

Mijn Eigen Hein.

Creating space for children to explore,
embrace and express their personal death stories.

MASTER THESIS
BY MYRON WOUTS



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Creating space for children to explore, embrace
and express their personal death stories.

Master thesis

by Myron Wouts

Design for Interaction

Faculty of Industrial Design Engineering
Delft University of Technology

Project part of

The Delft Design for End of Life Lab

In collaboration with

Nederlands Uitvaartmuseum Tot Zover

Supervisory team

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September 2022





If you're reading this page, then I have done it. I hardly know how, but I – have – done - it. I finished this behemoth of a thesis and this epic journey of a graduation project. This marks the end of my seven years as a student of *Industrial Design Engineering*, which I started in 2015 as an 18-year-old rookie.

The ultimate goal of my student years was to become an academic designer, but to be honest this was not always my focus. In the first years I spent most of my time developing friendships and learning to stand on my own two feet. I rarely missed a party and I lived through peak after peak. Then, in 2017, I experienced the darkest period of my life so far as I mourned the loss of my dear father. But the warm nest that Delft had become kept me going.

At that time, my personal life and my university life were still rather separate: my growth as a human being had little place in the product materials, production processes and design methods that I was studying. But ever since I started the *Design for Interaction* master's program, I have felt that my experiences, beliefs, and feelings have a place in my design projects. I have been able to pursue my expressive interests in theater and videography and could implement these disciplines in my work. Now, I am humbled and grateful that I have had the opportunity to conduct a graduation project that combines all the things that I love with a topic that is so dear to my heart.

I wish to thank my academic supervisors **Marieke** and **Ianus** for allowing me to shape the project to my preferences, truly making this the cherry on top. Marieke, thank you for your wisdom, your precise reasoning and formulations, and your inciting reflections on design for the end of life. I may not have always been able to admit it immediately, but your counsel time and time again lifted this project to a higher level. Ianus, thank you for your endless enthusiasm and boundless new angles on the context and the concept. Thank you for instilling me with hope and confidence whenever I lost either or both of those things.

Laura and **Guus**, thank you both for the opportunity to collaborate with your museum on this project. Thank you for your expertise. Thank you for your honest feedback. Thank you for giving me the perfect soil for my concept to grow on.

Casper, thank you for your immeasurable contribution to the structure of this thesis. I will remember your unconditional commitment to my process and wellbeing. I am proud to call you my brother.

Jikke, my sweetest, thank you for being there for me. Thank you for always seeing me in a more positive light than I can myself. Thank you for comforting me whenever the worries of this project became too much. And, credit where credit is due, thank you for your contribution to the visual quality of this thesis.

And, finally, **Pap**, thank you for the warm light of your star. We may not have spoken to each other for almost five years now, but your memory has given me more support than I could have hoped for.

Warmest regards,

Myron Woutts

Summary.

For a swift overview of the project.

Death is an endlessly interesting and relevant topic. After all, every human will encounter it one way or another. The common denominator among the many cultural and ideological perspectives on death is the cessation of all biological processes of an organism. But beyond that come rituals, values, and beliefs, all of which are subjective and open to interpretation. This graduation project is about what this subjectivity means for children. Children generally start developing more abstract questions about life and death at the age of 9 to 11. How can we educate children on something that we cannot fully describe and define ourselves?

Project objective

This graduation project was conducted in collaboration with Nederlands Uitvaart Museum *Tot Zover*, a museum that aims to encourage people of all ages to reflect on death, mortality, and bereavement. For a couple of years, the museum has had the ambition to increase their impact on children's death education with an experiential concept that operates outside of the museum walls. This ambition aligned with my own in the overall project goal: I aimed to design the narrative concept of a Tot Zover pop-up exhibition for 9- to 11-year-old children about the subjective aspects of death.

Research

From the project goal, I derived the main research question: *How do 9- to 11-year-old children currently learn about the subjective aspects of death and how could storytelling make a positive contribution?* Among other activities, I conducted literature research and contextmapping sessions with schoolchildren. I concluded that children currently learn about the subjective aspects of death – now classified as the psychological and metaphysical aspects – in isolation, since the topic

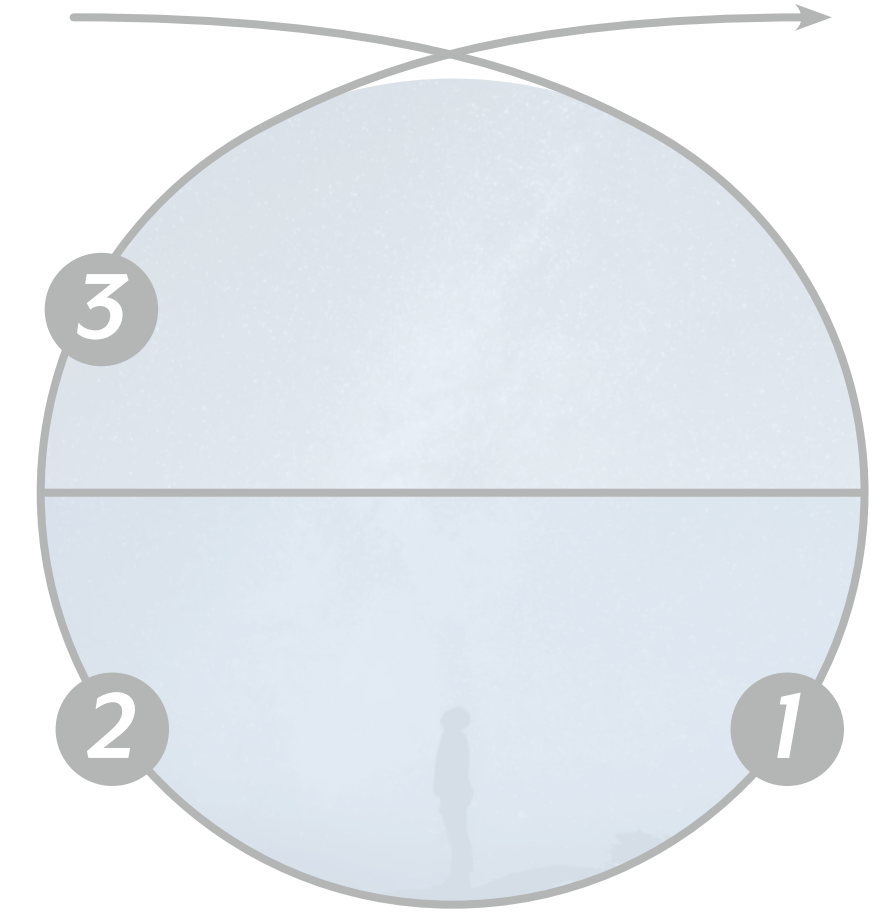


Figure 1. A visual representation of the three steps of my design goal.

is not often discussed. A positive change could be made through storytelling: telling stories to a group of children invites them to share their own experiences, fantasies, and reflections, which promotes feelings of comfort, and which may enrich the perspectives of the listening children.

Design criteria

I used the research insights to form a central theme which the narrative concept should discuss. I defined that the concept should ask children what death means to them instead of teaching them what to think or believe. Children should see that death has many faces and each one may be open to interpretation. Contrary to the current situation, death should not be something the children wish to avoid, but an approachable entity. The concept should present children with a diverse and colorful spectrum of death stories, which may contradict one another or take the children out of their comfort zones.

The theme, using the narrative blueprint called the hero's journey, was implemented in my design goal (see figure 1): to give 9- to 11-year-old schoolchildren space to: (1) explore death stories, (2) embrace that such stories, in their variety, may be authentic and personal, and (3) explore their own stories. I defined that, through the interactions with my concept, children should feel adventurous, imaginative, acknowledged and connected.

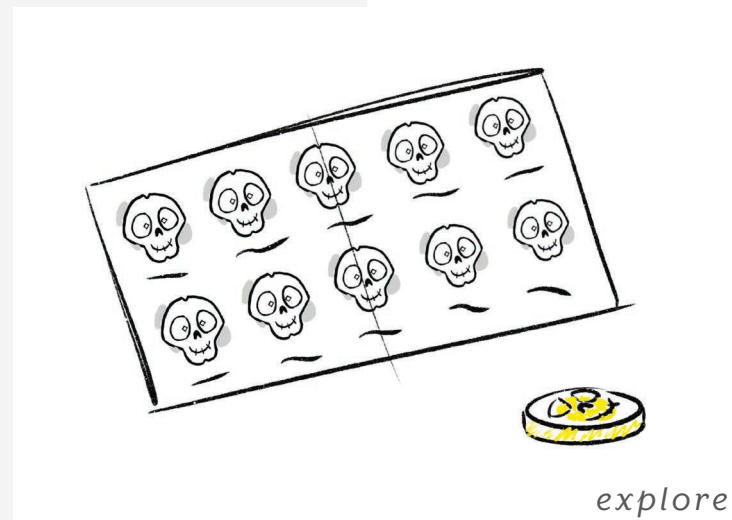


Figure 2. Sketch of the materials used in the exploration activity.



Figure 3. Sketch of how children embrace the collection of 10 Hein masks.

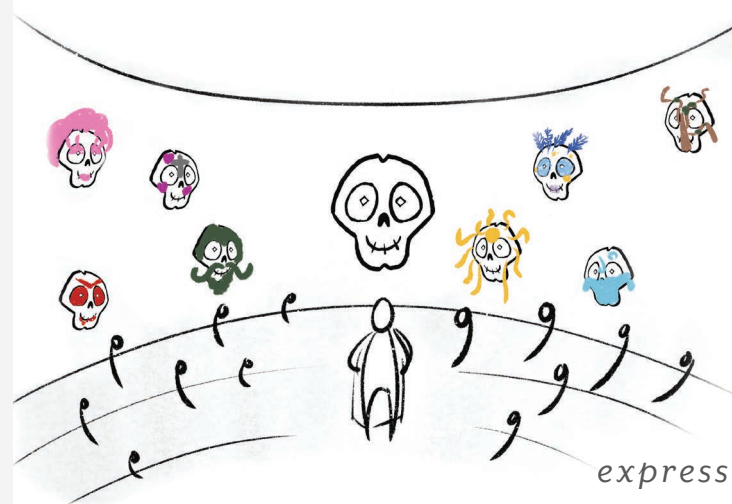


Figure 4. Sketch of the climax of the children's learning journey.

Design

The criteria led to the design *Mijn Eigen Hein*, the narrative concept for an exhibition that travels across locations of the OBA (Public Library of Amsterdam). It is a result of an iterative ideation and conceptualization phase, where developing a detailed narrative was complemented by designing the interactables that would bring that narrative to life.

While interacting with the concept, children explore death stories embodied through a collection of 10 Hein masks that represent contrasting perspectives on the subjective aspects of death (see figure 2). They learn to embrace that death can be many things, and that anyone is free to form their opinion (see figure 3). In the climax of their journey, they express their own stories by making their own Hein and add it to the digital collection by scanning it in a presentation ritual (see figure 4).

The design outcome is a storyboard of the children's learning journey, concept art for the exhibition scenography (see figure 5) and prototypes of the learning materials and the collection of Hein masks.

The concept was evaluated with positive results through a prototype test with schoolchildren and through feedback meetings with experts of experience design. I conclude that *Mijn Eigen Hein* fulfills the design goal. Children understand the story's moral, and they can use the mask as a canvas for their personal stories. Although it was found that not all children share their deepest ideas, I would argue that even those children learn during the journey by hearing their classmates' diverse stories. The interaction qualities could unfortunately not be evaluated through the test with children, as I found that they do not yet possess the linguistic skills to reflect on their interactions and experiences on the required level of abstraction.

Future implications of the project

Mijn Eigen Hein has the potential to be a viable way of contributing to death education beyond Tot Zover's museum walls, by which this project accomplishes its main objective. I would, however, recommend the museum to place the embodiment design concept's technology high on the priority list. Moreover, Tot Zover will need to attract funding and further develop the narrative with the OBA and possibly other partners if the project is scheduled to launch in September 2023.

In its academic context, the project has generated new insight on the merits of storytelling in death education of 9- to 11-year-old children. More specifically, making use of this age group's inherent fantastical worldview, although controversial in children's psychology, proves to make an effective and fitting contribution to breaking the death taboo. If the concept was implemented on a large scale, I could imagine that it would help to shape a generation that is open-minded about other death perspectives and that gives death a healthy place in their lives.

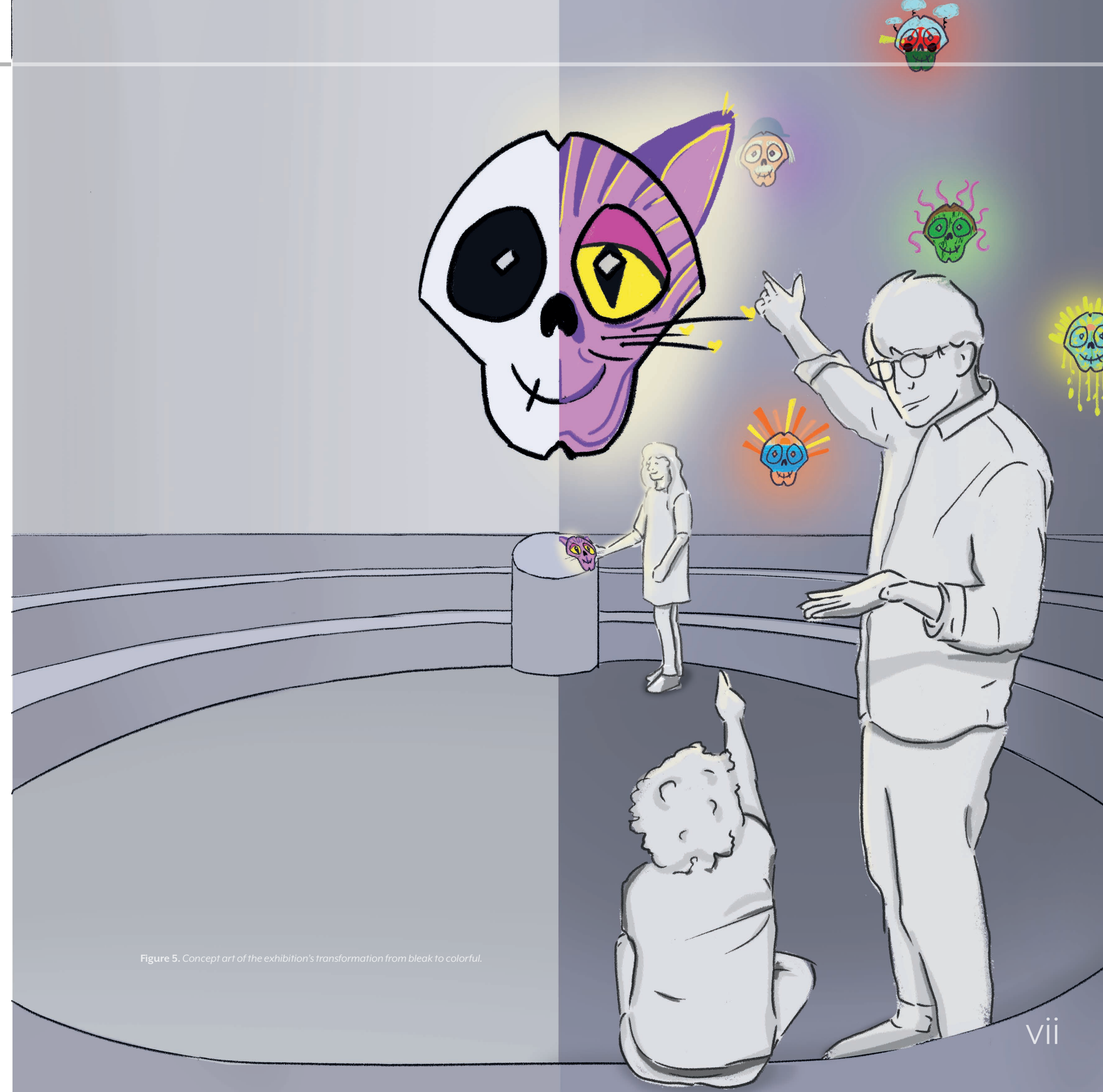


Figure 5. Concept art of the exhibition's transformation from bleak to colorful.

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Reading guide.

A thesis of this size is not necessarily the easiest read. Therefore, I would like to share some tips to help you on your journey through my written work.

Helpful colors. As shown in the table of contents to the left, the thesis is divided into five parts. Each part has its own accent color to help you keep track of where you are in the thesis. The 'storyline' at the top of the page should be an extra bit of help!

Read with your heart. Reading this thesis requires an empathic understanding of children's perspectives. The illustrations of the character Robin should help you with this. So try to connect with Robin. Pay extra attention to the prologue and epilogue.

Additional info. This graduation project entailed more than I could fit into this thesis. I refer to appendices at several points in the thesis. A separate appendix document can be found digitally on the TU Delft Repository website.



Figure 6. Appendix to this thesis.

This is Robin.
Robin is 10 years old.



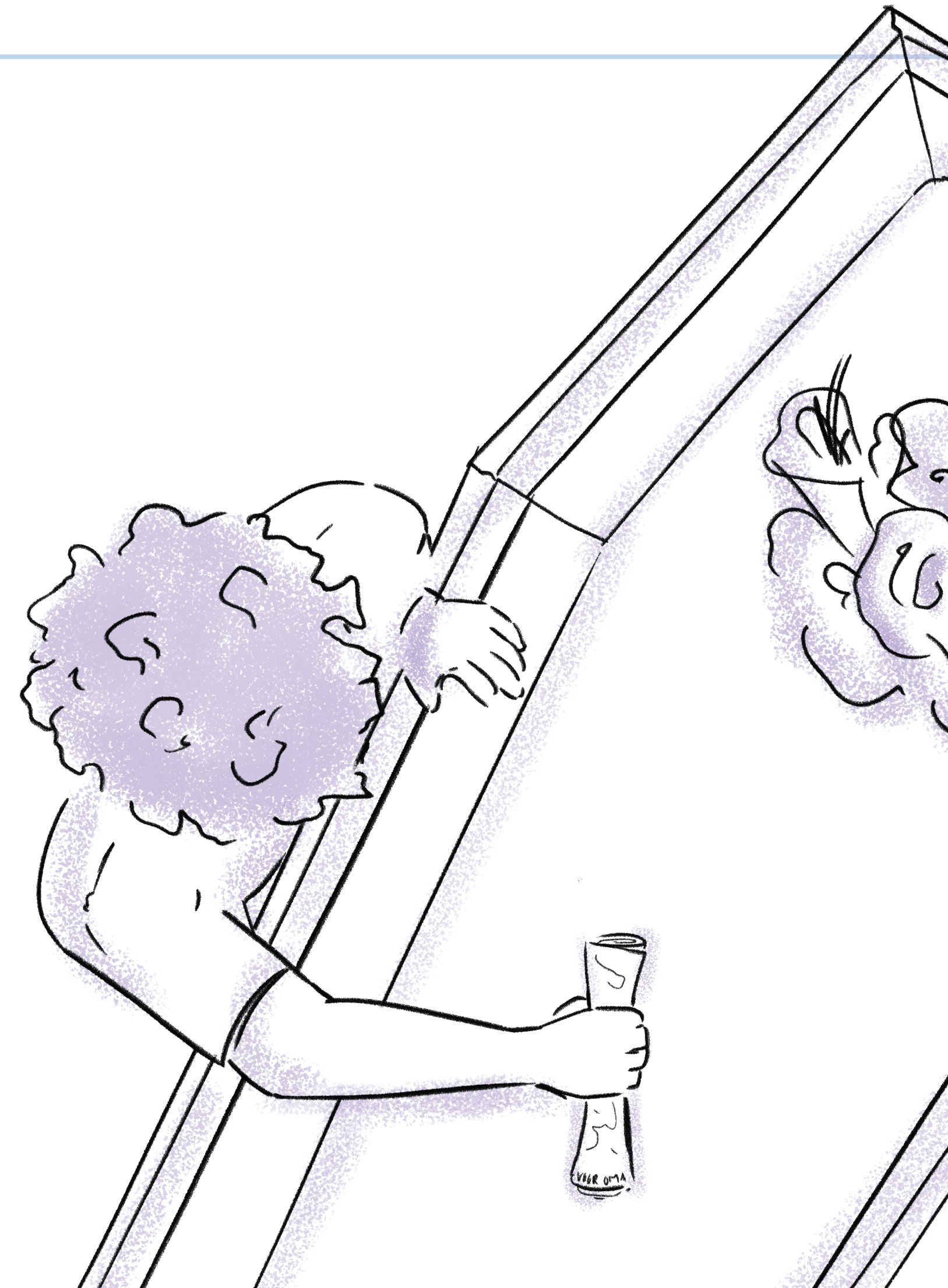


Robin does all right in school.
But sometimes it's difficult to focus.
On boring words and numbers.

Robin can be a bit of a dreamer.

Robin is usually a happy kid, but he understands that there's bad times too.

His saddest memory is of when Grandma passed away. That was two years ago.





Grandma's heart had stopped working.
Robin visited her at the hospital with Dad.

The doctor said that she had tried
everything she could to save Grandma.
But she couldn't.



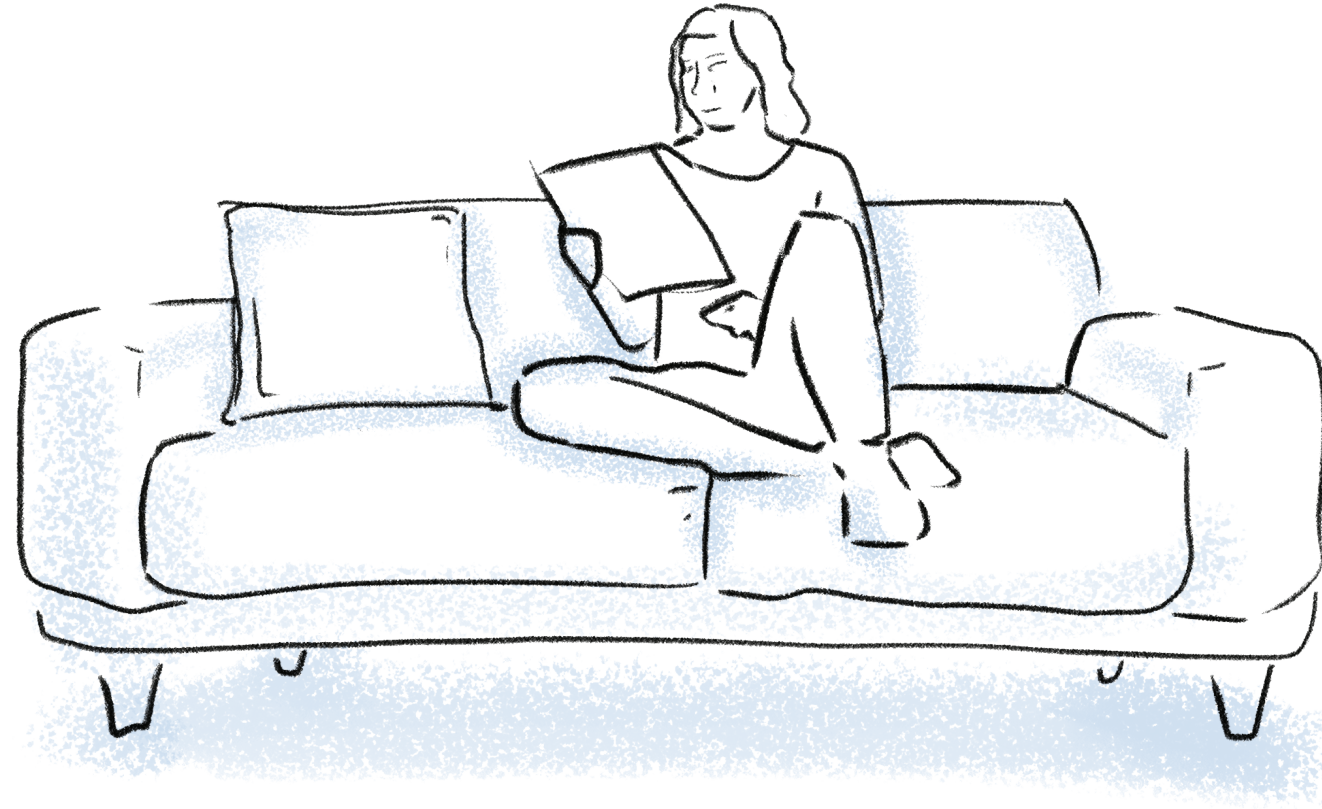
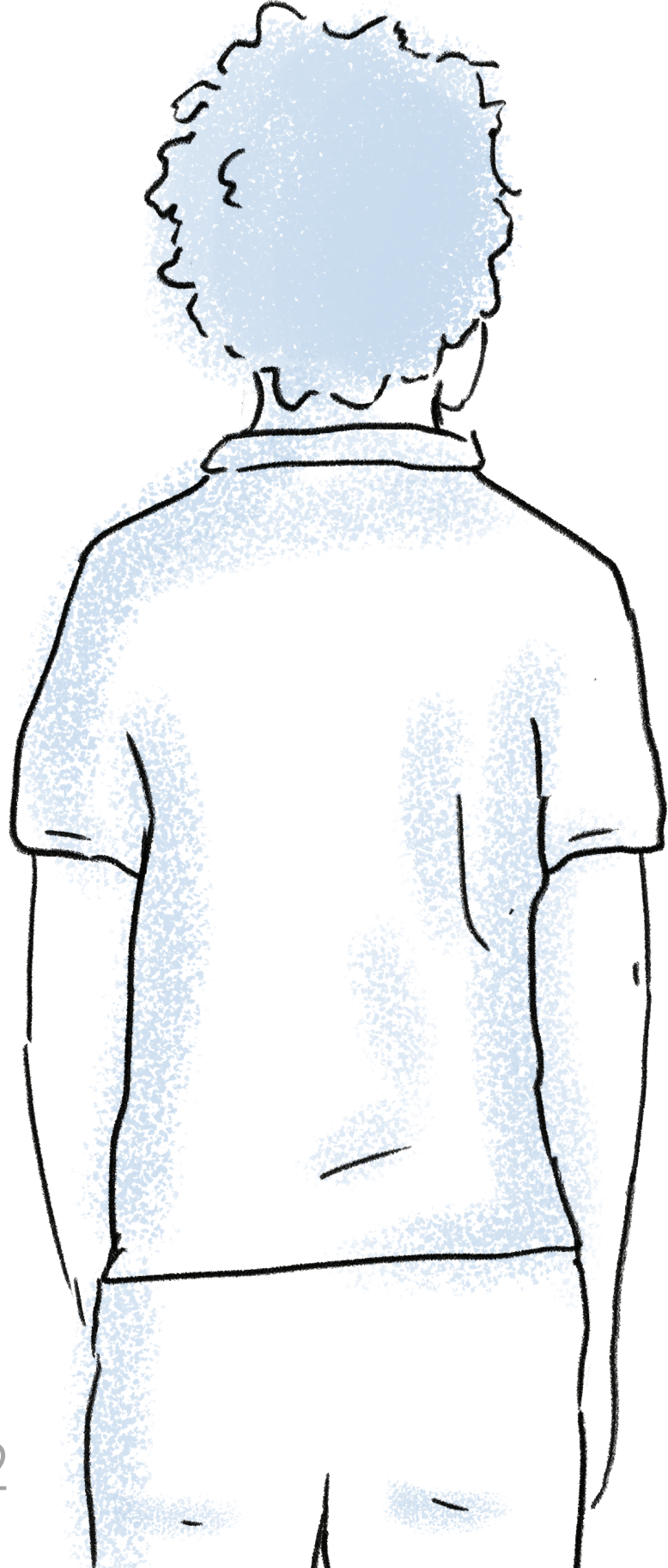
Walking away from the funeral,
Robin could see that Dad was crying.

Strange, Robin thought. Dad never cried.
Superheroes never cry, right?



Two years is a long time ago.
But sometimes sad thoughts still pop up.
Instead of boring words and numbers.

Where did Grandma go?
Where is she now?



Robin decides to ask Mom about it.
Does Grandma feel it when we burn her candle?

Mom looks up from her iPad.

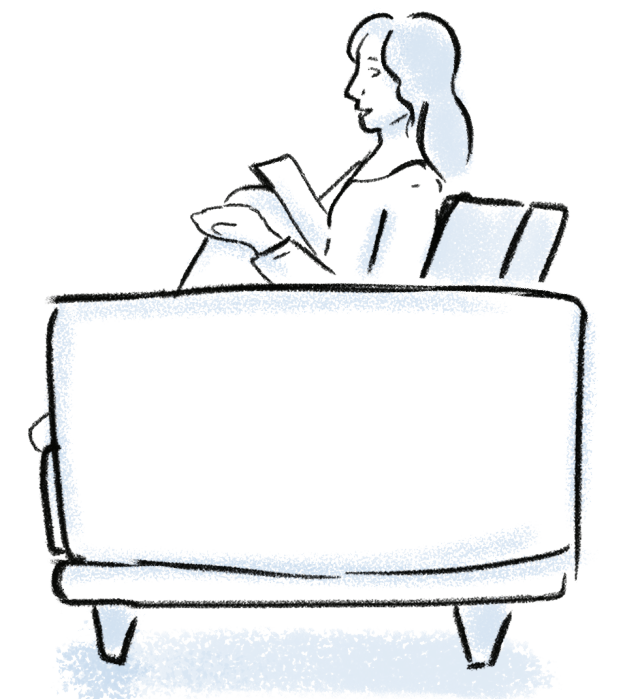


Does Grandma hear it when
I tell her that I love her?

I hope so.

I don't think so sweetie, Mom says.
I know it's sad, but she's gone.

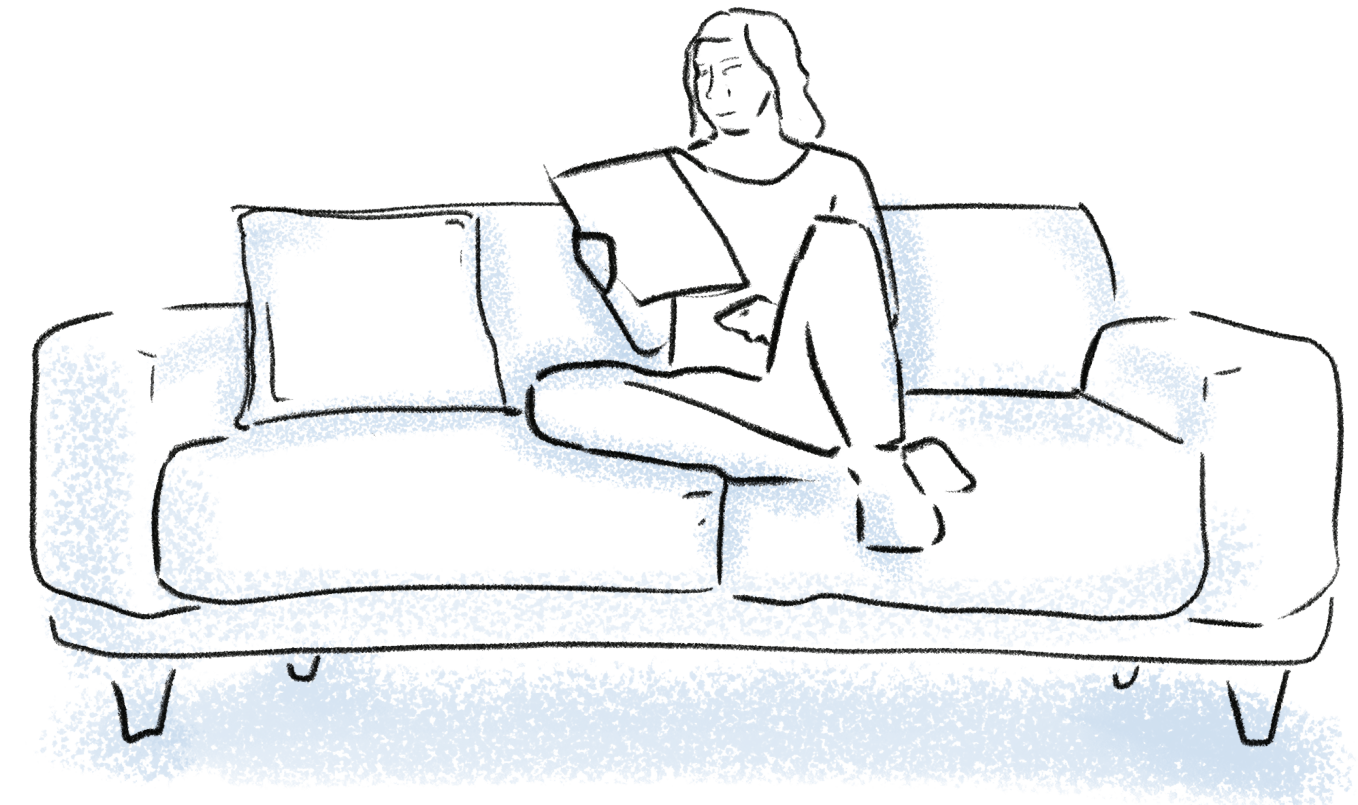
That's it.



Robin doesn't know what to say.



Why don't you go and play with your LEGOs.
That'll cheer you up, sweetie.



Mom's face dives back into her iPad.
Robin sighs. And goes to his room.

INTRODUCTION

PART 1

This part establishes the societal context and problem of this graduation project: the unattended thoughts, ideas, fantasies and questions about death of 9- to 11-year-old children. I explain my deep personal link to the topic and introduce the Museum Tot Zover, the external collaborating party for the project. I break down Tot Zover's ambitions regarding the studied age group to construct the project brief. I end the part by explaining the structure of the rest of the thesis.

The not so unusual story of Robin.

Introducing children's ill-attended curiosity for death, as well as my connection to the topic.

I believe that Robin, our protagonist in this thesis, is a child like many in the Netherlands. As children develop into their pre-teen years, their eager and questioning mind moves to increasingly bigger topics, even as big as life and death. But this curiosity, as with Robin, can remain insufficiently attended. In this graduation project, I unpack Robin's unanswered call for death education.

Unfit for children

There is a common saying that the only certainty of life is death. Every living thing must die one day. As humans, we are burdened to know this for a fact. Or blessed, depending on who you talk to. Every human needs to cope with this prospect and many of us experience losing someone at some point in our lives. The period around someone's death is often emotional, be it in saying goodbyes or in grieving.

Parents around the world wish to provide their child with the best for a meaningful life. UNESCO, in their 2014-2021 education strategy, named this the responsibility to 'educate for life', to prepare children for life in all its facets [1]. That is, the positive as well as the negative. However, it is often seen that parents mistake that responsibility: they seek to protect their child from any negativity at all [2]. They uphold the ideal that childhood should be carefree, happy, and unburdened by the harshness and the uncertainties of adult reality. Following that ideal, a child should be free to explore a world in which adventure waits behind every corner, in which an ordinary streetlight could be a source of mysterious, magical power.

When it comes to the topic of death, my problem with this type of protection is that death is beyond any parent's control. Death finds its way into a child's life. That may be, among other things, through loss, through a dead bird found in the park or through news articles. Think of the COVID-19 pandemic or the current conflict in Ukraine. Death is the only certainty of life. It is all over the world, and children, curious as they are, pick up on it. UNESCO's goal of educating for life means educating for death [3].

Open to interpretation

Death is an umbrella term for the many concepts, beliefs, states, and processes concerned with the end of life. There are countless perspectives on death. The common denominator among these perspectives is death as a biological process: the irreversible and inevitable cessation of all biological functions of an organism [4]. It can be witnessed, studied, explained: it is based in fact. But beyond that come spirituality, philosophy, rituals, beliefs, values, symbols, feelings, and reflections on the meaning of life, all of which are open to interpretation. This distinction between the objective and subjective concepts of death is not unusual within death studies. Later in this thesis, I will break down the different death concepts in more detail. I believe that precisely its subjectivity is why death has fascinated humanity for ages and why it still does today. No matter how long a person spends looking up to the sky, wondering what it all means, they may find answers, but they can never find a definitive answer. Anyone may have their own questions and their own answers. How can we educate children on something that we cannot fully grasp and define ourselves? In this thesis, I will focus on an instrument that humans have been using in these endless explorations for ages. This instrument is storytelling.

Wonder and play

Children typically start wondering about the subjective aspects of death at the age of 9 to 11. This has to do with their cognitive development, which at this age allows them to think about more abstract and complex topics [5]. Children at this age are relatively independent and can regulate their emotions relatively well [6]. But they are not yet teenagers: they have not yet outgrown that typical sense of wonder and playfulness. The combination of the above is why I chose to focus on this age group within this graduation project. Later I will explain more about how the child's concept of death typically develops over time.

An added benefit of working with this age group is that they are relatively accessible. Starting the project, I expected that older children would more likely get permission from their parents to participate in my research. Moreover, it was an ethical choice to work with a group that can stand up for themselves emotionally, especially since my didactic experience as a researcher and designer is limited.

Stories to cope

For each of the countless perspectives on death, there are countless stories through which these perspectives are explored and expressed. Well-known examples are found in the holy books of global religions: the Bible, the Quran, the Torah.

