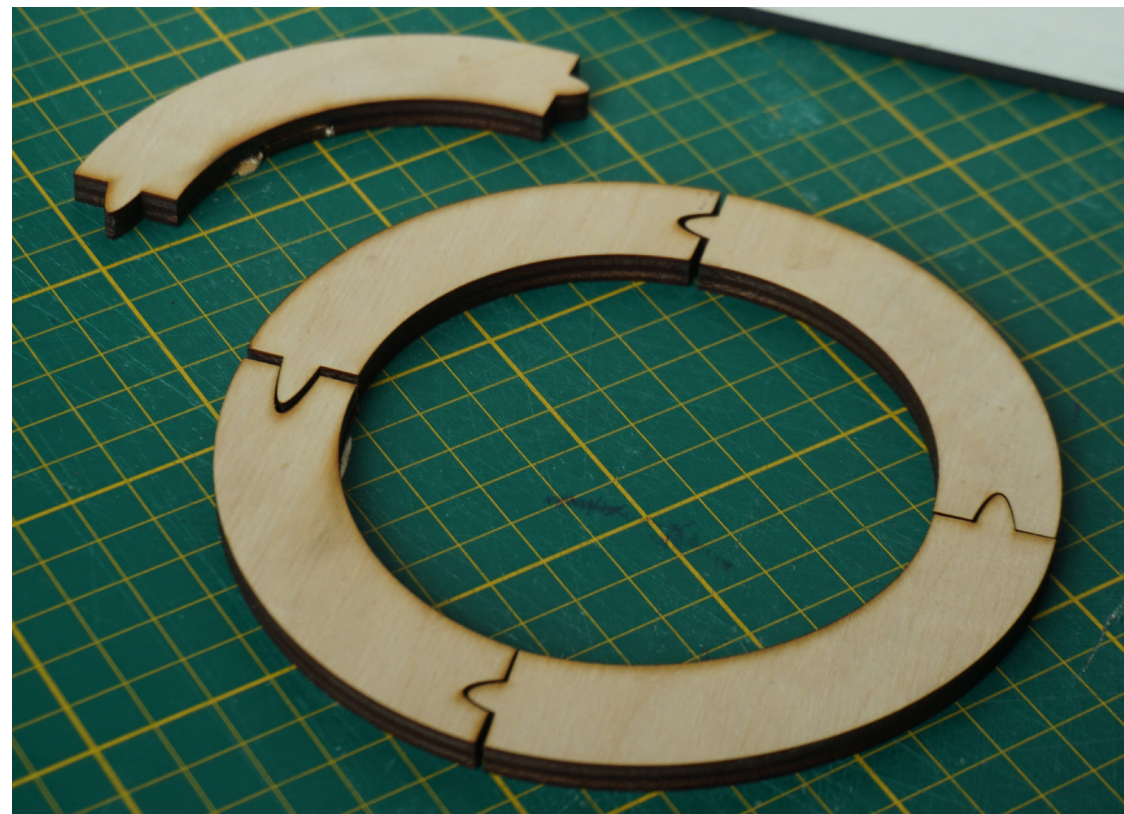


Figure 87: The first ‘failed’ theory instrument for the aporia



Figure 88: The and improved theory instrument for the aporia



Figure 89: A mock-up of the instruction booklet



Figure 90: A mock-up of the inside of the instruction booklet

Introduction booklet

Next to this, we can create an introduction booklet to the NDC cases with an explanation of all the facets for coaches. From creating the NDC themselves, to ways of implementing it in educational settings, and possible roles of the coach can be discussed in such booklet (Figure 92).

This booklet can also voice the conferences, advices, and insights represented and uncovered in the earlier context mapping clusters/themes. For now a mock-up of the booklet has been made for illustration purposes.

One important note regarding the context. If this was a course, it would be important to acknowledge that not every teacher/coach/educator explains the content the same way. From the validation it was concluded that this causes friction between educators. So, if this educational module and exercises was done on a bigger scale. There need to be video lectures accompanying the whole kit, or one introductory lecture.

Philosophy & Design exercise cards

One final addition of the NDC journey regards the question of 'what's next?'

During the whole thesis process many ideas for educational exercises came to mind. Some already existed, while others did not. During interviews and expert sessions some were even invented in conversation. To acknowledge these and give these a place in the final design. These exercises are summarized and explained in short on a 'philosophy and design exercise card'.

These cards serve as inspiration, additions, and a 'fix' for passionate students/educators wishing to explore philosophy and design more. Exercises that already exist or devised by educators and scholars are referenced to. So, to not claim ownership of work that has been created by others.

To include these in the final design is a deliberate choice. Because current templates of philosophy and design exercises (from *Edusources* for instance) have no visual and material components and are solely text in a Word-document. Next to this, this thesis serves can serve as a starting point for philosophy and design integration and therefore also wants to show what there already is.

Some cards are based on research-through-design activities, museum visits, or earlier prototypes in the scoping process of the thesis. Most of this is described in the Post Scriptum chapters.

The set of P&D cards is not complete, for now regarding the scope of the thesis they serve mostly illustrative purposes. As well as showing that most philosophy and design exercises cards are already thought in some form in current curricula.

The P&D exercise cards can be seen in Figure 93, and the next spread. The current five cards show three levels of difficulties. Indicated by either one, two, or three 'the thinkers' on the back of the card (Figure 91). Every card has a small explanation with relevant sources, as well as visual representations and examples.



Figure 91: A rendition of the thinker as seen on the P&D cards to show difficulty

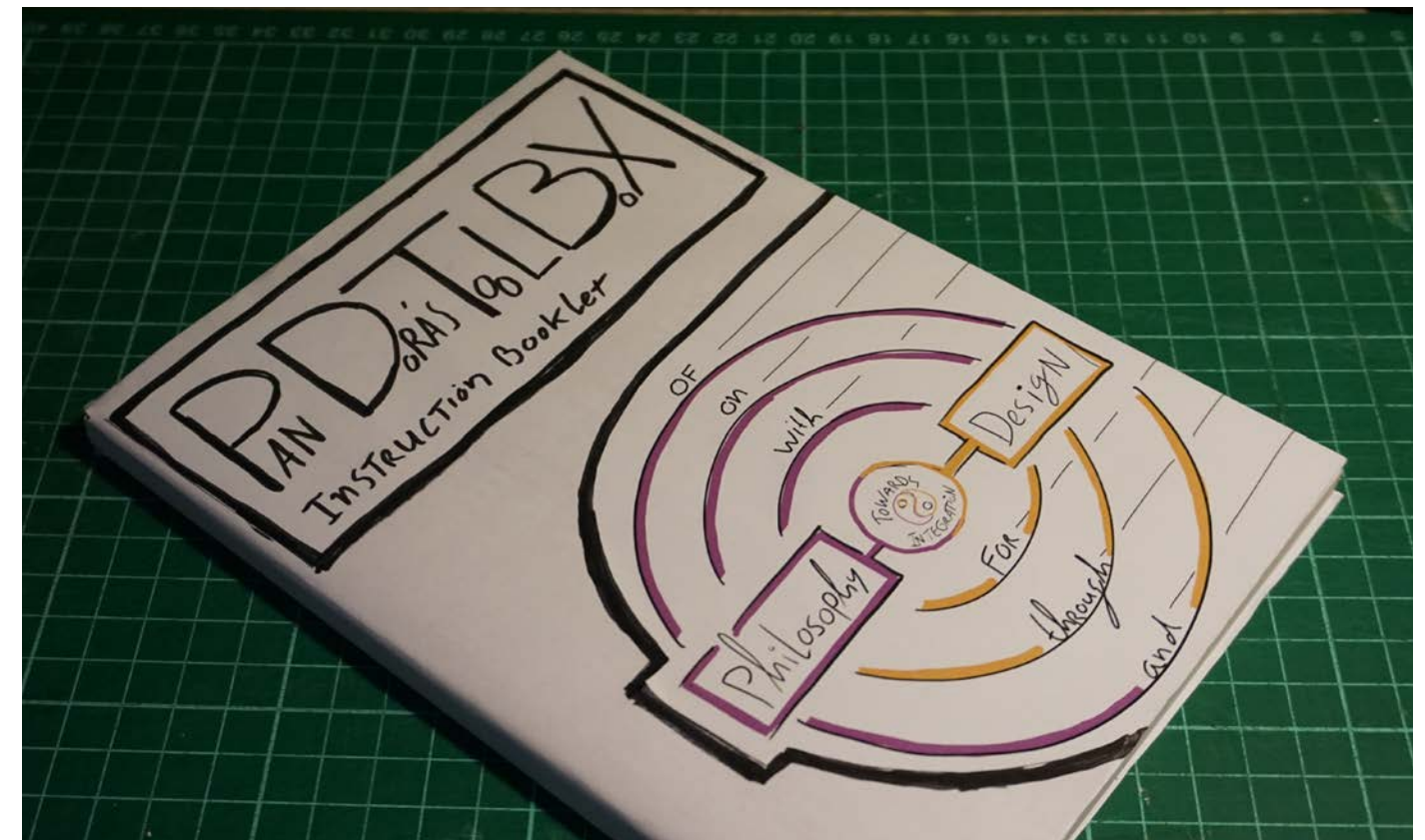


Figure 92: A mock-up of the instruction booklet

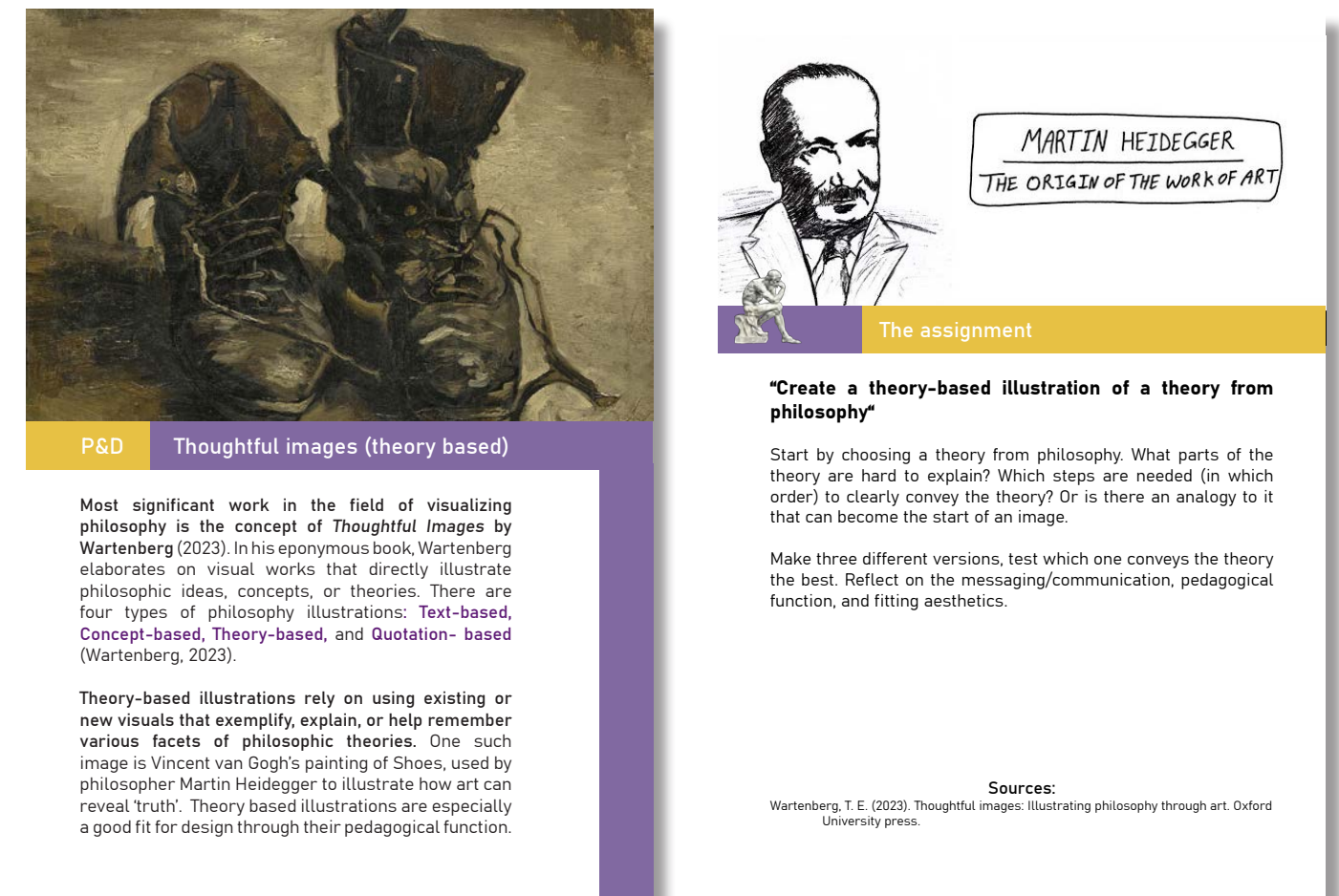


Figure 93: A P&D card (front on the left, back on the right) more on the next spreads.



P&D Thoughtful images (Quotation based)

Most significant work in the field of visualizing philosophy is the concept of *Thoughtful Images* by Wartenberg (2023). In his eponymous book, Wartenberg elaborates on visual works that directly illustrate philosophic ideas, concepts, or theories. There are four types of philosophy illustrations: **Text-based**, **Concept-based**, **Theory-based**, and **Quotation-based** (Wartenberg, 2023).

Finally, Quotation-based illustrations is when conceptual artists used the words of philosophers to create art. A work that fits inside this category is *Philographics* (Carreras, 2013). This collection of abstract iconography based on different philosophic words is a fitting example. However, due to its abstractness and one-liners it has no critical or in-depth qualities and better serves as a birthday gift.



The assignment

“Create a triptych with a quotation-based illustration of a philosophic concept of choice”

Start by choosing a philosophic wave such as existentialism, post-humanism, or any other topic you would want to dive into.

Which terms and words speak to you the most? Which concepts are interesting enough to visualize? How would you use this as inspiration.

Present the images and their origin. State the philosopher, show the work the concepts come from, and the self-made quotation based image, so to complete the triptych. The example above shows: Hannah Arendt, her concept of 'the banality of evil', and the painting of Marlene Dumas (1984).

Sources:

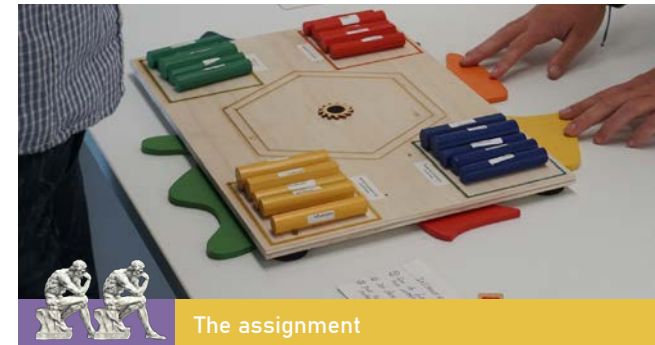
Carreras, G. (2013). *Philographics: Grote ideeën in simpele beelden* (Uitgebreide, tweede editie). BIS Publishers.
Wartenberg, T. E. (2023). *Thoughtful images: Illustrating philosophy through art*. Oxford University press.



P&D Theory instruments

Artefacts can be speculative and therefore they can also embed a philosophical reflection, even so some philosophical reflection need to be embedded in artefacts for better reflection (Singer & Tassinari, 2017). In general we take matter for granted, even though the objects, goods, fabrics, stuff and debris weave a complex web of meaning around us (Tynan, 2022).

Theory Instruments are proposed to be novel tangible tools for perspective shifts, introducing new vocabularies, and bridge disciplinary gaps (Buur, Karyda, et al., 2023). These tangibles help see the interconnectedness of products, use contexts, and user experiences, while also unfolding internal interaction with design practices



The assignment

“Design a theory instrument for a philosophic theory”

Start by choosing a theory from philosophy. From Foucault to De Beauvoir, any theory is fit as long as it is not too grand. Try to distill the theory to the essentials. What parts of the theory can people interact with? Or is there an analogy to it that can become interactive? Use this as a start for your ideation sketches.

Materialize your chosen theory through various prototyping materials: Wood, paper, cardboard, glue, second-hand board games, ready-mades, etc.

Make three different versions, test which one conveys the theory the best. Reflect on: Materialization, Design aesthetics, richness of interaction, messaging, and the possible bias.

Sources:

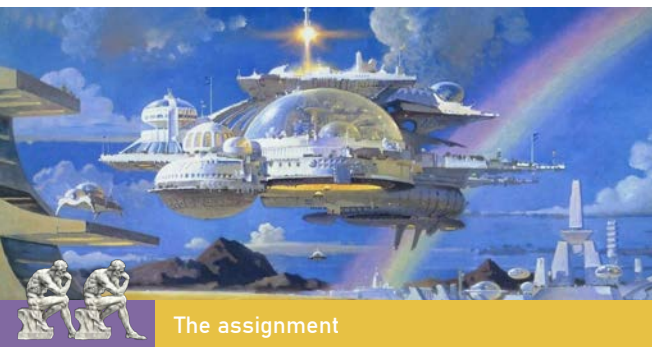
Buur, J., Karyda, M., Kjærsgaard, M. G., Sorenson, J., Ağça, A. Ö., & Antonelli, M. (2023). A Collection of Tangible Theory Instruments for Design Anthropology. <https://doi.org/10.1145/3569009.3572799>
Singer, J., & Tassinari, V. (2017, June 15). Inside/ Outside: Working our Way out of the Damaged Now (Design As Dialectics). *Nordes 2017: Design and Power*. <https://doi.org/10.21606/nordes.2017.038>
Tynan, J. (2022). *Trench coat* (First edition). Bloomsbury Academic. <https://doi.org/10.5040/9781501375170>



P&D Science-fiction Short Stories

Many modern day reflections on technology are shaped by, through, and sometimes even because of Science Fiction. Many examples are now not fiction anymore but reality. Stories as these serve more than an illustrative function. They can function as experiential prototypes of new technologies, and can highlight social relations rather than solely innovations.

Marin & Helden (2025) advocate for the ethical and philosophic relations between society and technology through creating science fiction narratives on one's own and reflecting on it. Science-fiction can also be useful in exploring historic future visions or retro-futuristic imaginaries.



The assignment

“Write a science fiction short story based on a philosophy paper”

Start by choosing a paper from a philosophy journal or archive (Philpapers/Journal of applied philosophy/etc.). Read only the abstract. Create a science fiction narrative that incorporates all facets of the philosophy paper.

Include a fitting (retro-futurist) image to support the narrative. The length of the story may not exceed twice the word count of the paper abstract used.

Switch your story with someone else. Can the other person make out the original message of the paper? What is added and what is lost in this narrative in relation to the source material?

Sources:

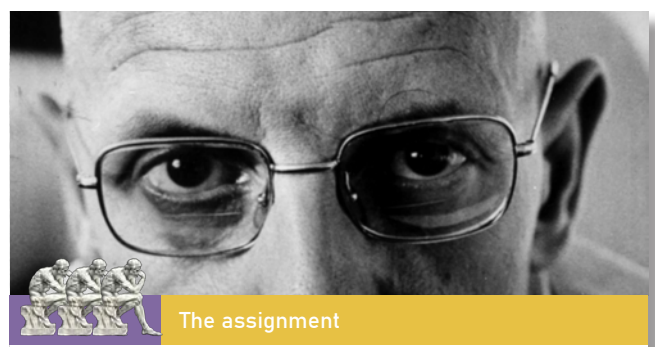
Marin, L., & Helden, G. van. (2025). Sci-Fi storyline mapping starting from writing prompts [Dataset]. *Community Ethics*. <https://doi.org/10.48544/EEE79E8A-5456-403D-9E5D-FBA2F9686F72>



P&D Through a philosophers eyes

In recent years, more and more academic publications in the field of design are inspired by philosophy. From design ethics inspired by Spinoza (Song & Jun, 2025), or design practices based on existentialist philosopher De Beauvoir (Gertz & Ozkaramanli, 2024), to even different practices to design such as a Foucaultian approach (Najar, 2022; Gaughwin, 2023)

The interesting facet at play is that the philosophy is elaborated upon through a material/architectural example, which can also be reasoned backwards. This backwards reasoning requires much specialist knowledge, and a thorough comprehension of the matter to view it through the lens of design.



The assignment

“Write a critique through the eyes of a philosopher”

Start by choosing a philosopher. Read some texts and summaries. Try to understand the philosopher under study. What was their mission? What parts of their thought can be used as a lens to critique design?

Find material/design/architectural examples on which the philosopher already elaborates. Try to stretch this reasoning further.

Write a critique in the form of an essay/manifest/paper on a subject within the broad field of design.

Sources:

Gaughwin, M. (2023). “The Apple Way”: Foucault, Design, Consumerism, and the Shaping of Apple Subjects. *Design and Culture*, 15(1), 49–67. <https://doi.org/10.1080/17547075.2022.2122115>
Gertz, N., & Ozkaramanli, D. (2024). Beauvoir versus Behavior Change: Introducing Existential Ethics to the Politics of Design. *Design Issues*, 40(2), 56–67. https://doi.org/10.1162/desi_a_00755
Najar, R. (2022). Problematizer Design: A Foucaultian Approach. *Design Issues*, 38(1), 29–38. https://doi.org/10.1162/desi_a_00668
Song, S., & Jun, S. (2025). Rethinking Design Ethics from the Perspective of Spinoza. *Design Issues*, 41(1), 51–63. https://doi.org/10.1162/desi_a_00793

Finally, I have the ambition to do another iteration purely on form. Just as one of the contextmapping information clusters was the decline of formgiving in IDE education, and the other one around forms embodying philosophic views (logos seen in Figure 94)

In the next chapter I will practice what I preach, and design an embodiment around the Narrative Design Cases and other exercises.

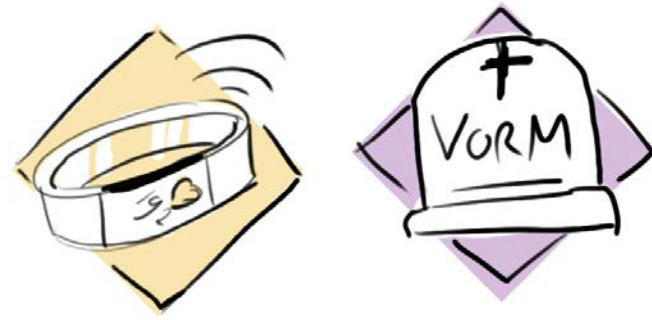
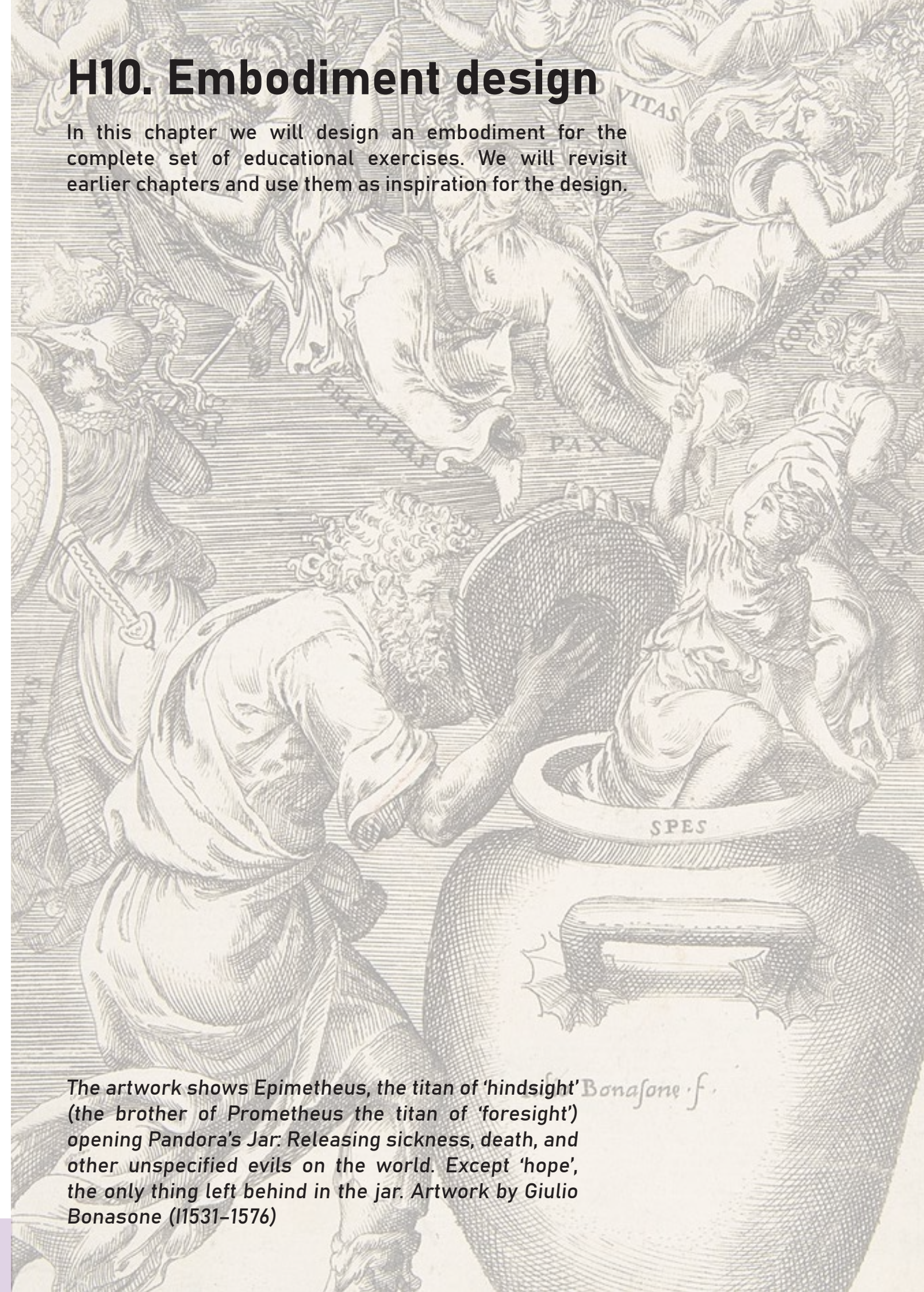


Figure 94: The two information clusters on formgiving

H10. Embodiment design

In this chapter we will design an embodiment for the complete set of educational exercises. We will revisit earlier chapters and use them as inspiration for the design.



The artwork shows Epimetheus, the titan of 'hindsight' (the brother of Prometheus the titan of 'foresight') opening Pandora's Jar: Releasing sickness, death, and other unspecified evils on the world. Except 'hope', the only thing left behind in the jar. Artwork by Giulio Bonasone (1531-1576)

In this chapter, we will go over an extra step in the physical form of the design. An embodiment is created through considering the metaphors and analogies that have surfaced during this project.

An embodiment to PerFORM

To create a final model for presentation and the image of the project, I choose to focus on an embodiment that brings together many facets of this research. Specifically, The Philosophy of technology, the three principles of sensitizing, visualizing, and materializing, in combination with the emphasis on narrative. To do this the principles of the IDE perFORM course are well fit to create such an embodiment. Where perFORM is used to create a visual storytelling with an intended effect through a given form:

per [by means of] FORM [shape, figure, mode, semblance]

The goal is to create an embodiment that embodies the narratives, analogies, and metaphors. The desired interaction is that when this educational module enters an educational setting it bring with it a mysterious yet intriguing atmosphere. An object that does not fit inside of the multitudes of educational toolkits and their modernist aesthetic. Instead of cliché playing cards and toolkits, the goal is to embody the same effect as the *MacGuffin* suitcase used in Pulp fiction. Where as when it is opened, a feeling of tension ensues (Figure 95).

The idea for creating a ceramic embodiment came to be through various material aspects that bring with them a performance:

- The weight of a ceramic box can be multiple kilo's. It is not easy to lift, and carrying it shows physical strain and discomfort on the body.
- The fragility makes that it should be placed very carefully and delicately
- The material is sturdy cannot be dented and in contrast to paper, cardboard, or wood. In a way it stands it ground and is permanent (cannot wither, only be broken with much force).
- The sound of ceramics is high pitched when it hits something, or as stone tablets moving by each other.
- When the embodiment opens it should bring suspense through the timing.
- Just as prophetic writings in caves, the clay can be engraved with metaphors used in the philosophy of technology.

To explore this more visually, during a concepting session a digital collage was made with various forms, colours of stoneware and visual metaphors. A combination of form inspiration, ceramic glazes, and AI-generated images. This served as a basis for some design drawing sketches. Design drawing as a method is in my experience a well-fit technique for clay modeling. The only downside to a sketch is that you cannot experience it in 3D, or different angles fairly quickly.



Figure 95: Shots of the suitcase from Pulp Fiction serving as a MacGuffin plot device

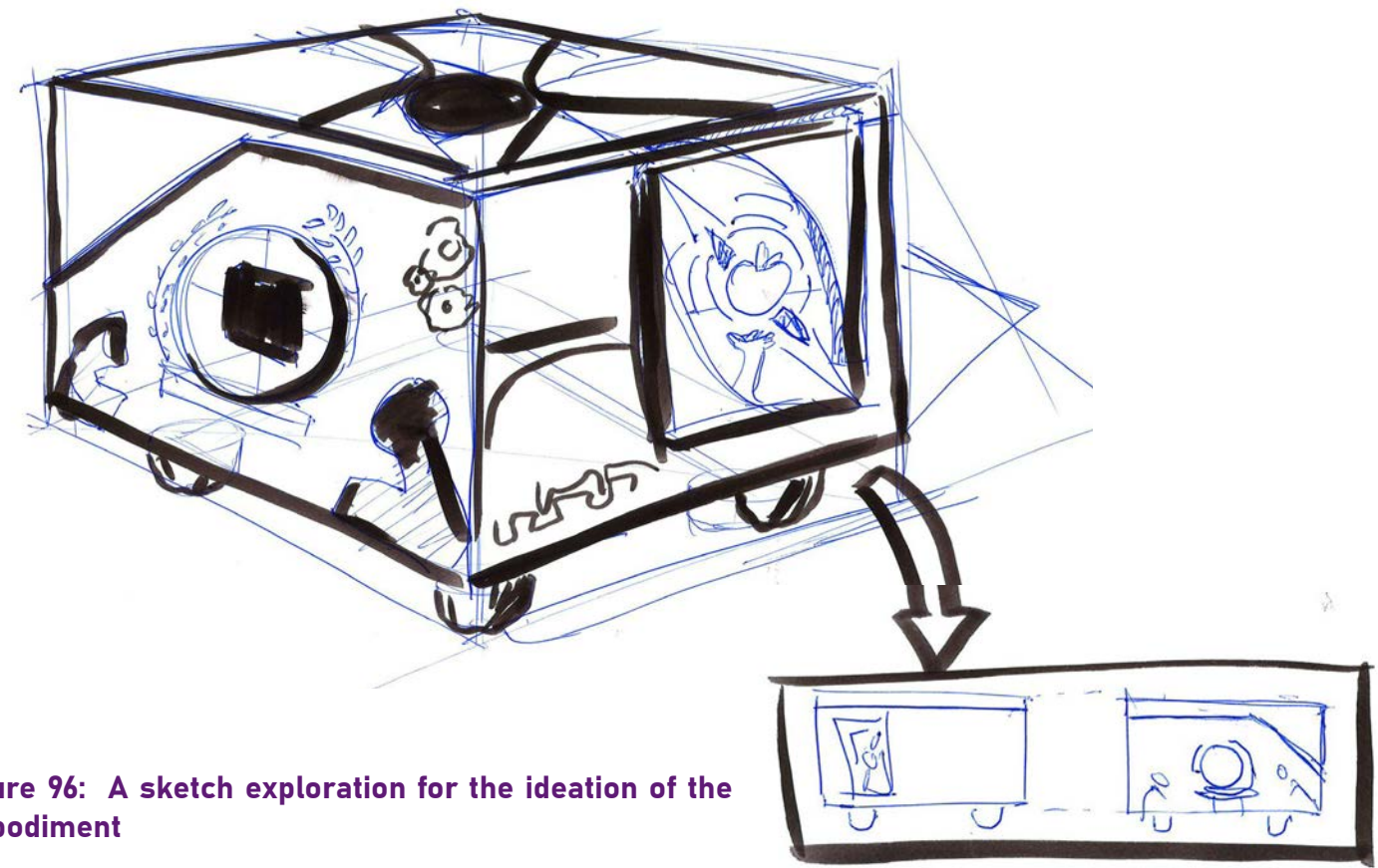


Figure 96: A sketch exploration for the ideation of the embodiment



Figure 97: A moodboard collage for the embodiment design

Ceramic imaginaries of the Philosophy of Technology

So, the design drawing sketches served as a basis for a paper prototype. An old storage tin was used to draw the various metaphors on. Now I could quickly re-arrange placements, paste new drawings over the old ones, and experience it hands-on.

Initially I found six metaphors fit to be engraved in the embodiment, that also resurface in the discourse on the Philosophy of Technology (an overview is shown in Figure 99):

- Pandora's jar/box: Referring to the idiom and myth of 'opening Pandora's box' which is doing something that can cause unforeseen problems.
- Icarus flying too close to the sun: The story and myth of Icarus with his own-made wings that melted away when he flew too close to the sun.
- The apple of Eve: The forbidden fruit from the tree of knowledge of all good and evil, taking a bite resulted in Adam and Eve being banished from paradise.
- The flame of Prometheus: The flame stolen to give to humanity, enlightenment and technological advancement.
- Sisyphus' stone: The everlasting punishment of Sisyphus, to roll up a mountain only to roll back down again when having almost reached the top.
- The 'black box' of technology: A modern metaphor for ever increasing complexity of technology. A black box that is hidden inside advanced technologies.

In the final design, I chose three of the above to visualize: Pandora's jar, the apple of eve, and the black box of technology. So to balance the metaphors from different time-periods (Hellenic period, Early middle ages, pre-digital age). As well as that these three metaphors

differ in their stories consequences. Icarus, Sisyphus, and Prometheus were all punished and the morale of their story is quite grim.

While the story of Pandora's box, The apple, and the 'black box' have relatively more ambiguity in morale, and a focus on objects instead of the people. Another aspect to consider is that the flame of Prometheus is the logo and visual identity of the TU Delft itself. Finally, the three chosen metaphors can be used to start conversations around technology and it's effects.

To explore this more visually, during a concepting session a digital collage was made with various forms, colours of stoneware and visual metaphors. A combination of form inspiration, ceramic glazes, and AI-generated images (Figure 97).

