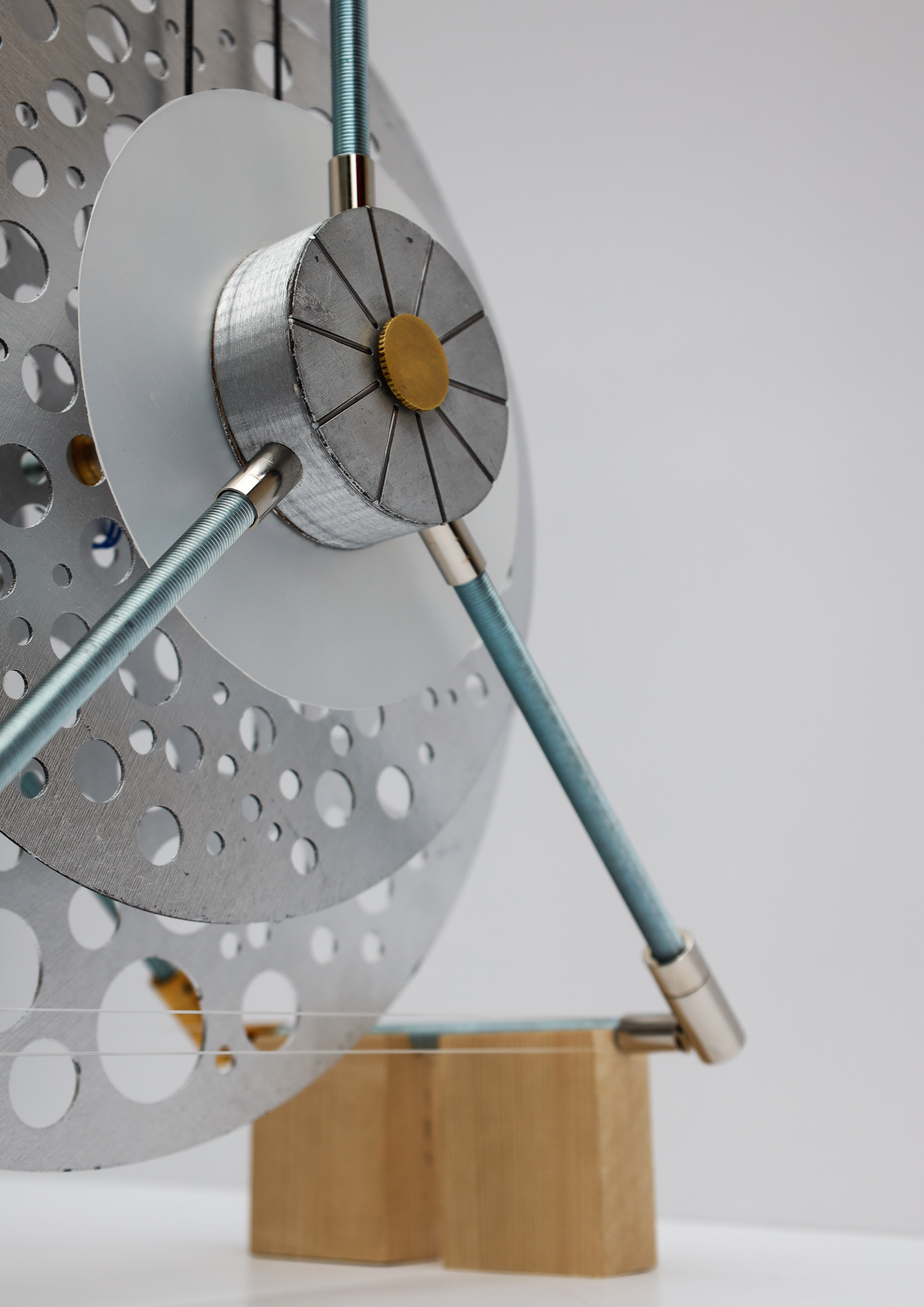

Design for Soft Fascination:

Bringing the outside in

By **Amy den Dekker**

Master Thesis - **Design for Interaction**

Supervised by **Pieter Desmet & Govert Flint**

Faculty of Industrial Design Engineering - Delft University of Technology - 2022-2023

Acknowledgements

Before you dive in, I must first express my gratitude to my supervisory team, Pieter Desmet and Govert Flint, for their guidance and support throughout this project. It has been quite a ride, to say the least. A big thank you for trusting me and my process.

And of course, my dearest family and friends, thank you for being there for me, for all your help, love and support. It feels great to have you around.

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Introduction

This graduation project explores the possibility of transfering mood-regulating experiences by recreating mood-regulating qualities artificially, ultimately leading to the design of Daze, a light object designed to lure us into a moment of soft fascination.

Context

The project emerged from a collaboration with the Delft Institute of Positive Design (DIOPD), which is an institution at the Faculty of Industrial Design Engineering at the Delft Technical University. DIOPD focuses on designing for human well-being, and its mission is "to initiate and stimulate the development of knowledge that supports designers in their attempts to design for happiness, for human flourishing". Over the past few years, DIOPD has focused on designing for moods, with a particular interest in finding ways to design experiences that support mood regulation.

After having collaborated with DIOPD on a project about mood regulation in the past, I decided to return to discuss graduation opportunities. During this conversation between myself and my chair, Pieter Desmet from DIOPD, we identified an opportunity to combine our skills and knowledge. Given my experience and interests in creating interactive experiences with technology, and in particular, interactive light experiences, we explored the possibility of creating an artificial mood-regulating experience, leading up to the research question: Is it possible to recreate an existing mood-regulating experience through artificial means?

Assignment

To approach this question, we hypothesized that it would be possible to study an existing mood-regulating experience, unravel its mood-regulating qualities, and recreate these qualities artificially to achieve a similar mood-regulating effect in a different context.

The goal of this assignment was twofold: first, to determine how such an experience could be created, and second, to explore if the transfer of a mood-regulating experience by recreating its qualities is possible.

The ultimate goal was to create an experiential prototype that would not only answer the research question but, through this project, also offer insights and inspiration to both designers and design researchers on how to design for mood regulation.

Process

This project followed a highly iterative and experimental process that involved a significant amount of hands-on prototyping. Therefore, this project is typical example of research through design. Although the actual process was very fluid, it can be best explained in the following design phases:

1 Research: diving into moods and exploring mood regulating experiences, ultimately resulting in a foundation of knowledge shaping the design direction and identifying the desired mood-regulating effect to recreate.

2 Observation: observing and analysing the chosen mood-regulating experience to unravel its mood-regulating qualities for recreation.

3 Experimentation: experimenting with ways to recreate the mood-regulating qualities through artificial means, leading up to key ingredients for design.

4 Integration: defining the relationships between the design ingredients that establish the desired mood-regulating effect to define the final prototype.

5 Finalization: building and fine-tuning the final prototype, making it ready for user testing.

6 *User testing:* testing the prototype to evaluate its mood-regulating effect.

Next, this documents provides insights into the fundamentals leading up to the design direction and summarizes the project in a summary and discussion.

The Fundamentals

This chapter lays out the theoretical underpinnings that inspired the design direction. The primary goal of this project is to recreate an experience that supports mood regulation. During the early research phase, an essential discovery was made that offered a means to design for mood regulation: the Attention Restoration Theory founded by Kaplan (ART; Kaplan, 1995). A compelling theory that shows parallels to moods, and mood regulation. To illustrate this, this document delves into the topic of moods, explores the Attention Restoration Theory, and shows how this inspired the design direction.

Moods

Designing for mood regulation requires an understanding of what moods are, how they function, and the various strategies that can be used to regulate them.

Moods

Moods are the positive and negative frames of mind that shape the ways we interact with the world around us, colouring our day-to-day experiences, and influencing our thoughts, feelings and behaviour (Morris, 1989; Desmet, 2015). As humans, we can experience a range of 20 different mood states that vary from pleasant to unpleasant, and from calm to energized (Desmet *et al.*, 2020). Moods are temporary, constantly changing, and can last for hours to days (Morris, 1989). It's impossible to pin point a specific cause for a particular mood state (Ekman, 1994), it's best considered as the sum of all of life's circumstances, reflecting of our own unique life experiences. This makes us, in the words of Desmet, (see Desmet *et al*., 2019) "the same person, but never the same."

A self-regulating mechanism

According to evolutionary psychology, moods are evolved psychological mechanisms that help protect and increase our well-being (Buss, 1995). They act as a self-regulating system that aims to maintain a balance between our personal resources and perceived demands. We have various kinds of personal resources, including physical energy, social, intellectual, material, and financial resources (Thayer *et al.*, 1994; Desmet, 2015). Demands are the things that keep us busy and consume our resources. These include our daily activities (like work, exercise, meeting with friends) and the situations life presents at us, the hassles and uplifts, as well as our past experiences and anticipated future events (Kanner *et al*., 1981).

Moods signal the status of the (im)balance between our resources and demands, indicating to what degree our resources are sufficient to meet the level of demands (Morris, 1992). Positive moods result from a surplus of resources, encouraging us to invest our resources, take on demanding situations, and explore new challenges (Desmet, 2015). Negative moods result from a shortage of resources, prompting us to withdraw from demanding situations to preserve and recharge resources, decreasing our

willingness to engage and explore new challenges (Desmet, 2015).

Mood regulation

People engage in all kinds of activities to regulate their moods. Usually, when in a good mood, they try to hold on to it, and when in a bad mood, they try to get out of it (Thayer *et al.*, 1994). Mood regulating activities can be grouped into three types of mood-regulating strategies (Desmet, 2015):

1. *Finding relief*: to ease or uplift the bad mood in the moment.
2. *Restoring balance*: restore the bad mood by increasing resources or lowering demands for a more sustainable improvement.
3. *Building resilience*: use the bad mood for personal development, as reflection material to transform it into something constructive that provides structural improvement to maintain overall mood balance in the long run.

In Summary, moods are an integral part of our day-to-day experiences, manifesting themselves through our thoughts, feelings and behaviour. They reflect the balance between our personal resources and perceived demands and can be regulated through a variety of strategies.

The Attention Restoration Theory

Having learned that moods reflect the (im)balance between resources and demands and that there are various strategies for mood regulation, it's interesting to explore the similarities with Kaplan's Attention Restoration Theory, which centers on the restoration of a critical resource: directed attention (Kaplan, 1995). This theory creates an interesting opportunity to design for mood regulation. In this section, we'll dive into the directed attention resource, including its functionality, the consequences of its fatigue, and the ways the Attention Restoration Theory proposes for its recovery.

Directed Attention resource

The directed attention resource is essential for human effectiveness: it plays a central role in human information processing and supports mental activities that require effortful attention (Kaplan, 1995). The avalibility of directed attention allows us to pay attention, to concentrate on work, behave appropriately and engage in cognitive tasks such as planning, problem-solving and decision-making (Kaplan, 1995; Pennebaker, 1991).

Directed attention fatigue

The directed attention resource is susceptible to fatigue, and its depletion is a key factor in human ineffectiveness, human error and unpleasant moods (Kaplan, 1995). Prolonged demands for mental effort cause the resource to run low, resulting in directed attention fatigue, also known as mental fatigue or mental exhaustion (Kaplan, 1995). When in this state, our cognitive abilities start to fail: we become easily distracted, have difficulties planning and lose our sense of overview; we tend to get caught up in the momentary pressures, unable to escape them or resist temptations; it affects our behaviour: we become irritable, snappy and impatient, and it becomes hard to stick to our manners, acting impulsively and taking unecessary risks

(Kaplan, 1995). This is a series of behavioral manifestations caused by a resource running low that cannot meet the current demands: the explanation of a bad mood.

Restoration of the resource

The Attention Restoration Theory provides insights into the restoration of the depleted attentional resource and focusses on one in particular: effortless attention. Where the directed attention resource runs low due to attentional effort, its recovery can be achieved through the opposite: effortless attention, also known as fascination (Kaplan, 1995).

Fascination

In contrast to directed attention, fascination is effortless: it draws our attention in an automatic fashion towards any interesting stimuli that we feel intrinsically attracted to. This requires no sustained effort or consious control, allowing the directed attention resource to rest and restore (James, 1982; Kaplan, 1995). However, Kaplan (1995) notes that not all kinds of fascination equally effective, which is why it's important to make a clear distincting between two types of fascination: hard and soft fascination.

Hard fascination

Typical modern examples of hard fascination include watching television, streaming movies and series, watching sports games, browsing YouTube and scrolling through social media feeds: appealing activities that offer quick entertainment. These types of stimuli are hard to resist, they tend to forcefully grab our attention, and occupy the mind fully, leaving little space for mental activity (Kaplan, 1995).

Soft Fascination

Interactions with simple natural elements are typical examples of soft fascination, such as taking a walk in the park, gazing out the window, or observing natural scenes like clouds drifting, water rippling, and leaves swaying in the breeze (Kaplan, 1995). Unlike hard fascination stimuli, these types of natural stimuli tend to gently capture our attention, creating space for wandering thoughts (Kaplan, 1995).

Restorativeness

Both types of fascination are effortless, however, they are not as equally restorative (Basu *et al., 2019*). Soft fascination is interesting because it has a special advantage: its effortless attention leaves cognitive capacity to provide opportunity for reflection which can further enhance the restorative benefits as it allows for a moment to process internal noise which would otherwise drain the attentional resources (Basu *et al*, 2019). This does not happen in moments of hard fascination because it fully captures the mind.

In this way, soft fascination ticks the boxes of all three mood-regulating strategies (p.9): it offers relief in the moment while it captures your attention, improves balance by restoring the directed attention resource and supports resilience with available headspace for reflection. This is what makes soft fascination an interesting direction for design for mood regulation.

Restorative nature experiences

According to Kaplan (1995), nature is rich in restorative qualities. Soft fascination is the key

element of the restorative experience, however, three other characteristics are important to reach full restorative potential:

Being away - Frees one from mental activity, from the daily hassles and obligations. It must provide a sense of being away; it involves a conceptual rather than physical shift.
Extent - Provides a feeling of being in a whole other world and it must be of sufficient scope to engage the mind.
Compatibility - The environment must fit with what one is trying to do and one would like to do, activities go smoothly and without struggle.

Opportunity for design

Bringing the outside in
Now, learning that nature offers restorative potential the question remains, how does this create an opportunity for design? When thinking about this, all nature examples that seem to restore are dynamic patterns. So, outside we're surrounded by nature's dynamic character and moving patterns. However, take a look inside, do you see any?
Inside, almost everything is still and static. Exept for people, animals, clocks, window-views, clocks and screens, everything remains pretty much still. This presents an opportunity to add restorative potential for bringing the outside in.

Transferability
Transfering qualities from the outside into indoor spaces is not a new concept. Biophilic design for example, is a movement that focuses on integrating natural elements, such as patterns, shapes, colors, plants, and natural light inside, to create a calming effect (Kellert, *et al.,* 2011). This approach has been proven to have relaxing effects and enhance performance, making it popular in office and public spaces (reference).

Additionally, according to Technobiophilia (Thomas, 2013), the positive effects of experiences in natural environments can be transferred to non-natural and virtual spaces while maintaining their restorative effects. For example, a waterfall screensaver or a digital fireplace can have a significant restorative effect, although not as effective as being in real nature.

Thus, both Biohpilic Design and Technobiophilia indicate that it's possible to recreate nature experiences and their accompanying restorative effects.

Design direction

The Attention Restoration Theory by Kaplan (1995) provides a direction on what mood-regulating experience to design for: the softly fascinating experiences in nature that support the restoration of mental fatigue. Additionally, in realising that, unlike nature, our indoor environments show little softly fascinating stimuli, This resulted in a design direction aiming to enhance restorative potential indoors by bringing the softly fascinating qualities from the outside in.

Summary

This project aimed to transfer a mood-regulating experience by recreating its mood-regulating qualities artificially, seeking an answer to the question whether this is possible and, if so, how. In the early stages, The Attention Restoration Theory by Kaplan (1995) inspired what mood-regulating experiences to design for: the softly fascinating experiences in nature that support the restoration of mental fatigue. A design opportunity revealed itself in realizing that, unlike nature, our indoor environments show few softly fascinating stimuli. This resulted in a design direction aiming to enhance restorative potential indoors by bringing the softly fascinating qualities from the outside in.