Joseph Campbell – remember him, he'll be important later – was an American literary historian who in 1949 published *The Hero with a Thousand Faces*, in which he compared myths from all over the world to distill a universal reason for existing. He found that the origin of modern-day religion lies in early humanity's search for the meanings of life, death and our place in the cosmos [7]. The original stories, though altered by thousands of years of retelling, have become personified in Buddha or Jesus Christ. But death stories do not require religious or supernatural elements per se. Non-religious people tell death stories too, and I am no exception.



Als een nachtelijke ster

Lijkend misschien eindeloos ver

*Trouw aan de hemel, speciaal voor jou
Straalt het warme licht, neemt weg de kou*

Ruimtelijke afstanden doen er niet toe

Een lichtjaar lijkt een heel gedoe

Hoop, geloof en liefde is ook hier de stille kracht

Die ster is dan dichterbij en maakt toch weer

Dat je lacht

I have not written this thesis just because the topic draws my interest. With this graduation project, I am ending a chapter of my life which death has been a part of. In 2017, my father passed away after a long battle with kidney cancer. After experimenting with several types of medication, he opted for euthanasia. After his painful announcement, we were fortunate enough as a family to have a three-month period for our goodbyes. Before that period, I had known my father as the archetypal *pater familias*: caring and strong but not overly expressive. Throughout his final months, I saw that change. He picked up writing, sketching, and crafting trinkets for us to remember him by. To the left, I share his work which struck me most. He signed this poem on the third of October 2017, precisely a week before his planned passing.

In this poem, my father personified himself as a star, a distant yet comforting sentinel in the sky. Now, we have never been a religious family, and we still are not. Before my father's passing, I could have read a poem such as this one with my rational mind, waving it off as spiritual balderdash. But living through grief, I learned that death stories are not about seeking what is true, but about finding comfort.

Going back to Robin and his real-life counterparts, this notion of comfort over truth is controversial: it has been common practice in death-related children's psychology to rely on the facts of the biological death concept. Manu Keirse, for instance, a central figure of the psychology of grief in the Dutch-speaking region, firmly argues that children fill gaps in their understanding with their vast fantasies; those fantasies may lead to anxiety [5]. Dutch children are reportedly stimulated to move on from fantastical death concepts 'around the time at which they lose their faith in the mythical Sinterklaas' [2]. According to Cox et al., unrealistic images do not prepare for the ability to cope with loss later in life [8]. Yet another study argues that euphemisms such as 'Grandma has turned into a star' may only provide short-term comfort [4]. Only recently, a new generation of pedagogues adopted the position that the objective and subjective aspects of death can be parallel without contradicting one another [9]. This new notion still emphasizes the importance of open and honest communication, but this communication does not have to be limited to matters that can be explained with certainty [10].

How could precisely the star that comforted me in my grief be discredited by the majority of academics when children's education is concerned? Do fairytales, parables, and folklore not already play a leading role in how children are raised, fantastical as these tales may be? Are metaphors and fantastical depictions such as the Grim Reaper not central to our death culture? With an activist's vigor, I started this graduation project to prove the value of stories and fantasies in educating around the subjective aspects of death. Luckily, I did not have to embark on my quest alone.

Ronald Wouts

14 February 1965 - 10 October 2017

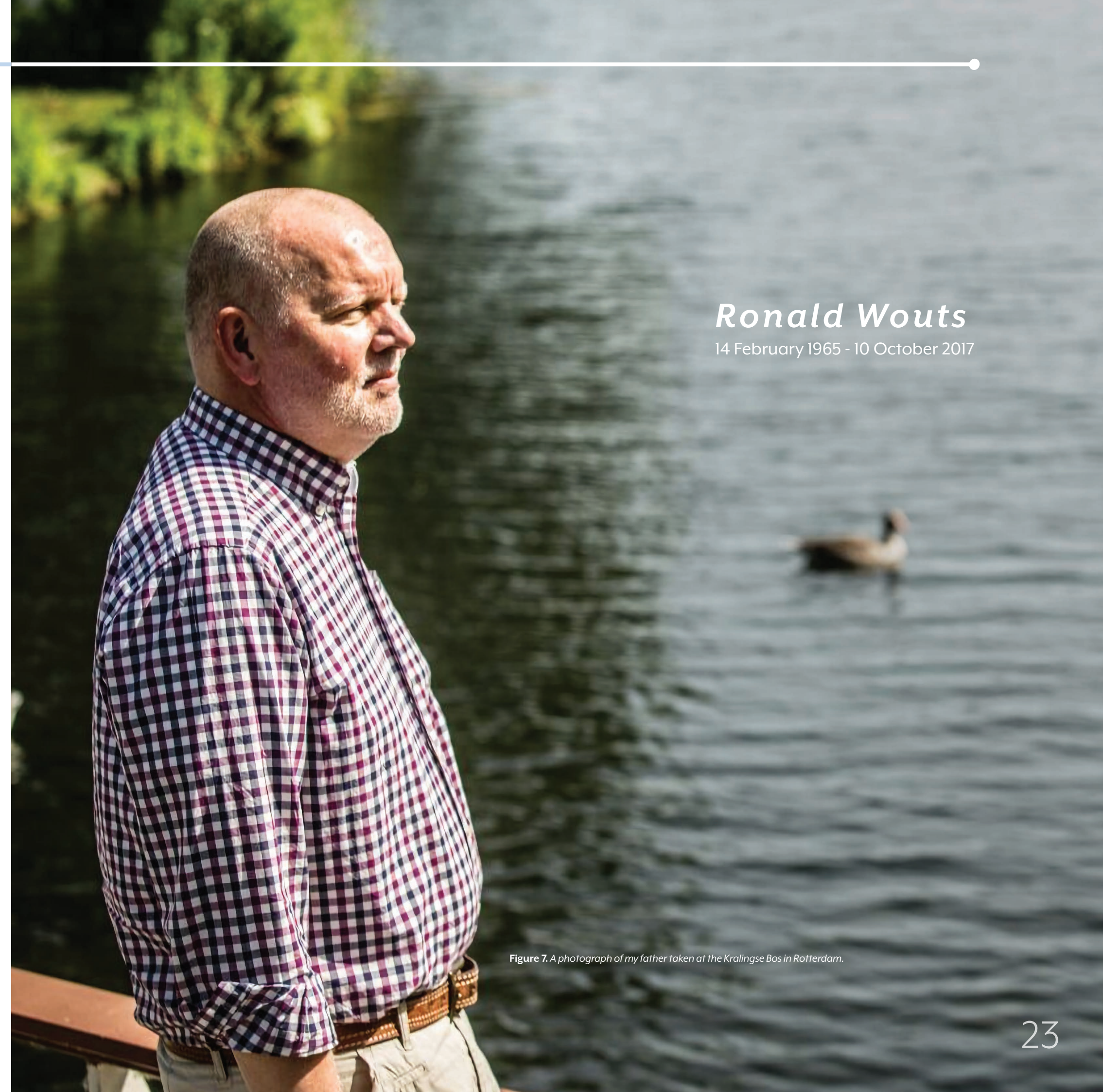


Figure 7. A photograph of my father taken at the Kralingse Bos in Rotterdam.

A museum for death stories.

Presenting this graduation project's external collaborating partner, Museum Tot Zover.

This graduation project was conducted in collaboration with Nederlands Uitvaart Museum Tot Zover (Dutch Funerary Museum Tot Zover). The museum, located on the Nieuwe Ooster cemetery in Amsterdam, is dedicated to showcasing end-of-life rituals, mourning and funerary practice. It displays a permanent collection of artworks and historical objects as well as temporary exhibitions of paintings, sculptures, photography and more.

Museum Tot Zover is run by a relatively small team of five employees supported by volunteers. The museum itself is part of a foundation, the Stichting Nederlands Uitvaartmuseum. It aims to encourage people to reflect on death, mortality, and bereavement [11]. In addition to the physical museum, the foundation leads a knowledge platform that connects funerary research and practice. The 'Funeraire Academie' facilitates interdisciplinary collaboration through events. A recent example is a series of gatherings named *Met de Dood in Huis*, where lectures and discussions alternate with musical performances, poetry recitals and documentary viewings. Recent themes in this series have been the universality of death, end-of-life rituals, and grief. The museum often collaborates with students and researchers for projects on strategy, policy, and design. I am proud to call this graduation project an example of the latter.



Figure 8. The museum's entrance.



Figure 9. Portrait of a deceased child, by Nicolaes Maes in around 1671. Oil on canvas. Part of Tot Zover's collection.



Figure 10. The auditorium of the Nieuwe Ooster cemetery.



Figure 11. Graffiti art used as promotional material for 'Met de Dood in Huis'.

Project *brief.*

Setting an overall project objective to align Tot Zover's ambition with my personal motivations.



Figure 12. Map of Amsterdam, showing location droplets of the Museum Quarter (left) and Museum Tot Zover (right).

Schoolchildren are a core target group of the museum, but recent attendance of children to Tot Zover has been low. Not many families nor many school groups find their way to the museum.

In our preliminary discussions, Tot Zover explained children's low attendance rates as follows. Firstly, the topic of death is sensitive. Parents may be afraid of upsetting their child, instead opting for a more amusing way to spend quality time together. Tot Zover expanded on this by suggesting that parents' own sensitivities towards the topic may inhibit them from paying a visit to the museum. This may also explain why few schools visit the museum with groups: teachers and school boards would rather choose a field trip with less controversial subject matter. Secondly, the museum lies in the residential neighborhood of Watergraafsmeer, about 5 kilometers away from Amsterdam's museum-packed center (see figure 12). Tourists and same-day visiting families are unlikely to stumble upon Tot Zover.

Beyond museum walls

Since it was difficult for children to be brought into the museum, Tot Zover found a solution in bringing the museum to children. In 2017, the museum launched *Doodgewoon in de klas*, a digital education tool [12]. This website discusses the themes 'Everything ends', 'Burial and cremation', 'Rituals and culture', and 'Grief and remembrance'. It has informative videos, assignments, and materials to support teachers. Tot Zover also creates the opportunity to send guest teachers from the funerary field, such as morticians, hospice workers, or deathcare workers. The learning modules are designed to fit into the classroom environment and empower teachers to take center stage, while retaining their autonomy as a teacher.

Tot Zover has continued to develop ways to reach children beyond the walls of the museum. The idea emerged for a pop-up exhibition traveling to public locations. Compared to the classroom-based *Doodgewoon in de klas*, this new concept would create a bit more of a museum-like experience for the children. In 2021, a group of students from Radboud University developed a concept titled *Tot Zover On The Road*, an exhibit that would travel from school to school.

Sparking my collaboration with Tot Zover, I was asked to develop these students' work into a design. An important note was that the scale of the organization and their limited financial means should be considered. We agreed that a narrative approach would set it apart from *Doodgewoon in de klas*. This aligned Tot Zover's ambitions with my own as the starting point for this project.

*In this graduation project,
I aimed to design the narrative concept
of a Tot Zover pop-up exhibition
for 9- to 11-year-old children
about the subjective aspects of death.*

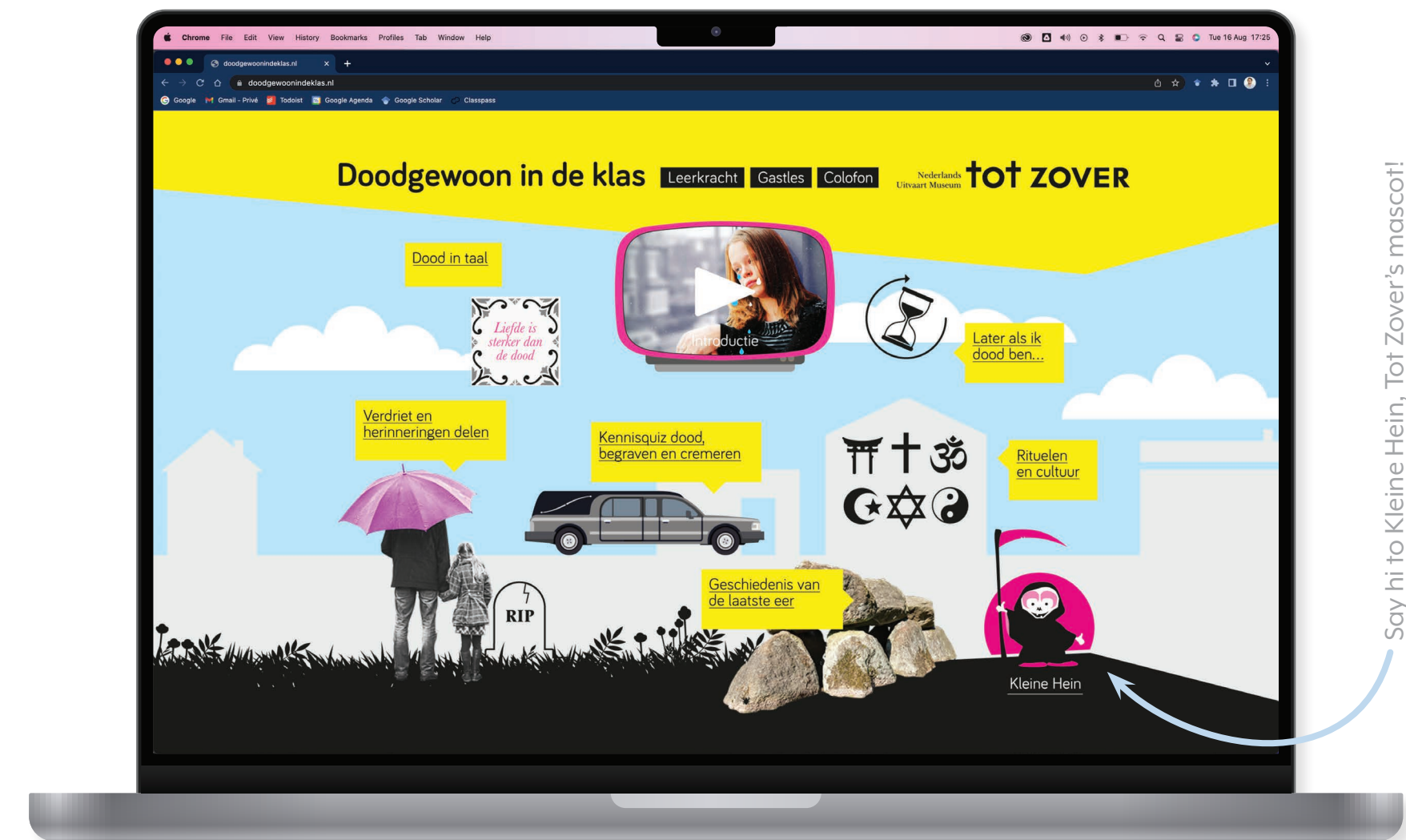


Figure 13. The home page of 'Doodgewoon in de klas'.

Design *process.*

Following the double diamond method of design.

In these pages, I give an overview of the process of this graduation project. I explain the phases of the project and which activities I conducted during those phases. The process doubles as the structure of this thesis.

The double diamond [13] is best used to describe the design process of this project. In its bare form, the model describes two phases of design: researching a problem and finding a suitable solution to that problem. The diamond represents the alternation of diverging and converging mindsets. In this project, I adapted the double diamond into a five-phase structure. These five phases are the five parts of this thesis:

PART 1 - INTRODUCTION is what you have read up until now. It describes the project's societal context, setup and overall objective.

PART 2 - DISCOVER embodies the research phase of the project. I gain an in-depth understanding of death education of the subjective aspects and the positive contribution that storytelling could make.

PART 3 - DEFINE is the link between research and design. Here I mix research insights with my personal point of view to form design criteria.

PART 4 - DESIGN briefly describes my design explorations in this phase of the project. Then, I present the final design, *Mijn Eigen Hein*.

PART 5 - CONCLUSION is the closure of the project and this thesis. I reflect on the project outcome and on my personal learning journey.

At this point, I do have to make a confession. The design process is nowhere near as linear as this thesis makes it seem, but is rather iterative: it involves looping back and forth. More than once, I have had to take a step back to review my research before proceeding into a design direction. Trust me that I am not trying to make things look better than they are. The structure I chose makes for a more compelling and comprehensible narrative.

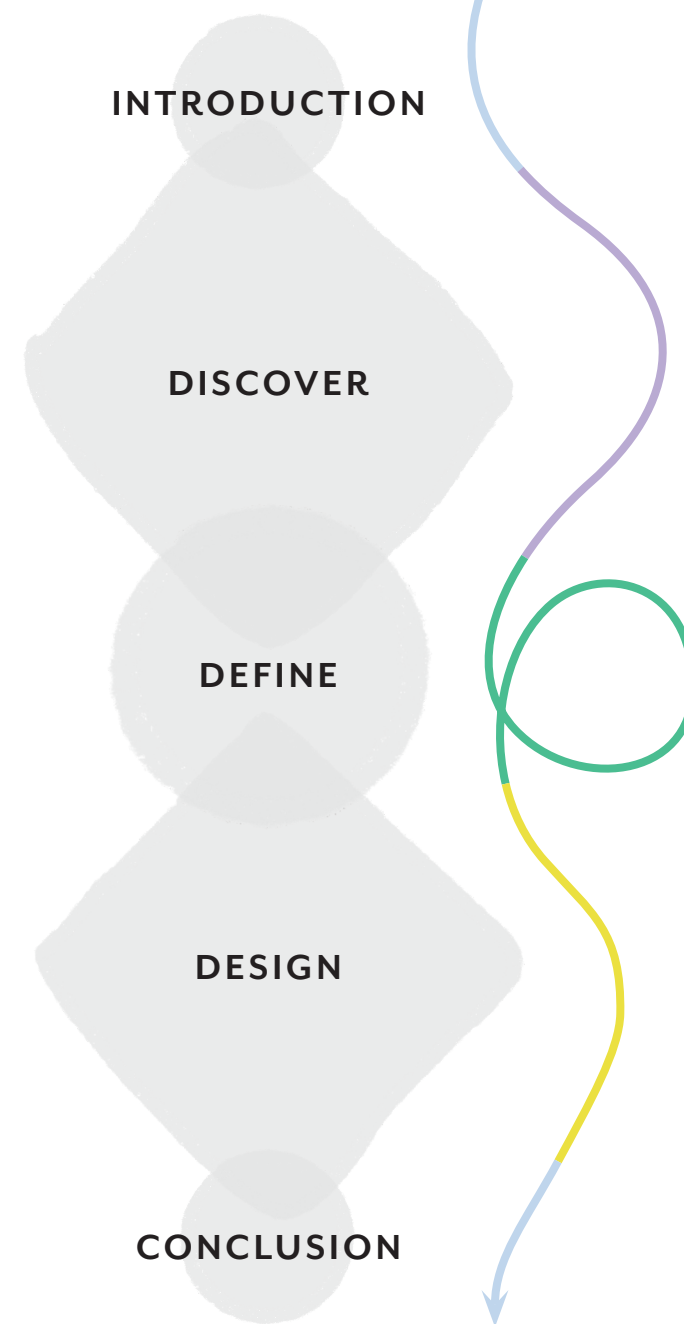


Figure 14. *The five phases with two diamonds.*

My research and design activities.



Literature study on death education and storytelling.



Research sessions with children about their death-related perspectives, experiences and stories.



Interviews with teachers about their perspectives on the current state of death education.



Consulting with experts for deeper contextual understanding.



Ideation sessions to kickstart conceptualization.



Artistic expressions to capture the envisioned design qualities.



Storyboarding to construct the concept narrative.



Prototyping to design the interactable elements.



Prototype testing with children to evaluate the concept.



Consulting with experts for feedback on the concept.



Figure 15. A glimpse of the research sessions with children.

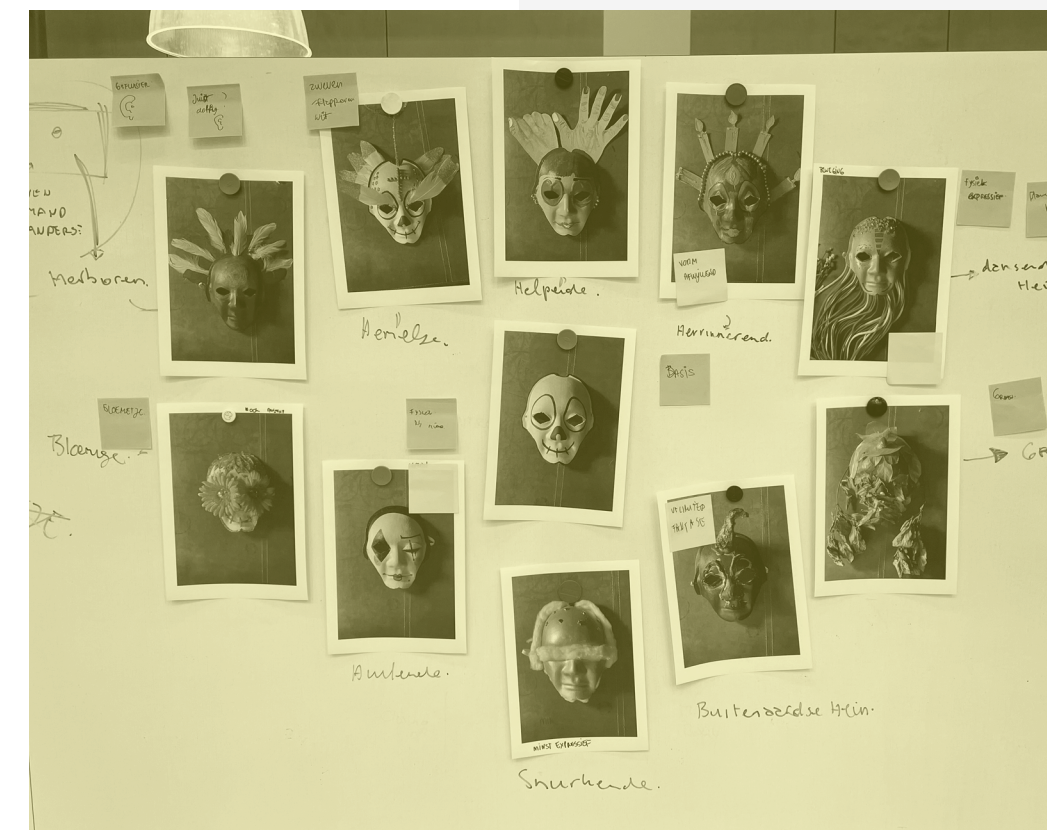


Figure 16. A look at a typical day of ideating on the wall.

DISCOVER

PART 2

In this part I conduct research to identify how 9- to 11-year-old children learn about the subjective aspects of death, and how storytelling could make a positive contribution. This part discusses both my theoretical insights and deepened insights gained through research sessions with children. My conclusions at the end of this part will be used later in the thesis as the foundation for my design.

Research approach.

Kicking off the research phase.

In this chapter, I derive my main research question from the project objective. I then describe the activities I conducted to study the research question.

In the previous part, I set the project objective to design a narrative concept of a Tot Zover pop-up exhibition for 9- to 11-year-old children about the subjective aspects of death. This project phase – and this part of the thesis – is about gathering the necessary information about the context and its problems to understand the core of the problem. The first step was to identify what this necessary information was: what did I want to learn about the context and its problems? What questions popped up from the project objective? See appendix B for my first explorations of the research context.





With a human-centered mindset, I immediately set my sights on the targeted age group. How do they perceive the world? What do they care about? What do they like and dislike? Making the connection to the subjective aspects about death, what does this age group generally know about the topic? What feelings do they associate with it? To what extent are they aware of the subjectivity and openness to interpretation of death topics? The other main component of the project objective is storytelling. What is the potential of storytelling in death education? To what extent does it already play a role? These initial questions came together in the main research question of this phase:

How do 9- to 11-year-old children currently learn about the subjective aspects of death and how could storytelling make a positive contribution?

I wish to point out that I chose not to research pop-up exhibitions and their capabilities in this phase of the project. I figured that the pop-up nature of the concept has to do with form and less with content, and so it fell outside the scope of the research phase. The form of the concept and its portability will be expanded upon later.

Another remark on the research question is about the subjective aspects of death. Instead of immediately focusing on these specific aspects, I thought it was wise to first develop an overview of children's general death-related learning. Therefore, in this part I first zoom out on death education in general and later zoom in on the subjective aspects.

Research activities
Below is a list of the four groups of activities I conducted to answer the research question. The first two are discussed in most detail throughout this part. The other two are discussed to support my findings of the first, albeit in less detail.

-  **Literature study** to gain a theoretical understanding of the context and to identify knowledge gaps which could be studied through other activities.
-  **Research sessions with children** to deepen my theoretical insights, and to empathize with children's perspectives about the subjective death aspects.
-  **Interviews with teachers** to understand their needs and concerns related to death education.
-  **Consulting with experts** of funerary research and practice, curriculum development and experience design.

Structure of this part
The rest of this part is divided into four chapters. The first chapter (pages 36 to 49) studies children's learning processes about the subjective aspects of death. The second chapter (pages 50 to 55) studies the potential of storytelling for death education. These two chapters are based in theory, complemented by the interviews with teachers and the consultations with experts. The third chapter (pages 56 to 69) deepens the theoretical insights by listening to the perspectives of children in research sessions. The fourth chapter (pages 70 to 71) concludes this part by answering the main research question.

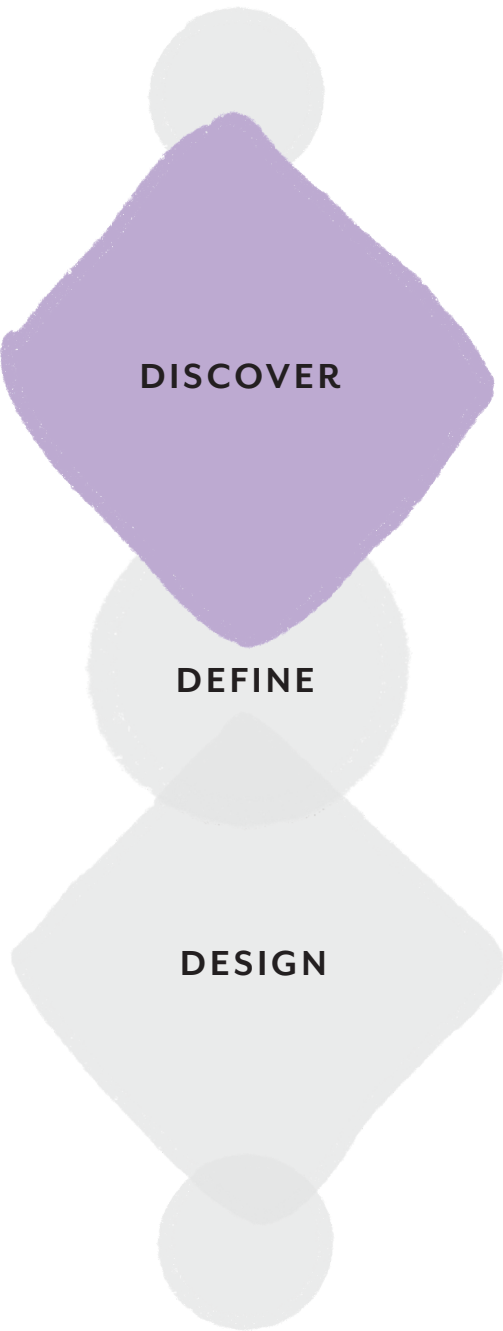


Figure 17. We are now in the first diamond of the process.

How children learn about death.

Establishing a theoretical basis of the current state of death education.

The research described in this chapter started with a question: how do 9- to 11- year-old children currently learn about the subjective death aspects? To answer this question, I gain an understanding of how death concepts grow along the cognitive and emotional development of a child. Explaining the history of the Dutch death taboo and setting up a base of the current state of Dutch death education, I will build a framework for the child's death concepts over time, including a nuanced classification for objective and subjective death concepts.

A history of the Dutch death taboo

For centuries, the area making up the modern Netherlands was predominantly Christian [14]. In faith, people found ways to cope with the high death tolls of famine, war, and disease. The notion of an afterlife provided comfort when death was an everyday matter.

Change came with the dawn of rationalism in a time named the Age of Enlightenment (late seventeenth to early nineteenth century). The great philosophers of this era, such as Descartes, Kant, and Spinoza, developed the ideal that reason should be the highest source of knowledge, over intuition or superstition [15]. Although this ideal brought forth an era of scientific advances, it also led to criticizing the inexplicabilities of religious tales and teachings. This was the start of the Dutch secularization [14].

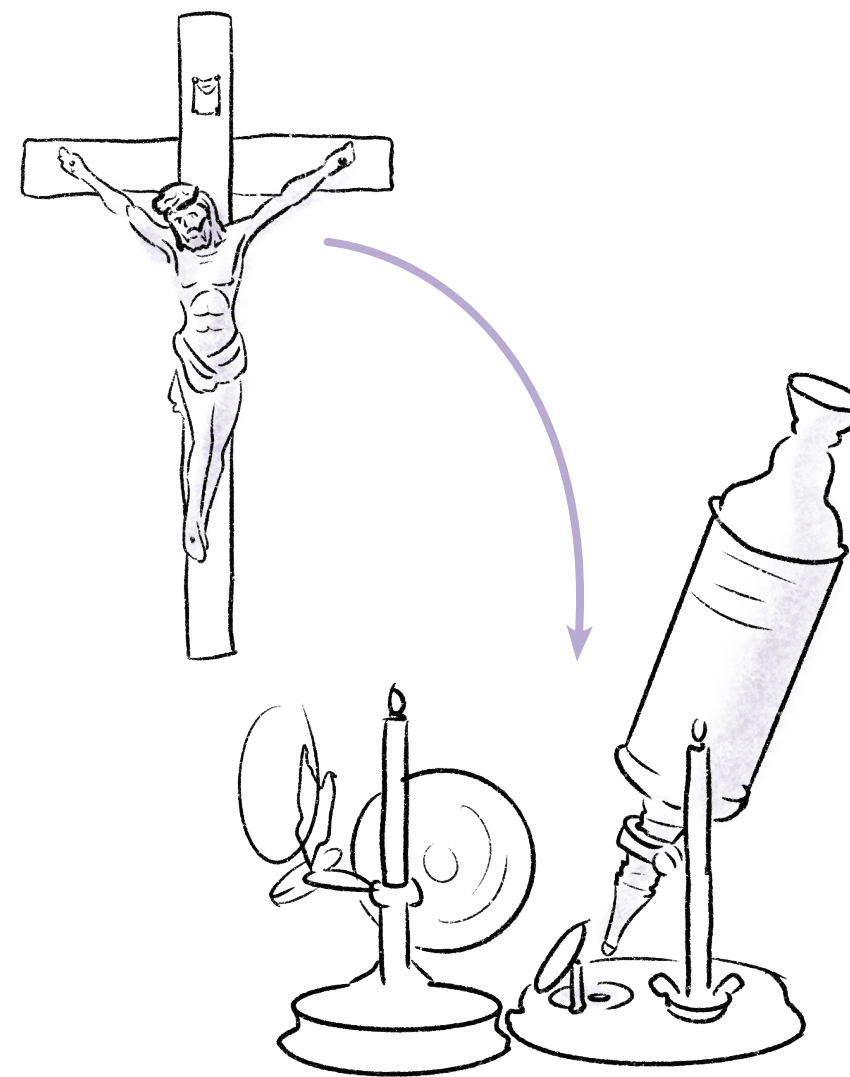


Figure 18. From intuition to reason.

The twentieth century gave shape to Dutch death culture in its current form. Immigrants from China, Turkey, Morocco, and the former colonies of Indonesia and Surinam brought a variety of cultural stories to the Dutch landscape. The emergence of the internet further enhanced the visibility of stories from non-Western cultures. Despite this enrichment, the century was characterized by further secularization. CBS describes that in 1960 more than 80 percent of Dutch citizens were of Catholic or Protestant faith. In 2019, only 46 percent of Dutch citizens were affiliated with any religious or spiritual group [16].

Over the twentieth century, death became less of an everyday topic. Advances in medicine meant decreased mortality and increased life expectancy. Cemeteries were removed from city areas to the outskirts to cater for population growth [17], removing death rituals from day-to-day view. Death thus became visible only to those approached by it: the chronically or terminally ill, the elderly, and victims of a severe accident or violence. The result is a society in which knowledge about the end of life and skills of coping with it, otherwise known as death literacy [18], are limited. The result is a society in which death is taboo. The issue was recently addressed by SIRE in their public campaign titled *De dood. Praat erover, niet eroverheen*. Through research, SIRE found that 41 percent of their (Dutch) participants never discuss the topic of death [19].

This death taboo does not seem to be a global issue. There are many examples from cultures around the world today with rituals in which death is more than a cause of sadness, anxiety, or grief. Think of traditional Chinese ancestor worship, or even the Mexican *Día de los Muertos* which celebrates death and remembrance. Or think about funeral rituals practiced by a variety of peoples across and native to Africa where the mourners sing and dance together to celebrate the life of the deceased person. None of these cultural perspectives seem to negate that loss comes with sadness, but they acknowledge that death can be more than that negativity. Is it not a shame that the Dutch death taboo refrains us from also adopting that rich insight and passing it on to our children?

Death education today

Several studies have pointed out the benefits of death education for coping with future loss and grief [20, 21, 22]. But the taboo on the topic of death also affects how it is discussed with children [23, 24], preventing death education from reaching its society-wide potential. Additionally, studies show that not discussing death with children leaves lacking insight into their end-of-life thinking [25, 26].



Figure 19. Still from SIRE's campaign video 'Schoenendoos' in which a child buries her pet.



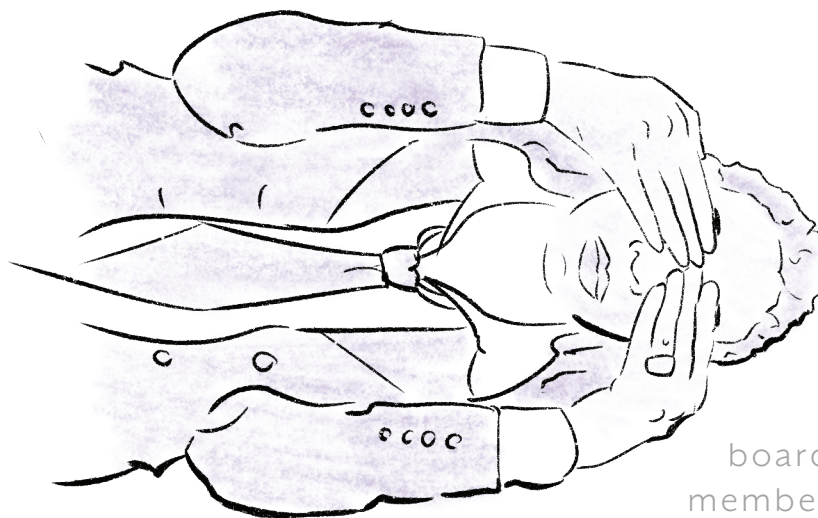
Figure 20. A girl in Mexico with her face decorated for Día de los Muertos.



parent



teacher



board member

Figure 21. Parent hears no evil, teacher speaks no evil, board member sees no evil.

In part 1, I introduced how parents may keep the topic of death hidden from their children to protect their careless childhood. But parent-child communication may additionally be affected by parents' inability to assess their child's cognitive and emotional development. They can underestimate their children, not deeming them capable enough for end-of-life discussions [4]. On top of it all, parents' own unease with discussing death may also cause hesitation.

Teachers also fall prone to the taboo. A 2008 study found that teachers were wary of causing an upset if they discussed death in the classroom. This may concern an upset from parents as well as the children themselves. The same study found that the execution of death education currently depends mainly on the teacher's own motivation to take responsibility as well as their ability to tackle the topic creatively [3]. This is one of the issues that *Doodgewoon in de klas* tries to solve by providing teachers with materials and starting points for preparing death-related lessons [27]. Testimonies of teachers have shown that such a helping hand can relieve their insecurities of teaching about death. Another strength of *Doodgewoon in de klas* is its flexible setup: it acknowledges the teacher as an autonomous professional who understands his pupils' needs [27].

The reliance on the teacher's motivation and creativity may be especially true in the Netherlands, where death education is not part of the required curriculum [28]. Unfortunately, that is unlikely to change soon, as was explained to me during an interview with Stichting Leerplan Ontwikkeling (SLO), responsible for the Dutch education curricula. According to SLO, national regulations for death education could conflict with Article 23 of the Dutch constitution, which protects the freedom to educate according to anyone's religion or ideology [29].

Through my own interviews with teachers, I found that death is generally only discussed in class when it is a matter of urgency, that is, when someone close to one of the children dies. One of the teachers said:

*When death comes into the classroom,
it drops like a bomb.*

Schools generally have a protocol for such cases. This usually means discussing with the bereaved child and their family how they wish to give attention to the loss. This may include lighting a candle in the classroom or creating a memorial for the deceased.

Of course, it is important to give bereaved children the comfort and attention they need, but it is not the ideal moment for death education that benefits the whole class. One of the interviewed teachers wondered why death as an education topic is seen as different from any other. 'As of late we almost talk to them about anything when they're so young, even sexuality,' she continued. 'Why is death off limits then?'

Timeline of Robin's death concepts

A child's understanding of death does not appear instantly. Understanding death is a complex task for a child [30]. It is a process that takes place over years, reaching far into adulthood. Some might argue that it is a lifelong process. In the following pages, I fly over our hero Robin's childhood to understand the development of his death concepts. I include both objective and subjective concepts to provide a zoomed out overview. Later in the chapter, we redivide the concepts. It is important to note that Robin's timeline follows the typical flow made up from literature, but the learning process of an individual child may differ.

3 years old

Robin's development at this age focuses on basic functionality of living. He starts to speak in longer sentences and his vocabulary grows; he understands more words than he can use [6]. His curiosity about the world around him is inexhaustible: he asks a lot of 'how', 'what' and 'why' questions [6]. Robin's first long-term memories may be created in this age [6]. His coordination improves and he rides his tricycle for the first time [6]. He may explore nature by playing in the sand, maybe picking up a dead insect. But death as a concept is not yet a subject of Robin's thoughts.



6 years old

As Robin moves from kindergarten onto his first real school years, he indirectly learns about death in school. He learns about the ecological circle of life: the seasons, animals and plants, the food chain, and his own body. Making sense of how the world around him works is quite fascinating [5, 31]. Step by step, Robin develops an understanding of the biological death concept. He understands how an organism dies and that dead things cannot come back to life [4]. The emotional weight of death and its universality has, however, not yet landed.

Interestingly though, death is all around Robin, even at this age. Death is a common theme in the fairytales he hears, the books he reads, the movies he watches, the video games he plays. Outside, Robin pretends to be shot by his friend's toy gun and drops to the ground. It is as if, between children at Robin's age, death is intuitively accepted as a normal part of life [32].



Figure 22. Illustration from Max Velthuis' 'Kikker en het vogeltje'.

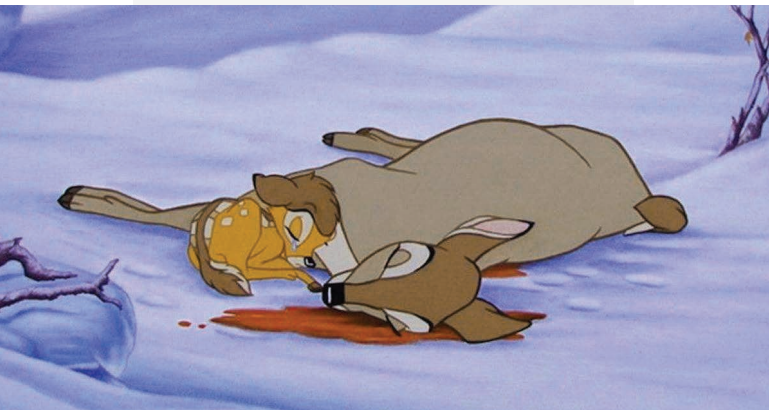


Figure 23. Still from Walt Disney's 'Bambi'.

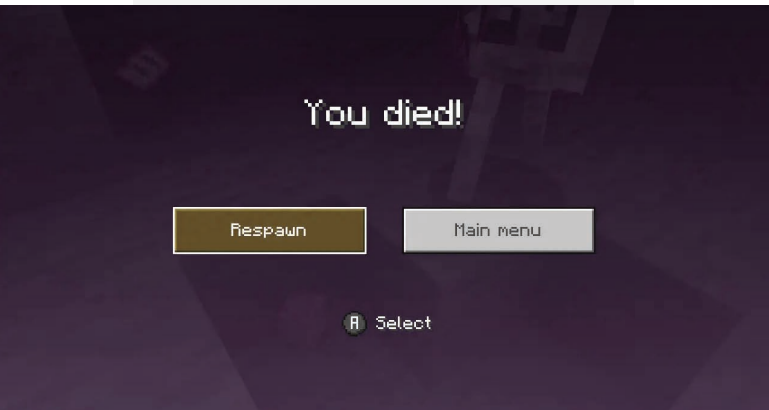


Figure 24. Screenshot of the popular videogame 'Minecraft'.



Figure 25. A typical hospital room which a child may encounter when visiting a sick or injured family member.



Figure 26. A memorial ornament for a deceased dog.

8 years old

At this age Robin first experiences the emotional gravity of death through the loss of his grandmother. For the first time, he learns what funerals are like. He sees that his parents are emotional and vulnerable beings too. In these tough weeks, Robin and his family spend more time talking, crying together and hugging than they usually do. Through it all, Robin's saddest thought is that Grandma will never make him pancakes again. No one makes pancakes like she did. But that is all part of the past now.

For many children in this age range, first-hand experiences with loss are the primary source of how they develop their psychological relationship with death [31]. This first experience does not have to be a person. Especially at this age, losing a pet can feel equally weighty. Families often perform formal rituals for deceased pets, such as a funeral including short speeches [33].

10 years old

Two years after his grandmother's death, the casket and the eulogies are mostly distant memories. At this age, the universal and irreversible biological death concept is completely understood. It is not as fascinating as it was before [5, 31]. Instead, Robin has developed the cognitive capability and curiosity for more abstract concepts [5], such as why people die.

Emotionally, Robin is slowly growing more independent from the adults around him, but this independence can be surprisingly fragile [6]. Grief-related emotions may be intense and difficult to control [5]. This is not made easier by the fact that peer group influences have already emerged at this age [6]; Robin may not want his boy classmates to mock him for showing too much emotion.

In these pre-teen years, Robin starts to develop a more pronounced personality, and he becomes aware of the individual personality traits of others [6]. In accordance with the cognitive development described above, his descriptions of his own and other people's personality traits can be more abstract and complex [6].



Theoretical framework of children's death concepts

The timeline discussed in the previous pages helps to understand children's death-related learning process over time, but it does not yet provide an overview of the themes that fall under the umbrella of the death concept, nor does it show the relations between those themes. In this paragraph I break down the themes and present a visual theoretical framework.

In a 2019 study, Vázquez-Sánchez et al. [31] invited children to make drawings based on several death-related prompts and then asked them to explain their drawings. The themes that emerged most frequently, informed by existing literature, were put into a hierarchy. The three main themes were defined as biological, psychological, and metaphysical.

Drawing inspiration from this study's insights, I adapted Vázquez-Sánchez et al.'s themes into a theoretical model for this project, see figure 27. The three main themes, biological, psychological, and metaphysical, parallel the child's emotional and cognitive development discussed in the previous pages, which is why I visualized the themes, now 'levels', as three concentric circles. Level 1, the biological aspects, describes the state of the death, the causes of death and the moment of death. Level 2, the psychological aspects, describes the feelings and desires associated with death, including but not limited to anxiety, sorrow, a good death, and love. Level 3, the metaphysical aspects, describes more abstract and intangible themes, including the meaning of life, the afterlife, personifications of death and symbolization. Figure 27 shows additional associations for each of the subthemes. It should be noted that the divides between the three levels are not necessarily clearcut. For instance, a biological concept such as the ecological life cycle could be the seed for a metaphysical reflection about the meaning of life.

The model presented here classifies the death concepts with more nuance than the division of objective and subjective concepts which I coined in the beginning of this thesis. But this new model of biological, psychological, and metaphysical still incorporates objectivity and subjectivity. The psychological and metaphysical levels are based in experience and belief, respectively. The higher you go in my model, the more heavily the themes rely on subjectivity.

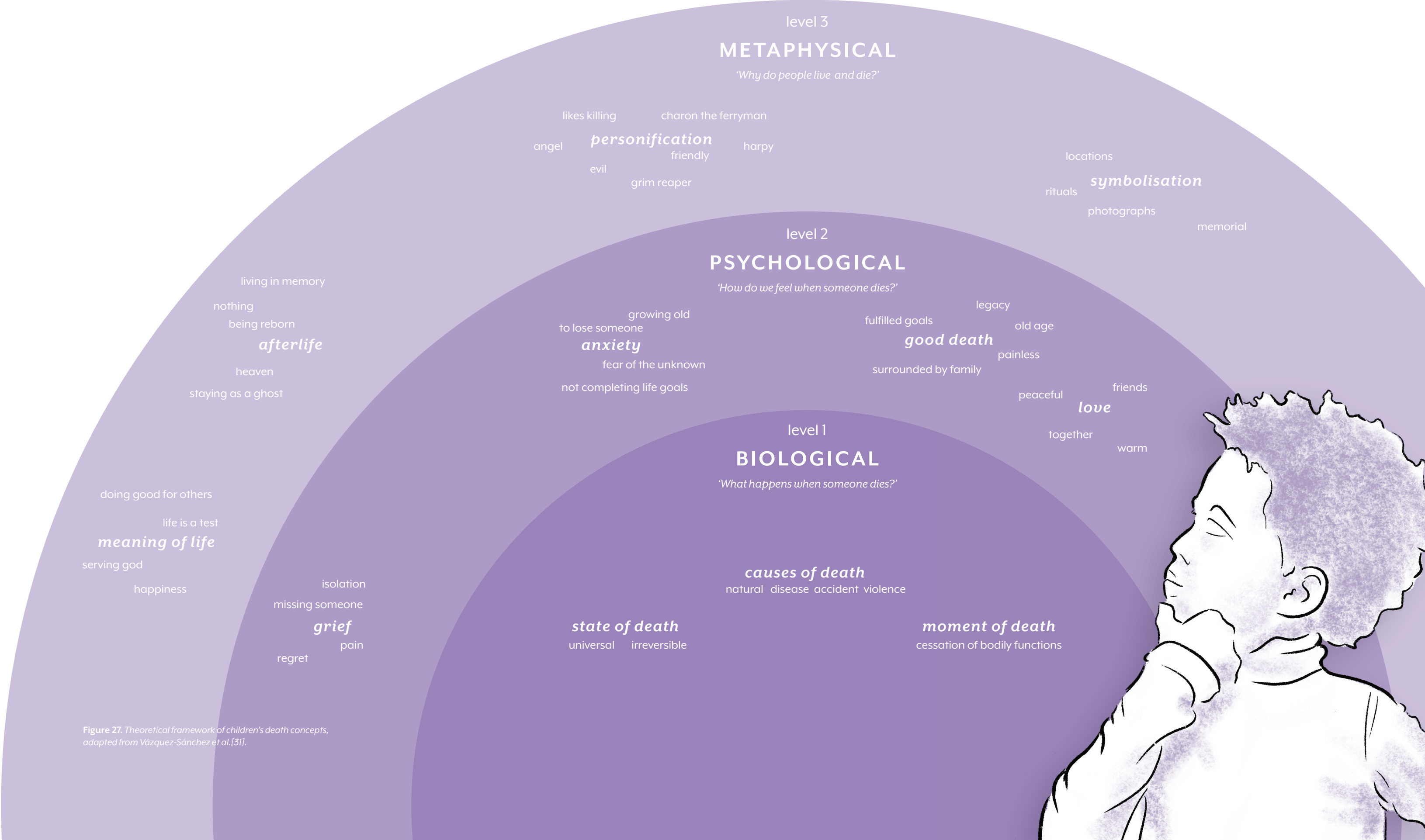
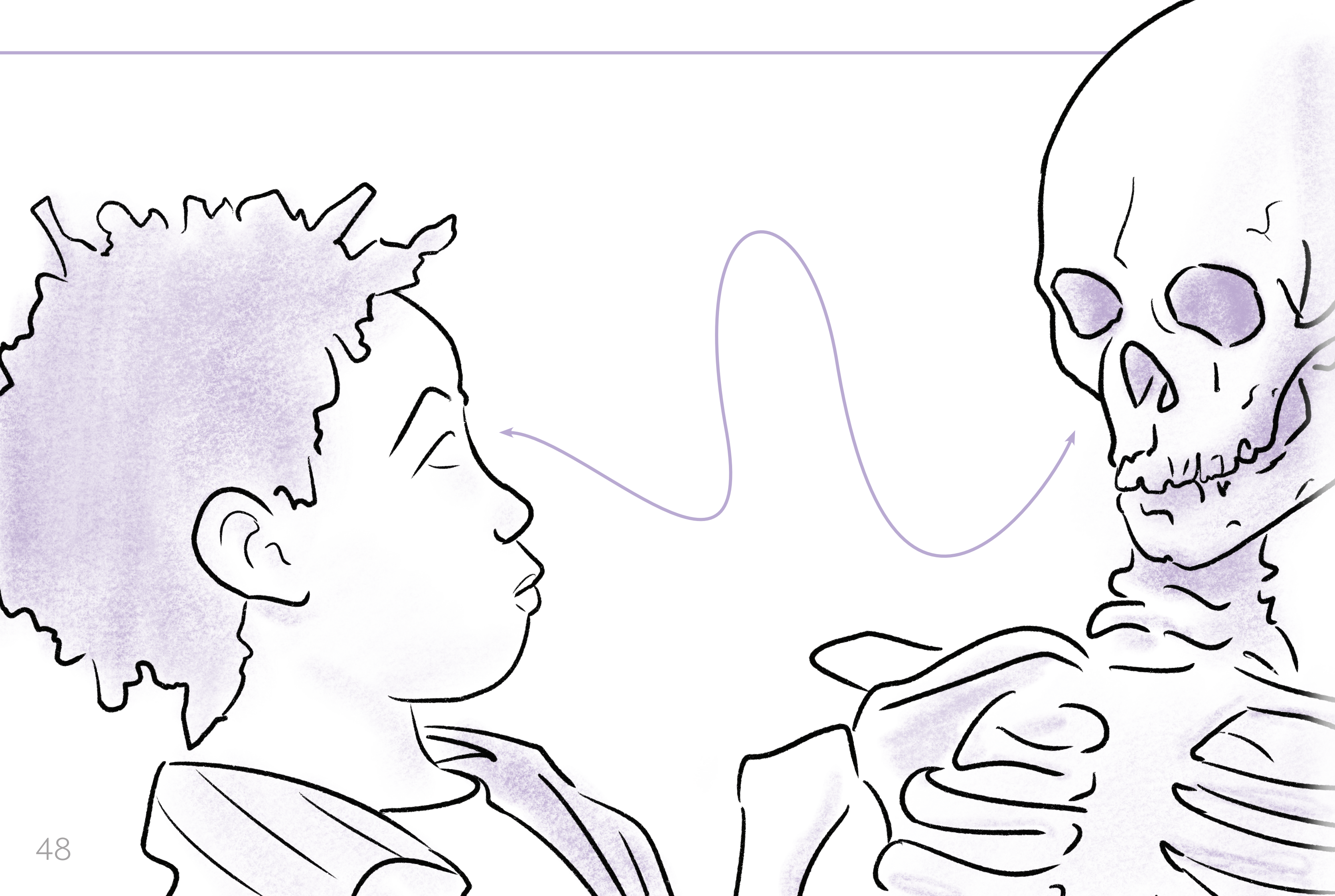


Figure 27. Theoretical framework of children's death concepts, adapted from Vázquez-Sánchez et al.[31].

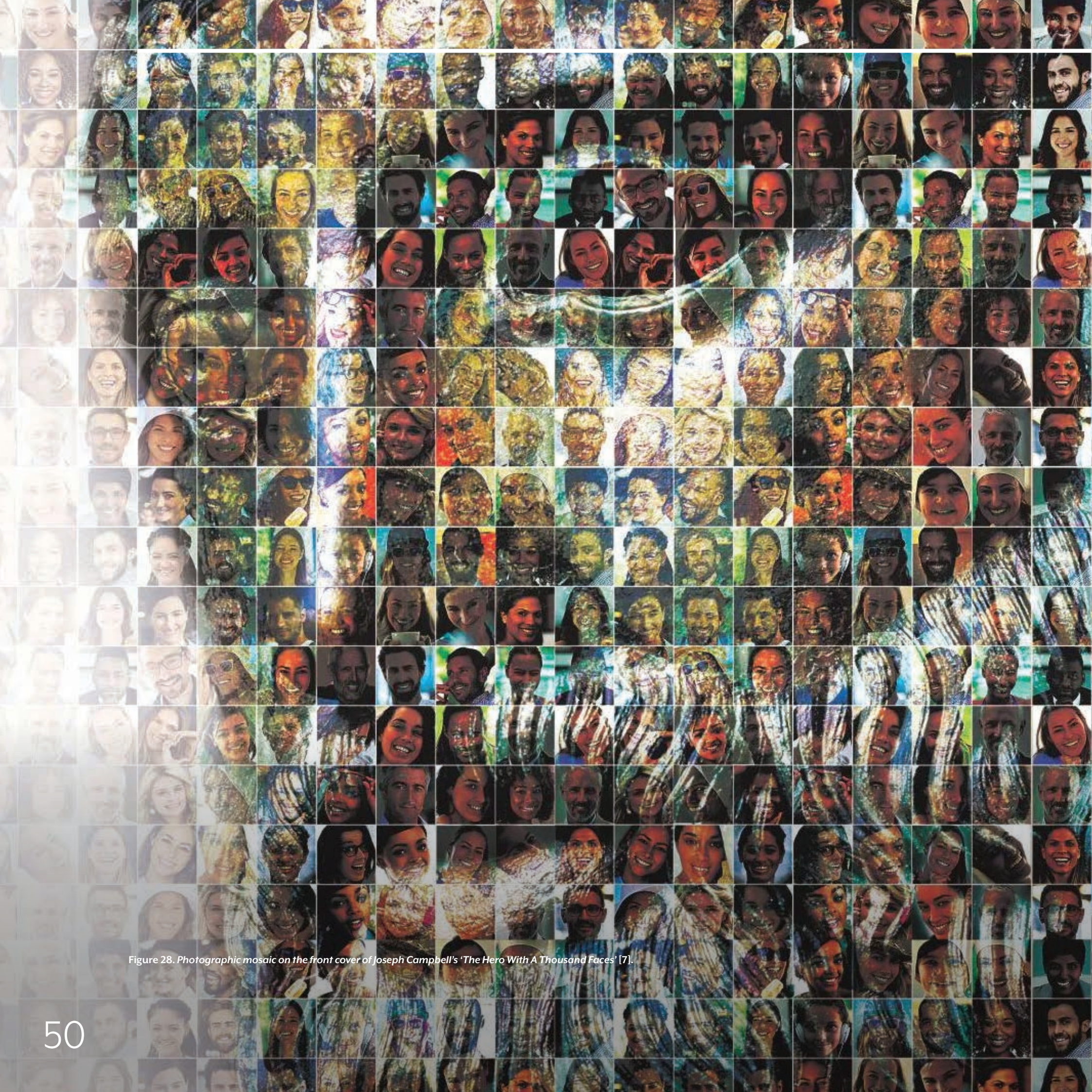


Key insights for 'How children learn about death'

I started this chapter with the research question: how do 9- to 11-year-old children currently learn about the subjective death aspects? My research activities of this chapter brought the following insights:

- † Death education of children in the Netherlands occurs within the cultural context of the Dutch death taboo, which I have found to be partially caused by centuries of gradual secularization and the removal of death from daily life. Death is a taboo and bleak topic despite the cultural enrichment brought through immigration and globalization.
- † Parents find death a difficult topic to discuss with their children. This is best explained by parents' misassessment of their child's cognitive and emotional readiness for the subject.
- † Teachers have trouble covering death in the classroom, since they may be weary of causing an upset with children as well as their parents. The execution of in-class death education currently relies on teachers' own motivation and creativity to tackle the topic, with limited material available to support and inspire them. An example of such material in the Netherlands is Tot Zover's *Doodgewoon in de klas*.
- † I have presented the typical timeline of a child's death-related learning process. This timeline was used to construct a theoretical framework of children's death concepts. It is divided into three themes or 'levels': biological, psychological, and metaphysical. The latter two levels, a nuanced classification of the subjective death aspects from before, would be most relevant to address in a death education targeted towards the 9- to 11-year-old age group.

The insights laid out above give me enough information to answer this chapter's research question. I have found that children currently learn about the subjective aspects of death, now classified as psychological and metaphysical, mainly through their own first-hand experiences with loss. These experiences teach them the emotional gravity of death. Unfortunately, the death taboo prevents children from expanding their learning experiences through discussions and reflections in the classroom or at home.



How *stories* could drive death education.

Rediscovering the ancient purpose of story.

In the previous chapter I concluded that the death taboo prevents children from fulfilling their learning needs of the subjective death aspects. In this chapter, I research how storytelling could provide a positive contribution. I start by unpacking the ancient cultural meaning of stories. I then point to museums as viable candidate storytellers in death education about the subjective aspects.

Call to adventure

When I think about storytelling, the first word that pops into my head is entertainment. I think of watching Disney's *The Lion King* on the couch. I think of seeing *No Time To Die* when it came out. I think of going to the musical *Cabaret* on London's West End. These associations of entertainment may be strong, but do not get me wrong: stories are more than an amusing pastime.

More importantly, stories can be a vessel for emotions, values, and social skills [34], and are a substantial factor in forming worldview [35]. Think of well-known myths, fairytales and parables and their morals; cultural, social, or ethical values taught through the symbolic events of the story. Stories can help to make sense of an experience and to make another feel that experience. Master storytellers manipulate the tools of their media, language, music, color, or imagery, to mold the experience of an audience. Of course, the extent to which an audience can resonate with a story depends on those tools, but it is not the essence of why stories play such a central role in our culture. That essence lies not in the storyteller, but in the audience, hidden in the deepest layers of our psyche.

In *The Hero With A Thousand Faces*, Campbell – told you he'd be back – argued that the quintessential strength of stories is how they speak to our deepest, maybe even unconscious, needs, desires, ambitions, hopes and fears: the contents of dreams [7]. Stories appeal to the universal human dream to grow, to develop, to learn, to transform, as life itself is nothing if not in motion: from birth to childhood; from childhood to adulthood; from adulthood to old age; from old age to death. Campbell saw stories as the metaphysical treasure chests of humanity, passed down from generation to generation.

The interaction between the story and the audience member, whether reader, viewer, listener, player, or *visitor*, starts to resemble a mirror: the obstacles and lessons of Odysseus, King Arthur, even Frodo Baggins, reveal gold nuggets of wisdom and inspire the audience to chase their own obstacles and lessons. Campbell claimed that any story, from any corner of the world, is the same reflection of that universal human dream [7]. To Campbell, there was only the one story, a monomyth, which follows the same structure of obstacles and lessons. This structure, visualized on the next page, is the hero's journey.

The hero's journey revolves around the hero, the protagonist. The hero can be anything or anyone; young or old; male, female or other; human, animal, or fantasy creature. A central aspect of Campbell's journey is the distinction between the hero's ordinary world and the special world. The journey is the cycle of departure from the ordinary, initiation through the special, and return to the ordinary. The ordinary and the special worlds are each other's opposites: light and dark; summer and winter; conscious and unconscious; life and death.

What follows is the individual steps along the hero's journey. The version presented here is simplified from Campbell's original twelve-step model to better suit the context of this thesis.

Figure 28. Photographic mosaic on the front cover of Joseph Campbell's *The Hero With A Thousand Faces* [7].

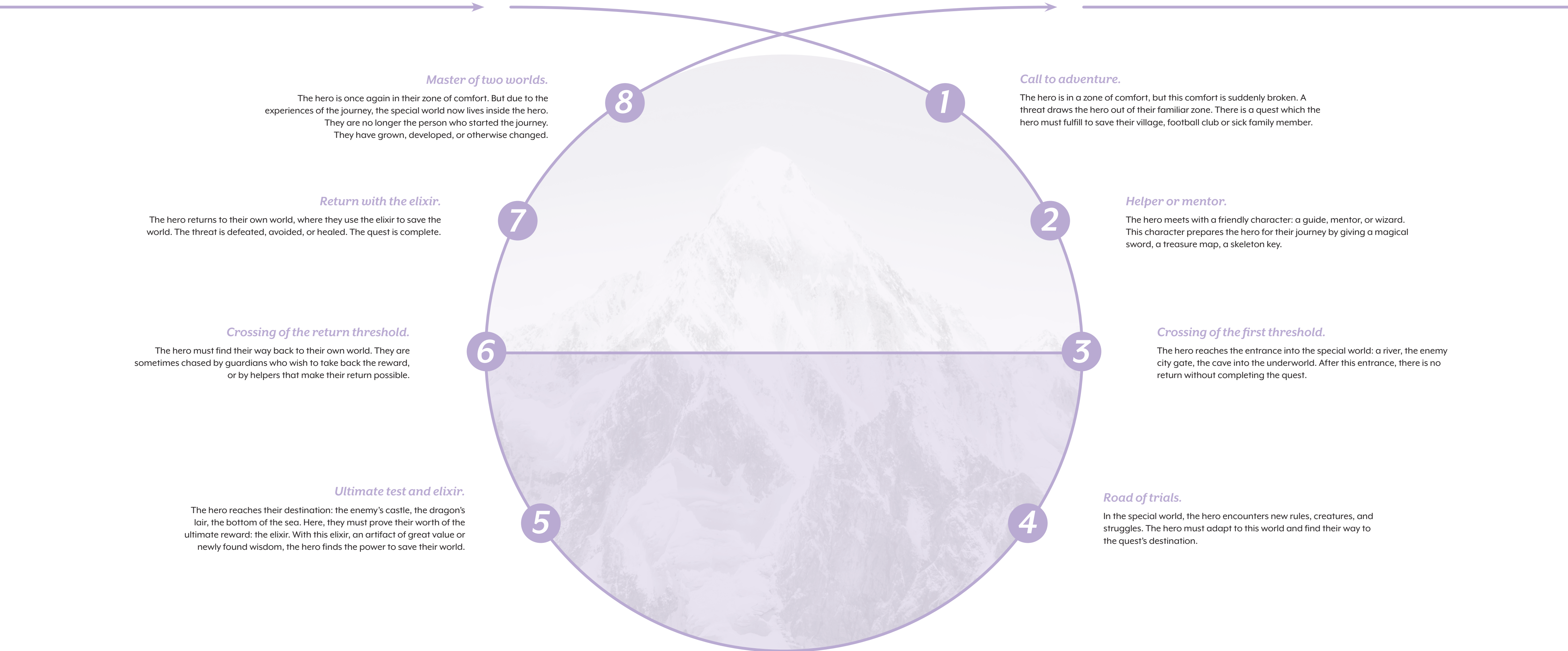


Figure 29. My adaptation of the hero's journey.



Figure 30. The Van Gogh sequence at 'Remastered'.



Figure 31. Me trying to fit into the nooks and crannies of 'Superstraat'.



Figure 32. Me regretting my choice to explore into the nooks and crannies of 'Superstraat'.

I hope that you enjoyed studying the hero's journey as much as I have. Did the descriptions of the eight steps remind you of any stories dear to your heart? Which heroes did you think of?

A new role for museums

Zooming back into the context of education, storytelling as a teaching method has been proven to encourage reflective and critical thinking [36]. These insights may be promising for using storytelling to contribute to education about the psychological and metaphysical death aspects.

This, however, does not yet solve the sensitivities that teachers may encounter when they discuss the topic of death in class. The fact remains that teachers do not have the expertise of death as an educational topic [37]. Seeing that Tot Zover is a collaborating partner on this project, it may not be a surprise that I would point to museums to provide a helping hand.

In 2000, Freedman wrote about a public shift in museums as organizations with objects to organizations with information [38]. Where in the past museums revolved around obtaining, preserving, and showcasing a collection, most now seek a predominantly educational role in which experience design, content expertise and didactics can work together, with the collection in a supporting role. Some modern museums do not have a collection at all, constructing new educational stories from scratch. An example of this is the exhibition *Remastered*, currently on show in Rotterdam, where video artists and animators created interactive audiovisual installations inspired by the paintings of the Dutch master painters Hieronymus Bosch, Rembrandt, Vermeer, Van Gogh, and Mondrian [39]. Another example currently on display, *Superstraat* at the Wereldmuseum Rotterdam, introduces a fictional street in a multicultural neighborhood, where objects from the collection are organically placed in the narrative space as decorations in the fictional inhabitant's houses [40].

Key insights for 'How stories could drive death education'

I started this chapter with the research question: How can storytelling provide a positive contribution to children's education about the subjective death aspects? My research activities of this chapter brought the following insights:

- † Stories can be a vessel for emotions, values, and social skills and are a substantial factor in forming worldview. But the quintessential strength of stories and their protagonists is how they can speak to the universal human dream to grow.
- † This universal dream is reflected in the universal story structure called the hero's journey, in which the protagonist saves their world by traveling to a foreign world and returning with its wisdom.
- † As a tool in education, stories can stimulate children to reflect and think critically.
- † Museums are a suitable candidate to provide story-based death education, since they could combine experience design, content expertise and didactics.

Based on these insights, I can answer this chapter's research question. Storytelling can provide a positive contribution to children's death education about the subjective aspects because stories are inherently subjective and open to interpretation. Compared to traditional knowledge-transferring education forms, stories pose questions and stimulate reflection. These are precisely the suitable effects that education about the psychological and metaphysical death aspects needs since these aspects have no right or wrong answers.

Listening to the authentic stories of children.

Deepening my theoretical insights in the field.

The previous chapters built a theoretical base about children's death education and how storytelling may contribute to it. But this base was formed through my adult perspective. In this chapter, I make a step towards practice. My objective was to study how the authentic perspectives of children may deepen my theoretical insight. First, I describe the approach for my research sessions with children. Then, I reflect on the outcomes.

Hearing their voices

A common belief in human-centered design is that users should participate in design processes. It is not up to the designer to study a design context from a distance and enforce a solution. Instead, designers should immerse themselves in contexts and empathize with the people they design for. This may be especially relevant in the case of children, a group with limited agency. I was eager to make sure their voices were heard in my project, which is the motivation behind the research described in this chapter.

Approach

Contextmapping. I chose the contextmapping method [41] as the blueprint for this qualitative study. Contextmapping is a form of participatory design research focused on triggering the participants' creativity [42]; it relies on the creation of artifacts (collages, drawings, or design concepts) which are used to spark discussion. Contextmapping is particularly useful to gain insight into deep

needs, desires, thoughts, and feelings [41, 42]. I set up the study using reflections by Gielen on contextmapping research with children [43]. In addition to his published work, I could count on his council and feedback through a few meetings with him. One of his reflections is that, compared to research with adults, sessions with children require more attention towards creating a sense of security.

Sampling. Two one-hour sessions were conducted, each with four children of nine to ten years old. The total of eight children were from the same school group, making sure that the children would feel comfortable with each other. The maximum of four children per group allowed for discussion and diverse responses but kept me, a researcher with limited didactic experience, in control. I asked the teacher to make the groups of four with a balance between introverted and extraverted children. Extraverted children are likely to break the ice for the introverted children and get the conversation going, but a group with only extraverted children can be distracted from the intended topic of discussion [43].

Location. The sessions took place in a separate room of the school building. I chose the school over the children's homes partially for practical reasons, but more importantly to make sure the children's responses were authentically theirs. Earlier studies found that children are more likely to give socially desirable answers when their parents are around, or that parents may answer a question on behalf of their child to help them [44]. In the chosen classroom, I moved the chairs and table to the side and laid out a blanket on the floor for the children and myself to sit on, to create a safe, encouraging, and non-hierarchical atmosphere.



Figure 33. The children are listening to my story.



Figure 34. The children are acting out scenes using stuffed animals.



Figure 35. The children are making their postcards to the dead.

Session setup. The sessions were built up as a sequence of three activities, described below. The activities are diverse in the means of expression to compliment different children's learning strengths and preferences (e.g., speaking, drawing, listening, playing, or writing). Each activity was followed by a short discussion. See appendix C for a schematic of the full session, including opening, icebreaker, and closure, as well as a list of interview questions asked during the discussions. For even more detail, see appendix D for the full interview protocol.

Listening to a story.

I asked the children to lie down comfortably and close their eyes. I then read them the short story called *Ballade van de Dood* [45], in which a king who fears death devises a plan to lock death itself in a cell. The kingdom celebrates for years as death is no more. As a century passes, the celebrations turn into boredom and recklessness. At the end, the king realizes that death is not the enemy, and he willingly frees death from the cell and dies in its arms. The people rejoice 'Long live death!', and they live, and die, happily ever after. The intention of this activity was to get the children into an introspective mindset and to sensitize them [41] towards the topic.

Acting out with puppets.

I asked the children to act out the final scene of the story, where the king accepts his mortality and embraces death. I gave them two stuffed animals for the two characters: a teddy bear for the king and a monkey for death. The intention of the puppeteering activity [42] was to find qualities of the children's performances through the funny voices, gestures, and facial expressions.

Making a postcard.

In the climax of the sessions, I handed out simple postcards as a worksheet. I instructed the children to write their postcard to a dead person. One side was blank for the children to draw on, on the other side the children could answer a question: 'What would you ask someone who passed away?' The intention here was to stimulate the children to share: 'Making' exercises are a common tool in contextmapping to reach deeper layers of knowledge, experience and dream [42].

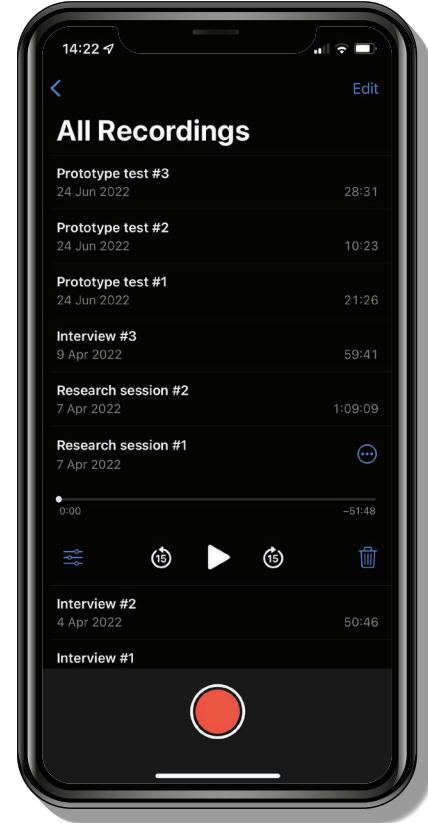
Data collection. Audio recordings were made of the full sessions. Video recordings were made during the puppeteering exercise. Photographs were taken occasionally by me as well as by the teacher. The children's postcards artworks were scanned before handing them out for the children to take home to their parents.

Analysis. The audio recordings were developed into a full written transcript (see appendix E). The transcript was put to the side for a couple of days, only to be looked at again with fresh eyes. Then, relevant and interesting quotes were selected from the transcript and developed into statement cards [42] on which each quote was accompanied by my interpretation. Additional cards were written through analysis of the video recordings and scans of the postcard artworks (see appendix G for these scans).

All cards were then clustered in a digital whiteboard environment. Clusters were labeled through which themes and insights could be identified. Then, I omitted the individual cards after which I could study the relationships between the cluster labels.

Ethical considerations. The sensitive nature of the topic of death and the vulnerability of children as a studied group called for extra care towards the ethical conduct of the study. Below are the most important considerations. The full list of ethical considerations can be found in appendix F.

- † Experts of research with children from inside and outside of TU Delft were consulted for feedback on the research setup.
- † The session plan was developed in cooperation with the teacher, who was present in the background at the start of each session and was easily accessible throughout.
- † Aspects of the session plan, particularly the postcard making exercise, were simulated and adjusted through pilot sessions with adult participants. This also made me more familiar and comfortable with the interviewer's role and the language required for the topic.
- † During the sessions, I paid extra attention to potential signs of discomfort and explained to the children that they had the freedom to withdraw from participating at any time.
- † All the parents were asked to give their informed consent in writing for their child's participation. Children without their parent's consent were excluded from participation.



LISTENING TO RECORDINGS

> T understands that she can be of comfort to her grieving family member.

"Mijn opa was doodgegaan van huidkanker toen mijn vader nog 5 of 6 was. Mijn oma die heeft nog een tweepersoons bed. En als ik dan ga logeren dan lig ik altijd naast haar." (40:29)

Quote child

Helping other people

> Bij F thuis wordt gesproken over missen maar ook over blijdschap

"Dan hebben we het erover dat we het wel jammer vinden maar dat ze nu ook waarschijnlijk wel blij is." (1:06:36)

Quote child

> Bij A is het rondom het verlies veel besproken, daarna weggestopt

"De eerste dag toen had ik het erover en daarna hebben we het er nooit meer over gehad" (1:04:38)

Quote child

> L snapt dat het belangrijk is om over gevoel en rouw te praten

"Ik spreek soms met [naam klasgenootje]. Dan praat ik met hem over wie er van de familie dood is gegaan en hoe je dat vindt. Ik denk dat dat goed is" (1:06:43)

Quote child

> T doet lieve dingen voor haar oma. Ze snapt dat dat iets goeds is.

"Mijn opa was doodgegaan van huidkanker toen mijn vader nog 5 of 6 was. Mijn oma die heeft nog een tweepersoons bed. En als ik dan ga logeren dan lig ik altijd naast haar." (40:29)

Quote child

> L praat wel met vriendjes over verlies en gevoel

"Ik spreek soms met [naam klasgenootje]. Dan praat ik met hem over wie er van de familie dood is gegaan en hoe je dat vindt. Ik denk dat dat goed is" (1:06:43)

Quote child

> T vindt het belangrijk dat je anderen helpt met verlies.

"En als diegene ziet dat je weer denkt aan iemand, kan die ander je helpen." (40:56)

Quote child

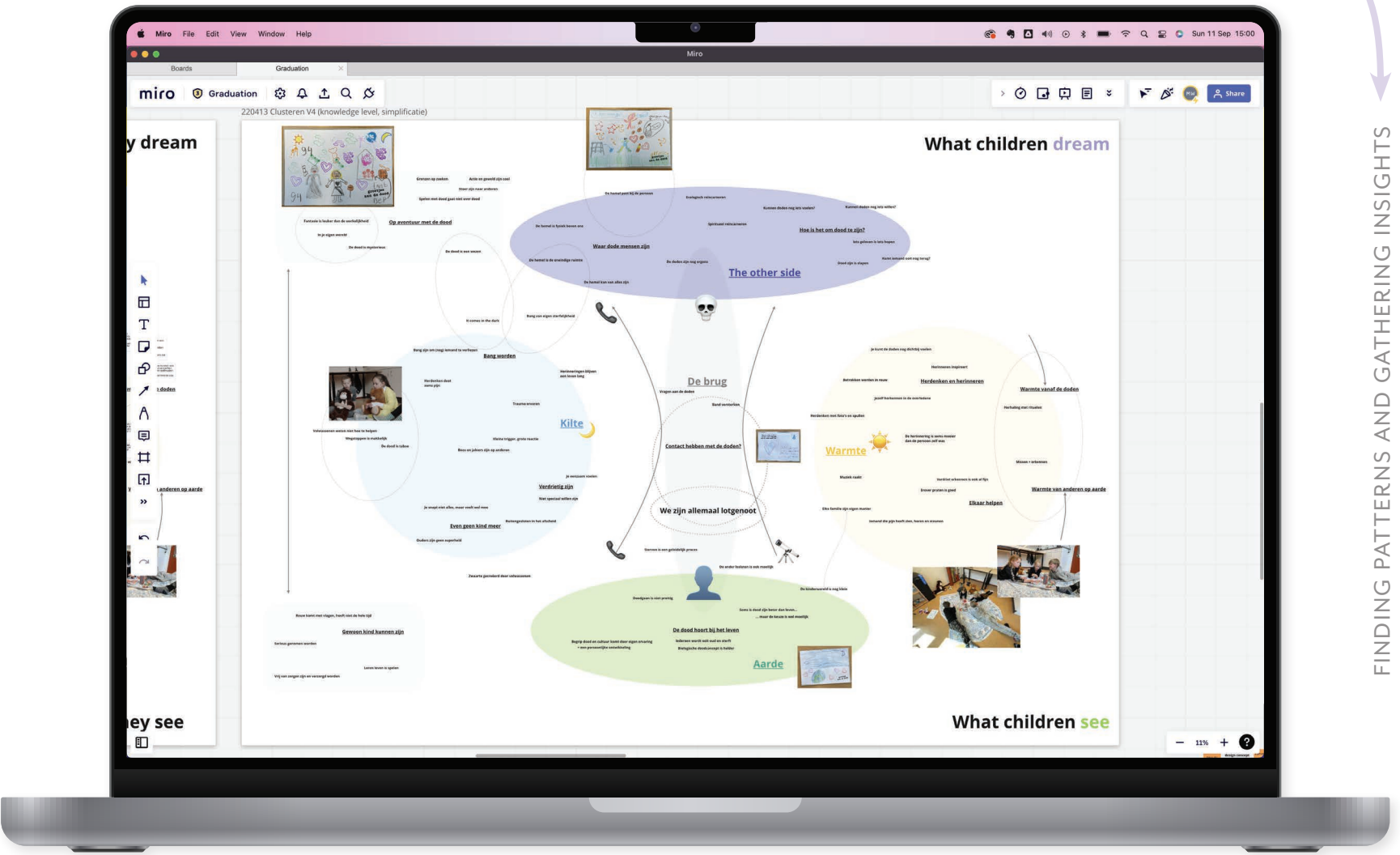
> De kinderen zijn al in staat om anderszins verhaal te begrijpen.

"Ik denk dat je oma dat altijd heel leuk vindt" (37:07)

Quote child

SELECTING AND INTERPRETING QUOTES

CLUSTERING AND LABELING



FINDING PATTERNS AND GATHERING INSIGHTS

Figure 36. The process from data to insights.

Insights

The data analysis led to four insights in relation to the study objective, which I present and explain on the following pages. A general remark is that the number of children who had experience with loss was much higher than I expected. In a circle discussion with the whole group, all children - including those who did not participate my sessions - were able to share a personal story of loss.

Children currently explore death in isolation...

Children explained that they remember their experiences with loss mostly as lonely. For children growing up in functional, loving families, the death of someone close can be a destabilizing experience as it may be the first time children are confronted with their parent's emotional vulnerability. Seeing a parent cry for the first time, a child may isolate themselves or hide their grief so that the parent has one thing less to worry about. One child explained that she only talks about her feelings of grief with the stuffed animals in her bed.

*I don't want to cry, because then mommy does not have to cry.
So, I don't cry as much, or I do it while hiding in a corner.*

Children can feel less isolated in the weeks directly following a loss if they are made an active part of the rituals performed by the family. Reading a poem at the funeral or decorating the casket can make the children feel like a valued member of the family. The opposite is also true: children can feel unacknowledged if they are kept out of funeral rituals. Around this time, stories and memories about the deceased loved one may be shared at family dinner, but as parents move on with their lives over the following weeks or months the topic of death disappears again.

We talked about it the first day, never again after that.

The above aligns with the findings described in the previous chapters. The topic of death is generally avoided in death and in school, and children's thoughts and reflections about the psychological and metaphysical aspects takes place in the individual heads of the children, like a worm in a cocoon. How can we make sure a butterfly comes out?

Wat zou jij willen
vragen aan iemand
die er niet meer is?

IK mis je
zo erg
#doei Groet
Jes

Figure 37. One of the postcard artworks, reading 'I miss you so much, bye.'

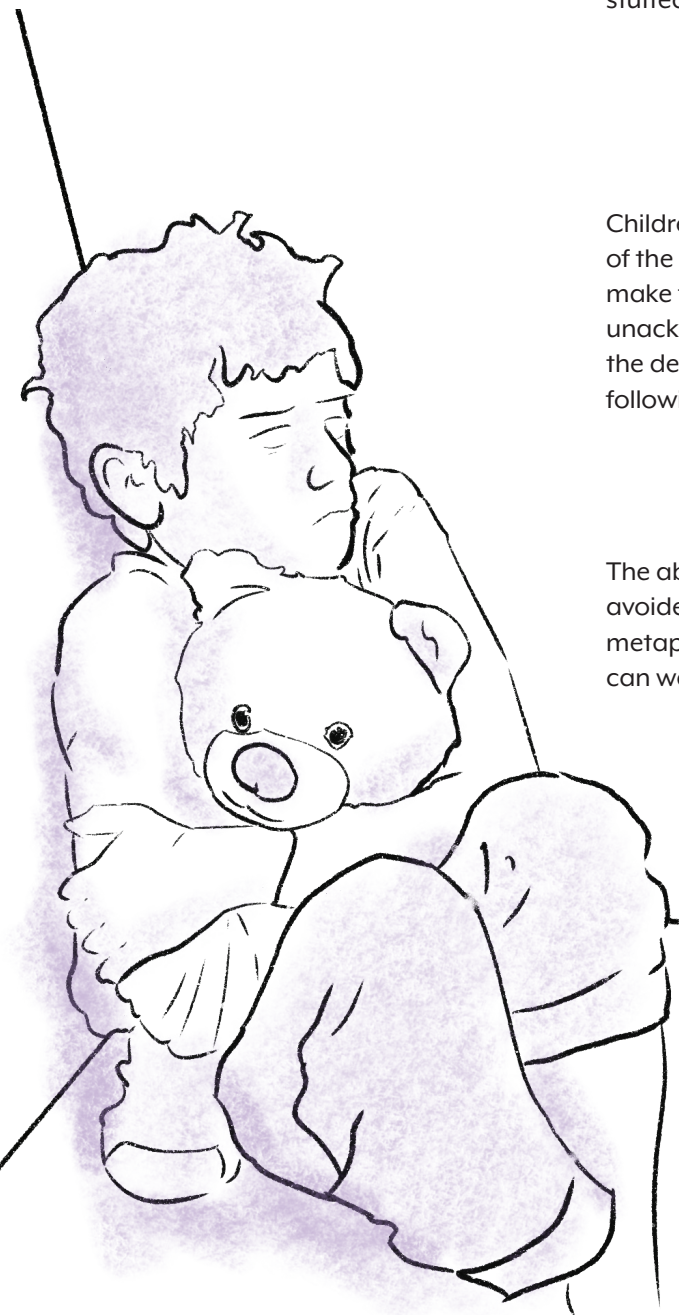


Figure 38. The children listening to my story.



Figure 39. The children moving together to make their artworks.

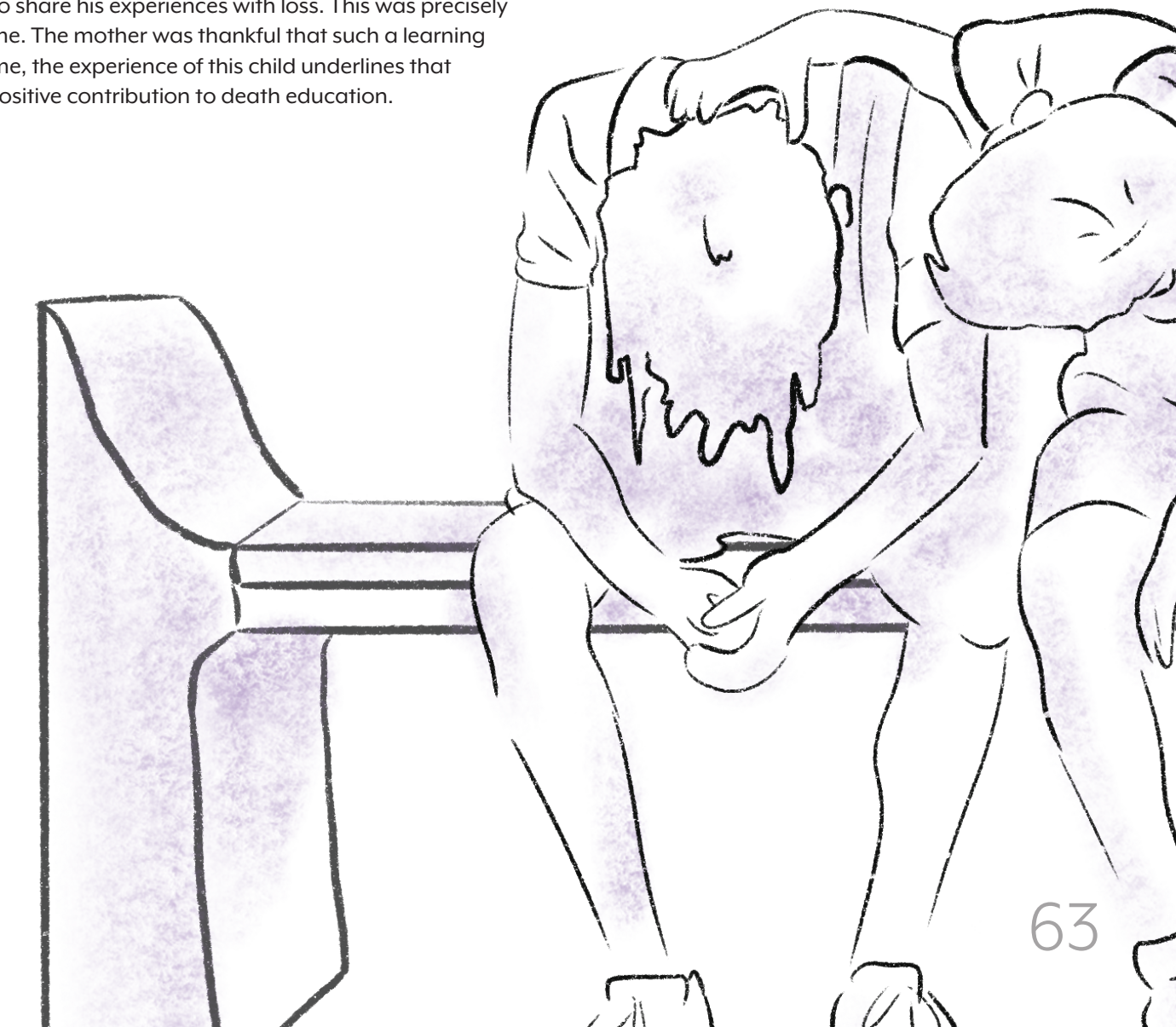
...but sharing stories can relieve isolation and provide comfort.

The first activity in which I read a story to the children immediately led to responses from the children. They first reflected on what the story could mean. And quickly after, the children started using their own experiences in these reflections. It seems that my story invited them to share theirs.

At the end of the session, I asked children what it had been like for them to talk about death with their classmates. They told me that it was a relief to discuss the topic outside of their own family. They found it inspiring to hear other children's stories and opinions. Hearing a story from outside of their own family shed a new light on death. One child explained that she had a lot of fun in the discussions because of the interesting and unusual topic. At the same time, the discussions reminded her of her aunt which made her a bit sad. To her, the session was comforting and saddening at the same time.

I learned today that I can talk about death to anyone, as long as I trust them.

A couple of days after the sessions, I contacted the teacher to reflect on the sessions and discuss my preliminary outcomes. She let me know that the mother of one of the participating children had come to her after class. This child had told his mother how much he had enjoyed connecting with his peers about the topic of death. He had found it relieving to share his experiences with loss. This was precisely something which he normally struggled with at home. The mother was thankful that such a learning opportunity had been facilitated by the school. To me, the experience of this child underlines that storytelling in the right setting can indeed make a positive contribution to death education.



The stories that children share can be full of loving fantasies.

I was struck by the fantastical quality of the children's stories and their postcard artworks. These fantasies of the dying process or about the afterlife – in other words, metaphysical fantasies – seemed to be formed through their personal experiences with loss. I noticed how the fantasies seemed to be shaped around the memory of a loved one, as if the metaphysical world shapes itself around the deceased person's personality. I was surprised and inspired by how intuitively and authentically the children's fantasies could deviate from conventional images such as the Christian concept of heaven. One child, for instance, remarked that heaven could be anything to him, maybe even an alien planet.

Grandma loves flowers and rainbows, so that's what I drew in heaven for her.

Sharing the memories of their loved ones, such as the jokes their grandmother always made, put smiles on all the children's faces. The children explained that recognizing themselves in the loved one makes them feel more connected: keeping the memory alive in some way keeps the person alive. The loved one lives on in a photograph on the nightstand, an inherited necklace or even in a typical family facial feature.

I was named after my grandfather. I can't remember exactly what he was called, but I was named after him, so he will be with me forever. That feels nice.

An additional insight is that, in the child's world, the boundary between fantasy and reality can be blurred. The physical world around us and the metaphysical realm are to children not necessarily two different concepts, but intuitively part of the same whole. One of the children, for instance, imagined heaven as a physical place in the sky from which his grandmother could look down on him. Only during the session, she could not, he explained, as we were in building with a roof over our heads.

A few weeks ago our teacher showed us a livestream of a bird house. My grandpa had just died and then the bird laid an egg. So, maybe my grandpa was in that egg.

The above solidifies for me that fantasies have value in the death education of the 9- to 11-year-old age group. In accordance with my assumption stated at the very beginning of this thesis, fantasies do not seem to trigger sadness and anxiety, but comfort, remembrance, and lineage. At the studied age, fantasizing is still central to how children make sense of the world in its physical and metaphysical facets. Could it be that it is not the children who struggle with death fantasies, but rather us, the adults?



Figure 40. The children making their artworks.



Figure 41. One of the children's postcard artworks.

Death explored through play does not have the same emotional gravity.

The personal stories of the children showed me that they understand and acknowledge the emotional gravity of death. However, this same gravity does not seem to be attached to the death that appears on the schoolyard or in video games. That death is creepy, but also intriguing and exciting. Macabre images of skulls, gravestones or monsters at this age do not necessarily trigger sadness or anxiety. As mentioned before, experimenting with death through play may be a way of making it an everyday topic. But it may also be explained as an exploration and challenge of its moral boundaries.

Do you know Huggy Wuggy? He's a blue, furry monster from a video game that eats people. So he also kind of has something to do with death. He's really scary.

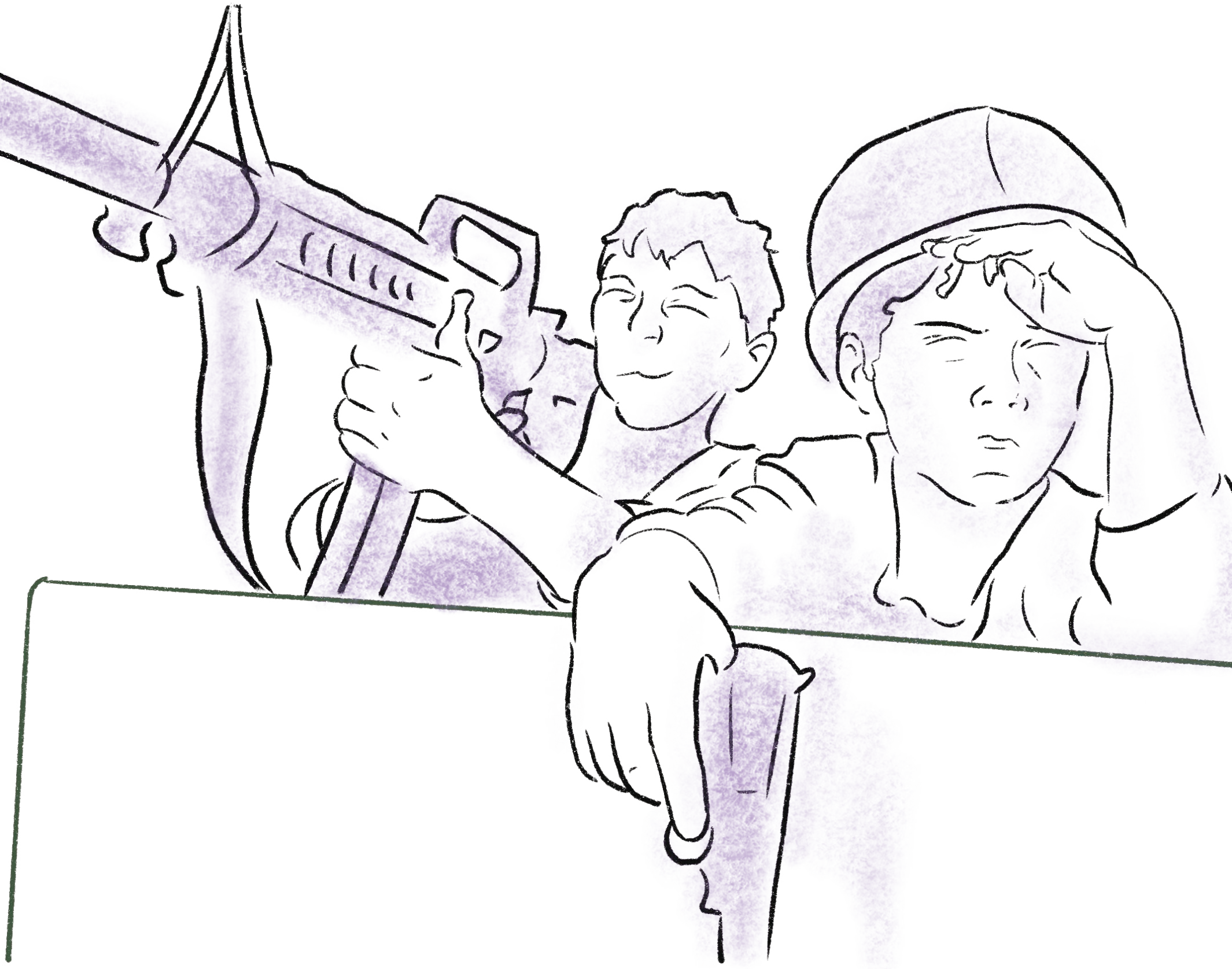
I did not know Huggy Wuggy at the time of conducting the research sessions. But I know him now alright. I downloaded the video game *Poppy Playtime* with my roommate and girlfriend. I kid you not, after playing the game, we had to cool down on the balcony for fifteen minutes. My heart was racing. Children play this for fun? This to me, if anything else than haunting, is another example of how difficult it is as an adult to assess children's emotional capabilities. I am convinced that they can at least cope with a lot more than they currently generally get credit for.



Figure 42. The children during the playful icebreaker activity.



Figure 43. The monster Huggy Wuggy from the videogame 'Poppy Playtime'.





Insights for 'Listening to the authentic stories of children'

I started this chapter with the research question: How do the authentic perspectives of children deepen my theoretical insights discussed in the previous chapters? My research activities of this chapter brought the following insights:

- † In the current situation, children explore the psychological and metaphysical aspects mostly on their own since the topic is not often discussed. The development of their perspective occurs within a cocoon.
- † This cocoon could be opened through interactions fueled by storytelling. Exposing children to stories encourages them to look inwards and share their own stories and experiences. This has the potential to enrich, to inspire and to provide comfort.
- † The stories that children share about the metaphysical death aspects are full of fantasy. These fantasies can be shaped around the memory of a lost loved one, reflecting their personality. This can be interpreted as a hopeful way to keep the lost loved one alive in a different form.
- † Exploring death through play seems to be detached from the emotional gravity associated with loss and memory. This may be a way to normalize death and challenge its moral boundaries.

Overall, the research sessions left me inspired by how free and open the children were able to discuss death with me and with each other. I am fully convinced that children at this age are capable of learning from each other's experiences and perspectives. It is a shame that in the current situation they rarely have the chance to prove it.



Figure 44. Me interacting with an exhibit at Naturalis Biodiversity Center.

Conclusions.

Closing the research phase.

Here, I tie together the theoretical and practical insights gained in this part to answer the main research question of this phase.

I started the research phase and this part of the thesis with the main question: *How do 9- to 11-year-old children currently learn about the subjective aspects of death and how could storytelling make a positive contribution?* I broke this question down into three sub-questions, which were individually explored and answered in the three previous chapters.

I have found that the taboo on discussing death is deeply rooted in the cultural history of the Netherlands. For children, the taboo affects how death is addressed both at home and in school. Generally, death is a topic of discussion around the time of someone's passing, but it is avoided at most other times. The subjective death aspects I now classify with more nuance as the psychological and metaphysical aspects. These are most relevant and fascinating for the studied age group due to the alignment with the children's cognitive and emotional development. Especially for these aspects, the taboo causes that children's reflections, imaginations, and explorations take place in isolation: they have little chance to learn from and be inspired by other perspectives and experiences.

Luckily, I have found that a narrative approach to death education may prove useful precisely for the psychological and metaphysical aspects. Stories can transfer subjective matters such as wishes, desires, experiences and feelings, and can remain open to interpretation. My field research deepened this insight, as I there found that telling stories to children invites them to search for and share their own experiences through stories. Sharing these stories can create a feeling of comfort in the child telling their story and may enrich the perspectives of the listening children. Effectively, this interaction of sharing personal stories and experiences has the potential of breaking the taboo.

I conclude that storytelling may contribute positively to death education on the subjective aspects by exposing children to enriching stories and by inviting children to share their own. An added note is that how this mechanic is addressed should fit the children's worldview, which at the studied age is still fantastical and playful. With this conclusion, I have gathered the appropriate insights to wrap up the research phase of this project and, with that, this part of the thesis. The next step is to develop the criteria for a design concept that addresses the identified learning needs.



PART 3

DEFINE

This part is the touchpoint between the research and the design phase of the project. First, I form a central story theme based on the learning need identified in the previous part. Then, I use this theme to construct a design goal and interaction qualities, which will together serve as the assessment criteria for the concept later on. I end this part by choosing a medium, the archetypal mold for the narrative concept to fit into.

Forming a *theme*.

From white light to a diverse spectrum of color.

In the previous part of this thesis, I concluded that stories could contribute positively to death education about the subjective aspects, since listening to enriching stories invites children to share their own. This may relieve the taboo-induced isolation in which children currently cope with these psychological and metaphysical death aspects, making way for inspiration and comfort. In this chapter, I use the research insights to take a position: I form and explain the main theme which the design concept should address.

What the design concept should be about is best illustrated by the metaphor of white light passing through a prism. The concept should show how the isolation, represented by a single ray of soulless, white light, can be transformed into a diverse spectrum of color full of personality. A strength of this approach is that the concept itself does not preach a specific ideological perspective. The concept should ask children what death means to them instead of teaching them what to think or believe. Through this approach, children should see that the psychological and metaphysical death aspects have no right or wrong answers. Death has many faces and each one may be open to interpretation. Death has no definitive meaning or association. It can bring up feelings of sadness as well as love, often at the same time, or a variety of other feelings. Contrary to the current situation, death in my concept should not be something the children wish to avoid, but an approachable, friendly entity.

The concept should present children with a diverse spectrum of death stories. The beliefs, rituals and experiences addressed in these stories may contradict one another or take the children out of their comfort zones. This may inspire the children to feel more free, fantastical, or open-minded, in the stories that they share with their peers. Other stories may be more conventional and recognizable to show the children that the perspective that they bring from home is also welcome.

This chosen theme of enrichment strongly aligns with my personal belief that empathic listening and embracing diversity are key components of a meaningful life in strong communities. This is especially relevant in our multicultural, globalized society, in a time where diversity is often cause for conflict instead of tolerance and togetherness. I listened to these personal beliefs as I was forming the theme. After all, designing is an exercise of the heart as well as the mind.

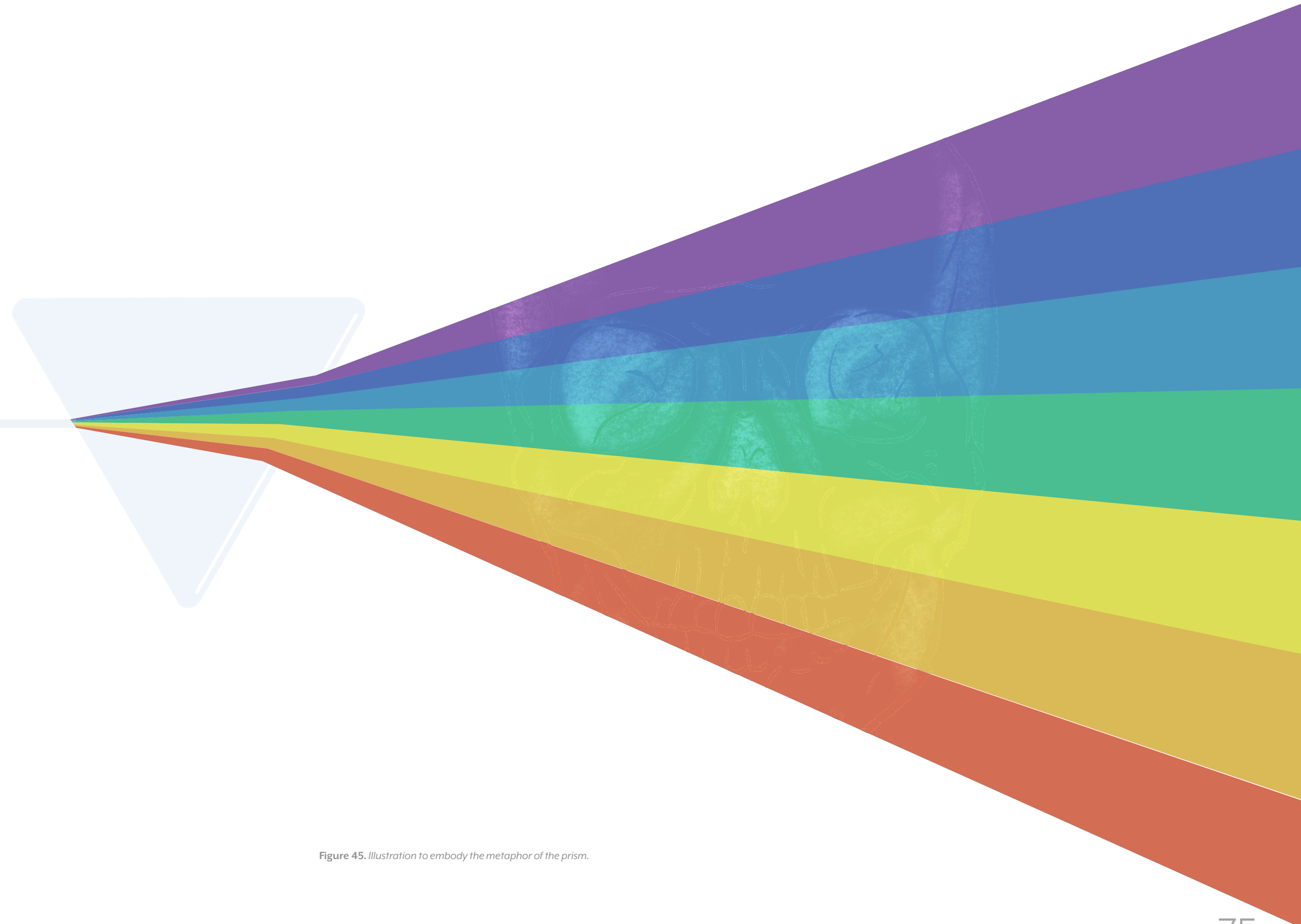


Figure 45. Illustration to embody the metaphor of the prism.

Design goal.

Imagining the concept's desired effect.

The theme formed in the previous chapter describes the principal message that should be discussed by the narrative concept. In this chapter, I further develop this theme into the backbone of a storyline, which marks the steps in the learning journey which I envision for the children. This backbone of the storyline is my design goal: a detailed description of the concept's desired effect.

When I introduced Campbell's work in the previous part, I may have left out a teeny-tiny detail. Namely, the hero's journey is not exclusively an analytical model. Quite the contrary, the hero's journey and its many adaptations are popular starting points for the development of stories. The theme of enrichment introduced in the previous chapter is none other than Campbell's reward or elixir. This will be the wisdom that children bring home from their interaction with my narrative concept. Furthermore, the journey's consecutive steps of separation, initiation and return [7] helped me to construct the steps of my design goal. Figure 46 shows these steps and explains their correspondence to the steps of the hero's journey.

Express their own stories.

Children feel inspired to share their dreams and experiences with their peers, their teacher, and their parents. This step corresponds with the *Return with the elixir* of the hero's journey.

Embrace that such stories, in their variety, may be authentic and personal.

Children will learn that it is no problem if the stories contradict one another, since there does not need to be a definitive image of death. One story does not devalue another that is different; two stories enrich each other. The children feel free to fantasize and incorporate their own dreams and experiences into their own perspective on death. This step corresponds with the *Ultimate test and elixir* of the hero's journey.

Explore death stories.

Children will be introduced to a new world in which they encounter several perspectives on death. These perspectives may contradict one another. The children are free to roam this world, but the exploration might provide a challenge. This step corresponds with the *Road of trials* of the hero's journey.

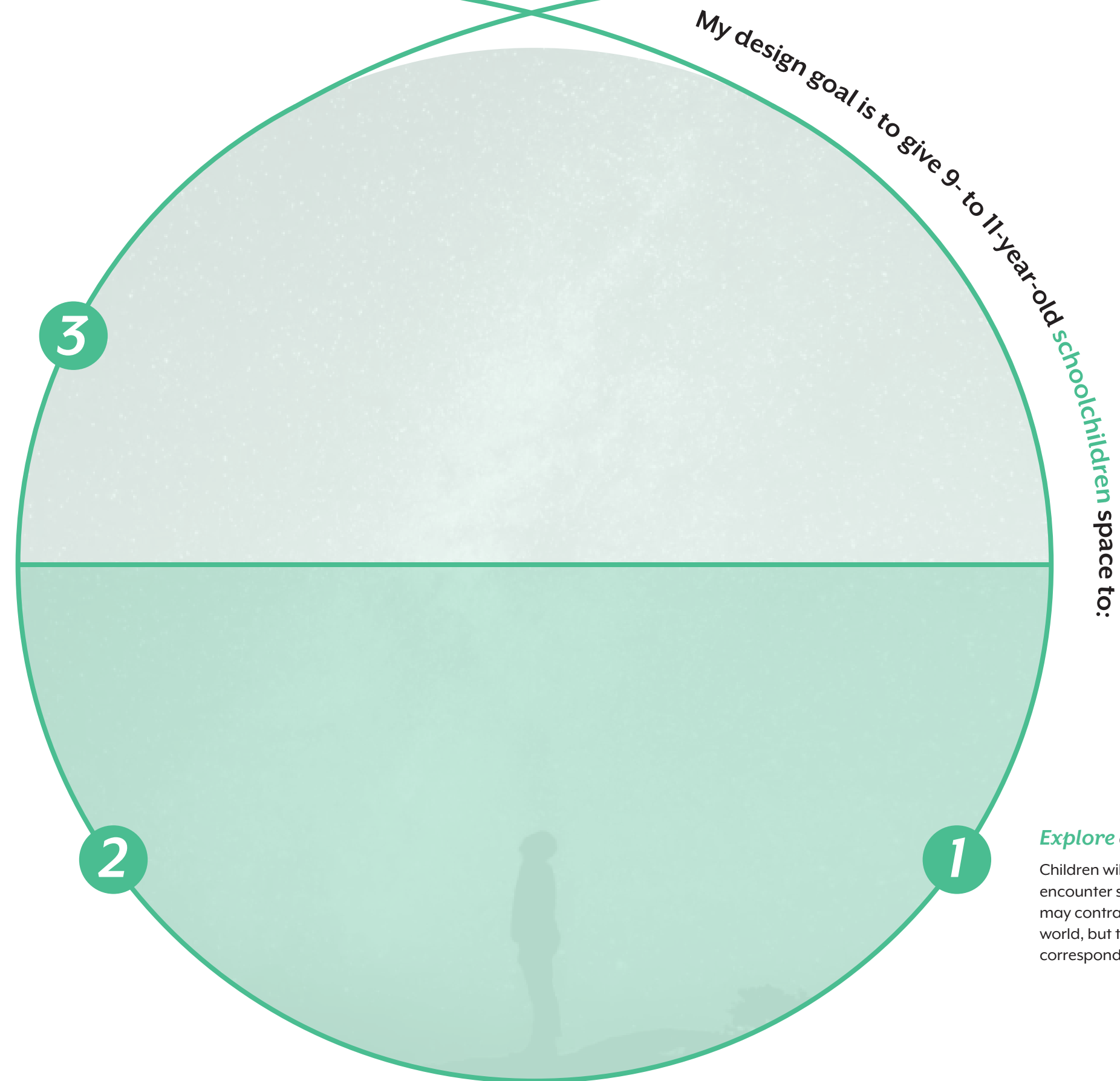
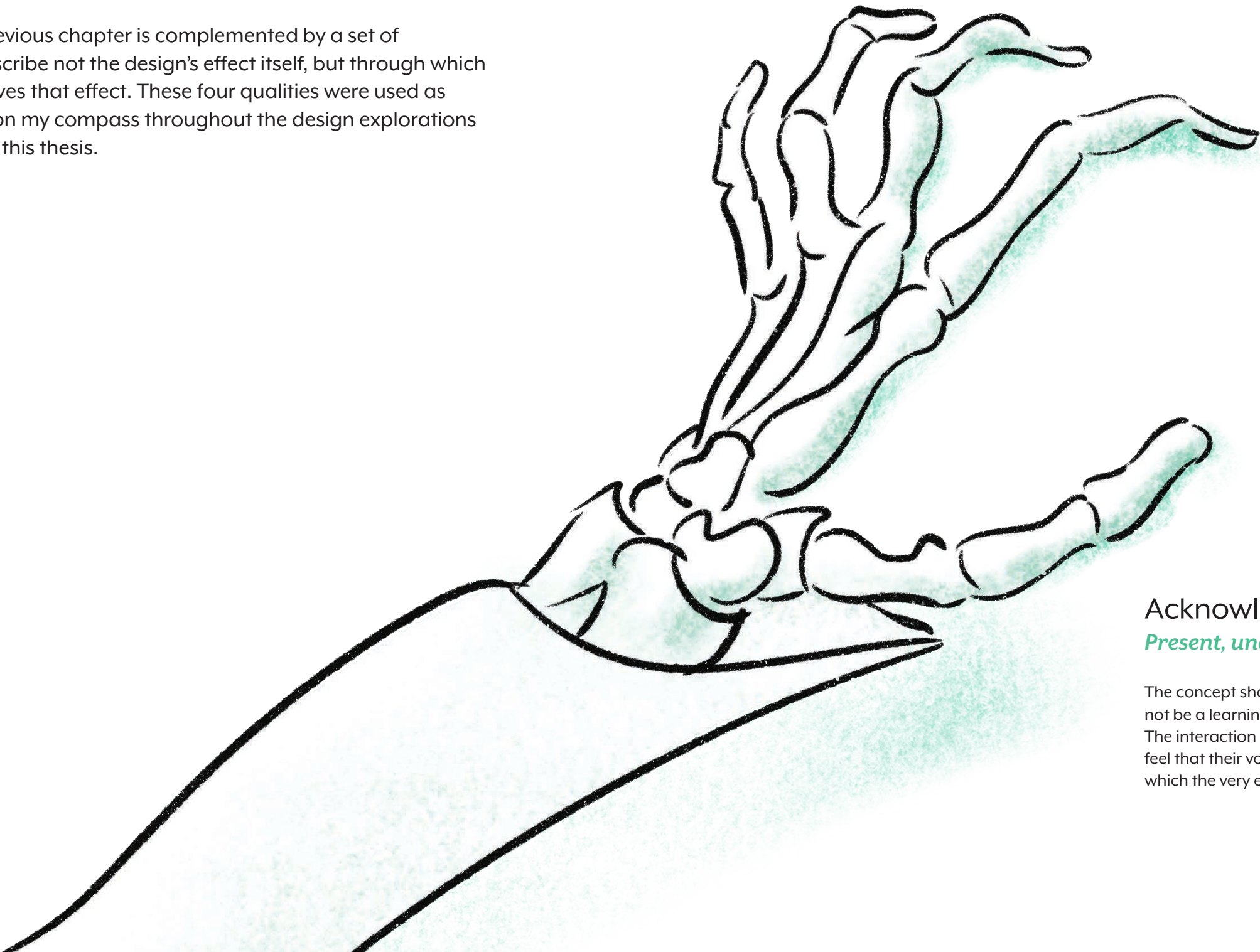


Figure 46. Visualization of the design goal.

Interaction *qualities*.

Determining the kinds of interactions with which the concept should achieve its desired effect.

The design goal from the previous chapter is complemented by a set of interaction qualities that describe not the design's effect itself, but through which kinds of interactions it achieves that effect. These four qualities were used as the four cardinal directions on my compass throughout the design explorations described in the next part of this thesis.



Adventurous

Heroic, exciting, extraordinary.

The concept should make the child feel like the hero. There are challenges to overcome and worlds to save. The child feels autonomous. The experience with the concept is something which the child would not encounter on an ordinary day. Making the child feel like the capable center of their story should motivate them to fully commit to the learning journey.

Imaginative

Otherworldly, creative, inspiring.

The concept should expose children to things beyond our own world. Children should feel encouraged and inspired to use their imagination: to color outside the lines. This quality is derived from the insight that imaginations about the subjective death aspects come naturally to children at this age since fantasies are still central to their worldview.

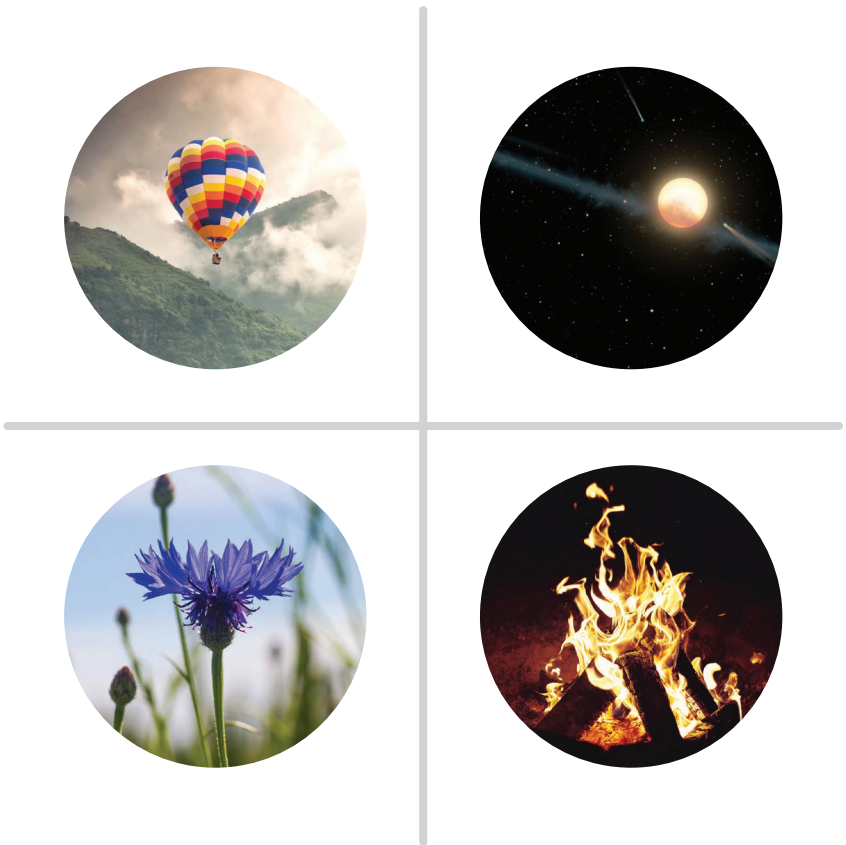


Figure 47. Four images to represent each of the interaction qualities.

Acknowledged

Present, unquestioning, accepted.

The concept should put children in a guiding role. This should not be a learning experience in which they sit and listen quietly. The interaction should create an atmosphere in which children feel that their voices matter. Only then they may start to share, which the very essence of the concept.

Connected

Empathic, supportive, intimate.

The concept should invite children to engage with their peers. This may entail collaborative activities or empathic discussions. After all, in the previous part we learned that exactly connection may be what is missing from the current situation as an effect of the death taboo.

Choosing a *medium*.

Determining what form the story will have, as a last preparatory step before I start designing.

In the previous pages, I described the intended effect and qualities of the concept narrative. Before starting to ideate towards a concept, however, I felt that I needed to decide on the archetypal form of my museum-like experience. I expected that basing the ideation phase in a particular medium would help to ground the concept more swiftly. In this stage, I worked with three media archetypes.

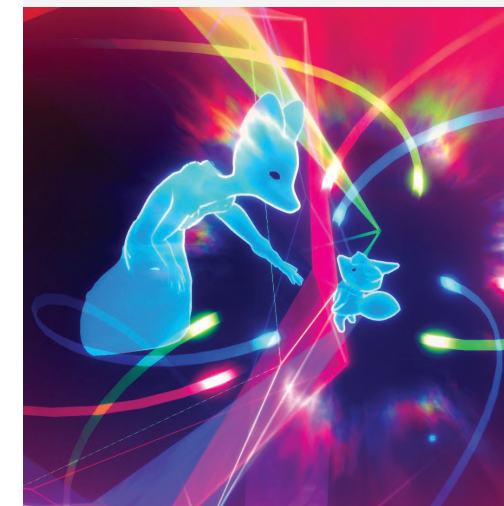


Figure 48. Collage of examples for each media archetype.

1

Toolkit brought into the classroom.

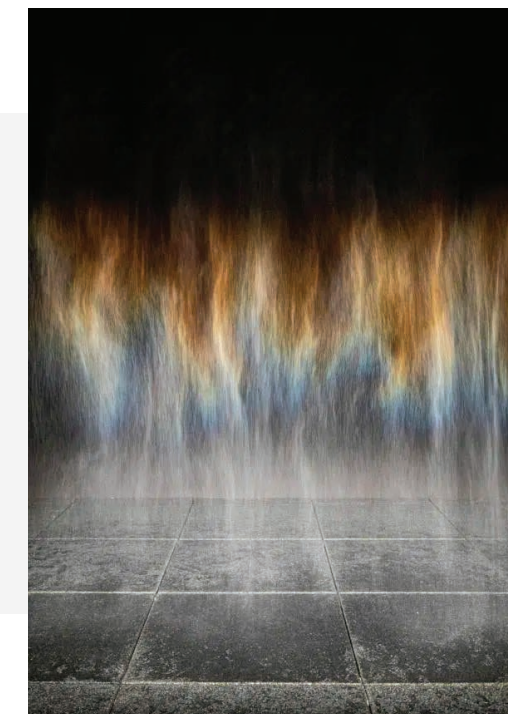
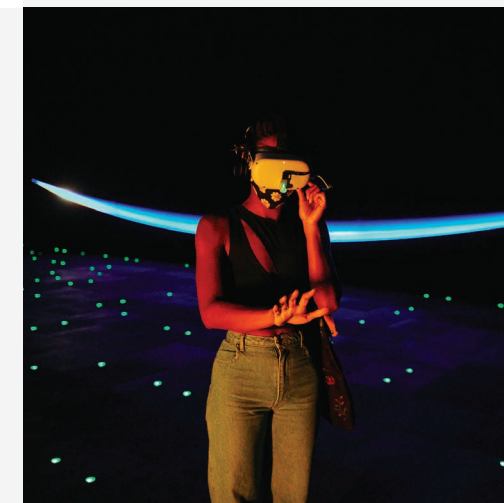
This archetype is a box, suitcase or other container that unfolds in the classroom. The container reveals playful learning materials for the children to interact with. There are already several examples of such toolkits in the education landscape, including examples related to the topic of death.



2

Fully digital experience.

This archetype may take place at school or at a designated museum location. The children enter a fully digital environment, possibly through a VR application.



3

Physical museum space.

This archetype corresponds most with the traditional museum form. It is physical space at a different location from the school that is designed to create an immersive experience.



Adventure and imagination

The classroom toolkit would seem the most practical or simple option. It does not require designing a full immersive space, but only elements that fit inside of a box or suitcase. I opted out of this archetype because of how its narrative world unfolds itself. In the other two archetypes, the children step from their world into the story world, whether that world is digital or physical. In the classroom toolkit archetype, they open the container, and the world is constructed around them. My experience designing a tabletop escape game taught me that this inside-out worldbuilding principle requires more effort for creating an immersive experience than the traditional worldbuilding where the visitor steps into the world. Moreover, I would say that the classroom's typical layout is most suited for traditional education, where the teacher broadcasts and where the children listen. That is not what this concept should be like.

Although the other two archetypes both involve the worldbuilding principle of the child as a visitor, they are still quite different in the experience that they generate. A major advantage of a fully digital experience is the boundless imaginative freedom which it affords. The bounds of the physical world are virtually negated. I thought that this might be especially suitable for metaphysical death stories. Quickly, ideas came to mind, such as a journey through several people's imaginations of an afterlife. Another upside is that digital experiences – especially involving VR technology – are still novel in the museum context. I expected that such novelty could enhance children's sense of adventure.

Connectedness

In the end, the potential connectedness between children during the experience drove my preference in favor of the conventional museum-like space. Not only does the physical world still allow for an appropriate amount of imaginative freedom, but the physical presence of peers has the potential of a much more human connection between children than is attainable with avatars in a digital environment. I was weary that a digital experience, where a child could not see the subtle facial expressions of a companion, would not make it possible to create my intended isolation-relieving experience. Especially in a VR manifestation, the headset creates an increased sense of isolation, and makes it difficult for adult supervisors to see the child's facial expressions during the experience, which may lead to unpredictable emotional situations.

Discussing with Tot Zover

In this stage of the process, the proposition of continuing the design process with this archetype as the basis was discussed with Museum Tot Zover, and they also spoke out their preference for this archetype. In addition to the aforementioned reasons, this could be explained by the required investment of a digital and physical space. Whereas physical spaces can still be scaled throughout the process (in size, technology, materialization, detailing, etc.), digital spaces require a heavy investment by default to develop software, to acquire hardware, and to maintain both.

Having decided on the physical archetype, one more decision was made before starting ideation. Tot Zover came with the idea of inviting the OBA (*Openbare Bibliotheek Amsterdam*, or the Public Library of Amsterdam) as a collaboration partner. I gladly embraced this opportunity, seeing that the OBA has 28 locations spread across the city of Amsterdam. Figure 49 shows the children's hall at OBA Oosterdok, the central library location. All OBA's locations, although of differing shapes and sizes, have a network of schools in their area. Moreover, the OBA's large team of education professionals could greatly increase the wingspan of this project compared to the scenario in which Tot Zover works alone. With the story theme, the design goal, the interaction qualities, the chosen medium, and, finally, a potential location to house the concept, I felt that I had enough of a direction and an invigorating pool of inspiration to start the second diamond.



Figure 49. The inspiring shapes of the children's hall at OBA Oosterdok.

PART 4 DESIGN

This part presents, explains and evaluates the design concept, *Mijn Eigen Hein*. I first give brief insight into my process during this phrase, flying through ideation and conceptualization. Then, I present the final concept and explain its core features. After that, I evaluate the concept based on the criteria set in the previous part through a prototype test with children. I end the part with my design recommendations.

Design approach.

How the design concept came to be.

With the design directions of the previous part in the pocket, the time had come to take out my pens and markers and to start conceptualizing. In this chapter, I present my approach in this project phase and explain the activities which I conducted to come to a final design concept. I end this chapter with an overview of the structure for the remainder of this part.

The conceptualization process of this project can be broken down into the four steps illustrated to the right. These steps mark important milestones in the transformation of the inherently abstract design criteria into a concrete concept that effectively makes a positive contribution to the issues found and discussed in part 2.

Ideating and incubating. In this first step of the phase, the thinking still takes place on quite an abstract level. Here, I derived design questions from the criteria formed in the previous part. How could a design stimulate children to explore, embrace and express? How could a design involve the interaction qualities? How could death be made attractive and friendly to children in the 9- to 11-year-old age group? And how could I implement the theme portrayed through the analogy of a prism? In this step, I made sure to alternate ideation with incubation [46]: walking in the park, visiting museums, or going to a theater show. Incubation is a way of relaxing the creative muscles and being inspired by things outside of the design scope.

Writing the narrative. The second step in moving to a concrete concept was expanding the backbone of explore, embrace, and express to a detailed storyline. I experimented with a variety of methods and media. Of course, I sketched, painted, and crafted, and wrote in a conventional script format, but I also explored the storyline through soundscapes and a VR prototype. Each iteration brought more detail and clarity.







Designing the interactables. Dictated by the storyline, I designed the elements which the children interact with. The interaction qualities here guided my decisions. This step also involved exploring the aesthetics of the interactables and the concept as a whole. As illustrated by the circular arrows, I went back and forth iteratively between this step and the one before.

Evaluating the concept. The final step within this diamond was to evaluate the concept. The design criteria from the previous part were used to assess the concept and generate points for improvement, of which most could be implemented in the final design.



Design activities

Below is a list of the activities I conducted in this diamond. I have chosen to omit detailed descriptions of some of the activities from the main body of this thesis. The next two pages show a glimpse through some photographs taken during my design work. For a chronological presentation of the ideation and conceptualization process, please see appendix H.

-  **Ideation sessions** with other designers to increase the fluency of generated ideas and keep my head fresh.
-  **Artistic expressions** to explore my ideas about the design problem and the envisioned qualities intuitively.
-  **Storyboarding** to capture the written narrative and its experience in a visual format.
-  **Prototyping** to bring my narrative ideas into the tactile world and bring the interactable elements to life.
-  **Prototype testing with children** to hear children's responses to the concept and generate points of improvement.
-  **Consulting with experts** of experience design to gain feedback on the concept.

Structure of this part

The rest of this part is divided into three chapters. In the first chapter (pages 90 to 121), I present my final concept, *Mijn Eigen Hein*. In the second chapter (pages 122 to 129), I explain how I evaluated the concept and which insights I drew from the evaluation. In the final chapter of this part (pages 130 to 133), I name my recommendations for further design of the concept.

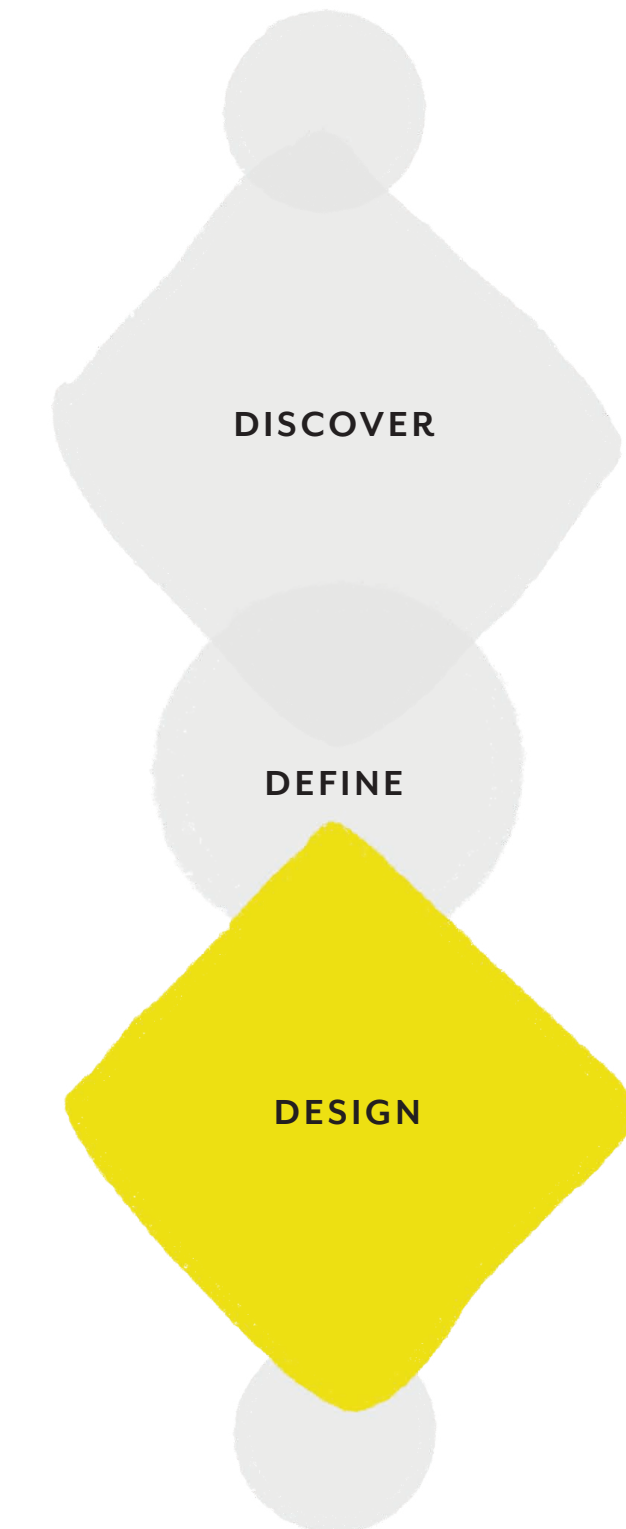


Figure 50. We are now in the second diamond of the process.



Figure 51. Me working on an artistic exploration of the concept.



Figure 52. An early sketch of the concept using charcoal and crayons.

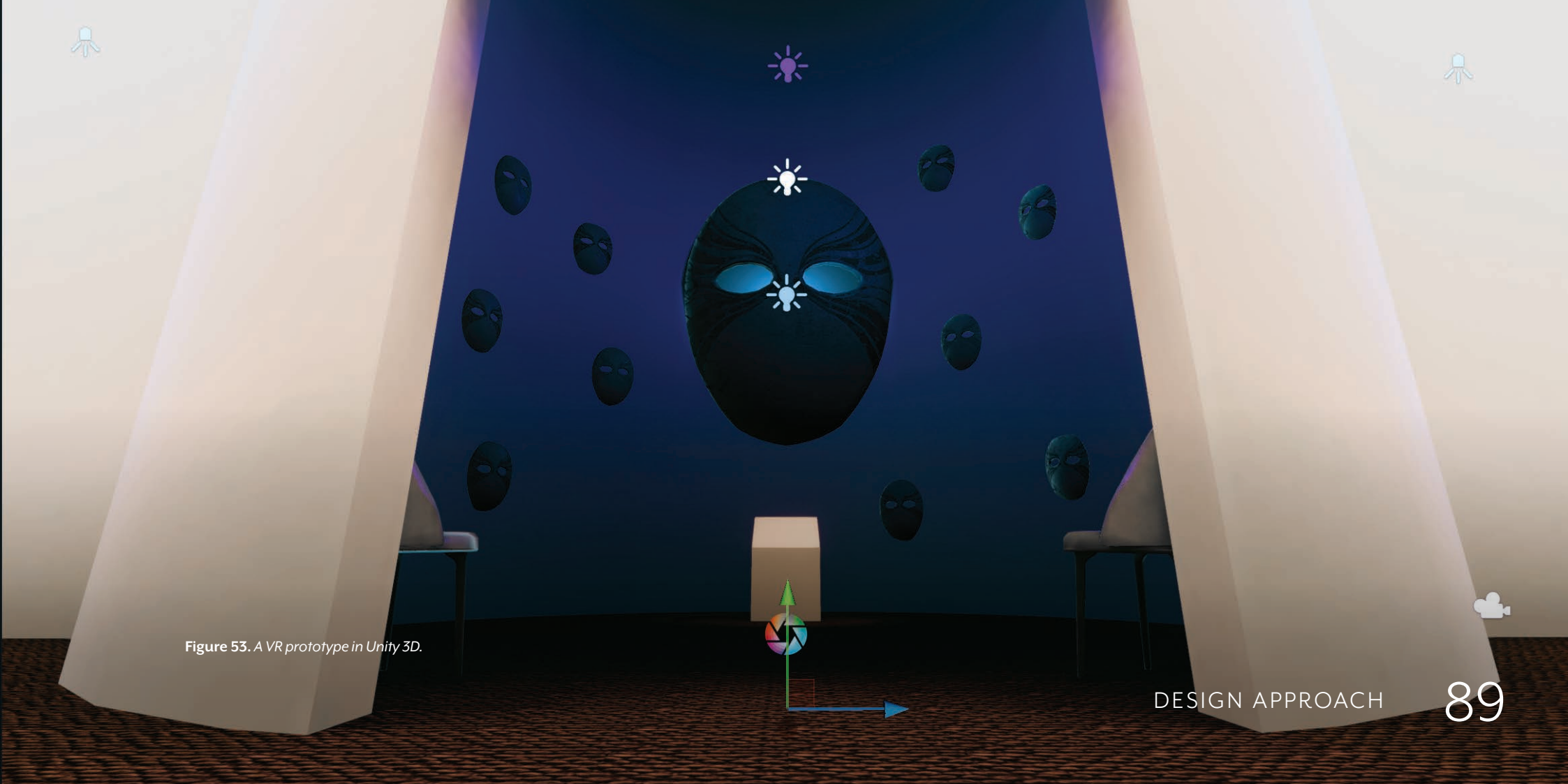


Figure 53. A VR prototype in Unity 3D.

Presenting the concept.

Mijn Eigen Hein, a learning concept with an interactive installation that grows in variety as children enrich it with their own death stories.

In this chapter, I give an overview of the concept and its primary features. Then, I present a visual scenario of the concept. I end with a detailed description of the concept's interactables where I explain my design choices.

Mijn Eigen Hein (My Own Reaper) is an anticipatory learning concept for 9- to 11-year-old children about the many faces of death, embodied through skull-shaped masks that represent a variety death stories. The flagship of the concept is an interactive installation in a temple-like room with projected walls that grows in variety as children make their own skulls masks and add them to the collection. The exhibition is designed to be displayed at locations of the OBA.

The children's learning journey starts as a mysterious box arrives in the classroom containing the mask of a skull. The mask is introduced as Magere Hein, the personification of death. The children are asked to reflect on their own experiences: have they met Hein before at some point in their lives? Later, the children visit the OBA location in their neighborhood, where *Mijn Eigen Hein* is on display. In a clinically white environment, the children explore ten Hein masks decorated to reflect ten different stories about death, each with its own perspective. By

putting the masks on, the children embrace the stories which these masks tell. Afterwards, the children are told that the exhibition is not finished, since it does not yet contain the children's own stories. They are invited to craft their own Hein masks, fueled by their own dreams and experiences. Decorating the Hein mask is a playful activity which stimulates the children's reflective thinking in a way that is different from a regular discussion. Then, the class performs a ritual where each child can present their mask and scan it to add it to the installation. With each masks added, the collection grows more rich, more personal, more colorful, and more reflective of the fantastical and open-minded way in which children see the world. The metaphorical white ray of light is split into the whole spectrum of visible color.

In the research phase of this project, I identified that sharing death stories can relieve the feelings of isolation which children may experience regarding the topic of death, instead providing empathy, enrichment, and comfort. *Mijn Eigen Hein* gives the children masks as a vessel for sharing. *Mijn Eigen Hein* tells a story of neighborly love, tolerance, and the importance of child-like fantasy at all ages. The decorated masks of Hein's skull face become a symbol simultaneously of death's universality and of how we all experience it individually.

For an impression of the *Mijn Eigen Hein* experience, please feel free to watch the showcase video on the TU Delft Repository.

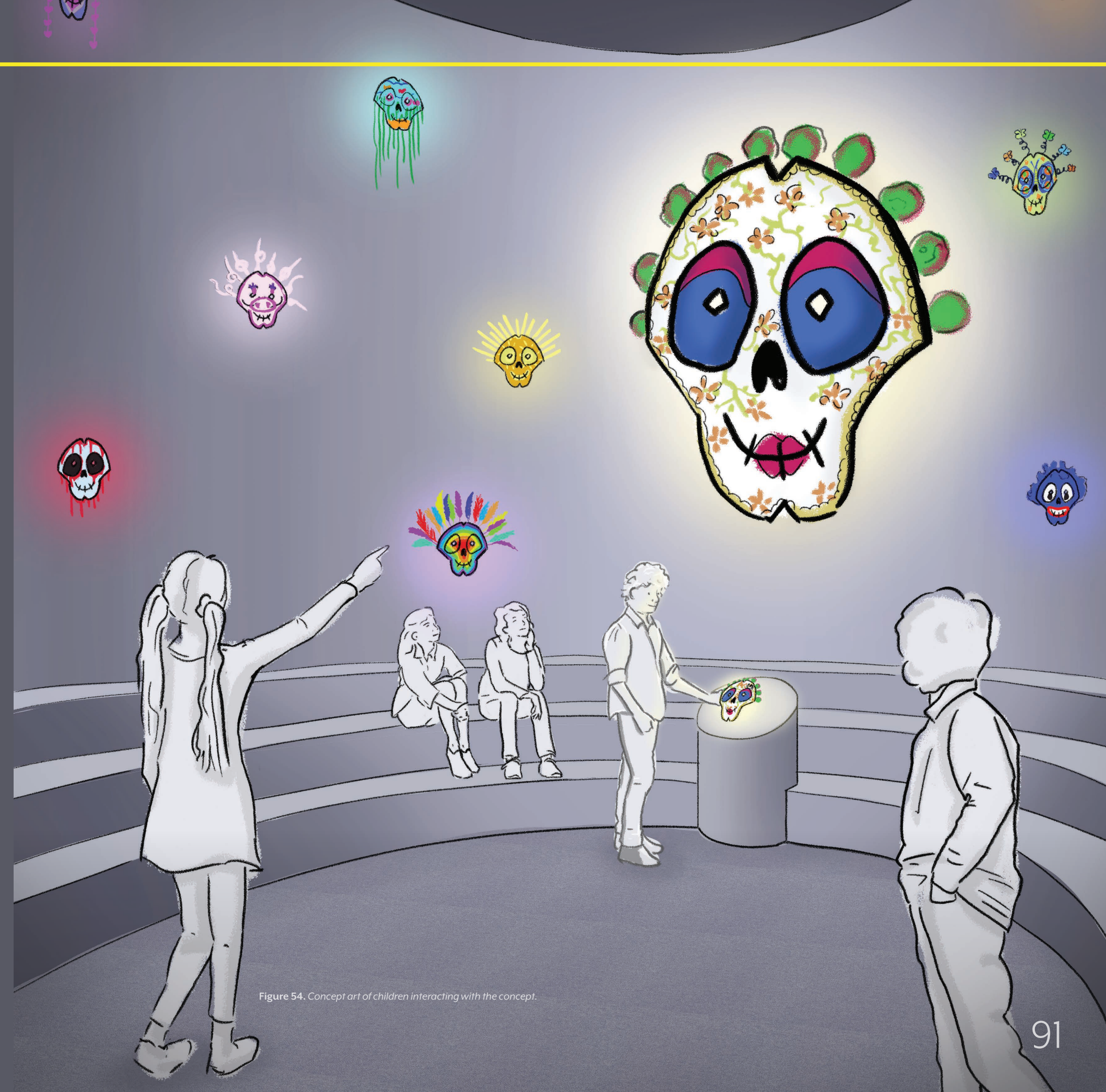


Figure 54. Concept art of children interacting with the concept.



Figure 55. Me astonished by the 'Capela dos Ossos' in Faro, Portugal.

Magere Hein is the Western symbol of the universality of death. He wields a scythe to represent that all living things will be moved down someday.

Although personifications of death have existed since the dawn of written history, Hein in his current form first appeared in Europe in the fourteenth century, at the time of the Black Death [47]. As about one third of Europe's population fell to this pandemic, death was all around. Personifying death made it easier to cope with the horrifying reality. This time brought forth the artistic motif *memento mori* – remember that you will die. Figure 55 shows my visit to the *Capela dos Ossos* – bone chapel – in Faro, Portugal, decorated with the remains of about 1250 Carmelite monks [48]. The sign above the entrance reads: '*Para aqui a considerar que a este estado has de chegar.*' – Stop here and consider that you too shall reach this state [49].

Personifying death makes the immaterial force of nature a tangible creature that is a product of the mind, which may make it attractive to children and their fantasy-fueled worldview. However, I did not think that the traditional embodiment of Hein as a hooded, realistic-looking skeleton would help to create an empathic and inviting atmosphere. I knew that I had to adapt this image to a form that would fit the children's world. Death in *Mijn Eigen Hein* is not a humbling nor a terrifying figure. His face is somewhere between human skull and cartoon face, rid of the traits that define the individual. He is someone anyone could recognize themselves in, following the same logic from photograph to icon explained by comic artist Scott McCloud in his masterpiece *Understanding Comics* [50].

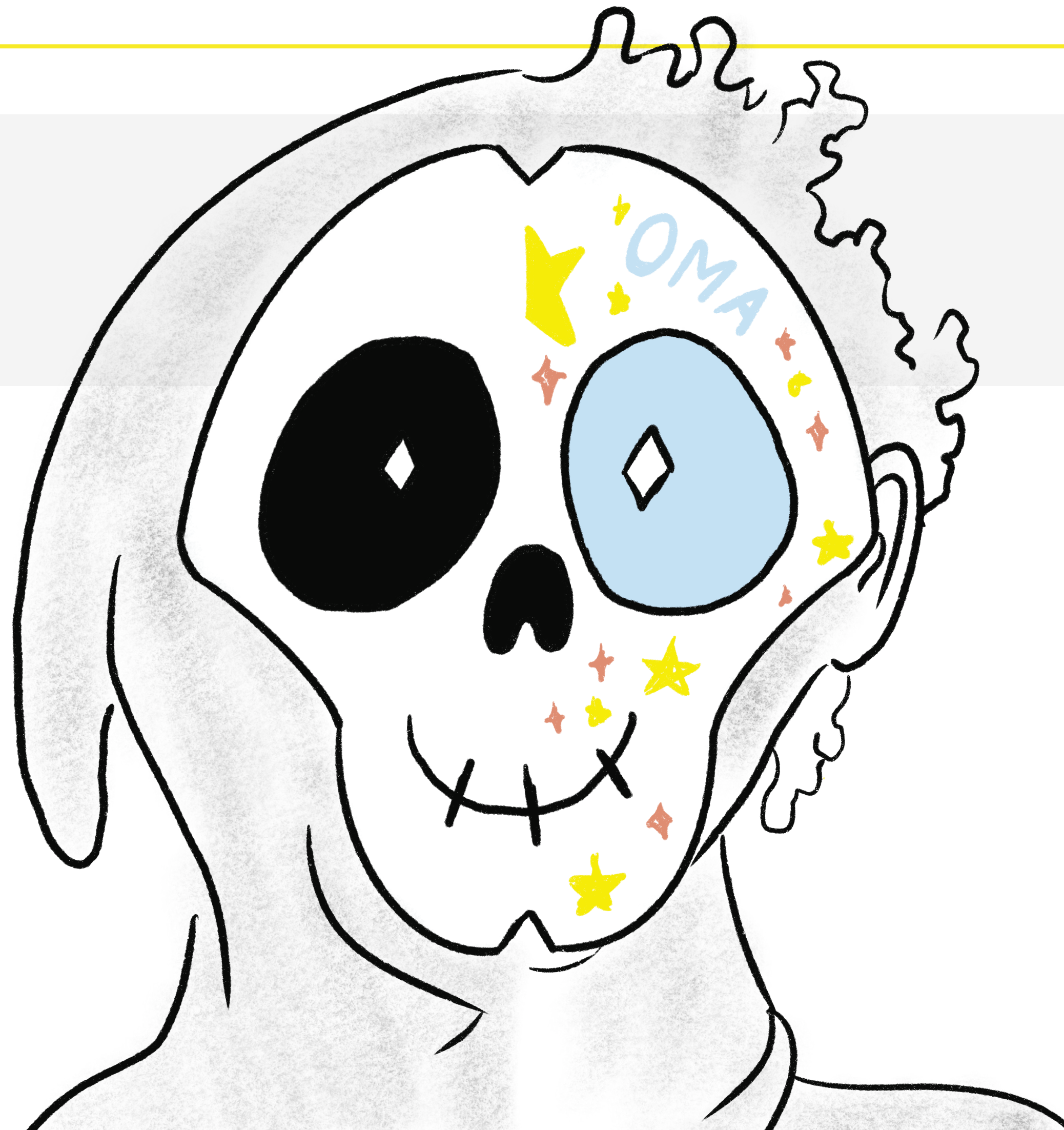


Figure 56. An actor performing in a traditional Japanese play.

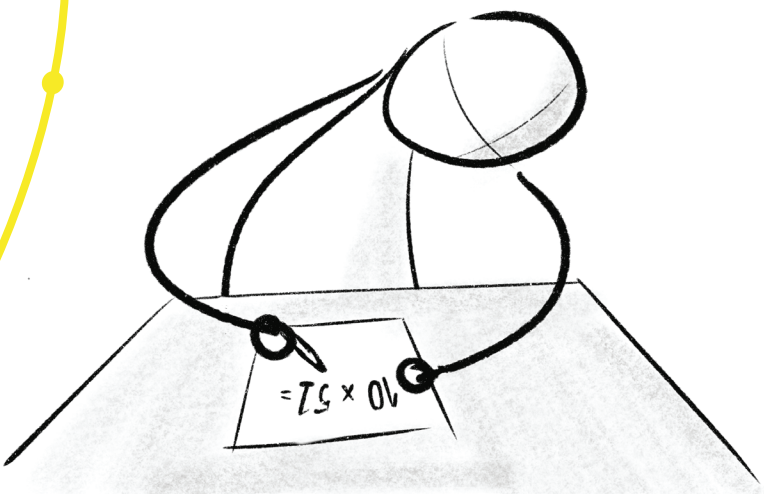
The Eigen Hein is a new symbol of the individual experience of death. Everyone has their own story to share; everyone has their own mask.

Masks play a role in cultural rituals across the globe. They are often representatives of the supernatural. Figure 56, for example, shows a Japanese actor performing in a traditional play as a spirit or demon. Another example more related to the child's world is Halloween, where children briefly become creepy creatures. Masks can evoke a range of (playful) interactions. They can be used to express but also to hide behind. With a mask, a person can become someone else and briefly look through another pair of eyes.

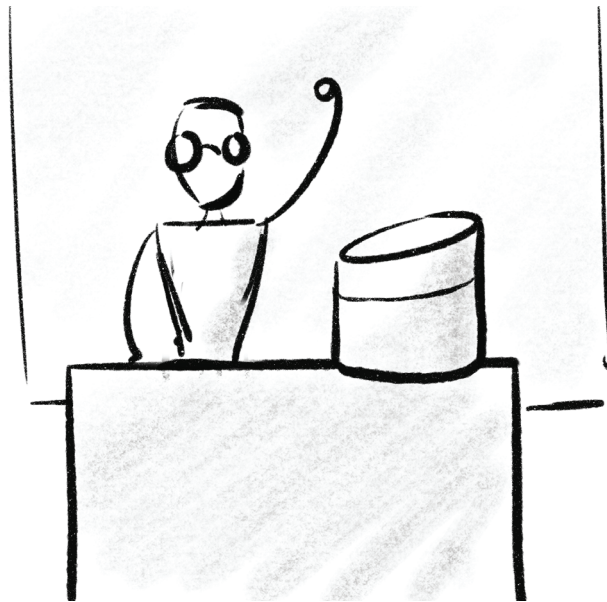
McCloud, as mentioned on the previous page, argued that an abstraction of a human face makes it possible for anyone to recognize themselves in it [50]. In *Mijn Eigen Hein*, I use this principle so children will recognize not themselves but their lost loved ones. Hein does not just represent death itself but the dead, and thereby becomes a way to explore metaphysical worlds of imagination. After all, in part 2 I found that children's metaphysical death fantasies can often involve their lost loved ones. The masks are an iteration of the making artifacts common to generative design research: they pull the child's deepest dreams and experiences to the surface in true *convivial* fashion [42]. Decorated with the child's stories, they become a starting point for conversation for parents and teachers. At the end of the story, the decorated mask is none other than Campbell's *elixir*: an artifact from the special world brought back to save the ordinary world. The child has become the hero and the *Master of Two Worlds*.

On the following pages, I present a storyboard for the complete learning journey of *Mijn Eigen Hein* from the point of view of our friend Robin.

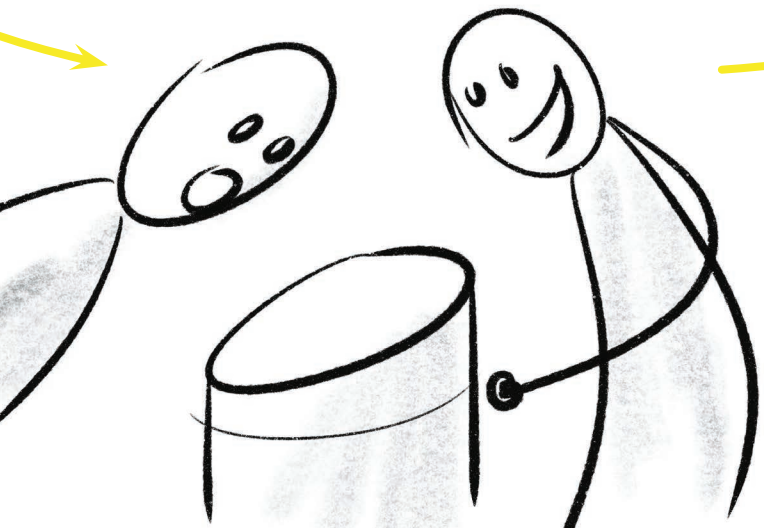
The storyboard shows the detailed steps of *Mijn Eigen Hein*. It explains Robin's interactions, thoughts and experiences. The journey starts in the classroom, a few days before the visit to the exhibition. The main part of the journey takes place over an afternoon. It ends as Robin takes his decorated Hein home to show it to his family.



Robin is having a regular day at school. He is working on his math assignments for the morning. Nothing too difficult or interesting.



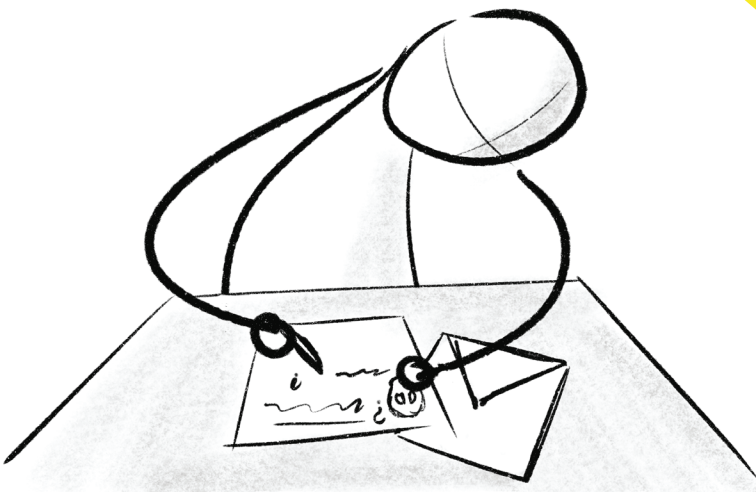
The teacher calls for all children to put their pens down. She has a special announcement to make. That is when she presents a white cylindrical box.



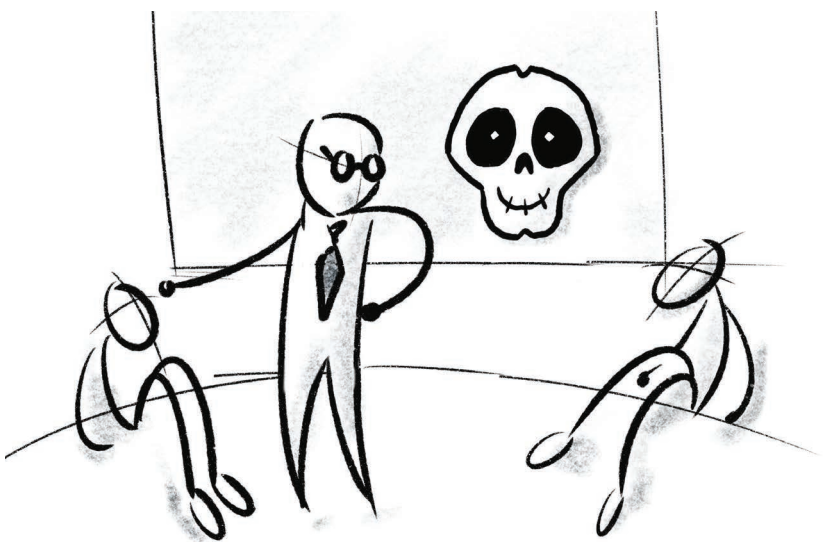
The box was sent to the school from a museum, the teacher explains. Robin and his classmates are drawn to this mysterious box. What could be hidden inside?



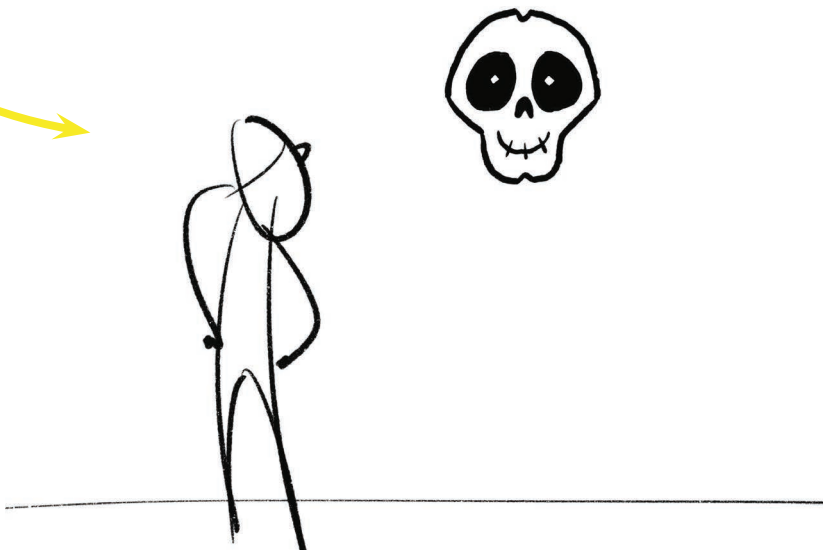
In the box, the children find a big skull-like mask. Also, the box contains a number of cards and envelopes, one pair for each of the children in the group.



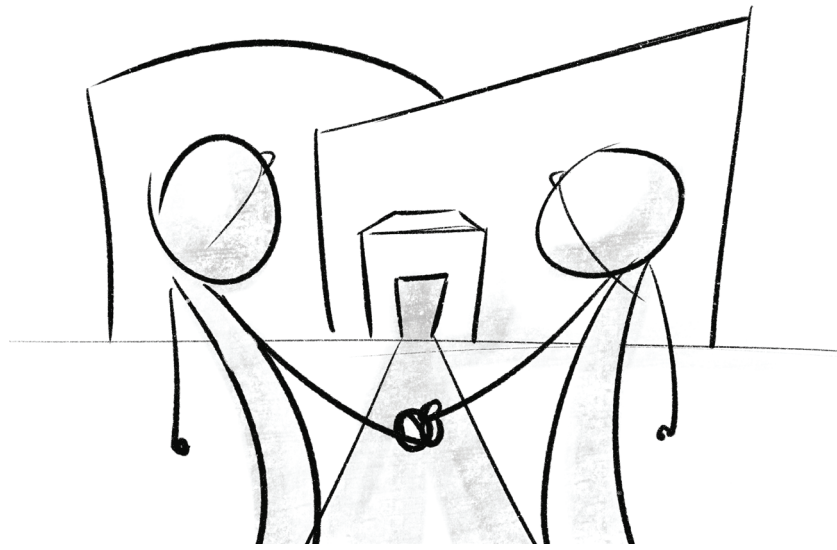
After the class discussion, Robin gets an assignment. He takes one of the cards from the box and answers the card's question: What would you ask Hein? Have you ever met him? Robin thinks of his grandmother, who died two years ago. Hein must have been there then. Robin then discusses his card with his friend.



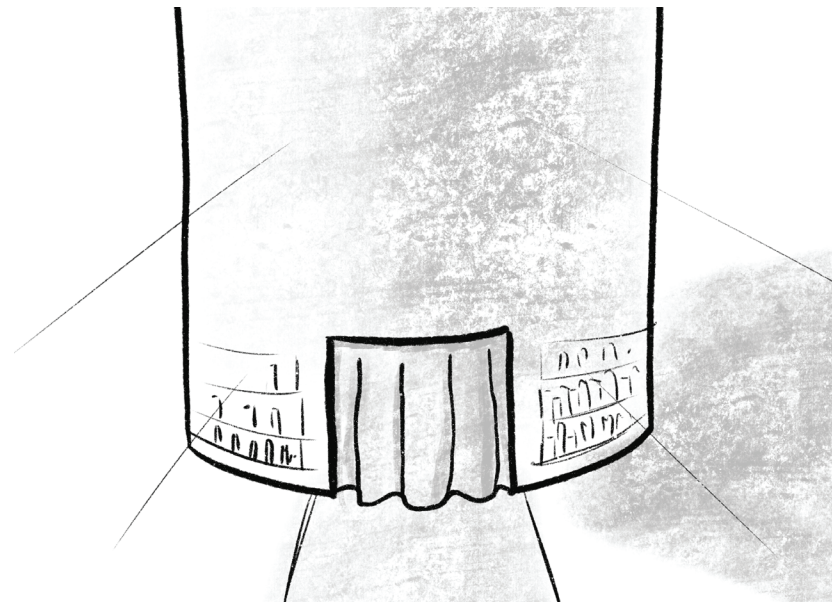
The teacher hangs the skull on the classroom wall and asks the group if anyone knows what it is. No one knows. This is Magere Hein, she explains, he is the symbol of death. Many people find death difficult to talk about since we cannot see it. Talking about Hein is easier.



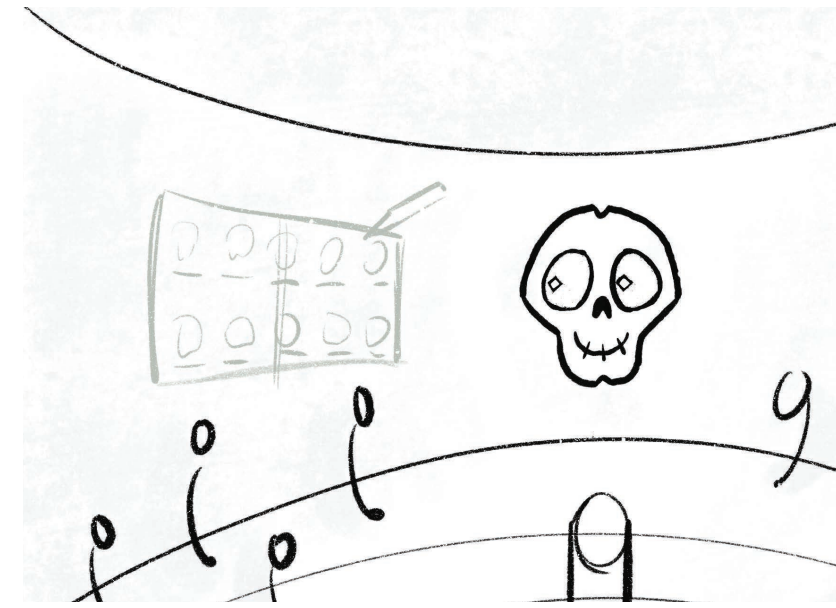
After finishing his assignment, Robin puts his card into the envelope returns it to the box. After all children have done the same, the teacher closes the box and proceeds with the next lesson. For the next coming days, Hein is left on the wall. Sometimes Robin looks at it and thinks.



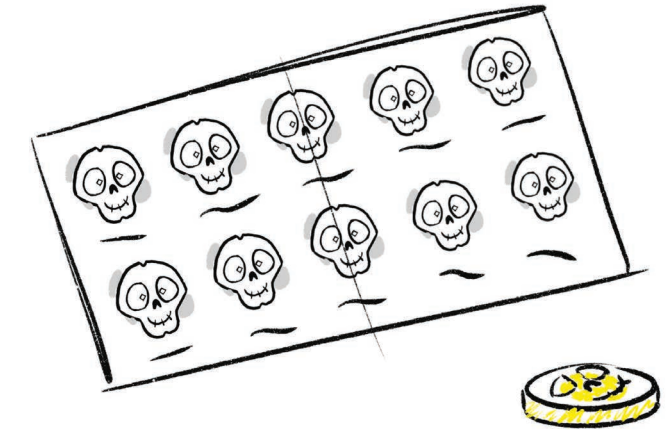
Later that week, Robin and his classmates are ready to visit the exhibition which they received the white box from. They approach the library building.



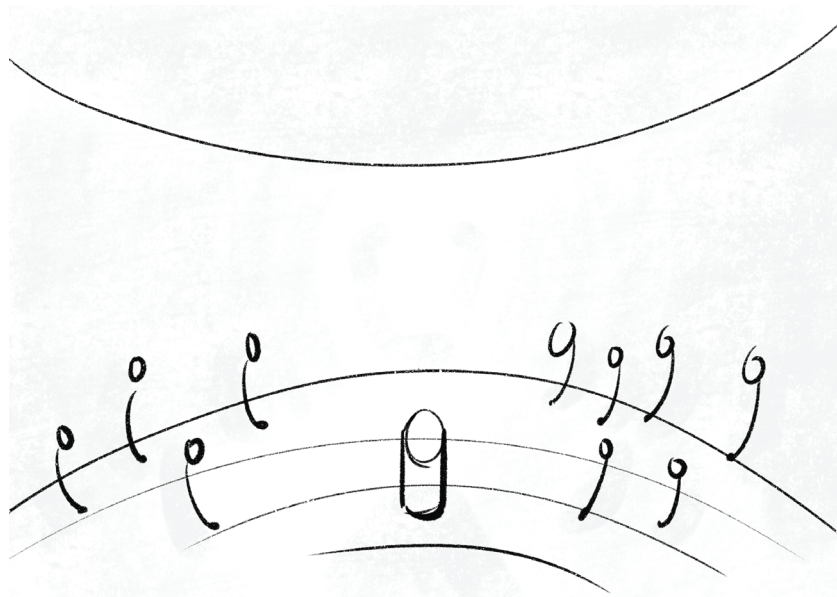
In the large library hall there are several big cylindrical bookcases. One of these is not an open bookcase, but a room closed by a curtain. Robin and his classmates are invited into the mysterious room.



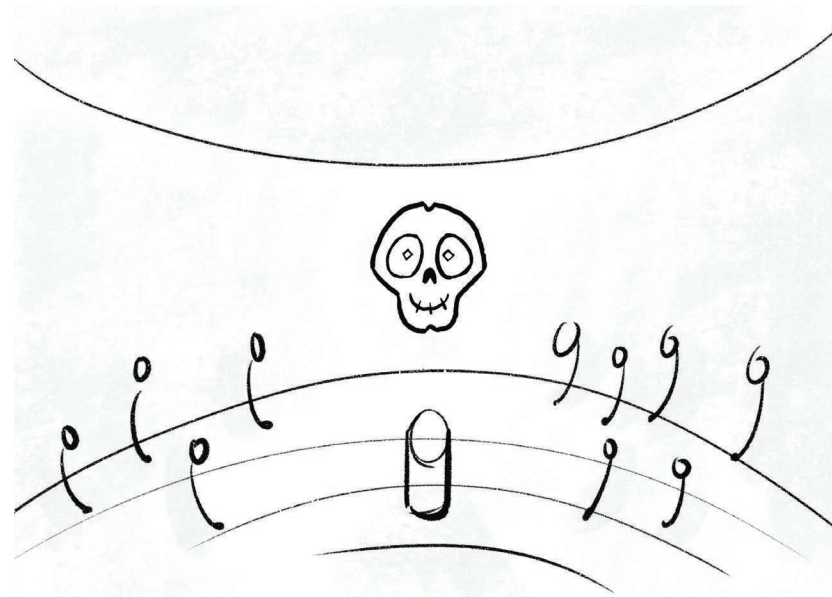
The voice continues to explain that the children are here to visit an exhibition. There are 10 different Heins hidden in the library collection, each with their own name. The children's assignment is to find them. The instructions are visualized in simple animations.



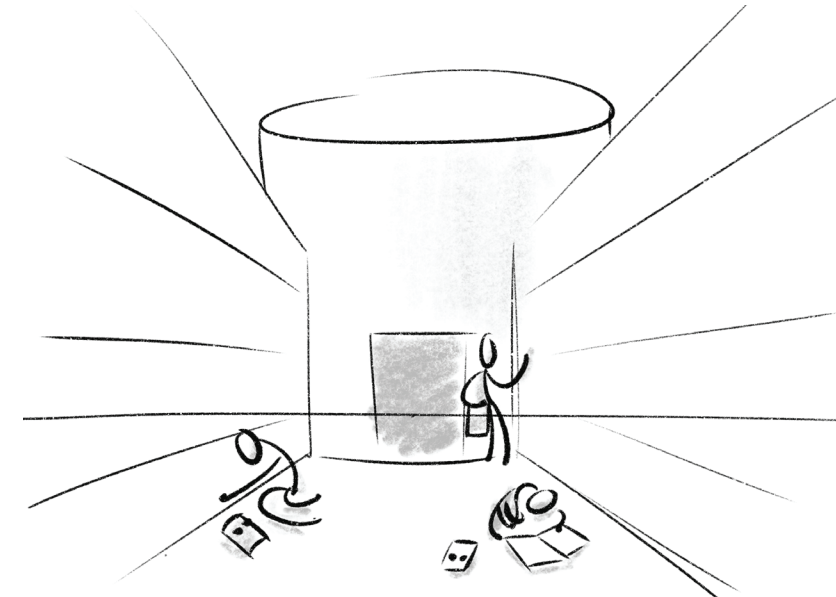
After the voice's explanation of the assignment, all children receive a worksheet and their personal coin. Robin feels excited to find all hidden faces and connect them to the right name on the worksheet. He runs out of the room as soon as he can.



The bright room with white walls has rows of seats following the round shape of the walls, somewhat similar to a Greek amphitheater. Robin and his classmates take a seat. The room appears empty, except for a small pedestal.



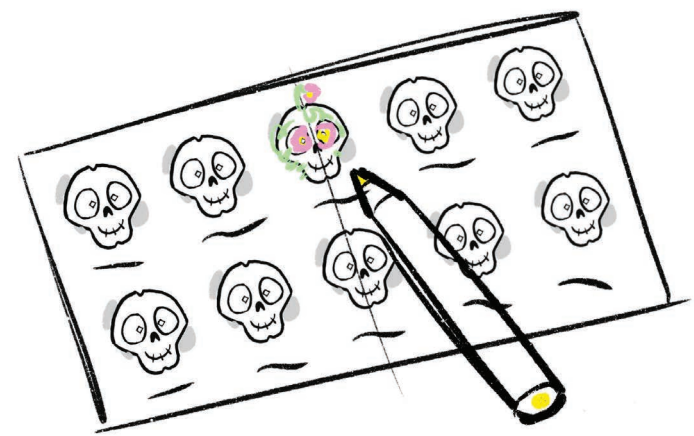
After all children have taken a seat, the silence is interrupted by a friendly male voice that welcomes the children and introduces himself as Hein. A mask looking similar to the one in the classroom appears as a projection on the wall. What could this mean, Robin thinks.



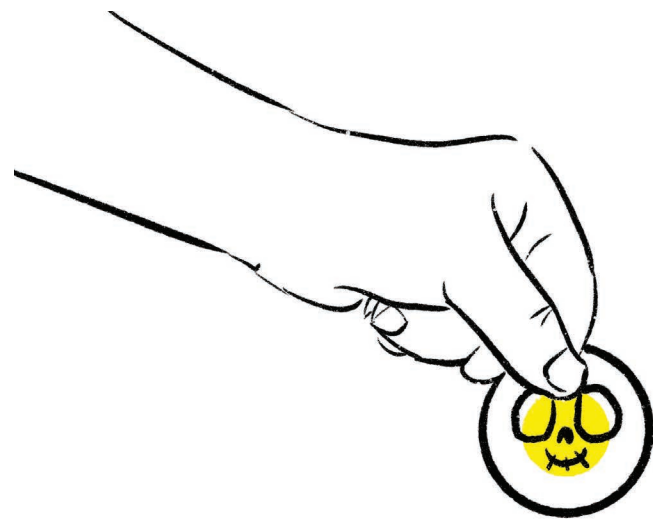
Robin and his classmates explore the library hall. Some Hein masks are easy to find, some are hidden behind books or found hanging from the ceiling. At some point, Robin opens a suspicious-looking book to see if there may be a hint hidden inside.



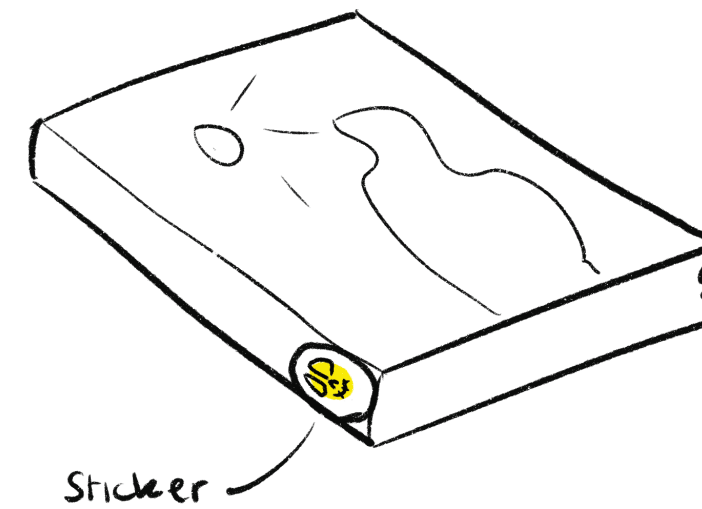
Each of the 10 hidden Hein masks represent a different death story. By picking it up and putting it on, Robin can hear how the mask's maker tells their story. Robin feels close to the person, as if he has become the person, even if it is only for an instant.



After listening to a mask's story, Robin understands which name belongs to it. He then colors that mask in on the worksheet. This step is repeated for each of the masks until Robin has found and identified all of them.



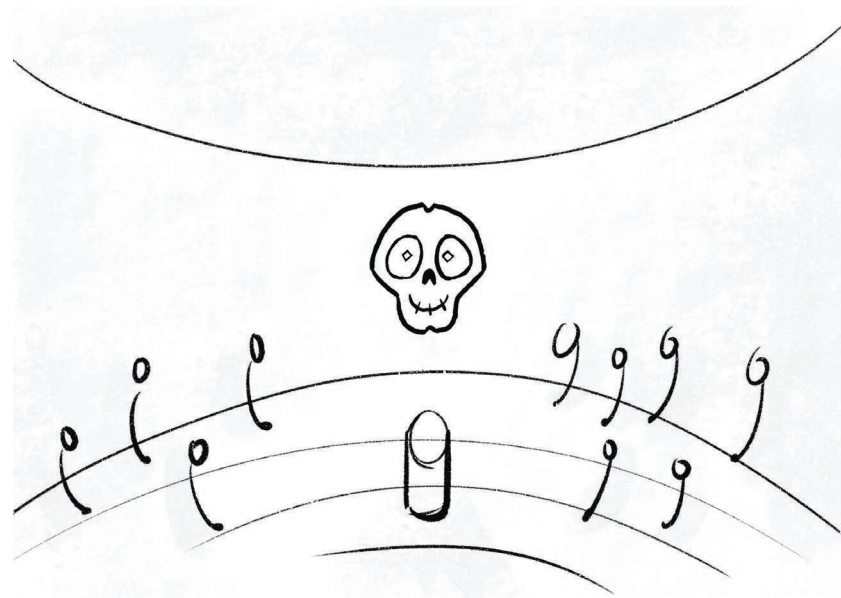
After finishing his exploration assignment, Robin can leave his personal coin with any one of the 10 hidden Hein masks. He is instructed to give his coin to the mask which he feels most connected to.



Robin is eager to make a nice-looking art piece, but he does not immediately know what to make. The teacher points out that library books about death and grief are labeled with a *Mijn Eigen Hein* sticker.



After some thinking, Robin knows what he wants to make: a Hein to resemble his Grandma as a star. Eagerly crafting, he makes her eyes blue like the night sky and draws golden stars on the skull. He gives the mask purple lips to make it look like Grandma's lipstick.



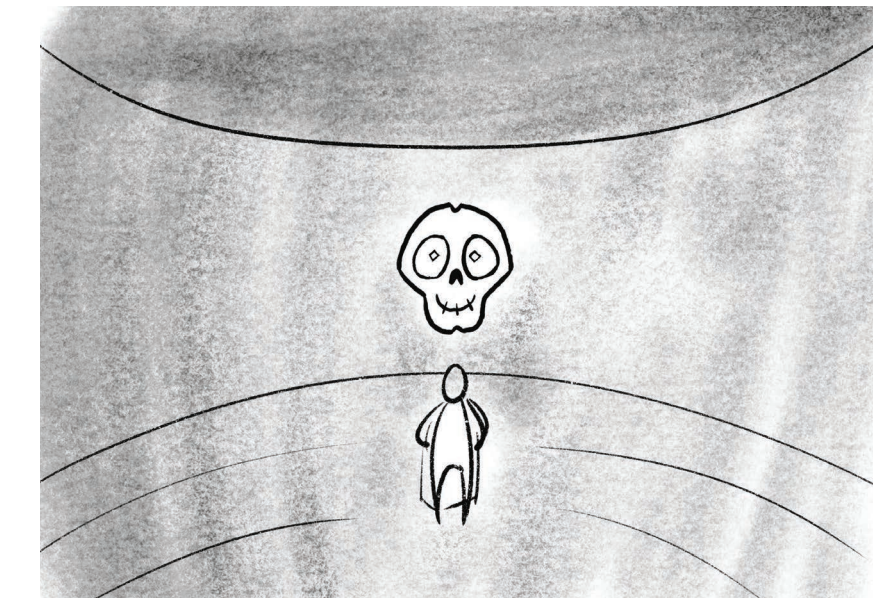
After all children have given their coin to a mask, everyone returns to the round room. There, the voice of Hein congratulates the children on completing their assignment. However, before the group returns to their school, Hein needs to ask the children a favor.



Hein thinks that the current exhibition is not nearly finished. He is convinced that Robin and his classmates could make wonderful additions to the collection. Each of the children receives a blank mask to decorate with their own story. The envelope from the assignment in the classroom can be used for inspiration.



On the inside of his mask, Robin adds a secret message that is only meant for himself. And maybe for Grandma, if she's watching from wherever.



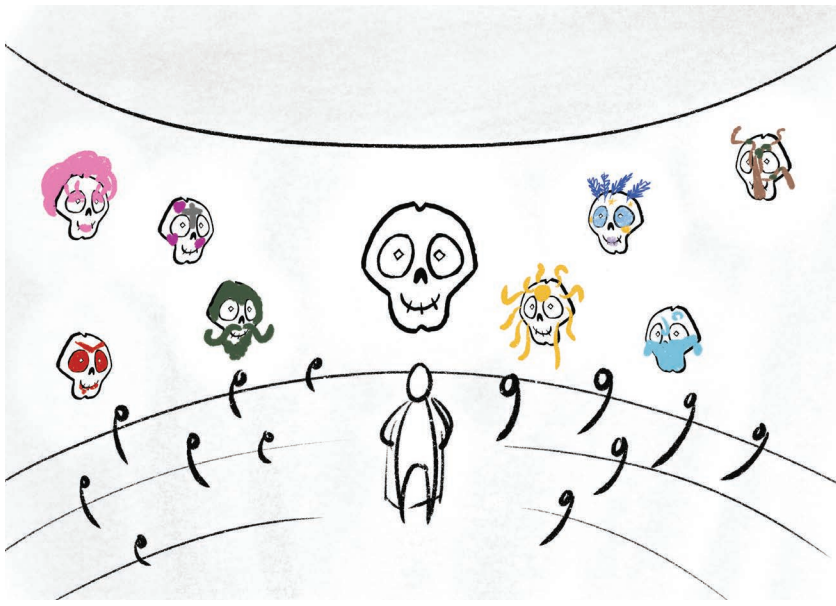
When all children have finished their creations, they go back into the round room one by one. The room is now dark, only lit by the big bright face of Hein on the wall. All children sit back down in a circle.



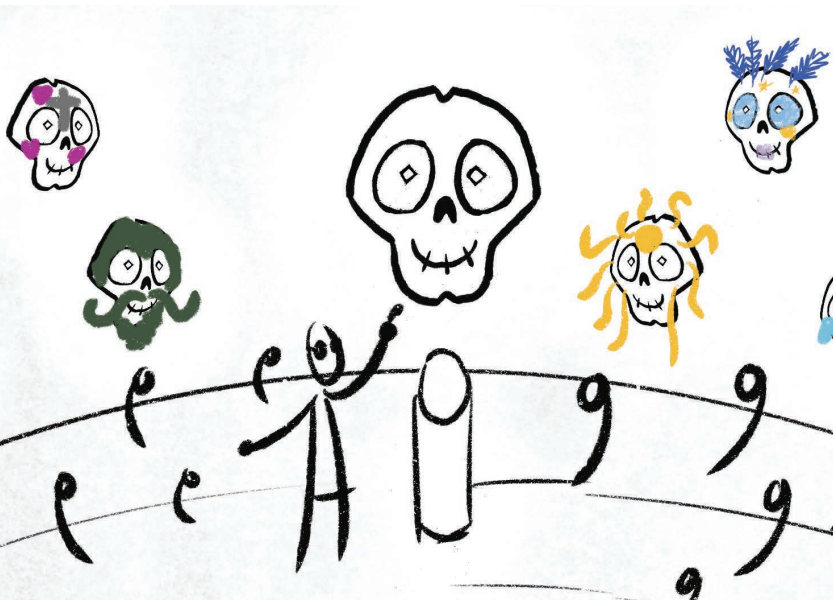
Each child is invited to come forward and show their Hein to the group. They can say a few words about it, if they want. Robin is asked to go first. He feels a bit nervous to share his Grandma with the group, but decides to tell the class about the day of her funeral.



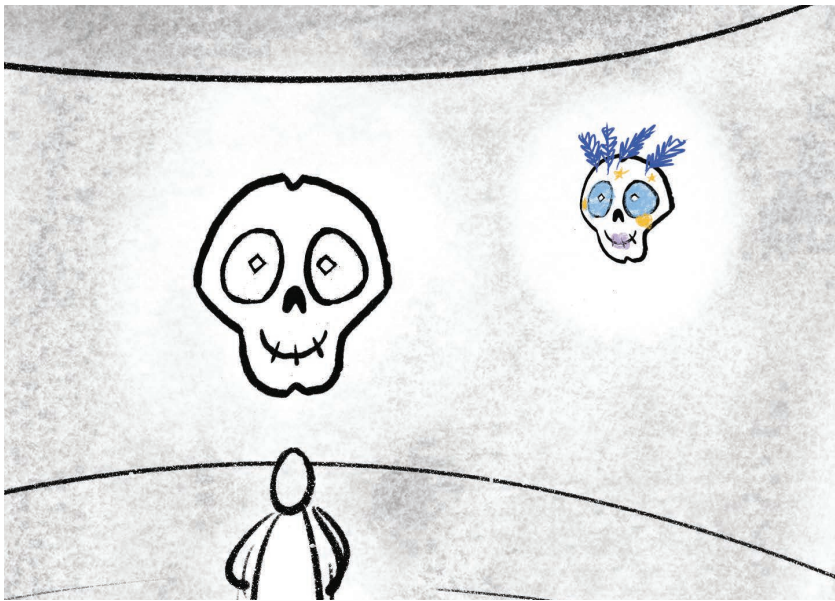
Robin feels relieved having shared his story. He puts his Hein on the pedestal, and it magically appears on the big Hein on the wall, for all children in the group to see.



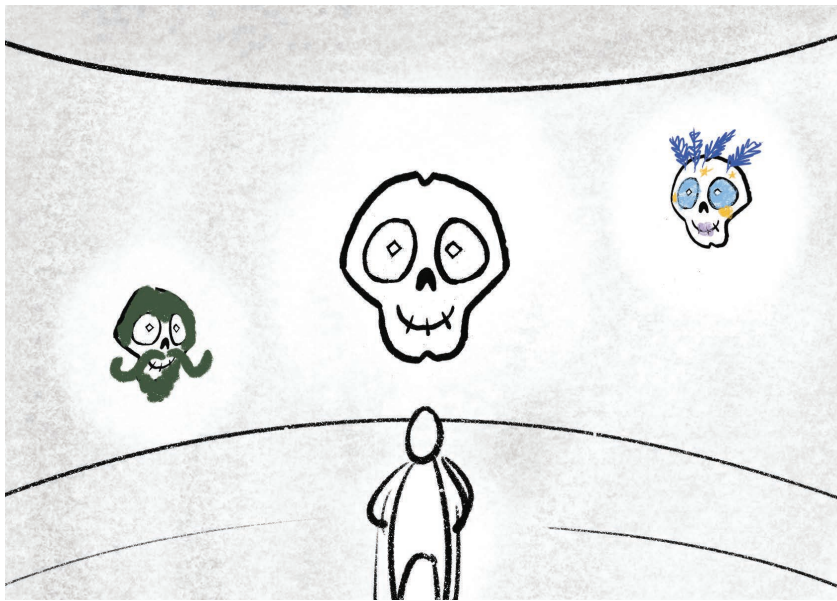
As the last of Robin's classmates finishes their speech, the room is completely filled with Hein masks, kindly surrounding the group like a circle of guardian angels. The room is now brightly lit in white.



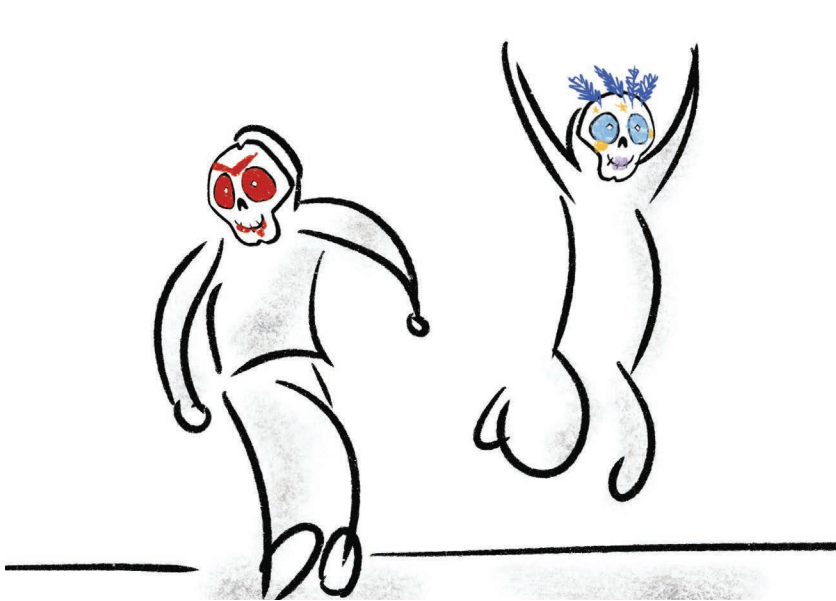
The teacher closes the museum visit by starting a group discussion about the day's lesson. Having seen the children's creations and their stories, the teacher feels more confident to discuss the topic of death with her pupils.



Robin's mask disappears and reappears in a different spot on the wall. It glows with light, making the whole room slightly brighter. Robin proudly looks at it and returns to his seat as the next child walks over to the pedestal.



One by one, Robin's classmate's Hein masks start filling up the wall with quirky characters, each with their own materials, expressions and colors. Robin carefully listens to his classmates' stories to understand the creations. The room gets brighter which each mask added.



When the schoolday finishes, Robin and his friends play outside happily with their creations on. They explain what they have experienced today to other curious children that they meet on the street.



At home, Robin proudly shows his Hein to his mom. He explains what he has learned. Robin's mother does not immediately know what to say. But she finds an email from school that guides her in a reflective conversation with her dearest Robin.

In the remainder of this chapter, I give a breakdown of the interactable elements of the concept in chronological order. I explain and justify my design choices.

The contents laid out on this spread are part of the preparatory toolkit that is brought into the classroom. Its design is simple but it introduces the form and color language of the concept.

1. Box brought into the classroom

The cylindrical box containing the interactables for the preparatory activities is white on the outside to represent the story's ordinary world. Its shape was inspired by the cylindrical bookshelves at OBA Oosterdok. The box is painted black on the inside to contrast with its bright contents.

2. Mijn Eigen Hein logo (and sticker)

The concept's logo showcases the central symbol of the friendly Hein face with big eyes and a simple smile. The black linework is handdrawn with a crayon-like quality as if designed by a child, referring to the fact that the climax of the experience is when the children create. The yellow circle beneath Hein's face represents the altar on which the children present their creations to the rest of the group. The yellow color itself was, albeit altered, derived from Tot Zover's brand palette, so that Mijn Eigen Hein could coherently fit into the museum's portfolio.

3. Worksheet 'What would you ask Hein?'

This first activity is an iteration of the postcard making assignment from the research sessions of part 2. To the children, it establishes the importance of introspection and reflection from the very beginning of their interaction with *Mijn Eigen Hein*, effectively sensitizing them [41, 42] for the learning journey. It indirectly asks them to set an intention for their visit to the exhibition which should stimulate their motivation to partake in the learning journey. The envelope gives children the opportunity to seal their thoughts until it is opened during the visit.



Figure 57. Prototypes of the preparatory toolkit.

This spread concerns the design of the central room or temple of the exhibition.

4. Schematic of the room layout

The temple is perhaps the most explicit example of how the design of OBA Oosterdok has inspired - or dictated, if you will - the concept. It is inconspicuously placed in the library hall between the other white cylindrical bookshelves. The inside of the room has three levels of steps along the wall for children to sit on. This circular seating layout is intended to promote interaction between the children, inspired by a cosy campfire. The room is equipped with a 360 degree projector rig which can transform the plain white wall into virtually any environment.

5. The altar and the temple's transformation

The altar is the exhibition's most technically advanced interactable. It is equipped with a scanner that incorporates the children's creations into the collection in real time. The two halves of Figure 59 illustrate the before and after of the children's visit. The left side is the bleak, taboo world of death that children encounter today - or the white ray of light. The right side is the end result which the children leave behind: a colorful palette of enriching stories and interactions with one another, or the spectrum of color created by the prism that was envisioned in part 3.

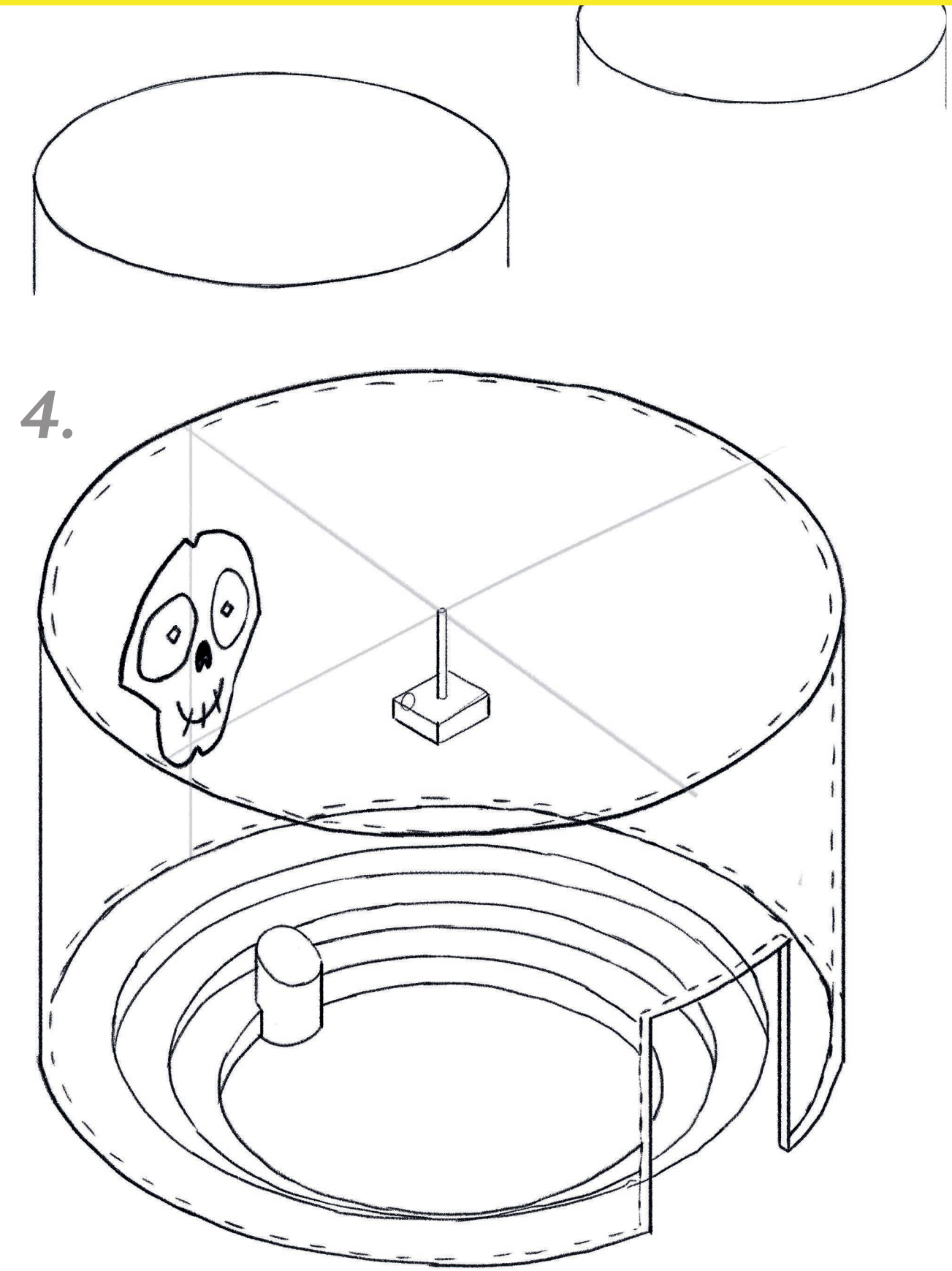


Figure 58. The layout of the temple-like room.

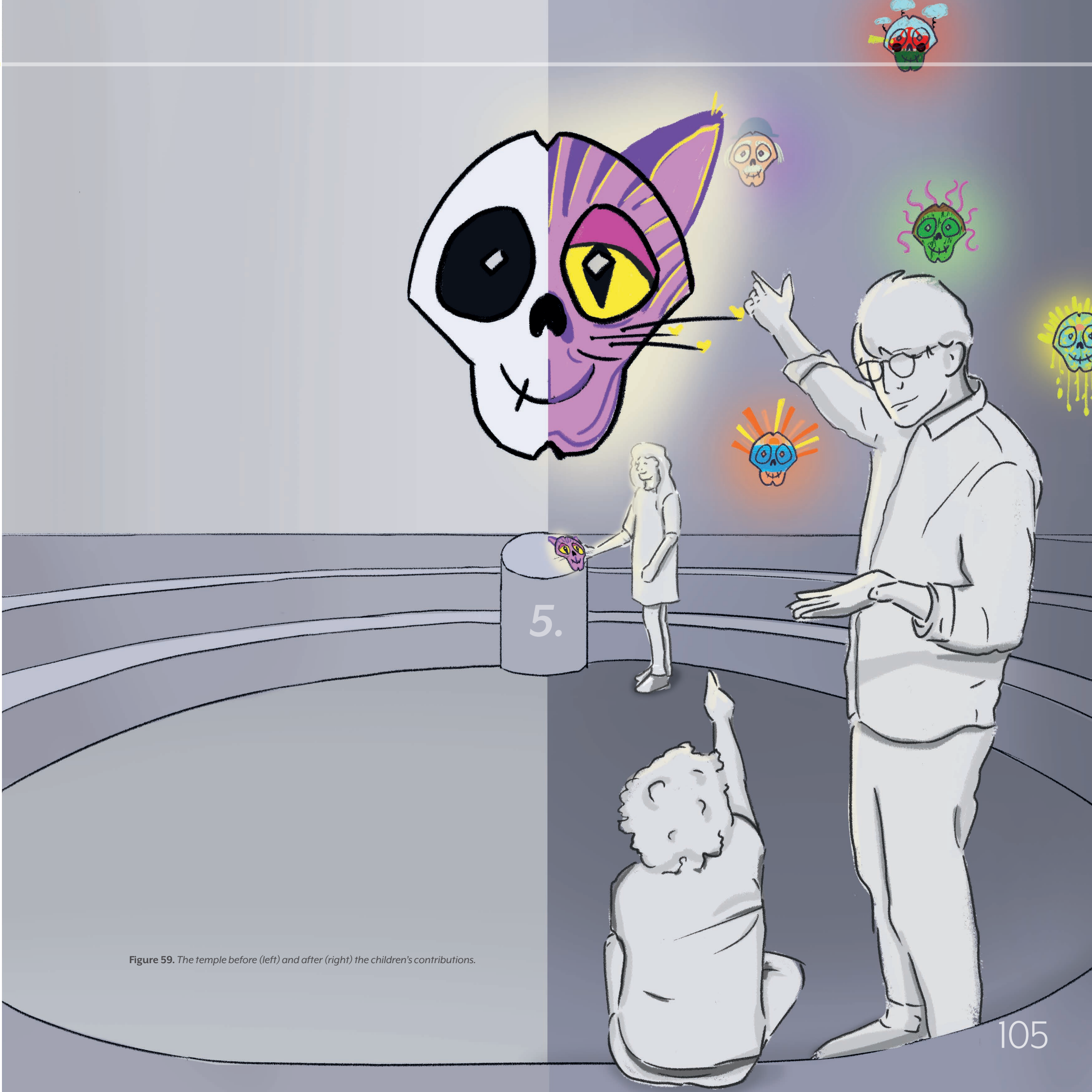


Figure 59. The temple before (left) and after (right) the children's contributions.

This spread concerns the design of the materials used during the visit.

6. Worksheet 'Search for Hein' (outside)

Children receive this booklet for the exploration activity of their learning journey. The front of the booklet is an instruction for this activity. The back of the booklet gives the instruction for the giving of the personal coin (see interactable number 8). The booklet is preferably printed on thick, sturdy paper to prevent wrinkles and tears.

7. Worksheet 'Search for Hein' (inside)

The inside of the booklet reveals the actual worksheet for the exploration activity. It presents the children with 10 plain Hein faces, each labeled with a name. These names correspond with the 10 exhibited - or hidden - Hein masks. The activity is a variant of the ever-popular scavenger hunt, but with a twist: the fact that children draw their answers foreshadows the making exercise which they will encounter later in their journey.

8. Personal coin

The tail of the exploration activity is the giving of the personal coin. This mechanic invites the children to take a position towards the exhibited Hein masks - and, more importantly, the death perspectives which they represent. The coin was designed to be a bit large for a child's hand, which adds to its (metaphorical) weight. The coin is a subtle reference to the golden coin that the ancient Greeks buried with deceased people, which they believed was needed to pay for their ferry across the river Styx into the underworld. An added benefit of the coin-giving is that it gives the teacher insight into how the class is perceiving the museum visit and the topic so far. The distribution of the coins across the exhibited masks can be a source of discussion at the halfway point of the learning journey.

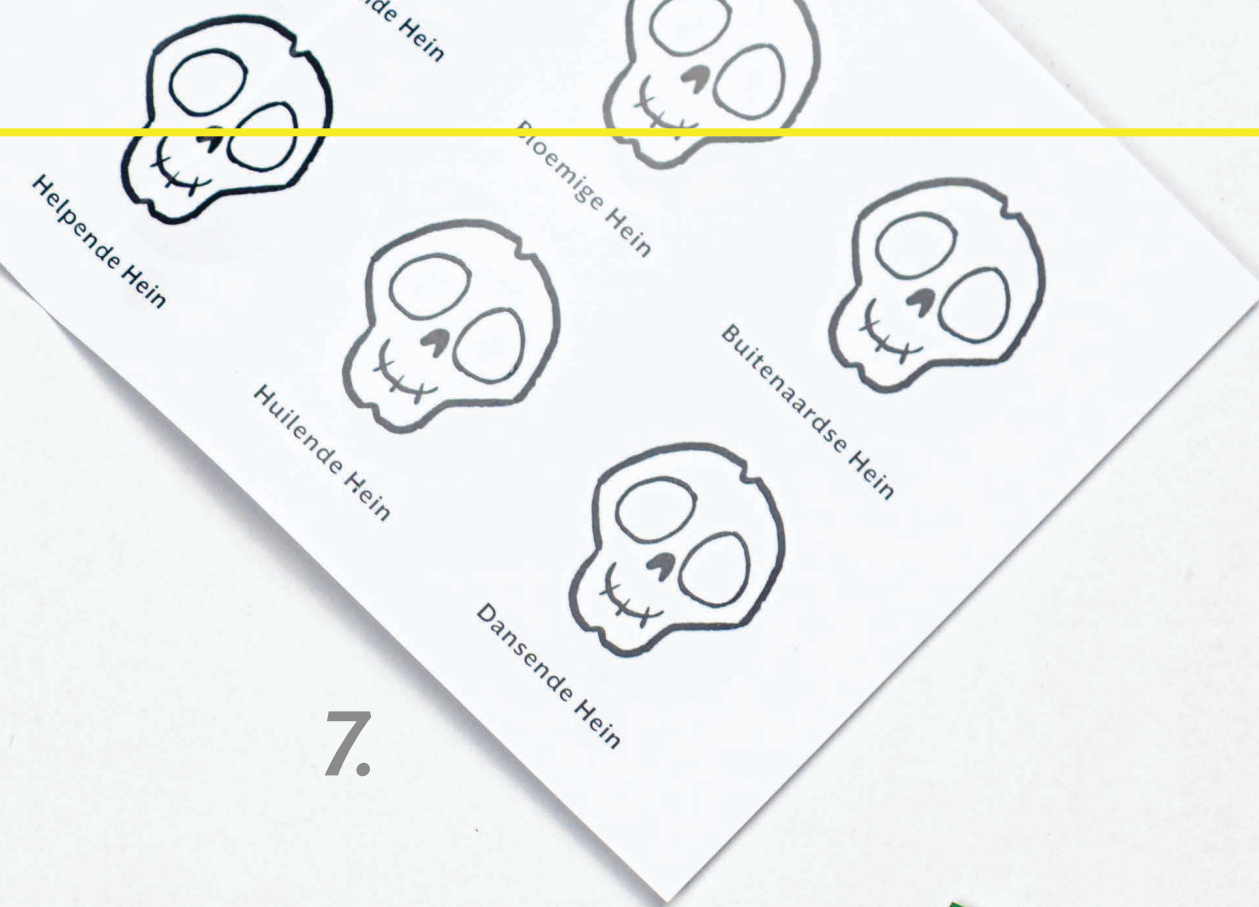
6.



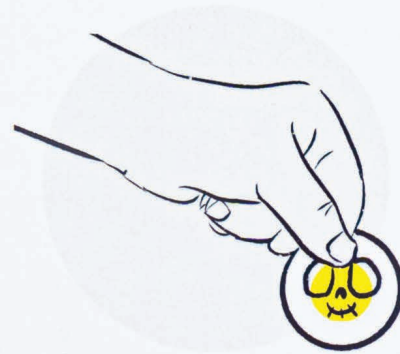
Zoek de Hein

In dit boekje staan tien verschillende Heinen die in de bibliotheek verborgen liggen. Kun jij ze allemaal vinden?
Geef ze het gezicht dat past bij de juiste naam.

7.



8.



Jouw munt is het waard!

Geef jouw muntje aan de Hein die jou het meeste aanspreekt. Welke vind je het mooist? Welke past het meest bij jou? En wat zeggen jouw klasgenootjes?

Figure 60. Prototypes of the materials children use during their visit.

The following pages show the prototypes for the 10 exhibited Hein masks of the exploration activity. These were designed in a co-creation session with friends and family in a late stage of the project. The co-creators made their designs based on my prepared curation. Special thanks to Jonas Bähr, Amy and Lizette den Dekker, Silvia van Knotsenburg and Jikke van Giffen for their contributions.

The main reason why I chose to recruit adults for this making activity was their availability and independence compared to children. Moreover, I specifically selected co-creators with a creative or artistic background to ensure the collection's wow factor.

The intention of the collection of 10 is to inspire the variety of metaphysical death perspectives that can be embodied through the Hein mask. The collection consists of cultural perspectives, rituals, afterlife images, and wild fantasies. They are intentionally ill-defined and open to interpretation, sometimes contradicting one another. It is up to the children to navigate through the collection and judge for themselves.

An important note is that the Hein masks that represent a specific cultural perspective were designed to be inspired by that cultural perspective but altered enough not to be an appropriation of that culture. This is most relevant for interactables 12, 17 and 19, which were inspired by Mexican, Hindu, and African death cultures respectively.

Drafts have been written for the short stories that the children can listen to by putting on the exhibited masks. These can be found in appendix I. Whereas the Magere Hein character that welcomes the children to the exhibition speaks in a warm male voice, the exhibited stories are told by children's voices, to contribute to the illusion that the current exhibition is already a result of other children's work.



Figure 61. Friends and family working on the final prototypes of the collection of Hein masks.



Figure 62. My mother, Silvia van Knotsenburg, making Hemelse Hein.

9.



9. The blank Eigen Hein (prototype)
The Hein mask as a blank canvas is the product of a thorough exploration towards a midpoint between the traits of a skull, a human face and the iconic comedy and tragedy masks from the theater. The latter can still be recognized in the diamond-shaped eyeholes. On top of this, I designed the character in a cartoony style to be attractive to the children. The speaking character of Hein has the function of Campbell's wise mentor or friendly helper. See appendix H for a detailed insight into my process.

Apart from the black outlines, the mask is left plain to maximize the area that children can use for their creations. This is specifically true for the eye sockets, which start as a skeletal feature but leave room for alteration. The stitched up smile was chosen from numerous alternatives by the children in the prototype evaluation tests that will be discussed in the following chapter. The smile also bears resemblance to Hein's cousin Jack Skellington from Tim Burton's claymation classic *The Nightmare Before Christmas*.

It is hard to deny the Eigen Hein's resemblances to Kleine Hein, Tot Zover's mascotte. I chose not to work with this existing character in this project, because I deemed the character design of Hein an essential aspect of the project in its educational context.

10. The blank Eigen Hein (sketch)
Within the confines of this project, I had to deal with a limited variety of masks available for purchase. Hence, the mask prototypes derive slightly from the sketched design.

10.



11. Groene Hein / Green Hein

This mask is decorated with a collection of the fallen leaves of late summer. Starting at the bottom with dark brown, wilted and shriveled twigs. Moving up, the leaves are less and less decomposed. A hopeful green acorn rests on the masks forehead.

The mask symbolizes the ecological circle of life. As mentioned before, it is grounded in the biological death concept, but could still help to navigate metaphysical questions and reflections. It was included in the collection to represent an atheist or agnostic perspective.



12.



12. Bloemige Hein / Flowery Hein

This mask portrays an almost happy ensemble of glitter, confetti and two flowers for the eyes. Its short story tells of a girl who visits her aunt's grave with her mother regularly. One day, a flower blooms on the grave. The girl explains that in her family they believe that the flower is her aunt's way of saying hello.

The mask's meaning and relevance to the collection is twofold. Firstly, the mask is an expression of the love that propels feelings of grief. It is a reminder to the visiting children that grief can only exist where love is. Secondly, this positive perspective towards death may nudge children to feel more free and imaginative in their own explorations (and creations).

The color and flowers of this mask were inspired by the Mexican tradition of Día de los Muertos, which also creates the opportunity to learn about a cultural tradition from another part of the world. Of course, the flowers may also bring up associations to a funeral bouquet.

13. *Helpende Hein / Helping Hein*

This mask portrays a crying lady and two helping hands. Her eyes are shaped like loving hearts. It symbolizes the comfort that a grieving person may find in other people, specifically through a hand on the shoulder or a tender hug.

Compared to the other masks, this one represents more of a psychological and social perspective than a metaphysical perspective. It is linked to the insight gained in part 2 that children at the studied age understand the value of other people's help in difficult times. This mask is a reminder of that wisdom.



14. *Hemelse Hein / Heavenly Hein*

This mask shows a crafty interpretation of the traditional Christian image of heaven. The Hein may be seen as an angel, decorated with wing-like feathers, a cross and a halo. It is bright and glittery with rich, golden accents.

This mask may be one of the more conventional perspectives portrayed in the collection. It was added to show the children that fantastical creations, although allowed and to some extent encouraged, are by no means a requirement.



15. Buitenaardse Hein / Otherworldly Hein

This Hein is a horned alien from a different planet or maybe even from a realm beyond our comprehension. It was inspired by the remark of a child in the research sessions of part 2 that heaven might even be an alien planet.

The mask was added to the collection as a counterpart of interactable number 14, the Heavenly Hein. It signifies how wacky children should feel free to go with their ideas and creations.



16. Huilende Hein / Crying Hein

This mask portrays the recognizable image of the sad Pierrot clown that has its origins as an archetype of the seventeenth century *commedia dell'arte* theater. His black makeup creeps down his cheek on the back of a tear.

This sad Pierrot is part of the collection to signify death's emotional weight, which I have found to be a known thing for the children in the target age group. This mask has the function of reminding the children that, more often than not, death comes with grief. It is an essential aspect of the collection, since it acknowledges sad feelings that the children may have instead of avoiding or neglecting them, especially in the colorful and hopeful context of the other masks in the collection.

Additionally, Pierrot is a subtle reference to an archetype of traditional puppet shows, such as *Jan Klaassen en Katrijn* in the Netherlands, where he is known as Pierrot or Pierlala. In the Flemish-speaking region, Magere Hein is known as Pietje de Dood.

17. *Herboren Hein / Reborn Hein*

This mask tells the story of spiritual reincarnation that is a common belief of the Hindu and Buddhist traditions. It is added as an alternative to the Western death perspectives. The notion of reincarnation does not see life and death as linear but as circular.

The aesthetics of the mask do not necessarily reflect its cultural heritage to keep it more open to interpretation. The more culturally neutral image presents the rising sun on the backdrop of a night sky. The headdress shows expressive rays of sunlight.

The placement of the sun on the forehead of the mask coincides with the third eye, or sixth chakra, of Indian spirituality. It is associated with inner wisdom and imagination [51].



17.

18. *Herinnerende Hein / Remembering Hein*

This mask shows a candle lighting up a dark room. Two hands cup the air around the candle and catch some of its light.

Lighting a candle is a remembrance ritual in many corners of the world. This mask emphasizes that such rituals can keep a deceased person alive in a different form. I found that children in the target age group are capable of understanding this notion in the research sessions of part 2.

The crown of multicolor candles refers to a funerary ritual that we perform in my family. Each candle symbolizes a particular trait of the deceased person. Each speaker lights a candle as they start their eulogy.



18.

19. Dansende Hein / Dancing Hein

This mask is a fantasy creature. Its majestic golden face has blue and red decorations. Its long braided beard swings as the mask's wearer moves their head.

The mask and the swinging beard symbolize the funerary traditions of certain peoples native to Africa, where mourners dance to celebrate the life of the deceased. It also shows some resemblance to the death masks of ancient Egyptian pharaohs.

The place of this mask in the collection is an alternative grieving ritual that focuses on expression instead of respectful - but bleak - silence.

19.



20.



20. Slapende Hein / Sleeping Hein

This final mask shows a creature that is fast asleep. This Hein is blindfolded and hooded with cotton wool as if floating on a cloud. His forehead is decorated as a sky with silver stars.

Although this mask may look fantastical, maybe even from a work of science fiction, it is part of the collection to represent another more down to earth death story, fitting to an atheist or agnostic perspective.

This mask was inspired by a child's remark during the research sessions of part 2 that death may just be like a dreamless sleep. The inside of this mask is, though invisible in this image, also completely covered in cotton wool. Putting on the mask, one can almost witness the symbolized loss of consciousness and detachment from the physical world.

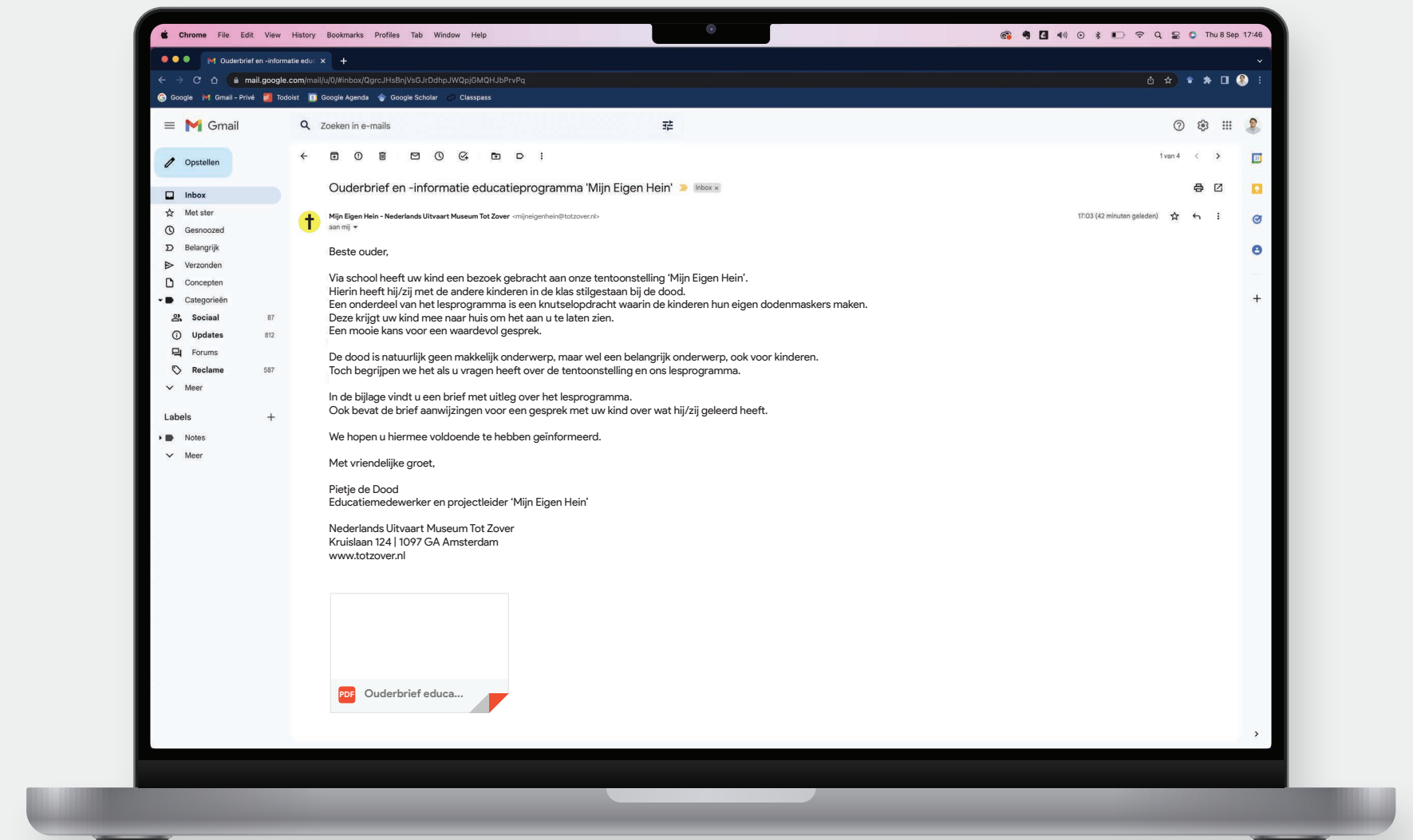
21.



21. Teacher's guide

This document prepares teachers for their responsibilities during the children's interactions with *Mijn Eigen Hein*. It gives them a detailed overview of the activities including indications of their duration and provides examples of helping questions to stimulate the children. Another addition to the guide is a set of tips for variation to keep the learning journey flexible to the teacher's preferences. A draft of the teacher's guide can be found in appendix J.

22.



22. Parent information letter

In the current situation, death is often avoided at home because parents find it difficult to assess what they can and cannot discuss with their children, as was explained in part 2. Therefore, it is wise to prepare parents for the child's return with their crafted mask by giving them pointers for a good death discussion. I have not written a draft of this letter within the scope of this project.

Evaluating the concept.

Using the design criteria to assess *Mijn Eigen Hein*'s positive impact on the current context.

In the part 3 of this thesis, I presented a design goal and interaction qualities. In this chapter, I assess to what extent *Mijn Eigen Hein* fulfills these criteria through a prototype test with children.

In this phase of the project, I returned to the schoolchildren that had been participants in the research sessions of part 2. Using the same group of children proved more practical than recruiting a new group. Additionally, the fact that I was already a familiar face could make it easier for the children to feel comfortable during the sessions. I once again made two groups of four children which I tested with for one hour each. The session setup can be found in appendix K. During the sessions, I upheld the same ethical considerations as during the research phase, see appendix F.

Limitations of the evaluation.

At the time of organizing this evaluation, its place in the project was a quick-and-dirty test of the masks as a central object of the learning journey. I remember, however, being so happy with the results that I did not think another formal evaluation was necessary to assess the design goal. If I am honest, the same cannot be said for the interaction qualities. For those, I rely on my own observations instead of the children's explicit remarks about their experience with the prototype. I reflect on the limiting factors of my evaluation to the right.

Available time with the children. The sixty minutes per group was the maximum amount that the teacher would allow the children to be away from their lessons. This meant not including a part of the learning journey for the test. I decided to focus on emulating the exhibition visit, omitting the call to adventure. Next to this, I allocated most of the time with the children to playing and testing, less to interviewing afterwards. The children's enjoyment and learning process were the priority during the sessions as I was a visitor in their learning environment; my research insights were secondary.

Low-fidelity prototype. I decided that a non-digital, low-fidelity prototype would suffice to assess my criteria feasibly; a fully functional technical prototype was not necessary. Please be aware that the mask designs used here were an earlier iteration of the final versions presented in the previous chapter.

Difficulty assessing abstract metrics with children. Compared to adult participants in a user test context, children are a particular group to work with for assessing abstract metrics such as interaction qualities. I found it challenging to get the children to describe their exact experience with the prototype with much nuance. After my experience with the two sets of sessions in this project, I do not think children in this age group are in a stage of their cognitive and emotional development where they can verbally express their own experiences with the nuance required to scientifically assess metrics such as 'adventurous', 'imaginative', 'acknowledged' and 'connected'.



Figure 63. The school library where the prototype test was conducted.



Figure 64. A child working on their Eigen Hein.



Figure 65. A hidden Hein.

I once again break down the design goal into three components that mark the important steps in the hero's journey. I first assess the three parts separately to draw a combined conclusion.

My design goal is to give 9- to 11-year-old schoolchildren space to:

1. Explore death stories.

The scavenger hunt-like activity of the journey is an effective exploration of different death stories. After I explained the assignment during the tests, the children could not wait to leave our meeting room and find all hidden Hein masks. I did notice that the assignment made the children a bit competitive: they wanted to be the first one to finish. That may explain why not all 10 Hein stories were listened to by all children.

2. Embrace such stories, in their variety, may be authentic and personal.

At the end of the testing sessions, I reflected with the children on what they had learned. They told me that the exhibition had been about many different Heins and that everyone can have their own Hein, because everyone can have their own idea of death: 'Of course, everyone is free to believe what they want.' They seemed to grasp the simultaneous individuality and universality of the Hein mask:

In some way, everybody is a Hein.

The activity of giving the personal coin to the most appealing Hein mask led to mixed results. For most children, the choice was intuitive, although not all decisions seemed to have deep reasons. One child moved me by picking 'Crying Hein', explaining that she usually cries when she thinks about her little brother who died in infancy, while another picked 'Dancing Hein' just because he likes dancing a lot. For one of the children, which I would roughly describe as kind and polite but introverted, the assignment was simply too difficult. I tried helping her by asking questions such as 'Which mask do you think looks best?' or 'Which masks do you think is the weirdest?', but to no avail.

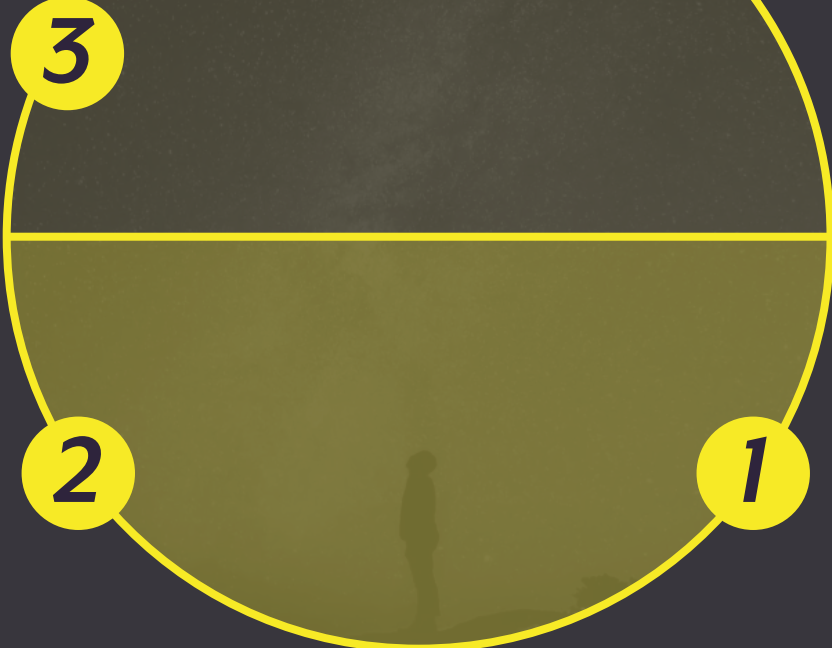


Figure 66. Visualization of the design goal.

In the reflective discussion, I noticed how the children started positioning themselves in relation to the stories that they had been presented with in the explorative activity. One of the children, for example, commented on 'Dancing Hein':

This Hein means that they celebrated when someone had died. I think that's weird, because then it seems like you're happy that they are dead.

The child here formed an opinion about the cultural perspective that was presented by that mask. Although this quote shows that the child understood her freedom to have a perspective, it also tells me that not all children walk out of *Mijn Eigen Hein* with as open a mind about other perspectives as I would want them to.

3. Express their own stories.

The most important factor of the prototype test was whether children would be able to use the blank Hein mask as a canvas for their own imaginations and experiences. I was happy to find that during the making activity personal stories once again started to emerge and found their way onto the masks. One child drew her grandfather as a two-faced Hein:

One half is happy because he always made jokes. The other half is bloody because he's dead now.

Another child took one of the exhibited masks from the exploration activity as an example and made his Hein look like an angel in heaven. Then he added his grandmother's name on the forehead because she had believed in heaven when she was still alive. The personal examples and references to deceased family members align with the research insight that metaphysical fantasies can form around loving memories.

Not all children turned their mask into a reflection of their personal stories. Some, mainly boys, drew more creepy figures which did not seem to be connected to any memories or experiences. I felt that they saw the activities more as a fun crafty workshop than as an opportunity to share and listen empathically. These were the same children that saw the exploration activity as a competition. I suspect that the extent to which the children empathically listen to the 10 hidden Heins' stories early in the journey determines their efforts in the making activity.

I must note that I gave the children some help in deciding what kind of face they wanted to make by asking questions about the exhibition and their experiences. Some children were not immediately inspired by a specific idea and, due to time constraints, I opted for giving them some help to speed things up. I was careful not to plant ideas into their heads, but I cannot rule out that I had no influence at all on the resulting artworks.

Overall, I would conclude that *Mijn Eigen Hein* as a concept fulfills the design goal. Children understand the story's moral, and they can use the mask as a canvas for their personal stories. It may be the case that not all children share their deepest ideas, but even those children learn during the journey by hearing their classmates' diverse stories.



Figure 67. A child finding one of the hidden Hein masks.



Figure 68. Two children collaborating on the exploration activity.



Figure 69. Children playing with their Hein masks before starting the making activity.



Figure 70. Children proudly showing off their completed worksheets as I am proudly watching them.



Figure 71. Children posing with their Eigen Hein masks.

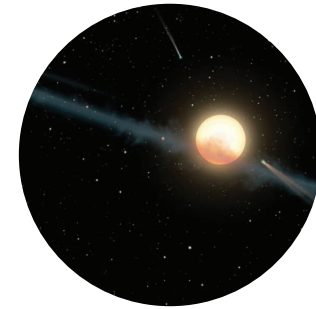


Adventurous

Heroic, exciting, extraordinary.

The children's journey starts quite typically as Campbell's *Call to adventure* with the white cylindrical box that is brought into the classroom. This container with unknown contents was expected to be quite mysterious for the children. At least it is something which does not happen on an ordinary day at school.

Then, during the visit, meeting Magere Hein face to face and hearing his voice could be exciting for the children. As noted in the previous chapter, the children participating in the prototype tests seemed enthusiastic and intrigued throughout, especially during the exploration activity. Other schoolchildren passing by the test setup seemed curious about what we were doing.



Imaginative

Otherworldly, creative, inspiring.

The world that children enter during the visit to the exhibition does not look too imaginative at the beginning of the journey. The round meeting room has a sleek, white design, representing the death taboo perceived by adults with the uniform, undecorated Hein mask as its poster child. But as the journey continues to the exploration activity, the children find the 10 Hein masks whose death stories color outside the lines. The children may imagine worlds around those stories, even though the masks are placed between normal-looking library bookshelves. I noticed how this may work during the prototype test, when 'Reborn Hein' made a strong impression on one of the children. After some thinking, she remarked:

So it could also be that we've all had fifty lives before this one.

After the climax of the journey through the making activity, the world left behind by the children is no longer white and bleak. The world, now metaphorically saved by the children through their imagined creatures, has come to life as a cacophony of colorful masks on the wall, achieving the envisioned prism-like theme. This is not an Eftelingesque design in which the children are immersed in the designer's imagination. This is a design in which the children do the imagining.



Acknowledged

Present, unquestioning, accepted.

This quality manifests itself the most in the ritual where all children present their Hein creation to the rest of the group. Each child gets the floor for a moment; each child is free to share what they want to share, or to keep things to themselves. This is reflected in the mask's design: the children can decorate both the outside and the inside.

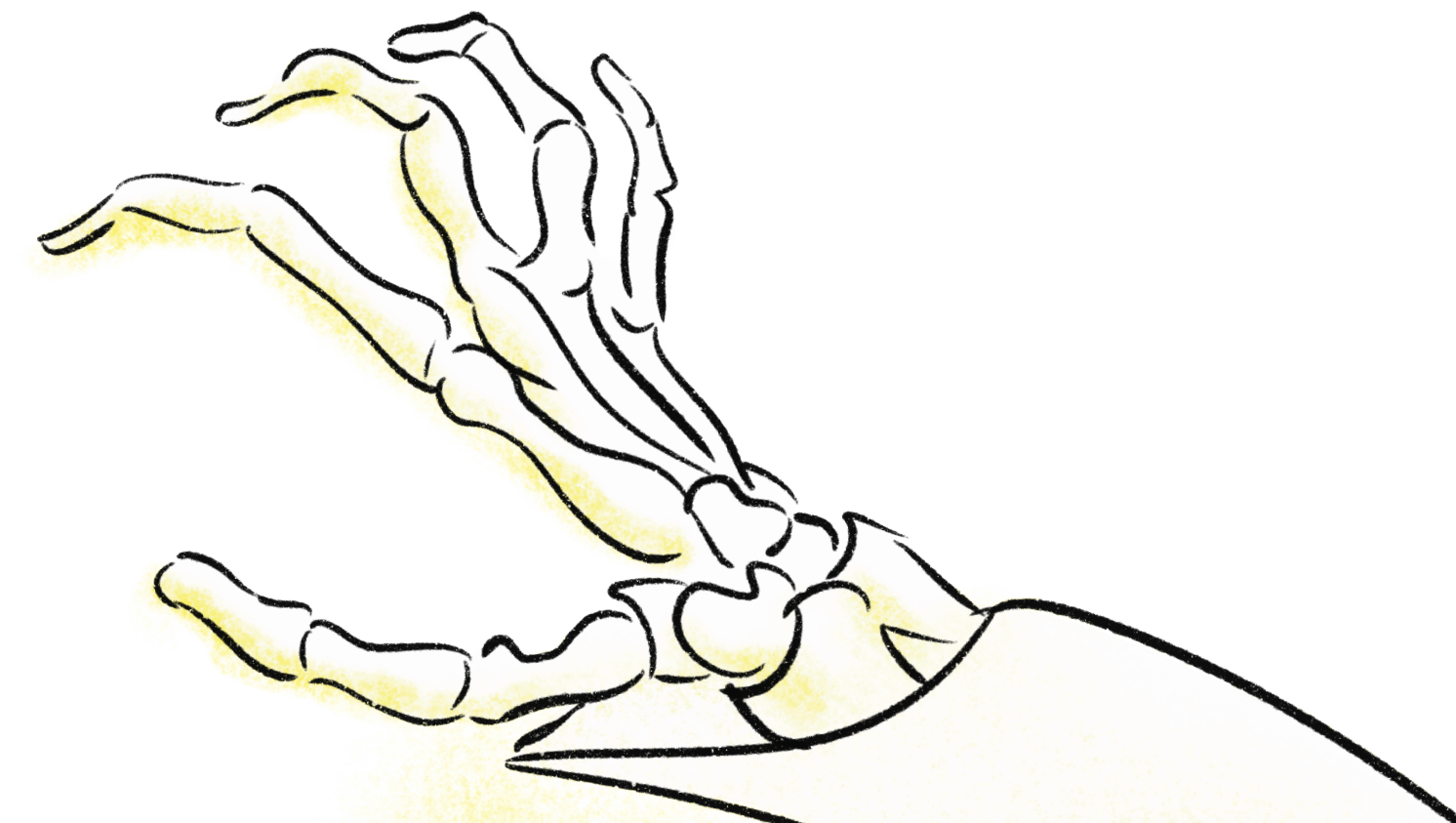
The personal coin each child receives after the exploration activity is another way in which this quality is reflected. The coin tries to show the children that their opinions about the exhibited Hein masks matter.



Connected

Empathic, supportive, intimate.

The design concept embodies connectedness in a variety of ways. Firstly, and most essentially, the children connect as a group during the presentation ritual. The room has a circular shape with seats along the wall to create an intimate atmosphere, inspired by the scene of sitting around a campfire. Secondly, the children are free to connect to their lost loved ones through their creations as explained in my evaluation of the design goal. Thirdly, the created masks give parents an insight into how children perceive the topic of death, which may give them the opportunity for a deeper connection.



Recommendations for further **design.**

Giving suggestions for the further development of *Mijn Eigen Hein* into a fully realized pop-up exhibition.

In this chapter, I zoom out and use the dimensions desirability, viability, and feasibility to provide recommendations for the further development of the concept.

Desirability concerns to what extent the concept addresses the involved users' needs and values. Viability concerns to what extent the concept has the potential to bring long-term value. Feasibility concerns to what extent the concept can be realized with available resources and technical capabilities. The equilibrium of these three dimensions is known as the innovation sweetspot [52].

Desirability

Desirability for children. Based on the criteria assessment of the previous chapter, I would say the concept is desirable for children. It addresses the topic of death in a way that is appropriate for the age group and makes for an enjoyable experience. The aesthetics of the concept were found attractive by the children in the tests. Children have even contributed to the final design of the Hein mask.

As mentioned in the previous chapter, not all children participating in the tests took part in the envisioned empathic atmosphere. I concluded that this was caused by these children not connecting to the hidden Heins' stories. I would, therefore, recommend to further develop these

stories. There is probably a sweet spot between entertaining and informative, but this would have to be experimented with further.

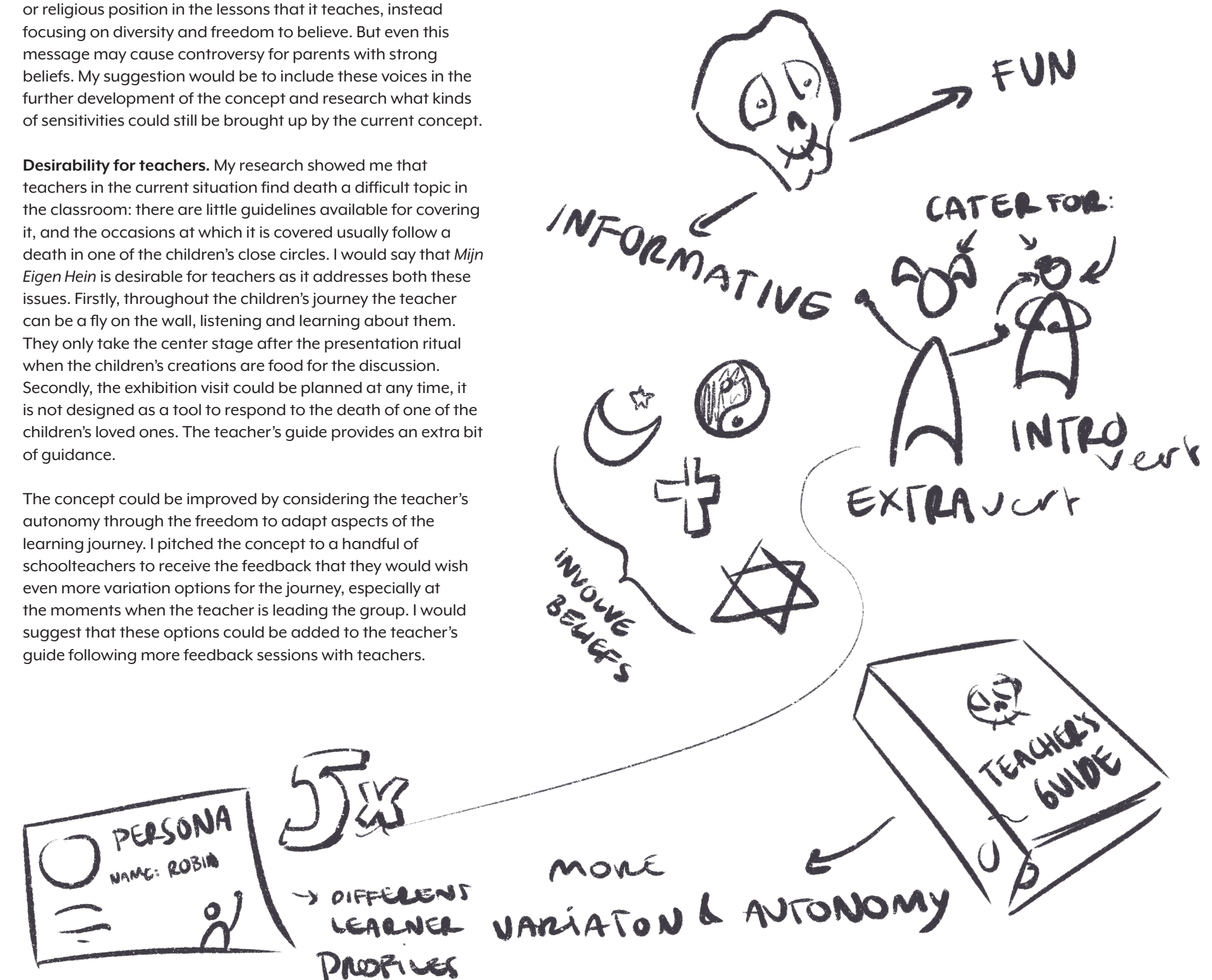
More improvements towards the desirability for children could be made by considering the diverse learning styles and personalities of children. The former has, in my opinion, been addressed by including diverse activities – writing, talking, crafting, and moving. The latter, however, does not seem balanced to me. The tests showed me that the current design is more effective for extraverted children than for introverted children. This is particularly apparent in the personal coin giving and the presentation ritual. These two activities could be redesigned to better cater for introverted children's needs. I would advise creating a selection of about five rounded personas and imagining their experience throughout the learning journey to find additional points of improvement.

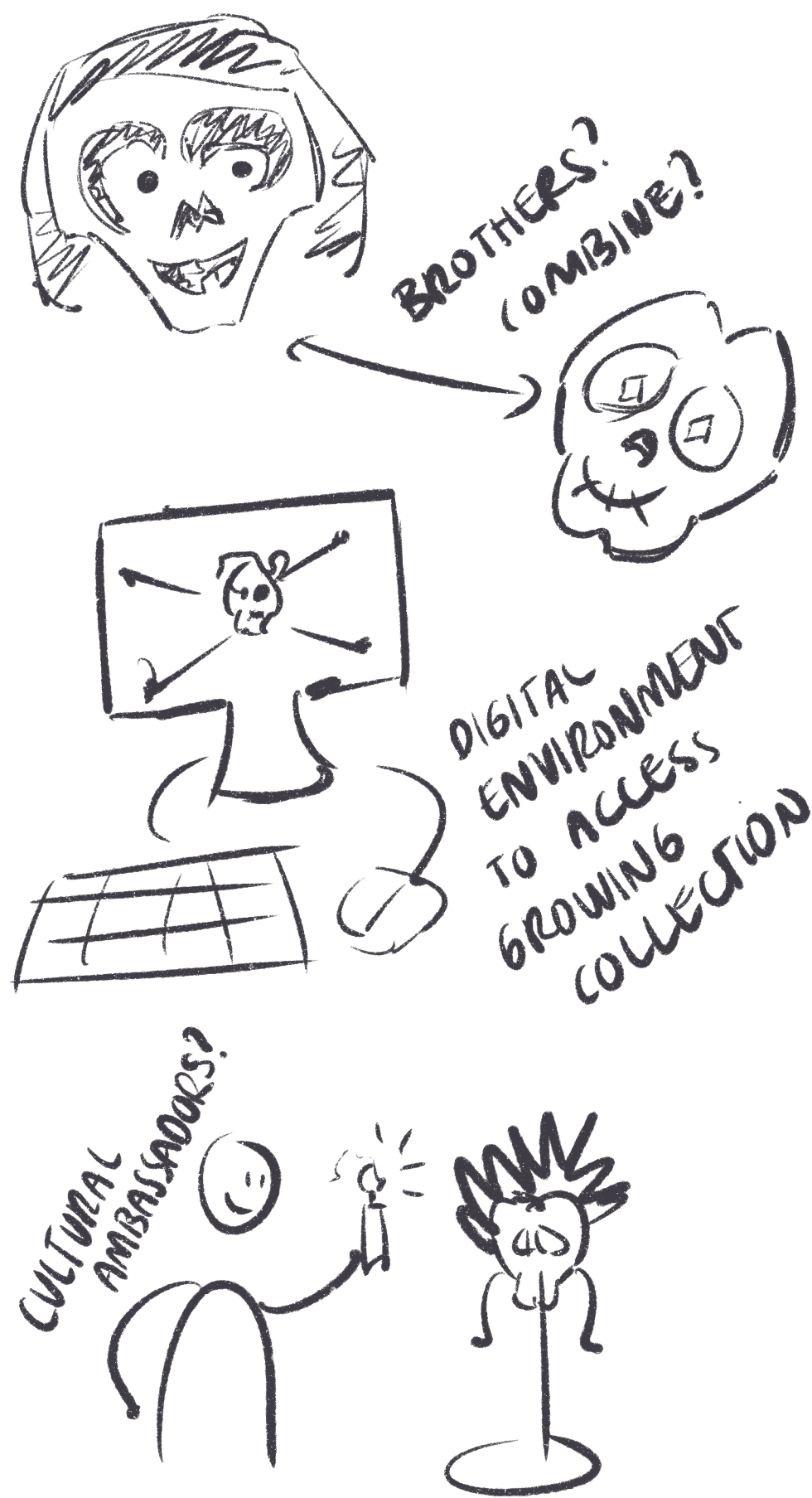
Desirability for parents. In the current situation, parents have trouble discussing the topic of death with their children. I would argue that the concept is desirable for parents, albeit indirectly since they do not interact with the learning journey directly. The concept gives parents a reason to discuss death instead of avoiding it, as the child brings their decorated Hein mask home. The mask and the supporting parent letter give parents insight into their child's thoughts and feelings towards the topic. This insight may make parents feel more prepared for and comfortable with the discussion than they were without *Mijn Eigen Hein*.

Mijn Eigen Hein was designed not to take any ideological or religious position in the lessons that it teaches, instead focusing on diversity and freedom to believe. But even this message may cause controversy for parents with strong beliefs. My suggestion would be to include these voices in the further development of the concept and research what kinds of sensitivities could still be brought up by the current concept.

Desirability for teachers. My research showed me that teachers in the current situation find death a difficult topic in the classroom: there are little guidelines available for covering it, and the occasions at which it is covered usually follow a death in one of the children's close circles. I would say that *Mijn Eigen Hein* is desirable for teachers as it addresses both these issues. Firstly, throughout the children's journey the teacher can be a fly on the wall, listening and learning about them. They only take the center stage after the presentation ritual when the children's creations are food for the discussion. Secondly, the exhibition visit could be planned at any time, it is not designed as a tool to respond to the death of one of the children's loved ones. The teacher's guide provides an extra bit of guidance.

The concept could be improved by considering the teacher's autonomy through the freedom to adapt aspects of the learning journey. I pitched the concept to a handful of schoolteachers to receive the feedback that they would wish even more variation options for the journey, especially at the moments when the teacher is leading the group. I would suggest that these options could be added to the teacher's guide following more feedback sessions with teachers.





Viability

Mijn Eigen Hein has the potential to be a viable way of reaching children with Tot Zover's message. I did my efforts to fit the design into Tot Zover's current portfolio, which is prominently visible in the yellow tint used throughout the concept elements and its branding. But *Mijn Eigen Hein* itself could be seen as an older sibling of Kleine Hein, Tot Zover's current mascot for the child audience. Still, I could see that the museum would combine the two characters for a more coherent story. In that case, I would give the advice to alter Kleine Hein's current design by removing its pink elements, since the mask as a blank canvas is a core feature of the concept. The children should add the color, not the adults.

Traveling from location to location, the concept could cause excellent publicity for the museum through children's positive experiences and parents' word of mouth. This potential may be enhanced by the flagship installation of children's mask creations that grows as more children visit: the installation's multicolor message increases with each mask added to the digital collection. This may in the end even attract more families to the museum at the Nieuwe Ooster. I would recommend further exploring ways for children and parents to access their own and their classmates' creations in an online environment, so that the collection and the *Mijn Eigen Hein* message reach beyond the pop-up exhibition. Another point to consider is how the exhibition can be experienced in other ways than a school visit. I can imagine that, for instance, a mother and child go through a shortened version of the learning journey on a Saturday afternoon, but this was not part of my scope in this project.

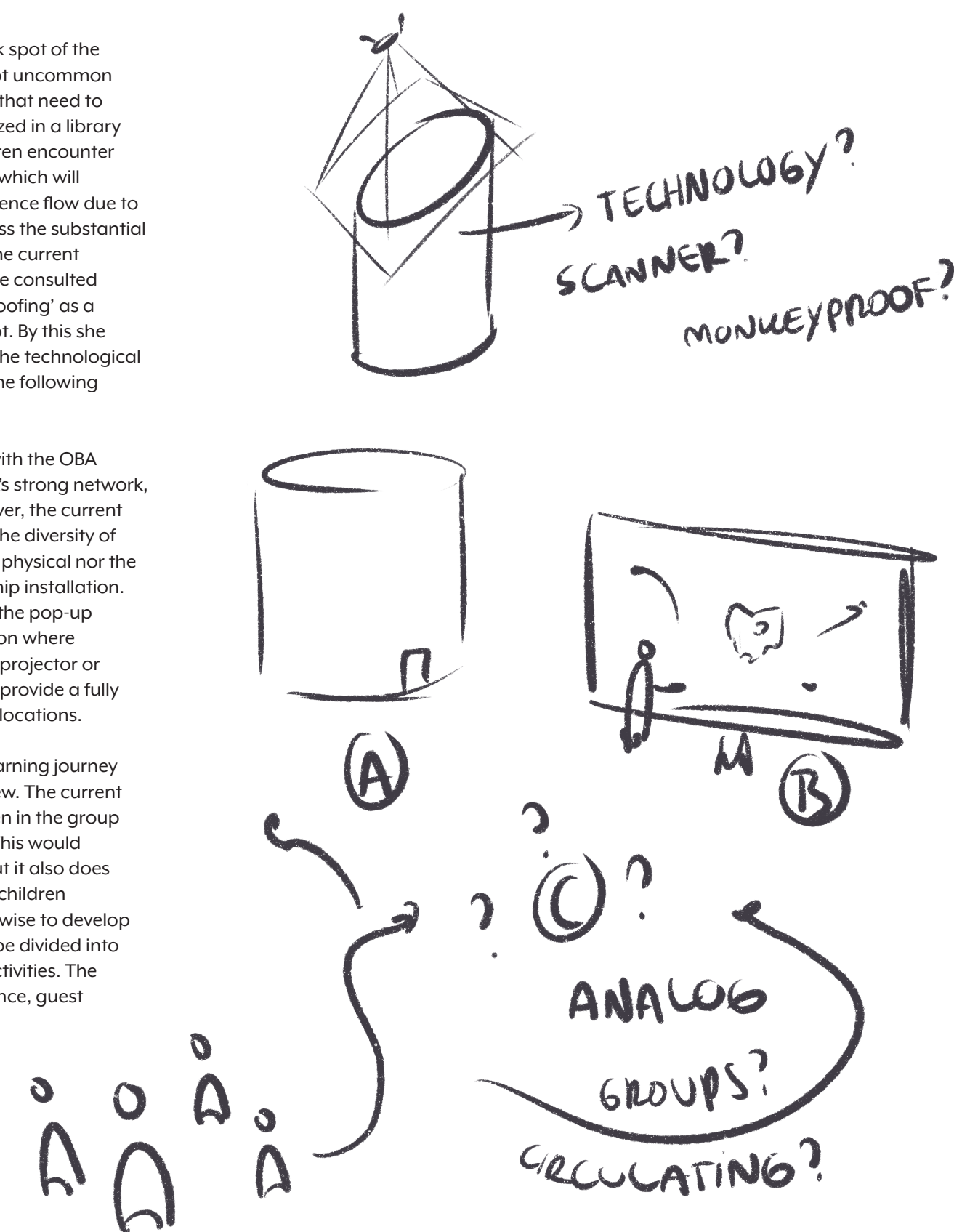
Another recommendation to increase the concept's viability is to adapt the exhibition content to its temporary locations. In my discussions with the OBA, for instance, I learned about the specific cultural characteristics of the different neighborhoods of Amsterdam. My idea would be to change selection of hidden Hein's to reflect the neighborhoods cultural diversity. An even better idea would be to invite influential cultural figures in these communities to make an Eigen Hein and place it in the exhibition temporarily. The same people could be invited to participate in additional programming such as guest lessons. This may embed *Mijn Eigen Hein* in the agenda of the Funeraire Academie.

Feasibility

I would deem the (technical) feasibility a weak spot of the concept in its current form. Although this is not uncommon in early concept design, there is a few factors that need to be addressed before I see *Mijn Eigen Hein* realized in a library hall. The technology-driven interactions children encounter during their journey need much further work, which will inevitably lead to changes in the visitor experience flow due to technical constraints. This does not yet address the substantial monetary investment that the realization of the current concept would require. Additionally, one of the consulted experience design experts named 'monkeyproofing' as a pointer for further development of the concept. By this she meant that the reliability and repairability of the technological elements should be given much attention in the following design stages.

I recognize that the proposed collaboration with the OBA increases the project's feasibility through OBA's strong network, large team, and widespread locations. However, the current concept does not yet sufficiently account for the diversity of these locations. Not all locations will have the physical nor the monetary space to house the concept's flagship installation. I recommend developing multiple versions of the pop-up exhibition in various scales. I could see a version where the flagship installation is reduced to a single projector or television screen. Another option would be to provide a fully analog version of the journey for the smallest locations.

Finally, more thought could be given to the learning journey of a school group from a logistical point of view. The current concept is a unilateral funnel where all children in the group simultaneously partake in the same activity. This would not only require an abundance of supplies, but it also does not account for the differing speeds at which children complete the individual activities. It would be wise to develop alternative activities. The children could also be divided into smaller groups, circulating through several activities. The aforementioned programming with, for instance, guest speakers could be useful to consider here.



PART 5 CONCLUSION

This part wraps up the graduation project. I start by reflecting on the project's value for the museum Tot Zover: has this project been able to fulfill its objective? Then, I reflect on the project outcome's potential academic and societal implications. I end the part and this thesis by reflecting on the project as the final part of my learning journey towards my master's degree in Industrial Design Engineering.

A dream for the future.

Reflecting on the future implications of the project outcomes and bringing the project to a close.

Well, that was it. My research and design work on this project is done. All that's left for me is to reflect on what the project may have accomplished. I first give a brief summary of my research and design outcomes. Then, I look at the future implications of those outcomes for Museum Tot Zover, for academia and for society as a whole.

At the start of the thesis, I introduced the project objective: I aimed to design the narrative concept of a Tot Zover pop-up exhibition for 9- to 11-year-old children about the subjective aspects of death. I researched how children in the target age group currently learn about the subjective aspects of death and how storytelling could make a positive contribution. Among other activities, I conducted literature research and contextmapping sessions with schoolchildren. I concluded that children currently learn about the subjective aspects of death – now classified as the psychological and metaphysical aspects – in isolation, since the topic is not often discussed. A positive change could be made through storytelling: telling stories to children invites them to share their own experiences, fantasies, and reflections, which promotes feelings of comfort, and which may enrich the perspectives of the listening children.

The research insights were used to construct abstract design criteria. These led to the design *Mijn Eigen Hein*, the narrative concept for a traveling exhibition. While interacting with the concept, children explore death stories embodied through a collection of Hein masks that represent contrasting perspectives on the subjective aspects of death. They learn to embrace that death can be many things, and that anyone is free to form their opinion. In the climax of their journey, they express their own stories by making their own Hein and adding it to the collection. The concept was evaluated with positive results through

a prototype test with schoolchildren and through feedback meetings with experts of experience design.

Implications for Museum Tot Zover

The design result of the project is an early narrative concept. Looking at the initial project objective, I would argue that my summary of the outcomes shows that the project has been a success. This does not mean that the design is not anywhere near completion. As recommended at the end of part 4, mainly the technological elements of the concept need much more work. A quick idea would be to conduct another graduation project with a student of the *Integrated Product Design* program to develop my conceptual work into a realized design. This could also be an opportunity to flesh out the pop-up or portable aspects of the concept, which is something that eventually fell outside of the scope of this project.

In any case, Tot Zover will need to take the following months to attract funding and further develop the narrative in collaboration with the OBA and possibly other content partners if the project is scheduled to launch in September 2023. Who will be receiving a cylindrical white box in their classroom soon?

Implications for design research

I started my preparatory work for this project about one year ago. I have since learned so much about children's personal storytelling, about their imaginative, creative minds and about death education. I must admit that I could not find much existing research that combined those three, especially within the context of design. I wish to remind you that children's psychologists such as Manu Keirse still advise against fantasy when it comes to death education [5].

The work described in this thesis was, as in any project, subject to some limitations. Firstly, death as a research topic inherently makes its researchers stakeholders in the study context since death is universal.



I can only admit that one way or another my agnostic beliefs have influenced the research and design outcomes. Secondly, in both the research and prototype evaluation sessions, only eight children participated. Future research could bring more children's authentic death stories to the surface. Thirdly, a detailed understanding of parents' sensibilities towards their children's death education was not my focus during this project. Future work, advisably through participatory design research, could generate more insight into a parent's perspective complementary to the child's perspective studied in this project.

Setting up my research phase, I hit several procedural bumps in the road caused by sensibilities about researching the topic of death with children. Naturally, I was determined to limit the ethical risk of harming children with my studies, but who is to say the assumed risk is not itself the result of the death taboo of the adult world? Based on my experiences in the project, I wish to invite academics from all disciplines to give children more credit for their cognitive and emotional capabilities, especially concerning the topic of death.

Finally, I wish to point my attention to designers in the fuzzy front end. During my years of studying, I have struggled with the fact that in many design processes, storytelling is only a tool to communicate a design concept – its features, its interactions, its experience. This project gave me the chance to use storytelling as design. I call for more designers to follow that example. I hope my graduation project shows that there is a reason behind the central role that stories play in our lives. Why not make use of that?

Implications for society

The project has shown me the authentic beauty that children bring to the table if they have the space to tackle the topic of death in a way that fits their worldview. *Mijn Eigen Hein* can make a positive contribution to breaking the death taboo by establishing interactions between peers, with teachers and with parents. If the concept was implemented on a large scale, I could imagine that it would help to shape a generation that is open-minded about other death perspectives and that gives death a healthy place in their lives.

In the greater scheme of things, this project has challenged what place death should have in future society. The bleakness of Dutch death culture today could be transformed into endless varieties of fantastical perspectives. I am proud that in my project I have been able to prove that fantasy in death education can have positive effects for children. Reflecting on the co-creation session of the collection of 10 Hein prototypes, I would go as far as saying that it could do wonders for adults as well. It turns out that my dad's poem was not just a comforting narrative after all, but also a source for future inspiration. I invite you to think of that when you look up to the sky tonight.

I sincerely hope that the future holds tolerance and empathic listening. I hope that 'agreeing to disagree' will no longer be a way to avoid conflict, but a way to be inspired by the colorful spectrum of death perspectives that exist on our planet. And finally, I hope that this thesis inspires people from all fields to make an effort and bring us a step closer to that dream: my wish upon a star.

Reflecting on my own learning journey.

In this final chapter, I reflect on the project as the ultimate course of my master's program.

It is difficult to put to words what I learned during these seven months of graduation. I could spend another thesis-length piece on it. But do not worry, I'll stick to these two pages. To start off, I name learnings based on my experiences in the project. I end this chapter and this thesis with five tips to other students of *Industrial Design Engineering* for a successful and enjoyable graduation project.

Developing my human skills

As mentioned repeatedly already, I am grateful for the opportunity to conduct a graduation project on a topic that is so relevant and dear to my heart. I have been able to discuss the sensitive topic of death with children as well as my peers, which have taught me invaluable lessons as a human-centered designer and researcher. For instance, I have learned about the subtleties of creating the right empathic atmosphere in a research setting including the appropriate language. I have learned how to be inquiring without compromising the humanity of the conversation.

Additionally, this project has made it clear for me how working with and for young people inspires and motivates me. In the first step of my professional career, I will be searching for a position in which I can apply my design skills in a cultural educational context.

I have also learned much about my own death perspective and spirituality. The project has given me the chance to approach my grief about my father in new ways. I have been confronted to reflect on my own mortality, which is something that I generally avoided before. Both reflections brought old and new emotions to the surface throughout the project. Through it all, I am most thankful for learning to respect all death perspectives and for learning to see my own death perspective as a fluid and ever-changing concept.

Dealing with my pitfalls

My part-time work as a freelance videographer and consultant at a visual design studio taught me the ropes of project management. I think that these skills were a major help in this project, where for the first time in my studies I felt full autonomy and responsibility over my process. My personal pitfalls did not concern properly controlling the project but letting go of control of the creative process that is designing.

Contrary to the preachings throughout the *Industrial Design Engineering* program, design is not a linear and completely conscious process. Research insights and design criteria are subject to change as the concept takes shape. In this project, I struggled to allow the concept to take a shape organically: my perfectionist side wanted the concept to be finished in a single afternoon. I am happy to have learned how unrealistic this desire was while still under the wing of an educational context.

Five tips for a successful and enjoyable graduation

The graduation project is large, complex, and exciting. I would like to take this final page of my written work to share some tips for future graduating students that I wish I had known when I started.



Individual does not mean alone. Yes, graduation is an individual course. You are solely responsible for the research and design outcomes. This does not mean that everything you do has to take place in the isolation of your mind. I found that whenever I got stuck, a 30-minute coffee break with a friend could bring me further than a week of individual thinking. Do not be afraid to ask others for help.



If your story does not add up, tell it again. Especially in DFI projects, the road towards a design solution is going to be fuzzy. You may already see parts of your concept clearly, but the connections between them may be covered in fog. My advice: keep telling your concept's story, even if it is not complete. Every time you tell it, it will be better and more coherent than the last time. You'll get there eventually.



Motivation and fun are your most valuable assets. No matter the context of your project, you'll have to navigate a spiderweb of stakeholders and their concerns. It is very easy to forget your own needs and desires. You really do not want that to happen. Everything starts with an interesting and resonating topic, but it does not end there. Keep in mind that this project is first and foremost a course in your study program. Pursue your goals, conduct the activities that you want to try out. Listen to yourself, because before long you'll be listening to your boss at work.



Coaching is for you, so make it yours. You have a committee of two academic supervisors. If you decide to collaborate with an organization, you will have an external third supervisor. There is no definitive recipe for a productive and enjoyable collaboration with your coaches: it all depends on the personalities of the people involved, including yours. You don't have to agree with everything your coaches say or ask of you. Reflect on what you wish to take home from your coaching sessions and shape the sessions to those needs. Know that your needs may change over the project, so your coaching may change as well.



Be flexible. For most students, graduating is a high stakes game. It sure was for me. However, know that part of succeeding is letting go and just doing your best. You are allowed to make mistakes. You cannot control everything. Meetings will be canceled at the last minute; experiments will have surprising or disappointing results. One way or another, you will face uncertainty. After all, however macabre it may be to bring it up, the only certainty of life is death.

With those final words of wisdom, I am back to one of the very first sentences of my thesis. I ventured into an unfamiliar world where I sure encountered more than one trial. Now that I am back where I started, wielding the elixir that is the design concept, its implications and the lessons of the journey, I am no longer the person that started this project. I may not literally be the *Master of two worlds* described by Joseph Campbell. But I must admit, *Master of Science* does not sound too bad either.



Robin is home from the museum visit.



He runs over to Mom.
To show her the Hein he made.



I made it for Grandma, Robin says.

I'm not sure if it is true, but I like to think
that Grandma is a star now.

She's always there for us.



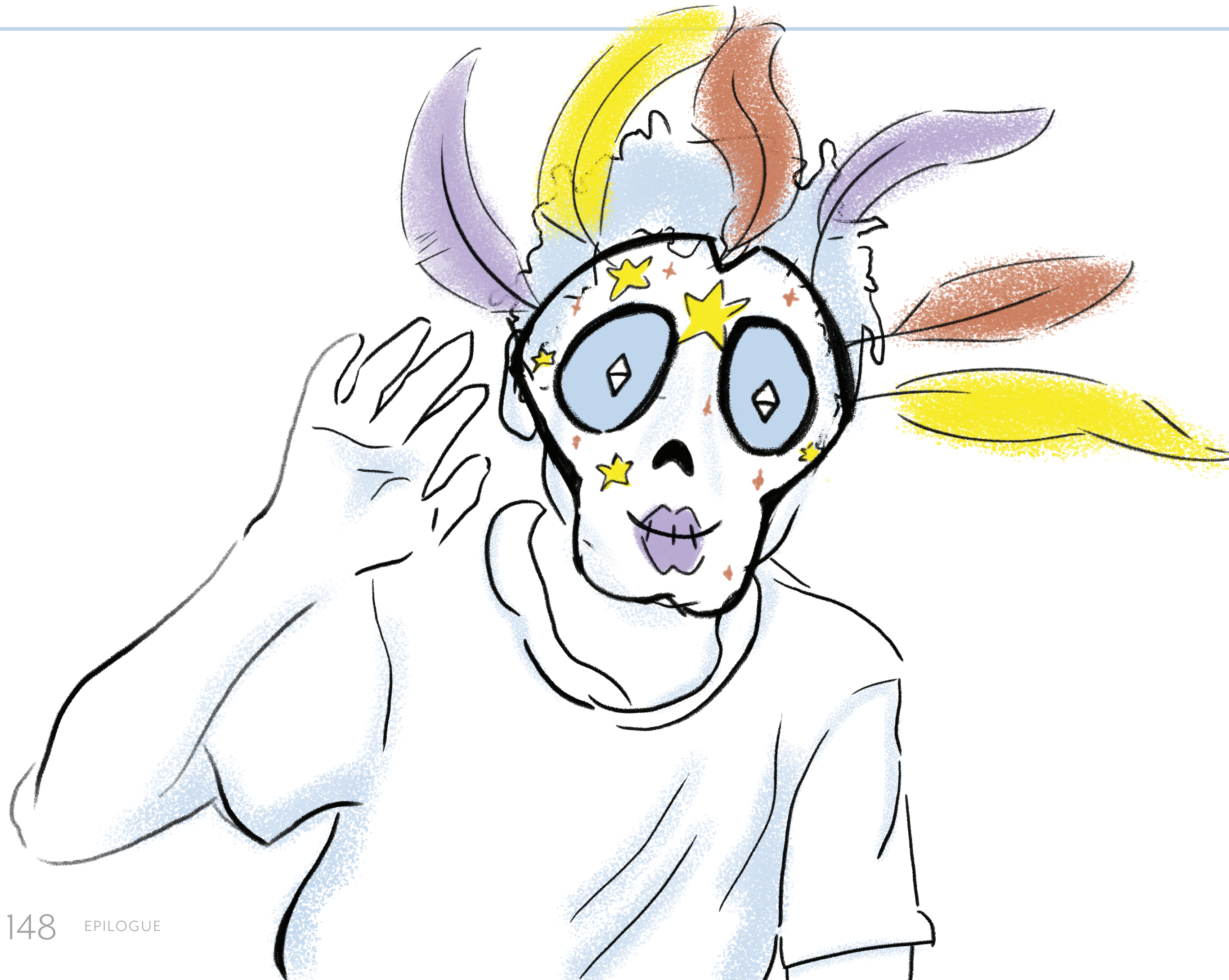
Mom smiles.
She does not say a word.
She doesn't need to.





Robin and Mom decide to hang the Hein high on the wall, like a star in skies above.

Now, Grandma is always close to Robin, even though she is not there.



This is Robin.

He may not know
what comes after this life.

But he has a story or two
to tell about that.

And he now knows
how to share those stories.

With his Hein, or without.

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Figures
The majority of figures used in the thesis were made by me. Below is a list of the figures for which this was not the case, with proper reference.

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Figure 43. Poppy Playtime [Computer Software]. (2021). Lake Stevens, WA: M.O.B. Games.

Figure 56. Japan RailPass. (2022). *Kabuki in Japan: What it is and how to watch it*. <https://www.jrailpass.com/blog/kabuki-japan>