This served as a basis for some design drawing sketches. Design drawing as a method is in my experience a well-fit technique for clay modeling. The only downside to a sketch is that you cannot experience it in 3D, or different angles fairly quickly.

So, the design drawing sketches served as a basis for a paper prototype (seen in Figure 98). An old storage tin was used to draw the various metaphors on. Now I could quickly re-arrange placements, paste new drawings over the old ones, and experience it hands-on.



Figure 98: The paper prototype, made from an old storage tin combined with folded paper



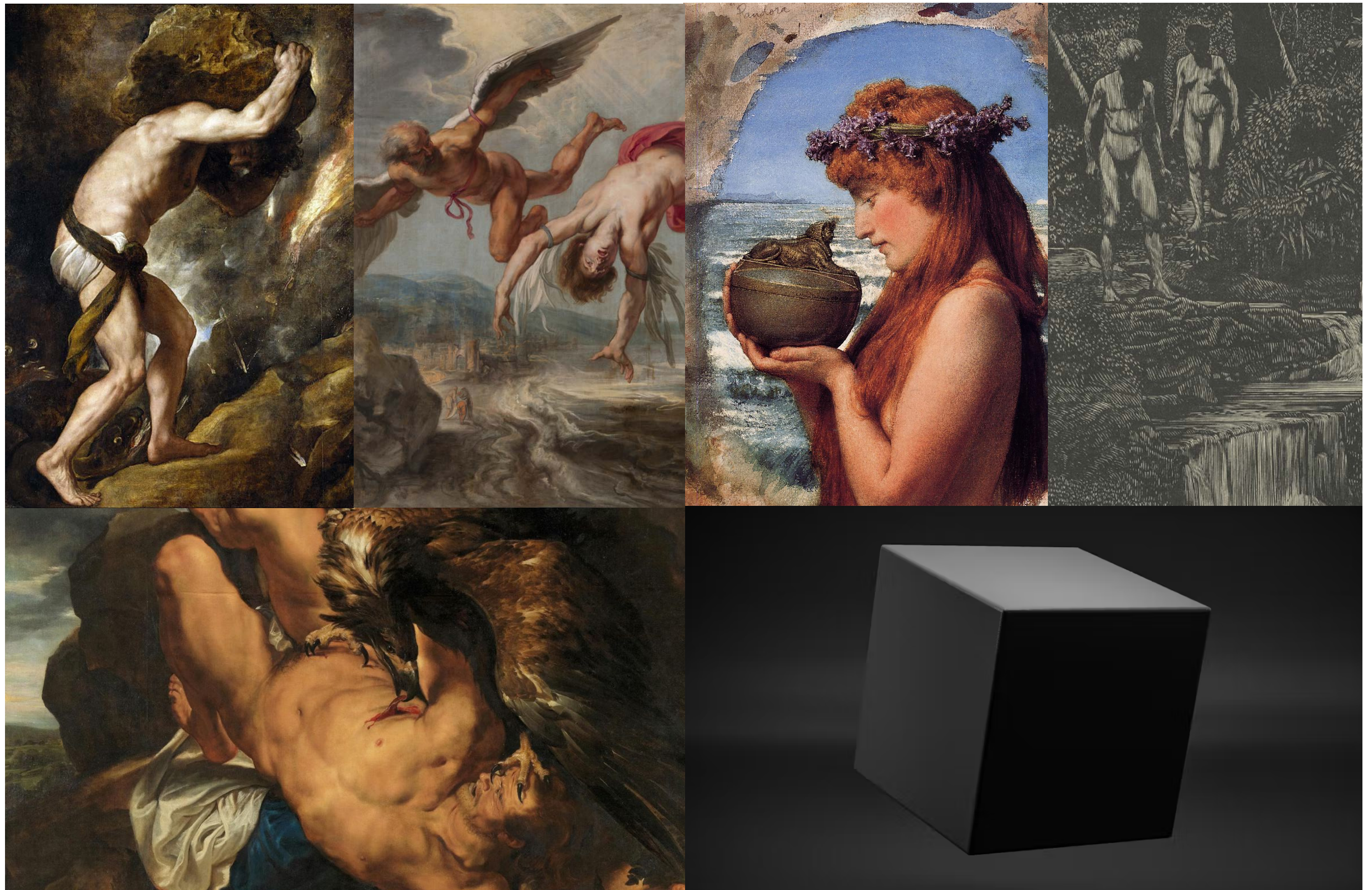


Figure 99: An overview of mythologies: (Left) Sisyphus, Icarus, and Prometheus, and (Right) Pandora's jar, Adam and Eve in paradise, and the Black box of technology



Figure 100: The making of the clay model

The process of making the clay model itself took around 5 weeks (Figure 100 to 103). The first week to make the general form in wet clay with the help of a mold. In the second week, the clay has dried and gained strength, it can be smoothed out and the whole structure is given legs to stand on. In the third week, the final touches can be made before it goes into the oven to be bisque fired (1050 ° degrees Celsius).

The size of this embodiment is not representative of the actual desired size. Clay does not only shrink around 10%, the bigger the work the

more risk it brings with baking it. Therefore this smaller size was chosen to focus on the aesthetics, rather than actual size. Next to this, to reduce the risk of the model breaking and having nothing to show at the presentation.

The fourth week, the bisque model - which is now a solid piece of stone - can be glazed. I wanted to give each side it's own colour, but this could go wrong inside the oven and give unexpected results. The choice was made to choose one base colour/glaze, and highlight the details of the story with ceramic paint.

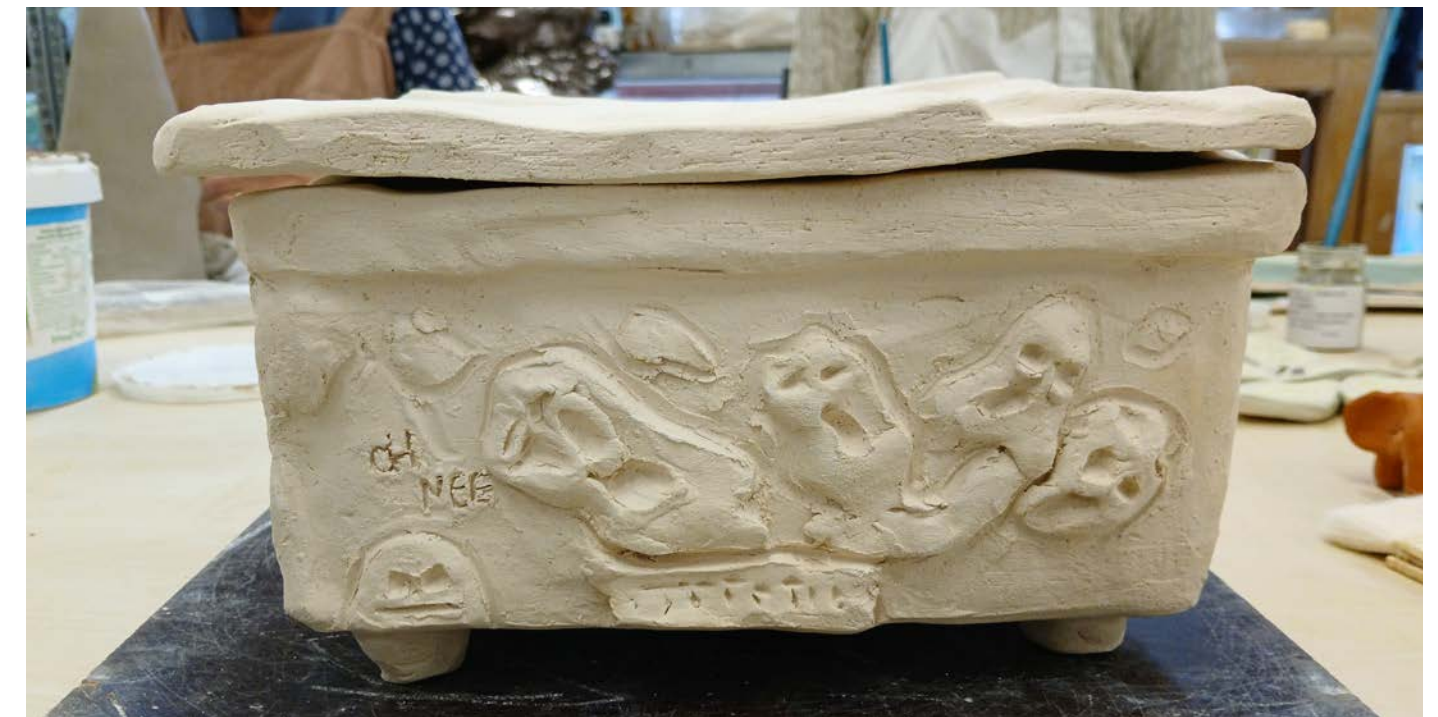


Figure 101: The bisque baked model



Figure 102:



Figure 103: The glazed model before firing at 1200 degrees Celsius

One disadvantage of this ceramic process, is that in all parts the bottom surface cannot be glazed. If there is glaze on the bottom that touches the oven floor, it will melt itself onto the oven. Next to this, it is not easily iterated upon through the lengthy process.

For now this embodiment will serve as a ceramic presentation model that imagines the Philosophy of Technology in its design. Where the material properties amplify a performance an visual storytelling through handling the object in an educational context.

It must be acknowledged that the wrong glaze has been applied. So the colour palette of figure 102 is not seen in the final embodiment that can be seen on the right). Because of the lengthy process it cannot be corrected, or iterated upon. The only imaginary that does not work anymore is the black box, because the box is simply not black because of the white-blue glaze. For the other imaginaries this glaze colour is no problem.

H11. Final design showcase: PanDora's Toolbox

In this chapter we will give a showcase of the final design, containing all educational exercises made.

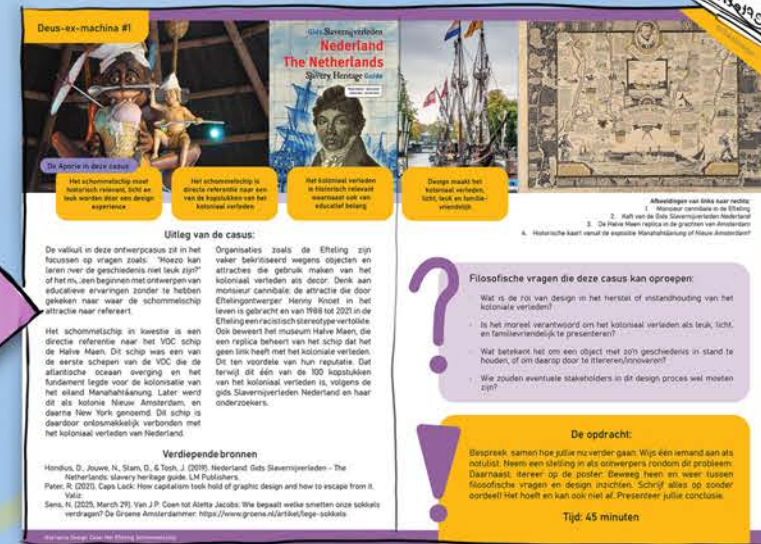


PanDora's Toolbox

Educational exercises on philosophy & design for design engineering education.

NARRATIVE Design Cases

P&D exercise cards



VARIOUS MINIATURES

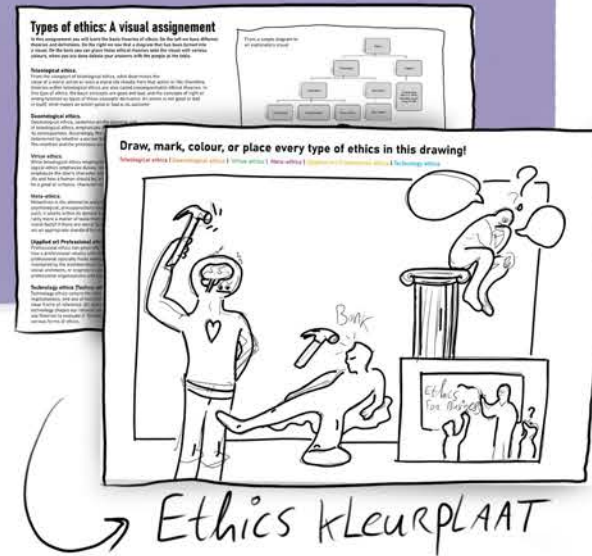
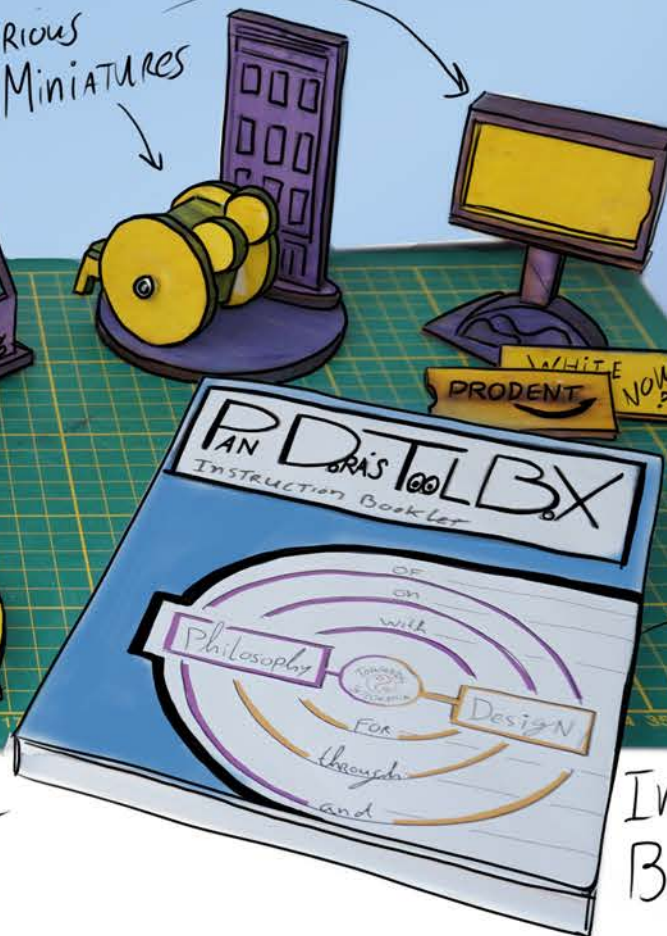




Figure 104: an overview of all facets of PanDora's Toolbox

PanDora's Toolbox:

The final design (Figure 104) consists of multiple assets:

- A ceramic embodiment with various imaginaries of The Philosophy of Technology.
- An explanatory booklet regarding Philosophy & Design, and all components of the set.
- Narrative Design Cases, with each their own miniature for fidgeting.
- Accompanied by a theory instrument to explain the concept of aporetics.
- A visualization exercise for various forms of ethics.
- Various Philosophy & Design exercise cards

This kit can form the basis of a final year bachelor or master course. As well as being expanded upon for a minor programme or a design studio course.

The name (PanDoras Toolbox) is not only one of the imaginaries on the ceramic embodiment, nor a reference to one of the myths mentioned in **The Philosophy of Technology**. It encompasses the abbreviation of Philosophy and Design (P&D), and is 'in form' also a box where when the contents are released, we cannot return to our oblivious and unknowing state.

In the end the choice was made to exclude the Theory instrument on **The Technical Condition** (from the materializing chapter). An iteration was needed for it to fit inside the design aesthetic of the toolbox, as well as a renewed interaction to make the theory easier to understand. This was outside of the scope of this thesis project due to time constraints, and the choice was made to develop P&D cards for a more varied and implementable design.

H12. Discussion, limitation, and recommendations

In this chapter we will have a discussion on the thesis project, elaborate on the limitations, and show various recommendations for further research.

"Apartments" is an artwork by Ben Tolman (2025) depicts faceless humans in blocks of apartments. These dystopian visions show anonymous figures mill about in individual, soulless boxes. Some appear to be working, relaxing, or socializing. Others just seem to stand there, staring into their phones.

In this chapter we will elaborate on the discussion, limitations, and recommendations for further research.

Discussion and limitations of the research

All tests were intensive, every session was around 90 minutes, and required teamwork from around two to four people. Because of this the initial aim of teams of three to four people did not succeed. Many participants were too late, canceled, or did not show up. The goal of four people was chosen to replicate the IDE studio- and group- setting.

This does not mean that the results do not fit this context. All the tests took place at IDE, and were evaluated as assignments they could recognize as 'taking place at IDE'.

The sessions with educators had the same problem of attendance and effort. Educators are a hard audience to reach. Next to having not much time, being critical as their job, and having their own teaching ambitions. In the end, these insights were toned down in the research analysis, and there was a bigger focus on their perception of IDE, than how it should be.

Interpreting the data

Through the contextmapping effort, desired data was collected on NDC feedback, perception, and possible implementation. The contextmapping exercises of make-do-say also resulted in latent and tacit knowledge. What this would have been could not be predicted. This data was very insightful for the current and desired state of philosophy and design at IDE.

It is important to stress that these data points cannot be seen without their relation to the respective cases. Neither can the data points be 'chopped up' into quotes and one-liners.

Therefore we can conclude that (for the three chosen themes), students were not fit to discuss topics as eugenics, colonialism, or heritage.

We can presume that students are therefore unfit to discuss/design/advocate for other discomfoting or contested topics/histories/practices. This in itself can be seen as a 'problem'. But at most this is an inconsistency within the mission of contemporary design education, regarding the 'design for our future motto'.

The conclusions of the research are therefore not generalizable, in a sense that this counts for every design school or context. This thesis and research is rooted in Delft and IDE. Even this thesis project is a result of the history, methods, and cultural/educational context.

This does not mean the results are not trustworthy. The goal of the study and this thesis was to uncover the current state of philosophy and design at IDE. These insights can be used to further develop likewise educational programmes or give an insight in the student/educator experience. Especially, regarding discomfoting topics.

One critique of this research and thesis project is that it is university-centric, and missing a clear link with the practice of a designer. In conversation with the Association of Dutch Designers (BNO) we spoke through the contemporary Dutch design landscape. One of the main takeaways was the role of a designer in project context:

A designer should be a 'charming critical thinker': One that keeps asking questions on the what, how, and why of the project. All of this without losing touch with teamwork or other designers"

We can compare this to the initial definition of De Regt put forward in this thesis. This thesis thus shows skills the designer should put into practice.

In the end, the project does not discuss applied universities or art/design education programmes because of their focus on ones own development. Rather than teamwork and discussing difficult topics in a project context.

On the integration of philosophy & design in education

Short answer, yes. Long answer, no. We have seen throughout this thesis that integrating philosophy in the design process can be beneficial, is perceived as a development for design skills, and people are passionate for one such integration.

However, this research has also seen a dissonance in the discourse around what philosophy is, what it should be in the context of education, or simply which philosophic wave we should adhere to. To exemplify, consider other design programmes:

Looking at other industrial design programmes at the Dutch technical universities: philosophy is thought through discussing post-phenomenology. Attributed to the heavy influence of the works of Peter-Paul Verbeek. With all due respect, in comparison to this the faculty of IDE is an empty dessert. We do not adhere to any philosophic wave in our programmes.

Next to the question of what wave to adhere to, we should note that there indeed are various philosophy courses at the TU Delft. These courses are scattered throughout the university and can be hard to find on first sight.

The question then remains why should we incorporate it into IDE, and not facilitate more electives or a minor programme? Especially, when a clear necessity and enthusiasm is shown for the integration of philosophy?

We consider philosophy as a more in-depth look, or even as a 'bildung' for design and engineering students. Pleading for the incorporation inside already existing courses seems counterproductive. This thesis takes the stance for electives or a minor programme (last year bachelor, and/or master) so to not dilute the philosophy discussed, make time for critical debate, and crowd courses with as much different topics as possible. Inter-faculty programmes are also endorsed, but the focus lies on IDE.

Recommendations and further research

When embarking on a journey to explore philosophy and design, one should first consider their own philosophic mission (as defined by Onfray 2019). Next to this one should make a clear distinction on which level of philosophy and design the project operates (as seen in Figure 105).

Having these two distinctions at the start of a project can help to better understand various academic sources, and help place insights into context. So, to better tackle the philosophy & design topic at hand.

This thesis has laid the groundwork for various further research opportunities. Especially:

- Incorporating facets of The philosophy of Technology into a design course context.
- The use and evaluation of various sensitizing object in a classroom or design project setting (sensitizing chapter)
- The implementation of Graphic Philosophy (visualizing chapter)

- The implementation of Theory Instruments into design education (materializing chapter)
- Testing the PanDora's toolbox educational exercises in a real course or classroom setting
- The construction of a new (final year bachelor and/or master) elective or minor, with a focus on The Philosophy of Technology and design/the built environment.

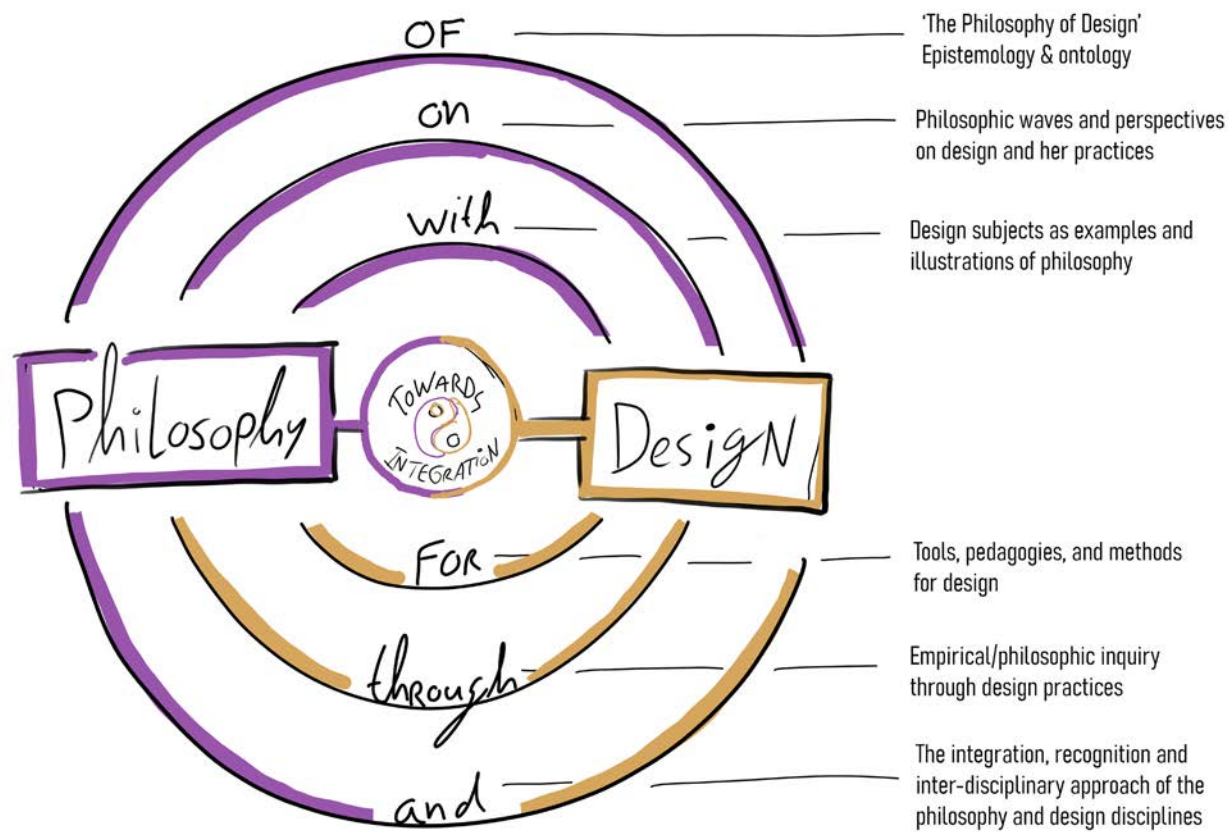


Figure 105: The earlier shown overview of Philosophy and Design

H13. Conclusions

In this chapter we will conclude this thesis project.



In this chapter we will conclude this thesis. Next to this, the self-made collage on the cover of the thesis (and this chapter, figure 106) serves as a theory based illustration for this conclusion.

Subgoal: Exploring the Philosophy of Technology

One of the subgoals of this thesis was to *analyze the role of the philosophy of technology, ethics, and relevant facets of the humanities in contemporary design education.*

This has predominantly taken place in the literature study. The facet of technology ethics has been relatively unexplored. However, this was in part because through the study I learned that the Philosophy of Technology is not the same as technology ethics. Which is still a broad field up for exploration.

In relation to the Philosophy of Technology, this thesis does attempt to structure the current academic discourse for a clear division for the Philosophy of/on/with/for/through/and Design. So, this thesis project is grounded in Delft and her efforts regards philosophy, technology, design, and responsible innovation: From peer-reviewing theses on design and philosophy, to highlighting current research projects. Rooting philosophy at TU Delft from an inter-faculty viewpoint.

Subgoal: Sensitizing, visualizing, and materializing

Another subgoal was to *explore different sensitizing, visualization, and materialisation techniques for philosophical texts, thoughts and methods.* These aspects have been shown to be of importance when regarding philosophy and design.

These three pillars overlap with current design education exercises, thought skills, and ambitions of various students.

Design goal: Educational exercises

The main design goal of this thesis was to *create educational exercises that integrate philosophy and form in design education, for broad and*

philosophic perspectives on contemporary issues. The collection of educational exercises centered around the Narrative Design Cases, have shown to integrate philosophy through form and resulted in more broad and philosophic perspectives on design.

The aporia or aporetic method in the Narrative Design Cases is not essential. However, it does help uncover inconsistent thinking in contemporary design problems.

The essence of the Narrative Design Cases lies in the performance, mimicking real design cases and attitude of students toward systemic issues. This performance and design of the cases bring with them humour, lightness, and clumsiness. Which is needed to easily ignore the theme and systemic issue at hand.

The strongest remark of the design is that these designed case studies place the student 'inside' the systemic problems and topics they face instead of solving them from 'afar'. It confronts the students with an experience that mirrors the real world. There is given no time to think critically, and therefore they will not think critically or make time themselves.

Instead of teaching students what critical thinking is or should be, these designed case studies let students experience discomfort regarding their own worldview. Therefore, they feel the need to think critically themselves and are motivated to ask philosophic questions intrinsically.

The final design moves away from the Narrative Design Cases as a focus and shifts it toward a toolbox with various exercises and examples. This to better accommodate the educational context. Facets can be used as independent assignments, or form the basis of a course.

The most simple intervention and recommendation this thesis can make for more critical and philosophic design education, is make explicit time for active reflection. Without, it will just be regarded as many facets of the design process such as scope, target audience, material choice, or prototypes.

Impossible by Design

Some problems are impossible by design. By applying design method firsts, we have to acknowledge that some problems cannot be solved. Or that some 'problems' may not even be problems at all.

Even in inconsistent times we might have the urge to solve all the problems. But without a critical look at our own skills we can become overconfident and make the problems even more complicated. Iterating upon things that were in the first place questionable.

We as designers have to look at ourselves in the mirror. Doing this is not easy, we have to carefully hold the mirror and without judgment spot our own blind spots.

Applying philosophy, on any level and in any form, can help us become aware of different viewpoints and broad perspectives. Especially in the context of design education it can be a facet of the larger learning journey and one's own design practice.

When we are eye to eye with out normative assumptions and ethics, we have to face the discomfort. So, to iterate upon ourselves, as designers, and as people.

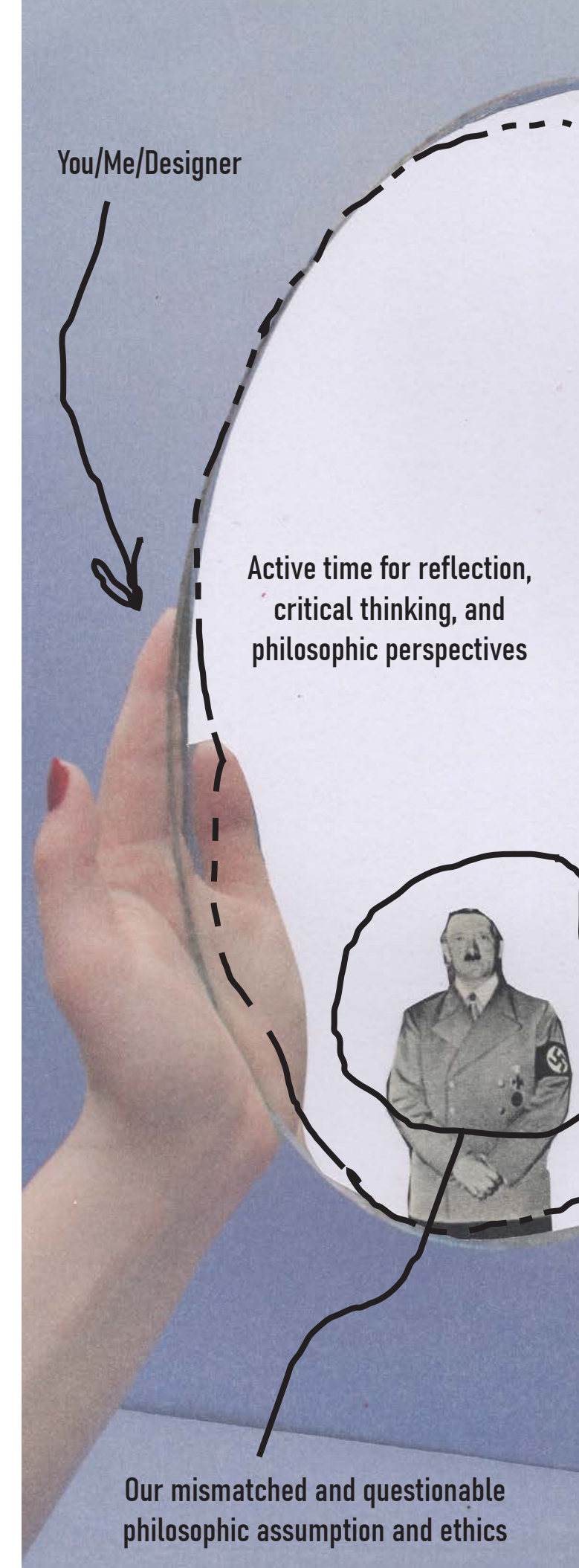


Figure 106: The cover image as theory-based illustration, explained

Final notes

Was the example at the beginning a good example or should it be denoted as an anecdote?

Sara Ahmed (2019) describes 'queer use', a way of re-purposing objects and institutions for unintended ends: Queer use can be a form of survival, creativity, and a way to resist systems of control. Het Vergeten Bestaan by Lucas Mergler can indeed be a memorial to commemorate the homeless of Hoog Catherijne.

But It can also be a just an aesthetically pleasing bicycle rack. Or just as in Figure 107 it can join the ranks of 'bicycle rack's designed differently.



Figure 107: Played Rack, a multipurpose 'afdruipek' by Maze de Boer (2010).

H14. Personal reflection

As an addition, a personal reflection will be given on the learning goals and ambitions, my time at IDE, and my way of designing.



Dutch rapper Sef released the album 'Lieve Monsters' (2025). An album reflecting contemporary existential fears, ever-evolving technologies, and living in between all the systems of today. Fitting for my final academic year with the official theme of: "Can you hear the music?"

Reflection on thesis goals and ambitions

For this thesis projects my learning goals were:

- To apply the humanities and the topic of philosophy to the active field of design.
- Hone my philosophical skills and make them relevant for design.
- Become more confident in visualization techniques (with a focus on sketching)
- Broaden my knowledge into design education and apply principles of design, philosophy of technology, into an educational context.

I can say with confidence that I managed to achieve these goals. Especially the visualization confidence around sketching has taken new heights of which I am proud. Next to this, I have the ambition to continue various facets of this project and be busy with them even more.

In the end, I can say nothing more than that I am very satisfied with the results, visuals, and final design.

My time at IDE

Reflecting on my time at IDE, my projects, and overall education journey is not easy. It has been six extreme years. With many ups and downs. I even almost left IDE twice, but I stayed.

I have gathered a diverse set of projects, from ceramics to exhibition design. From interactive experiences to provocative fashion. No topic is considered taboo: Making sexting great again, and reframing immigration with satire. Designing for exclusion at Dutch Design Week, and stealing people's passports through weaponizing bureaucracy.

In most of my projects there is one common theme. I am an essential part of the design. Which begs the question, what am I more? Performance artist or a designer for interaction? All I can say is that my identity is very often on the borderline, even considered extreme. I think that is an advantage in being a part of my design.

But it is also a burden, having experienced so much misery throughout my life. It has made me a part of the bigger story on problems. When people are designing a better world from afar, they make judgments and considerations on my life, my family, my misery.

This thesis is a culmination of me wanting to let people experience my outlook on life. From experiencing the discomfort in the design-subject at hand, towards the transcending philosophic viewpoint. Not through a negative lens, but through a positive and educational one. This project is me, but for once not physically.

I have lived through all my design projects. I became the designer of my own life, and against all odds I have passed the finish line. Not on my own, but surrounded by all the people that supported me through the past six years, because it indeed takes a village to acquire a master degree.

Now the final curtain falls, and I am glad that this is not the end, just a new beginning.

- Nathan



A collection of pictures from projects where Nathan was an essential part of the design himself.

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Because of the many sources, the choice was made to order the sources based on the chapters they are mentioned in. (Duplicates may therefore occur, for the sake of completeness.)

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Post Scriptum



Experts/Interviews/Acknowledgments

Below an overview can be seen of the experts that have been consulted and interviewed during this thesis process.

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Name	Expertise	Role in thesis
Susie Brand-de Groot	Graduation committee	Mentor of the research project
Maarten Wijntjes	Graduation committee	Chair of the research project
Aafke Fraaije	Collage making, ethics, and trans-disciplinary research	Interviewed on her publication (Fraaije, 2025), and discussed the research findings together
Sander Mulder	Education & Design	Multiple interviews and sparring sessions on design, education, and IDE as a faculty.
Sergej Schetselaar	Education & Design	Interviewed on visualization and design education.
Sanne Hazenoot	Student and teaching assistant experience	Interviewed and sparring session on different aspects of the designed case studies
Lavinia Marin	Professor in philosophy (TPM)	Interviewed and sparring partner regarding the designs, philosophy at the TU Delft, and further research opportunities.
Laurens Kolks	Professor at IDE	Interviewed on his dissertation, materialisation, and philosophy versus sociology at TU Delft
Louise Houweling	IDEgraduate: Designer and Philosopher	Multiple sparring and feedback sessions on philosophy, design, education, iteration opportunities, and further readings.
Stefan Persaud	IDE education	Advocate for various pedagogies, sparring partner for the educational facet of the design project.
Lara van der Veen	Philosophy, education, and design coach	Sparring partner for various facets of the initial research and design process.



Name	Expertise	Role in thesis
Jane Tynan	VU Amsterdam professor in Design Cultures	Interview and sparring partner on the humanities and critical design facets of this thesis
Nancy Jouwe	PhD researcher	Sparred on the topic of colonial histories and decolonizing design, inspired the NDC cases
Patrick Aarts Sen & Dewi Klomp	Beroepsvereniging Nederlandse Ontwerpers	Interviewed on their view on design regarding the working field in relation to the academic field.
Hanne Bosma	Teaching Lab TU Delft	Multiple interviews and sparring sessions on design, education, and the narrative design cases
Noa Buijsman	Teaching Lab TU Delft	Guide for the Teaching lab tour, as well as sparring partner for the final design
Marre van der Schee, Merel Franke, Sander Dietz, Sem Mous, Mirthe Bronkhorst, Helena Ligtenberg, Caspar Nobbe, Jens Eckhardt	Student experience and feedback panel	Not only emotional support during the thesis, but also applying critical ntoes around the perception and experience of the student experience.

A critique on design for the systemic level

I am critical of the new bachelor an master revision. Especially the notions of the design for the systemic level. the vision of Voûte et al. (2020) is to make way for design to move to the systemic level. However, this thesis does not agree with the notion of 'simply widening the view of the designer from people affected to society', and that it can be done inside the 'people' facet alone. This does not do justice to the studies of humanities and culture. Therefore, it is proposed to add a row of ' society' (with a focus on culture) to the matrix as sketched out by Voûte et al. (2020) in Figure PS1.

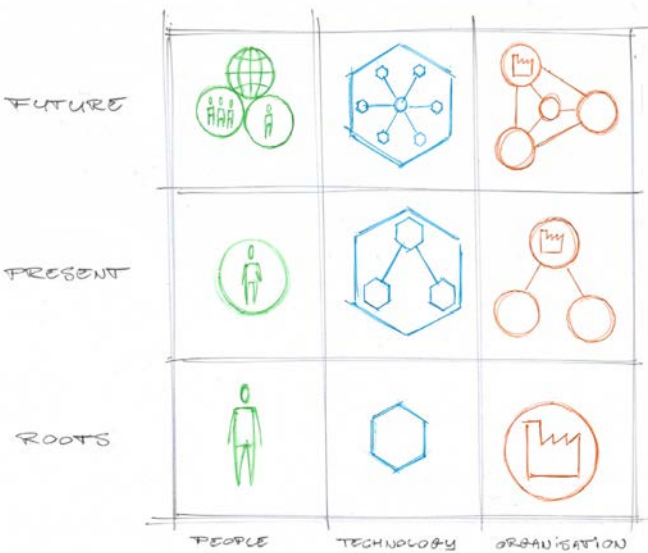


Figure PS1:



Figure PS2:

Whereas the roots are described as the (design) culture one is in, regarding ' culture sensitive design' by van Boeijen en Zijlstra (2020). The present level describes the study of the humanities or the academic field of Design Cultures as a whole, which coincides with works as ' The culture of design' by Julier (2001). The future level resembles the 'entanglement' of people, technology, organisation, and culture, as described in ' the technical condition' by Swierstra et al. (2019). The symbols are visualized below in Figure PS2, and added onto the framework of Voûte et al. (2020) in Figure PS3.

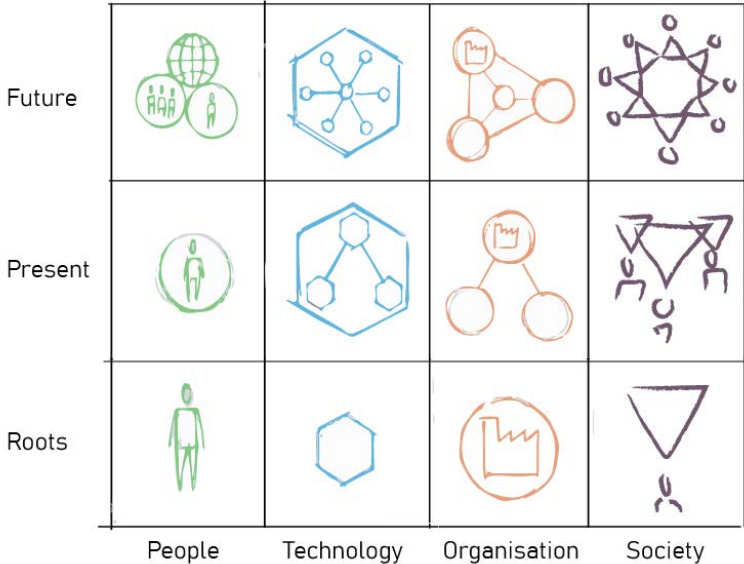


Figure PS3:



A statement on the use of A.I.

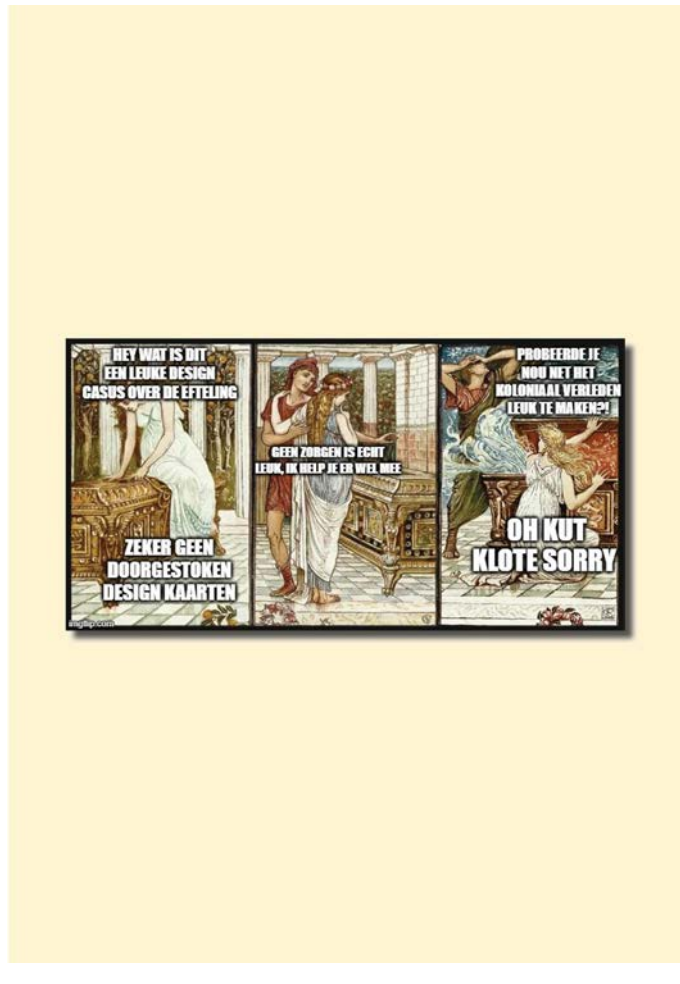
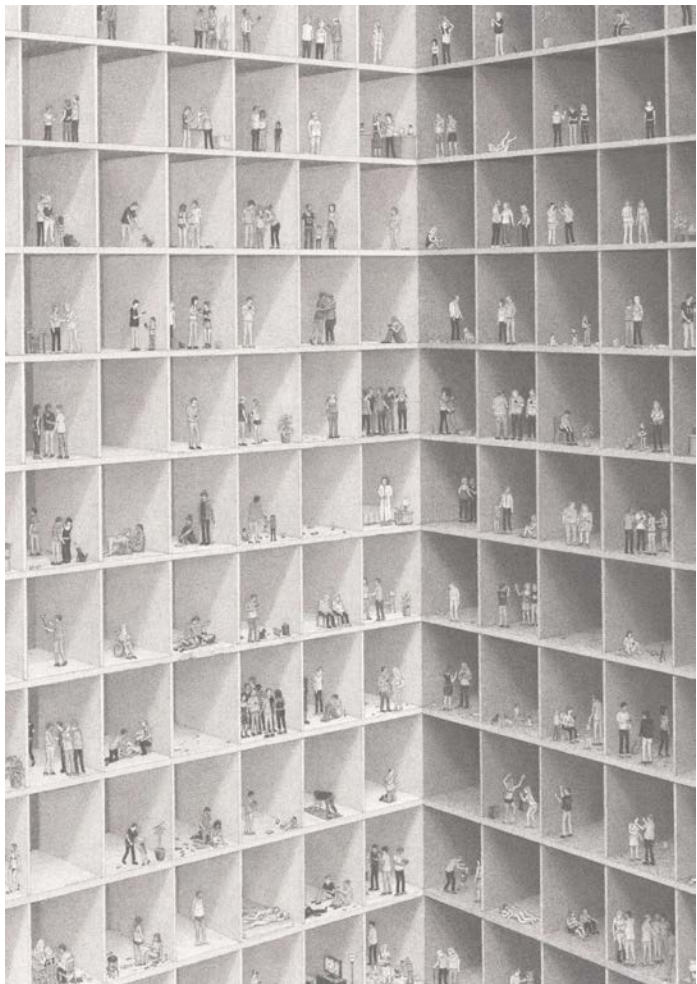
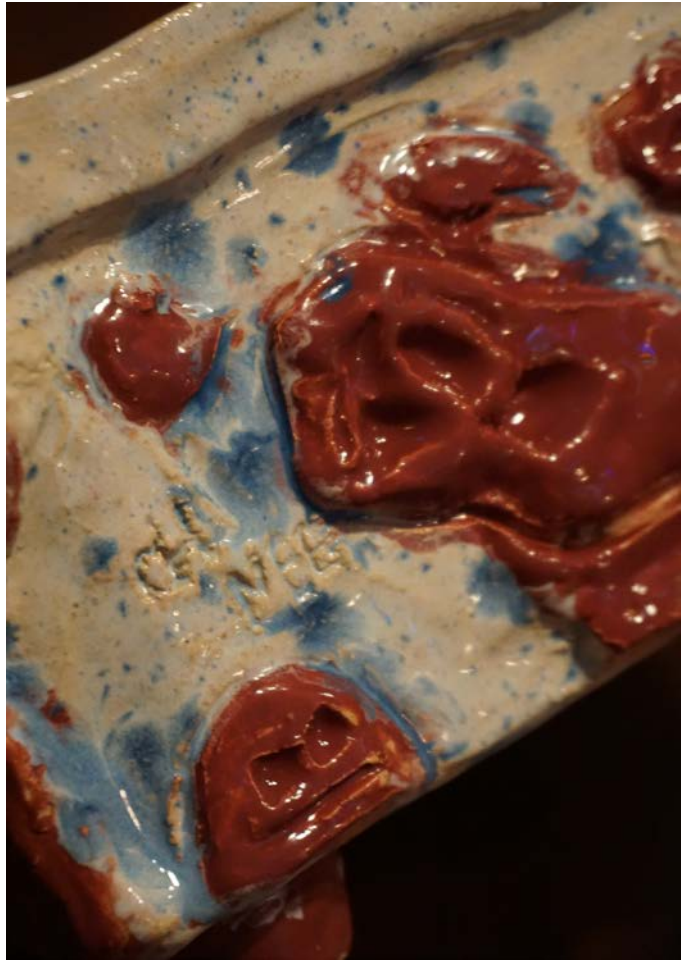
In this thesis Artificial Intelligence has only been used for making transcriptions from the recordings (during the research). Sparingly has A.I. been used for rapid prototypes of images or visuals. The research has shown as well that A.I. is not to be trusted regarding ethical questions or philosophic reasoning.

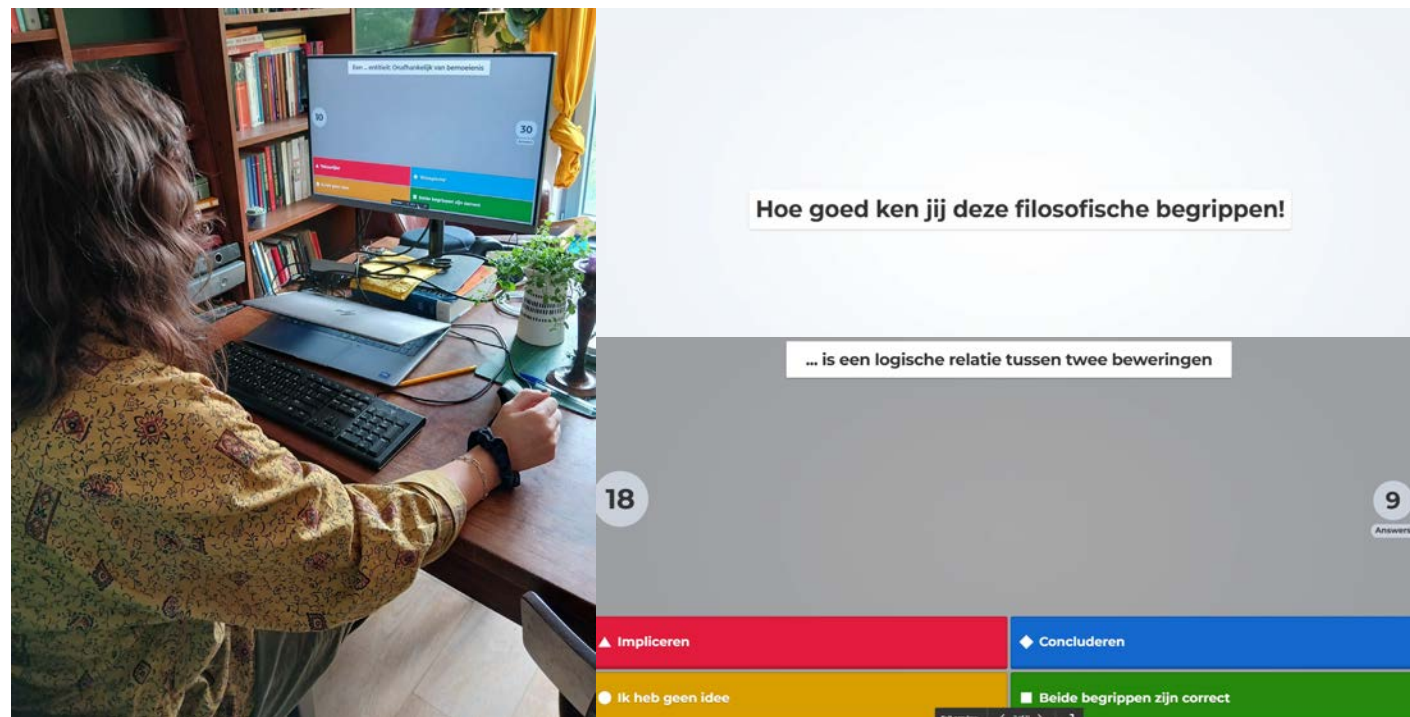
When has a philosophic quote lost its reflective and critical edge? - The tote bag test

In summary, the "tote bag test" is a way to assess the value of reflective quotes. Does the quote fit on a linen bag? Would it sell well? If not, then the quote is not suitable for deep reflection and use in your report, for example. Does the quote not fit on a linen bag? Then the quote generally has enough reflective value for your report and facilitates the associated depth.

This example of the tote bag test will hopefully encourage readers to actively engage with the reflective aspects of a quote themselves. After all, how much depth can be gained from a quote if one does not actively engage with it? A quote on a linen bag does not generally encourage people to engage in valuable reflection.







Research through design prototypes

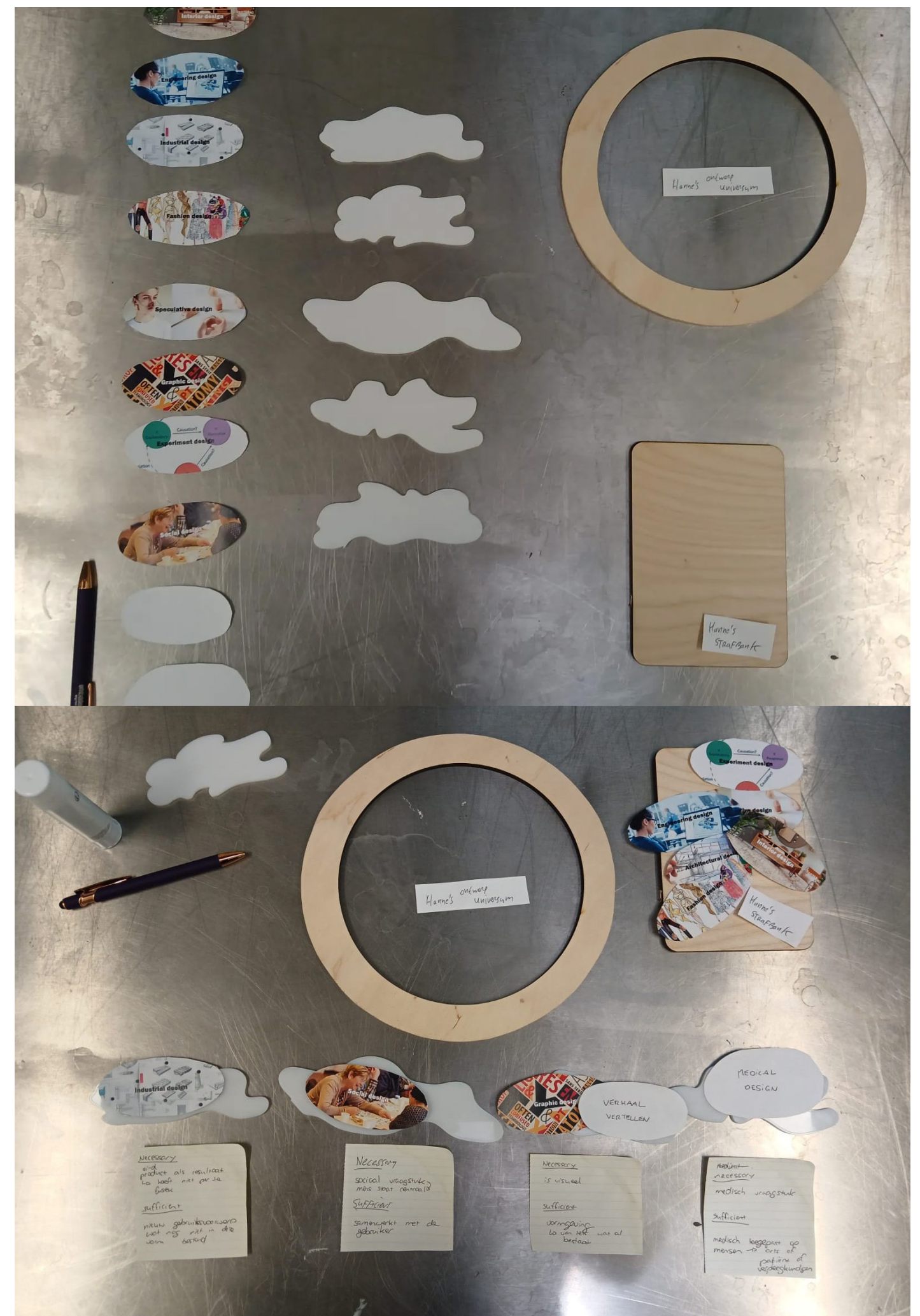
During this thesis project multiple prototypes were made that did not make the eventual cut, however were of importance in the process.

One of the first was a quiz to find out students their knowledge on philosophic words and terms. However, Kahoot now works with licensing, so I dropped it.

As a different approach, shown on this spread is a taxonomy prototype where one could facilitate a critical conversation on design with.

This low-fidelity prototype resulted in multiple different conversations, in turn even sparked a small research into philosophic and spiritual views on design.

This essay can be read on the next pages, and was sent in for the Design Writing prize of the Design History society.



More than the sum of its material parts: A philosophical approach to Design as a spiritual phenomenon

When one explains Design to the other, we tend to explain it *through* something else. A ritual where we - to explain Design's *raison d'être* and importance for others and ourselves - grab something nearby, to explain that this artefact is a result of Design. We grab a chair to explain that Design is the synthesis of materials, ergonomics, engineering, aesthetics, or the cultural relevance this had in history and still affects our surroundings today. Is this then Design *an sich*? *What can we learn from approaching the phenomenon that is Design in unconventional or unexplored ways?*

To explore this we must ~~Design~~ start at finding a definition. Trying to find a definition of Design is a cumbersome process, exploring the Labyrinth that is Design. On the way through the labyrinth we find practitioners who preach Dieter Rams principles. Going around the other corner we find a cult that worship Papanek's thought of everyone is a Designer. While others mention Herbert Simon's definition of Design as a changing of a state into a preferred one. On a journey to find the meaning of the Labyrinth itself we have to evaluate dialectic opinions on Design, we have to look through the material walls of the Labyrinth and also consider if this maze even has an exit.

In trying to find the meaning of Design, the tribes that cling to a certain definition have to be evaluated. Interior Designer can be seen as faux-Design, because they simply re-arrange given objects in a space. In turn we can consider interior Design as thinking through every possible interaction in the space. Now we legitimized the practice again. The debate on what Design is, or what it is not, will be always be a debate. So, let us take another step backwards.

If you think Design is a remnant of Modernist thought¹, you would not be wrong. If you consider Design to be a practice resulting from the Romantic period², you still would not be wrong. Even if you search for the etymological origin of the word Design, and find it in the time of the Homo Universalis³, so for sure Design would come from there! You would not be wrong. If even the origin is debated, and every thought mentioned above has a core that is or even feels correct, we have to again take a step back.

Let's consider then an unpolished form of Design that goes way back in time. Let us consider 'making'. Making has been done since the dawn of time, and let's not immediately jump to the conclusion that therefore Design has been omni-present. Let us first consider an example: In the Dutch education system, the students learn the time-periods based on this visualization (Figure 1).

¹ As Glenn Parsons (2016) proposes in The philosophy of Design

² Kennepohl and Doorman (2014) in *we have never been so romantic*

³ Stemming from the word: *Designare*



Figure 1: The ten time-periods that structure the Dutch history curriculum.

The clay-pot? Prehistoric times! Helmet? Monks and knights! Guillotine? Something with the French revolution! A television and a nuclear weapon! Cold war until today! What a time to be alive. Every time that someone was alive has through this visualization easily been reduced to a form of material culture. Every time period had its own technology, their own stuff, and their own aesthetic. Considering Heidegger's philosophy of technology we can interpret these times with their own worldviews as well, because an artefact is not just an artefact it is an instrument that manipulates us as well: A river is a river until someone created a boat, then it became a route to travel on. A river is a river until a windmill with water wheel is invented, then it is a source of energy.⁴

Another example, relating it back to the start of this essay, when we talk about Design we explain it *through* something. We grab a cup and say that Design is hidden in the simplest things. That we do not experience good Design, because it vanishes, or that the simple texture is not only an aesthetic feature but an affordance so that we know how to hold it. We explain it *für mich*, we highlight the features we deem and classify as Design. We know that Design is about ergonomics, it has been taught to us during our studies, so we highlight that aspect. Or we highlight the cultural significance and ripple effect it caused in the industry, because we were taught about iconic Design.

All these viewpoints are valid, even when they contradict, when they enlarge, or simplify, the thing it actually is. What then is *Design an sich*? Combining the way we converse, we write, and we teach about Design we can construct a definition to the phenomenon. Combining definitions from future-oriented to the reconstruction of the past: *Design in its most abstract form is the emergent property of materials/artefacts/objects/services/systems/forms we point our attention and awareness to, that reveals tangible and intangible aspects that are more than the sum of its parts.*

⁴ Visser 2014

In this *an sich* definition, the emergent property aspect is important. When conversing together on a Design artefact, we first become aware that that what lays before us is indeed Design. We can discuss facets from production to consumption, with knowledge gained from theory or from practice. Next, we can think of shortcomings, sketch new ones, propose a speculative future in which it plays a role. However, we can also imagine the social relations of the past, all strengthened with sources and eye-witness accounts. This all even takes place in the realm of service Design. We tend to forget that even a service or system has some form of materiality. We forget that a parcel delivery system still makes use of our material world. And that even a bureaucratic system is nothing without paper. Not to forget that our parallel digital world and persona's still rely on the physical and material components of computer hardware.

So, pointing out that Design is an emergent property that reveals social relations, different facets of materiality, theory and practice, what then? I propose that this definition of Design as a phenomenon can make us more aware of our material world. Likewise, the study of Design can learn from other material disciplines, such as Design, or engineering, or craft, maybe even art. Our current Pillarization of Design disciplines, make us narrowminded to what it our cross-disciplinary field can be or should be. The wheel should not be re-invented. The wheels should be combined, into a car, a truck, or a train.

Still one more thing remains, the people that partake in Design as a phenomenon, what are they? Are we pretentious? Fetishizing this phenomenon? Are we constantly explaining our own practice to convince people that we are worth it?

If we consider Design as this immaterial and emergent property, are we then a form of religion? Design does give us purpose, and helps us find or even construct meaning in our surroundings. All the while we move through our technological background fabric. What if we then imagine Design as religion? An exercise as this one is similar to van Boeijen's *Cultural Probes* exercise.⁵

To start with the icon of Design, every religion has some form of symbol or iconography: From the Cross, to the Star of David, to the Torii (figure 2). We as Designers would (and some already do) worship the Double Diamond.

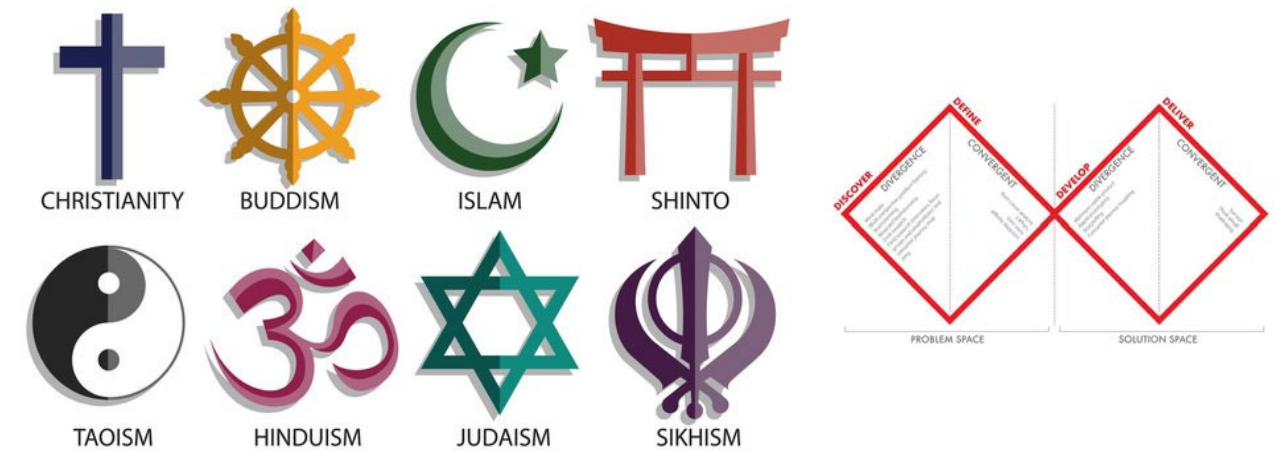


Figure 2: Some religious icons, and the Designer's Double Diamond.

Are we that influenced by the Double Diamond? In the Design Documentary *permission to Muck about* it is stated that Design Thinking, as a practice is more of a belief.⁶ That if we believe that Design Thinking can be done by anyone, we can solve all worlds problems, or 'matter of concerns'. This fictitious analogy in this essay has it's roots in our real world, and our academics.

How about our religious space then, or the religious texts we preach? This may differ per region, and per tribe of Design. The industrial and graphic Designers would surely adopt some amalgamation of the White Cube from museums and the corporate office. Where the Delft Design Guide, reigns, and stands firm in every bookcase, from student to teacher (figure 3).

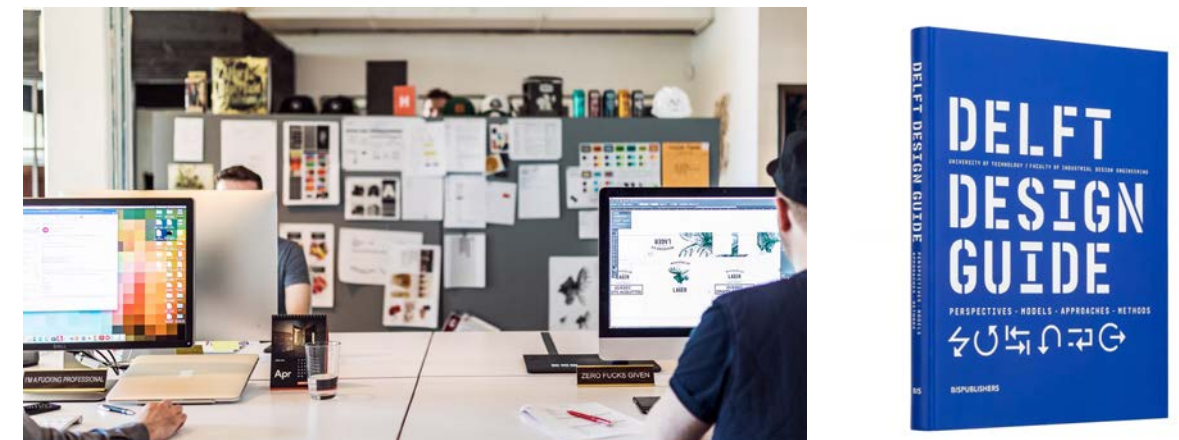


Figure 3: The Design studio and the Delft Design Guide

What would we wear, how can we even compete with the fashion and the rather sleek branding of actual religions? This was a harder task to envision, but when we consider Dorst⁷ levels of Design expertise: Seven levels from Novice to Visionary. Starting from this theorem, as a Designer myself I cannot withstand the indulgence

⁵ Boeijen and Zijlstra 2020

⁶ Design Research Works 2024

⁷ Dorst and Reymen 2004

to give form. Envision these levels in clothing would start from the black turtleneck. Worn by many tech entrepreneurs and architects alike. Combined with our icon, the Double Diamond, as visualized in Figure 4.



Figure 4: From Novice to Visionary, cult-like fashion mock-ups for Design as religion.

The novice would wear a low one, where the Double Diamond is centred at the heart, very poetic. When going up the ranks, the turtle neck grows. Until it reaches the chin at the advanced beginner. The competent still sees the world, and tries to preach the word of Design through the Double Diamond. The proficient has started to be affected by Design, it has now obscured their vision. While the turtle neck grows and grows, the Double Diamond travels to the brain. As a Master this has even surpassed one's own thinking. And the Visionary has a long enough turtleneck to touch upon all. There is a lot to unpack in this fictitious analysis of the Design culture of Design.

To what extent is an exercise as this helpful? Design is inherently a material practice, however the people who practice Design are never really examined through a material view itself. When we talk about Design we project our view something nearby, to explain that this artefact is a result of Design. We grab a mug to explain that Design is the synthesis of materials, ergonomics, engineering, aesthetics, or the cultural relevance this had in history and still affects our surroundings today. Now in the exercise above we reversed it.

We grab a turtleneck to explain the arbitrary levels of Design expertise. We can better assess questions as “when is the turtleneck elongated to the next level?” or in more academic terms: When has a Designer moved from being a competent Designer, to an expert one”. Questions as these can be handy tools to look at Design history in this way. Are Dieter Rams’ ten principles, handy tools to practice and gain expertise, or even ‘level up’? Do we attribute to the commodification of Design thinking? Does the double diamond model evoke enough depth, or was the practice of Design never about seeking depth in societal problems? Have we always believed in solutions for rather wicked problems?

Neither the immaterial connotations of the material. We recognize bakers by their working garments, tools, and image in our collective memory. We recognize artists differently depending on what we think they should look like, from covered in paint to pretentious or even performative assets. How then do we envision a Designer? What material properties do we uphold, or do we adore solely Copic markers? To think Design through in a way as this, we can come to terms with Designer identities and

histories of which some are even pseudo-scientific or heavily influenced through scientism.

In The technical condition, Verbeek et al. state that the philosophy of technology has gained prominence after the industrial revolution. We could not ignore our material reality anymore, the realm of ideas and grand theories were not sufficient to explain how technology was an *actant* itself.⁸ The background fabric of our daily life is dominated by technology, which not only embodies as meaningless objects. The omnipresent technology is entangled in our culture. Design is one such entanglement. The emergent property of synthesizing materials, choices, and futures together into a Design. Best not to forget that there is no Design future, without Design history, nor Design philosophy.

In the end there is a need to critically evaluate the contemporary consequences of Design. This cannot be done solely through clinging on to a mono-directional definition, it simply does not do justice to an omni-present phenomenon. We need to acknowledge the contemporary Designer, that has - in contrast to the starchitect – had not much of a clear defined identity. However, still is an active agent in the fabrication of the background fabric of technology. We need to incorporate the past and the future, against the pillarization of our disciplines. If we want to *Design for our future* we have to believe in Design, without losing ourselves in the phenomenon. This seems harder than it looks, but Design is just like us, more than the sum of its material parts.

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⁸ Swierstra et al. 2022



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6 August 2025

Re. Design Writing Prize 2025

Dear Nathan Douenburg,

Thank you for your submission "More than the sum of its material parts: A philosophical approach to Design as a spiritual phenomenon" for the 2025 Design Writing Prize. I am sorry to inform you that after a blind double review process, your submission was not chosen as this year's prize winner. The two readers thoroughly enjoyed reading your piece.

I wish you all the very best with your future writing projects. If you have any questions about any of the above please do not hesitate to ask.

Kind regards,

Deepika Srivastava
Teaching and Learning Officer, Design History Society

Another prototype was a design manifest (sensitizing booklet) for various discomfoting views and questions on design. This booklet was quickly mocked-up and tested wth multiple students.

In all evaluations, three spreads stood out. Everyone mentioned that these examples resonated with a critique they had for a longer time, 'but did not have the words for'. These three spreads eventually were left behind as a concept. But they are shown on the next pages.