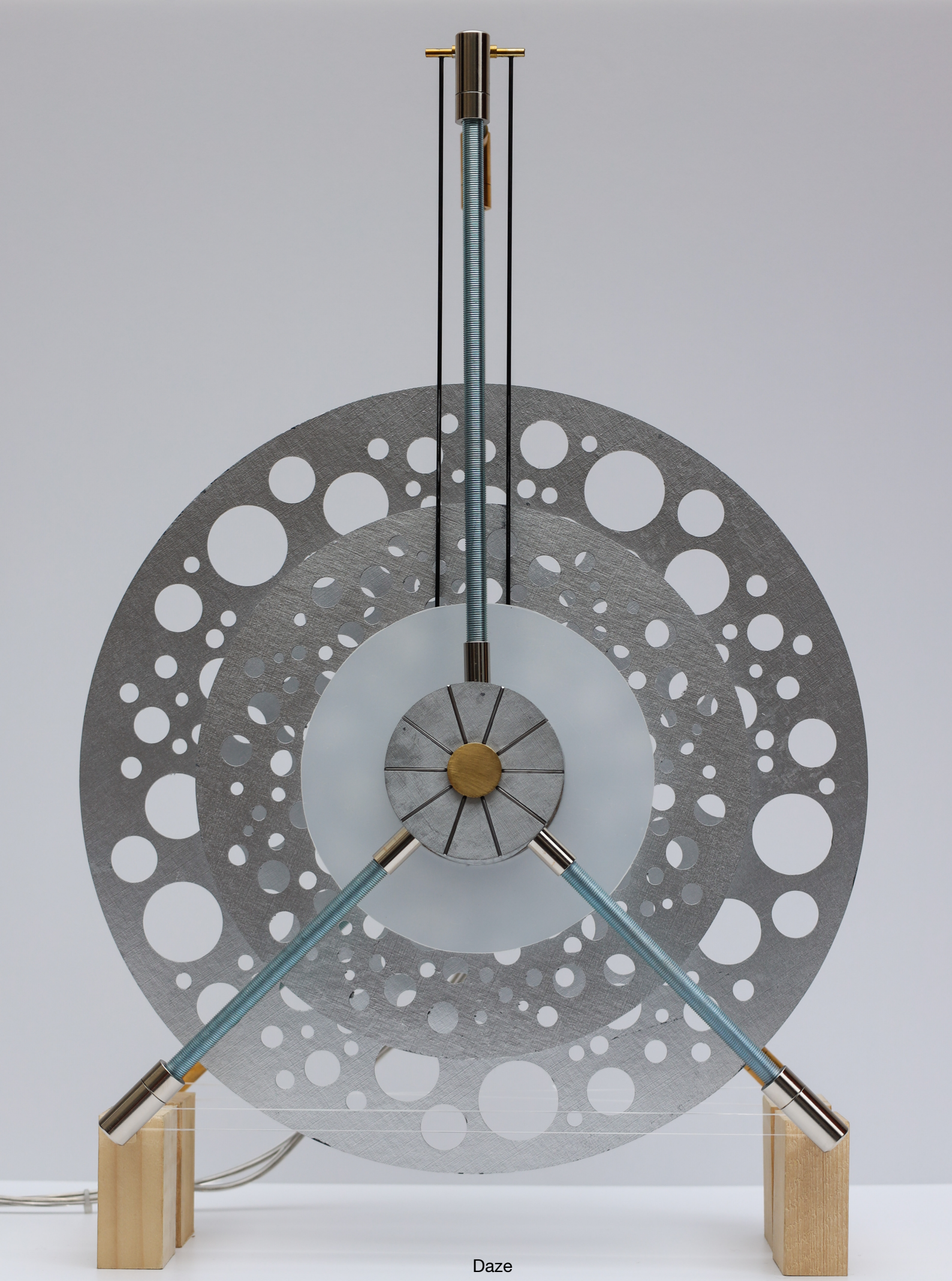
This led to a quest in search of the softly fascinating qualities of nature. It was found that it's the self-similar patterns in motion, like drifting clouds and leaves swaying in the breeze, that attract our attention. It's the quality of unity in variety in the self-similar patterns as well as the movement of the patterns that lures us in this moment of fascination, creating scenes that are "the same, but never the same."

In a process of experimentation and prototyping, three key elements of design were found to establish the fascinating effect of shimmering light patterns as sunbeams pass through dancing leaves: a light source, two patterns, and physical movement. The integration and refinement of these design elements ultimately resulted in a working prototype called Daze.

Results from the final user test show positive results in regards to Daze's potential for restoration. On a 5-point Likert scale, the average ratings of nine participants for the living room's restorative qualities significantly increased with Daze's presence compared to without. Additionally, the majority of participants mentioned feeling fascinated and relaxed by Daze.

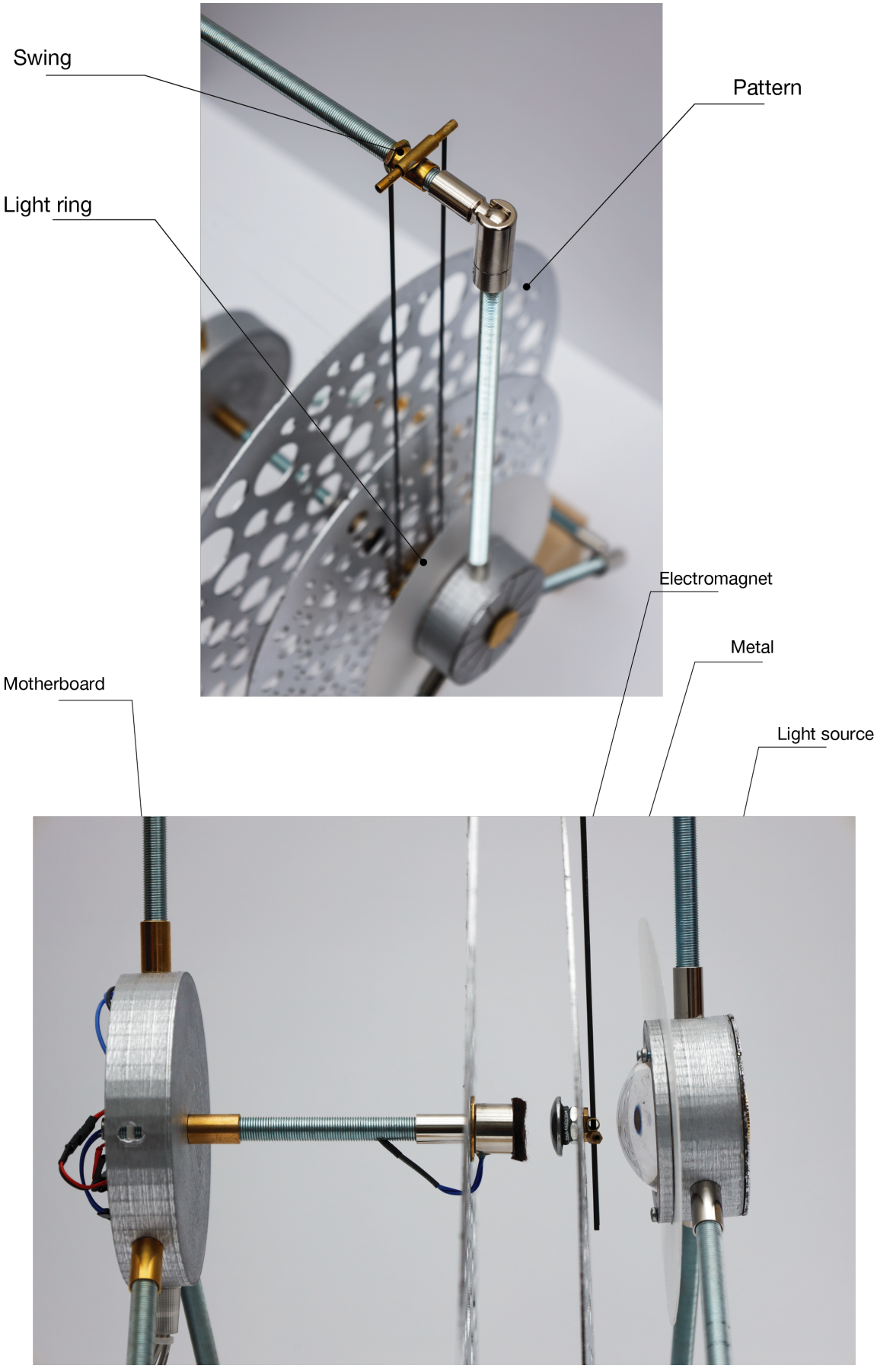
In conclusion, Daze was designed to enhance indoor spaces' restorative potential by introducing softly fascinating qualities from the outside in. The results have shown that Daze is capable of doing so, thereby providing proof of concept: it's possible to transfer restorative nature experiences by recreating its softly fascinating qualities.

Process overview



Daze

Daze


Swing
Pattern
Light ring
Electromagnet
Metal
Motherboard
Light source

Discussion

The main objective of this project was to transfer the mood-regulating experience of nature by recreating its qualities artificially in order to find an answer to the question of whether this is possible and, if so, how. Drawing inspiration from The Attention Restoration Theory (Kaplan, 1995), we learned that nature's softly fascinating experiences have restorative potential, and we realized that unlike nature, our indoor environments show little of such experiences. Therefore, to enhance the restorative potential of indoor spaces, the design goal became focused on transferring restorative nature experiences by recreating nature's softly fascinating qualities. This led to a process of unraveling and recreating qualities through experimentation, ultimately leading to Daze, a light object inspired by the shimmering lights from sunbeams passing through dancing leaves.

The evaluation of Daze's restorative potential showed positive results: a significant increase across all restorative qualities when Daze entered the room. Moreover, eight out of nine participants reported Daze's experience as either calming, fascinating, or a combination of both. One participant even mentioned feeling hypnotized and noted feeling the same relaxing effect as when staring at the reflection of water on the ceiling while bathing.

These results show that Daze is capable of transferring a restorative nature experience by recreating its softly fascinating qualities artificially. This brings us back to the main objective of the project, as it provides proof of concept. However, it is important to note that Daze is just one design example and cannot cover the entirety of the approach. Though, given Daze's promising results, design for soft fascination presents a field worth further exploring for design and design research in the ambition to design for human well-being.

Lastly, and maybe more importantly, soft fascination doesn't get the attention it deserves; it's a term barely heard of. Little do people know that it holds the capacity to put our minds at ease, restore balance, and even create resilience. A valuable experience, especially in our busy modern lives that drain away our attention. So, on a final note, I would like to say, let's just stop and stare from time to time; let's go out and lose ourselves in moments of soft fascination.

Reflection

What to say, it's been quite a ride this project. Very high ups and very low downs. My personal ambition was to get to know myself a little better; well, mission accomplished, for sure. All the usual obstacles that I thought I could escape this time, I couldn't. Confronted with them again, and again. I guess my biggest lesson learned is not to resist, and especially NOT to try harder.

It's a pity that this document does no justice to my design process or Daze, but I'm happy that it's done, happy that it's over.

I'm proud of Daze. When I look at her, I feel no need to explain her, all I want to say is: just look at her. For me, that's the biggest thing I could have accomplished.

Maybe I made her for me.
Amy.

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Appendices

Appendix 1: Design Brief

Personal Project Brief - IDE Master Graduation

TU Delft

Transferable Experiences for Mood Regulation — project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 15 - 03 - 2022 — 23 - 09 - 2022 end date

INTRODUCTION **

Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).

The context of this graduation project is mood regulation. The main question is: if and how we can design for mood regulation with the use of "transferable experiences".

People are always in some mood, it provides the affective colouring for all our day-to-day events and activities. Some days we are cheerful; other days, we are gloomy. In today's society we prefer positive moods over negative moods. Not only because positive moods feel better (and are more socially accepted and desired), but also because negative moods, even when subtle, cause serious mental and physical health problems if they sustain over longer periods of time. The World Health Organization (2012) reported that mood-influenced ill-being is the leading cause of disability, and a major contributer to the burden of disease worldwide. Not to mention the societal and economical problems that can rise from this. Therefore, mood regulation is an important topic for design researchers and designers to address and explore to find ways in creating mood-regulating products and environments to support people's well-being.

Design researchers at The Delft Institute of Positive Design research moods and generated knowledge to map and define the variety of mood states and their impact on human behavior and people's subjective well-being. Resulting in concepts and strategies with the aim to support designers in their process to design for mood regulation:

Mood Regulation: Mood regulation is any form of (mental and/or physical act) that aims to influence one's mood. People (both deliberately and non-deliberately) engage in all sorts of mood-regulating activities. When people are in a bad mood, they try to get themselves out of it, and when they are in a good mood, they try to prolong it.

Design for mood regulation: Design for mood regulation is any design activity that aims to generate interventions that either influences mood directly or that supports people in their mood-regulation activities.

Next, designers have the ability and the opportunity to integrate the generated knowledge, concepts and strategies from the mood research in their design processes to inspire mood-regulating designs to support people's well-being. But, at this point we hit a problem and encounter unexplored territory: because design for mood regulation is relatively new, it's largely unexplored by designers. Because of that, there's only a scarce set of mood-regulating design examples to inspire designers: leaving designers (and students) questioning how to put design for mood-regulation to practice.

During this graduation project I will tackle this problem and enter the unexplored territory to question if and how we can design for mood regulation.

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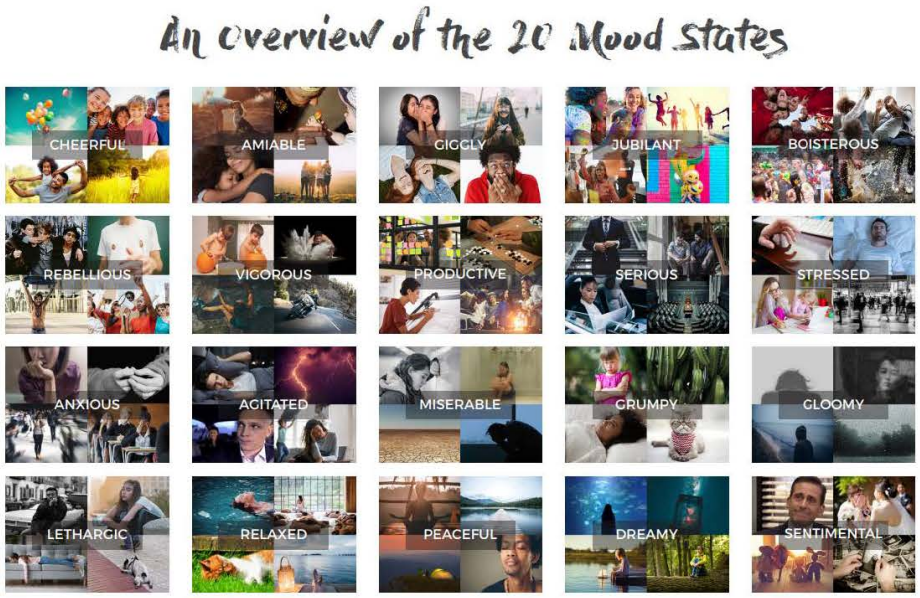


image / figure 1: From: Twenty moods: Holistic typology of human mood states (first edition)

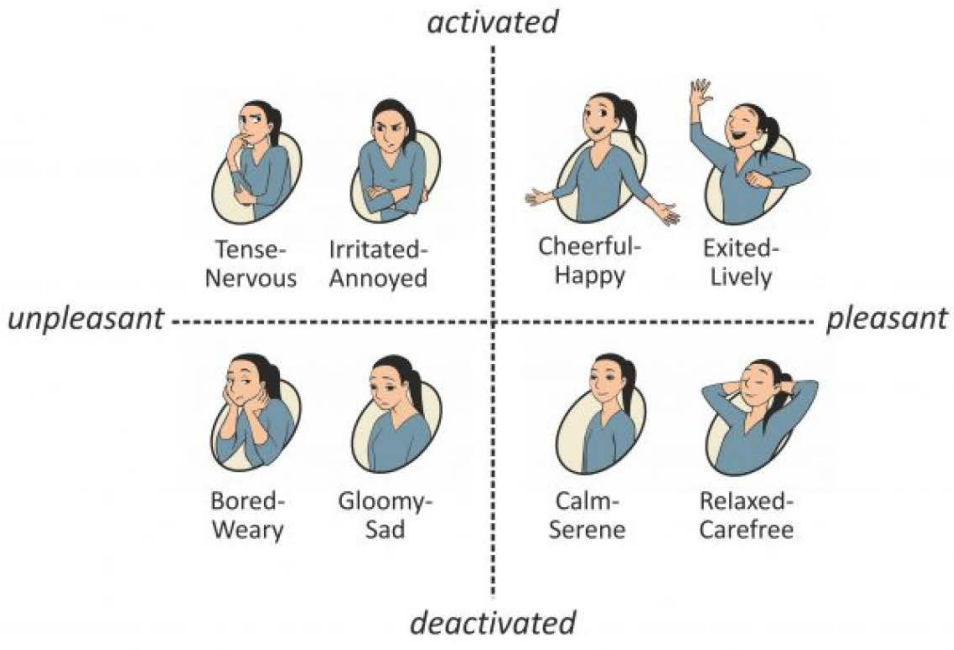


image / figure 2: Eight mood states expressed with Pick-A-Mood characters

Bijschrift

PROBLEM DEFINITION **

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

To limit the scope of the question if and how we can design for mood regulation, I focus on "transferable experiences".

"Transferable experiences" refer to the experienced micro-qualities during existing mood-regulating actions. For example, there are physical/sensory/somaesthetic qualities that one might experience when 'taking a refreshing shower': warm/cold water running down the skin, producing sounds and vibrations; rubbing shampoo through the hair and feeling the silky texture of fragrant soap on the skin. It is the unison of these micro-qualities that shapes the experience of a refreshing shower.

During this project I want to find out if it's possible to create the same mood-regulating effect of an existing mood-regulating action if we unravel its micro-qualities and string them back together in a different form or manifestation in another context (for example: the experience of a refreshing shower in the context of an office).

So, the main question that will be addressed in this project is IF and HOW we can design 'something' that supports a new mood-regulating activity by using "transferable experiences" of an existing mood-regulating action.

For now, a specific mood-regulating activity and context is intentionally left undefined. These will be defined during the early stages of the process, in the discovery phase (see frame in planning and approach **).

ASSIGNMENT **

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, ... In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

During this graduation project I'm going to research if and how we can design for mood regulation with "transferable experiences" (1). I will generate experiential prototypes for testing (2), and design a series of experiential prototypes to illustrate if and how we can design for mood regulation with "transferable experiences" (3).

During the project I hope to find out the if and how to design for mood regulation with "transferable experiences" (1).

In the experiment phase (see planning and approach**) I will explore the answers to this main question with experiential prototypes. I will generate various prototypes to test with: to understand how to distill transferable experiences from existing mood-regulating activities; and how to shape them into new forms to induce the same mood-regulating effects (2).

Like I mentioned before, mood-regulating design examples are scarce. For that reason, I will finalize this graduation project with a series of experiential prototypes: to communicate to both design researchers and designers if and how we can design for mood-regulation with "transferable experiences". As a means to inspire for opportunities and inform about limitations. In this way, I hope to contribute to a greater community of researchers and designers to move into a direction in which we care for people's well-being through design.

Bijschrift

PLANNING AND APPROACH **

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date 15 - 3 - 2022 23 - 9 - 2022 end date

Part-time: I will work on graduation 4 days a week as I have a side job once a week in an art supply store. Therefore the duration of this project results in a total of 25 project weeks instead of 20.

Breaks: 1) Week 21 - off to attend the EuroHaptics conference in Hamburg to showcase the tactile installation I worked on during my internship last year. 2) two weeks in Juli - planning a two week break during summer in-between the midterm and green light meeting.

I divided the project in three phases: 1) Discovery, 2) Experiment and 3) Finalize project:
Phase 1 - Discovery: I start off with immersing myself in the topic of mood regulation to get a feel for what I am dealing with. This includes literature, research, interviews with people/specialists, observations, etc. At the end of this phase the insights result in a clear frame and specific direction for the upcoming activities in the second phase.

Phase 2 - Experiment: The main phase of the project, and therefore running for longest period of time. It is the hands-on phase in which I explore transferable experiences by experimenting with activities and prototypes. I will 1) explore how to distill micro-qualities from transferable experiences, 2) experiment with ways to translate them into novel experiences through prototypes, 3) test and evaluate the intented mood-regulating effects of the prototypes with participants. This phase is highly iterative and includes similar elements used in research through design methodologies. This phase results in a design proposal that will be further developed and finalized in phase 3.

Phase 3 - Finalize project: In this phase I work towards finalizing the final design and communicating the project: make, evaluate and validate the final design and finalize the deliverables (report and presentation).

MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, ... Stick to no more than five ambitions.

Why I set up this project: A topic close to my heart - room to grow and show my skills - opportunity to grow as a designer.

First of all, the topic of moods is close to my heart. I care about people's well-being, especially people's mental well-being. Several times, I have been confronted with the darkness that can result from sustained negative/bad moods and mental ill-being. From this, my interest in human ways of being, behavior and drivers grew: personally, as well as for me as a designer. Therefore, with my abilities to create and design for people, I hope to be a cheerleader for them to care for (their own) well-being.

Next to that, the proposed experimental and hands-on approach to this project allows me to show and further develop my skills, especially my prototyping skills. Past years I have come to learn that (quick) experiential prototypes and research through design activities fit me well. And, I love working with my hands. It allows me to channel, test, evaluate and share my ideas fast. It makes my process flow more naturally and smoothly. So, I want to further develop this and grow my designer toolkit.

Lastly, I set up this project because it offers room to grow as a designer that infuses elements and operates on the edge of design, research, art and technology. During my internship with the artist Laura A Dima I worked in an interdisciplinary environment consisting of artists, designers, researchers and technicians. It made me realize that I'm not an artist, not a researcher and not a technician, but that I am a designer that understands all 'languages' and is able to integrate aspects and perspectives from all these disciplines. I love working in an environment like this. Therefore, with my eyes set on the future, I want to use this project as an opportunity to develop myself further in that direction.

Personal learning ambitions:
1) Find ways to make the process of documenting my ideas, thoughts and processes more enjoyable for myself. Documenting my work has always been my major fight during projects. It's a struggle and extremely challenging to me. I have now come to the point that I am tired of it being a struggle. It has a negative impact on my mood, and therefore my work. So, this has to end. That's why I will search for ways to document that fit me and my ways of working, to make the process more enjoyable. Let's see it as a little side track to regulate my own mood.

2) Grow my understanding of who I am as a designer.
The fact is, after my graduation I will have to land somewhere, somehow. I want to graduate as a designer and start my career as a designer. So, I kind of have to know: what kind of designer am I? That's why I wish to grow closer to the answer of that question so I can better define myself as a designer. And by that, I hope to grow more comfortable and confident with showing and sharing what I do, my skills and qualities.

3) And most importantly, enjoy this project and have fun!!!

FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.

Bijschrift

Appendix 2: User test

This user test aimed to evaluate whether the experience of Daze is restorative and softly fascinating.

Participants:
The test included a total of nine participants, ranging in age from 24 to 59 years old, including three men and six women. There were no specific requirements for recruitment, as fascination is something innately human. However, due to the fact that Daze is designed for visual stimuli, individuals with visual impairments were excluded.

Procedure:
The participants were divided into three groups, with each group visiting the test location at a different timeslot: 2:30 PM, 8:00 PM, and 9:00 PM. The first group visited during the daytime, while the other two groups visited during the nighttime, making a difference in incoming natural light from outside.

The test was conducted in a living room, and the participants were asked to take a seat on the couch. The test was divided into two scenarios: first, being in the living room in its usual state, and second, being in the living room with the addition of Daze. In both scenarios the participant were asked to fill out a form about their experience of being in this room. However, with the introduction of Daze in the room, the participants were first given some time take in the experience, share thoughts with each other before filling in the form. After the form there was some room for discussion.

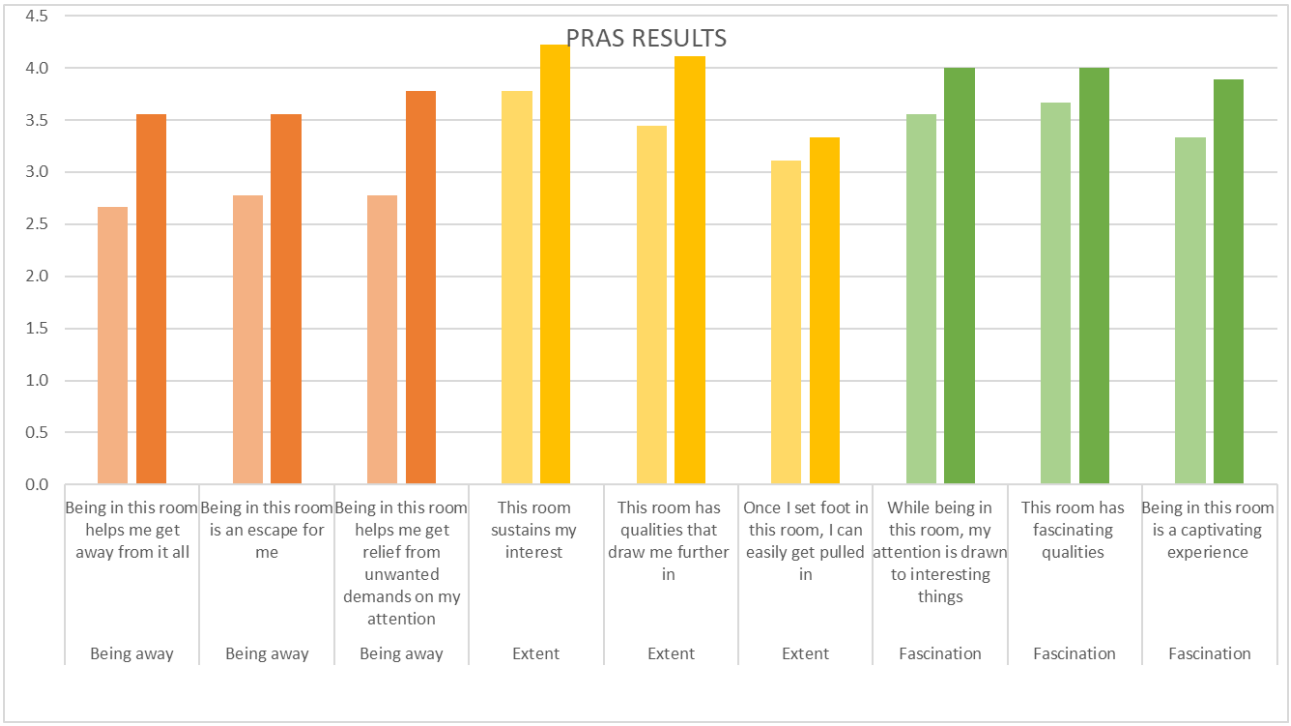
For this test, a modified version of the Perceived Restorativeness for Activities Scale (PRAS) was used, a measure developed by Norling, Sibthorp, and Ruddell (2008) to evaluate the perceived restorativeness of activities. In this case, the 5-point Likert scale was used to test the perceived restorativeness of the living room in its usual state and with the addition of Daze. This included nine questions in total, including three questions regarding *being away*, three regarding *extent,* and three questions regarding *fascination. Compatitibility* was left out because these were considered too vague and abstract for this scenario.

Data Collection:
Three types of data were collected. Firstly, a paper form including nine questions from the PRAS 5-point Likert scale measure and two open-ended questions. Secondly, recordings were made to catch important insights and quotes. Thirdly, notes were taken by an assistant who was intructed to observe and collect insights from participants' verbal and non-verbal expressions.

Data Analysis:

Average scores of answers to the PRAS measure (usual living room and living room with the addition of Daze) were compared and used to determine the difference in perceived restorative across the single question between the scenario with the living room in its usual state and the living room with Daze. if the introduction of Daze into the living room would increase the restorativeness of the living room. The notes from the observation and recordings were collected and grouped to filter key insights.

Results:



In comparing the averages of the of the 9 participants' ratings of the restorative qualities of the living room, firstly without and secondly with Daze, on a 5-point Likert scale, a significant increase across all restorative qualities was observed when Daze was present in the room.

Secondly, the open questions showed compelling results. In describing their experience of Daze in the open questions, eight out of the nine people decribed the experience being either calming, fascinating or the combination of both. A remarkable result, considering that it's an open question. Only one participant showed a different experience: feeling relief when the movement stopped.

Insightful notes:

People became silent and stared at Daze for a long time. It was seen as something organic, a beating heart or heartbeat was mentioned by several people. People became curious, some made

associations ... and others just tried to understand how it worked. Some came closer but most stayed at a distance.
The effect was best experienced at the front.
In the last group, all participants were staring and talking around Daze as if they were standing around a campfire.
At least two participants explicitly mentioned wanting to keep looking at it. 1 of these two said that after 40 minutes after Daze was turned on.
Hypnotic, soothing, calming,
The rhythm
It arouses curiosity, people wonder what it is, what it looks like, and how it works. At least two participants describe the rhythm of the movement as calming "the rhythm gives peace" and "it is hypnotic, it can calm me down."
Subtle movement and not disturbing.
It also prompted reflection on where Daze can be applied, the sauna, bedroom, nursery, hospital were mentioned.
"It does something to your brain, at least for me".
Feeling fascinated about the design and the ways it works, "that this little amplitude has such a great effect"
It was also noted it continues to attract attention because there are many different areas to look at, different things happening at different places.
Peaceful rhythm living in the background.

These results indicate that Daze has restorative potential.

References

Norling, J. C., Sibthorp, J., & Ruddell, E. (2008). Perceived Restorativeness for Activities Scale (PRAS): Development and Validation. *Journal of Physical Activity and Health*, 5(1), 184–195.

Name:

Age:

This test is part of a graduation project of the Masters Design for Interaction at Delft University of Technology. Answers to the following questions serve only as research material for gaining insights for this project. The answers will not be further distributed or used for other purposes.

During the test, footage will be taken in the form of photographs and video. These recordings will only be used for research, documentation and presentation (report and final project presentation) of this project. The footage will absolutely NOT be distributed through other channels or social media. If desired, your face will be obscured.

I hereby agree and consent to photo and video recording Yes / No

Obscure the face: Yes / No

The following statements are about your experience in this living room. Please indicate how much you agree with the following statements:

(**scale**: 1 = not at all, 2 = a little, 3 = somewhat, 4 = a lot, 5 = extremely)

1 - Being in this room helps me get away from it all

1 2 3 4 5

2 - Being in this room is an escape for me

1 2 3 4 5

3 - Being in this room helps me get relief from unwanted demands on my attention

1 2 3 4 5

4 - This room sustains my interest

1 2 3 4 5

5 - This room has qualities that draw me further in

1 2 3 4 5

6 - Once I set foot in this room, I can easily get pulled in

1 2 3 4 5

7 - While being in this room, my attention is drawn to interesting things

1 2 3 4 5

8 - This room has fascinating qualities

1 2 3 4 5

9 - Being in this room is a captivating experience

1 2 3 4 5

Name:

With the addition of the prototype in the room please answer the following questions:

Can you describe your first thoughts and feelings?

Can you describe how the prototype influences your experience of this living room?

The following statements are about your experience in this living room with the addition of the prototype. Please indicate how much you agree with the following statements:

(**scale**: 1 = not at all, 2 = a little, 3 = somewhat, 4 = a lot, 5 = extremely)

1 - Being in this room helps me get away from it all

1 2 3 4 5

2 - Being in this room is an escape for me

1 2 3 4 5

3 - Being in this room helps me get relief from unwanted demands on my attention

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7 - While being in this room, my attention is drawn to interesting things

1 2 3 4 5

8 - This room has fascinating qualities

1 2 3 4 5

9 - Being in this room is a captivating experience

1 2 3 4 5

Any other thoughts, feelings, ideas you would like to share with me: