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Master's Thesis

Academic Year 2017

Lightbox: Mindful Behaviour in the Social Environment without Digital Distractions

Graduate School of Media Design,
Keio University

Kirill Ragozin

A Master's Thesis
submitted to Graduate School of Media Design, Keio University
in partial fulfillment of the requirements for the degree of
MASTER of Media Design

Kirill Ragozin

Thesis Committee:

Associate Professor Kai Kunze	(Supervisor)
Professor Keiko Okawa	(Sub-supervisor)
Professor Matthew Waldman	(Co-reviewer)

Abstract of Master's Thesis of Academic Year 2017

Lightbox: Mindful Behaviour in the Social Environment without Digital Distractions

Category: Design

Summary

We live in a highly connected world, one that gets more complex and intertwined every single day. The spread of internet has irreversibly changed our society, and personal mobile technologies have become an integral part of our daily lives.

We got accustomed to being constantly connected and having unlimited access to new information, however, this ability has not only brought us new opportunities and new ways of interaction, but has also introduced new challenges that we as a society need to learn to overcome. People got accustomed to being distracted and live in the world that is somewhere out there, rather than embrasing their physical reality. It affects their relationships, the quality of work they do, their mental and physical health, and, as a result, their overall happiness and satisfaction with life.

This research is aimed to bridge the emerging gap between our digital and physical lives by focusing on a common social scenarios and exploring the ways in which technology can promote mindful behaviour and enrich our experience. Rather than negate the technological presence, we need to find better ways of integrating it into our life and design new ways of interaction that lead to the formation of healthier habits.

Keywords:

Table Light, Product Design, Dining Experience, Mindfulness

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Chapter 1
Introduction

The relationship between people and technology is a complicated one. Being driven by the desire to innovate and to improve things around us, we create devices that make our life more comfortable and more efficient. When a technological creation truly makes things easier and faces mass-adoption, it turns from being a utility to being a necessity. What eventually ends up happening is that we find ourselves being dependent on the product of our own labour.

One can make an argument that the smart phone, in conjunction with the Internet infrastructure, is one of the most impactful technologies of our day and age. Having originated as a tool with the single purpose of making voice calls, it has rapidly evolved and is now a powerful device with lots of different attributes that seems inseparable from our daily life.

The author of this work has found himself puzzled by the increasing role that modern technology plays in our life. While it clearly fulfils its purpose and makes things easier and more convenient, it also alters our behaviour, which shows effects in all areas of our life. It seems that being captivated by this whirlwind of constant change happening globally in the world we might be missing something important about our life in the here and now. The authors desire to explore and help resolve this dilemma of our relationship with technology has led to the creation of this research.

1.1 Overview

A significant portion of our time we spend in the digital space. It is where we look for new information, where we consume news and entertainment, where we communicate with our friends, colleagues and acquaintances. The convenience of having a mobile device with the access to the whole world in our pocket has made it habitual that our attention is drawn to it whenever the opportunity presents

itself. As Kevin Kelly, co-founder of the Wired magazine, put it in his book (Kelly 2016), most of us have become people of the screen. With the screens at our houses, screens at our offices, screens in our pockets and now even the screens on our wrists, we have transitioned into a fast-paced culture where information is fluid in its form. Its an endless flow of sentences, charts, photographs, videos, articles, instant messages, and our attention is constantly switching from one piece to the next. The growth of social networks and media platforms, such as Facebook, Twitter, Youtube, Instagram and Snapchat, has not only provided us with an endless source of content, but also has made it so that any activity can now be socialized and shared. This has led many people, especially those of a younger generation, to look at their life through the prism of social media. With the amount of various types of endorsements and critiques people are subjected to online, it is reasonable to expect to see some psychological consequences. For instance, the trend of media multitasking has been linked to the development of various mental health problems such as depression and social anxiety (Mark W. Becker and Hopwood. 2013). The more engaging and functional this online medium becomes, the more of our mental energy we put into it and the less aware we become of our physical surroundings and our physical self.

When so much of what we do happens online, the question of the importance of physicality becomes more relevant. After all, people are physical beings, and our life is directly shaped by our sensory experiences. The technology adds great value to our lives, but as with everything in else in life, there should be a balance in the way we interact with it, and it should not take away the quality from our unique human experiences.

1.2 Research premises

With the issue of physical and digital divide discussed above, it is important to map out the general scope of problem before addressing a specific part of it. In this section the author gives an brief overview of the some of the negative effects of the digital revolution that we are experiencing.

If most of the related problems could be summarised in one word, it would probably be "distraction". Cellphones make people more distracted, and the ripple effect can be seen in various areas of our life. For instance, a serious issue when it comes to commute is distracted driving (Figure 1.1). On the road, where attention is crucial, the ability to observe the road situation, estimate risks and

briefly choose the correct course of action is definitive of a good driver, and a simple distraction in the form of a text message is enough to have life-altering consequences. This is why in so many cities we can now see public campaigns aimed to warn about the dangers of distracted driving and to prevent it from happening. Education is another area where the effects of distraction take place. It is no secret, that students get distracted; this has always been happening, however, with mobile phones giving incentives to wander off at any given moment it has now become much easier to get distracted than ever before. Being unable to properly focus on the activity in the class, students retain less material and struggle more during the education process.

Figure 1.1: Distracted driving awareness campaign by Ford

Addiction to digital content is a serious issue as well. When the time people spend using a particular service or app is directly related to the revenue a company is receiving from it, it is reasonable that they would do everything to capture users attention for as long as they can. With simple techniques like push notifications, instant interruptions, infinitely scrollable feeds, autoplay of content and various gambling elements embedded into the apps, the companies trick people into spending more time on their services (Harris 2016). As an indirect result, we can observe the increase in social anxiety and depression. Similar techniques are being applied to online and mobile games, and we see children and young adults getting addicted to them and spending irrationally large amounts of time pursuing digital entertainment. Both physical and mental health of people gets affected. Social isolation is another problem that became more prevalent with the spread of mobile phones. Being accustomed to interact online, many people of the younger generation are now facing problems with real-life interactions. (Sutton 2013). The convenience of sending a text message, as opposed to making a phone call or interacting in person is obvious. There's a certain aspect of personal relationship development that gets lost through this shortcut though. A

large percentage of our communication is non-verbal. Shared social experiences bond people, and that does not happen when most of interaction is diminished into series of pictures and texts.

Figure 1.2: Public campaign in Bangkok, Thailand

The main focus area of this work is the activity in restaurants. Specifically, the social and aesthetic aspect of the restaurant experience. With mobile phones being so prevalent, it has become more common these days to see a group of people immersed in their screens and not paying attention to each other. It can be seen happening with couples, with families and even with groups of friends. One person getting distracted by something on their phone makes another person feel neglected, so in order to fill that void, they pull out their device as a response. What once used to be a quiet connecting experience, amplified by the ambiance of the place and the quality of food, has now been subjected to distractions from the outer world. Dining distracted has slowly become the new norm. This, however, doesn't only affect the visitors, the chefs and the managers of the restaurants seem to be bothered as well. According to an article in DailyMail (McCormack 2014), one such manager of a busy New York restaurant has noticed a significant increase in average service time per customer. After conducting a little investigation and

comparing up-to-date camera footage with one from a decade ago, they have found that cellphones were the culprit. The customers seemed to spend extra time connecting to WiFi, being distracted before making the order, taking and editing pictures of food and restaurant interior, asking waiters to take group pictures, simply being busy on their phones and even asking and waiting for the food to be reheated because it had gotten cold by the time they decided to eat it. While there's nothing inherently wrong with the fact that it's happening, the frustration of people that put their effort into creating the perfect dining experience is easy to understand. The author believes that creating an intervention in a such common scenario can not only address the existing issues when it comes to dining out, but can also raise awareness and spark changes in other areas of people's lives.

1.3 Objectives

This research is aimed to design an intervention in the form of a compelling artefact that would promote physical awareness and temporarily shift the users focus to the present moment. Such intervention could help establish healthier habits in people's relationship with technology and help mitigate some of the negative effects of the technological spread that people are experiencing. The overall objectives of this work can be stated as follows:

1. To create an incentive for people to set their digital life aside for a short period of time and to integrate such incentive into a common setting
2. To help establish healthy habits in people's relationship with technology
3. To promote physical awareness in ordinary daily situations
4. To explore new ways of interaction that can be applied to social experiences

The value of good design lies within the power to imagine and actualize the change in a certain area, that will ultimately navigate people towards a better way of interacting with the world. Through this research the author hopes to introduce such a change for social behaviour in public places.

1.4 Contribution

In this work the author proposes a concept of a table light that would encourage mindful social behaviour in a public place, such as restaurant or a bar. The main contributions of this project are the following:

- (**Interaction type**) A new type of interaction, where the smartphone has to be given up in order to trigger the effect
- (**Product concept**) Design of a physical product that encourages people to temporarily unplug from the digital medium and focus on their physical experience
- (**Physical artefact**) Creating a table light that enriches the dining experience
- (**Social effect**) Promoting the social ritual of putting the phone down as a way to publicly commit to the social event

1.5 Thesis structure

This thesis work consists of six chapters.

The first one is where the author lays out the problem and his motivation for conducting the research and making the contribution in that area.

In the second chapter the author introduces existing work, that has addressed similar issues.

It the third chapter the author describes the final design concept. It containts the vision behind the design, the scenario it addresses, the users that it targets and the methods that went into the design process.

Chapter four is where the full design process is laid out. The author goes over each iteration of the project and explains his rationale behind making certain decisions and shares his takeaways.

Chapter five is dedicated to the results of user testing and the evaluation of the design concept.

In chapter six the author concludes the thesis and mentions the future potential of the project.

1.6 Key terms

Key terms used in this thesis are the following:

Digital distraction

Mindfulness, the practice of maintaining a non-judgemental state of heightened or complete awareness of one's thoughts, emotions, or experiences on a moment-to-moment basis; also: such a state of awareness[1]

Mindful behaviour, conducting oneself according to the principles of mindfulness; acting with awareness and intent

Social environment, a common area where the social interaction is taking place, e.g. restaurant, cafe or a bar

Dining experience

Notes

1 Definition by Merriam-Webster Dictionary

Chapter 2
Related Work

In order to properly address the problem, it is important to take a look at the approaches that have already been taken within that area. This chapter is logically split into three sections. In the first one the author gives a general overview of the existing solutions that blend mindfulness with modern technology; although they are not directly related to social behaviour and the restaurant experience, these examples make a case for incorporating mindfulness principles into the design concept. In the second section the author looks at the specific instances where the attempts to address the distraction problem have been taken. The examples given both confirm the need for a solution and serve as a reference for the following design process. In the third section the author gives an overview of some unique table light concepts as part of his product research.

2.1 Mindfulness and Technology

The area at the intersection of mindfulness and technology is a relatively new one. It originated from the need to balance out the trend of being mentally sucked into the digital realm. With mindfulness practice popularized in the western world through meditation techniques, and technology surrounding us at seemingly every area of our life, people have naturally come to the realization that modern technology can be applied to mindfulness training and serve as the enabler of mindful behaviour, instead of being the source of distraction and diversion.

Guided Meditation Services

Since it was the practice of meditation gave that initial push to the development of mindfulness technology, it is no surprise that applications for mindfulness meditation practice were the first ones that came to existence. Below is the overview of

the most notable instances of such applications, the principles behind their work, their functions and limitations.

One of the most prevalent applications in the space of mindfulness meditation is *Headspace*[1]. It is a mobile application and a digital service that provides mindfulness training and guided meditation sessions (Figure 2.1). Developed in 2012, this service now has over 8 million users. At its core, it introduces people to the habit of regular mindfulness practice. In general, regular users of the app claim to be more calm and collected in times of stress, and that it serves them a reminder to become aware of their thoughts and emotions. The studies conducted with this service indicate reduction in mind wandering after subjecting people to 30 days of mindfulness training(Ida H Bennike 2199).

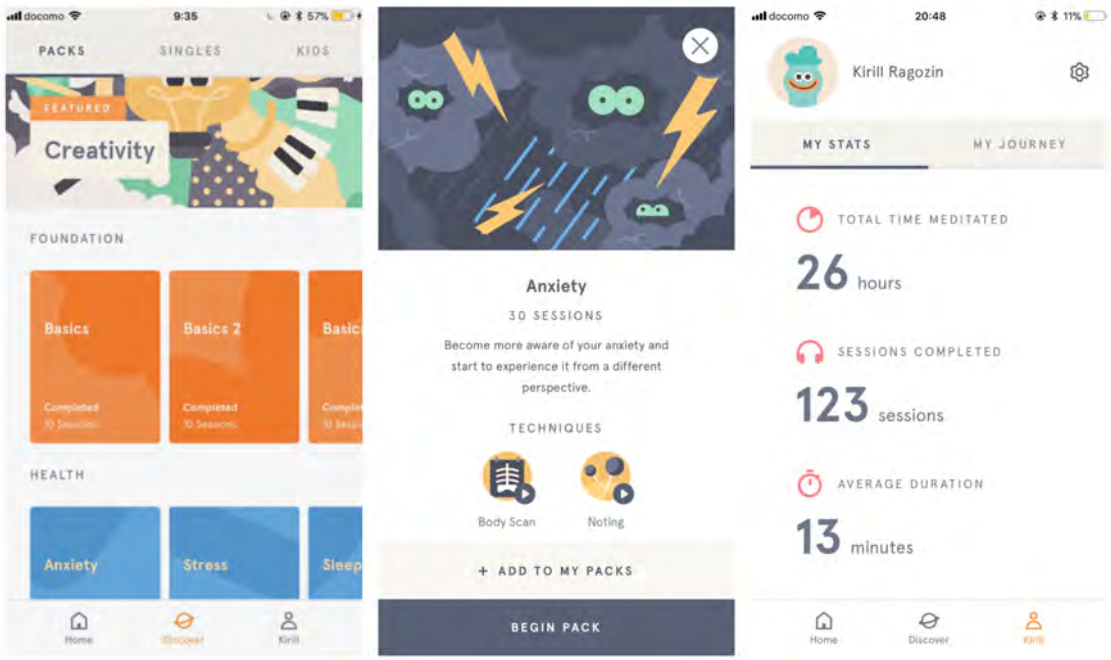

Figure 2.1: User interface of the Headspace application

Calm and *Insight Timer* are similar services that belong to the same category. While these types of applications offer certain benefits to their users (in fact, the author of this work has started his transition into mindfulness using one of these tools), they come with the certain set of limitations. First, their primary focus is on the meditation practice, which implies that in order to get benefits from it one has to incorporate this practice into their daily routine. Similar to how people

struggle to commit to exercising regularly, dedicating time to focus of a practice is a task not everyone is willing to do. Secondly, there's a certain utilitarian aspect to mindfulness that these services bring to the table: instead promoting pure state of mindful awareness in its original sense, they substitute it with the benefits of "becoming more productive" or "reducing stress", which takes the focus away from the core idea of the practice. This concern is also shared by some experienced monk practitioners. Last point, which is of most concern for the author, is that such service, in a way, makes people more reliant on technology for their regular life. Even such traditional practice as meditation, that has developed over the hundreds of years in absence of any modern technology, now gets intertwined with the screen. It is surely a great introduction point, but over the long term that turns into a burden.

While there is definitely a role that these services fulfill, there is room for a more subtle approach to mindfulness, that could be naturally integrated into daily life and would not force the development of new habits.

Public Installations

Researchers at the University of Oklahoma have conducted a project (Cook M. 2015) where they tried to promote mindfulness within the public space. Trying to address the problems of distraction, lack of concentration and stress within a contemporary library, where a lot of work revolves around using the computer, they have installed an interactive labyrinth underneath the stairwell (Figure 2.2). The users were able to choose a labyrinth pattern using a touch interface on the wall, and then they could freely engage in an activity utilizing the labyrinth. Most users who participated in the installation have claimed to feel more relaxed and less anxious after the experience. The creators of the project have concluded that this type of mindfulness technology was beneficial within the library space. This project shows how negative effects of frequent technology use, discussed in Chapter 1, can be successfully addressed by the embedding elements of mindfulness training into the public space.

Figure 2.2: Interactive labyrinth installation in the Bizzell Memorial Library

2.2 Restaurant experience

Unplug box

One of the attempts to address the distracted dining problem directly has been tried at the Hearth restaurant in New York, where the chef decided to take the issue in his own hands and do something about the fact that his customers spend so much time on their phones. The solution is elegant in its simplicity (Figure 2.3). Its a vintage-looking box on the table that directly encourages users to open it with a sticker that literally says "Open Me!". Inside the box is a simple note inviting the users to put their phones inside for the time of the meal. This approach seems to resonate with the visitors and, according to the chef, six out of ten customers decide to put their phone into the box. This solution is simple and easy to understand and it confirms the validity of the approach, but it also leaves the space for the improvement of the interaction.

Figure 2.3: Cellphone box at Hearth restaurant in New York

The Bonding Pot

The following work is another attempt of addressing mobile addiction in the restaurant setting. Its called "*The Bonding Pot*" and was implemented for the COCA SUKI restaurant in Thailand as a marketing experiment in the year 2013 (Figure 2.4). Oriented at the family-style dinner, the project was presented as a plastic container that had four phone slots; the container itself was connected to the sukiyaki pot. The relationship between the two was simple: the sukiyaki pot would only be heated up when all phone slots in the container were occupied. Had one of the users taken their phone out, the heating would stop. The project has received generally positive feedback from the surveys, although it had some obvious problems with the way it was implemented. First, its application was limited to sukiyaki pot only. Second problem is that the user interaction was forced. The concept did not take into account the situation where the four phones weren't available, or the users genuinely did not want to give them up. Nevertheless, the lessons learned from this work are valuable and can be applied to project described in this thesis.

Figure 2.4: COCA SUKI: The Bonding Pot concept

2.3 Lighting Concepts

This section lists several table lights and lamps that the author found interesting and took inspiration from while doing product research for this project.

The following lamp by Pranaya Design (Figure 2.5) is created through laser-cutting. It has an appealing contrast of plain geometric shapes in its form and organic cut-outs in the decorative pattern. It drops beautiful shadows when lit and acts as a simple sculpture during daylight time.

Figure 2.5: Geometric shadow lamp by Pranaya Design

The next lamp on the list is a sculptural lamp by Maarten De Ceulaer (Figure 2.6). It is made out of a wood plank and is filled with an LED circuit. The beauty of this lamp lies in the fluidity of its shape and the fact that it's made out of a solid wood piece. Another great aspect is that it includes programmable LED mesh that conceptually merges modern lighting techniques with basic natural materials and opens up the possibility to explore the movement of light on top of the lamps fluid shape.

Figure 2.6: Sculptural wall lamp by Maarten De Ceulaer

The last lamp featured in this section is the "*Cracked Log*" lamp by Duncan Meerding (Figure 2.7) made from salvaged logs. Although not inherently unique as an idea, this design preserves the natural quality of the material it is made of and creates an aesthetically appealing light pattern. Its flexibility deserves the mention as well, as it comes in the variety of forms, such as a stool, a wall mount and pendant. There's something especially captivating about the pendant version, where the log is hanging from the ceiling.

The world of design is full of wonderful unique ideas. Over the course of his research the author has discovered dozens of great lighting concepts; the ones that are mentioned in this section provide a good understanding of the aesthetic basis

Figure 2.7: Cracked log lamp by Duncan Meerding

that the author tried to capture is his final design concept that is presented later in this thesis.

Notes

1 http://www.headspace.com

Chapter 3
Lightbox

This chapter will introduce the design concept and the final artefact that was created as a result of this work. For a better understanding of the concept, it will also explain the vision behind the design, the scenario that it focuses on, the types of users it targets, as well as the methods that went into the design process.

3.1 Design Concept and Artefact

Figure 3.1: Render of the Lightbox concept

Lightbox is a concept of an interactive table light that is designed to eliminate cellphone distraction from the dining experience (Figure 3.1). When in use, the product is placed on the side of a table in a restaurant or a cafe. It enables the interaction where the visitor of the place can put his cellphone underneath the light in order to fully focus on the dining experience. The act of putting

the cellphone inside is recognized by the lamp and the lightning produced by the lamp is changed in response to the action. Multiple users can interact with the product at the same time. When they choose to use it, they prioritize the dining experience over the digital content and choose to mindfully engage in the social interaction with each other.

The product consists of two main parts: the phone base and the light module that goes on top of it. The base of the lamp follows the modular design principle and provides the space (slots) for two or more phones, depending on the version of the product. By default, the product acts as a standard table light illuminating the area around it with a warm white glow. Each phone slot is connected to a certain set of lights within the light module, and when one of the phone slots gets activated by the user, the lighting pattern and colour changes to provide a more unique and visually pleasing experience around the table area. When all phone slots are activated, the lighting is at its most vibrant and rich state. The product incentivizes the action from users and they get rewarded by the ability to charge the phone, while it stays inside the lamp.

Figure 3.2: Final prototype of the Lightbox concept

In order to try out the product in the real-world setting, the physical artefact was created (Figure 3.2). A version of a Lightbox concept for a medium-sized table designed to be used by two people was made out of pine wood and brought over to a cafe in Tokyo, where the user testing session was conducted. Interviews

with the participants were taken after the session. The results of the session have confirmed the applicability of the concept and have provided insight into the future development of the project.

The initial development and prototyping of the idea took place in Pratt Institute, where the concept originated. After exhibiting the prototype at the local showcase and gathering the feedback, the author has continued developing the idea in Keio University. The work presented in this thesis is the final result of the design process.

3.2 Philosophy and Vision

Dining experience has always been about more than just eating food. Whether its a group of people celebrating some holiday, a group of friends casually going about their day, or a couple spending some time together, cafes and restaurants have always provided the space, where people would communicate with each other, tell stories, laugh, relax and develop personal connections. The social significance of such experience has not really changed through out history and has remained its value to this day. Everything is similar except for the smart phones in our pockets that we carry with us everywhere we go. If you go to a restaurant and look at any occupied table, what you usually see is a phone laying there next to the plate of food or a drink. The owner of that phone usually picks it up without a second thought, whenever the opportunity presents itself. People got so accustomed to multitasking and filling in any open moment with a peak at their device, that they can't help it. There's nothing wrong with checking the phone, after all, people live busy lives and live in a world that's globally interconnected and where something new happens every minute, but mindlessly doing so breeds the inability to set distractions aside and focus when the situation calls for it. The content, it won't go away, but our social events and human interactions are unique and don't repeat themselves. Same applies to taking pictures at the public place. Social networks and services with the heavy focus on imagery (e.g. Instagram, Pinterest) are filled with the photos of food. Again, there's nothing wrong with the act of taking and even sharing these pictures, but why does one make a habit of doing it almost every time they eat somewhere remains a mystery. Even if the person doesn't touch their phone, there are always notifications that bombard us through out the day trying to steal our attention. New message, new email, new subscriber, new click of a "like" button, one notification is enough break the flow

of the conversation and to take someone away from socializing and enjoying the moment to something, that most likely could've waited. While not significant on their own, these minor, one could even say somewhat selfish, acts accumulate and weaken the experience.

Excluding the situations where someone doesn't have a phone with them when they're out in a restaurant, which are rare these days, a person's phone on is almost always either on the table or in their pocket. Ladies might have it in their purse, but usually they take it out of there right away. When a person wants to show that they are paying attention, they might demonstrate that by putting the phone screen down to the side of the table, or even put it away from the table into their pocket. The phone disappears for a while, but then in inevitably finds its way back.

It this work the author tries to address this problem of people being too attached to their devices in social situations, especially those that take place in a public environment, such as a cafe, a restaurant or a bar. If people were presented with the proper incentives to set their phones aside and focus on their immediate activities, they would build up situational awareness and ability to prioritize certain behaviour patterns over the others. The author believes that enabling and incentivising such interaction will also promote mindful behaviour in other areas of a persons life.

It this work the author proposes a concept of an interactive table light for cafes and restaurants that offers people to give up their phones for the time of their meal. The is placed on the side of the table, and has several slots in which the users can put their phones while they're having dinner. The act of putting the phone into the slot not only demonstrates the person's intention to commit to the social event, but also changes the light and colour properties of the lamp and makes the scene more beautiful. The concept includes multiple versions of the product, designed to fit into different environments.

The goal for the product is to eliminate digital distraction from the dining setting in such a way that would also create an aesthetically pleasing atmosphere and would facilitate interpersonal interaction and enhance the restaurant experience as a result.

3.3 Target Audience

The target audience for this work can be classified into several categories based on the prevalence of the digital medium in their life.

Active digital users

One such category is the active digital users. They typically fall into the age group between 20 and 34 years. These are the people who heavily rely on the use of their mobile phones in their daily life. They are students or young professionals on the rise in their career. They predominantly communicate and organize their social activities over messenger applications. They are active on social media and fill in their windows of spare time either consuming digital content or contributing to the network. They live a fast-paced lifestyle. As this user group is the most dependent on the use of the smart device, it is affected the most by the "unplugging" aspect of this work. When designing for these users, the focus should be put on providing an incentive to put the device away and making the interaction more appealing to them.

Casual users

The second category is the casual users. Although they may be represented in the younger age segment, they are more commonly seen in an older age group from 35 to 50 years. They are typically established professionals in their field. They also rely on the use of modern technologies and mobile devices, but their use is limited to certain functions that help them with their activities. Their lifestyle is more structured and moderate. They aren't active on social media, as they don't have the time for it. They have a higher level of environmental awareness and value the overall quality of the experience over the individual details. When designing for these users, it is important to take into account the physical aesthetic aspect of the project and to make sure it fits the experience.

3.4 Methods

To make the design process more structured it has been split into several thematic layers. The design choices that have been made took place separately on each layer

and have addressed a specific subset of questions. This section introduces these layers to make the process outlined in the design iterations easier to follow.

Functional layer

The functional layer of the design deals with the user actions that are enabled by it, incentives to these actions and their outcomes. It also takes into account the amount of users in the setting. The final concept introduced in this chapter has revolved around two basic user actions: putting the phone into the slot within the device and taking it out., as well as the novelty factor and additional. The results of the interaction were reflected in removing the source of distraction from the visual field, charging the users phone and changing the light and the visual atmosphere around the table.

Physical layer

The physical layer of the design deals with physical qualities of product, such as manufacturing materials, form, shape, colour and light properties. The final artefact was made out of pine wood and acrylic and it has utilised rectangular block shapes with organic elements in its form. As for the colour, warm white light was used for primary lightning, with a mixture of green, red and blue added for unique colour effect. It was diffused, indirect and moderately bright to be used in the dim cafe or restaurant environment.

Spacial layer

The spacial layer of the design deals with environmental constraints of the product, such as its size and its position in the environment. The proposed concept took into account different table sizes, suited for different amount of people. The lamp is designed to be placed on the side of the table out of consideration to the least obtrusive and leave most of the table area for the users.

Technical layer

The engineering decisions that went into the design and manufacturing process belong to the technical layer. It deals with the type of lights used in the project, the positioning and sizing of the phone slots and the manufacturing limitations imposed by the chosen materials.

Chapter 4
Design Iterations

The purpose of this work to eliminate digital distractions and to encourage mindful social interactions in a public space, as well as to promote healthy technological habits. This chapter will be going over the iterations of the project that led to the creation of the final concept and the artefact associated with it. As this project was developed over the course of studies in two different educational institutions located in two different countries, it has a noticeable thematic split in its development. This chapter takes into account this feature and provides the necessary explanation for each section.

4.1 Initial Experiments

At the early stages of the project several exploratory experiments were conducted. These experiments, at the time, were separated from the cafe and restaurant setting, and their purpose was to discover the role that can be assigned to light in the interpersonal interaction process and the physical qualities of the artefact that would be used to enhance these interactions. They were aimed to find a way to enhance the interaction in such a way, that would make the cellphone distraction less appealing and less likely to happen as a result. These experiments were brief and were made by placing a light source (an led, a flash light, a smart phone screen, a smart phone flash light) on a cardboard mock-up next to the one of the two participants. The author has quickly discovered that a wearable form of light source (a wrist bracelet or a neck pendant) was too distractive during the interaction, where as the version placed on the surface between the people could have some effect, while not drawing to much attention to itself. When exploring the surface-mounted light, the author has tested the idea of using the screen of the cellphone, the source of the ubiquitous distraction, as a source of light. While prominent on paper, the idea turned out to be not functional due

to several reasons: the screen was not bright enough, the light it produced was concentrated in one small area and, as a default behaviour, the screen would turn off to preserve energy. An explorative attempt to overcome these limitations was then taken by mounting a small reflective prism on top of the cellphone screen to extend the visual area and using a phone app to override the default screen behaviour and to create the graphics. While appealing as a concept, that setup called for a pitch-black room and the light area created was still too small to be engaging for the user.

There were two main outcomes that came from these initial experiments. First one was that a table-top light source could have an effect on people interacting across the table, while not being demanding of their attention. The second reveal was that using the phone as an enabler for the interaction had a unique appeal for the users. By applying these learning points, the scope of the solution to the cellphone distraction problem was narrowed down to the interpersonal interaction over the table, which was then applied to the typical restaurant and cafe scenario targeted by this project.

4.2 Organic Origin

The first prototype series developed for the Lightbox concept were following the organic theme. The idea of the design being inspired by nature isn't a new one and has shown itself numerous times in various objects created by people through out history. Beside the aesthetics, there are also underlying core mechanisms that can be learned from the systems that exist in nature. Many successful examples of this approach are listed by Jay Harman in his book(Harman 2014), from using fish scale patterns in the design of armour to mimicing the shapes of naturally occurring spirals in the design of energy efficient water turbines. In this series of prototypes the author tried to apply the biomimicry and bio-inspiration principles when solving the issue of the digital distraction, with the fundamental questions being: "How can we encourage sitting together by the table to pay more attention to each other and get less distracted by their phones?", "Can the light serve as a tool to enhance communication?" and "What are the features of light and color in nature that can be applied to the social setting in a restaurant?".

Glow

Seeking inspiration from light-emitting creatures, though the phenomenon of bioluminescence, the author found fireflies to be the right fit. The fireflies use light and colour for the variety of reasons: baby larvae glows to scare off the predator and to communicate its distastefulness, fireflies use their glowing patterns to discriminate between different species, however their major use for bioluminescence is the communication between each other and the process of seeking mating partners (a certain parallel can be drawn between this example and people having a date in a restaurant). There is something inherently beautiful about the way the fireflies interact using light and colour and the experience of watching large amounts of them engaged in this interaction can be quite breathtaking. The author decided to mimic some of the features of that natural phenomenon in the following design. The reason this version is called *Glow* is because of the glowing nature of firefly lights that he had tried to represent with the prototype.

Design

Figure 4.1: Initial render for the Glow version

The results of the initial experiments have laid the foundation for prototyping the concept as a table light. As that happened, a series of decisions had to be made regarding the physical characteristics of the product.

The design process began with the exploration of the core shape for the light source. The idea of using a reflective transparent surface to spread the light has

shown some interesting results in the experiments with the holographic prism and the cellphone screen, so the shape and size of the prism were used for the initial reference. To develop the shape, a second inspiration from nature was taken, which came from the water lilly, as the idea of adding another source of bio-inspiration for the form seemed to align with the desired organic theme. The shape has first evolved from the prism into an origami flower (Figure 4.2) and then was simplified and adjusted for manufacturing purposes. The amount of five petals was empirically chosen after experimenting with the number and shape of petals that make an appealing flower shape. A simple pentagonal shape the was chosen for the base of the flower to reflect that choice.

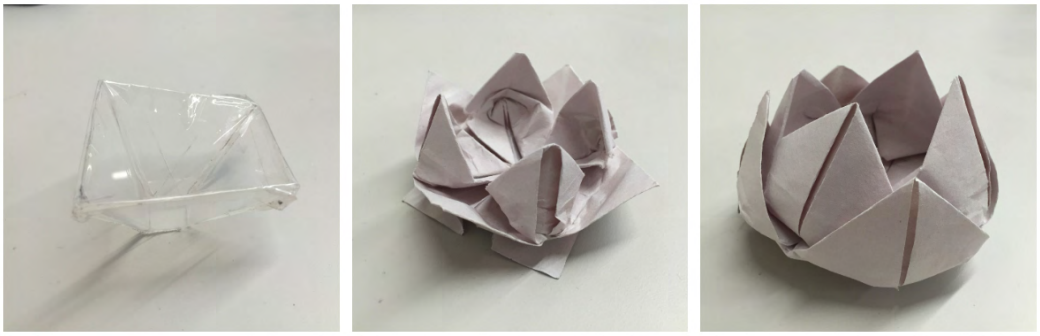

Figure 4.2: Experiments with the light source shape

The second set of decisions had to be made around the spacial layer of the concept, as it was important to figure out how much space the lamp should occupy and where it should be placed. The research has shown the typical table for two people to be between 70x70cm and 70x100cm in size, with approximately 15cm wide shared area in the middle. Based on that, it was decided to restrict the lamp space 20 square centimetres and to place it on the side of the table along the middle, since it was the only location that did not interfere with the persons view while allowing both users to interact with the product (Figure 4.3). This central section on the side of the table is commonly used for placing a flower vase, a menu holder or a spice rack, so it was a logical choice to design the product for the similar area.

When it came to the user interaction, a decision had to be made on where should the users put their phones and what would be the effect of such interaction. The author had considered adding separate phone slots on the table next to each user, but that would take away even more space from the table. Also, having the

Figure 4.3: Experiments with the physical form and location

phone in the clear sight next to the user would provide too much of a temptation to pick it up, so it had to be taken out of sight. However, during the experimenting sessions some people have mentioned their anxiety for the fact, that something important, such as a message from their child or partner, might come up on the phone while it's away, and they wouldn't want that to happen. As a result, a balance had to be struck between leaving the phone directly on the tale and removing it from the direct view of the user. For that, the author had decided to create pockets for the phones within the lamp's base. It had to be done in a space-efficient manner, because of the limitations imposed by the table area size. The interaction also had to be convenient for the owner of the phone. After some experiments the choice was made to make the phones go in the pockets horizontally from each user's side in a way, that would leave 1/3 of the phone visible outside the pocket. The act of "sacrificing" two phones into the corresponding slots would turn on the light.

For manufacturing purposes, thin birch wood was chosen as a sustainable solid material for the base of the lamp and 4mm acrylic sheets were used to craft the transparent flower. Both materials were cut using the laser cutter and then man-

ually assembled. A combination of cold green and blue lights, mimicking the bioluminescent colours, was placed on the opposing sides within the base corresponding to each user. Although the light itself was functioning, the interaction on turning it by placing the phone in the slot was mocked up using a manual switch.

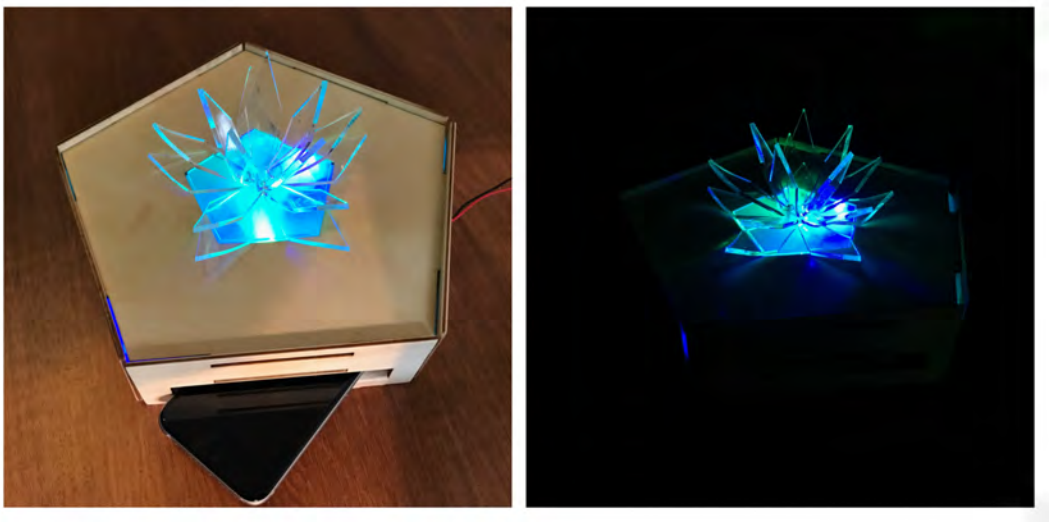

Figure 4.4: Final prototype of the Glow version

Evaluation

The final prototype (Figure 4.4) for this version of the concept was showcased at the industrial design view week at Pratt Institute (Figure 4.5). This work was also featured in an article about the cellphone distraction and biomimicry in the Psychology Today magazine (Albert 2017).

The feedback gathered at the showcase had addressed several areas: the idea itself, the physical quality of the prototype, the form factor and the user interaction. On the positive side of things, the general idea of an interactive table light for the restaurants had resonated with people. They could relate to the scenario, in which the product was meant to be used, and were also intrigued by the bio-inspirational aspect of the lightning properties of the lamp. As for the negative points, the people were confused by the pentagonal shape of the base and its size in relation to the lightning part, as it drew too much attention to itself. They also mentioned the general quality of the prototype as being somewhat "cheap"

Figure 4.5: The author presenting the Glow prototype at Pratt Institute

and "cardboard-looking", because of the thinness of the materials used and the way they were finished.

The author was also given interesting suggestions regarding the phone interaction, such as the idea of connecting the action of sliding the phone into the slot and modifying the intensity of the light, as a way to represent the level of commitment to the conversation.

Bloom

Bloom is the continuation of the organic origin series of the Lightbox concept. In this version the author tried to incorporate part of the feedback from the previous iteration and to move away from rough polygonal aesthetics of the *Glow* prototype, while preserving its organic aspects and inspirations. A new type of response to the user's action is introduced in this version. The name represents the effect of opening up the flower and "letting it bloom" as a result of the phone submission by the user.

Design

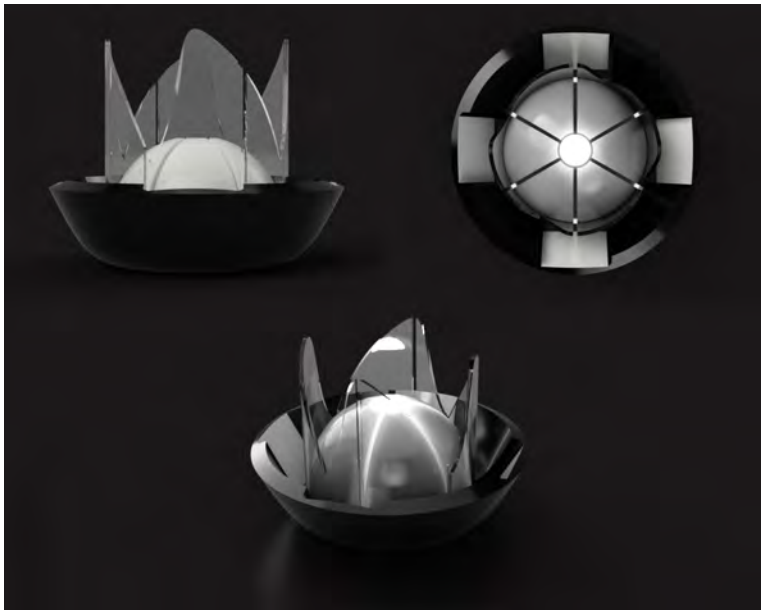

Figure 4.6: Initial render for the Bloom version

This version is an experimental one. When designing the physical features of *Bloom*, the author decided to take the aesthetics of *Glow* and make them more abstract. As one can see in the concept render (Figure 4.6) and the physical mock-up (Figure 4.8), the rough angles have been smoothed out, the transparent plastic feature that's used to reflect the light was turned into a cylindrical cover, and the flower was transformed into a half-sphere of moving petals.

On a user interaction level, this version undertook some changes from the previous iteration. Instead of changing the light in response to phone submission, the light source has remained static, but the petals around the light have moved, changing the luminosity and shadow patters as a result. One of the challenges was to think of a way to make the petals move and not produce any noise or add any complex mechanisms. One of the ideas was to attach a mechanical switch underneath each phone slot that would push out the petals, however the technicalities were postponed in favour of testing out the interaction first.

The experiments (Figure 4.7) with this version were conducted on a half-scale mock-up. The parts required by the design have been printed on a 3D printer, and the effects of the interaction have been tried out manually. This quick mock-up

approach has turned out to be the correct way to go about these tests, as the results have revealed that significant changes had to be done to the concept.

Figure 4.7: Experiments with the lights and shadows

Evaluation

This version has played a critical role in the development of the Lightbox project. The experiments have provided a few minor takeaways and one major issue that needed to be addressed.

On the minor side of things, the positive takeaways were in the use of warm white colour for the light, which really set the mood for the relaxing time, and in the shadows dropped from the lamp, that provided a unique decoration for the table. One of the issues in the design of *Bloom* was related to the positioning of the phones. Due to the dynamic nature of middle section the phones had to be placed on the sides and under the wide angle, so that they wouldn't stand in the way of the light from the lamp. This wasn't an optimal solution and it resulted in the increase of the size of the lamp base, which was not intended, as the space was already limited.

The truly meaningful takeaway from this version was that the realization that the concept got too complicated physically and, as a result, got further away

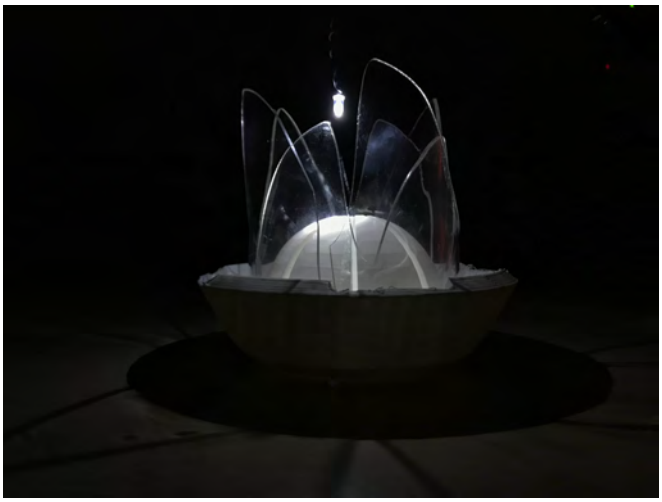

Figure 4.8: Mock-up for the Bloom version

from the main purpose of the project. Although it technically possessed the necessary features within the design, the visual and structural complexity became so noticeable that the phone interaction has been shifted aside. Because of that, the author has made the decision to pivot from the organic series as a whole and to rethink the concept.

4.3 Urban Origin

The development of the Lightbox concept in its final stages was following the urban theme. As it was learned from the previous iterations, the bio-inspirational elements have a role on an abstract conceptual level of the product, but when applied directly, they take attention away from the actual experience. Beside that, the market at its state is already heavily saturated with lighting products that are shaped as plants or flowers in one way or another, so in order to attract the user and to create a unique visual experience a different approach had to be taken. The design created in this section has preserved the best and was stripped away from the unnecessary features from the previous versions.

Figure 4.9: Urban inspirations for the Build version

Build

Walking around Japan one can notice a distinct grid that gives structure to the public space and holds it together. It consists of rectangular blocks, that are pulled in or out of the surface plane, expanded or reduced in size, shifted, tilted, rotated, cut, yet consistently connected to the rest of the structure as a whole. It can be observed both on an exterior level within the architecture (Figure 4.9) and within the interiors and objects that fill these spaces. Objects built with such structure can look unordinary and stay functional at the same time. Aiming to achieve a similar effect, this design borrows some of its elements from the Japanese architecture.

Design

This version, as the previous ones, is based around the interaction of sliding the phone into the socket in the base of the lamp or taking it back. The physical movement of the lamp parts in response to this action, that was attempted previously, is removed from this design. Various approaches to emphasize this interaction

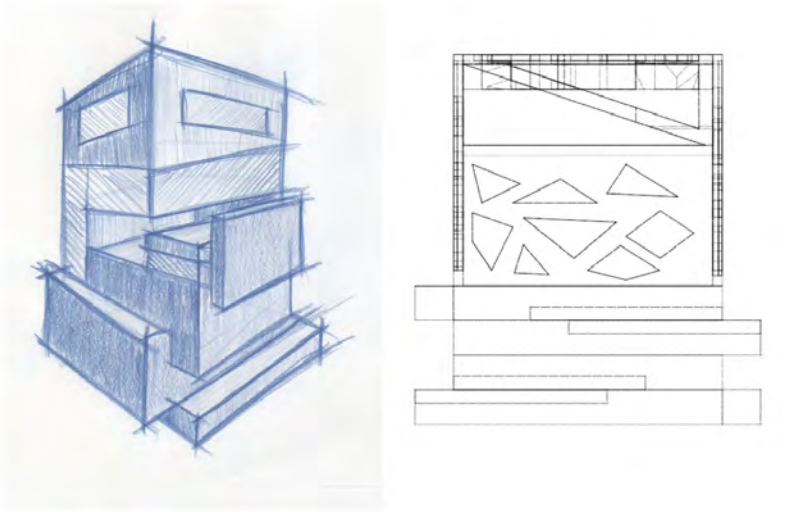

Figure 4.10: Sketches of the Build version

could be taken from there. One would be adding a new function, such physically locking the phone for the time of the meal. It could also be brought to another level by integrating the lamp with the process of ordering food and requiring the phones to be inside the lamp before making the order. These modifications, while promising to provide insight on the human behaviour in the restaurant setting, were not included in this prototype for several reasons. First, they force the action out of the user. In order to embrace mindful behaviour, the user has to decide himself to be put the phone away, otherwise that action could cause anxiety, which would negatively affect the dining experience. During the user research phase, one of the ... has admitted to feeling uneasy when introduced to the idea of having to put the phone away, as it was strongly with her behaviour. The user also has to have freedom to take the phone out at any given time. A person may want to make a phone call, reply to an important message or leave in the place a rush, and locking the device in any way would interfere with his intentions. For these reasons, the phone interaction has been intentionally left at its basic state, with the intention to be gradually improved, as more data on the users behaviour is gathered.

For this design, wood was chosen as the primary material. Tables and counters in cafes and restaurants are commonly made out of wood, so a wooden object is easier to blend in with the rest of the interior. For manufacturing purposes, it was decided to use wooden boards of medium thickness and to stack them on top

of each other, constructing the table light. These wood boards would give the lamp a better physical quality and more of a product look, that was lacking in the previous versions of the project and was pointed out in the feedback. This choice was also made out of the physical stability and weight consideration. In order for users to comfortably interact with the product, it needed to be heavy enough to not shake, move or fall when the interaction takes place. Thin and light materials would require heavier components to be added to the product structure, where as the wood was already strong and heavy enough to fulfil that need.

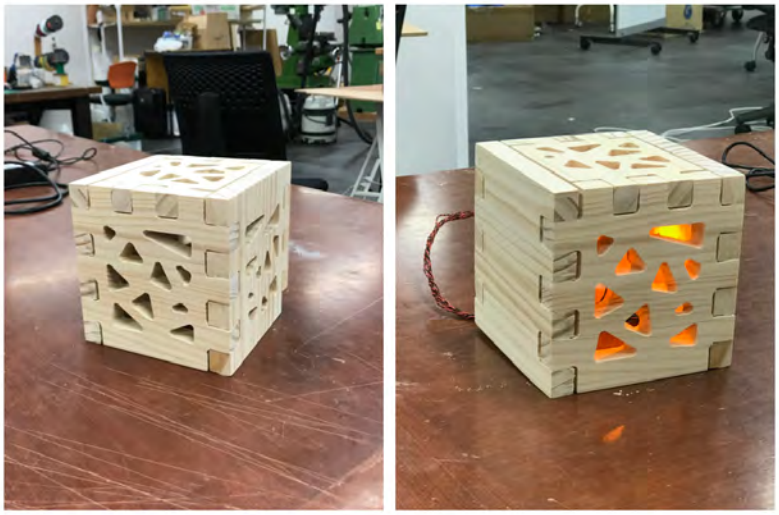

Figure 4.11: Prototyping the Build version

This version, as the *Glow*, is modular and consists of two parts: the phone base and the light part. It was decided out of necessity to account for different sizes of the tables that can be encountered in various public places. A small lamp would be suited for a small table for 1-2 people, where as the larger table for 3-4 people would be better with a large lamp. The modularity of the design allows to modify the product for these needs, while maintaining its structure. The product can be adjusted for a different amount of users by simply stacking more phone modules in the base or removing some, and the light section can be switched from the large size to the smaller one, to fit the product on a smaller table. A layer of transparent acrylic is added between the base and the light sections to allow for more light to reflect and illuminate the table.

One of the considerations to justify the the larger size of the lamp was to integrate it into the table itself. There's often an area with the spices, dining

utensils and the menu, and if the lamp's base would serve as a holder for these items, it's size would not matter as much. However, as this use case is more unique, requires more knowledge about the specific cafe or restaurant and also reduces the flexibility of the product, this option was omitted from this prototype.

Phone slot design was taken from the *Glow* version and improved upon. Due to its size, is able to hold most of the modern phones with the cases on. The phones fully fit in the slot, and the visible part of the phone lies on the slot surface, instead of hanging in the air, as it used to. There's also an acrylic surface inside the phone slot to ease the sliding interaction and prevent the phone screen from scratching. The sides with the phones face each user, an the phone in the pocket is easily noticeable, so that the user doesn't forget it when they leave the place.

Inside this lamp is a set of programmable LED lights, that can be customized to fit the environment and create the unique lightning effect. The capability to make the light dynamic and interactive sets it apart from the regular lamps and allows to experiments and explore the users behaviour under different conditions.

The aesthetics of this version restrict the types of places it can fit into. It is designed to fit into a more casual setting with a laid back atmosphere, such as a cafe or a bar, and would not be suited for a high-end restaurant. For the restaurant, the structure of the design can be left the same, but the materials would need to be picked more carefully in accordance with the restaurant interior and the product size would need to be optimized. These actions can be taken in the future development of this project.

Evaluation

In order to evaluate this design, a user testing session was conducted in one of the cafes in Tokyo (cafe Kanok in Jiyugaoka). The results of the session have shown the features of the design that have performed well and have also outlined the points of improvement for the future development of the project.

An important part of the evaluation was observing the users engagement in the interaction. As this was the first version of the design that was tested in the real-life setting, the key factor was making sure that the users will choose to put their phones away will and positively view the overall experience in its essence. If any problems were to arise at this level, any additional developments on top of that would be negated.

According to these principles, the prototype has served its main function. It

Figure 4.12: Final prototype tested in a cafe

fit well into the chosen space and set a nice relaxing tone for the social event. The interaction was clear and the action of putting the phone away was compelling for the users. They enjoyed the overall atmosphere better and felt more immersed when the phone was inside the artefact. The product has gained positive responses for its aesthetic qualities and build quality, and was treated as a tangible product rather then a technical demo.

As for the improvements, it became clear that the interaction that was intentionally kept to the core minimum needed some additional feedback mechanics. A good suggestion was given for exploring the dynamic nature of the light and including an element of intrigue and mystery into the design, so that the users would be interested in observing the changes in the atmosphere over time and would be motivated to not touch the phone after it was put into the lamp. Although the artefact was designed to not draw much attention to itself, the users have expressed interest in having an ability to interact with the product beside just putting the phone away and taking it back. The size of the lamp was a bit too big for the space of the testing session, and a smaller version (about two thirds of the prototype size) was desired. A suggestion to improve the action of putting the phone away was also given.

Overall, the product has performed well within the testing scenario. Some of the results and suggestions received were anticipated prior to the session, while the others have provided some unique ideas worth exploring in the future.

Chapter 5
Results and Discussion

5.1 Evaluation Summary

Over the course of this research three iterations of the design concept have been prototyped and tested, each one of them serving a specific role in the development of the concept. This section lists the key outcomes from these iterations and afterwards explains the evaluation of the design as a whole.

The first version of the design has confirmed its validity on the conceptual level. The idea of Lightbox was shown to resonate with the potential users and to be applicable as tool enabling mindful social behaviour. The scenario of it being used in a cafe or a restaurant was found easy to relate to and the people were intrigued by the underlying story and were interested in seeing the project develop further. As for the issues, the prototype was found lacking physical quality and the validity of the aesthetic choices was questioned, which required the physical artefact to be improved as it didn't quite suit the idea and was not engaging enough to be interacted with.

The second version of the design was built upon the feedback gathered from showcasing the first prototype. It addressed the users' concerns regarding the physical representation of the concept and has introduced a new interaction feature to enhance the user engagement. The experiments with this version have outlined the positive changes with regards to the aesthetic qualities of the product, specifically its lightning features as table lamp, however they have also revealed the amount of complexities introduced by the new interaction. It was decided that with the new additions the design became over-saturated and could not fulfil its role as a mindful behaviour enabler, so the next iteration took place in the development process.

In the third version the design has preserved its conceptual core, while being stripped away from the distractive features. To accomplish that, the functional and physical aspects of the product were redesigned from the ground up. The

emphasis was put on improving the physical layer of the product, as it was the key objection point in the first version, and on not disrupting the main interaction loop, as it prevented the second version from being applied to the desired scenario. A full-scale prototype was built following these principles and was tested out live in a public environment within a scenario for which the artefact was designed. Testing sessions involving this version of the design have proven the concept and have shown that the artefact serves its primary function; valuable directions for the future development of the product have been given.

A question may be asked whether the design concept fulfils the goals of the project as a whole and delivers the results that the project was set to deliver. To answer that, it is important to recap the objectives that were set for this project at the very beginning. First, it aimed to create an incentive for people to set their digital life aside for and to integrate such incentive into a common life setting. The final artefact was created to be used in a typical dining scenario, and as the testing sessions have shown, the incentive to put the phone away was being acted upon, so the project has met that first objective. Second, the project was set to help establish healthy habits in people's relationship with technology and to promote physical awareness in ordinary situations. This objective touches upon the subject of mindful behaviour. While it is difficult to estimate from the conducted testing sessions alone the scale of the impact that the concept in question would have on an individual's behaviour, it can be said for a fact, that the conscious act of choosing to give up the digital device and to shift attention to the social activity, although temporarily, but puts the person on the right track. The author believes that by making such choice on a regular basis, akin to the regular mindfulness meditation practice, over time people will build up their awareness level, and as the user testing has shown, with the proposed artefact they feel compelled to make that choice. With that said, the second objective of the project can be considered met as well. The last objective was to explore new ways of interaction that can be applied to the social experiences. Through out this research it was shown that the core interaction of this project involving the sacrifice of the phone as way to publicly commit to the social event is positively perceived and can be one of such interactions types. As the feedback from the testing session in the cafe suggested, another such interaction can involve dynamic light that changes with the experience; it does not require any direct attention from the user, while at the same time it is able to change the physical environment and affect the mood and feelings of the users. As one can see, the project meets that last objective.

To summarize the results, the Lightbox concept was proven through out this work. The designed artefact meets all the objectives that it was set to meet. It acts as an enabler for the mindful behaviour, which makes it contribute to the quality of the social interactions that take place during the dining experience. As for the scale of this contribution, without a question there is room for improvement, since the features of the design were kept to the core minimum for the purposes of proving the concept. Now that the core application is established, future improvement and experimentation can be done on top of it. In this project the authror has strived to find the balance between the interactive and the socially stimulating nature of the design, and the finding from the testing sessions suggest that on the basic level such balance was found.

5.2 Design Limitations

There are certain limitations that apply to the concept proposed by this project. Some have been discovered during the user testing sessions, while the others are the result of the design decisions that were made during the development process. It is important to mention them in this section in order to overcome these limitations as the project develops further.

First, the physical choices that were made during the creation of both organic and urban versions of the product (e.g. aesthetics, materials, size) have restricted its use to a certain type of public environment. In it's current form, the artefact is tailored more towards a casual and relaxing space. Every restaurant and cafe try to be unique with their interior design choices, so one solution doesn't apply to every place. The author tried to address this limitation by making the design modular and easily modifiable, and also by choosing commonly used materials for the manufacturing, but in order to overcome this limitation in a better way more research and experiments have to be conducted.

Second, the wireless phone charging incentive included in the product to enable the interaction does not work for some users simply because not every phone is equipped with the wireless charging function. While current technical trends show that mobile phones are moving towards the wireless charging standard, some action need to be taken in order to address this limitation for the current time. Creating a version that would incorporate a different incentive for the users can help overcome this limitation and also improve the design concept as a whole.

There were also some technical limitations imposed by the way the design

concept was implemented. A small limitation regarding the detection of the phone within the phone slot was discovered during the testing session. In the final artefact, the phone is sensed by the light sensor pair that is placed above and below the phone inside the base. When the phone receives the notification, its screen lights up, which causes the lamp to act as if the phone was removed from its slot and switch the lights. This limitation can be addressed by changing the position or type of the sensors, or by redesigning the phone interaction, suggestions for which have also occurred during the testing. The size of the phone slots in the lamp has been calculated is a specific way. As the phones vary in sizes, the author has took into account all the common phone sizes and has designed the product in such a way, that even a big phone with a case would fit into it. However, if the phone case is too thick or its shape isn't a conventional one, it will not fit into the phone slot, as it currently stands. A potential solution would be to move away from the slot design and to make a designated open area to place the phone on.

Chapter 6
Conclusion and Future Work

The work presented in this research proposes an intervention in the social interaction scenarios happening over the table, that eliminates cellphone distractions from these interactions and shifts the focus to the activity at hand. The concept allows for the interactions to take place, while creating an appealing physical environment and removing the smart devices out of sight. It also opens up the discussion about digital dependency in the modern age and the value of our physical experiences. This work has introduced the physical product based around the action of giving up the cellphone as a way to commit to the activity in a mindful manner. The design has been tested live in a public environment and the results show that people are compelled to unplug from the digital realm and to pay closer attention to their immediate physical surrounding when given the incentive to do so. The use of a table light as a container for the smart devices has been shown to spark curiosity for the interaction, and the experience provided by the use of the designed artefact was shown to have positive effects on the person's engagement in the social activity.

There are several potential directions for the future development that can take place after the introduction of this work. First, while the concept was shown to affect the users in a desired way, the sample group for the experiments was small, so conducting a longer term experiment in a designated public place that attracts a broader audience will undoubtedly provide more insight and a deeper understanding of people's behaviour and interaction patterns.

Second, the author believes that splitting the project into two segments and conducting more in-depth experiments in each one individually would benefit the concept as a whole. The first one would be purely focused on the lights in the social setting and their effect on people's behaviour. Comparing dynamic lightning against static, experimenting with different colours and seeing how they affect the perception of food and drinks would give insight to making a product that is better suited to be used at a bar or a restaurant. Another one is the interaction aspect of

the artefact. As one of the outcomes of the experiments was the user's interest in the interactive nature of the experience, the author would like to further explore the new types of interactions that could be enabled by the product and embrace this and the role they can play in the interpersonal communication.

Lastly, the author would like expand the scope of the idea from the physical product to the public space. As people's actions is affected by the environment they are in, embedding the findings of this research into the space as a whole, as opposed to limiting it to just the table area, can have a significantly stronger impact on their behaviour and lead to the creation of a truly unique social experience.

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Appendices

User Interview

Below is the transcript of the user interview from the testing session in a cafe.

Q: How did you feel about using this product?
A: I really wanted to put my phone inside to see what would happen.

Q: Did you find the interaciton encouraging?
A: Yes. There was a good trigger for it.

Q: Was there any difference in how you felt when your phone was inside versus when it was just laying on the table?
A: The lights and the apmosphere felt much better when the phone was inside.

Q: What did you think about the function of wireless charging?
A: It was nice to have and it was part of the reason why I wanted to put my phone in there, but honestly it wasn't necessary.

Q: What would you want to add to the product, if anything?
A: If there was some gimmick for the interaction, it would be more interesting. Something with more feedback. Maybe if I put the phone inside and there's a lock and something clicks. Something like that... Or paying with WeChat. Insert your phone with the QR code and pay for the bill. A gimmick.

Q: How did you feel about the aesthetics, the shape, the size? Did something bother you?
A: As long as it doesn't block the space on the table and I can comfortably eat my meal, it is fine. Although it is a little too big for this table. I quite like the box, but 2/3 of this size would probably be better.

Q: What about the materials? Did it feel like the lamp was out of place?

A: No, nothing like that. It actually looks good. I think you can sell this already.

Q: What kind of public place would you like to see this being used?

A: It fits in a lot of places. The design seems quite versatile. It's wooden, fits nicely on a wooden table. If I were to choose a place... not McDonalds, not a French restaurant... A place like this one, where you just come to relax and have some quiet time.

Q: Did we cover everything? Is there anything else you like to say?

A: I think the only improvement I would like to see is the interaction. Not the lights, just the mechanical movement of putting the phone in. Some gimmick that would make me feel good about doing it. Change the phone slot into a drawer, for example, so that there are more steps for the interaction. I just want in to be more difficult to take it (the phone) back.