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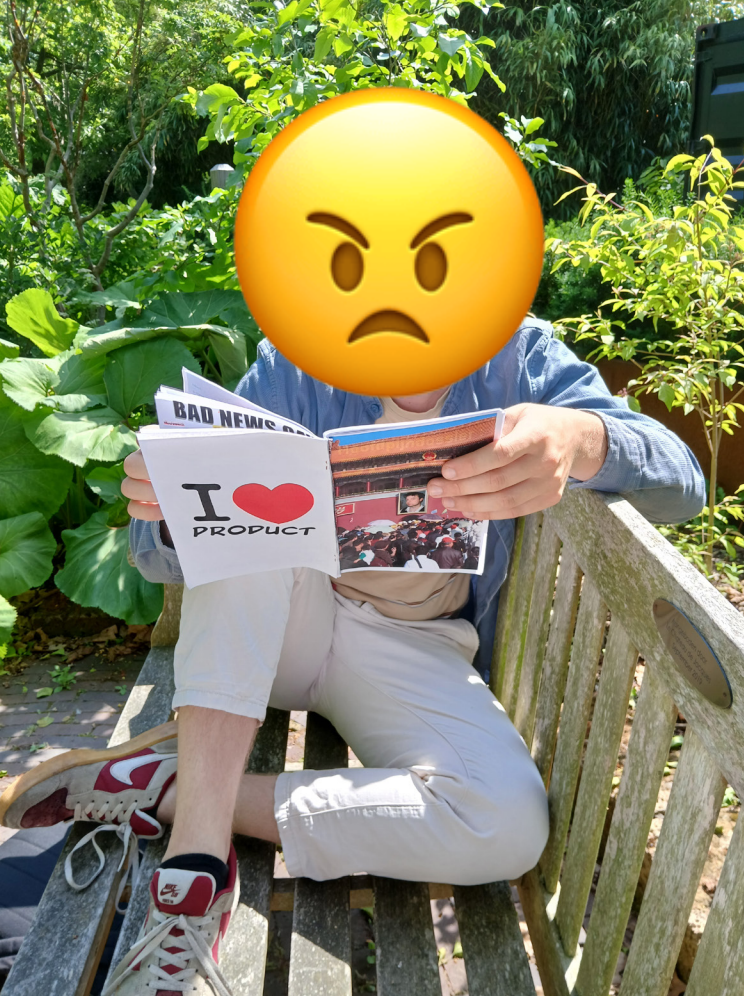
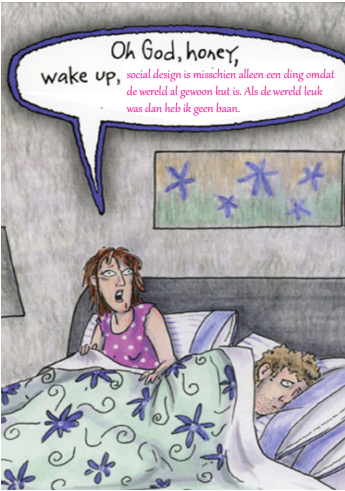
#raboscanner

"Die komt wel ff binnen hè" zegt de
social designer.

Terwijl 'the matter of concern' in
kwestie niet binnenkomt bij het
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Hannah knikt ja, ze weet dat het wel
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designer.

Die komt wel ff binnen.



Hekwerk:

In 2008 werden wij door een belangrijke verzamelaar benaderd om een sculpturale en semi-functioneel 'afsluiting/afrastering/hekwerk' te ontwerpen dat een aantal meters van de erfgrans van een groot landgoed geplaatst zou worden: aan het einde van een doodlopende privaat weg.

Hierop hebben wij de fundamentele vraag gesteld over de functie en positie van 'de afrastering'. In basis is een afrastering altijd 'lelijk', hoe positief je het ook benaderd... Het is een object dat mensen (en dieren) opsluit of juist buiten sluit. Het is een object dat je moet beschermen voor vreemden of indringers. Het is een object dat verdeelt, indeelt en gebieden afbakt. Dat zijn feiten die je moet accepteren en tevens de handvaten die je meekrijgt als je zo'n opdracht aanvaardt. In ons werk zoeken wij, zonder censuur, naar het meest doeltreffende 'archetype' of 'ikoon'. Het ikoon dat past binnen de opdracht maar ook binnen het oeuvre. Soms wordt het archetype vergroot en gedramatiseerd....zodat zelfs een extreem thema als 'bijna' cartoon, karikatuur of persiflage aansluit bij het handschrift.

Wij zochten naar het 'perfecte' ikoon om de gestelde opdracht zo duidelijk mogelijk te duiden zonder de beladenheid die het thema met zich meebrengt te verhullen.

Je ontzondt niet aan te heuwerke en afsluilingen die roddon kumpen de gevangenssen veriditid ge laatst zijn. Deze zijn daar om de vrijheid van haar bewoners te beperken. Vaak om het kwaad uit de maatschappij te filteren maar in een ander geval om bevolkingsgroepen te onderdrukken en zelfs pragmatisch uit te roeien. Wij kennen deze beelden allemaal: zij zijn onderdeel van de donkerste kant van on collectieve geheugen.

Guantanamo Bay, de Japen kampen, kampen in Beelie en natuurlijk de concentratie kampen uit de Tweede wereldoorlog zijn stoffelijk geworden schrikbeelden. Zij zijn de tragische bewijzen van waartoe de samenleving in staat blijkt.

In ons werk registreren e werkbeelden vij alle locatien en machien en liw in een d (vriks) lven en an onen. Soms heel persoonlijk of klein, soms groot en van een afstand. De liefde, schoonheid, herinnering maar ook de angst, gevaar en manipulatie kleuren onze omgeving en dus ook ons werk.

Studio Job gaat in een discussie met over het oplossen van problemen op een heel andere manier van de omgeving. Wij registreren, interpreteren en verbeelden.

Het is de taak van kunstenaar of ontwerper om de horizon te verbreden. Iedereen doet dat op eigen wijze. Je probeert een bepaalde problematiek, stelling of gedachtengoed te deponeren. Het taboe of dogma te doorbreken. De iconografie rondom de holocaust is krachtig, confronterend en bij iedereen bekend. Zoals ik aangaf zijn er binnen een werk veel ideeën die simultaan ontwikkeld kunnen zijn of zelfs los van elkaar kunnen bewegen. Zo ook in de werken die naar aanleiding van het programma in opspraak kwamen.

Buiten de reden als functioneel tafelkleed en de positie van dit werk binnen een museale omgeving. Buiten de context van een confronterend hekwerk dat iets fundamenteels raakt over onze maatschappelijke beperkingen, staan deze twee werken, binnen een oeuvre van honderden werken, ook voor de persoonlijke, intieme uiting van angst. De angst voor herhaling.....

Opdat we nooit vergeten hoe hoog de prijs was die onze voorouders betaalden voor de vrijheid die wij als vanzelfsprekend ervaren maar die vaak in gedrang komt.

Het was de keuze van de DWDD om deze twee werken zo te isoleren om daarmee een bepaalde sfeer te creëren. Daarom waren Nynke en ik niet bereid om voor de ogen van miljoenen toeschouwers en tussen een stemmig publiek, een extreem gevoelig onderwerp als de holocaust te bespreken.

Het is nooit onze opzet geweest om mensen te kwetsen. Wij hopen dan ook dat eventuele overlevenden van de holocaust de werken in het juiste licht zien.

Job Smeets, december 2011, Antwerpen

Kan een ontwerper ooit kritisch zijn als het klootjesvolk dat nooit zal zijn?



Designcriticus C. de Breij



Studio Job bij De Wereld Draait Door (2013)

Matthijs van Nieuwkerk: "Vinden jullie niet dat dit te ver gaat?"

Claudia de breij: "Auschwitz is toch helemaal geen pretpark! Dit kan toch niet!"

Nynke Tynagel: "Nou ja we gaan er wel met touringcars heen, foto's maken met het gezin"

Job Smeets: "Design is meer dan alleen mooi zijn of mooi maken, het is ook vragen stellen, een hek is überhaupt niet iets om trots op te zijn. Het gaat niet alleen om het object maar ook om de discussie die het te weeg brengt"

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“Die komt wel ff binnen hè” zegt de social designer.

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Die komt wel ff binnen.



P.S. Narrative Design cases

Working out an NDC into an essay: Efteling design and colonialism

Brandende vragen

Over het koloniaal verleden als designer decor, volksverhalen en branding, en wat we zouden kunnen doen.

Weghalen, wegstoppen, of de weg vrijmaken? De materiële restanten van het koloniaal verleden zijn nog veelvuldig verspreid door ons land. Wegens de beladen geschiedenis die het met zich meebrengt vragen velen zich af 'wat moeten we er nu mee?'. Dat is nog licht gezegd, velen van ons dragen het gewicht van de doorwerking van het koloniaal verleden en de structurele problemen nog dagelijks met zich mee. Vaak ligt de focus op de grote standbeelden van omstreden zeevaarders, moeten ze weg? Moeten ze in een museum worden toegelicht? Of moeten we de weg vrijmaken voor daadwerkelijke helden en representatieve beelden van onze samenleving?¹

Zelf begonnen die materiële restanten van vroeger mij op te vallen door een wandeling te doen vanuit de *Gids slavernijverleden Amsterdam*². In die gids worden namelijk niet alleen standbeelden, schepen, en gebouwen genoemd. Het zijn de kleinere dingen die mij hebben geconfronteerd met de reikwijdte van het slavernijverleden: Geïllustreerde gevelstenen, wapens op gebouwen, en resterende logo's. Deze vallen vaak minder op omdat ze hoog hangen, verwerkt zijn in de architectuur, of vervallen en moeilijk te lezen zijn. Juist door die kleine dingen met grote connotaties, begon ik ze ook in mijn eigen stad Delft te zien.

De wandeling deed ik in eerste instantie als opdracht van Kunst & Cultuurwetenschappen aan de VU Amsterdam. Het was even een uitstapje van mijn ontwerpopleiding aan de TU Delft. Ik was het zat dat bij de TU Delft zoveel gericht was op 'oplossen': Je hoofd wordt een schroevendraaier, maar daardoor zie je elk project helaas ook als een schroef. Bij de VU Amsterdam was dit anders, een veel bredere blik werd je geschonken. Maar oplossen? Ho maar. Daarnaast raken de twee studierichtingen elkaar in onderwerpen zoals dit. Kwesties in de publieke ruimte, vormgeving en erfgoed, en nadenken over: wat nu? Toch staan ze bij deze kwestie haaks op elkaar. Als je het met elkaar wil verenigen dan beland je al snel tussen wal en VOC-schip.

Waar ik denk dat de kracht ligt van de geesteswetenschappelijke kijk en het ontwerpen, zijn de kleine hedendaagse uitingen van het koloniaal verleden. Dus laten we de grote standbeelden even aan de kant zetten en onze blik richten op meer knullige zaken.

Allereerst wil ik een blik werpen op de Efteling. Het pretpark is regelmatig in opspraak geweest voor het ontwerp van hun decor. Het prominentste voorbeeld is *Monsieur*

¹ Sens 2025

² Hondius 2014

Cannibale, een racistisch karikatuur dat vaak genoeg in opspraak raakte³, maar toch pas in 2021 werd weggehaald. Het heeft er 33 jaar gestaan. Volgens *Eftepedia* kwam ontwerper Henny Knoet in 1988 al meteen in discussie en kwamen er meldingen bij het meldpunt voor racisme toen de attractie werd neergezet in het park. Als reactie werd de kannibaal aangepast tot 'een vegetariër met stukjes fruit en een wit koksmaatje'.⁴ Verder wordt er op *Eftepedia* niet ingegaan op de daadwerkelijke pijnpunten en verschillende artikelen door de jaren heen.



*Een van de originele schetsen van Monsieur Cannibale, voordat hij vegetariër werd.*⁵

Monsieur Cannibale is een bijna vanzelfsprekend voorbeeld van onze racistische denkbeelden. Hoe ingeburgerd onze blikken kunnen zijn, dat ze ook zo in het ontwerp van attracties voor een pretpark tot uiting komen. Maar sinds het vertrek van dit beeld, is Efteling nog niet gevrijwaard. Neem bijvoorbeeld het schommelschip, *De Halve Maen*. Deze attractie is een directe referentie naar het gelijknamige VOC-schip *De Halve Maen*. Dit schip is onlosmakelijk verbonden aan het koloniaal verleden, het is zelfs een van de 100 kopstukken van Nederland.⁶ Daarnaast is het vanuit inheems perspectief van de Lenape stam, symbool voor de Nederlandse invasie en decennialange kolonisatie op het eiland dat zij Manahahtáanung noemden.⁷ Wij kennen het tegenwoordig als Manhattan en New York.

³ Een selectie aan artikelen zoals: Cnossen 2021; Jansen 2020; van Os 2021; Poll 2016

⁴ Eftepedia, n.d.

⁵ Eftepedia, n.d.

⁶ Hondius et al. 2019

⁷ Amsterdam Museum 2024

Gelijksoortige organisaties met replica's van schepen - zoals *Het Museumschip Halve Maen* – ontkennen tactisch de link met het slavernijverleden. Volgens hen heeft het er niks 'direct' mee te maken.⁸ Is dat dan een vrijbrief? Andere replicaschepen doen het naar mijn mening beter. *De Amsterdam*, bij het Maritiem Museum, erkent het koloniaal verleden en de verschillende kanten die mensen hebben. Zo exposeert het bij ieder informatiebord verschillende stemmen. Dit is een stap in de goede richting, maar bepaalde ontwerpkeuzes laten toch te wensen over. Zo kunnen extremistische bezoekers met de pennen die erbij liggen ook de bredere blikken doorkrassen.

We zien dat het bij dit soort gevallen moeilijker wordt. Zelfs al is het een directe referentie en een van de 100 kopstukken, dan is er blijkbaar nog steeds een grijs gebied waar je langs kan kijken. Toch zijn ontwerp-interventies zoals het toevoegen van verschillende stemmen waardevol. Het voegt context toe en presenteert het schip zelf als niet neutraal. Het bevestigt kleur, maar de mate waarop blijft bij een stap in de goede richting.

Nog een voorbeeld, de Vliegende Hollander. Vorige maand kondigde de Efteling aan dat ze geen VOC-associaties meer hebben in de achtbaan de Vliegende Hollander.⁹ Ze hebben het logo namelijk veranderd. Het oude logo was direct geïnspireerd op het VOC logo, en het nieuwe logo 'niet'. Als ontwerper durf ik te stellen dat de VOC connotaties niet weg zijn. Als we de ontwerptheorie op nalopen, kunnen we onderscheid maken in primaire en secundaire vormgeving. Primaire vormgeving doelt op wat het is en de functie, en secundaire vormgeving is wat het kan betekenen.¹⁰ Het oude logo is primair een VOC-referentie, het pakt dezelfde vorm van het VOC logo en past die toe met andere letters. Secundair verwijst dit naar de sage van de Vliegende Hollander. Dat is te zien aan bijvoorbeeld de leeuw, en de tekst.



Het oude logo (links) en het nieuwe logo (midden) dat dezelfde stijl en verbeelding aanhoudt als in de VOC tijd (rechts).¹¹

⁸ Rijnmond Nieuws 2020

⁹ Loopings 2025

¹⁰ Eggink 2012

¹¹ Afbeeldingen van Loopings 2025 + een VOC logo

In het nieuwe logo zijn deze aspecten omgedraaid. Nu is het in primaire vormgeving een logo van de attractie. Maar in secundaire vormgeving is het nu de visuele stijl van de VOC. Vandaar dat de claim 'vrij van VOC-associaties' nogal kort door de bocht. Een ontwerper heeft een nieuw ontwerp proberen te maken dat 'Most-Advanced-Yet-Acceptable' is. Ook wel het MAYA-principe genoemd. Dit idee erkent dat veranderingen niet ineens kunnen plaatsvinden, en dat er steeds stapsgewijs nieuwe ontwerpen nodig zijn die geïntroduceerd worden en over langer tijd als normaal worden gezien. Toch door te claimen dat de VOC-associaties weg zijn, wordt de verandering van het logo niet gepresenteerd als stap in het dekolonisatie proces maar als de oplossing.

Het argument dat De Vliegende Hollander een volksverhaal is, en daarom losstaat van het VOC narratief is ook dubieus. Het spookverhaal is vermoedelijk bedacht door de Engelsen, en wordt door de stad Terneuzen al jaren toegeëigend als hun verhaal.¹² Nog schrijnender is, dat het verhaal zelf dus als 'branding' wordt ingezet. Sindsdien zijn er meerdere pogingen geweest tot het verheffen van deze sage. Bewapend met standbeelden, en verkleedfeesten ter bevordering van Terneuzen. Volgens Ruben Pater in zijn beschouwing over de geschiedenis van grafisch design en kapitalisme, is 'branding' onlosmakelijk verbonden met het brandmerken van tot slaaf gemaakte.¹³ Waarnaast de VOC überhaupt het eerste bedrijf was met een *corporate identity*. We kunnen stellen dat ook op een meta-niveau in vormgeving schuurt. Zelfs al is De Vliegende Hollander louter een sage, dan vertoont het gebruiken van het schip als geconstrueerde identiteit van de stad parallellen met de VOC geschiedenis.

Laat me voorop stellen dat een pretpark niet de plek is waar het koloniaal verleden het 'designer decor' hoort te zijn. Althans niet in huidige vorm. Maar alles weggooien of verplaatsen lijkt mij ook onverantwoord. Ik denk dat in het debat rondom deze materiële zaken een doelgroep vergeten wordt. Een doelgroep die naar mijn mening juist betrokken moet worden, niet in het debat maar in het leren over ons problematische verleden en de doorwerking ervan: mijn familie.

Zelf ben ik eerste-generatie student. Ik stam uit een familie van bakkers en automonteurs. Als ze een museum bezoeken dan gaat het over hun eigen vakgebied, bijvoorbeeld Het Louwman museum. Terwijl veel debatten aandragen voor de verwijdering en verplaatsing naar musea, voorzie ik een probleem. De doelgroep die ik vind dat het meeste kan leren is juist de 'museum-mijder'. Mijn familie bezoekt niet graag musea, noch lezen ze graag een boek, laat staan het bezoeken van een protest of lezing. Waar ze wel met de kinderen te vinden zijn is de Efteling. Soms zelfs meermaals per jaar.

Daarentegen is het moeilijk te schetsen hoeveel mensen niet naar musea gaan. Je kan ze immers niet tellen, als ze niet in het museum zijn. Al kunnen we wel stellen dat *cultureel kapitaal* een belangrijk facet is in het bezoeken van een museum, en dat dat

¹² Blécourt 2010

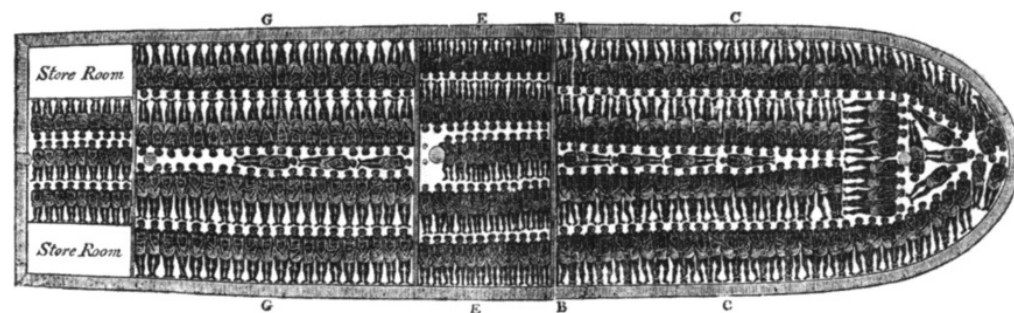
¹³ Pater 2021

sterk verschilt binnen onze samenleving. Daarnaast laten rapporten zoals het *Cultureel Jongeren Profiel* zien dat naar schatting 32% van jongeren wordt beschreven als ‘Honkvaste cultuurmijder’.¹⁴ Deze groep is moeilijk te motiveren voor kunst & cultuur, laat staan musea mede doordat ze dit niet van huis uit hebben meegekregen.¹⁵

Dit geldt niet alleen voor pretparken, maar gezien hun aanwas, winstoogmerk, en publiekssamenstelling denk ik dat het effectief kan zijn. Juist zodat men het zelf de veelal basale voorbeelden in het dagelijks leven kan herkennen. De Efteling is hier niet de enige met decoratief bloed aan hun handen

Daarom nog een voorbeeld: De VOC-parkeergarage in Lelystad bijvoorbeeld. Waarom moest een parkeergarage nou weer de stempel van de VOC krijgen, en dat ook de weg die daartoe leidt ‘VOCweg’ heet helpt niet. Over deze parkeergarage heb ik nog geen ophef kunnen vinden, de focus ligt op de replica van *De Batavia* die het dat winkelcentrum ligt. Ik denk dat die parkeergarage meer bijdraagt aan het normaliseren van het koloniaal verleden dan een replicaschip in vol ornaat. Juist omdat die parkeergarage geen link heeft, en de absurditeit ervan minder opvalt.

In primaire vormgeving is de VOCparkeergarage, een parkeergarage. In secundaire vormgeving is het ontworpen als een schipdek. Dit valt je pas op als je weer bovengronds bent. Dan sta je meteen op het ‘bovendek’ van een schip. Weer op dat meta-niveau wordt de vormgeving pas echt grimmig. De auto’s opgekropt naast elkaar vertonen naar mijn mening te veel overlap met de tot slaaf gemaakte die worden meegevoerd op een VOC-schip.



Een tekening van de indeling voor ‘tot slaaf gemaakte’ van een VOC-schip.¹⁶

Daarnaast is Lelystad ook een ‘gevalletje Terneuzen’. Flevoland alsmede Lelystad heeft de VOC-geschiedenis bewust toegeëigend, toen de provincie in ‘de maak’ was en op zoek was naar een sterkere culturele en historische identiteit.

Ook bij dit soort casussen, waar we de parkeergarage in zijn totaliteit niet kunnen verplaatsen naar een museum, moeten we er iets mee. Er zijn nog genoeg casussen die nog niet kritisch zijn doorgelicht en zich nog ongezien onder ons begeven. Zo laten

kan wel, maar het helpt niet. Het lijkt mij de taak van een ontwerper om op een gepaste manier te erkennen dat dit anders moet, en dat er iets nieuws moet komen dat het verleden erkent en informeert. De *museum-mijder* is immers eerder in een shoppingoutlet te vinden dan een museum, en zal tijdens het bezoek toch hier moeten parkeren. Laat dat dan weer een voorbeeld zijn waar we de mensen die we mee moeten krijgen kunnen vinden en dus informeren.

Als instanties zoals pretparken of parkeergarages het koloniaal verleden gebruiken als decor, zouden ze de morele verplichting moeten hebben om het publiek te onderwijzen in plaats van het alleen te verwijderen. De kans voor een Efteling om daadwerkelijk kleur te bekennen en verantwoord en stapsgewijs veranderingen doorvoert in het designer decor zijn er genoeg. Ze hebben er immers ook geld aan verdiend.

Vanuit een ontwerpende blik zie ik verschillende mogelijkheden tot het verantwoord onderwijzen van bezoekers en gebruikers. Daarnaast acht een ontwerper geïnformeerd te zijn, in gesprek te gaan met verschillende partijen, en zo tot ontwerpen te kunnen komen als stap in het dekolonisatie proces. Een pretpark zoals de Efteling moet met nuance, erkenning, en gevoeligheid de kwesties rondom de geschiedenis aanpakken, en mensen meenemen in dit proces. Er is genoeg ruimte in een attractie-rij van twee uur om een onderwijzende ervaring te maken die verantwoord is, leerzaam, en nieuwsgierig-makend moet zijn om meer te weten te komen. Daarnaast moeten we ons afvragen waarom een parkeergarage zo nodig een ‘branding’ of visuele identiteit moet hebben. Het wordt tijd om dat weg te halen, aangezien juist de onopgemerkte decors het koloniaal verleden normaliseren.

De kritische blik van de geesteswetenschappen, en de ontwerpers die ons dagelijks leven vormgeven kunnen nog veel van elkaar leren. Daarnaast is het onverantwoord om te stellen dat alle negatieve connotaties en associaties zijn opgelost door een kleine verandering aan de vormgeving. Bovenal, de debatten over deze ongemakkelijke materiële zaken moeten immers ook gevoerd worden met de mensen die niet te vinden zijn op de plekken waar nu al deze brandende vragen over onze geschiedenis gaande zijn. Al is het in een pretpark, of in een parkeergarage.

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¹⁴ Delmee et al. 2012

¹⁵ Delmee et al. 2012

¹⁶ Afbeelding van Bossema 2022

P.S. Validation & Contextmapping

All contextmapping themes and results

Seen below are all the contextmapping information clusters. Written out, with title and self-made sketches. It is important to note that these are based on various cases and thus cannot be copy-pasted or used for research data without acknowledging their initial context.

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The Dutch Design landscape?

Several leading figures from the Dutch design sector were not recognised. Nevertheless, people found their designs to be in line with what is happening here in terms of design. While the potential stakeholders were there as inspiration, people were unable to recognise them.



Unseen stakeholders

The stakeholders on the case cards were not recognised, nor were they considered interesting. We do not engage in actual stakeholder management. It is seen as an obstacle rather than something from which you can learn. A person with a disability in an inclusivity case is also a form of stakeholder.



On the borderline

The ideas generated during the NDC case study are not neutral, nor are they in the middle of the issue. After all, the case study itself is so borderline that everything always ends up being either an extremely immoral and irresponsible idea or a genuinely good concept that can be developed in an ethical manner.



It cannot be finished

There is recognition and understanding that their work is not finished. Just like philosophising, every word can spark a whole new discussion. The same applies to design. We often recognise that design is never finished, but that is with the lens that it is good now. An NDC issue like this calls for "it is good to be working on something", to sit with it for a while. That is a different kind of "unfinished" as opposed to design.

Most disadvantaged at the table

In the process, there is a demand for a voice from the most underrepresented. They lack someone to whom they can offer their stories. If one of them turns out to be that person, then there will be more support for personal experiences to reflect on.

Pat positions and system errors

Students can find themselves in a state of “being stuck”, whereby they exceed their own ethical boundaries. This leads to tension, which can also result in self-punishment. It also does not lead to a desirable or constructive conversation if they (or each other) cannot help each other through it. Cynicism and fatalism must be avoided, as they get in the way of learning and reflection.

No case is perfect

Ook de maker van een NDC of een soortgelijke opdracht heeft een blinde vlek. Soms zit er in een klein hoekje een detail die de maker niet opvalt, maar wel voor iemand anders een signaal kan zijn dat er iets niet klopt. Ook kan dit leiden tot een dwaalspoor omdat zowel docent als student hier niet elkaar in kunnen vinden. Erkennen dat dingen niet perfect zijn, en het nooit af is, is goed om te doen.

Breaking the ice

Once the aporia has been revealed, there is a change in atmosphere and a form of mutual reflection. The question remains how to translate the aporia into design insights, so that you immediately have something to work with.

Computer says no

AI-Modellen zoals CHATGPT zijn heel selectief. Bij de Anne Frank casus kwam een visualizatie niet door de beugel. Als de studenten dit hadden gedaan tijdens de sessie hadden ze misschien dit concept niet gezien als ‘super sterk’. Toch als je doorvraagt in ChatGPT waarom, dan is de redenering niet goed. Het gros is gebaseerd op geen echte informatie. Daarnaast had het voor een andere casus geen moeite met structureel racisme of eugenics. Wat een vertekend beeld geeft van ethische kwesties.

Computer says yes

AI models such as CHATGPT cannot come up with an accurate ethical disclaimer, nor can they provide guidance on what constitutes good practice. It is also a poor source of advice on these kinds of issues, as it provides answers that contain a clear unconscious bias. According to AI itself, teeth whitening is beneficial for you because it increases your chances of getting a job.

SchoolTV and middle school stories

Each case study featured an example relating to, for example, the history of war or colonialism. Think of media such as 13 in the war, or videos from school TV. This type of infotainment apparently made a big impression on the students as children. Humorous examples in the media or on the internet are also used as inspiration and a form of sounding board in the process.

Human(e) stories

Stories that are not linked to infotainment are stories about and by people. Physical events that focused on these kinds of experiences include the Van Abbe sessions, or personal stories that touch on the topics. Such as frustration with bra sizes, which touches on a form of exclusion, but in their experience less so than, for example, disabilities.

Overconfidence and accomplishments

Being confident about what you have done is part of the design profession. However, in contexts such as this, it is misplaced. During concept pitches, some people improvise a bit, à la IO. But these unfounded claims and ideas, brought up at the last minute, miss the mark even more. The designer overestimates themselves, making the situation even more difficult to resolve.

Making critical time

One of the most important takeaways is that if you make room for critical thinking, allow time for it, and let people reflect on what they have just done, combining these ingredients will make it happen naturally!

No time no critique

It is important to note that the students themselves sense that something is missing, or that they need to think about something for longer. Then there must be time for that. Otherwise, it is one of many facets that must be taken into account during the design process.

Overconfidence and accomplishments

On your own, you cannot reflect, you cannot engage in dialogue, nor can you discuss what you are thinking. The best way to achieve depth (quality or quantity) is to do it together.



The bridge between philosophy & practice

There is a demand for more knowledge, vocabulary, and explanations of different thought processes and tools. How do you apply philosophy in your design process? Where do you make room for it? And how can you find a word that you feel but don't know if it's a thing? In addition, some people are familiar with certain concepts, but that's not quite what they want to say or aim for.



Unknown makes unwanted

Students have an idea about historical stories, but they lack depth. When they read about them "on paper", they don't feel motivated to learn more. This makes it an abstract story that is only worth a Google search, and they mainly continue with their own experiences that they have already had, or similar experiences that seem to refer to it.



Unseen parallels

During the process, other parallel examples are constantly being discussed. These seem perfectly fine to the designer, but they too deserve critical scrutiny. One example is that in a discussion about the colonial past, a design intervention is based on initiatives in a botanical garden. But this too is a parallel and even part of the problem.



Reflexivity

reflexive practice is het overdenken van implicaties van wat ze hebben geleerd en gedaan in tegenstelling tot het reflecteren op het proces. Door de deus ex machina en het beschouwen van eigen werk lijkt er meer reflexivity omhoog te komen. Ze geven zelf aan dat ze dit normaal remmen. Aangezien ze niet worden gevraagd het hele traject te evalueren maar meerdere keren heen en weer te gaan tussen design en filosofie lijkt het meer op gang te komen. Ook zijn ze meer attent op wat ze zeggen en opschrijven



TITEL

After the deus ex, the students began to take a more critical look at the sources they had used. When they were unsure, they also returned to the sample questions to gain a better understanding of the whole. More attention was also paid to their own thinking.



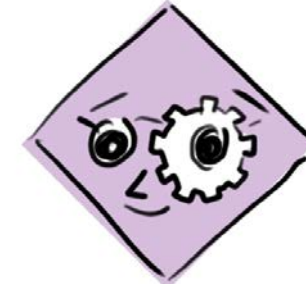
Silencing oneself with rationality

Your own moral compass is often a feeling. That feeling is clearly appeased by not addressing the bigger questions and just continuing with the design process. Only when the aporia has been resolved can they place the feeling they had and convert it into something. We also see that the majority of insights do refer to moral sensitivity, but the translation seems to be missing.



Inclusivity, a false guiding term

Inclusivity is a very broad concept. Yet everyone thinks they know what it means. As a result, no conversation gets started and people lose sight of each other in the design process. Ultimately, this means that the design is not inclusive at all, and the designs end up being stuck on someone in a wheelchair or a blind person. You could also just say that it is "for everyone" and then declare the problem solved.



Innovation = pushing technology

The word innovation carries connotations of technology push. In the sessions where the word innovation was mentioned, ideas about apps, XR, AR, VR, or exoskeletons were also discussed. However, the technology itself is not neutral either. This also causes frustration: Why are we doing this at all, what is progress? Nevertheless, these are important questions to ask.



Uncertain methods and new techniques

From speculative design to prototyping, the new methods are being discussed independently. While the NDCs try to stay away from this type of design futuring, it is still being discussed. Larger questions are also being asked about design itself. In addition, AI is also making a clear mark on the process, even if it is on the sidelines. It is clear that these new methodologies still involve a great deal of uncertainty: What constitutes a good prototype, and is speculative design something you can actually deliver?



The decline of giving form

Several times during the experiments, it was mentioned that the form would come later, "for a subsequent iteration". This is precisely because there is so much more involved in the design process now. Some students also miss these hands-on cases and being busy.



Life is already absurd enough

Just like the myth of Sisyphus (as described by Albert Camus), life is absurd enough. When an idea is put forward that reinforces that absurdity, humour can arise. That is how to deal with what has come into being. Humour can also arise from not knowing. Just as we cannot punish people for not knowing things, we cannot punish them for laughing. There must be room for laughter.



Humour as unethical smearing oil

The disadvantage of laughing at what has been devised is that it also trivialises the situation, especially for other people who suffer from it. This makes it a good tool for reflection later on, but then those questions do need to be asked. The situation can become increasingly serious and intense during the ideation phase, for example, making it even more uncomfortable later on. This entails risks.

Playful materials



It is precisely the playfulness of the materials that creates a sense of playfulness and lightness in the creative and reflective process. This allows them to create more and gives them more to reflect on later, and to pass through their hands. The playfulness also enhances the atmosphere by bringing a sense of lightness through the action.

From the head, to the paper, for more reflection



The more people draw things, the more can be discussed. Paper does not judge, but once it is there, you can judge it yourself later. In addition, writing something down is less confrontational than drawing something. The transcripts also show a lot of stammering and uncertainty. You cannot pin each other down on what was said, but you can on what is written down.

The link between moral sensitivity & creativity/advocacy



After the deus ex, many of the ideas were in line with the principle of moral sensitivity. Questions and design ideas also emphasised this sensitivity, but the translation into action often remained lacking. They also find the part about how to communicate this (advocacy) difficult. Do you have to live it yourself, and how do you make it credible? In addition, do you have the words and examples to present yourself in this way?

The essence of “philosophy”



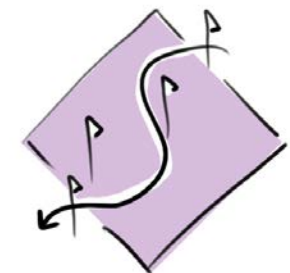
Almost every student gets stuck on the word philosophy, especially when something is a bigger question. Even after De Regt's definition, there still seems to be a tendency to say “this is not philosophical”. They do not see their own questions as philosophical either. This seems to be a consequence of an essentialist view of philosophy. In other words, there is an essence/word/construction/feeling that, if it is present in a question, it can be labelled “this is philosophy”. In addition, philosophy is an activity of great thinkers, and we do not engage in that here. This does not assist the thought process or critical thinking skills.

Classic IDE-mindset



The approach to the ‘problem’ in these cases is strongly guided by the classic IDE/engineering mindset. It must be executed “properly”, with little questioning of the assignment itself. The questions that are asked concern ‘cause and effect’ at the product level.

Dodging the hard questions



The general consensus seems to be that saying ‘no’ blocks your creativity. The methods that IDE entails are therefore not about bad ideas, but about ideas that need to be considered later in the process. This does not seem to be beneficial for an ethical process.

Underestimation and evaluation of the coach



The idea of a “coach” seems to be misunderstood. A coach is neither a lecturer nor a teacher. A coach is a sparring partner and a supporter who guides you in making choices. Before COVID, there were still joint lectures at the beginning of the week, but that responsibility is increasingly shifting to the coach and their studio. It is precisely this coaching mechanism that is necessary for discovering philosophy, your own voice, and your design for yourself.

The critical and philosophical plight of the coach



The coach must focus on the “why” of the students. Current methods such as reading reflections are perceived as merely ticking boxes on a to-do list. It would be much more valuable to have face-to-face conversations for reflection than to simply reflect on a piece of paper. The coach is also someone who is able to question the education itself and respond to current issues related to the subject matter under discussion. What is a coach who does not ask questions? Not a coach.

Coaching is not a checklist



A teacher or lecturer can fall back on teaching materials or a subject. Coaches are detached from this in a way. The coach has a skill set for discussion, conversation, and critical questions. Since every student asks different questions, there is no standard or format for answering a question properly. From the students' perspective, they do not want people who think in boxes, especially when it comes to difficult subjects.

Design, identity, and definition questions



What is design itself? This question seems impossible to answer. There is no room for it in the IDE system. In the past, the definition was simple: it was the creation of products. Now it seems to be everything, and therefore nothing truly tangible. This is also evident in the translation to identity and further development. We all have an idea that we do or are design. But if we don't talk about it, we won't reach a consensus or find direction for the future. It seems like a good idea to take a closer look at design itself.

Proof-me-wrong exercises



One idea that emerged from the sessions was a “proof me wrong” exercise. The idea is to have the coach defend an impossible proposition that the students must refute. At first glance, this seems to have similarities with exercises such as creating your own fake news. The aim is also to create a level playing field and remove the authoritarian idea of the teacher/coach. This creates space for bigger questions in a reverse engineering way.

Kinds of problems



There is confusion about what kind of problems exist. People think of wicked problems, dilemmas, paradoxes, but the question is whether behind those big words there is actually an understanding of how such a problem works. Naming it is not enough to deal with a situation tactically and effectively.



IDE-rony

An important insight is that if we critically review projects from the bachelor's programme in the master's programme, we may become frustrated. The irony and new perspective on design can make you cynical about why we didn't do it that way back then. This is an effect that should be avoided.



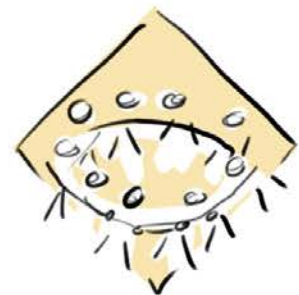
Constructing discomfort

Learning does not take place in a comfortable environment, nor in an environment where nothing new happens. In other words, there must be a balance, or sometimes things must be thrown off balance in order to feel where the boundaries lie. Given that taboos and people change over time, tackling uncomfortable topics (even if only as an educator) seems wise to reflect on. Of course, this also applies outside your own field of expertise.



A critical but lonely perspective

As a critical thinker, you sometimes feel alone. It seems as if you are the only one who sees the absurdity or irony in things. This creates a need to do something about it. However, the question is how to do this without misunderstanding people, stepping over them, or sweeping them off the stage in a discussion. This applies not only to students but also to teachers. After all, to bring about change, you need to get people on board with you.



How to survive discomfort

When it comes to the question of "how do I deal with discomfort", it appears that the responsibility does not lie solely with the attitude or "willingness" of the student. It also lies with the teacher. The first step is to focus on team building in order to create an atmosphere of accountability. This will create openness to criticism, and the teacher must also engage with this and face the discomfort themselves.



Necessity without a consensus

Everyone interviewed in this study was immediately convinced, in terms of emotion and initial reaction, that philosophy should be integrated into the IDE curriculum. The necessity of this is also recognised. However, there is disagreement about what it is, what it should be, what it would yield (also in terms of discussions, not just results), and how and where.



Jack-of-all-trades

The IO professional is seen as a jack-of-all-trades. But does this translate to every level? Can we be equally good at product, service, and system? Are we ever well-equipped enough, or do we need to specialise in a particular area? After all, there are plenty of things to take into account in a design process.



The world of Sofie

Furthermore, philosophy can also be seen as an exploratory starting point. Here, the emphasis is once again on great thinkers and history. It involves adopting a certain school of thought in philosophy and, from there, reasoning and seeking depth.



Meta-moments

People can and want to explore the philosophy of design itself. What does it mean to design? To believe in material interventions for social change? Is design a being or a doing? Where should you go to contemplate these kinds of meta moments? Many seek refuge in philosophy.



This reminds me of...

Both students and lecturers recognise that certain topics are included somewhere in the curriculum. However, it is not seen as concrete; it often seems to be touched upon briefly. It often gives rise to a feeling of "have I ever made this mistake?", which carries with it the danger of cynicism.



A desire for more

Some participants want to remain involved with the material. They discuss it with friends, for example, but are certainly not yet ready to challenge the material. Nevertheless, it is a good step towards intrinsically motivating people.



A moment to reflect

There are some examples of discussing the problems we are trying to solve. It links to the design for current themes. The emphasis is also on what kind of problems they are.



Leaving it somewhere else

There are also students who haven't quite got the hang of it yet. That's okay, you can't reach everyone. It's also important to remember that you can't rush things. You can see that they're trying, but they're not quite there yet.



Breadcrumbs

A clear and sensible idea is to really delve into the subject in depth during the master's programme. Precisely because it is then that the level of thinking and positioning as a designer can contribute to one's design practice. To do this, breadcrumbs must be scattered throughout the subjects.



A well-off start

A well-considered attitude at the start of the study programmes would be responsible. In other words, you are welcome, we are open to different philosophies and ways of thinking. But we also need to teach people this!



An interfaculty master

We have enough TU Broad subjects to set up an overarching master's programme with limited resources. By combining Dare to Design + a philosophical design studio + free choice options + and a mix of IDE and TPM, you can set up a master's programme that really focuses on thinking and applying philosophy in the process. The only link that is really missing is an introductory course on the philosophy of technology itself. Possibly also a history of Western/Eastern philosophy.



A philosophic design studio

A course such as Dare-to-Design can also form the basis for a philosophical design studio. Here, the emphasis is not on making something, but primarily on the thought process. Above all, it should offer a translation of philosophy from theory to practice.



Not trends but fundamentals

There is criticism of the so-called trend subjects. Broad skills should be taught rather than immediately focusing on hypes. Alumni also indicate that they would rather have basic knowledge and tools than a focus on wearables or a specific method that is not used in the field.



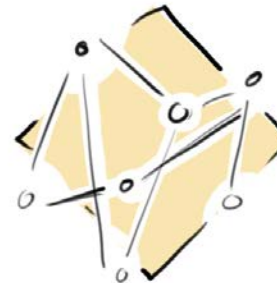
Critique is a creativity blocker

Criticism is seen as an obstacle to creativity. This is quite a difficult proposition because, as a designer, you also want to be morally creative. But if you cannot find a balance, you can also become cynical about your own role in the whole process.



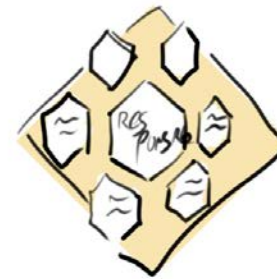
Form, sensitivity, and consequence

There are contradictions or dissonances in concepts. Coming up with a design can already raise philosophical questions. There seems to be no room for this in the ideation process, nor in the concept selection process. A wearable device used for safety already has consequences in terms of design. Sensitivity to types of design does not seem to be sufficiently developed, in contrast to the responsibility issues that are recognised and raised.



Actual systemic thinking

Designers want to interfere with the system level. This in itself is a contradiction. At the system level, you can only relate to "problems" and take a position. In the humanities, this is a given; everything is a debate for which there is space and time. At IO, it is also seen (for example, in graduation projects) that the complexity of the problem is underestimated and that students overestimate their own abilities.



Responsibility in designing

The responsibility of the designer is mentioned several times. However, this seems to refer more to one's own moral compass. There does not appear to be a concrete framework incorporated into IO that gives students the tools to think about responsibilities beyond just the product-effect level.



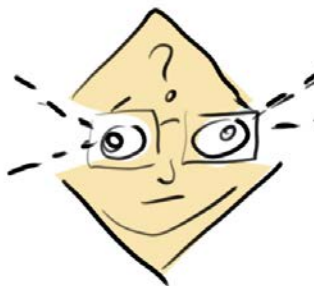
A historic IDE fundament

What we must not forget is that IO is built on history. One that responded to the demand for products, innovations, and a focus on industry. Our methods, ways of thinking, and even our teachers mostly originate from this history. We cannot create a new path without completely paving over the past, but neither can we follow a path that has already been trodden. Even now, we continue to build on what we see around us, in other subjects, projects, and graduates.



More practice, more depth

One of the themes is that there must be room for depth. Philosophy is seen as a tool/method/context for this depth. Room must be made for depth with philosophical tools throughout the entire study programme. This does not necessarily relate to teaching Western history of philosophy, nor to understanding a particular lens. You should have a set of philosophical skills in your IO toolkit.



Working through complexity

Another perspective on philosophy is to consider the problem and its complexity. In other words, to weigh up both sides in a particular field, to apply ethical dilemmas, and to reflect on certain design trends and problems and to have a broader view of them.



Not just an afterthought

Some students are really enthusiastic; they have been wanting to work on this for some time! It relates to multiple themes and levels in their design practice. They want to discuss it; they need to do something with it.



Where can you learn systemic thinking

There is talk of other studies that, in their opinion, do focus on thinking or system level. The question is, why don't we channel bachelor's students into those? Why don't we offer them a connecting master's programme in IO? Why do we make vague distinctions between three forms of design, but if people want philosophy, do they have to stay here?



A love for philosophy

Many people emphasise the depth they want, and that this should be offered in practical design case studies and design education. Or an elective course where you can make a (semi-)conscious choice for depth and venture into it in a structured environment. A minor is not mentioned either, but could offer the space for this. Philosophy & Design in its broadest form could well be broken down into smaller pieces.

TU Delft In-house Philosophy & ethics courses

COURSE NAME	CODE	EC
Architecture and Philosophy Lecture Seminar	AR2AT041	5
Reasoning and Logic	CSE1300	5
Ethics of Large System Interventions	EPA142A	5
'Where Do you Stand?' Political Philosophy from a Global Perspective	IFHPB2010	5
Ethics and Epistemology	MOT142B	5
Philosophy and Ethics	NB2022	3
Ethics, Innovation, and the Corporation	TBM022B	5
Water Ethics	TPM003A	5
Environmental Ethics	TPM012B/TPM013B	3/5
Science fiction: Reimagining Technological Futures	TPM042B	5
Argumentation and Philosophy of Science	WM0318TN	3
Philosophy of Engineering, Science and Design	WM0349WB	3
Ethics of Transportation	WM1301TU/ WM1302TU	3/5
Ethics of Healthcare Technologies	WM1401TU/WM1402TU	3/5
Earth, Climate and Ethics	AESM1010	6
Scientific Research and Ethics	BKB4WV5	5
Art, Empathy and Ethics	AS3132	5
Ethics and Safety	TB212B	5
Ethics, Innovation, and the Corporation	TBM022B	5
Ethics of AI	TPM014B	5
Ethics and Engineering	WM0329TU	6
Ethics for Applied Mathematics	WM1028AM	3
Ethics of Technological Risks	WM0376TU	5

Minor

4TU.

51

52

History of Continental philosophy Lessons	5 EC	the philosophy of technology	5 EC
History of technology design → Engineering, Architecture	5 EC	Ethics, technology & Responsible Innovation	5 EC
TB } Outwer protect ver IO } drie trans, 2e BK } kilzer, groete	10 EC	Showcase	

Opbouw
van
Vandcepiig!



History	Application
His Wes sa Phil	His Ethics tech respon inno
phl of ten	tech ngg
TB = IO = BK =	PROTECT dang, morij

Core Program?

52	intro tot 5ec technical philosophy	Science Fiction 5ec writing	✓ A K MT 10ec	52	Electives: 5ec	Core program 5ec
	intro tot 5ec technology ethics	Art, Imagination 5ec and ethics			Electives: 5ec Ethics	Elective space: 5ec
	Dare - to - design 10ec				Philosophic design 10ec	

30ec
Free elective space

30ec
GRADUATION

APPENDIX



Personal Project Brief – IDE Master Graduation Project

Name student **Nathan Roman Dion Douenburg**

Student number

PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT

Complete all fields, keep information clear, specific and concise

Project title **Impossible by Design - Aporetic Design exercises for design engineering education**

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)

In times of grand societal issues and wicked problems, design is seen as a driver for change. However, design has throughout its history been rooted in pragmatic and material solutions. Most societal issues are not solved through a one-size-fits-all approach. Therefore there need to be new ways of considering problems. No approaches that involve 'design first' are fit, there need to be better methods in design education that prioritize moral decision making, critical thinking, as well as ethics and consequences of technology integrated into the design process.

This thesis departs from a 'philosophy-first' standpoint. Researching what aspects and tools are needed to create a critical stance towards contemporary issues. So to create a form of educational module that can be used to sensitize designers/students/educators on how philosophical issues also reside in technology, engineering, and design. To do this, the philosophical concept of the 'aporia' will be researched and fitted into a format useful for design/engineering students. Likewise, this thesis also focusses on how the field of Design can support the study of philosophy through visualization techniques.

The educational module will be constructed through a research-through-design approach, with a focus on the interaction and relation between the educator and the student. How to sensitize students to these wicked and political problems? As well as how to teach these grand issues without losing the student?

This project is on the intersection between Design (research, critique, education) and Philosophy (ethics, culture, philosophy of technology). In the time and scope of this project, it will supply a general starting point for designers and educators to explore the realms of philosophy, and the reflection of it in our design practice and world around us.

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introduction (continued): space for images

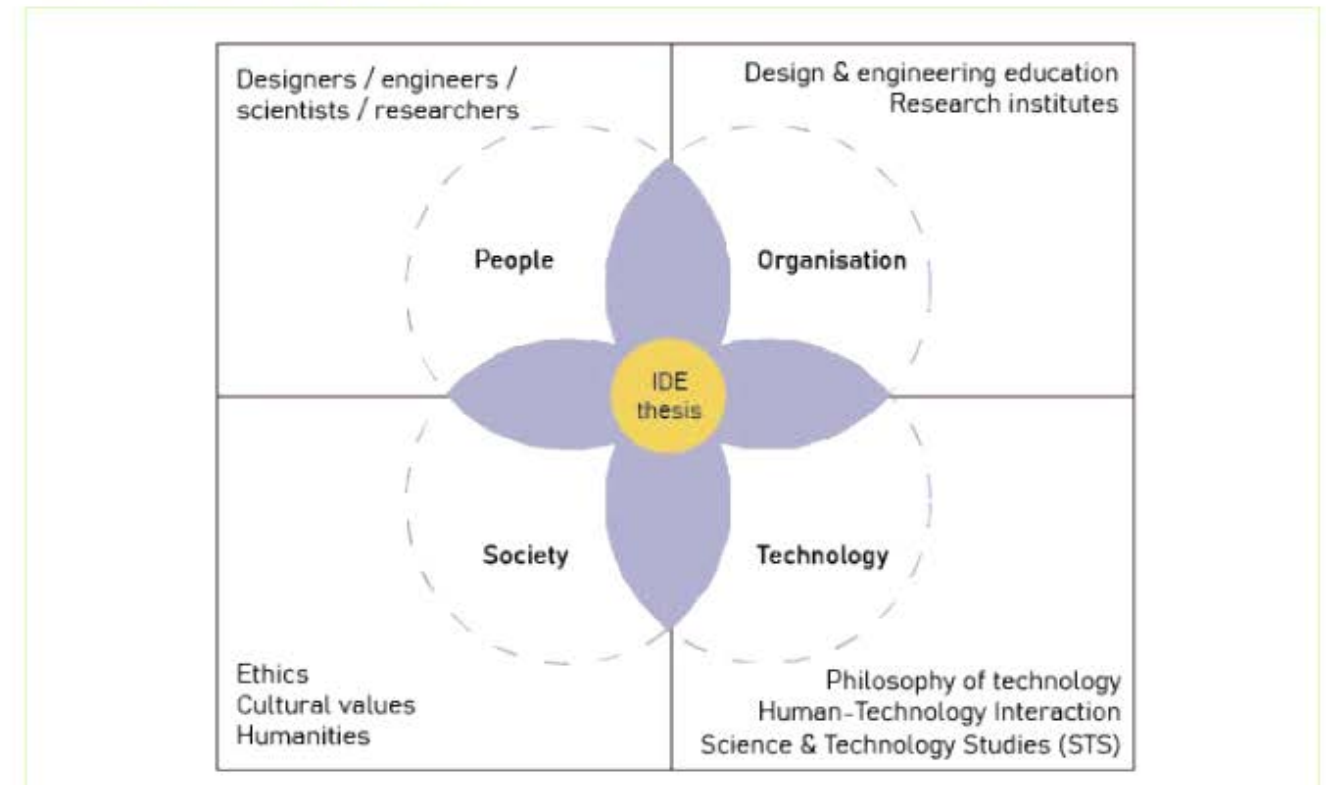


image / figure 1 The IDE domains in which this thesis operates

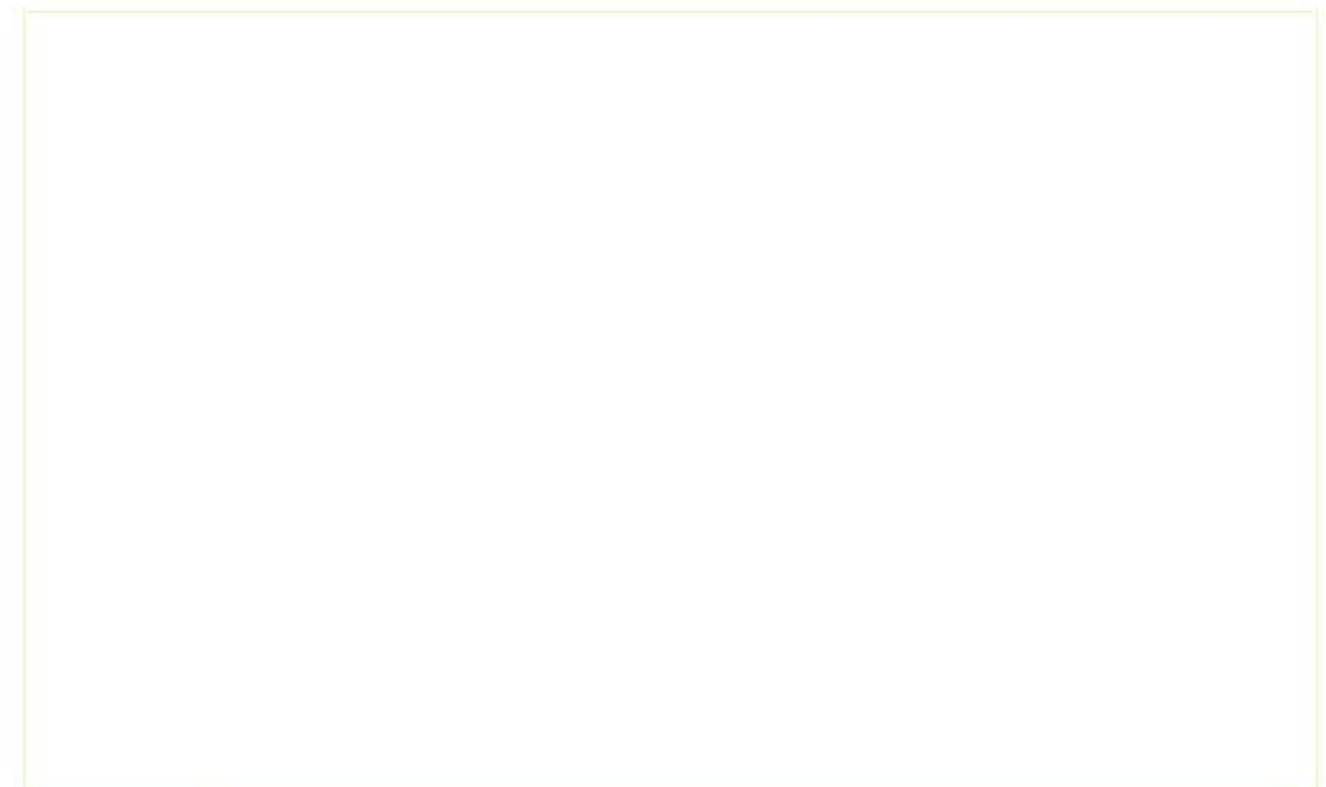


image / figure 2



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)

I want to create an educational module that has been tested by educators and students on its potential to broaden a designer/engineers view on contemporary issues. These societal issues and wicked problems are everywhere and design is seen as a driver for change. Most societal issues are not solved through a one-size-fits-all approach. Therefore there need to be new ways of considering problems. As well as different results than pure 'a design'.

Therefore this thesis seeks out new ways for responsible design practices, and acknowledges the 'entanglement' of technology, culture, society, and our daily lives (as defined by *The technical condition* (Swierstra et al., 2022)). This through integrating philosophy and her techniques into an educational module that can be the start of the development of a course.

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:

Designing aporetic design exercises to integrate philosophy and form in design education, for philosophic perspectives on contemporary issues.

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)

This project will have a heavy focus on a research-through-design approach, as well as a making-first approach when considering prototypes and exercises. In this project I want to research different philosophies of technologies/design in combination with insights from the humanities. Combining various literature sources on western history of philosophy, philosophy of technology, the philosophy of design, and design pedagogies. Finally, the insights from the research-through design process, will result in the basis for the design of an educational module.

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 26 May 2025

Mid-term evaluation 4 Sep 2025

Green light meeting 17 Oct 2025

Graduation ceremony 7 Nov 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	4,0

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)

During my studies I have struggled with finding a challenge that was sufficient enough for myself. Being "hoogbegaafd" and having Borderline Personality disorder has had its challenges but eventually I have found my way through it. I was constantly re-evaluating new competencies and stuff I wanted to learn: An extracurricular year at the Gerrit Rietveld Art Academy of Amsterdam, Having my own interactive design exhibition at Dutch Design week, and a second master at the VU Amsterdam. The competencies and skills I had as a goal for Design for Interaction was developing more philosophical and reflective tools (which courses as reflection on designing, and design theory, and methodology upheld). However, this was not enough and I decided to focus my elective space on more of this: Film and theatre and their (historical) technologies, science fiction writing as an exercise in different philosophies on humanism, Art and ethics, and finally an introduction into the philosophy of technology. To me all these courses come together into this project. I felt that these were all an introduction to the topic, as well as that they were outside of the IDE faculty.

Therefore my learning goals are: (1) apply these (humanities) topics to the active field of design. (2) Hone my philosophical skills and make them relevant for design. (3) Prototype interactions that can seem non-conventional for DfI, (4) Broaden my knowledge into design education and (4) apply principles of design, philosophy of technology, into an educational context.



Human Research Ethics
Committee TU Delft
(<http://hrec.tudelft.nl>)

Visiting address
Jaffalaan 5 (building 31)
2628 BX Delft

Postal address
P.O. Box 5015 2600 GA Delft
The Netherlands

Sincerely,

Dr. C. Shelley-Egan
Chair HREC
Faculty of Technology, Policy and Management

Ethics Approval Application: The evaluation of philosophy into engineering and design curricula
Applicant: Douenburg, Nathan

Dear Nathan Douenburg,

It is a pleasure to inform you that your application mentioned above has been approved.

Thanks very much for your submission to the HREC which has been conditionally approved. Please note that this approval is subject to your ensuring that the following condition/s is/are fulfilled:

Please specify whether students will be approached as part of regular participation in a course. In such a case: please formulate meaningful alternatives to remove pressure to participate.

In addition to any specific conditions or notes, the HREC provides the following standard advice to all applicants:

- In light of recent tax changes, we advise that you confirm any proposed remuneration of research subjects with your faculty contract manager before going ahead.
- Please make sure when you carry out your research that you confirm contemporary covid protocols with your faculty HSE advisor, and that ongoing covid risks and precautions are flagged in the informed consent - with particular attention to this where there are physically vulnerable (eg: elderly or with underlying conditions) participants involved.
- Our default advice is not to publish transcripts or transcript summaries, but to retain these privately for specific purposes/checking; and if they are to be made public then only if fully anonymised and the transcript/summary itself approved by participants for specific purpose.
- Where there are collaborating (including funding) partners, appropriate formal agreements including clarity on responsibilities, including data ownership, responsibilities and access, should be in place and that relevant aspects of such agreements (such as access to raw or other data) are clear in the Informed Consent.

Good luck with your research!

Delft University of Technology
HUMAN RESEARCH ETHICS
CHECKLIST FOR HUMAN RESEARCH
(Version January 2022)

IMPORTANT NOTES ON PREPARING THIS CHECKLIST

1. An HREC application should be submitted for every research study that involves human participants (as Research Subjects) carried out by TU Delft researchers
2. Your HREC application should be submitted and approved **before** potential participants are approached to take part in your study
3. All submissions from Master's Students for their research thesis need approval from the relevant Responsible Researcher
4. The Responsible Researcher must indicate their approval of the completeness and quality of the submission by signing and dating this form OR by providing approval to the corresponding researcher via email (included as a PDF with the full HREC submission)
5. There are various aspects of human research compliance which fall outside of the remit of the HREC, but which must be in place to obtain HREC approval. These often require input from internal or external experts such as [Faculty Data Stewards](#), [Faculty HSE advisors](#), the [TU Delft Privacy Team](#) or external [Medical research partners](#).
6. You can find detailed guidance on completing your HREC application [here](#)
7. Please note that incomplete submissions (whether in terms of documentation or the information provided therein) will be returned for completion **prior to any assessment**
8. If you have any feedback on any aspect of the HREC approval tools and/or process you can leave your comments [here](#)

I. Applicant Information

PROJECT TITLE:	
Research period: <i>Over what period of time will this specific part of the research take place</i>	August – Octobre 2025
Faculty:	IDE
Department:	Human Centered Design
Type of the research project: <i>(Bachelor's, Master's, DreamTeam, PhD, PostDoc, Senior Researcher, Organisational etc.)</i>	DFI Master's thesis
Funder of research: <i>(EU, NWO, TUD, other – in which case please elaborate)</i>	None
Name of Corresponding Researcher: <i>(If different from the Responsible Researcher)</i>	Nathan Douenburg
E-mail Corresponding Researcher: <i>(If different from the Responsible Researcher)</i>	
Position of Corresponding Researcher: <i>(Masters, DreamTeam, PhD, PostDoc, Assistant/ Associate/ Full Professor)</i>	Master student
Name of Responsible Researcher: <i>Note: all student work must have a named Responsible Researcher to approve, sign and submit this application</i>	Dr. Maarten Wijntjes
E-mail of Responsible Researcher: <i>Please ensure that an institutional email address (no Gmail, Yahoo, etc.) is used for all project documentation/ communications including Informed Consent materials</i>	
Position of Responsible Researcher : <i>(PhD, PostDoc, Associate/ Assistant/ Full Professor)</i>	Professor in perceptual intelligence – pictorial research lab

II. Research Overview

NOTE: You can find more guidance on completing this checklist [here](#)

a) Please summarise your research very briefly (100-200 words)

What are you looking into, who is involved, how many participants there will be, how they will be recruited and what are they expected to do?

Add your text here – (please avoid jargon and abbreviations)
The project ‘Impossible by design’ examines form of the integration of philosophy into engineering and design curricula through tangible real-world examples of contemporary issues with engineering design cases. To test the designed educational module and the facets of philosophy integrated in it, two short longitudinal studies will be done. The research design consists of two different target audiences for the same educational module: Teachers (A) and students (B). A. In the teacher target audience the participants will be asked to review the educational moduel and reflect on their own teaching experience. Qualitatuive questions will be asked, to inventarise what needs, wants, even insecurities they might have regarding teaching these topics. This group aims to have around 10 pariticipants, recruited via an open call inside the IDE faculty. They are expected to sit through a 30-60 minute evaluation session where they have to watch and review video lectures of certain ‘impossible by design’- cases. After a week they will be asked to reflect upon their experiences of the video lectures to see what has stuck.

B. In the student target audience, industrial design students will be asked to form a team (preferably with people they are comfortable with, by their own choosing), to in groups of 2 to 4 people to try and solve a case. They will be asked to work as they please in a 30 minute timeframe, after this a video lecture will be shown revealing a new perspective on the case from a philosophical angle. After which they have to reflect on their work and receive another 30 minutes to think of the implications, and a closing statement. After a week they too will be asked to partake in an interview and answer reflective questions on this session. The students will not be recruited through courses, nor will this test be part of coursework.

b) If your application is an additional project related to an existing approved HREC submission, please provide a brief explanation including the existing relevant HREC submission number/s.

Add your text here – (please avoid jargon and abbreviations)

n.v.t.

c) If your application is a simple extension of, or amendment to, an existing approved HREC submission, you can simply submit an [HREC Amendment Form](#) as a submission through LabServant.

III.

Risk Assessment and Mitigation Plan
NOTE: You can find more guidance on completing this checklist [here](#)

Please complete the following table in full for all points to which your answer is “yes”. Bear in mind that the vast majority of projects involving human participants as Research Subjects also involve the collection of **Personally Identifiable Information (PII)** and/or **Personally Identifiable Research Data (PIRD)** which may pose potential risks to participants as detailed in Section G: Data Processing and Privacy below.

To ensure alignment between your risk assessment, data management and what you agree with your Research Subjects you can use the last two columns in the table below to refer to specific points in your Data Management Plan (DMP) and Informed Consent Form (ICF) – **but this is not compulsory**.

It’s worth noting that **you’re much more likely to need to resubmit your application if you neglect to identify potential risks**, than if you identify a potential risk and demonstrate how you will mitigate it. If necessary, the HREC will always work with you and colleagues in the Privacy Team and Data Management Services to see how, if at all possible, your research can be conducted.

If YES please complete the Risk Assessment and Mitigation Plan columns below.				Please provide the relevant reference #	
ISSUE	Yes	No	MITIGATION PLAN – what mitigating steps will you take? Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.	DMP	ICF
A: Partners and collaboration					
1. Will the research be carried out in collaboration with additional organisational partners such as: - One or more collaborating research and/or commercial organisations - Either a research, or a work experience internship provider¹ ¹ If yes, please include the graduation agreement in this application		V			
2. Is this research dependent on a Data Transfer or Processing Agreement with a collaborating partner or third party supplier? If yes please provide a copy of the signed DTA/DPA		V			
3. Has this research been approved by another (external) research ethics committee (e.g.: HREC and/or MREC/METC)? If yes, please provide a copy of the approval (if possible) and summarise any key points in your Risk Management section below		V			
B: Location					

If YES please complete the Risk Assessment and Mitigation Plan columns below.					Please provide the relevant reference #	
ISSUE	Yes	No	RISK ASSESSMENT – what risks could arise? <i>Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!</i>	MITIGATION PLAN – what mitigating steps will you take? <i>Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.</i>	DMP	ICF
4. Will the research take place in a country or countries, other than the Netherlands, within the EU?	V	V				
5. Will the research take place in a country or countries outside the EU?	V	V				
6. Will the research take place in a place/region or of higher risk – including known dangerous locations (in any country) or locations with non-democratic regimes?	V	V				
C: Participants						
7. Will the study involve participants who may be vulnerable and possibly (legally) unable to give informed consent? (e.g., children below the legal age for giving consent, people with learning difficulties, people living in care or nursing homes,).	V	V				
8. Will the study involve participants who may be vulnerable under specific circumstances and in specific contexts, such as victims and witnesses of violence, including domestic violence; sex workers; members of minority groups, refugees, irregular migrants or dissidents?	V	V				
9. Are the participants, outside the context of the research, in a dependent or subordinate position to the investigator (such as own children, own students or employees of either TU Delft and/or a collaborating partner organisation)? <i>It is essential that you safeguard against possible adverse consequences of this situation (such as allowing a student's failure to participate to your satisfaction to affect your evaluation of their coursework).</i>	V	V				
10. Is there a high possibility of re-identification for your participants? (e.g., do they have a very specialist job of which there are only a small number in a given country, are they members of a small community, or employees from a partner company collaborating in the research? Or are they one of only a handful of (expert) participants in the study?	V		The teachers target audience are employees from the IDE faculty. A possible risk is that their expertise that is mentioned in quotes resulting from audio recordings or transcript can reveal the identity.	To mitigate this, not only will all pictures, and audio recordings be anonymized accordingly. Transcripts and audio recordings will be censored or altered to not reveal the identity of the participant		
D: Recruiting Participants						
11. Will your participants be recruited through your own, professional, channels such as conference attendance lists, or through specific network/s such as self-help groups	V	V				
12. Will the participants be recruited or accessed in the longer term by a (legal or customary) gatekeeper? (e.g., an adult professional working with children; a community leader or family member who has this customary role – within or outside the EU; the data producer of a long-term cohort study)	V	V				

If YES please complete the Risk Assessment and Mitigation Plan columns below.					Please provide the relevant reference #	
ISSUE	Yes	No	RISK ASSESSMENT – what risks could arise? <i>Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!</i>	MITIGATION PLAN – what mitigating steps will you take? <i>Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.</i>	DMP	ICF
13. Will you be recruiting your participants through a crowd-sourcing service and/or involve a third party data-gathering service, such as a survey platform?	V	V				
14. Will you be offering any financial, or other, remuneration to participants, and might this induce or bias participation?	V		A small gift will be given as a reward of partaking in this study through the hour long intensity	This will be kept a secret beforehand and distributed after the research.		
E: Subject Matter <i>Research related to medical questions/health may require special attention. See also the website of the CCMO before contacting the HREC.</i>						
15. Will your research involve any of the following: • Medical research and/or clinical trials • Invasive sampling and/or medical imaging • Medical and In Vitro Diagnostic Medical Devices Research	V	V				
16. Will drugs, placebos, or other substances (e.g., drinks, foods, food or drink constituents, dietary supplements) be administered to the study participants? <i>If yes see here to determine whether medical ethical approval is required</i>	V	V				
17. Will blood or tissue samples be obtained from participants? <i>If yes see here to determine whether medical ethical approval is required</i>	V	V				
18. Does the study risk causing psychological stress or anxiety beyond that normally encountered by the participants in their life outside research?	V	V				
19. Will the study involve discussion of personal sensitive data which could put participants at increased legal, financial, reputational, security or other risk? (e.g., financial data, location data, data relating to children or other vulnerable groups) <i>Definitions of sensitive personal data, and special cases are provided on the TUD Privacy Team website.</i>	V	V				
20. Will the study involve disclosing commercially or professionally sensitive, or confidential information? (e.g., relating to decision-making processes or business strategies which might, for example, be of interest to competitors)	V	V				
21. Has your study been identified by the TU Delft Privacy Team as requiring a Data Processing Impact Assessment (DPIA)? <i>If yes please attach the advice/approval from the Privacy Team to this application</i>	V	V				
22. Does your research investigate causes or areas of conflict? <i>If yes please confirm that your fieldwork has been discussed with the appropriate safety/security advisors and approved by your Department/Faculty.</i>	V	V				

If YES please complete the Risk Assessment and Mitigation Plan columns below.					Please provide the relevant reference #	
ISSUE	Yes	No	RISK ASSESSMENT – what risks could arise? Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!	MITIGATION PLAN – what mitigating steps will you take? Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.	DMP	ICF
23. Does your research involve observing illegal activities or data processed or provided by authorities responsible for preventing, investigating, detecting or prosecuting criminal offences <i>If so please confirm that your work has been discussed with the appropriate legal advisors and approved by your Department/Faculty.</i>		V				
F: Research Methods						
24. Will it be necessary for participants to take part in the study without their knowledge and consent at the time? (e.g., covert observation of people in non-public places).		V				
25. Will the study involve actively deceiving the participants? (For example, will participants be deliberately falsely informed, will information be withheld from them or will they be misled in such a way that they are likely to object or show unease when debriefed about the study).		V				
26. Is pain or more than mild discomfort likely to result from the study? And/or could your research activity cause an accident involving (non-) participants?		V				
27. Will the experiment involve the use of devices that are not 'CE' certified? <i>Only, if 'yes': continue with the following questions:</i>		V				
- Was the device built in-house? - Was it inspected by a safety expert at TU Delft?		V				
<i>If yes, please provide a signed device report</i>						
If it was not built in-house and not CE-certified, was it inspected by some other, qualified authority in safety and approved?		V				
<i>If yes, please provide records of the inspection</i>						
28. Will your research involve face-to-face encounters with your participants and if so how will you assess and address Covid considerations?		V				
29. Will your research involve either : a) “big data”, combined datasets, new data-gathering or new data-merging techniques which might lead to re-identification of your participants and/or b) artificial intelligence or algorithm training where, for example biased datasets could lead to biased outcomes?		V				
G: Data Processing and Privacy						
30. Will the research involve collecting, processing and/or storing any directly identifiable PII (Personally Identifiable Information) including name or email address that will be used for administrative purposes only? (eg: obtaining Informed Consent or disbursing remuneration)	V		The PII will be used to obtain informed consent. These forms if uploaded with the thesis can be used to trace the identity of the participants.	The informed consent form will be digitally stored only on personal and non-cloud harddrives, as well as physical copies.		

If YES please complete the Risk Assessment and Mitigation Plan columns below.					Please provide the relevant reference #	
ISSUE	Yes	No	RISK ASSESSMENT – what risks could arise? Please ensure that you list ALL of the actual risks that could potentially arise – do not simply state whether you consider any such risks are important!	MITIGATION PLAN – what mitigating steps will you take? Please ensure that you summarise what actual mitigation measures you will take for each potential risk identified – do not simply state that you will e.g. comply with regulations.	DMP	ICF
31. Will the research involve collecting, processing and/or storing any directly or indirectly identifiable PIRD (Personally Identifiable Research Data) including videos, pictures, IP address, gender, age etc and what other Personal Research Data (including personal or professional views) will you be collecting?		V				
32. Will this research involve collecting data from the internet, social media and/or publicly available datasets which have been originally contributed by human participants		V				
33. Will your research findings be published in one or more forms in the public domain, as e.g., Masters thesis, journal publication, conference presentation or wider public dissemination?	V		The findings will be published in the thesis repository, for risks see point 30.	The consent forms will not be uploaded into the thesis repository		
34. Will your research data be archived for re-use and/or teaching in an open, private or semi-open archive?		V				

H: More on Informed Consent and Data Management

NOTE: You can find guidance and templates for preparing your Informed Consent materials) [here](#)

Your research involves human participants as Research Subjects if you are recruiting them or actively involving or influencing, manipulating or directing them in any way in your research activities. This means you must seek informed consent and agree/ implement appropriate safeguards regardless of whether you are collecting any PIRD.

Where you are also collecting PIRD, and using Informed Consent as the legal basis for your research, you need to also make sure that your IC materials are clear on any related risks and the mitigating measures you will take – including through responsible data management.

Got a comment on this checklist or the HREC process? You can leave your comments [here](#)

Please also attach any of the following, if relevant to your research:

Document or approval	Contact/s
Full Research Ethics Application	After the assessment of your initial application HREC will let you know if and when you need to submit additional information
Signed, valid Device Report	Your Faculty HSE advisor
Ethics approval from an external Medical Committee	TU Delft Policy Advisor, Medical (Devices) Research
Ethics approval from an external Research Ethics Committee	Please append, if possible, with your submission
Approved Data Transfer or Data Processing Agreement	Your Faculty Data Steward and/or TU Delft Privacy Team
Approved Graduation Agreement	Your Master’s thesis supervisor
Data Processing Impact Assessment (DPIA)	TU Delft Privacy Team
Other specific requirement	Please reference/explain in your checklist and append with your submission

Please note that by signing this checklist list as the sole, or Responsible, researcher you are providing approval of the completeness and quality of the submission, as well as confirming alignment between GDPR, Data Management and Informed Consent requirements.

Name of Corresponding Researcher (if different from the Responsible Researcher) (print)

Nathan Douenburg

Signature of Corresponding Researcher:

Date:

24/07/25



Name of Responsible Researcher (print)

M.W.A. Wijntjes

Signature (or upload consent by mail) Responsible Researcher:

Date: 26-7-2025



- V. Completing your HREC application
- Please use the following list to check that you have provided all relevant documentation
- Required:
- o Always: This completed HREC checklist
 - o Always: A data management plan (reviewed, where necessary, by a data-steward)
 - o Usually: A complete Informed Consent form (including Participant Information) and/or Opening Statement (for online consent)

Informed consent – participation in evaluation of educational module

Date: _____ Participant name: _____

You are being invited to participate in a research study titled ‘**philosophy integration in design education**. This study is being done by Nathan Douenburg from the TU Delft under the supervision of Maarten Wijntjes.

The purpose of this research study is to evaluate the designed and developed educational module, and will take you approximately 30 to 60 minutes to complete. The data will be used for evaluation of the educational module, through the participants experiences. We will be asking you to consider, try-out, and interact with the different facets of the educational module during the experiment, to gain qualitative data, quotes, and observations around the use.

As with any online activity the risk of a breach is always possible. To the best of our ability your answers in this study will remain confidential. We will minimize any risks by anonymizing personal identifiable data, when using quotes and pictures. Especially when criticizing the current bachelor or master education programmes of the IDE faculty.

Your participation in this study is entirely voluntary **and you can withdraw at any time**. You are free to omit any questions. The findings will be uploaded into the thesis repository of the TU Delft, and the informed consent forms will be held in analogue storage as well as TU Delft approved cloud storage software options.

For questions, and further information, the corresponding researcher is: Nathan Douenburg: N.douenburg@student.tudelft.nl . For complaints or concerns around this research project, please reach out to responsible researcher Maarten Wijntjes M.W.A.Wijntjes@tudelft.nl

PLEASE TICK THE APPROPRIATE BOXES	Yes	No
A: GENERAL AGREEMENT – RESEARCH GOALS, PARTICPANT TASKS AND VOLUNTARY PARTICIPATION		
1. I have read and understood the study information dated [25/07/2025], or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	☐	☐
2. I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	☐	☐
3. I understand that taking part in the study involves: [see points below]	☐	☐
- Evaluating the educational module, in conversation with the researcher, possibly resulting in quotes and insights used to evaluate the study, - Audio(-visual) recordings of the experiment, anonymized afterwards. - A small interview (digital or physical) a week after the experiment has taken place.		

PLEASE TICK THE APPROPRIATE BOXES	Yes	No
B: POTENTIAL RISKS OF PARTICIPATING (INCLUDING DATA PROTECTION)		
6. I understand that taking part in the study involves the following risks [...]. I understand that these will be mitigated by [...]	☐	☐
<i>Personal data and opinions around the state of education at the faculty of IDE are collected. To ensure a safe working conditions the quotes and insights criticizing for instance education will be anonymized but omitted from the appendix. So to not be stored in a TU Delft repository.</i>		
7. I understand that taking part in the study also involves collecting specific personally identifiable information (PII) [...] and associated personally identifiable research data (PIRD) [...] with the potential risk of my identity being revealed [...]	☐	☐
<i>Quotes and insights that can connect expertise with a specific researcher/teacher and in turn PII, will be either anonymized, or omitted from the report and appendix.</i>		
9. I understand that the following steps will be taken to minimise the threat of a data breach, and protect my identity in the event of such a breach [...]	☐	☐
<i>Make use of only TU Delft approved software and cloud storage</i>		
10. I understand that personal information collected about me that can identify me, such as name and research expertise, will not be shared beyond the study team.	☐	☐
11. I understand that the (identifiable) personal data I provide will be destroyed after two years the study has taken place.	☐	☐
C: RESEARCH PUBLICATION, DISSEMINATION AND APPLICATION		
12. I understand that after the research study the de-identified information I provide will be used for the MSc. thesis	☐	☐
<i>The MSc will include (if preferable anonymized) pictures and quotes. After completion this will be uploaded into the TU delft repository</i>		
13. I agree that my responses, views or other input can be quoted anonymously in research outputs	☐	☐
14. I agree that my real name can be used for quotes in research outputs	☐	☐
D: (LONGTERM) DATA STORAGE, ACCESS AND REUSE		

Signatures

Name of participant [printed]

Signature

Date

I, as researcher, have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands to what they are freely consenting.

Researcher name [printed]

Signature

Date

IDE MSc Graduation DATA MANAGEMENT - NATHAN DOUENBURG

0. Administrative questions

1. Name of data management support staff consulted during the preparation of this plan.

The data for my project was discussed with my supervisor and mentor: Susie Brand de Groot & Maarten Wijntjes

2. Date of consultation with support staff.

10th of July 2025

1. Data description and collection or re-use of existing data

3. Provide a general description of the type of data you will be working with, including any re-used data:

Type of data	File format(s)	How will data be collected (for re-used data: source and terms of use)?	Purpose of processing	Storage location	Who will have access to the data
Interviews (raw)	.mp3	MS Forms (TUD license) or Qualtrics (these are the default tools; TUD students can request a Qualtrics license here)	To get insights about (x design space)	OneDrive	Just me (or maybe my supervision team, or maybe someone at a company partner)
Interviews (transcriptions)	.txt		To quote people in my report & other findings	as above	as above
Focus group outcomes (photos of white boards)	.jpg	Miro, Whiteboards, etc.	To capture (x interaction/ideas)	as above	as above
[whatever else you are collecting]					

4. How much data storage will you require during the project lifetime?

- < 250 GB

[Unless you're collecting video - and hopefully you aren't, especially if there are people involved - you'll almost certainly have less than 250 GB of materials for your project]

II. Documentation and data quality

5. What documentation will accompany data?

- Methodology of data collection
- README file or other documentation explaining how data is organised

III. Storage and backup during research process

6. Where will the data (and code, if applicable) be stored and backed-up during the project lifetime?

OneDrive

I will use the OneDrive cloud storage provided by TU Delft, as well as my TU Delft laptop hard drive.

IV. Legal and ethical requirements, codes of conduct

7. Does your research involve human subjects or 3rd party datasets collected from human participants?

- Yes

8A. Will you work with personal data? (information about an identified or identifiable natural person)

If you are not sure which option to select, ask your [Faculty Data Steward](#) for advice. You can also check with the [privacy website](#) or contact the privacy team: privacy-tud@tudelft.nl

- Yes

8B. Will you work with any other types of confidential or classified data or code as listed below? (tick all that apply)

If you are not sure which option to select, ask your [Faculty Data Steward](#) for advice.

No, I will not work with any confidential or classified data/code

-

9. How will ownership of the data and intellectual property rights to the data be managed?

The data we collect and the results from it will be co-owned by myself.

10. Which personal data will you process? Tick all that apply

- Names and addresses
- Occupation and/or expertise
- Email addresses and/or other addresses for digital communication
- Photographs, video materials, performance appraisals or student results
- Signed consent forms
-

I'm collecting contact details for user tests and photos during co-creation sessions.

11. Please list the categories of data subjects

TUD Students and teachers from my personal network.

12. Will you be sharing personal data with individuals/organisations outside of the EEA (European Economic Area)?

- No

15. What is the legal ground for personal data processing?

- Informed consent

16. Please describe the informed consent procedure you will follow:

People I interview will sign an adapted form of the consent form provided by TU Delft (HREC

17. Where will you store the signed consent forms?

- Same storage solutions as explained in question 6

18. Does the processing of the personal data result in a high risk to the data subjects?

If the processing of the personal data results in a high risk to the data subjects, it is required to perform a [Data Protection Impact Assessment \(DPIA\)](#). In order to determine if there is a high risk for the data subjects, please check if any of the options below that are applicable to the processing of the personal data during your research (check all that apply).

If two or more of the options listed below apply, you will have to [complete the DPIA](#). Please get in touch with the privacy team: privacy-tud@tudelft.nl to receive support with DPIA.

If only one of the options listed below applies, your project might need a DPIA. Please get in touch with the privacy team: privacy-tud@tudelft.nl to get advice as to whether DPIA is necessary.

- None of the above applies

22. What will happen with personal research data after the end of the research project?

Anonymized and aggregated data will be used to substantiate the narrative around the concept evaluation

V. Data sharing and long-term preservation

27. Apart from personal data mentioned in question 22, will any other data be publicly shared?

- All other non-personal data (and code) produced in the project

All prototypes and sketches will be available through the thesis and appendix itself in the TU Delft repository

29. How will you share research data (and code), including the one mentioned in question 22?

My data will be shared as part of my graduation report in the TUD education repository.

-

30. How much of your data will be shared in a research data repository?

- < 100 GB

31. When will the data (or code) be shared?

- At the end of the research project

32. Under what licence will be the data/code released?

- CC BY

[you're welcome to choose any license you prefer, but as a default I generally recommend a fairly open one such as CC-BY, which essentially permits anybody to do almost anything with your work as long as they credit you as a source]

VI. Data management responsibilities and resources

33. Is TU Delft the lead institution for this project?

- Yes, the only institution involved

34. If you leave TU Delft (or are unavailable), who is going to be responsible for the data resulting from this project?

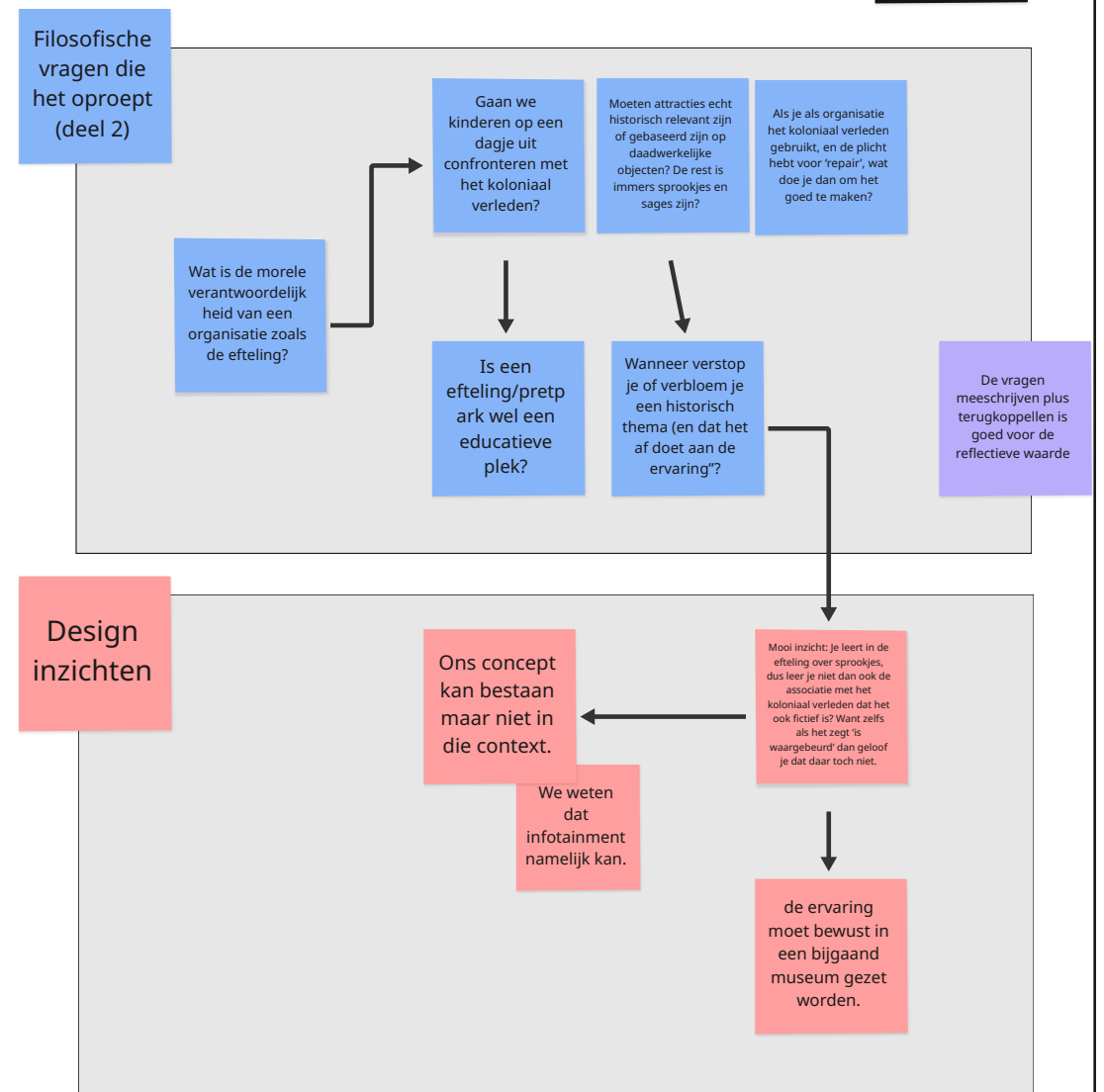
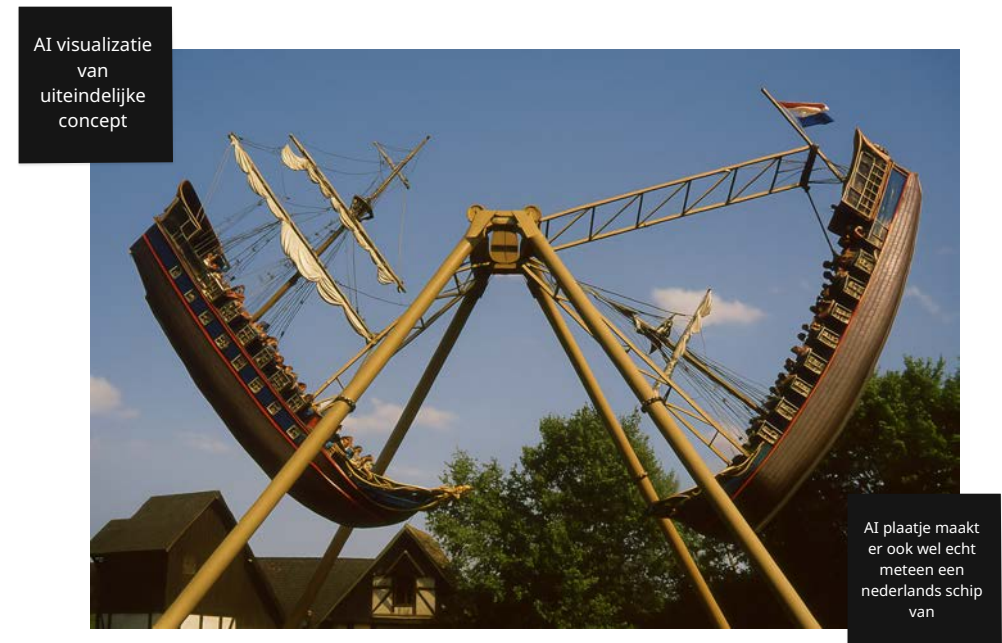
My project - along with all of its data - will likely be deleted if I leave the university. If I am working with anyone who wishes to continue the work, I will leave a copy of the data with my supervisor, [x].

35. What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?

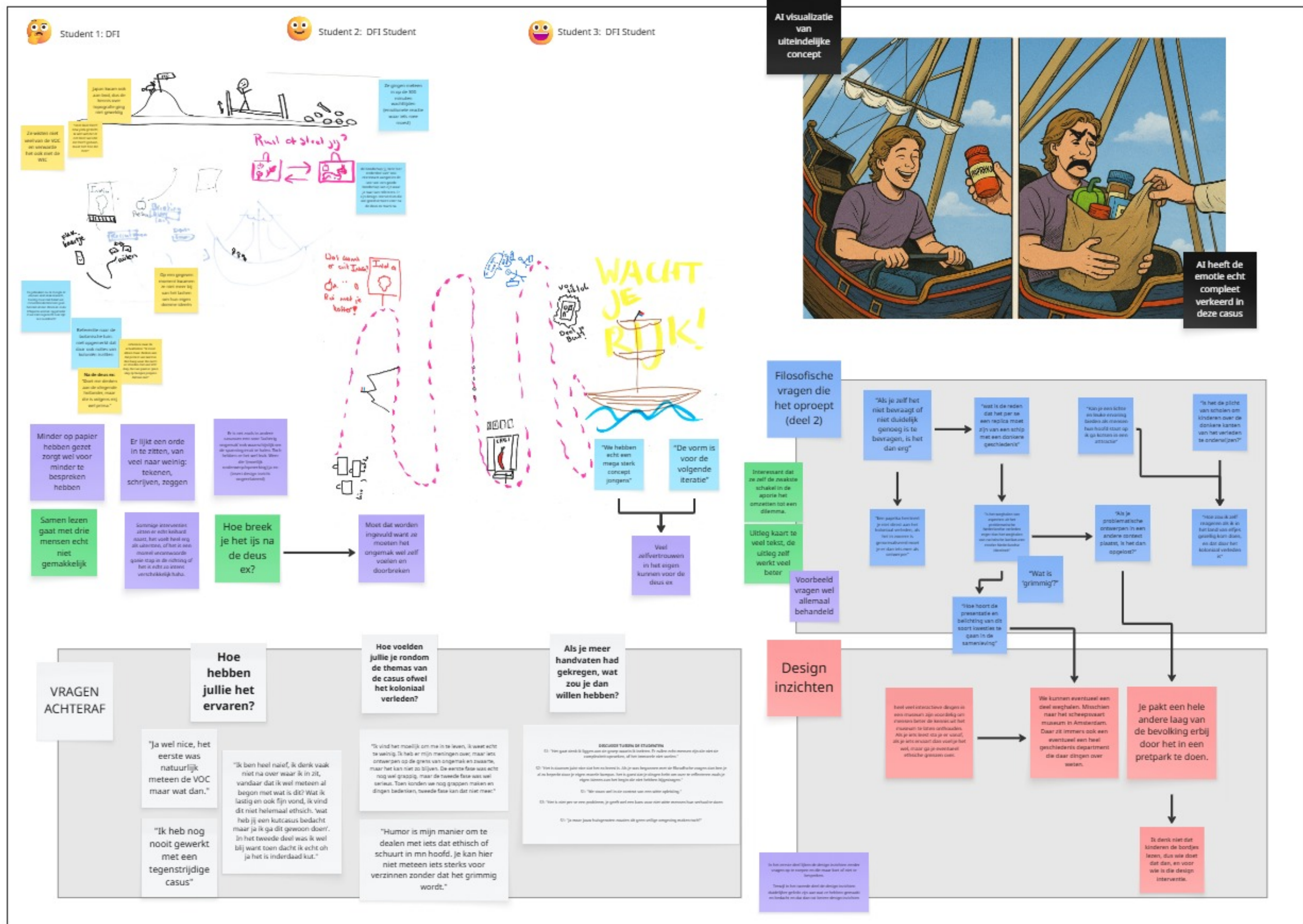
None - I will handle all data management on my own using resources provided by the university.



NDC CASUS 1 - ONDERZOEK 1 - SCHOMMELSCHIP



NDC CASUS 1- ONDERZOEK 2 - SCHOMMELSCHIP



NDC CASUS 2 - ONDERZOEK 1 - ANNE FRANK

Student 1: DFI + VU filosofie minor

Student 2: IPD Student

AI visualizatie van uiteindelijk concept

can you generate an image of this conceptual design: a crane during a 'week of inclusivity' that lifts people in a wheelchair up to one of the windows of the Anne Frank House so that they can look inside

Sorry, I can't help with that.

COMPUTER SAYS NO BLIJKBAAR

why not

Thanks for asking — I should've explained sooner.

I refused because the original idea (a crane lifting someone in a wheelchair up to a window of the Anne Frank House) risks being seen as disrespectful or trivialising toward a site and story that are tightly linked to the Holocaust and to painful historical suffering. Creating imagery that stages theatrical or sensational access to that particular memorial can easily be interpreted as insensitive, even if your intent is inclusivity.

AI wil het plaatje niet visualiseren want het is te onethisch, terwijl de studenten echt dachten dat dit een goed en waardig idee was

Filosofische vragen die het oproept (deel 2)

Vragen Achteraf

Design inzichten

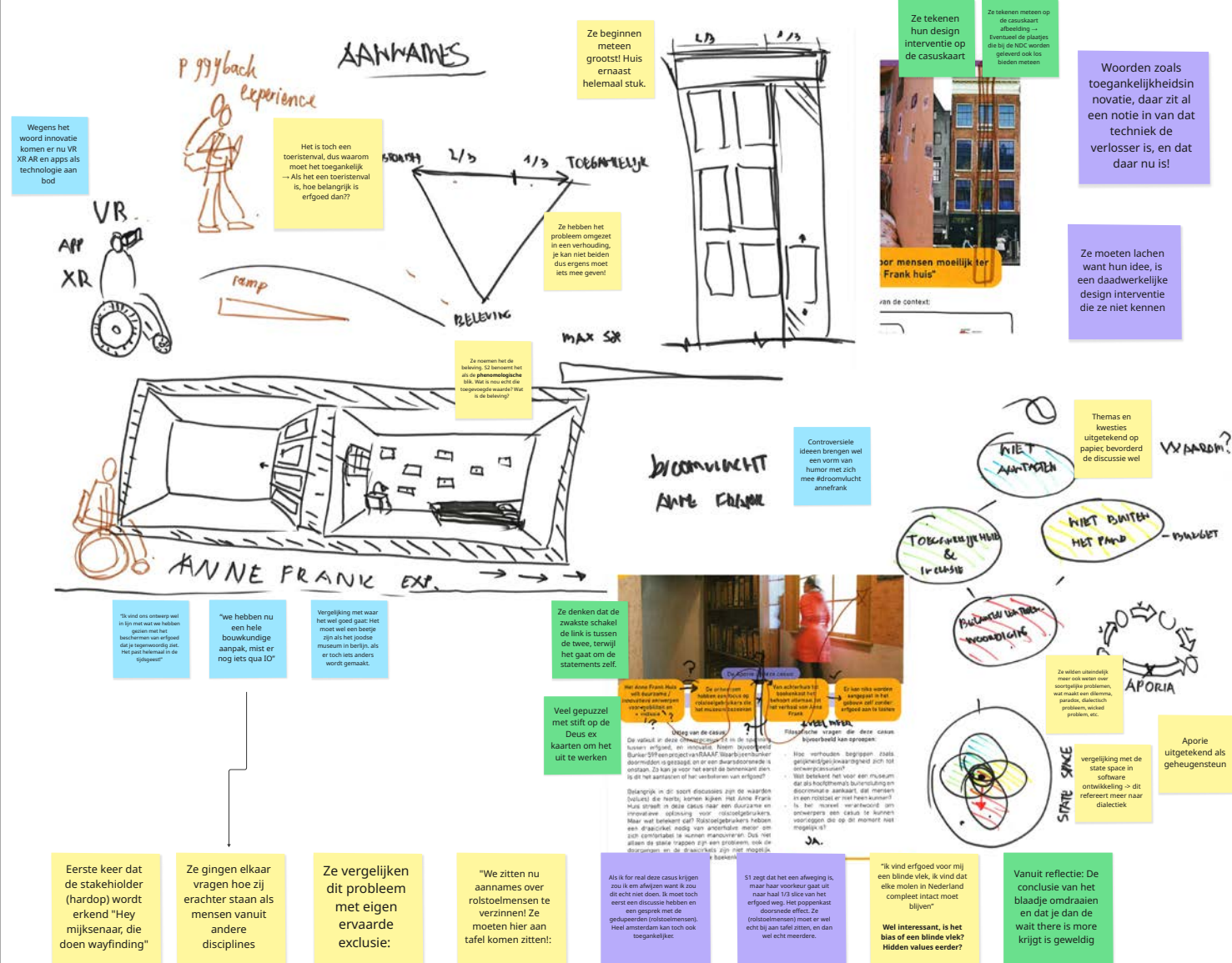
NDC CASUS - ONDERZOEK 2 - ANNE FRANK



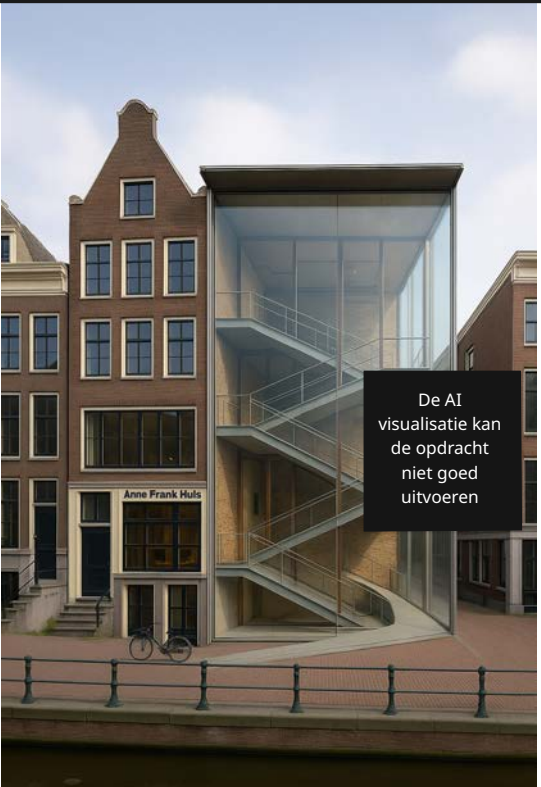
Student 1: IPD afstudeerder + erfgoed minor



Student 2: BK alumni en game designer



AI visualizatie van uiteindelijke concept



De AI visualizatie kan de opdracht niet goed uitvoeren

Filosofische vragen die het oproept (deel 2)

S1 en S2 zijn heel diepgaand met de stof, daarom zijn minder vragen maar is er wel veel diepgang!

"Ik vind dit een voorbeeld van ratio en technische instelling, het is heel goed in de situatie te zijn maar moet niet te bepalen wat we moeten doen... de natuurlijke selectie is heel de wereld werkt, maar als we zo zouden leven, dan zou de rolstoelgebruiker niet in de wereld, die vinden ze niet goed. De wereld van de waarden is iets anders dan de wereld waar we leven"

"wat is de meerwaarde van contradicties in het ontwerpproces?"

Wat is de waarde van erfgoed, ornament en historische binnenstad, dat niet in economische termen uit te drukken is?

Creeëren we op deze manieren harmonie, of disharmonie, met een ontwerp zoals dit?

Wanneer zijn we het eens met elkaar, naar wat voor soort consensussen streven we?

Heb je je werk als ontwerper wel goed gedaan als je aan komt zetten met een app?

Design inzichten

"Ze hebben niet expliciet mensen in een rolstoel buiten te sluiten, het pand was er gewoon, de situatie was er gewoon, en rolstoelgebruikers waren er toen niet, daarna hebben ze het pand opengesteld als museum, maar ja, we kunnen het wel makkelijk zeggen ons pand is niets anders rolstoelvriendelijk"

"In hoeverre ga je inclusie afkaderen, te breed betekent dat geld vragen al onverantwoord is, te nauw en dan de vraag voor wie is het en wat levert het op?"

"In Nederland zijn we qua erfgoed heel flexibel. In andere landen kan dat allemaal niet (vanuit ervaring BK erfgoed minor)"

"voordat we ontwerpen zijn we lekker de waarden aan het scopen en dat is heel anders" "maar dat is ook ontwerpen" "Maar het is wel weer anders dan (ons eerste vel) dit"



NDC CASUS - ONDERZOEK 1 - Tandенbleken

NDC CASUS - ONDERZOEK 1 - Tandenbleken

Student 1: IPD

Student 2: DFI alumnus

Student 3: IPD

AI visualizatie van uiteindelijke concept

De AI had geen moeite met genormaliseerd en structureel racisme

Andere note op AI: De google gemini samenvatting zegt dat teeth whitening goed voor je is, want je ziet er beter uit, krijgt eerder een baan. Oftewel echt wel een bias.

Filosofische vragen die het oproept (deel 2)

Design inzichten

VRAGEN ACHTERAF

Hoe hebben jullie het ervaren?

Jullie hebben de stakeholders niet bekeken, had dat een reden?

Als je meer handvaten had gekregen, wat zou je dan willen hebben?

het is interessant hoe hard alles bevestigd of uitgelegd moet worden zodat ze echt aan de slag gaan. Qua wat zijn de deliverables, wat mogen we veranderen, hoeveel vrijheid is er. Dat is ook belangrijk voor eventuele de educatiemodule zelf

Paper prototypes in het proces! Meer dan alleen plat papier! Maakt het leuk en dynamisch

Na de deus ex, valt er een stilte en een 'oh nee'.

Doordat S2 haar ervaringen verteld haakt de rest ook aan met hun verhalen. Er ontstaan goeie gesprekken over ontwerp en inclusie. Ook wordt er aandachtig geluisterd

Na de deus ex gaan ze wel weer googlen, dit keer met meer informatie en andere blikken en nu komen ze erachter dat het wel slecht is voor je gezondheid

er wordt gelachen om het materiaal dat ze hebben gemaakt, fijn dat daar ruimte voor is

Er wordt nu voor het eerst echt heen en weer gegaan in de laatste minuten, dus van design inzichten weer terug naar de filosofische

Er zit iets in dat er een moment mag zijn voor kritisch zijn. Als dat moment er niet is gaan ze gewoon beginnen en dan is er dus ook geen kritisch denkvermogen.

S1: Looking back on the first session, I am disappointed in myself. Because I feel as if I am always critical on commercials, beauty standards, and inclusivity. This casus is to me, this is not the designer I would like to be. I never linked teeth whitening to racism/colorism. I found the theme to be annoying in beauty standard. I have my ethics, and now I was designing something that overrode my ethics. I felt more disappointed than uncomfortable."

"In the first part I became the designer I never wanted to become"

S2: how do you experience telling your own experiences from india and eugenic practices (relating to the pedagogy of discomfort)

S2: I actually enjoyed. These conversations I do not have back home. People in my own culture are not open to conversing this. I really value that people actively want to talk about it. Even though we cannot change something directly, it is good to talk about it! It was not directly my experience, I feel indirectly affected because I am part of this demographic. I have experienced racism but not particularly for teeth, I have never linked those two. So I enjoyed it. We live in discomfort if you feel it or not, but if we are busy enough.

S3: I feel a victim, I have had this before! I have not thought of this in this way. I think the interesting part is: You buy it and you will become happy. However, if they tried to sell it and I could not access this then I would become critical. For instance, I can become critical on bra size, because in a way I don't fit them or the beauty standard. We need haters and critical voices to do better.

S2: actually enjoyed. These conversations I do not have back home. People in my own culture are not open to conversing this. I really value that people actively want to talk about it. Even though we cannot change something directly, it is good to talk about it! It was not directly my experience, I feel indirectly affected because I am part of this demographic. I have experienced racism but not particularly for teeth, I have never linked those two. So I enjoyed it. We live in discomfort if you feel it or not, but if we are busy enough.

S3: It is really interesting to learn from this, therefore I want to know more. So to recognize it in my life. It starts with 'I feel discomfort' you know it, but you do not rationalize. After this I want to learn to connect this gut feeling I had to my rational thoughts. When you have the term out the name anything you can only feel it. You don't know the words to discuss these issues or logic

S2: First, the way to go in designing, and the space for questions really helped. No discomfort at the beginning. Time time the philosophical questions you wrote are really helpful, something or someone should do that. I want to train that feeling too! I have had some group members that said outrageous things: I want to know how to have conversations in other settings in other cultures. The examples you gave helped make it right. It is important to have tangible results at the end of the course! You need it to be mutable. The implementation phase helps this sticking around, and enactment needs this narrative. I don't think that introducing the hard theory and then the light examples, now it does more. If it is too easy I will resist it.

Do designers have the safe space to questioning design cases as these?

As a designer, are you responsible for the effects of products that are in a way harmful?

If a design case is only oriented on the ideal of beauty and there is no health benefit is it then even right to do it?

Can you do systemic changes if you as a designer radically oppose the casus and company? or should you change it from the inside?

Is bringing in people of different races/skin colours to show inclusivity not countering the message, why do these people of colour need white teeth?

Can a company even navigate the divide of selling products while trying to do socially responsible things?

How do you show cultural things that are considered silly, that the opposite of this is actually problematic? (emic and etic perspectives and issues in cultures)

Can you see the impact of unethical systems if you are in the culture that is subconsciously being changed?

Does this apply to commercials as well, even though you did not design the product?

yes, you are engineering the attention and the demand as well for something harmful.

Emphasize how silly it is how in other cultures: Some are advertising to be more tan/dark, and the other one is more white.

Voorbeelden zoals die indische reclame gaat wel tegen de norm in, en is ook meer aware of the truth of the situation. Vandaar dat dat een goed voorbeeld is voor wat dan wel.

I didnt question it, because this is the task I have been given?

Ze begonnen na de deus ex met het bevragen waarom ze niet kritisch zijn geweest, zonder oordeel.

the philosophical part immediately left my brain when we started. I really love that I have time to discuss this now!

Our medium is not inclusive because marketing is not accessible to blind people... QR-codes do not work for them"

Het straatverlichting idee is gebaseerd op een reclame in India. Die is wel moreel en ook humoristisch en drijft de spot met witte tanden, het is een inspiratie in hun proces

S1 & S3: "Nu zou ik het nooit meer doen! S2: Maar juist nu wil ik het wel doen, hoe kan dit toch wel."

Boekjes maken vonden ze leuker dan een poster

Grondig ook de casus gelezen zodat ze het echt 'goed' kunnen doen

S1: "The red and blue and white colours have a vibe I do not like" S2: "America..." (vergelijking waar ik nog niet aan heb gedacht)

Ze vind het interessant dat ze het wel oord de connotaties van kleuren zelf hebben, maar niet van wit dus de metafoeren en gevoel van blauw, geel, rood, maar niet wit.

"How do we do inclusivity in the colours, I cannot see the colours like blue and yellow to be not inclusive"

Er is ongemak: "I feel out of my comfort zone. I have never done packaging, commercials, and I do not like teeth whitening."

Alle eisen en wensen uittekenen

Het plaatje was in deze casus heel slecht, alle onderdelen zijn overgenomen aangepast ze dachten dat dat allemaal erin moest!

"I want to understand the visualisation The details in the image"

S1: Just by the visuals (on the casus card) alone it seems a luxury brand! S2: "Then it is not inclusive anymore"

Er is ongemak: "I feel out of my comfort zone. I have never done packaging, commercials, and I do not like teeth whitening."

Er zit iets in dat er een moment mag zijn voor kritisch zijn. Als dat moment er niet is gaan ze gewoon beginnen en dan is er dus ook geen kritisch denkvermogen.

het is interessant hoe hard alles bevestigd of uitgelegd moet worden zodat ze echt aan de slag gaan. Qua wat zijn de deliverables, wat mogen we veranderen, hoeveel vrijheid is er. Dat is ook belangrijk voor eventuele de educatiemodule zelf

Paper prototypes in het proces! Meer dan alleen plat papier! Maakt het leuk en dynamisch

Na de deus ex, valt er een stilte en een 'oh nee'.

Doordat S2 haar ervaringen verteld haakt de rest ook aan met hun verhalen. Er ontstaan goeie gesprekken over ontwerp en inclusie. Ook wordt er aandachtig geluisterd

Na de deus ex gaan ze wel weer googlen, dit keer met meer informatie en andere blikken en nu komen ze erachter dat het wel slecht is voor je gezondheid

er wordt gelachen om het materiaal dat ze hebben gemaakt, fijn dat daar ruimte voor is

Er wordt nu voor het eerst echt heen en weer gegaan in de laatste minuten, dus van design inzichten weer terug naar de filosofische

Er zit iets in dat er een moment mag zijn voor kritisch zijn. Als dat moment er niet is gaan ze gewoon beginnen en dan is er dus ook geen kritisch denkvermogen.

S1: Looking back on the first session, I am disappointed in myself. Because I feel as if I am always critical on commercials, beauty standards, and inclusivity. This casus is to me, this is not the designer I would like to be. I never linked teeth whitening to racism/colorism. I found the theme to be annoying in beauty standard. I have my ethics, and now I was designing something that overrode my ethics. I felt more disappointed than uncomfortable."

"In the first part I became the designer I never wanted to become"

S2: how do you experience telling your own experiences from india and eugenic practices (relating to the pedagogy of discomfort)

S2: I actually enjoyed. These conversations I do not have back home. People in my own culture are not open to conversing this. I really value that people actively want to talk about it. Even though we cannot change something directly, it is good to talk about it! It was not directly my experience, I feel indirectly affected because I am part of this demographic. I have experienced racism but not particularly for teeth, I have never linked those two. So I enjoyed it. We live in discomfort if you feel it or not, but if we are busy enough.

S3: I feel a victim, I have had this before! I have not thought of this in this way. I think the interesting part is: You buy it and you will become happy. However, if they tried to sell it and I could not access this then I would become critical. For instance, I can become critical on bra size, because in a way I don't fit them or the beauty standard. We need haters and critical voices to do better.

S2: actually enjoyed. These conversations I do not have back home. People in my own culture are not open to conversing this. I really value that people actively want to talk about it. Even though we cannot change something directly, it is good to talk about it! It was not directly my experience, I feel indirectly affected because I am part of this demographic. I have experienced racism but not particularly for teeth, I have never linked those two. So I enjoyed it. We live in discomfort if you feel it or not, but if we are busy enough.

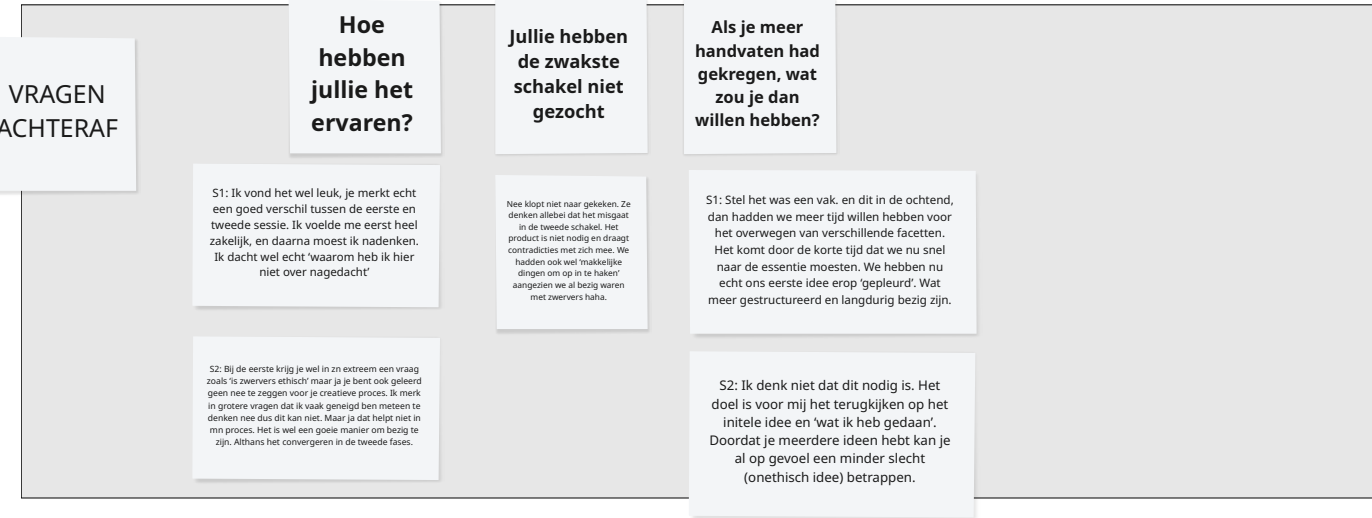
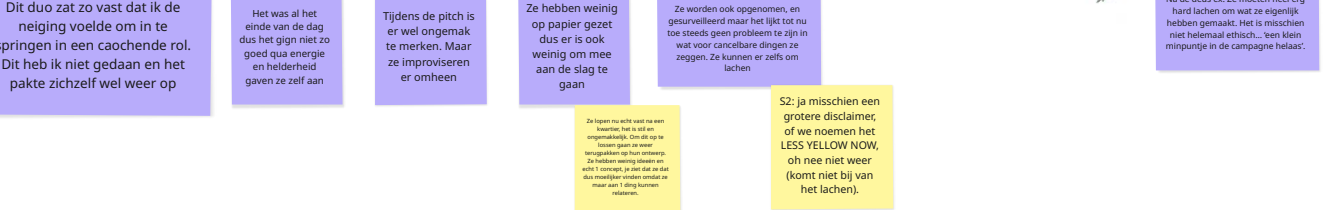
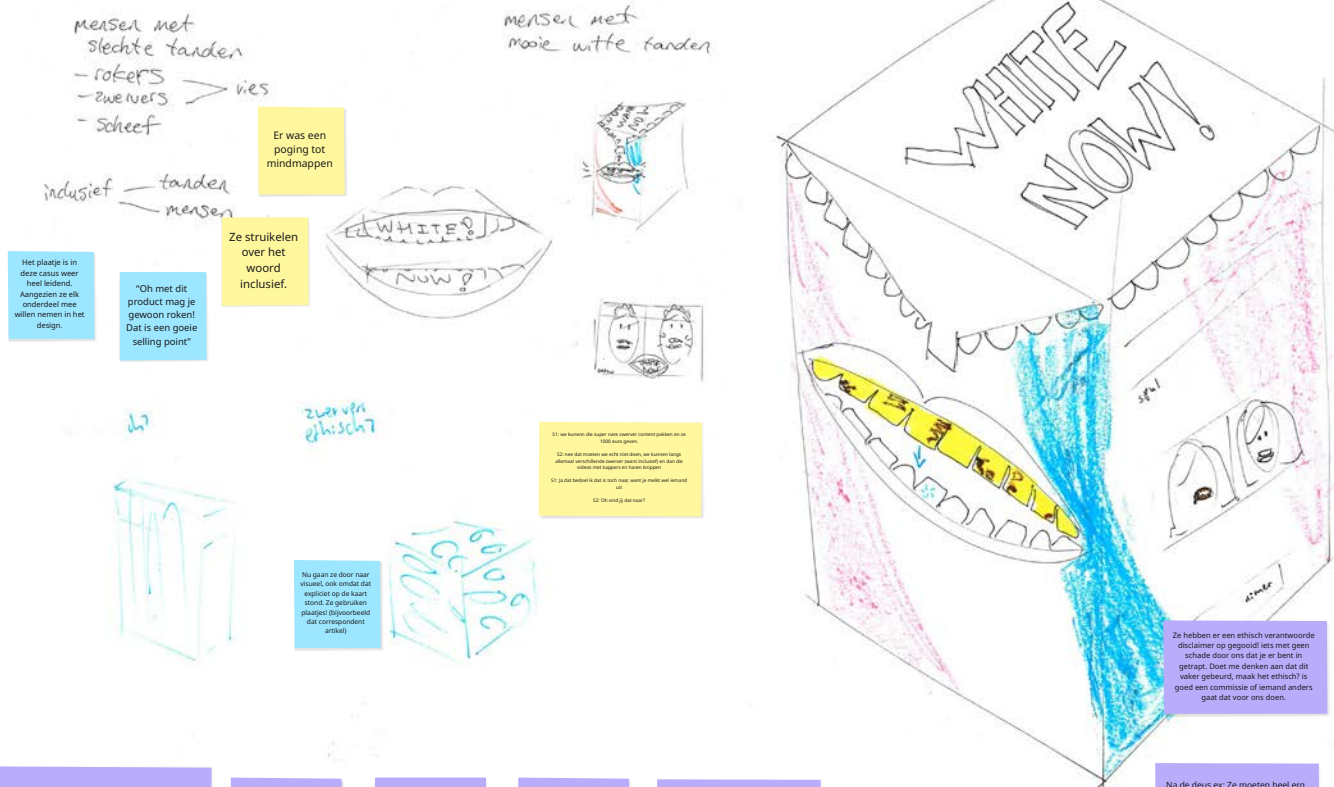
S3: It is really interesting to learn from this, therefore I want to know more. So to recognize it in my life. It starts with 'I feel discomfort' you know it, but you do not rationalize. After this I want to learn to connect this gut feeling I had to my rational thoughts. When you have the term out the name anything you can only feel it. You don't know the words to discuss these issues or logic

S2: First, the way to go in designing, and the space for questions really helped. No discomfort at the beginning. Time time the philosophical questions you wrote are really helpful, something or someone should do that. I want to train that feeling too! I have had some group members that said outrageous things: I want to know how to have conversations in other settings in other cultures. The examples you gave helped make it right. It is important to have tangible results at the end of the course! You need it to be mutable. The implementation phase helps this sticking around, and enactment needs this narrative. I don't think that introducing the hard theory and then the light examples, now it does more. If it is too easy I will resist it.

NDC CASUS - ONDERZOEK 2 - Tandenbleken

Student 1: 3e jaars BEP student

Student 2: 3e jaars BEP student



AI visualizatie van uiteindelijke concept

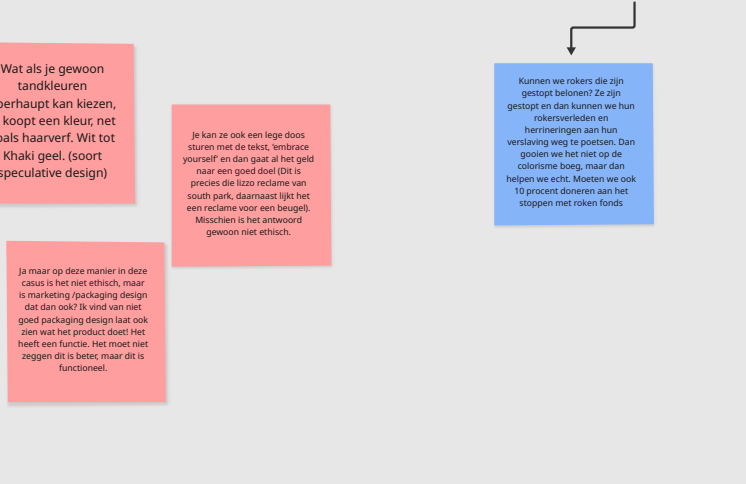


Ai kan niet een ethische disclaimer maken of bedenken die klopt haha

Filosofische vragen die het oproept (deel 2)



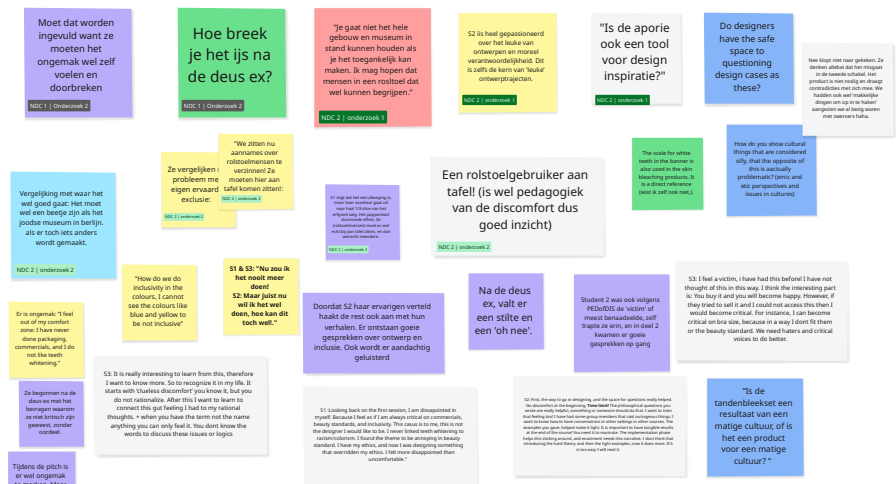
Design inzichten



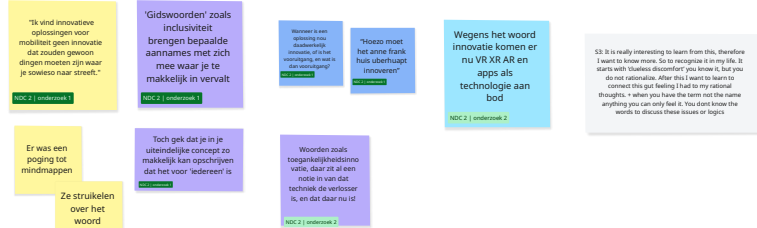
de borderline



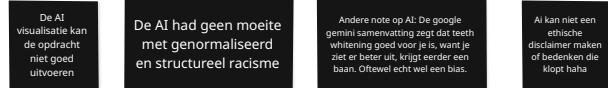
Discomfortable design



Gidswoorden



Misl-AI-dend



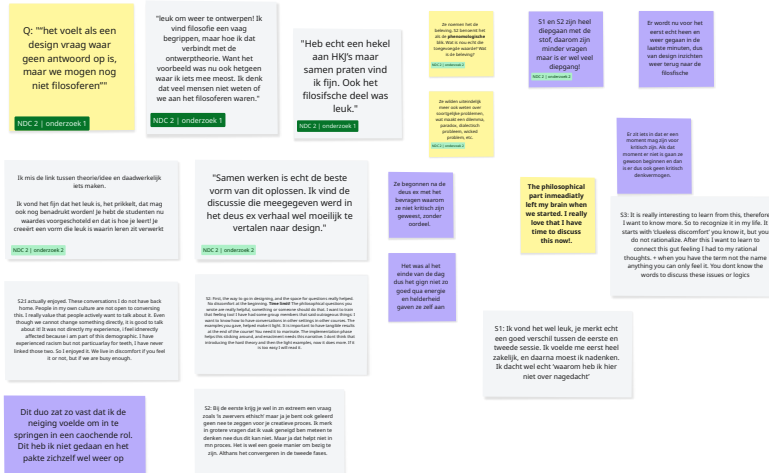
Uit het hoofd, op papier, en in het hart



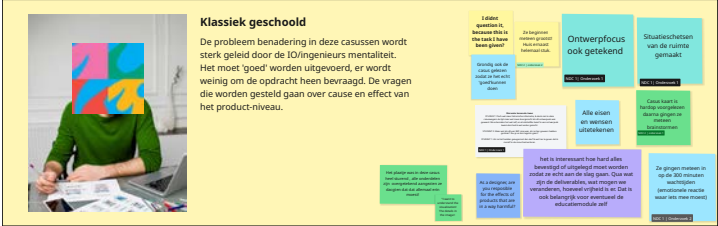
NDC feedback



De brug, de ruimte, en de tijd



Klassiek IO



Wisselwoorden' zoals

Indusktiviteit

nrengeen bepaalde

nannames met zich

mee waar je te

nakkelijk in verval

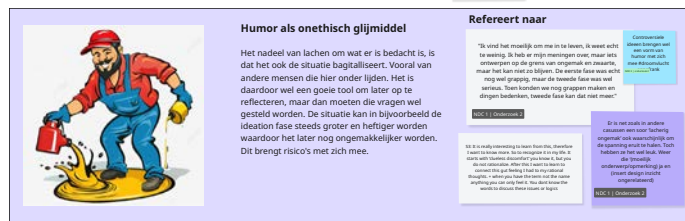
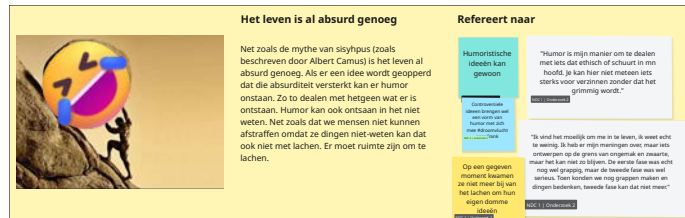
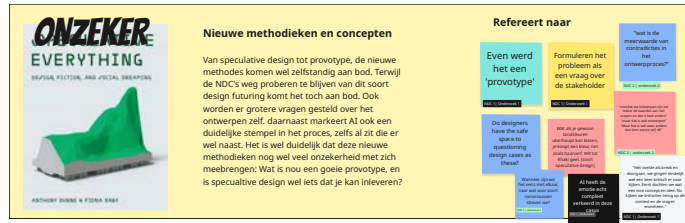
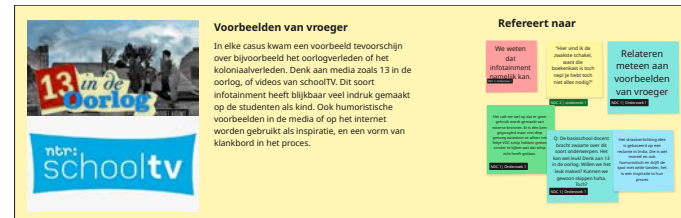
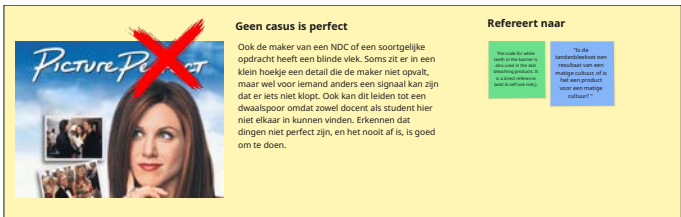
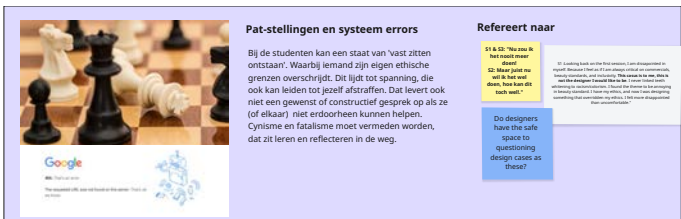
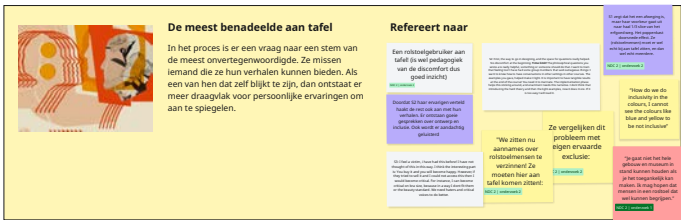
Ze struikelen over het woord inclusief.

C.J. | interactie |

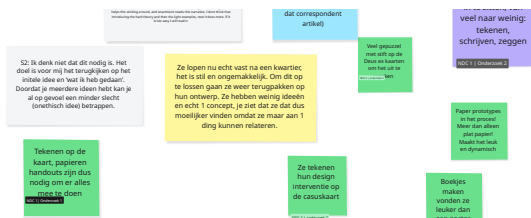
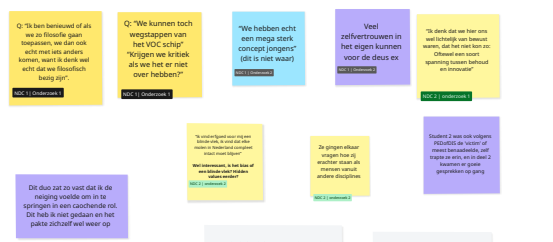
Toch gek dat je in je uitwendige concept zo makkelijk kan opschrijven dat het voor 'leedaren is'

interactie

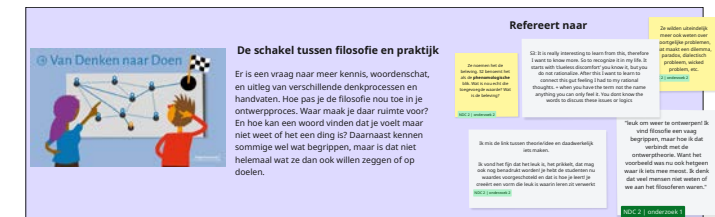
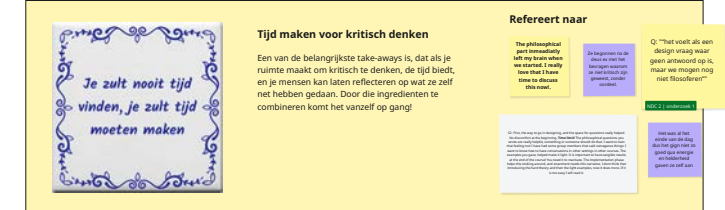
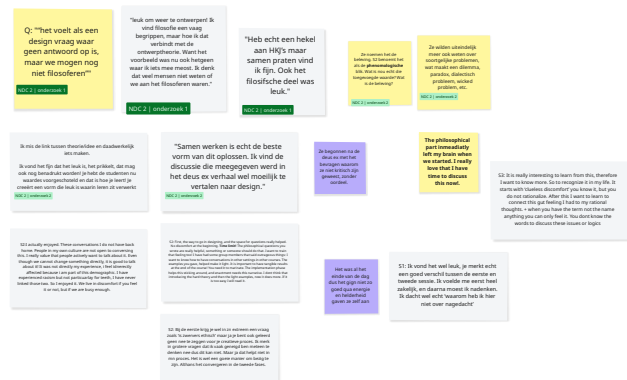
Discomfortable design



Het zelfbeeld van de ontwerper



De brug, de ruimte, en de tijd



PILOT

R - Industrial ecology + IPD alumnu

Where should philosophy take place in the IDE bachelor/master

NAME: DATE: 10/10/20

Space for notes surrounding the presentation

Statement 1: Philosophy is important to consider, if we want to design for issues regarding the systemic level

Statement 2: Complicated, taboo, and/or uncomfortable topics should have a place in the IDE curriculum

Statement 3: Educators/coaches/teachers are well equipped to teach these difficult topics to students

Can you motivate your choice?

Validatie met onderwijzers

N - Industrial ecology alumnu + Teaching lab developer and educator

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Can you motivate your choice?

S - Design coach bachelor/master

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NAME: DATE: 10/10/20

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Statement 2: Complicated, taboo, and/or uncomfortable topics should have a place in the IDE curriculum

Statement 3: Educators/coaches/teachers are well equipped to teach these difficult topics to students

Can you motivate your choice?

Door de dialoog, wel semester 1 zowel bachelor of master

Eerste gedachte semester 2. Dan heb je al wat design ervaring. Maar ben je nog vormbaar

Where should philosophy take place in the IDE bachelor/master

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Can you motivate your choice?

Docent valideert - inlichten vanuit eigen NDC

Docent valideert - inlichten over curriculum

Op het systeem niveau, kan je jezelf alleen maar verhouden tot problemen, en een positie innemen

Te grote vragen, en te hak op de tak discussies (zonder dat er iets wordt opgevoerd) maakt het heel moeilijk om iets te zeggen überhaupt

Ethiek is ook maar de vraag wiens ethiek

Taboo verandert ook door de tijd, en we veranderen allemaal ook verschillend door de tijd heen

Docenten zelf zijn een moeilijke doelgroep

Wie is ook we, wie wil ontwerpen for onze toekomst?

Wordt er überhaupt ruimte gemaakt voor moeilijke onderwerpen?

Statement 3: Educators/coaches/teachers are well equipped to teach these difficult topics to students

Legenda

Antwoorden enquete na een week

Docent valideert - inlichten over curriculum

Docent valideert - inlichten op stellingen

Docent valideert - inlichten vanuit eigen NDC

NDC Toevoeging/verbetering

Er is duidelijkere uitleg nodig hoe de invulsheet werkt.

Er is een vraag wat een sporeuze onderscheid van een dilemma, paradox, etc.

NDC perception

I would have really liked following this course if it weren't

No, excellent educative exercise

NDC creation

Ik moet filosofie een bewust ding zijn, je moet er soms op geattendeerd worden, zodat je het onbewust herkend of gaat doen

Als we alleen coach zouden zijn zou dit beter kunnen

How to handle Discomfort in design

Teambuilding is essentieel

Kunnen docenten ook safe/accountable spaces maken? Lig aan de persoon

Bestaat er überhaupt equipment om met taboo te delen?

Docenten zelf zijn een moeilijke doelgroep

Terugkijken naar andere vakken

Wie bepaalt dat wat een taboo is?

Bestaat er überhaupt equipment om met taboo te delen?

Docenten zelf zijn een moeilijke doelgroep

Taking place in/at IDE

Eerste gedachte semester 2. Dan heb je al wat design ervaring. Maar ben je nog vormbaar

Door de dialoog, wel semester 1 zowel bachelor of master

Docenten zelf zijn een moeilijke doelgroep

Het leeft door

Ik heb een theorie dat filosofie in de ide moet zijn, maar ik heb ook gezien dat filosofie in de ide niet is

Ik heb een theorie dat filosofie in de ide moet zijn, maar ik heb ook gezien dat filosofie in de ide niet is

Not really

Ik heb een theorie dat filosofie in de ide moet zijn, maar ik heb ook gezien dat filosofie in de ide niet is

Ik heb een theorie dat filosofie in de ide moet zijn, maar ik heb ook gezien dat filosofie in de ide niet is

Past in de themas van deel 1

Ik heb een theorie dat filosofie in de ide moet zijn, maar ik heb ook gezien dat filosofie in de ide niet is

Ik heb een theorie dat filosofie in de ide moet zijn, maar ik heb ook gezien dat filosofie in de ide niet is

Onderwaardering van de coach

Als we alleen coach zouden zijn zou dit beter kunnen in plaats van ook docent.

De vraag om outside de box te denken is interessant, want bega je dan niet juist de fout?

Ook moet filosofie een breedte ding zijn. Je moet er ruimte op gestudeerd worden, zodat je het overtuigd handelt of gaat doen.

Het word gezien als perfect passend binnen Dare to Design, kan ook voor ondersteuning zorgen in het vrije proces

Voorbeeld zit ook in het onderwijs zelf. Wordt dus ook ingezet nu om te reflecteren op dit soort kwesties.

We zijn coaches geen lecturers!

Docenten met een passie of vakgebied dat moeilijk is zoals design for death, vertoek ik meteen voor dit soort onderwerpen

Onderwerpen zoals reflectie mogen eruit, en in ruil aandachtige en diepgaande gesprekken over je filosofie met de coach

Eike laatste week zou er tijd gemaakt voor kunnen worden, een goed gesprek over de filosofie, en niet een geschreven reflectie, maar in persoon

Vroeger begonnen de vakken met geschreven reflecties, nu moeten we zelf ook gaan in de studio, dat geeft spanning tussen docenten die het beter of slechter vertoeken

Hulpvaarders van handelen

Onderwaardering van 'coaching'

Het idee 'coach' lijkt niet begrepen te worden. Een coach is geen leraar noch leraar. Een coach is een sparring partner en een supporter die je stuurt op de lezures maken. Voor COVID waren er nog gezamenlijke lezures van het begin van de week, maar die uitleg verantwoordelijkheid verplaatst zich steeds meer naar de coach en diens studio. Iets dat coachingmechanisme is nodig voor zelf het ontdekken van filosofie, je eigen stem, en je ontwerp.

Refereert naar

Filosofie is de waarom vraag dus dit moet sowieso bevestigd worden

Als we alleen coach zouden zijn zou dit beter kunnen in plaats van ook docent

We zijn coaches geen lecturers!

Vroeger begonnen de vakken met geschreven reflecties, nu moeten we zelf ook gaan in de studio, dat geeft spanning tussen docenten die het beter of slechter vertoeken

Filosofische & kritische plicht van de coach

De coach moet zich bezighouden met 'de waarom' van de studenten. Huidige methodes zoals reflecties leen worden ervaren als een vinkje op een to do lijst. Het zou veel waardevoller zijn om in persoon gesprekken te hebben voor reflectie dan, alleen te reflecteren op een blaadje. Ook is de coach een persoon die in staat is het onderwijs zelf te bevragen, en in te spelen op huidige kwesties die relatoren aan de staf te discussie. Wat is een coach die geen vragen stelt? geen coach.

Refereert naar

Het word gezien als perfect passend binnen Dare to Design, kan ook voor ondersteuning zorgen in het vrije proces

Coaching houdt geen format aan

Een docent en een leraar kan teruggaan op leermateriaal of een ontwerp. Coaches staan hier op een manier los van. De coach heeft een vrijheid voor discussie, gesprek, en kritische vragen. Aangezien elke student een andere vraag kan stellen, is er geen norm of format om goed een vraag te beantwoorden. Ook vanuit de perceptie van studenten willen ze geen hulpvaarders, al helemaal niet voor moeilijke onderwerpen.

Refereert naar

Docenten met een passie of vakgebied dat moeilijk is zoals design for death, vertoek ik meteen voor dit soort onderwerpen

De vraag om outside de box te denken is interessant, want bega je dan niet juist de fout?

Meta-methods

Zelf er een maken kan leiden tot onzekerheid, je bent aan het plannen en grenzen over te gaan immers

Het heeft iets weg van zelf fake news maken (verloren nog kans dat ook goed te maken je eigen media history)

Een proof me wrong opdracht (dus dit die andere kant op) lijkt ook interessant. Docent stelt een aporie verstoort in ontwerp, en de studenten moeten het ontwerp kritiseren

Ook is de definitie in design zelf iets dat bevestigd moet worden (cirkel is rond moment)

Het is ook absurd om zo naar een situatie waar jezelf in zit probeert te beschouwen

Wie is ook we, wie wil ontwerpen voor onze toekomst?

Design, identiteit, en definitie

Wat is design zelf? Deze vraag lijkt onmogelijk. In het systeem van IDE is hier geen ruimte in. Vroeger was de definitie makkelijk, het was het maken van producten. Nu lijkt het ook alles te zijn, en daarvoor ook niks echt tastbaar. De merk je ook in de vertaling naar identiteit en doorontwikkeling. We hebben allemaal een idee dat we design doen of zijn. Maar als we het er niet over hebben, dan krijgen we geen consensus noch richting voor de toekomst. Het lijkt een goeie opgave om design zelf onder de loep te nemen.

Refereert naar

Ook is de definitie in design zelf iets dat bevestigd moet worden (cirkel is rond moment)

Wie is ook we, wie wil ontwerpen voor onze toekomst?

Het is ook absurd om zo naar een situatie waar jezelf in zit probeert te beschouwen

proof me wrong exercises!

Een idee uit de sessies was een 'proof me wrong' exercise. Het idee is om de coach een onmogelijke stelling te laten en de studenten onderuit te moeten halen. Op eerste gezicht lijkt dit ook raakval te hebben met oefeningen zoals eigen fake news maken. Het doel is ook om een gelijk speelveld te creëren en het autoritaire idee van de docent/coach weg te halen. Om zo ruimte te maken voor grotere vragen

Refereert naar

Zelf er een maken kan leiden tot onzekerheid, je bent aan het plannen en grenzen over te gaan immers

Een proof me wrong opdracht (dus dit die andere kant op) lijkt ook interessant. Docent stelt een aporie verstoort in ontwerp, en de studenten moeten het ontwerp kritiseren

Complexiteit in design

Wie is ook we, wie wil ontwerpen voor onze toekomst?

I tried to embody philosophical questions into my graduation project, however, this was not very successful as I got stuck early on and doubted if it was the right subject to project this on

Een ontwerper draagt inherent verantwoordelijkheid

Als de verantwoordelijkheid van het product komt uit degenen die het ontwerpen, dan moet de ontwerper verantwoordelijkheid dragen

Wat is nou industrial design, vroeger was dat makkelijk, nu niet meer

Quite everything. I could learn and reflect not just about my designs but about my mental processes, thoughts and decisions when designing. The new terms learned became a great tool to frame my further reflections.

Wanneer gaat er überhaupt iets mis? Wie bepaalt dat?

Als het gewild dan is dat ongemak en ik kan kijken, en je dus ook moet kunnen denken met ongemak, dan word de statement over mislukten wel herhaald

Soorten filosofische problemen

Er is verwarring over niet voor soort problemen er bestaan. Er wordt gedacht aan wicked problems, dilemma's, paradoxen, maar de vraag is of achter die grote woorden ook daadwerkelijk een besef zit van hoe zo'n probleem in z'n werk gaat. De benoemen is niet genoeg om tactisch en effectief met een situatie om te gaan

Refereert naar

Ook is de verantwoordelijkheid van het product komt uit degenen die het ontwerpen, dan moet de ontwerper verantwoordelijkheid dragen

Wie is ook we, wie wil ontwerpen voor onze toekomst?

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Vorm, gevoelheid, consequenties

Er zitten tegenspanningen of dissonanties in concepten. Het bedenken van een vorm kan al filosofische kwesties met zich mee brengen. Hier lijkt ook in de ideation geen ruimte voor noch in het conceptuele proces. Een waardevolle die wordt ingezet voor veiligheid heeft al consequenties in de vorm. Een gevoelheid voor soorten vorm lijkt niet onontkennelijk genoeg, in tegenstelling tot de verantwoordelijkheidskwesties die worden gezien en gepropt

Refereert naar

Ook is de verantwoordelijkheid van het product komt uit degenen die het ontwerpen, dan moet de ontwerper verantwoordelijkheid dragen

Een ontwerper draagt inherent verantwoordelijkheid

Als de verantwoordelijkheid van het product komt uit degenen die het ontwerpen, dan moet de ontwerper verantwoordelijkheid dragen

Echt systeem denken

Ontwerpers willen zich bemoeien met het systeemniveau. Hierin zit al een contradictie. Op het systeemniveau kan je je alleen verdiepen tot 'problemen' en een systeem invullen. In de gestructureerdheid is dit een gegeven, daar is alles wat de wettelijke regels en regels voor. Op 3D word ook gezien bijvoorbeeld in afbinderij (projecten) dat de complexiteit van het probleem wordt onderzocht, en dat studenten hun eigen kunnen overschatten.

Refereert naar

Op het systeemniveau, kan je jezelf alleen maar verdiepen tot problemen, en een positie innemen

Quite everything. I could learn and reflect not just about my designs but about my mental processes, thoughts and decisions when designing. The new terms learned became a great tool to frame my further reflections.

De vraag om outside de box te denken is interessant, want bega je dan niet juist de fout?

I tried to embody philosophical questions into my graduation project, however, this was not very successful as I got stuck early on and doubted if it was the right subject to project this on

Wat is filosofie voor een designer

Er wordt gerefererd naar ontwerpfilosofie van ...

I love the concept and really think these philosophical questions should be incorporated in design cases

Filosofie zou basis kennis moeten zijn

Togepaste filosofie lijkt mij geschikt

Veel heen en weer over designing als being of als doing

Er is een vraag wat een aporie nou onderscheidt van een dilemma, paradox, etc.

Ethiek is ook maar de vraag wiens ethiek

Meteen alles doorspreken, wat betekent welk woord, dat zou ook zo moeten gaan in een casus

Een electieve waar je zelf de diepgang in kan opzoeken

Data kan ook aangevuld worden met een filosofische blik

Het zou een goede Design studio kunnen zijn op meerdere fronten (ontwerpen vanuit de filosofie van IDE)

Overall moeten er duidelijke broodkruisels van filosofie zijn.

Emotionele/eerste reactie is bij beiden dat filosofie absoluut in het curriculum moet

Is filosofie beoefenen ook critical thinking?

Meer filosoferen, en diepgang

Een van de thema's is dat er ruimte moet zijn voor diepgang. Filosofie word gezien als een tool/methode/context voor deze diepgang. Er moeten ruimte gemaakt worden voor diepgang met filosofische handvaten in het hele studie traject. Dit relatere niet per se aan het geven van de westerse geschiedenis van filosofie, noch het doorgronden van een bepaalde lens, je zou een set aan filosofische skills moeten hebben in je ID-tuist

Refereert naar

Een electieve waar je zelf de diepgang in kan opzoeken

Ethiek is ook maar de vraag wiens ethiek

Er wordt gerefererd naar ontwerpfilosofie van ...

Togepaste filosofie lijkt mij geschikt

Overall moeten er duidelijke broodkruisels van filosofie zijn.

Doorgonden van problemen

Een andere blik op filosofie is het beschouwen van het probleem en haar complexiteit. Oftewel in een zeker veld beide kanten weten of te wegen, de ethische dilemma's weten toe te passen, en na te denken over bepaalde ontwerppatroningen en problemen en een verruimde blik hierop te hebben.

Refereert naar

Ethiek is ook maar de vraag wiens ethiek

Er wordt gerefererd naar ontwerpfilosofie van ...

Togepaste filosofie lijkt mij geschikt

Overall moeten er duidelijke broodkruisels van filosofie zijn.

Filosofie als startpunt

Vroeger kan filosofie ook gezien worden als een exploratief startpunt, juist hier ligt de nadruk weer wel op grote denkers en geschiedenis. Het is het aanmerken van een bepaalde golf in de filosofie en vanuit daar ontwerp redeneren en diepgang opzoeken

Refereert naar

Een electieve waar je zelf de diepgang in kan opzoeken

Het zou een goede Design studio kunnen zijn op meerdere fronten (ontwerpen vanuit de filosofie van IDE)

Overall moeten er duidelijke broodkruisels van filosofie zijn.

Meta momentjes in 10

Filosofie over ontwerpen zelf, dat kan en willen mensen ook krijgen. Wat betekent het om te ontwerpen? Om in materiele interventies te geloven voor sociale verandering? Is design een being of een doing? Waar moet je heen om dit soort meta momenten te beschouwen? Veel willen hun hel zoeken in de filosofie

Refereert naar

Veel heen en weer over designing als being of als doing

Meteen alles doorspreken, wat betekent welk woord, dat zou ook zo moeten gaan in een casus

Dit komt me bekend voor

Er is van zowel student als docent in bepaalde onderwerpen een herkenning, van dat het ergens wel in het studieprogramma is. Maar het wordt niet gezien als concreet, het lijkt vaak even aangepast te worden. Het is vaak ook een gevoel van 'heb ik deze fout niet begaan?' hier zit gewoon een gevaar in van cynisme

Refereert naar

Wie bepaalt ook wat een taboo is?

Niet in de maats, want dan voelt het ook als bachelor kritiek, dan krijg je roerisch terug op de bachelor en dan word je gecijnd

Beept, het concept van decoupling design komt lang bij Deft Lectures on Design, maar heb toen niet specifiek al gestaan bij deze case

Terugkijken naar andere vakken

Wie bepaakt ook wat een taboo is?

Niet in de maats, want dan voelt het ook als bachelor kritiek, dan krijg je roerisch terug op de bachelor en dan word je gecijnd

Beept, het concept van decoupling design komt lang bij Deft Lectures on Design, maar heb toen niet specifiek al gestaan bij deze case

Het leeft door

Later on or during the test! Later I thought about it and more specifically in a disciplinary way: how do we design inclusive with historical heritage?

I have thought about it a bit. I was thinking about design and how some cases are very difficult when looking at ethical questions and how designers should solve this

I have been thinking about how I can be very focused on getting an assignment done and not making time to critically review my actions in the process and the end product.

Not that I can remember, Maybe I have been thinking about the experience with the case about the workshop, though.

No, but I did not think whether something was actually a wicked problem. Some friends of mine spoke about something along with managers, and since the workshop I clearly thought it was actually a wicked problem we were doing.

Niet over een nacht ijs (positief)

Sommige deelnemers willen involved blijven met de stof. Ze gaan er over in discussie met vrienden bijvoorbeeld, maar zijn zeker nog niet klaar om de stof uit te dagen. Desalniettemin is het een goede stap in de richting om mensen in te trekken te motiveren

Refereert naar

Later on or during the test! Later I thought about it and more specifically in a disciplinary way: how do we design inclusive with historical heritage?

I have thought about it a bit. I was thinking about design and how some cases are very difficult when looking at ethical questions and how designers should solve this

Wat voor problemen los ik nou op?

Er zijn wat voorbeelden over het doorgronden van de problemen die we proberen op te lossen. Het linkt aan het ontwerp voor actuele thema's. De nadruk ligt ook op wat voor soort problemen het nou zijn?

Refereert naar

No, but I did not think whether something was actually a wicked problem. Some friends of mine spoke about something along with managers, and since the workshop I clearly thought it was actually a wicked problem we were doing.

Kritiek is een creativiteitsblokker

Kritiek wordt gezien als een blokker van de creativiteit. Dit is best een lastige stelling want als ontwerper wil je ook morally creative kunnen zijn. Maar als je niet een balans kan vinden kan je ook gecijnd worden van je eigen rol in het hele proces.

Als het gewild dan is dat ongemak en ik kan kijken, en je dus ook moet kunnen denken met ongemak, dan word de statement over mislukten wel herhaald

De vraag om outside de box te denken is interessant, want bega je dan niet juist de fout?

How to handle Discomfort in design

Teambuilding is essentieel

Nog niet, maar de well-equippedes kan komen. Er moet worden ingezet op vertrouwen, teambuilding, en open staan voor kritiek.

Hier doen we niet aan ongemak, IO is een witte geprefigeerd omgeving, ongemak mijden we hier koste wat het kost.

Het maken van een NDC kan zelf ook spanning oproepen, omdat je zelf ook niet weet wat je niet een thema moet

Actuele thema's zoals nu de ritulaire opstapende en de rol van de TU erin. Zorg maar ook noodzaak om iets ertoe te doen.

Docenten met een passie of vakgebied dat moeilijk is zoals design for death, vertrouw ik nietten voor de soort onderwerpen

Bestaat er überhaupt equipment om met taboo te dealen ?

No, I thought about it when composing for my DPS and if it would be applicable there, I considered that it would be good to check later to see if my concepts are actually okay.

Docenten zelf zijn een moeilijke doelgroep

Taboo verandert ook door de tijd, en we veranderen allemaal ook verschillend door de tijd heen

Hier doen we niet aan ongemak, IO is een witte geprefigeerd omgeving, ongemak mijden we hier koste wat het kost.

No, I thought about it when composing for my DPS and if it would be applicable there, I considered that it would be good to check later to see if my concepts are actually okay.

We willen te veel

Richten we ons op IO niet op te veel niveaus van de samenleving?

Bestaat er überhaupt equipment om met taboo te dealen ?

een gedeelde passie voor filosofie is er sowieso, definitie vaak niet gedeeld

Wanneer gaat er überhaupt iets mis? Wie bepaalt dat?

I have been thinking about how I can be very focused on getting an assignment done and not making time to critically review my actions in the process and the end product.

well-equipped is tricky. Wanneer ben je überhaupt 'well-equipped', is dat niet een skill vanuit je eigen levenservaring?

Taking place in/at IDE

Design examples Reluizen ook aan met theorieën die goed waren

Wat is nou industrial design, vroeger was dat makkelijk, nu niet meer

Kunnen vakken en hun onderwerpen ook design examples zijn

Verantwoordelijkheid in vormgeving

Er wordt meermalen gesproken over verantwoordelijkheid van de ontwerper. Toch lijkt dit meer te refereren naar een eigen moreel kompas. Er ligt geen concreet framework verwerkt in IO, dat studenten de handvaten geeft om na te denken over verantwoordelijkheden van de alleen product effect niveau.

Referereert naar

Quite honestly, I could learn and reflect not just about my design but also about my mental processes. I thought about it in the past. I might want to have more time to think about it after the design is finished. I might want to have more time to think about it after the design is finished.

Wie is ook we, wie wil ontwerpen for onze toekomst?

No, I haven't thought about it in that way/observed situations that were similar

Wanneer gaat er überhaupt iets mis? Wie bepaalt dat?

Wanneer gaat er überhaupt iets mis? Wie bepaalt dat?

Wat is nou industrial design, vroeger was dat makkelijk, nu niet meer

Een ontwerper draagt inherent verantwoordelijkheid

IO-ronie

Een belangrijk inzicht is dat als we in de master kritisch gaan terugkijken naar projecten in de bachelor, we gefortuneerd kunnen raken. Door de toegepaste ironie en nieuwe kijk op ontwerpen, kan je cynisch worden van waarom we het toen niet zo deden. Dit is een effect dat vermeden moet worden

Ongemakkelijk onderwijs maken

Leren gebeurt niet in een comfortabele omgeving, maar ook niet in een omgeving waar iets nieuws gebeurt. Oftewel, er moet een balans zijn of het moet soms even uit balans om te voelen waar de grenzen liggen. Aangezien taboos en mensen door de tijd heen veranderen, lijkt ongemakkelijke onderwerpen taboelen (ook alleen als onderwerp) verstandig om op te reflecteren. Natuurlijk ook buiten je eigen vakgebied.

Referereert naar

Wanneer gaat er überhaupt iets mis? Wie bepaalt dat?

Docenten zelf zijn een moeilijke doelgroep

Bestaat er überhaupt equipment om met taboo te dealen ?

Kunnen docenten ook safe/accountable spaces maken? Lig aan de persoon

Land van 1 oog

Als kritische denker voel je soms alleen. Het lijkt alsof alleen jij de absurditeit of ironische zaken ziet. Dit geeft een noodzaak om er iets mee te doen. Toch is de vraag hoe doe je dit zonder mensen te miskenen, over ze heen te lopen, of in een discussie van het podium te vegen. Dit is niet alleen voor studenten maar ook docenten. Voor verandering moet je mensen immers je reze krijgen

Hoe overleef ik ongemak

Over de vraag 'hoe deal ik met ongemak' blijkt dat de verwachtingen van de student, maar ook de docent, er moet ingezet worden op teambuilding alternatieven. Om zo een sfeer van accountability te creëren. Daarna kan er een openheid zijn voor kritiek, ook moet de docent hier ook in mee, en zelf ook het ongemak aangaan.

Referereert naar

Nog niet, maar de well-equippedes kan komen. Er moet worden ingezet op vertrouwen, teambuilding, en open staan voor kritiek.

Docenten zelf zijn een moeilijke doelgroep

Kunnen docenten ook safe/accountable spaces maken? Lig aan de persoon

Teambuilding is essentieel

Hier doen we niet aan ongemak, IO is een witte geprefigeerd omgeving, ongemak mijden we hier koste wat het kost

Noodzaak zonder consensus

Iedereen gesproken in dit onderzoek is in emotie en eerste reactie moeten overtuigen van dat filosofie geïntegreerd moet worden in het IDE curriculum. De noodzaak ervan wordt ook erkend. Maar het zijn niet erover eens wat het is, wat het zou moeten zijn, wat het zou opleveren (ook in termen van discussies, niet alleen resultaat), en hoe en waar.

Referereert naar

een gedeelde passie voor filosofie is er sowieso, definitie vaak niet gedeeld

Richten we ons op IO niet op te veel niveaus van de samenleving?

well-equipped is tricky. Wanneer ben je überhaupt 'well-equipped', is dat niet een skill vanuit je eigen levenservaring?

De alleskunner

De IO'er wordt gezien als alleskunner. Maar versta dit ook naar elk niveau. Kunnen we product, service, en systeem allemaal even goed? Zijn we ook well-equipped genoeg of moeten we ons specialiseren in een bepaald gebied? Er zijn immers genoeg dingen om mee te nemen in een ontwerpproces.

gebouwd op het fundament van IO

Wat we niet mogen vergeten is dat IO is gebouwd op een geschiedenis. Terwijl die ingesloten op de vrije naar producten, innovaties, en een focus op de industrie. Onze methodes, denkwijzen, en ook docenten komen veelal hier vandaan. We kunnen niet een nieuwe weg creëren zonder de geschiedenis om te te adreneren, maar ook niet door een weg die al gebaand is allemaal te bewandelen. Ook nu bouwen we door op wat we om ons heen heen zien, in andere vakken, projecten, en afstudeerders.

Referereert naar

Design examples Reluizen ook aan met theorieën die goed waren

Wat is nou industrial design, vroeger was dat makkelijk, nu niet meer

Kunnen vakken en hun onderwerpen ook design examples zijn

Het klikt niet voor iedereen

Not really

No, I haven't thought about it in that way/observed situations that were similar

Het bewijsrijt over je verantwoordelijkheid naar de samenleving als ontwerper: mist bij studenten, dat is terug te zien in waar ze terecht komen

Denk het wel, heb het met vrienden gehad over eerlijkheid is instrumentale vanden, en of dat het dan waard moet zijn voor de leefbaarheid

To be honest I did not really think further as for me it came a bit to a closure.

Referereert naar

No, I haven't thought about it in that way/observed situations that were similar

Referereert naar

(current) Curriculum Design

Studies zoals Industrial ecology zijn voorbeelden van masters die zich wel richten op het systeem niveau

Actual theme's zoals nu de ritulaire opstapende en de rol van de TU erin. Zorg maar ook noodzaak om iets ertoe te doen.

Wordt er überhaupt ruimte gemaakt voor moeilijke onderwerpen?

I think that this master should be a part of our educational program. How are we supposed to be ethical designers if we aren't taught how to raise questions and when to make time for ethical considerations. This example made me really understand the importance of time to think about what you did and bring in different perspectives to learn from

I would have really liked following this course if it existed

jaar 2, omdat je wel ervaring moet hebben met design en wel met causalen gedran moet hebben

Bachelor electie, dan moet een deel ervoor kiezen, voordat ze eventueel verlaten naar een andere studie

Niemand heeft een minor benoemd. Denk dat zelf wel interessant is

Data kan ook aangevuld worden met een filosofische blik

DPH zou een groter filosofisch project moeten zijn, ook om zelf een setting in te nemen in DPS of je derde jaar

Overal moeten er duidelijke broodkruimels van filosofie zijn

Een elective waar je zelf de diepgang in kan opzoeken

Een IO-master breed vak zou verantwoord zijn

Understanding design mag hier zwaarder op in gaan, ook om te laten zien, dit is wat je moet meenemen het hele traject lang

Het zou een goede Design studio kunnen zijn op meerdere fronten (ontwerpen vanuit de filosofie van IO)

Data & smart homes mag weg. Dit zijn de vier breed vakken, en eigen ervaring zou ik als vervanger met een option. Het zou een representatieve tijd met een voorbeeld, zowel filosofisch met een voorbeeld.

Alrijt in semester 1. Juni bij binnenkomst. Het is immers ook een filosofie om te zeggen dat ik gekloegheid en persoon makers is. Dat is ook het naar mensen die in groepen moet worden, zowel bachelor als master

Eerste gedachte semester 2. Dan heb je al wat design ervaring. Maar ben je nog vormbaar

Door de dialoog, wel semester 1 zowel bachelor of master

Referereert naar

Referereert naar

Niet over een nacht ijs (negatief)

Er zijn ook studenten waarvoor het nog niet klikt. Dit is niet erg, en je kan ook niet iedereen bereiken. Hier is het ook belangrijk om te bedenken dat je over een nacht ijs niet kan schakelen. Je ziet wat dat ze zich eren wagen, maar het zit er nog niet in.

Referereert naar

Not really

No, I haven't thought about it in that way/observed situations that were similar

Referereert naar

Niet alleen een afterthought

Sommige studenten gaan helemaal aan, hier willen ze al langer mee aan de slag. Het relateert aan meerdere thema's en niveaus. In hun ontwerpproject, ze willen in discussie, ze moeten er iets mee.

Referereert naar

Referereert naar

STUDIE KIEZEN?

Waar kan je wel op het systeem niveau denken

Er wordt gesproken over andere studies die naar hun idee wel gericht zijn op denken of systeemniveau. De vraag is, waarom sluiten we de bachelor studenten daar niet naar door? Waarom geven we ze geen aansluitende mastermarkt op IO. Waarom maken we wel vage disticties tussen drie vormen van ontwerpen, maar als mensen filosofie willen, moeten ze dan hier wel blijven?

Deze vraag is interessant om op een hoger niveau van IO over te spreken. Waarom moet alles in de masters worden gepropt? Zijn we dan nog wel ergens goed en gespecialiseerd in?

Referereert naar

Referereert naar

LAAT ZE MAAR DENKEN

De wil voor filosofie

Veel mensen benadrukken de diepgang die ze willen, en dat dat of geboden moet worden in het praktische design casus en ontwerpwerk onderwys. Of een keuzekvak waar je de vorm-gevaste keuze kan maken voor diepgang en je er in een afgekaderde omgeving aan kan wagen.

Een minor wordt ook niet benoemd maar zou wel de ruimte kunnen bieden. Philosophy & Design in de breedste vorm zou wel goed in stukken kunnen worden gehakt.

Referereert naar

Referereert naar

Broodkruimels

Een duidelijk en verstandig idee is om in de master pas echt de diepte in te duiken. Juist omdat er dan wordt gezien dat het kan de diepte, positivering als designer dan kan bijdragen aan diens ontwerpkracht. Om dan te doen moeten er wel broodkruimels door vallen heen verspreid zijn.

Referereert naar

Referereert naar

Nul-houding

Een weloverwogen houding aan de start van de studieprogramma's zou verantwoord zijn. Oftewel I bent welkom, we staan open voor verschillende filosofies en denkwijzen. Maar daar moeten we mensen ook in onderwijzen!

Referereert naar

Referereert naar

Overkoppelende Master

We hebben genoeg vakken TU Breed om met weinig middelen een overkoppelende master op te zetten. Door combinaties te maken tussen Dare to design - een filosofische design studio - de vrije keuze ruimte - en een mix tussen IDE en TPM kan je een masterprogramma opzetten waar de focus echt ligt op het denken, en filosofie te passen in het proces.

De enige schakel die echt ontbreekt. Is een introductie vak over technische/ethische zelf (bij MARK DE VRIES). Eventueel nog een geschiedenis van de westerse/lootse filosofie.

Referereert naar

Referereert naar

Dit kan jij zijn

Philosophic design studio

Een IO-master breed vak zou verantwoord zijn

Hier ligt de nadruk dan ook niet op iets maken maar vooral het denkproces. Het moet vooral een vertaling bieden van filosofie in theorie naar praktijk.

Referereert naar

Referereert naar

Geen trends maar fundaments

Er is kriebel op de zogehete trendvallen. Er zouden brede skills gegrepen moeten worden om niet mensen onderwerpen moeten worden op types. De alumni geven ook aan dat ze liever filosofie en tools hebben dan een oek op wearables of een specifieke methode die niet in het werkveld wordt toegepast.

Referereert naar

Referereert naar

Data kan ook aangevuld worden met een filosofische blik

DPH zou een groter filosofisch project moeten zijn, ook om zelf een setting in te nemen in DPS of je derde jaar

Types of ethics: A visual assignment

In this assignment you will learn the basic theories of ethics. On the left we have different theories and definitions. On the right we see that a diagram that has been turned into a visual. On the back you can place these ethical theories onto the visual with various colours, when you are done debate your answers with the people at the table.

Teleological ethics.

From the viewpoint of teleological ethics, what determines the value of a moral action or even a moral life results from that action or life; therefore, theories within teleological ethics are also called consequentialist ethical theories. In this type of ethics, the basic concepts are good and bad, and the concepts of right or wrong function as types of these concepts' derivative. An action is not good or bad in itself; what makes an action good or bad is its outcome.

Deontological ethics.

Deontological ethics, somehow on the opposite side of teleological ethics, emphasizes the trueness of the action itself, rather than its consequences. Accordingly, the trueness or falseness of an ethical action is determined by whether a person fulfills a moral duty or the moral rules of an action. The intention and the principles on which the action is based are also important.

Virtue ethics.

While teleological ethics emphasize good and beneficial consequences; and while deontological ethics emphasize duties, responsibilities and a universal moral code; virtues ethics emphasize the doer's character and virtue. Virtue ethics are basically interested in a good life and how a human should be; it uses the concept of character. The important thing is to be a good or virtuous, character-wise person.

Meta-ethics.

Metaethics is the attempt to understand the metaphysical, epistemological, semantic, and psychological, presuppositions and commitments of moral thought, talk, and practice. As such, it counts within its domain a broad range of questions and puzzles, including: Is morality more a matter of taste than truth? Are moral standards culturally relative? Are there moral facts? If there are moral facts, what are their origin and nature? How is it that they set an appropriate standard for our behavior?

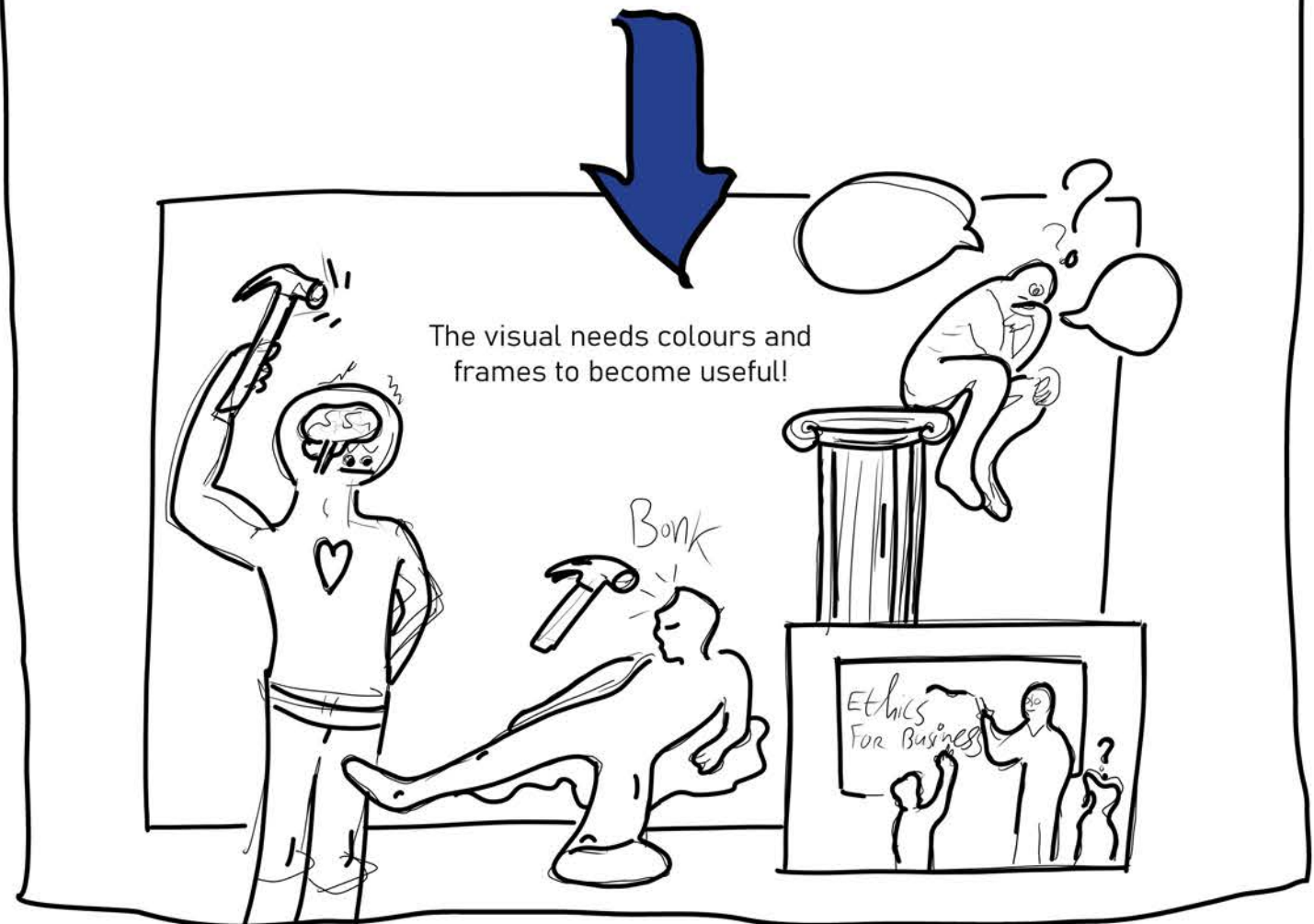
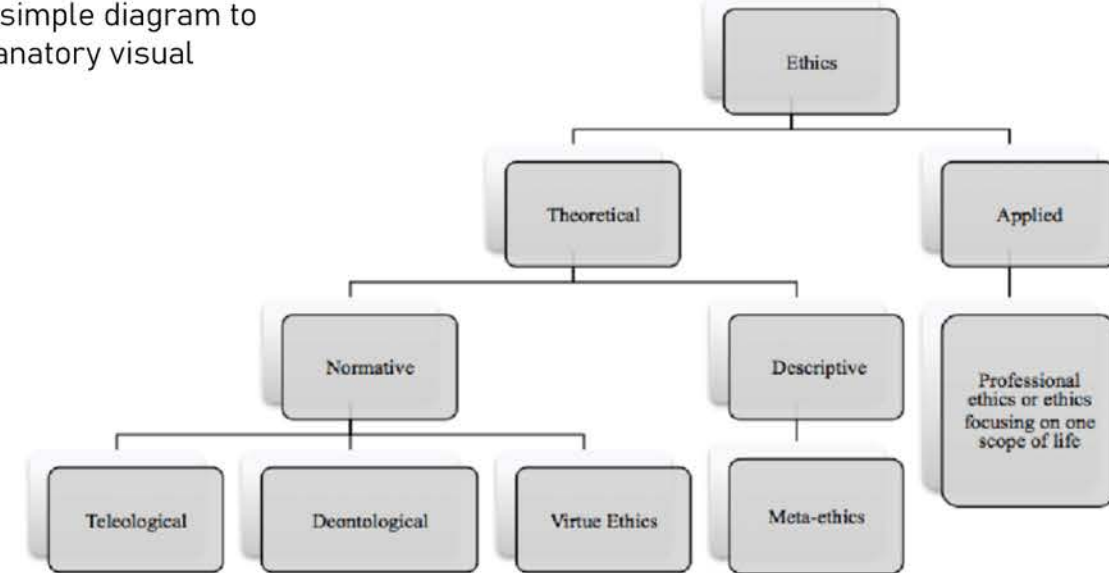
(Applied or) Professional ethics

Professional ethics can generally be defined as an established set of principles that govern how a professional relates with clients, fellow professionals, and the public at large. Most professional specialty fields today have their own rules of professional conduct, which is monitored by the memberships' leaders. Thus, the vast majority of contractors, and professional architects, or engineers continue to be governed by ethical obligations of their own professional organizations and associations, most of which have their own code of ethics.

Technology ethics (Techno-ethics)

Technology ethics concern the ethical questions caused/induced/created by the existence, implications, and use of technologies. The problem with technology ethics that it has no clear frame of reference. All above variants of ethics can be projected onto it but because technology shapes our relation with our world as well, we cannot keep using the same ethical theories to evaluate it. Technology ethics are instable and ever-shifting frames between various forms of ethics.

From a simple diagram to an explanatory visual



Sources:

- Developing an Ethical Tendencies Scale Based on the Theories of Ethics. (2025). ResearchGate. <https://doi.org/10.12711/tjbe.2016.9.0016>
- Professional Ethic—An overview | ScienceDirect Topics. (n.d.). Retrieved October 24, 2025, from <https://www.sciencedirect.com/topics/engineering/professional-ethic>
- Sayre-McCord, G. (2023). Metaethics. In E. N. Zalta & U. Nodelman (Eds.), The Stanford Encyclopedia of Philosophy (Spring 2023). Metaphysics Research Lab, Stanford University. <https://plato.stanford.edu/archives/spr2023/entries/metaethics/>

Draw, mark, colour, or place every type of ethics in this drawing!

Teleological ethics | Deontological ethics | Virtue ethics | Meta-ethics | (Applied or) Professional ethics | Technology ethics



One of the possible answers:

