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PERCEIVED BENEFITS AND DRAW- BACKS OF ETHICAL DESIGN

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ABSTRACT

Lauri Parkkamäki: Perceived Benefits and Drawbacks of Ethical Design
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There is a widespread need for ethical design in today's world; everyone faces minor ethical issues, whether they are biases or violations of user control, on daily basis. Although ethical evaluation is generally thought to be good, it is not yet clear what the benefits of ethical design really are and whether the benefits outweigh the downsides. Traditional UX design primarily focuses on immediate gains in user experience and monetary value, overlooking alternative metrics and long-term considerations. Ethical design emerges as a promising design paradigm in this regard.

This thesis investigates the perceived benefits and drawbacks as experienced by ethical design practitioners, aiming to render the effects of ethical design more tangible and comprehensible to a broader audience. Moreover, the concrete evidence of ethical design could act as an argument business-wise; it is easier to advertise ethical design to clients when the implications are clear. This research in a way answers to whether ethical design should be practiced or not and why. This, in turn, might spark motivation in individual designers.

The methodology of this qualitative study consists of two interviews and a diary study. Four participants, proficient with ethical design, with different backgrounds and motivation were recruited. Since the impact of applied ethics is quite difficult to measure or compare definitively, the benefits and downsides are measured by how the effects are perceived by professional designers. Affinity diagrams are used to sort and categorise the data into handleable themes.

As a result, a number of benefits were found and categorised along with their downside counterparts. The tone in which the professionals discuss about the benefits points strongly to the notion that they are worth the extra effort, in comparison to non-ethical design. This is also backed by the vast number of perceived benefits compared to the number of identified downsides. Furthermore, the results will also open the possibility of discussions among designers, stakeholders, customers, and end-users about the benefits and downsides of ethical design.

In conclusion, the research implicates ethical design has more benefits than downsides. However according to the interviews, it will bear even more fruit in the long run. The responsibility of delivering ethically-driven products and services needs to be shared to be able to harness the full potential of the benefits that comes with ethical design. The sooner it is adopted the better; ethical design has more positive impacts than negative ones which makes it a cost-effective investment both for individual designers and companies.

Keywords: ethics, ethical design, design paradigm, UX design, service design

The originality of this thesis has been checked using the Turnitin OriginalityCheck service.

TIIVISTELMÄ

Lauri Parkkamäki: Eettisen muotoilun havaitut hyödyt ja haitat
Pro gradu -tutkielma
Tampereen yliopisto
Tietojenkäsittelytieteiden tutkinto-ohjelma
Marraskuu 2023

Nykymaailmassa on laaja tarve eettiselle suunnittelulle; jokainen kohtaa päivittäin pieniä eettisiä ongelmia, olivatpa ne oletuksia tai käyttäjän toimintojen rajoittamista. Vaikka eettistä tarkastelua pidetään yleisesti hyvänä, ei ole vielä selvää, mitkä eettisen muotoilun edut ovat ja ovatko hyödyt haittoja suuremmat. Perinteinen UX-muotoilu keskittyy ensisijaisesti välittömiin hyötyihin käyttökokemuksessa rahallisessa arvossa mitattuna, jättäen huomiotta vaihtoehtoiset mittarit ja pitkän aikavälin näkökohdat. Eettinen muotoilu näyttää tässä suhteessa lupaavalta.

Tässä pro gradu -tutkielmassa tarkastellaan eettisen muotoilun harjoittajien kokemia hyötyjä ja haittoja. Tutkimuksen tavoitteena on kiteyttää eettisen suunnittelun vaikutukset konkreettisemmiksi ja ymmärrettävämmiksi laajemmalle yleisölle. Lisäksi eettisen muotoilun konkreettiset vaikutukset voivat toimia argumenttina liiketoiminnallisesti; eettistä muotoilua on helpompi mainostaa, kun sen vaikutukset ovat selkeät. Tutkimus vastaa tavallaan siihen, onko eettisen suunnittelun harjoittaminen kannattavaa. Tämä puolestaan saattaa herättää yksittäisten suunnittelijoiden mielenkiinnon eettistä muotoilua kohtaan.

Tämän kvalitatiivisen tutkimuksen metodologia koostuu kahdesta haastattelusta sekä päiväkirjatutkimuksesta. Tutkimusta varten rekrytoitiin neljä eettistä muotoilua ammatissaan harjoittavaa osallistujaa, joilla oli eri taustat ja motivaatiot. Koska etiikan soveltamisen vaikutusta on melko vaikea mitata täsmällisesti, hyödyt ja haitat mitataan sillä, miten ammattisuunnittelijat näkevät vaikutukset. Affiniteettikaavioita käytetään tietojen lajitteluun ja luokitteluun teemoiksi.

Tutkimuksen tuloksena löydettiin useita hyötyjä ja haittoja, jotka luokiteltiin niiden kategorioihin. Se sävy, jolla ammattilaiset keskustelevat eduista, viittaa vahvasti siihen, että eettinen muotoilu on ylimääräisen vaivan arvoista verrattuna perinteiseen muotoiluun. Tätä tukee myös havaittujen etujen suuri määrä verrattuna havaittujen haittojen määrään. Lisäksi tulokset avaavat myös keskustelua kaikkien osapuolten kesken eettisen muotoilun hyödyistä ja haittapuolista.

Yhteenvetona voidaan todeta, että tutkimus osoittaa, että eettisestä muotoilusta on enemmän hyötyä kuin haittaa. Haastattelujen mukaan se tuottaa kuitenkin vielä enemmän hyötyjä pitkällä aikavälillä. Vastuu eettisten tuotteiden ja palvelujen tuottamisesta on jaettava, jotta eettisen suunnittelun tuomat edut voidaan saavuttaa täysimääräisesti. Mitä nopeammin se otetaan käyttöön, sen parempi; eettisellä suunnittelulla on enemmän positiivisia kuin negatiivisia vaikutuksia, mikä tekee siitä kustannustehokkaan sijoituksen sekä yksittäisille muotoilijoille että yrityksille.

Avainsanat: etiikka, eettinen muotoilu, UX-muotoilu, palvelumuotoilu

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1 Introduction

The role of information technology in our daily lives has increased significantly over the last few decades. 2020's brings us lots of technological changes – the top strategic technological trends of Gartner constantly include automation, AI engineering and generation, and distributed cloud-native platforms from 2020 onwards (Panetta, 2019). It is evident that technologies will become easier to develop and accessible for more and more people. As technology continues to evolve and integrate into our personal lives, designers and decision makers alike must consider the ethical implications of their work.

Human-Technology Interaction (HTI) is a field that focuses on the design and development of technology that is not only efficient and effective but also considers the human experience. While Human-Technology Interaction expanded the scope of Human-Computer Interaction (HCI) from focusing on computers to technology in general (Coetzer et al., 2020) it has its limitations. Traditionally, this is approached from the perspective of an individual user aiming to increase the quality of a service. That indirectly means the wider effects on society, culture, and the environment are not paid attention to. This raises the question of where the quality of a system arises from. For example, if the focus is put on individual user experience but the design imposes negative effects to the surrounding context the impact might be neglectable from the perspective of a single user. However, each user could be considered an individual ergo the effects accumulate. On paper it might seem like an improvement for users but can the quality of a such system considered good?

This is where the long tradition of ethics research comes into play; filling up the deficiencies of HTI, ethical design is an essential addition to HTI that aims to create technology that is not only effective but also morally sound. Ethical design practice ensures technologies are accessible for everybody, considering the environmental aspects, and not causing any harm to people, communities, and other ecosystems. In other words, ethical design pays attention to the context and the surroundings of the users and the system itself.

Ethical design is usually defined only for a particular application area with a quite narrow and specific perspective as described with examples later in chapter 2.2. A comprehensive and widely applicable definition is unfortunately not yet agreed-upon. Thusly, a new definition of ethical design, for the purpose of clarifying the key concept discussed in this paper, is proposed in the figure 1 below. This definition ties ethical design to its predecessors – Human-Technology Interaction and Human-Computer Interaction – as those layers ensure the efficiency and the interactions in the first place. Ethical design builds atop of those a layer of ethical perspectives aiming to increase the well-being of humans, society, and the environment.

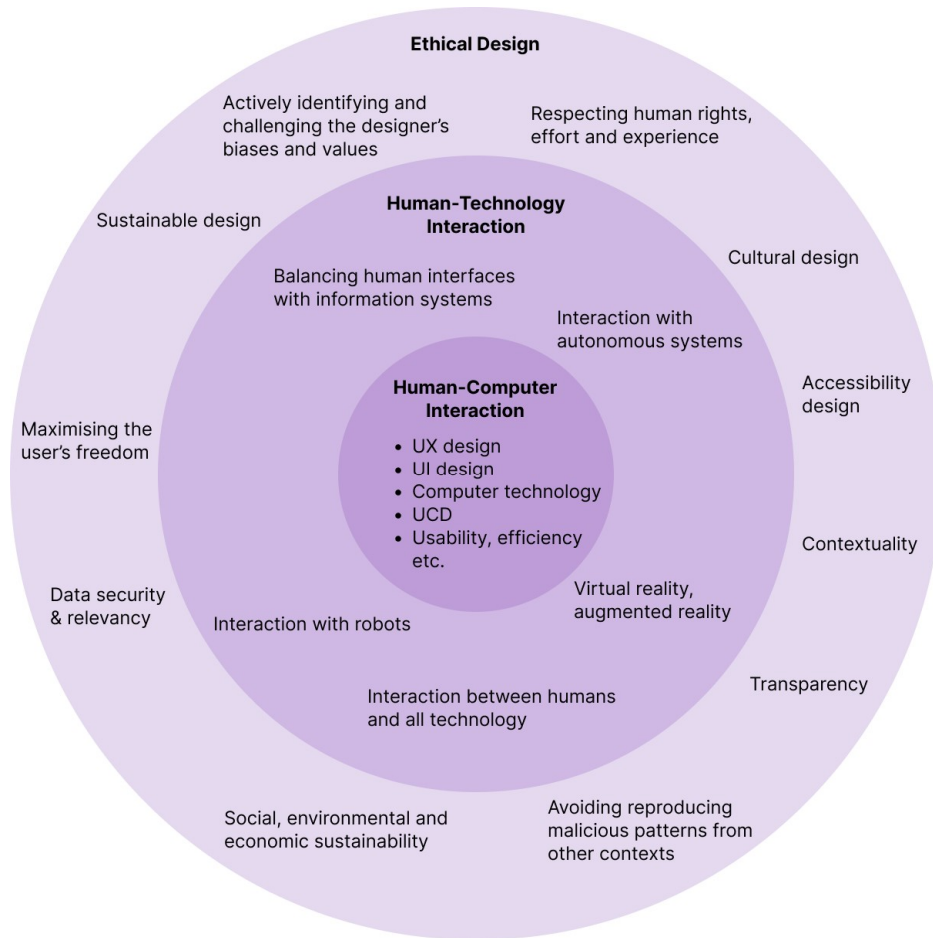


Figure 1. Ethical design in relation to Human-Technology Interaction and Human-Computer Interaction

Ethical design has taken its first steps and gained foothold in the design community. There are several different manifestos, guides, toolkits, and frameworks for ethical design available on the internet but the consensus about the definition is still lacking. Some put it as simply as respecting human rights, effort, and experience (Balkan et al., 2017) but others expand on that. More specific aspects of ethical design could, for example, be actively identifying and challenging the biases and values of designer, respecting user's right to choose how to interact with the product by offering appropriate customisation, and striving for socially, environmentally, and economically sustainable designs (Mulvenna et al., 2017).

Although ethical pondering is generally recognised as important, it inevitably incurs costs and at the same time the benefits are vague. Ethical examination is basically considering the different dimensions of good and evil and identifying the contradictions and compromises related to them. However, it is not all black and white; things can also be neutral. This goodness-badness spectrum can be and is being used in design.

In UX design, the evil is generally known as dark patterns or dark design. In practice, dark patterns manifest as user interfaces that trick the users into doing things. Companies

and their designers do this with intention and a good understanding of human psychology. (Fansher et al., 2018.) A clear hallmark of such design is that the focus is clearly not on the users and their interests. This should give you a good idea how to avoid dark design: not contradicting the interests of users, not persuading them, or restricting their freedom. However, as good and evil are considered opposites, that does not mean such design is good; good design should be retained to describe such designs that support users' interests, gives them freedom, and enables them to do things they could not before. Ethical design is thought to fit this definition of good design.

In all professions that also have business motives, it is important to be able to demonstrate a sense of new ways of operating also financially. Whereas the core of dark design is to gain more income quickly, ethical design, as the counterpart of dark design, should have a financial motivation with similar magnitude to better appeal to organisations. Since ethical design does not abuse human psychology for quick profit the possible benefits need to be researched and findings presented so that its value is clear. Focusing on the individual users, it seems irrelevant to only use monetary metrics when evaluating ethical design.

UX design has a strong tradition of trying to support business either with direct effects – a good experience increases sales – or indirect effects, such as brand value. This explains why royalty-of-investment and cost-justified usability are so associated with UX. At the same time, there is a strong mindset that UX designers are on the side of the users and sheltering them from malicious technology corporates. That is, interesting conflicts of values and different beliefs. This creates an interesting tension to research.

This thesis focuses on how ethical design practitioners in the field approach ethical questions and what kind of effects they perceive from it. These perceptions try to build a case for ethical design as, due to the young age of the design paradigm, the effects producing financial gains might not be fully in action just yet. It is also interesting to study the ethical designers' relationship to business goals comparing to those of typical UX designers. As this is an ongoing process of change, it is essential to hear the thoughts of professionals that are doing this kind of work daily. It must be admitted it is highly likely, if not even expected, this exclusive group of practitioners has inherent biases resulting from their educational background as well as personal values. However, acknowledging and challenging your own biases is usually imbued within the definition of ethical design (Mulvenna et al., 2017).

Ethics – a topic with endless rabbit holes of philosophical and moral pondering – combined with design and its continuous development has an unprecedented amount of influence on each of our lives. Currently, ethical design is an ongoing process, but it might stay that way due to the meandering nature of ethical questions; questions create more

questions. To address these demands and questions the research was anchored to place with the following research questions:

1. What kind of benefits are believed to have arisen from ethical design and to whom?
2. What are the perceived drawbacks or trade-offs of explicitly ethical design?
3. What are the most effective strategies for incorporating ethical design into UX design?

The key point of the study questions lies in the wording of them – it is emphasised through this thesis that the effects observed spring up from the experiences of ethical designers, not from business indicators or any other measurable phenomena. From the questions above, three assumptions were made to help moving in the right direction:

1. More perceived benefits than costs are found from ethical design.
2. Benefits of ethical design are not directly financial.
3. Ethical work makes employees enjoy their work and increase the feeling of importance thus making them more loyal.

The first assumption is based on the mere fact that professionals and some organisations are investing in ethical design and its development. If even a handful of people are willing to do so, at least they must assume it is beneficial in the end. The second assumption leans on the nature of ethics. It being an abstract conception, the benefits, or the drawbacks to the extent, cannot all be assumed to be directly monetary though some exceptions may be found. The third assumption springs from the notion that doing good feels good; acting in ways that benefit others also positively impacts oneself (Thoits et al., 2001).

Setting out to find the answers is initiated by immersing into the definitions of ethical design, various standards, and the vast number of different guidelines. All that is done by literature research and the knowledge acts as a basis for studying the designers practicing ethical design. The methodologies chosen for this study consists of initial interviews, diary studies, and final interviews conducted for each study participant individually. The accumulating qualitative data, both from the semi-structured interviews and diary studies, is analysed with affinity diagrams and the findings from different study phases are compared to each other. Based on the analysis and the current state of ethical design according to the literature, this thesis unveils different effects ethical design has. The artefacts of this research act as a starting point for discussions and future studies with larger sample size.

To familiarise the reader with the concept of ethical design, chapter 2 discusses the current understanding of it, where did it sprout from, who is it for, and how to practice it. From there it is logical to move through the chapter 3 – the actual research material and methods – to the results described in chapter 4. Chapter 5 discusses the meaning of the results and reflects on the research. This all is concluded in chapter 6.

As a product, this research is expected to uncover various benefits of varying types for different stakeholders and for different timespans. It is highly likely that the perceived benefits will outnumber the downsides as the focus is nonetheless on how the ethical designers experience the effects of ethical design. This aspect of qualitative research is well acknowledged, and this thesis does not try to draw biased conclusions for nor against ethical design practice. However, various discussion starting points are assumed to be populated from this study hopefully covering the issues from different perspectives as broadly as possible. The thesis aspires to be a spark of many conversations to come.

2 Theory And Background

The first step towards ethical design was taken in late 1980's. The idea of value sensitive design – somewhat arguably the predecessor of ethical design – was sparked. Through decades of research and developing frameworks and standards, the concept of ethical design was born. This chapter goes through the brief history of ethical design chronologically and illustrates the current understanding of the design paradigm. Also, the methods of implementing ethical design is briefly discussed.

2.1 Towards Ethical Design

Value Sensitive Design (VSD) is an approach to the design of technology that considers human values and ethical considerations. It aims to ensure that technology aligns with the values and needs of users, stakeholders, and society. It was developed in the turn of 1990's – a time when almost all development effort was put into making computing systems more efficient – by Batya Friedman and Peter Kahn. The paradigm was based on the idea that value emerges from the tools we build and ways we use them. (Friedman et al., 2002.)

Even at the time, it was acknowledged that VSD is not the ultimate answer to the ethical dilemmas of technology. It was evident that balancing human values is not a task with one correct solution. One of the main difficulties was the fact that economic goals, which tend to oppose moral values, are human values and economic means can enhance autonomy (Friedman et al., 2002). Moreover, moral values can support economic goals; less bias in design leads to systems that are more accessible leading to a larger market share.

VSD provides good tools for implementing values into a design without taking a side on what is right. There was a consensus that the criteria should include ways of promoting core human values in the early 2000's (Friedman et al., 2002). That being said, it should not be a surprise that VSD was modified further for certain purposes. These specialised variants include for example Privacy by Design and Care-Centred Value Sensitive Design. Other proposed steps forward – towards ethical design – include participatory design, lending methods from social sciences, increasing diversity, studying edge cases, social activism, opening the process to a larger audience, and utilisation of collaborative online tools (Borning et al., 2012). A decade later, all these tools and methods are used regularly. Could we say it was the right direction?

Whereas VSD research was well focused on the matter, the current state of research in ethical design is vastly dispersed. It might be due to the relatively young age of ethical design or the simple fact that there is no consensus on the meaning of ethical design. However, a certain trend is visible when looking at the recent studies on this topic. The research seems to focus on interfaces where inputs and outputs are unpredictable, such as

AI, social media, social agents, and social robots. The majority of these revolve around human-AI interaction.

Taking a deeper look at the recent studies of ethical design reveals it is all about missing standardisation. IEEE launched an initiative for Ethical Considerations in Artificial Intelligence and Autonomous Systems whose mission is to ensure all technologists are trained to balance ethical considerations in the design and development of autonomous systems (Bryson et al., 2017). In the context of carebots in healthcare, ethical design goes hand in hand with trust. Care ethics is a framework that seeks to provide guideline to lean to. (Yew, 2021.) There is an imperative need for ethical considerations of artificial social agents. A scaffold for a guideline or framework was discovered in a principlist-based study. (Richards et al., 2023.) This diverse list of research goes on. It could be argued that it is a hot topic considering the rapid leaps of progress in artificial intelligence.

In regards of accessibility, this kind of standard, General Data Protection Regulation (GDPR), was created and thereby European Union put it into effect on commercial products and services. In a nutshell, the regulation dictates that processing personal data must be lawful, fair, and transparent (Alford, 2020). Accessibility being only a small sliver of ethical design, the handling of the issues acts as a good exemplary resolution.

2.2 Perspectives to Ethical Design

At its current state, ethical design is not a distinct design paradigm like VSD or HCD. At least not yet. It is defined within the context of use and, generally, is a field of experimenting as best practices are not yet formed. The following paragraphs illustrate the diversity of contexts in which ethical design is attempted to be defined. However, the definitions of ethical design in these example cases are not mutually exclusive.

Most often for a typical consumer, UX design represents itself as user interfaces. They consist of relatively visual building blocks such as menus, navigation, user flow, dialogue boxes, colours, and the content itself which, in turn, consists of textual elements, images and videos. UX professionals coined the term dark patterns to categorise falsely persuading design and shame offending companies and practitioners (Brignull, 2013). These patterns do not exist by coincidence; dark patterns are created with intention to lever underlying human psychology. In other words, they are patterns that trick the user into doing things. In a 2018 study, it was revealed that typically dark patterns manifest themselves as interfering interfaces, sneaking, obstruction, and forced action (Fansher et al., 2018). Obviously, restricting the actions of a user, guiding the user flow, and obscuring the view are infringements of Nielsen's usability heuristics (Nielsen, 2005) and therefore unethical violations against the user. Dark patterns are nowhere near ethical design. Although, being the complete opposite, they are an interesting topic worth of discussion that gives insight not only on what not to do but on how conscious design decisions on the details of UIs have the potential to be the defining factor of user experience; if following the

rulebook arms the unethical actors it should also equip the designers with best intentions with opposing patterns. All in all, sometimes it is easier to define what ethical design is not.

The GDPR has a great effect on the ways of maintaining and processing data done by organizations. The products and services need to guide users make informed decisions explicitly about their private data and provide control over it. (Van Ooijen et al., 2019.) In a nutshell, the policy changes ensured the user with the following rights: right to be informed, to access, to reject automated decisions, to correction, be deleted, to restrict processing, and to stop processing. How this consent can be given is not unique, but the user reserves all rights to withdraw the consent at any time. (Almeida et al., 2021.) Whether you have heard about it you probably saw the ramifications of the GDPR: all websites started asking for consent overnight. Thusly, it also affected the design of user interfaces. In conclusion, the GDPR gave the user full control on their private data but, to fight back, some malicious companies utilised dark patterns tricking users into giving consent and making it difficult to withdraw it. On the other hand, several browser extensions were developed to automatically refuse all cookies as some people got frustrated enough about the never-ending asking for consent. Regardless of how the user decides to process their consent, the GDPR guarantees that the power over decisions regarding the processing of personal data rests with the user. In this case, that is the very essence of ethical design.

In late 2016, the EU put into effect the Web Accessibility Directive which provides people with disabilities with better access to websites and mobile apps of public services. Two years later, the implementation plan was updated with Web Content Accessibility Guidelines, WCAG 2.1. (European Commission, n.d.) Studies have shown that following the accessibility guidelines results in increased performance in terms of task completion rates and times for non-disabled users. This is in par with prior studies. WCAG 2.0 aims to increase understandability and operability through manipulated recommendations and is seemingly successful at it. These goals are to reduce the mental load of the user. In more practical terms, to highly conform with the guidelines, the design should consider the following aspects: clear structure of the website, increased predictability, and providing higher distinguishability of elements. (Schmutz et al., 2016.) This example tries to convey how quickly ethical design practices can be adopted through standardisation and regulations and how big the benefits can be when focusing on one corner of ethical design.

In the context of designing and developing IoT, the main goal of ethical design can be described as empowering users to control and protect their personal data. This can be achieved through transparency regarding algorithms and giving the user more freedom over decisions. (Baldini et al., 2018.) In this interpretation, ethical design is seen to entitle the user to make decisions whenever value issues arise. However, another study looking

into ethical issues of IoT states that adequate security and privacy countermeasures are lacking, especially low-cost chips (Pasricha et al., 2011). This statement is backed by a 2019 study which revealed that over 90% of communications between IoT devices were encrypted (Constantin, 2019). Additional ethical issues include handling of post-deployment issues such as bugs and vulnerabilities, and carbon emissions of always-on devices. Lately, the focus has been on maximising performance with the cost of increasing carbon footprint. (Pasricha et al., 2011.) It is obvious that in regards of IoT, ethical design is often focusing on transparency, security issues and carbon emissions as the devices in this realm run somewhat autonomously around the clock.

In these varying examples, ethical design was defined differently: consciously avoiding dark patterns, giving user the power they are entitled to, ensuring a high level of accessibility, transparency, data security, and carbon emissions. Is it one of these specifications, a combination of them, or something more abstract? As there is no agreed-upon definition or framework for ethical design, for the time being it is safe to say the contexts affects how ethical design manifests itself. In this thesis, however, ethical design is defined as the abstract layer on top of Human-Technology Interaction which aims to create designs with humans, society, and environment and what is best for them in mind.

2.3 Implementation of Ethics in Design

Ethical design stretches from software to hardware and touches all the experts of different disciplines in contact with the design or product. Whereas UCD revolves around the user and their needs, ethical design takes the whole ecosystem into account from carbon emissions to user interfaces.

A 2022 study probing the public opinion on the importance of ethical design in artificial intelligence. The study measured the weight of different attributes, and the results were generally unanimous though accountability stands out a little. Looking at the classifications of participants, it is hinted that people tend to value ethical principles differently. These opinions gathered from the public could act as a basis for legal regulations as they have been proved effective and demanded countermeasures against discriminatory AI (Kieslich et al., 2022.) It could be extrapolated from these findings that regulatory political or legal actions are a required basis for widespread ethical design, that is in the context of artificial intelligence at least. Thereby, the implementation of ethics in the design is more of a political than technological task which does not necessarily require computer scientists.

We do not completely understand how computers work (Maron, 1966) and thusly no information system has been, or can be, developed by a single person. Typically, a project is undertaken by a team of professionals with varying disciplines, though mostly computer scientists, inevitably leading to a situation where each partaking professional must bear some level of ethical understanding regarding the area of their expertise.

Based on these examples, the implementation of ethics in design should not be only the job of designers. Computing systems cannot be understood well enough by an individual to do the ethical assessment on all its components. The responsibility therefore lands in the hands of everybody; creating laws and regulations require people outside of technical field, the public needs to vouch for it, and technological companies need to abide by these rules. A company or a team of designers could however commit to produce ethical results and develop the prevailing understanding of ethical design. On the other hand, intrinsic motivation is rare and the demand for legal regulations is brewing.

2.4 Current State of Ethical Design

Ethical design has been attempted to define multiple times in different context. Of those attempts, none is declared as the universal understanding or the paradigm. This chapter provides a quick overview of the state of ethical design today. It is noteworthy that this is not to be thought as a comprehensive list because the rapid development of ethical design and the recent legislative changes can speed up the assimilation of the design paradigm in general.

Defining ethical design is not an easy task. It is much easier to define what is it not; deceptive design leads to reduced brand loyalty in long-term (Nielsen, 2021). Could that be understood as ethical design being thinking about the longer-term implications of the design decisions? Some people might find it easier to approach ethical design from examples or through resources (Fossheim, 2020). These resources include articles, blogs, books, courses, frameworks, podcasts, principles, and toolkits (Every et al., 2023).

As mentioned in the previous chapter, ethical design can be defined as simply as respecting human rights, effort, and experience (Balkan et al., 2017). Simple definitions are easy to remember but offer little to no practical tools. Another slightly broader definition goes as follows: actively probing and questioning your biases and values, respecting the freedom of the user to choose how to interact, and striving for more sustainable designs (Mulvenna et al., 2017).

More practical approach is given by another methodology that crudely put imbues design goal with human values to for human design goal (Sohail, 2017). It is not a definition but a starting point for ethical design practices. This kind of reframing of a known methodology is common; one such example redesigns the design process by expanding the 5-step design thinking process (Interaction Design Foundation, 2016) into an 8-step process differentiating the individual steps to intents and results (Zhou, 2023).

In conclusion, balancing between finding the universal definition and getting something done is a challenge. Each definition either amplifies some aspects what ethical design is or excludes what it is not. It would be rather straightforward to summarise the definitions, but ethical design seemingly has a strong connection to the context. However, it is only a matter of time when the all-encompassing definition is coined.

3 Material and Methods

The research materials of this study were gathered from interviews and diary studies. The participants consisted of professional designers, both UX designers and service designers, working in companies that describe ethics being part of their design process on their public websites. Furthermore, the interviewees were ideally working in different projects to maximise the diversity and avoid biasing the data.

Each of the study participants was interviewed at the beginning, given a longitudinal diary assignment, and interviewed again at the end of the research process. The time span for studying the participants was not static; to assure the viability of the amount and quality of the data, the diary study commenced until the researcher decided enough data has been accumulated. The study phases were conducted parallel to data analysis. This allowed to better enhance the focus of the subsequent phase based on the themes found in the previous one.

3.1 Participants

Recruiting the participants via the official channels – filling out the contact forms at company websites – proved to be unsuccessful or slow at the least. Only one of the participants were recruited this way. Maybe it would have worked out just fine if more time was given to it. Instead, the intense networking with and searching for the designers of specific companies was fruitful. It was also possible to scour the background of each participant to ensure the diversity. Several designers in different positions with varying experiences were chosen to be contacted. Of these two expressed their interest in the study directly and one shared the contact details of their colleague. Thus, four participants all of which were consultants and defined themselves as ethical designers were recruited.

Participants will be kept anonymous in this report, and they will be referenced with a dedicated ID. This is not to highlight their background but to tie quotes together. Participant P1 is a UX designer with 3 years of practical experience. They are focusing on accessibility and carry the title Accessibility Expert and they work as a consultant in a large organisation. Participant P2 is identifies as a consultant as well and works in a team of service designers as one of them. Their main area of interest is environmental design. Participant P3 is also a service designer but they are more inclined to alleviate social inequalities. They have also experience in defining and refining the concept of ethical design. Participant P4 – self-claimed design anthropologist – works with the title of service designer in a company providing IT-solutions and consultancy. They possess a non-technical background: they have studied social sciences and culture anthropology. These four participants were thought to have different enough profiles to be sufficient for this research.

3.2 Initial Interviews

The purpose of the initial interviews was to map design routines, define how ethics as a topic is visible in everyday life of ethical designers, what ethical design means for different UX professionals, attitudes towards ethical work, and whether ethics influences how UX designers relate to their work. In addition, the interviews sought to figure out how ethical designers perceive ethics. Acknowledging the nature of the matter, semi-structured interviews were selected as a method as they suit well for the qualitative research.

At the beginning of each interview, the study process and motivation were described concisely but in depth, and then a consent form covering the whole process was asked to be filled. This interview offered an opportunity to explore the participants' thoughts about their work unaffected by this study. Depending on the interviewee, different matters were discussed and familiarity with the role of each participant was formed. This allowed to focus on the questions better from their point of view in the later study phases.

3.2.1 Questions

The interview questions were formulated based on the research questions and initial literature research. The set of questions was thoroughly analysed and polished, and all irrelevant or plain questions were dropped out. As an ethical design practice, all the questions were consciously thought of and penned in the most neutral way possible with the current state of knowledge. The final set of questions was loosely about the routines and typical projects, how ethics is defined in design work and how that is visible in practice, costs and benefits of ethical design, and why it is practiced. In the ultimate set consisted of 10 questions and the interview was approximated to take about 45 minutes.

In addition to the interviews being semi-structured, the questions were ordered so that the discussion would flow like a regular conversation; starting off with introductory question, going through ethical design from abstract to concrete, and finally closing it off positively with a question about meaningfulness. The questions to guide the discussion were as follows:

1. What kind of work do you do?
2. What kind of project(s) are you working in? How many of them are ethical design?
3. How far in the future are their expected effects?
4. In design work, what does ethics mean to you?
5. How is your definition of ethical design visible in practice?
6. Which guidelines or other material do you rely on?
7. What kind of benefits and downsides you perceive in ethical design?
8. How do you feel about / approach ethics in your work?
9. How is the discussion about design ethics in your organisation or projects?

10. How meaningful do you find your work?

Of the above questions, the questions 1-3 were used to get familiar with the nature of participant's work and projects. Questions 4-7 were mostly about ethical design and how it is visible in practice. Also, this middle section included the heart of the matter, perceived benefits and downsides, which was given lot of time usually with a handful of follow-up questions. The question 8 did not fit the natural flow of any of the interviews and was thus left out entirely. It was anyway partly answered in the questions 4 and 5. The last two questions, 9 and 10, were about general discussion and meaningfulness of ethical design work. These were thought as grounding questions after the vaguer questions in the middle section. Additionally, the question 10 was intended to be a way to end the interview with a positive note.

3.2.2 Practicalities

The initial interviews went roughly as planned, except for the time estimate, which was off by 15 minutes depending on the participant. At the end of each interview, the outlining instructions for the next phase, the diary studies, was given. The diary canvas was shown to the participants and a little introduction on how to use it commenced. Also, the initial schedule for the next phase was discussed; all initial interviews needed to be conducted to get as much input for the diary questions as possible.

3.3 Diary Study

The diary study was conducted to observe the practices in real-life context. This part of the study focused on the research questions by looking at how designers act when presented with ethical questions. The objective was to write about the situation when the designer faces ethical issues or decisions in their work. Hence in-situ logging was mentioned and described in the instructions. Also, this method alternative to contextual inquiry sought to gather perceived benefits and costs of ethical design.

As ethical questions in design can be about sensitive matters, contextual inquiry was quickly ruled out; the research could not be done in-premises not because of the nature of the participant's job but because of the confidentiality of the users' data they are studying. This remote research came with pros and cons. It is not as pressuring for the participant to fill in the diary but at the same time they will have to rely on intrinsic motivation to do so.

The diary study assignment was handed out almost as soon as the initial interviews were done. The participants were briefed about this in the initial interview. Screen was shared and the unfinished diary assignment was shown to them. The expectations were also discussed. The accumulation of data was not as frequent as initially thought. The

participants were being kept in touch asking how the assignment is going and suggesting setting a reminder. National holidays might have affected the accrual of data.

3.3.1 Questions

The helper questions for the diary studies were created with the focus on the concrete work designers do in mind. These questions were polished slightly based on the answers to the questions asked in the initial interviews. This set of questions consisted of questions about the very context, the actual methods used, perceived benefits and downsides, and how the participants feel about the solutions. The following questions were used and not supposed to be in in any order necessarily:

1. What was the part of the design or process?
2. With whom you worked with on the ethical design?
3. Which guidelines/frameworks did you use?
4. How do you feel about the solution? Why?
5. What kind of short/long term benefits/downsides you think the solution brings?
6. Which stakeholders are affected by the design? How?
7. Do you think something was ignored? If so, what was it?
8. How much more effort it took to make the design ethical?

These questions were not supposed to be answered like that. The point of them were to think the situation from different perspectives and maybe start writing from one of them. Again, the questions 1-3 were about the context surrounding the event. These were in the set to find out with whom the decisions are made and where and how the need for ethical perspective surfaces. The questions 4, 5 and 7 were the heart of the matter: benefits, downsides, and perceptions of the designer. These tried to accumulate data on the overall noticed effects of ethical design whether they are positive or negative. The question 6 is requires no explanation. The point was to prompt using stakeholder analysis as a perspective for analysing the design decisions. The last question, number 8, was an attempt to explore the cost of ethical design compared to regular design.

3.3.2 Assignment

The diary itself, or assignment if you will, was a FigJam template representing a physical spiral notebook – the kind you would use as a diary in the real world. The template, as shown in figure 2, was made from scratch since no such template existed in Figma Community. The idea behind spending time on designing a template like this was to try to entice creativity and different types of self-expression. While a plain text editor would have worked just as well, the template was hypothesised to be attractive, motivation-inducing, and even fun.



Figure 2. Blank diary template

Differing from the restrictions of a physical notebook, a digital diary supports adding new pages, extending existing ones, and pasting photos, links, and videos easily. Colourful and playful elements were used in the introductory pages enticing participants to express themselves as naturally as possible. The first pages are illustrated below in figure 3.

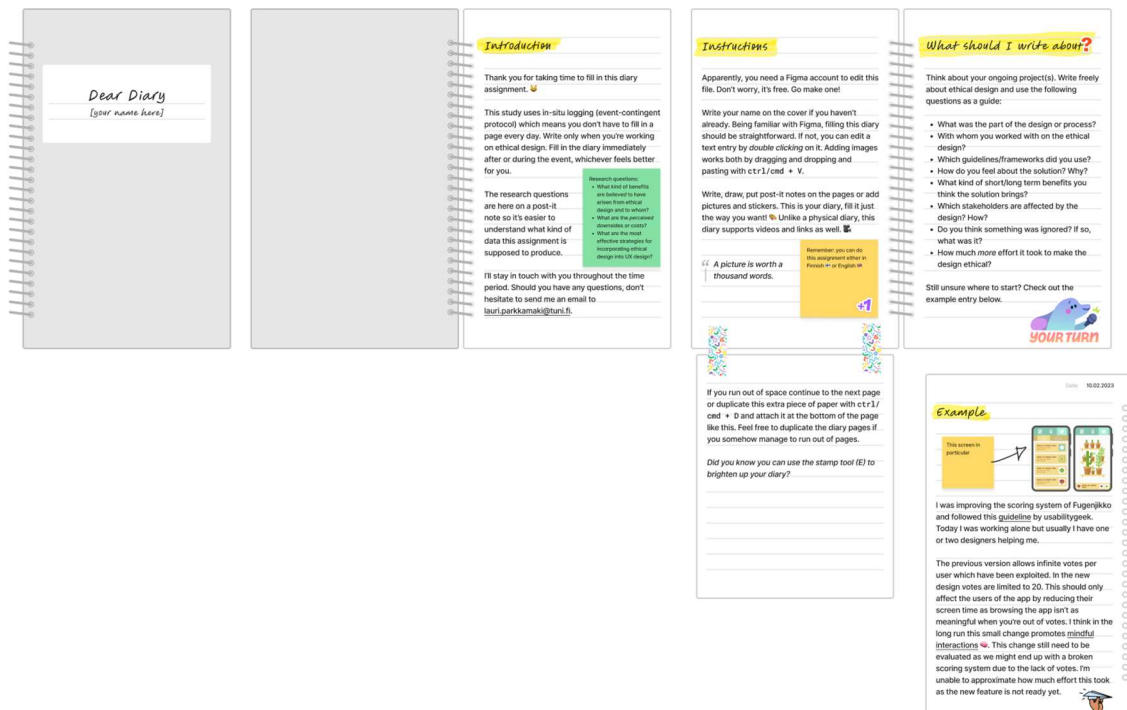


Figure 3. The first pages of the diary

The diary, as pictured in figure 3, contained introductory pages about the practicalities of the assignment. It consisted of a quick tutorial for those new to Figma, how you are supposed to fill in the diary, the research questions, and ideas on how to use media within the text. To get as close to the actual event as possible, the study used in-situ logging, event-contingent protocol, which meant that the participants were supposed to write in the diary when the event is happening or soon afterwards. The research questions were put on the first pages to make it easier for the participants to understand what kind of data

is supposed to be produced with this assignment. Lastly, the ideas on using different media were implemented to elicit participants to include different media in their diary pages. As you know, picture is worth a thousand words but how much is a video worth? It was hoped for that different frameworks, guidelines or other significant material would be added as links. This section was followed by the helper questions and an example entry as illustrated. After these introductory pages, the diary template had a bunch of blank pages, similar to the right-hand side of the figure 1, which the participant was supposed to use like a diary.

3.3.3 Practicalities

Despite the immense planning, issues were in plenty. There were problems with amount of data, motivation, following the instructions, and too ambitious planning. First off, the data did not accrue as hoped. The participants wrote one or two pages hesitantly after which the accrual stopped. The participants were reached out, praised by the progress they had made and inspired to continue the good work resulting in varying degrees of success. Checking in with participants was done in regular intervals as it clearly acted as a reminder and a motivation boost.

Secondly, there were issues with motivation and following the instructions regarding this study phase. The participants forgot to write the diary as the event happened violating the logging policy mentioned in the instructions. As this was frequent, participants were not notified about this, but this infringement was considered when analysing the accumulated data.

It was also planned that after completing the diary assignment, each participant would be asked to weigh all the costs and benefits that arose during the logging period from the diaries of all participants as weighing the observations is crucial for cost-benefit analysis of the effects. That would have been clumsy as there were the issues mentioned above. It was left out of the scope and saved for the final interviews.

Other than that, the diary assignment went fine and resulted in in-depth data about daily ethical issues accompanied by pictures for better visualisation. However, one of the helper questions were totally left unanswered. No participant mentioned benefits or downsides directly. There were a couple indirect references but nothing solid. This observation acted as the basis for structuring the final interviews.

3.4 Final Interviews

The final interview wrapped everything up. In the centre of the interview was the diary assignment experience. This part of the study sought to observe if any of the initial perceptions have changed and what each participant has to say about the found themes regarding ethics. Moreover, the participants are asked to estimate the cost of their work to construct an idea of how much ethical design costs compared to regular design work.

3.4.1 Questions

In diary studies, data on the benefits and downsides of ethical design was not accumulating as quickly as originally thought. This shortage was simply addressed in the final interviews. The focus of the question set was heavily set onto the very topic of this thesis, benefits and downsides of the themes that arose from the diaries.

The interviews started with a generic opening question followed by follow-up questions suitable for the situation. Then each theme was discussed keeping the benefits and downsides at the centre making sure both facets were investigated. Additionally, now that the participants had had time to process these matters, some conversation about the relationship between ethical design and business goals was initiated. In the end of the interview, there were two questions closing the interview naturally: the participants were asked what pieces of advice they would give to designers heading towards ethical design and what kind of future they predict for ethical design. More concretely, these were the questions at hand:

1. How did filling in the diary go?
2. What did you learn? Did you notice something new?
3. What does ethical design mean to you? Has the perception changed?
4. Did you notice any particular benefits of ethical design? How have the benefits been reflected in the projects?
5. Did you notice any drawbacks or challenges? How have they been seen?
6. How do you see the relationship between ethical design and business?
7. What advice would you give to new ethical designers?
8. How do you see the future of ethical design? Challenges and opportunities?

Of the above, the questions 1-3 were used to start the conversation by asking how the diary was as an assignment. With follow-up questions, the first three questions provided an opportunity to probe for stuff the participants left out of the diary. After those followed a short description of what is happening next. Each finding category from previous study phases was discussed at time utilising the questions 4 and 5 respectively. The categories or themes were described to the interviewee as broadly as possible so that they will be able to answer the questions from their point of view. To close off the heart of the matter, the question 6 was used to get estimations on the cost of ethical design in concrete terms. The talk about ethical design in whichever units the interviewee preferred allowed contemplating the issues from a more concrete and tangible perspective. To close the studying process off with a forward-looking note, the questions 7 and 8 provided just that angle.

3.4.2 Practicalities

Being way more familiar with the participants than in the beginning, estimating the time for the interview was on point. The final interviews lasted from half an hour to just over an hour as expected. The pattern repeated itself: the more talkative participants in the initial interviews talked more in the final interviews as well and vice versa. Other than that, the interviews lived up to their expectations.

3.5 Analysis

It was evident from the day one that the amount of data in this research would stay low. Thus, due to the qualitative nature of the data, affinity diagramming was chosen as the method for going through the findings. They were created individually from each research phase.

Before the actual analysis, some preliminary tasks were needed to be resolved. While the interview recordings needed to be transcribed to handle the data meaningfully, the diary studies directly provided insights mostly in textual format. Keeping the dots connected, participants were pseudo-anonymised by assigning each one a colour. However, the colour coding was removed, and answers shuffled for this report to ensure anonymity.

3.5.1 Affinity Diagramming

The pieces of data were analysed individually and not in relation to the participant to avoid biases and assumptions. Especially, in the final interviews the participants were so familiar that it would have been easy to spoil the data. Separating the transcribed chunks of the interview helped to preserve a neutral perspective. Each study phase was analysed promptly as the results helped to orientate the subsequent phase more towards the research questions.

Analysing the first set of data, it was not so clear what kind of themes would arise. Therefore, almost all pieces of data got their own category which were then meticulously modified and combined. There were still too many categories to handle so parent categories were created. Figure 4 shows the conversations of the initial interviews split into chunks categorised into many themes.

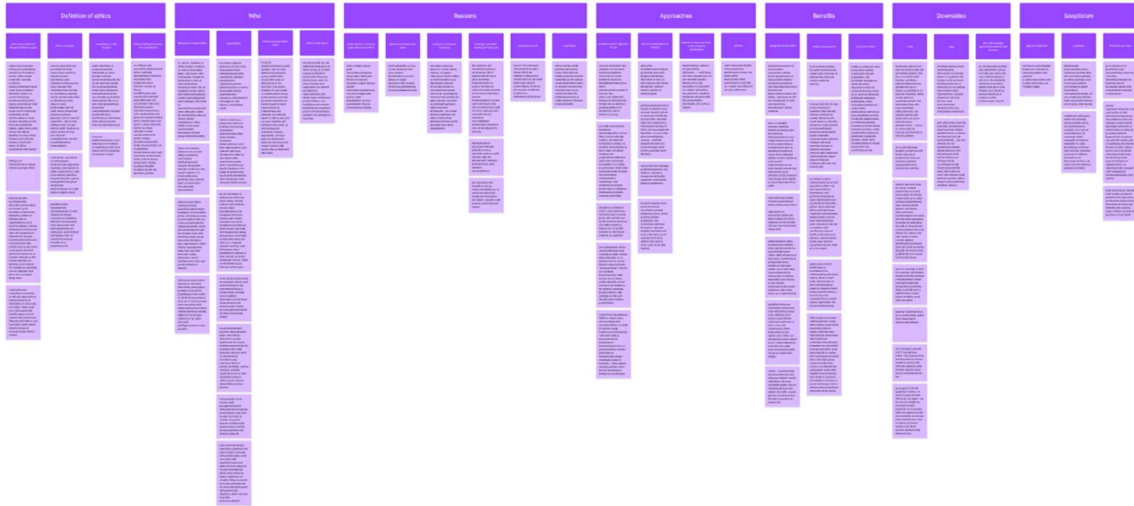


Figure 4. Affinity diagram from initial interviews

Figure 4 is acknowledged to be unreadable, but it attempts to illustrate the vastness of the notes that were analysed. Originally blooming with colours, the affinity diagram was rid of colour to ensure anonymity on this report. The individual notes contained small parts of the transcription of the interviews. On a closer look, the diagrams looked somewhat like what is shown in figure 5 below.

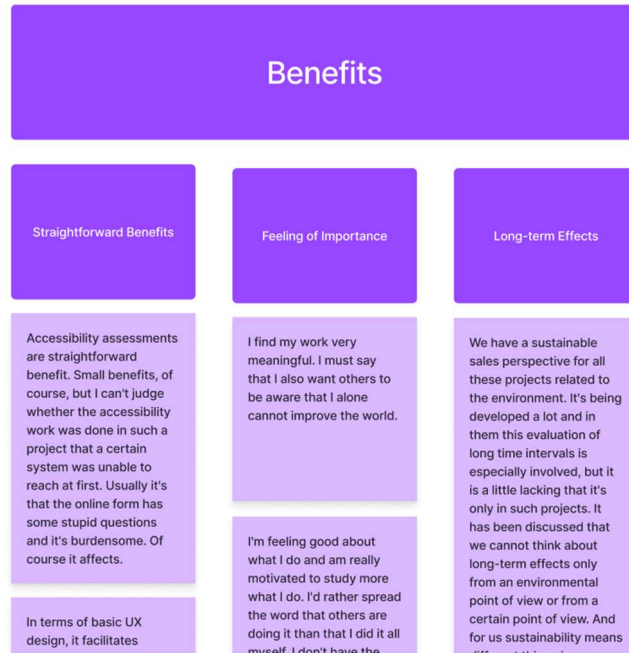


Figure 5. A closer look at the benefits theme from initial interviews

At this stage, lots of themes were discovered. The set of interviews only provided a good overview of the current state of ethical design, not too much insight about the benefits or downsides of ethical design. It was evident the questions for next phase, diary studies, need to be a bit more guiding towards the intended goal.

The second affinity diagram grouping the notes from diary study showed less diversity; it was clear that these answers were not as spread apart as in the previous affinity diagram. This phase provided data on what kind of dilemmas, problems, discussions, and frustrations ethical designers face in their work. However, data about benefits and downsides were left thin. The real-life context acquired from this phase of research offered a natural way of finding out the pros and cons of ethical design: now that the context is well-defined, the categories can be gone through one-by-one scouting for where profit and drawbacks lie.

Now that the context was well established, each theme could be probed more thoroughly. This time the data accrual was spread evenly throughout the interviews. It shows by each theme having similar amount of data points. All but one of the parent categories was closely tied to the effects of ethical design compared to regular design.

All in all, there were nearly 200 notes included in the analysis. Each theme was split into two to four sub-themes which only played a part in grouping the data into meaningful chunks. The identified themes and the number of notes in each team is shown in table 1 below and it is sorted by the phase of the study going chronologically from left to right.

Table 1. Main themes and number of notes by research phases

Initial interviews		Diary study		Final interviews	
Theme	Notes	Theme	Notes	Theme	Notes
Definition of ethics	10	Collaboration & discussing	11	Discussing	11
Who	13	Representing users	10	Representation	11
Reasons	8	Awareness	5	Awareness	13
Approaches	11	Ethical design	19	Ethical design	19
Benefits	12	Total	45	Business	7
Downsides	10			Steps forward	13
Scepticism	6			Total	74
Total	70				

Direct benefits and downsides were found in notes from initial and final interviews. Diary study, as mentioned previously, did not provide insight directly into the main question of this research. In the final interviews, all but the last theme – steps forward – contained sub-themes of benefits and downsides and thus they are not explicitly mentioned in the top-level themes. The number of notes from interviews was higher than from diary study which could be explained by the nature of the research method; in interviews, the researcher is present and the participant is expected to give input whereas in diary study it is only the participants responsibility, with less-to-no external pressure, to provide data.

4 Results

This study was initiated by diving deep into the definitions of ethics in design, case studies and the wide selection of ethical design guidelines none of which is considered as a standard. That provided a basis for in-depth interviews with professionals. This research sought to uncover the benefits and downsides of ethical design.

All participants were, and still are, professional designers practicing ethical design – a subsection of UX and service design focusing on solving ethical issues. The trend being relatively young, each participant had a strong passion and a lot to say about the matter. Therefore, there was plenty of research data and different viewpoints. The results are presented chronologically in this chapter as the results from prior study phases affected the next one. It only makes sense to order them in such way since the first two phases outlined the context and the final interviews managed to dive deep into the pondering of the original research questions.

4.1 Initial Interviews

The initial interviews provided a good overview on different perspectives and varying themes within the scopes of the participants. The interviews being semi-structured, most topics were not discussed with all participants. Especially not from the same point of view. The topics that arose in this study phase gave context for the diary studies.

4.1.1 Definition of Ethics in Ethical Design

Ethics in ethical design carries multiple mutually nonexclusive meanings. All participants, however, stated unanimously something along the lines that ethics is a complex construct that aims to do good while recognising the meaning varies from person to person. P1 described ethics being “relative” and, “multidimensional and branches into many directions”, but P3 put it as “strive to do good, and such a pursuit of good is a guiding star”. P4 described the relativity of ethics as an important thing to keep in mind while working with ethical issues: realisation that what is ethical and responsible for me is not necessarily so for others.”

However you choose to define ethics, it is more important to have some sort of concrete manifestation of it. Ethics, being such an abstract topic, can be difficult to embody concretely in digital products and services but it is said to be easier with specifically designed guidelines. It was mentioned by P1 and P3 that this kind of concrete manifestation is crucial.

“In design, it is important that you make something concrete and not just designing something abstract that promotes good. (--) That is why all these tools and guidelines are very important.” (P3)

In service and UX design, accessibility has been a cherished topic especially after the release of WCAG. That is why ways to increase diversity and inclusion in the name of accessibility is a typical point of view for ethical designers. Two of the participants, P1 and P3, emphasised accessibility and inclusion is the core of their work. P1 described the goal of their work as “to give the opportunity to use things for as many people as possible” and P3 “to produce an equal digital world to which everyone has equal access, and not create structures or services that discriminate or leave groups of people out.” However, if your personal or organisation’s interests lie elsewhere, it is still ethically speaking somewhat mandatory to take the inclusion issues into account. In practice this could mean at least focusing on how to conduct interviews and handle sensitive topics and participants.

Ethics, at least in the domain of ethical design, can be described as a superstructure. P1 said in the interview that: “Everything you do is the basis for what you do next.” What they meant was that everything you or someone else does ethically builds a strong basis for things to build on top of that. The structure of IT products and services is typically a stack of services and technologies so if something is done well it goes a long way.

4.1.2 Shared Responsibility for Ethics

There is a mutual understanding that to tackle ethical issues a communal effort is required. All participants mentioned directly that active open communication is the key to pondering difficult matters together. The impression was that different people observe the world from different perspectives rendering them to notice different things whereas an individual can only focus on so much. P4 noted that it is usually difficult to distribute information efficiently when a large amount of people is included in this process.

“Since we have caused the problems, we also have to take responsibility for solving them. (--) In a society, responsibility and sustainable development are such broad and cutting-edge issues that everyone must embrace and take responsibility.” (P2)

Whereas “we” could refer to you and me, it was evident it P2 referred to people in general. Participant P4 reminded that an organisation is nothing more than its employees again hinting that “we” should take responsibility. It was also briefly discussed with P2 how industrial sector – or “we” as in people in general – has done quite a bit to solve issues with environmental sustainability while the private sector – or “we” as in you and me – has done next to nothing. This hints to the direction that the consumers should not trust the organisations and governments to fix all the problems and instead take responsibility for their own choices and actions.

Taking responsibility starts by committing to do your best or as P3 said it: “we are not perfect, and we recognize that there is still work to be done, but the commitment is there.” Some actors have been doing the work towards more ethical tomorrow for longer

than others, but the work is never finished as P2 described the current situation. It is dangerous to view it as a task.

“You have to be careful not to be lulled into thinking that ethical design is well established practice, although you have been talking about it for a long time in your own circles.” (P4)

Ethical design is not so much a task than it is a way of working. It was mentioned by P1 that taking the ethical perspective into consideration is easier when it is “in the backbone”. There was a notion that when it is new to the designer it takes more time and effort to include the ethical aspect. P4 said: “The better it is included in the basic genes, the less it costs as people will take those things into account by default.” Participants P1 and P3 mentioned that ethical perspective is a part of the design process, but it must be there in each step of the process as whole. It is arguably not a task but a lens through which an ethical designer is used to see the world.

Currently, the responsibility to initiate conversation on ethical issues is generally left to designers. As ethical design is a practice that likely stems from the personal interests and aspirations of a designer, it is natural to get assigned the role of a conversation-starter whether you wanted it or not. However, this is not an issue unique for this specific context only. Participant P4 had observed this in real context: “In organizations, it is easy to slip into the fact that people are in their own silos and certain people are expected to fulfil certain roles.” Different positions have certain roles and expectations the employees are expected to comply with.

4.1.3 Practices of Ethical Designer

There is no single guideline or best practices on how designers should approach solving ethical problems. Some guidelines or regulations exists that can partly ensure the design will turn out ethically sound. Like ethical problems the solutions depend on the context. P1 told how Web Content Accessibility Guidelines (WCAG) is their primary guideline: “it is like my bible”. P2 mentioned how laws, regulations, directives, and standards guide their work in general. Probably the most famous of such laws or regulations is General Data Protection Regulation (GDPR) which P4 said to affect their work a lot. However, it was observed that the participants were not generally satisfied to only comply with the laws as it is merely, quoting P2 directly, “a minimum requirement that needs to be met” but nothing more. In some organisations, designers develop frameworks to be used within the company. P3 had prior experience on this. Some prefer to use their own self-developed guidelines. Some companies are committed to the Sustainable Development Goals (SDGs) by United Nations but P1 was disappointed SDGs are not provided with practical tools.

The utilisation rate of different guidelines varies from designer to designer. Only participant P3 convincingly said, “I use those tools on a project-by-project basis and some of them have been selected as my favourites that I use more often”. But then again, it might be a matter of experience as evident from this quote by P4: “Nowadays I probably work more on the basis of mental checklists.” P2 said to “rely a lot on that know-how and experience” and P1 was arguing “the upper-level ethical thinking is in the backbone” and thus does not find regular use of guidelines relevant. It was mentioned by P1 that search engines are provide useful information when in doubt as in any job dealing with information.

4.1.4 Benefits of Ethical Design

At this point, scouring for benefits was difficult. Some clear pros were uncovered but they were vague and abstract in nature. It was evident that the next phases of the research should focus on digging deeper into these initial findings. However, the next phases alone could not have been enough as this phase of the research shined the light on how the participants work, what they do, and why they do it. That itself proved beneficial when designing the questions for the subsequent research phases.

Nonetheless, noticed by P1, tasks such as accessibility assessments, provide somewhat direct benefits. Conducting the assessment does not mean any changes will be made. If, however, changes will be made it ensures better opportunities for everybody. Two of the participants, P1 and P4, eagerly pointed out that accessibility improvements provide better UX for all. Additionally, ethical design in general was said to provide a wider range of perspectives.

All participants expressed they feel they are doing important work. They said to be motivated to make the world a little better place each day. Moreover, P4 talked about an observation that the employees seem to be happier overall and more loyal when being able to do ethical work. This notion also hinted at they all held ethics in high regard personally. Finding suitable participants for this research being difficult and the fact that all four participants had a strong personal connection to ethics can be interpreted as most, if not all, ethical design practitioners are ethically awakened. That, in turn, can be caused by certain types of people being drawn to ethical design or it being somewhat required feature or skill in the profession.

4.1.5 Downsides of Ethical Design

The downsides, like benefits, were vague and shallow in this phase of the research. As it is closely tied to pros, cons should be treated the same way throughout the study. At this stage the research was focused on downsides, but additionally one threat was found. It was apparent that these need to be researched further.

Some frustrations that surfaced were not having only questionable or unethical options to choose from and the amount of useless or repetitive work. This frustration was

expressed by P2. It is obvious why an ethical designer would feel bad if they did not have any good options to choose from. It might be due to many factors such as bad design decisions, lack of experience, and restrictions from the client as described by P2. Some ethical design work gets repeated with different clients, and it might feel frustrating to put your input into basic things. It must gnaw the feeling of importance.

In turn, participant P3 was concerned of replicating the existing discriminating structures to the digital world. As it is not a direct downside, it surely is a threat. The understanding was that it is better to pay attention to the issue before it is replicated than to fix it afterwards. These observations might play a big role in the lifetime costs of a digital system or service.

Economic-wise, the initial interviews provided a good direction if not a sliver of the whole truth. Shortly put, not designing ethically, a lot of potential is lost; the userbase is smaller and the market potential follows. On the other hand, ethical design comes with a bigger price tag than non-ethically considered design. Typically, the user or context research requires more attention when done with an ethical perspective. Participant P4 dared to approximate that the increase is around 5 working days in projects that would otherwise be budgeted 30–40 days. That is roughly a 15–20% increase.

4.1.6 Other Noteworthy Observations

Lots of scepticism among the participants was observed about companies hiring sustainability chiefs only to look good and the results of ethical design being more miniscule than anticipated, explicitly expressed by P1 and P2. Often, the assignment of a client is not optimal, and a lot of energy is spent on redefining the assignment. P2 had experienced that in worst case scenarios “things are done with no reason” and “even the client does not always know” what should be done. It might be taxing to clarify the common vocabulary and finding the actual thing that the client wants to achieve.

Speaking of vocabulary, participant P1 expressed deep frustration on how things are done and described in the tech industry: “I hate to say ‘competitor’ because these things should be done together.” Traditionally, companies have been competing against each other but for the ethical design to be truly inclusive, companies should collaborate and strive for common goals.

4.2 Diary Study

The diary study was designed based on the results of the prior interviews. It was hoped that the results would reflect the common contexts as naturally as possible. In this section, each participant was talking heavily from their point of view as opposed to the conversations in the initial interview being more abstract. The findings could be roughly categorised as raising awareness, collaborating, representing minorities, awareness of designer,

and advancing ethical design. As these findings came from real context, none of them cannot be neglected as unimportant thought exercises.

In this part of the research, no benefits or downsides were directly found or discussed. This finding affected the design of the questions for the final interviews heavily. However, the main findings from this study phase provided a good outline of the context ethical designers are typically working in.

4.2.1 Raising Awareness of Ethical Issues

Teaching and discussing about ethical design or issues is raising awareness. Despite being so obvious part of ethical design, participants P2 and P3 faced a situation during the study phase where they needed to initiate the conversation on which stakeholders were being left out. It is easy to get by day-to-day doing and speaking the same old; P3 emphasised how important it is that “discussions also always challenge us in our thinking and help us further develop and think about our own work”.

“Raising awareness and building capacity among practitioners is a key to getting these issues from the more theoretical – nice to have – kind of discussions into the actual practical work.” (P3)

Regarding responsibility, we might be on the brink of change. That was being read between the lines of a participant P2 saying: “For many years in this kind of expert work, I have had to justify why these things should be taken into account.” The current state of awareness of ethics-related issues is better than before, and less justification is needed. They also raised a concern about the lack of tools to utilise ethical design in practice in larger scales. So, just discussing is not going to solve anything. There needs to be ways to implement ethical design in practice.

4.2.2 Collaboration Within Teams and Organisations

Collaboration within UX team is crucial. Like raising awareness, discussing within the design team strengthens the mutual understanding rendering collaboration smoother and better overall. It was also mentioned in different context by all participants that collaboration between companies helps defining the vocabulary.

“It is easier for a service designer to find out the more complex, systemic issues related to inequalities and then the UX designer can help translate these issues into the wireframes.” (P3)

4.2.3 Representation and Diversity

Truly representing the users, or allyship and advocacy, is not easy. It requires extra discretion to represent a group you are not a part of. Participant P1 put it like this: “My co-worker thought that they really would not want someone not belonging to their minority to represent them.” It was revealed it is common that minorities do not take it seriously when an outside is representing them – it can even be considered offensive. Also, P3 mentioned this. However, P1 continued by talking how it is also impossible to include a person from each minority into each design process resourcewise.

Diversity is an aspect that is being tried to maximise. Again, P1 addressed this from the accessibility perspective describing how the tools available, such as Figma, lack the support of assistive tools like screen readers. Therefore, it is difficult to include people with disabilities in testing the prototypes. Another difficulty lies in categorising tests roughly into usability testing and accessibility testing. For example, including neurodiverse point of view in the design process proves to be challenging. Two of the participants, P1 and P4, expressed their concerns on how neuroatypical people get often neglected.

“I would like people with different cognitive challenges to participate in the regular usability tests. However, often if they are deliberately recruited, the test typically transforms into accessibility testing.” (P1)

Increasing diversity is never finished according to all the participants. This notion was summarised by P4 saying that, at current state, equality is addressed “only in terms of gender, and not very intersectionally or considering other aspects of diversity”. The work already done in that section is still valuable – P4 put it encouragingly: “Of course, this is also an important aspect and maybe a good place to start, as long as companies do not stay at that level.” Participants P3 and P4 also mutually agreed it is not just ethical design but good design in general, or like P4 said it: “It is important to expose yourself to different opinions and ways of thinking.”

4.2.4 Awareness and Challenging Biases

Whereas diverse thinking was said to be sprouted from exposing yourself to different opinion and people, awareness touches all areas of UX and service design. P4 described it as being aware of your biases, suppositions and the unknown. They mentioned one of the practical ways to do this is to write down your current level of understanding – “What do we think we know? What do we know that we do not know? What assumptions do we have about the subject or our customers? How confident are we in our assumptions?” – and reflect to it later in the future.

However, awareness goes further than that. One example from the diary of P2 described a scenario where you are aware there is a market for recycled and reusable material or services. In this case, it is not enough to be aware that such a market exists. The task of a designer is to find the potential in the thing they are looking the markets for. The participant continued discussing how much potential is lost by not reusing and recycling, not doing anything although being aware of the situation.

Sometimes a designer finds tiny details that need to be fixed. Although feeling miniscule, these “couple-of-pixels differences” really do matter as P1 said. The participant discussed how it can be crucial for some users, especially those using assistive technologies, whether the improvement is moving an object or tweaking the colours slightly. They expressed concerns about how these things are easy to not be aware of. Moreover, the changes can be difficult to spot if you do not specifically benefit from this improvement.

4.2.5 Advancing Ethical Design

This finding category can be roughly split into three: defining the practices, developing ethical design and obligations of a designer. All these advance ethical design in their own way and thus are clumped together.

Defining ethical design in practice was unanimously told to be extremely important. This kind of defining work was said, by participant P4, to be typically costly as it, “like everything else in business, requires resources”. Another participant, P2, discussed how laws and regulations have a big impact especially on how regular people think. Nonetheless, participants P3 and P4 felt the most common hinderance of forming a shared definition is likely the difficulties in distributing the information about the defined practices internally effectively.

As regulations and such are being developed and are affecting more how companies operate, ethical design, or the internal interpretation of it, should be kept revised as the oncoming changes are expected to be vast. Participant P2 emphasised the importance this observation. One concern, raised by P3, was about discerning whether you are thinking from ethical point of view or not if you have been practicing ethical design for long. This might be a valid thought especially, if you are working in a company vouching for ethical design in every project. A shared definition of ethical design should be ideally created by a team as diverse as possible, at least in terms of ways of thinking, working on the cause.

“Developing ethical design forward requires some kind of specific way of thinking, where design is considered from many different perspectives.” (P3)

Ethical designers struggle with power-responsibility questions. As it might feel powerful to be able to imbue the design with your values, who is responsible for prioritising

certain projects? Moreover, participant P4 questioned who is responsible for design compromises, especially if they are against the designer's or to some extent the company's values. There was a mutual understanding of P1, P2, and P4 that responsibility should be shared. In one example, a company was willing to do charity work to meet fulfil its values. That really shows that management took the responsibility to act appropriately.

“Responsibility and all these themes are so cross cutting that the entire organisation must contribute. The management should have greater ownership and bigger effort in that matter, and not push it to some team.” (P2)

4.3 Final Interviews

The result from final interviews were focused on the heart of the matter, benefits and downsides of ethical design. The themes handled in this section were formed by the results from the previous phases of the study. The context was laid out with the results of the diary study and the themes are like what was described above. Addition, final interviews offered an opportunity to tie these matters to business goals.

This chapter concentrates on uncovering the benefits and downsides of ethical design perceived by professionals. Each section discusses the theme more in-depth than in the previous study results accompanied by thoughts about the downsides or costs.

4.3.1 Discussing About Ethics and Ethical Questions

Teaching is important especially if your work is related to accessibility. Participant P1 mentioned that people tend to think about people similar to them unless their thinking is challenged. Similar notion was summed up by P3 optimistically saying people are “not doing unethically because of malicious intent but because of the lack of awareness”. A good practical example of such action was given by P2. They described a case where a less aware product owner was provided with knowledge, they got enlightened, and soon they started really pushing things with all their power. In this scenario it is the interplay between the awareness of ethically oriented designer and the power of product owner over the design that enabled changes. Yet, client naturally has the last say on things the designer proposes in consultancy business. In the example, the designer was able to open the eyes of the client’s representative and motivate them to act. When people are truly changed, they will start acting like it.

A common vocabulary is crucial for smooth and efficient cooperation. However, ethical design is new, developing rapidly, and being developed in multiple directions simultaneously; each organisation has their own interpretation. Participant P2 really capsulised this thought: “definitions are often open to interpretation”. This constant learning can be seen as one of the biggest benefits of ethical design and thus raises worries that if not handled properly a lot of potential is lost. P4 mentioned within a company “investing in

learning to talk about things in the same manner saves time when you do not always have to explain what being responsible means” meaning it is an investment. If it saves time, it also saves money. Additionally, P2 was assured the potential does not tap out in anytime soon; “All the time we are moving forward. At no point the goal of ethical design is finished.”

“We don’t really know what these new terms mean and how they should be understood. The biggest benefit comes from the dialogue between different experts. We should always aim for a better mutual understanding.” (P2)

Raising awareness is closely intertwined with developing a mutual vocabulary and strives towards mutual understanding. The benefit of widespread general awareness is that people can act better. Participant P3 expressed it is like an actuator of change: “When developing a common society, if people do not know how to do it, take different groups of people into account, or be aware, then nothing will happen.” The notion was that from common definitions sprouts increased awareness which, in turn, can lead to actual changes.

This all does not come without its cons. Most notably, all teaching, raising awareness, and discussing about ethical design is away from the billable hours of a consultant as participants P3 and P4 affirmed. Additional monetary costs might come from hiring ethically oriented personnel, sustainability chiefs and such as P1 described. Hiring exclusively for ethically oriented positions is important because P2 was concerned that if ethically concerned people are scattered acting becomes harder. All in all, they continued describing how taking action is already difficult; “if there is no mandate coming from the management, it is left to the shoulders of the employees to act, then it is quite difficult to make that dialogue and cooperation happen.” It is also important to keep in mind people interpret words differently. Participant P4 reminded discussing can sprout negativity as people might have negative connotations to words like “privileged” and it can easily sound like blaming. They clarified this by talking how being privileged might sound like you should feel ashamed when, in fact, it is not your fault. Moreover, profitability of discussions was explicitly discussed with all the participants. There was a common notion that ethical design surely brings costs but only in short-term. All the participants were convinced that ethical design is net-positive in the long run.

“Those hours do not bring any money to the company but can bring money in the long run when you want to do collaborative projects. Maybe it is only a short-term expense.” (P3)

4.3.2 Allyship and Advocacy

Allyship was said, by participant P1, to be extremely crucial; “From people’s point of view, in order to bring about change, you also need to get allies and not just the people from that reference group.” This thought was explicitly shared directly by participants P1, P3, and P4. One could argue it is a must like P3 did: “You must represent the people.” All three described it is a necessity for change since there are not enough resources to have all minority groups represented in product design and development. However, allyship and advocacy goes both ways. Participant P3 said, “I would hope that people have the capacity to think about people other than their own kind.” That refers to both designers truly representing the minorities and minorities realising the designer is their ally and advocate. Participant P4 felt extremely deeply about this: “I feel that we, the privileged, have an obligation to invest in this theme, to amplify voices that may not be heard as often.” The opinions were generally strong in this category of findings as becomes apparent from the following paragraphs if it did not already.

There is not much difference between Human-Centred Design (HCD) and ethical design regarding representation. One of the participants, P2, even questioned why this topic is part of the research: “What is the difference between what an ethical designer does and what a regular designer does?” They continued by pondering whether ethical design in general is just good design. That would explicitly mean the majority of UX and service design done today would not fit the criteria of good design.

The only direct downside found from this theme was that the user studies take more time and resources if you are including participants from minorities as expressed by P1 and P3. The rest of the cons uncovered were more like threats and challenges than direct downsides. If you do not ask the users, it is guess-work. This was a thought mentioned explicitly by participants P2 and P3. Drawing from experience, P2 said, “It is a bit absurd that you have to justify the fact that these things are worth figuring out.” Logically the next threat would be to spend time in user studies but client not taking the findings into account. This unfortunately came up in a real-life example told by P2. They continued sharing an observation that clients might be scared to ask for opinions. The reasoning was said to be that the client expected to get a long list of issues.

“Even if you ask for opinions, it doesn’t mean that all of them should be taken into account. (--) You can yourself decide whether you make good or bad decisions.” (P2)

You can always ask and decide later which feedback is taken into consideration. Lastly, participant P4 was concerned about the difficulty to convey fluently that you are equal with the representative of a minority; “The challenge is how to do it so that it does not bring about a rescue mentality.”

4.3.3 Good Design Requires Awareness

Good design requires awareness or how P3 put it, “If there is no awareness nothing can be done better. We would just stay in our own comfort zones.” A similar notion was commonly mentioned in all the interviews although P4 defined it as “social bubbles” rather than “comfort zones”. Nonetheless, the quality of design is affected by the designer’s skill in escaping these restrictive zones.

Whereas all participants agreed that the big picture matters, details are as important as well. Participant P1 gave an example from accessibility design: “If I mess up even a small thing in the design, some user will stop using the service or some user will not be able to use that service at all. They may seem like infinitesimally small things to us.” It could be argued that these details make up for better accessibility as they were said to affect some users. It was not clear what kind of users this might influence but, taking the context into account, it does not seem to matter. Poor accessibility equals to less potential users.

All interviewees had hard time understanding what was meant by awareness; it was so obviously mundane that they did not even question it. The fact that raising awareness is part of an ethically oriented designer’s job description confirms this observation. How could they preach about awareness if they were not aware themselves? Whereas being highly aware is generally seen as a state of mind, the participants thought saw it more like a skill that can be honed. It was not directly mentioned but they all gave examples on real life situations where becoming aware of things at hand was merely a routine. Hearing out all the opinions was explicitly mentioned to be a crucial part of a good design process. Participant P2 separated the awareness from actions: “There must a reason why you would not take these into account.” Being aware of the opinions and other factors makes it more difficult to make bad decisions. However, hearing out the opinions does not necessarily mean you have to follow all of them. Being aware only gives you a clear picture enabling you to act accordingly. P3 started drawing the line from awareness to obligation; when you acknowledge there are issues, “you have to do something about them.” That aspect will be discussed a bit later.

“When you become aware of whose needs you normally don’t hear or when you acknowledge what biases there are, it makes it possible to take their issues into account.” (P3)

As declared above, it can be assumed that everything is a choice whether it is something that is done or ignored. When asked if any of the stakeholders are ignored, the interviewees answered from differing points of view. Participant P3 said they are taking

advantage of a reversed stakeholder map which forces you to view the relations differently as opposed to somewhat narrow sighted traditional UCD regarding stakeholders. Expressing it differently, P4 questioned the interview question: “Are there any ignored stakeholders or are they just rather inconvenient? Meaning that they are difficult to approach or reach.” This perspective admittedly keeps inside the assumption that everything is a choice.

Awareness does not come without its downsides, however, participant P2 hypothesised “it may not even bring additional monetary costs”. They questioned the exclusive relevance of awareness to ethical design and had a strong opinion that it is only an aspect of good design. Typically, prioritisation can become an issue. You could focus on every little detail or the big picture. What is often forgotten is that projects have the side of the end-user and the employee. Typically, “you make the end-user’s side accessible first and the employee’s side is lower priority”, P1 mentioned. They continued discussing how this can lead into serious accessibility issues: “In fact, no one, for example legally blind person, can ever work in this field.” The stakeholder analysis proves to be important but more important could be to avoid the threats it encapsulates. Participant P2 depicted clearly how the one deciding has lots of responsibility: “If stakeholders have been identified, it is quite dangerous to leave one out if they are part of the product or value chain.” The professional vocabulary surrounding the theme of awareness has pitfalls. An example was given by P1 about Design For All (DFA), which has become somewhat fancy words without any practical actions: “Everyone talks about the same things in the same terms but with different nuances. DFA is a great idea, but at the same time it has just gotten a reputation as a euphemism meaning it does not take enough into account.” Another participant, P3, had discussed about these things in front of audiences and witnessed many times the distress people experience when they become aware. They told it is a negative feeling one must go through. Most commonly, the response is something along these lines: “How have I been so blind all my life?”

4.3.4 Fostering Ethical Design

Developing ethical design further starts from the defining work; what it is, what it is not. The benefits of it are direct. Two of the participants, P2 and P3, mentioned clear definitions makes it easier to discuss with clients, especially if you could highlight the known benefits. Defining “makes it tangible”, like P3 put it. Unambiguous definitions that sprout from values within an organisation leads to more cohesive results. Yet in other words, a mutual understanding requires wider perspectives and therefore ensures the communal benefits better.

“Being able to share the same priorities and way of doing things is the most important thing that should be promoted in the organisation. (--) Having a common language

creates a good baseline for what kind of design we as a community want to do and what we want to focus on.” (P4)

When ethical design is a commonly adopted practice, the communal benefits accrue: “things are layered” as participant P1 said earlier. They meant when someone designs something ethically and the next designer continues, the benefits to the community and users stack up. They emphasised that to get these benefits, effort is needed both from communities and individuals: “Instead of a few people writing laws or directives, we should invest in teaching, sharing information, and spreading empathy.” The responsibility should be shared and decentralised. P2 was assured it is not designers that can make the change by themselves: “Change must happen elsewhere as well. A designer cannot do it all alone.” They continued discussing how the management is highly responsible for creating such an environment where this change is allowed if not encouraged. Being the ones paying for the product or service, the end users have the responsibility to demand for change. They, as a group, hold quite a lot of power regarding the design of products and services.

Awareness leads to obligation, and that is in the core of ethical design. The question about power-responsibility relationships quickly turned into awareness-obligation. This was a mutually shared view and two participants, P1 and P4, explicitly stated that the approach to ethical design should rather be actions before words, not the other way around. There was a notion of feeling obliged to act on behalf of the users; the work is very meaningful from the target group’s point of view. It was also described by participant P4 that it is not that easy to find the optimal ratio between acts and theory: “It is a challenge to balance between ethical design and getting something done on time.” To be able to act correctly is a challenge. P2 stressed it is important to study all the time: “In terms of professional ethics, it is a significant responsibility to stay on the cutting edge of competence. If you want to be good, you have to stay on that bandwagon and develop yourself all the time.” You must keep learning constantly to ensure your design work addresses the underlying ethical issues or concern properly.

The downsides of ethical design in general are mainly monetary. It is not a surprise that establishing a new way of working and practices requires resources, or as participant P4 said it, “Spending time and money to create common guidelines and a common way of talking about it is really quite a big investment.” Yet, the participants all thought it is an investment that pays out at least in the long term. The initial investment might come with a large price tag as all the training and defining is away from billable hours. Nonetheless, P3 mentioned input ideally comes also from the management: “If there is not that will from higher up in the organization, it is hard to start doing it on your own initiative.” A designer could, in theory, start developing ethical practices within an organisation on

their own but without the support of the management it could be difficult to establish such practices. Therefore, time is needed from the designers and management alike. Additionally, compromises, whether caused by restrictions set by the organisation or the client, can be difficult for a designer, as expressed as a concern by P2. They were also worried about compromises to ethics of a particular design. They described how wrong it feels to make such compromises especially if they clash with your personal values. Moreover, an ethical designer, or designer in general, might feel wronged if they are treated improperly. This was brought up by P4: “Ethics goes both ways.” Being able to practice ethical design requires an ethically sound atmosphere. Participant P4 continued comparing the differences between the inputs of a designer and developer to projects and described how the expectations cannot be the same. Whereas the input of a developer correlates somewhat directly with the hours they put in, the work of a designer is not that visible. A company cannot thusly be ethically sound externally if the employees are not treated right. If this is not already an established practice it brings more costs.

4.3.5 Relation to Business Goals

Ethical design’s relation to business goals is an important one. This allows to tie the abstract and somewhat immeasurable topic into something concrete. First and foremost is that ethical design serves for a larger user group. It directly leads to bigger business potential. Without sounding like they are exaggerating, participant P3 told “That potential amount of gained money is much much bigger.” How big, it depends on which traditionally marginalised groups are considered in the design. In addition, better usability improves the experience for all users which can lead to, for example, better user satisfaction among other benefits.

In consultancy business, ethics can be a competitive advantage. Organisations might be willing to either pay more for ethical design or choose the consultancy only because they address ethics. Establishing ethical design practices requires resources and P3 thought short-term benefits to be quite rare, or at least not expected: “it requires resources, but I see no quick business benefits”. However, they continued, “In the long-term, those business benefits will start to emerge more clearly.” The long-term benefits were thought to come from reputation, brand image, well established practices, and the competitive advantage. None of the participants dared to take a guess how big the benefits could potentially be but all of them were convinced it is going to be huge. On the other hand, participant P2 estimated the shift is happening soon: “I think we are on the verge of change in thinking.”

Avoiding being accused of whitewashing is a constructive challenge about which P1 expressed their concerns. Another participant, P4, toyed with the thought how it really challenges you to finding the inner motivations. They hypothesised that figuring those

out reduces the risk of accidental whitewashing. They further pondered how to convincingly convey you are actually doing the things you state you do. They saw it as a challenge but also hindering organisations, in good and in bad, from stating they are practicing ethical design.

Whereas solving the aforementioned challenge is potentially a good thing, whitewashing in general is probably one of the biggest downsides of the relationship between ethical design and business. Participant P1 had observed all sorts of whitewashing being currently in use to sell more but mentioned some organisations are doing what they advertise: “If they also acted accordingly, it would be really cool. It’s a thing that is actually happening, and people have realised it. At the moment, it’s more at the level of creating mental images.” It is more common to advertise and not deliver the promises. Whitewashing is used to get the end users feel better for their choices but, in fact, it is nothing but a trap. People realising whitewashing might ruin the reputation of and trust to a company for good. P1 gave examples of such cases, and there are lots of them. Another big downside is that the only metric in business is money.

“Measuring only in money is a concept that has outlived its time. Other metrics should be included in decision-making.” (P2)

Participant P2 questioned measuring the value of unmeasurable things monetarily. They pondered how to make it appealing to organisations. This provides a challenge to ethical design as a design paradigm because the matters at hand come with no clear price tag. The only metric convertible to money in any meaningful way is the increase in potential users, thus potential market. The question remains how we attempt to measure things such as ethical values and sustainability and is it even relevant.

5 Discussion

The writing is on the wall; ethical design is an investment. It is still unclear how big the impact will be on the business, organisations, and the daily life of the people. It seems probable that ethical design practices keep evolving and the organisations that invest in it early on will reap the benefits sooner. For an individual designer, this means it is an investment to your professional career development to master this new paradigm. Staying up to date with the design trends, it is not much extra effort to familiarise yourself with this topic. For some, ethical design might prove a useful tool and for others an everyday design pattern. But in the end, let the results of this research speak for itself.

5.1 Answering the Research Questions

The benefits and costs perceived were close together on the time scale; the longitudinal effects were conspicuous by their absence. It is highly likely that the relatively young age of the ethical design paradigm caused this; not enough time has passed to see the assumed long-run benefits. The additional value ethics brings to design becomes more apparent in the longer-term (Nielsen, 2021). Only a couple of direct effects were identified of which most were downsides, such as monetary or temporal costs. On the other hand, ethical design paradigm adds value by reminding to think twice (Zhou, 2023). It was explained that the longitudinal benefits are expected to overcome the short-term costs. Although a lot of benefits were discovered, more are expected to surface later. This notion hints that the research is not complete and cannot be finished before the longitudinal effects come into play. Therefore, this topic, and ethics in design in general, is worth researching in the future as well.

A number of benefits were identified for all stakeholders ranging from organisations to end users. The pros ranged from monetary to socioeconomic benefits which gave a nice range of possibilities. Nonetheless, this wide range causes speculation whether this research only scratched the surface; acknowledging the small sample and the widespread effects of ethical design, both positive and negative but mostly the former, there could be a lot of more benefits and downsides to be found or identified.

The same does not apply for downsides of ethical design. Although some were found, they were in low numbers and not put as concretely as their counterparts. The practitioners and organisations partaking in this kind of design work might tend to focus on the positive results and not get too attached to their negative counterparts. However, if the assumption that benefits overcome downsides hold true, it would not be too meaningful to cling on the cons when they are known to not matter in the grand scheme of things.

These effects, especially the benefits, arise from thoroughly and thoughtfully conducted user studies and laws and regulations. The former is an obvious cause as ethical design requires cautiousness from the designer in all aspects of the design process. The former, for example, Web Content Accessibility Guidelines, WCAG 2.1, ensures better

accessibility to websites and mobile apps of public services (European Commission, n.d.). However, this kind of jurisdiction does more than anticipated; it changes how designers think. It forces any designer to be more ethically inclined when designing websites of public services. That might give a designer the spark to continue that path as it benefits all users.

5.2 Confirming the Assumptions

The first assumption, the perceived benefits outweigh the downsides, was correct. It is worth mentioning that it does not mean the real-life benefits are greater than the downsides. However, the fact that organisations are allocating resources to ethical design hints that the assumption holds true even in real context. The research was done on professionals on the field to gain a good perspective how things are in practice. It can be said that they are also the experts to say whether ethical design is a profitable investment. Although their career paths have been led by personal values, the increase in market potential cannot be neglected. It is difficult to estimate the scale of that effect but, according to the research, it was unambiguously found to overcome the short-term costs.

Benefits of ethical design are partly monetary. That means the second assumption was only half correct. It seems the majority of the benefits are not directly financial. It is obvious at this point that the first steps towards ethical design practices require time which, business-wise, means money. However, the benefits are not that measurable due to their nature. For example, benefits such as heightened ethic competence, more considerate allyship and advocacy, and clearer definition what ethical means in an organisation does not directly generate income directly. These kinds of positive impacts of ethical design can prove to be worthwhile monetary investments in the long run, however. The importance of these effects might lie more in the social sustainability, reputation, trustworthiness, and such things. It is, nonetheless, worth saying that the type of gain should not matter when comparing benefits and downsides; it is the perceived immeasurable human factor that makes the equation difficult.

It was explicitly asked how it makes the interviewees feel when they get to practice ethical design. They all expressed gratefulness, and it seemed like they truly enjoy the work they do. It could also be interpreted that they found their work important and were loyal to their employer. The third assumption therefore was correct; ethical work makes employees enjoy their work and increase the feeling of importance thus making them more loyal. This is not, however, concrete proof that ethical work has the same effect on all people. The participants valued ethics personally which might explain why they savoured their job. More research should be done especially focusing on the effects of ethical work to the enjoyment, feeling of importance, and loyalty of the employees. In the context of this research, the participants most likely applied to their positions due to their

values. It could be worth investigating the relation between work quality and personal values when people are assigned an ethically oriented position.

5.3 Limitations of the Results

Although a lot of qualitative findings were made, the sample consisted of only a small sliver of practitioners and therefore was way too small to draw definitive conclusions on the magnitudes of the perceived effects. However, the research sought to reveal these effects, not quantifying them, and succeeded in it. Among the four participants, no two shared similar thoughts and perspectives. In this manner, the sample was too small, or at least the results are not the full truth. It was surprising how uniquely each participant viewed the topic of ethical design although they all claimed to practice the same thing. It would be interesting, and relatively meaningful, to see this study done again with different participants. Assumably, similar topics would surface but discussed from different points of view.

This research was purely done on ethical designers and that is visible in the results. As mentioned above, the findings were qualitative in nature and the goal was to identify as many of the perceived effects of ethical design as possible. It could be argued that this research reached the goal, however, the other side of the coin holds true as well; the results were not compared to those designers who do not regard ethics in their daily practice. In any case, the effects needed to be uncovered before designing a study comparing the perceived effects of UX and service designers with different ethical alignments. Some of the participants explicitly confirmed they are in a filter bubble, and it is difficult for them to observe ethical design objectively. A future endeavour could attempt to study how filter bubbles of certain designers affect their perceptions of the effects of their design work.

Lots of effects of ethical design were identified in this research. However, the list is nowhere near comprehensive as the mentioned effects are only perceptions of four ethical designers per to the acknowledged small sample. In a relatively small study like this, it is only assumable that some effects of ethical design were left unidentified, undiscovered, or even undiscussed. As it was mentioned that some participants explicitly acknowledged their subjectivity toward ethical design, it is highly likely that some, if not all, of the identified benefits and downsides are perceptions from biased points of view. But how much does that bias really matter since the direct benefits of ethical design is seen by the often-marginalised groups and not the designers themselves? How subjective the perceptions need to be? It is also possible that there is no bias or it is infinitesimally small as being aware of biases and actively seeming to minimise them is part of designer's job description. Being aware of your biases is, however, a part of the commonly believed definition of ethical design (Mulvenna et al., 2017).

The practicalities, the interviews, and the diary assignment, were conducted a bit too optimistically. That did not affect the results though. Whereas they were thoroughly designed and prepared, the accrual of data and the usefulness of it were not accounted for. If one decides to replicate this research or do something similar, it would be advised to take local holidays into account and make a habit of keeping in touch with the participants every week or so. It is easier to stay in touch when it is started in the beginning. Although messaging the participants often might feel it must be annoying for the participants, if they all are designers of some sort they probably have pondered on similar questions in their work and therefore are more receptive for this kind of behaviour. To end the discussion about the practicalities on a positive note, it was easy and meaningful to conduct the interviews remotely and the diary study online. Since the COVID-19 pandemic, designers have had to shift completely online. It was only meaningful for the implementation of the diary study as ethical designers can be assumed to work on such delicate matters that it would require extra efforts to observe them working on-site.

Overall, this research reached its goals. That was not without difficulties or exceptions, however; the third research question was left mostly unanswered. Additionally, guiding the research towards the questions presented in the beginning proved to be difficult. The actual discussion about certain effects of ethical design started only in the final interviews. The first two phases of research were spent getting better understanding of the participants and outlining the context.

5.4 Future Work

First, this study would be meaningful to run with different participants. It is highly likely the overall results would look somewhat similar, but the individual effects would vary. That would expand on the findings of this research and could offer countering viewpoints. Another interesting approach to deepen the insights could be to conduct a study to figure out the exact gains of each benefit. It might not be possible to convert each effect into its monetary value, but it would be relevant to identify the aspects of ethics and sustainability a particular effect impacts on. That is, categorising the perceived effects and identifying different facets of ethical design would help to create the universal definition of ethical design.

A known limitation is the lack of comparison to the perceived effects of a non-ethically oriented designer. One could attempt to study the differences, but the implications of the results would have a different message; the causes would not be the same. That does not necessarily mean it is not important, but one would have to assess whether such study fits their research motivation. It might have less impact to the popularisation of ethical design and more towards polishing the arguments for and against different design paradigms.

The third research question about ethical design practices quickly fell out of the scope of this research. Although all kinds of guidelines and frameworks were named, the examining and analysing them was left for further studies. During the interviews, the participants mentioned some tools they used but that was only used to guide the conversation towards their perspectives on ethical design – not how they think ethical design should be practiced in real context. It had to be chosen whether to keep the conversation on the ground level or focus on the abstract notions surrounding the theme. As this thesis highlights the benefits and presents downsides of ethical design, further research could focus on the practical implementations of ethical design and comparing different methods and tools.

5.5 Summary of the Discussion

We still do not understand how computers work (Maron, 1966) but, to solve the ethical issues surrounding them, we do not have to because the issues spring from us, not from technology itself. The digital world, in good and bad, is the work of our hands. Are we not responsible for how things are designed? Humans understand humans and ethical questions are always about respecting human rights, effort, and experience (Balkan et al., 2017). Why is it so difficult to do things right? What is right? Is ethical design the right way to go?

This research implicates that ethical design is beneficial, and not only financially. This design paradigm does not only touch designer but developers, managers, users, society, and everyone else affected by the design directly or indirectly; the responsibility is ours, not any individuals. The power of public opinion, which already demanded countermeasures against malicious AI (Kieslich et al., 2022.), could be harnessed to demand this change in how things are designed if, that is, we want change.

6 Conclusions

This thesis explored the perceived consequences of addressing ethical inquiries from the perspective of ethical designers. As a result, a vast set of perceived effects was identified consisting of both positive and negative factors. Although weighing the severity of the effects is thought to be very difficult, the consensus was, however, that the positive effects outweigh the negative effects. This means that ethical design should turn out to be net positive despite the initial relatively high cost.

Ethical design, as understood in this context, is still a developing concept as the best practices have not been established yet. If asked from designers, the definition of ethical design would vary from person to person. At the time of writing, the term ethical design refers to context-dependent definition of how to best take aspects relevant to the context into account. These aspects typically include social or environmental perspective but can include economic side as well. There are numerous examples of such attempts to define ethical design in this thesis. Nonetheless, one thing is definite: being ethical is a way rather than a goal.

As for UX and service designers, the results of this research point that one should contemplate on adapting to the mindset of an ethical designer. This will make you better suited to the future if your organisation decides to invest in ethical design. It is also easier and cheaper for the organisation to make this shift if the competence is partly already there. Moreover, you could start the discussion and sharing knowledge on these things.

The results speak for themselves in an organisational perspective; ethical design is a worthwhile investment. The earlier it is adopted, the cheaper it will be. Additionally, as the trend is still young the market potential is still huge. However, the responsibility of applying ethics to the deliverables should not be left for any individuals. Ethical questions are better solved with a large diverse group of people, meaning the whole organisation. The internal communication about ethical ways of working is easier when everyone shares a mutual vocabulary and participates in the discussion. High ethic competence is what makes an organisation act appropriately.

The perceptions of the effects discussed in this paper are undeniably real. The existence of these observations hint that these immeasurable effects have real life repercussions. However, measuring the actual effects might prove impossible with the current metrics; nearly all the found effects have no direct monetary impact and it would be difficult to measure the indirect influence with any accuracy. That leaves us with the question whether ethical designs would benefit from having alternative ways of measuring. All in all, the perceptions are real.

Ethical design is a relatively new concept which seems to be growing. It is not only a design approach and touches all employees; the responsibility of this mindset needs to be shared by as much people as possible. The sooner it is adopted the better. In conclusion,

ethical design has more positive impacts than negative ones which makes it a cost-effective investment both for individual designers and companies.

7 References

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