Beyond the Capture

Letter Matter

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Research & Design Thesis
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Countering unethical data extraction by Critical Speculative Design (CSD) methods to cultivate a sustainable relationship between technology and society, in which users of digital devices have control over how their data is collected, treated and cared for.

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Abstract

This research thesis is the foundational knowledge component of the following design thesis. The research explores the unethical extraction of personal data for purposes such as commodification, economic growth and power and examines its negative externalities. By using Critical Speculative Design (CSD) methods, the research thesis aims to challenge current data management practices. Eventually, the goal is to promote a sustainable and ethical relationship between society and technology, ensuring that users of digital devices have greater control over the collection, management, and treatment of their data. This includes ensuring a sustainable online and offline environment for future generations. Through deductive research, along with discursive and speculative design methods, the work seeks to propose design interventions and set deciding pillars or principles such as trust – transparency – participation – time – and simplicity, by which we could mitigate the harmful practices of data exploitation by protecting raw data in its un-digitized state until there are more explicit and international regulations on data management and data processing.

Keywords: **Discursive Design, Critical Speculative Design, Unethical Data Extraction, Raw Data, Data Sovereignity, Digital Transformation**

Affidavit

I hereby affirm that I have written this research thesis, 'Beyond the Capture' on my own. I have only used the resources explicitly referenced, and all sources, whether quoted directly or paraphrased, have been properly attributed to their respective author. This thesis has not been previously published in the same or similar form nor submitted to any other examination board or university.

When writing the thesis, I optimized text using tools enhanced by AI technology, Grammarly and ChatGPT.

Luzern, 30. September 2024
Anja Geissbergerová

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1.0 Introduction

1.1. Theatrum Mundi

Messages can be conveyed in various ways. Discursive Design applies a communication classification system based on Modes of Discourse from literature (Tharp, 2018). Some of these modes include Analysis, Description, Definition, Narration, Examplification, Process, or Analogy. Analogies are commonly used when the topic is complex or the audience has limited knowledge about it. Therefore, it will be used to introduce this particular research thesis and to propose a discourse.

It has been nearly two decades since Mark Power captured the photograph of Pope John Paul II's funeral in Poland in 2005 (Figure 1). Another arguably symbolic interpretation of the image could be the portrayal of the intricate relationship between humans and technology and how technological advancements and new media shape and mediate our perception of reality. The photograph encapsulates a moment in history. It is shedding light on the complexities of how we interpret and construct the world around us. It prompts the idea to question the implications of technological advancement on our understanding of the world and our place within it. In this photograph, the audience is looking at the screens. Nearly two centuries later, in February 2024, Apple introduced a space-like travel-looking headset: Apple Vision Pro (Figure 2). They are a tool of spatial computing that allows us to look through screens at an augmented meta-reality, a tool that seamlessly blends digital content with physical space. It prompts the question: Who is in control of this reality? As Apple quotes on their website: "Apple Vision Pro is the ultimate Theatre wherever you are" (2024) It is a perfectly crafted Theatrum Mundi[1]. Scripted and directed by a mighty producer, Apple, one of the big five, US-based tech giants known as GAMAM[2]. It was crafted and designed by some of the world's best designers, engineers, and marketing specialists.

Apple Vision Pro and similar technologies, ranging from not-so-advanced to hi-tech, including smartphones, computers, health trackers, online services, generative AI tools, and automated machines, rely on various layers to function. Most of them need one thing—data—which lies at the core of making algorithms of these technologies function. However, where does this data come from, how is it collected, and how did it become a valuable commodity?

This research thesis focuses on this layer of the spectrum and the issue of unethical data extraction and collection utilisation, often without the subject's explicit consent or knowledge, by quasi-monopolized technology corporations for purposes such as analysis, profiling algorithm learning, commodification and monetisation.

To summarise the analogy, just as a theatre play is directed by a script, a series of carefully chosen words and letters that dictate the narrative, Apple Vision Pro operates on its own 'script,' a digital code composed of carefully chosen data, often unethically extracted, that directs its functionality and user experience.

1.2. Research question and aim

Big-tech corporations depend on data, as suggested in the introduction. They have another thing in common: the visions of a hi-tech future and human interfaces[3] (Accenture, 2024). The aim of this thesis is also to explore the future. Rather than advising digitalisation and increasing user's time spent online with digital devices and services, it visions a post-tech world where users are in a dialogue with technology that supports data sovereignty[4] , the user's independence, focus, intent, and well-being as well as having control over their time spent offline or online.

The swift development of technology and its pervasive reach into our lives require a critical examination of data extraction practices. By applying Critical Speculative Design (CSD) methods, this thesis aims to initiate a discourse on protecting raw data and envisioning better futures where data is not commodified but respected and ethically managed, motivating users to become actors. Critical Speculative Design does so by questioning the current to find alternative, better futures. This approach seeks to address immediate concerns and aims to influence long-term policy and societal changes.

The research should also lead to exploring the meaning behind the 'uncaptured' elements, raw undigitised data through qualitative research, such as interviews and observations, whilst being mindful of Vladan Joler's (2020, p. 10) essential questions for this investigation: *"How can we investigate but not harm those fragile*

[1]The idea that human life is like a play scripted and directed by a mighty producer (God, Fortune, Fate), a play in which each player is given an allotted role.

[2]GAMAM stands for Google, Amazon, Meta, Apple, and Microsoft, the largest internet companies worldwide by market value and user base. (Clement, 2024)

[3]A general idea of human interfaces (HCI: Human-Computer Interaction) is to build interfaces that are based on an understanding and appreciation of human physical, mental, and behavioural capabilities. (Source: Tan, D. S., (2024) human-machine interface. Encyclopedia Britannica. https://www.britannica.com/technology/human-machine-interface)

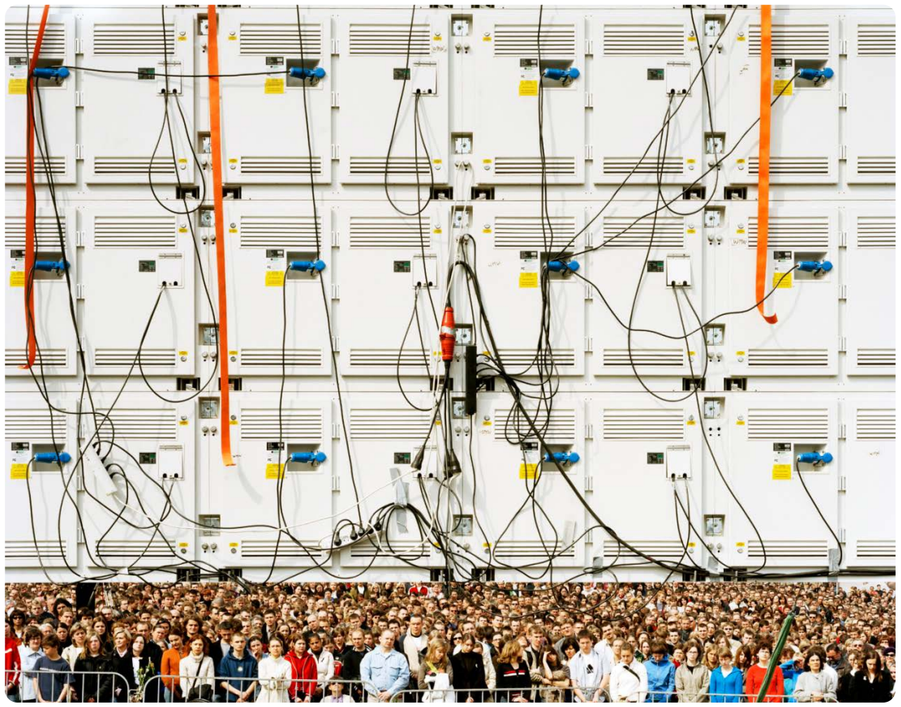


Figure 1: Watching the Pope's funeral on large video screens, broadcast live from Vatican (Power, 2005).

Figure 2: Apple Vision Pro Headset (Apple, 2024) .

[4]A state where entities have freedom from external control over their data and can decide how their data is being cared for. The issues concerning digital sovereignty and the common thread that unites them are getting clear: these are all episodes in the fight for digital sovereignty, that is, for the control of data, software (e.g. AI), standards and protocols (e.g. 5G, domain names), processes (e.g. cloud computing), hardware (e.g. mobile phones), services (e.g. social media, e-commerce), and infrastructures (e.g. cables, satellites, smart cities), in short, for the control of the digital (Definition from Herlo et al., 2021 by Luciano Floridi).

words or meanings that somehow escaped the capture process? How can we speak about them without exposing and capturing them? How do we care for and cultivate ecologies that exist beyond the border of capture?".

The aim and the complexity of the topic lead to the following open-ended research question, which supports a broader exploration of ideas and future perspectives:

> **How might a discursive approach, more precisely Critical Speculative Design (CDS), be utilised to reverse and counter unethical data extraction and protect what has not yet been digitalised, the raw information, from exploitation, the things that lie "Beyond the Capture" until we have more explicit regulations and policies?**

1.3. Method/Tool/Approach:

Through deductive research, the thesis will explore the hypothesis that protecting data in its raw state is essential to slowing down the data extraction processes until we have more explicit global regulations and policies and that methods used in Speculative Critical Design can be appropriate tools as they allow for better foresight in technological impacts and offer a critical lens for evaluating the ethics behind data extraction.

To achieve this, the first step in this thesis involved conducting desktop research to understand the broader context and identify key leverage points. This was done by analysing various sources, including literature, films, and interviews, focusing on the intersection of emerging technologies and society.

The research followed a deductive approach, applying hermeneutic questioning by systematically analyzing and interpreting the context and research areas in a logical sequence, as shown in Figure 4.

The results of this analysis were synthesized into a Manifesto, which served two main purposes: (1) to clarify the thesis's overall direction and positioning, and (2) to stage a design intervention aimed at addressing unethical data extraction practices.

Subsequently, a review of best-practice design examples and relevant case studies was conducted. By comparing projects that address complex societal issues through speculative and critical design, this review sought to identify successful strategies and approaches applicable to the design thesis. This review also gives insights into what could be done differently to improve design effectiveness in tackling unethical data extraction and other complex issues.

This research process, involving various methods of Discursive design and delving into best practices and areas of expertise, should also help validate the initial hypothesis and ideas and recognise an ideal placement of the design thesis and an intervention, which should elicit a response from the stakeholders.

1.4. Context and Issue

A – Technological innovation. We are currently living in what economist Joseph Schumpeter called the sixth wave of the innovation economy starting from the beginning of the Industrial Revolution, where artificial intelligence and digitisation across the Internet of Things (IoT), robotics, drones, systems automation, predictive analytics, and data processing have a momentous impact, leading to the digitisation of physical goods and services (Neufeld, 2021). Digital goods are products and services that do not involve exchanging physical things. Under some of these digital goods, we can picture digital media such as news, e-books, music, or virtual items such as NFTs or currency. Under digital services, we have e-commerce, streaming portals, social media platforms, education platforms, customer services and others. Most of these digital goods and services require a set of data for their functioning. The more digital goods and services, the more data is needed; this often comes at the cost of unethical data extraction and user exploitation. The innovation cycle visualises the acceleration of innovation, which occurs in waves. Each wave should be shorter than the previous, making innovation and extraction processes faster and more advanced (Figure 5).

Figure 3: Futuristic Image by Accenture (2024).

The Accenture Technology Vision Report 2024 is one of the proves that we certainly do live in the sixth wave of technology, which was even more accelerated by the unfortunate events of the Coronavirus pandemic when many people and businesses shifted online, which contributed to digital transformation (Crawford & World Economic Forum, 2021). This acceleration is not only a matter of technology, but there is also social and cultural acceleration (Nowotny, 2016); hence, many researchers in design, academia, social studies or ecology are advocating for downsizing (Manzini, 2009; Tonkinwise, 2020, p.46; Tsing, 2012, p. 506), deceleration (Center for Complexity at RISD, n.d.), and degrowth (Latouch, 2009), arguing that we need it for sustainable development and future. This implies that we will need to make significant sacrifices in our ways of living. However, Tonkinwise, a scholar with specialisation in design studies, particularly in the field of sustainable design, convincingly argues that when we give up something valuable in return for something else of equal or lesser value, it's an exchange, not a sacrifice (2020). CSD could support such exchanges.

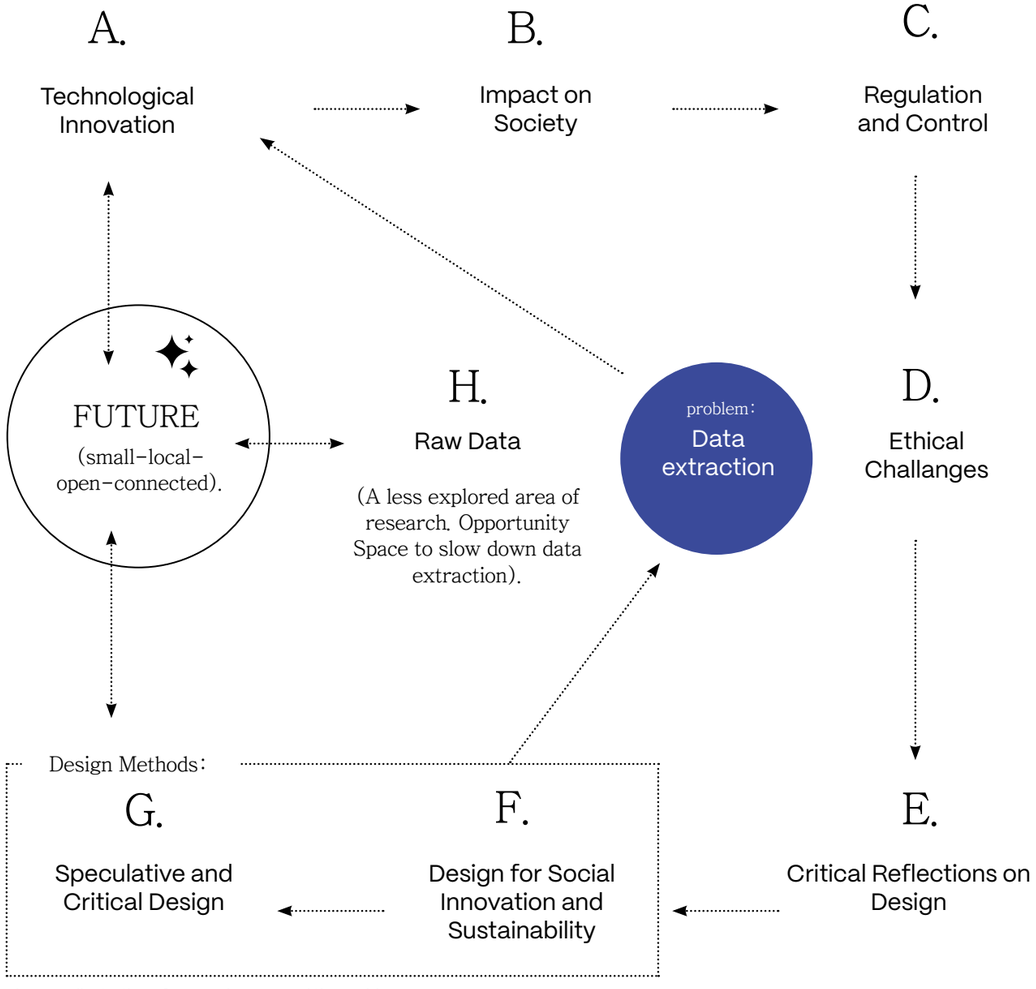


Figure 4: Illustration of research areas and the problem space.

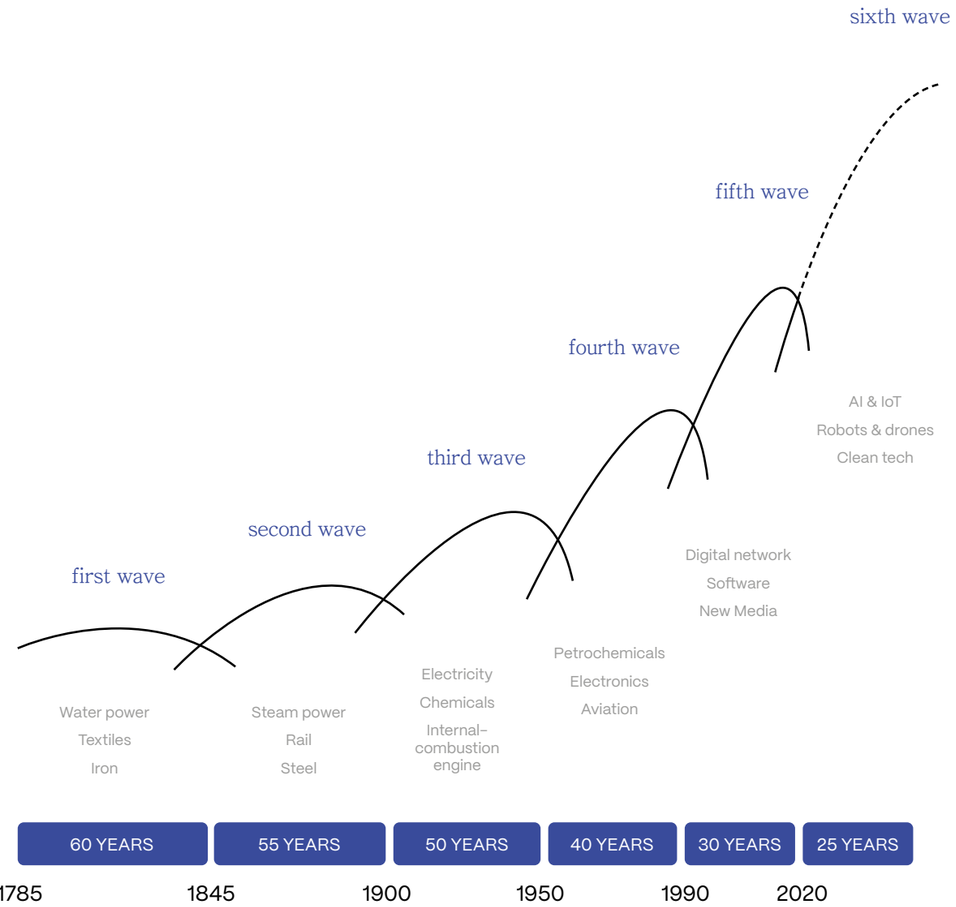


Figure 5: Schumpeter's Innovation cycles. Simplified and redrawn from Neufeld (2021).

B – Impact on Society. The question that arises with the acceleration of innovation is also: What kind of innovations will we have in five or ten years? How much more data will be unethically extracted to make these innovations real, and what will be the impact on society? This is where speculation comes into play, and thinking of alternatives to our world becomes necessary. Are we entering a dystopian or utopian future, and whose preferred futures will they be?

C – Regulation and control. Chapter 2.2.1. delves into the regulation of data usage, management, and processing, which is increasingly prioritized in international standards and political discussions. It examines data collection for reference or analysis and data management, which relates to the organization and ownership of data. The chapter provides insight into existing regulatory frameworks and how design could intervene in these frameworks.

D – Ethical challenges. The previous three points raise ethical challenges of data extraction and questions about our values and morals. These themes recurred throughout the research and were often discussed in conversations with stakeholders and during expert interviews.

The use of generative AI tools, such as ChatGPT and Grammarly, in editing this research thesis itself also raises ethical considerations, especially given the thesis's critical focus on data usage and processing. However, after thorough reflection and consultation with peers, these tools were employed to improve clarity while maintaining a careful awareness of the ethical complexities involved.

Consequently, this research was conducted with a deep sense of care, humility, and responsibility, particularly in addressing issues of accountability. Ethical concerns were considered at each stage, from the actions taken to the workshops conducted and the questions explored during the research process.

> *"A designer who does not have a clear sense of the wider future they are trying to design by introducing a new product into the world is not only unconvincing but irresponsible."*
>
> – Cameron Tonkinwise (2015)

E – Critical Speculative Design. Speculative and Critical Design (SCD) emphasises ethical and societal features of design practice. One aim is to reveal underlying agendas and explore alternative values, forms, and representations (Bardzell & Bardzell, 2013). By pushing the public to think critically about norms and values, CSD practice strives to encourage public debate and discourse.

This approach of the Speculative Design method, sometimes seen as a design field, school or attitude, first emerged in the 1990s at the Royal College of Arts in London as a reaction to mass consumption and technological development and the growing disciplinary awareness of the impact and responsibilities of a designer. Within design theory, the influence of Victor Papanek's Design for the Real World influenced this approach, prompting designers to question their role in conspicuous consumption and its impact on the planet's ecosystem (Ward, 2019). In terms of data extraction, designers should consider how digital tools are designed, their purpose, and the potential consequences associated with them.

> *"Critical thinking without hope is cynicism. Hope without critical thinking is naiveté."*
>
> – Maria Popova (2016)

F – Critical Reflection on Design. The speculative approach has often ended up being purely commentary or terminal, speaking to a smaller audience through, for example, gallery exhibitions, student exhibitions, design publications, design blogs, designer's websites, or small commercial niches (Tharp, 2013; Mitrović et al., 2021). Subsequently, it has been subjected to significant critique, questioned, and its relevance to society has been debated (Laranjo, 2014). However, as Davis (2014) argues, *"if we don't think about alternatives, we're stuck with what we're doing now, following hi-tech industrial growth-capitalism to the bitter end: the uncontrolled exploitation and exhaustion of mineral, plant, and animal resources"*. In a time marked by interconnected crises, we as designers must go beyond wishful thinking and the spectacle of dystopia to engage with the real world (Mitrović et al., 2021). While we can still use our creativity and skills to generate alternative realities, our goal should be to turn them into actual future realities where users are no longer users but actors.

Nowadays, Speculative designers continuously realise that they usually act from the point of privilege, especially SpeculativeEdu, an educational project orienting toward novel education of Speculative Design, which reflects heavily on this critique. Matt Ward, a key contributor to this community, addressed these concerns in his article 'Critical About Critical and Speculative Design' (2019), where he outlined a set of principles for practising Speculative Design responsibly, aiming to avoid past mistakes. These principles were carefully considered and integrated into this research to ensure they were addressed throughout;

I. **Participation and Engagement:** Engage with the audience and stakeholders to understand their hopes and fears.

II. **Authorship and Benefactors:** Ensure the work benefits the community and avoids exploiting people.

III. **Inclusion and Exclusion:** Consider diverse perspectives to understand potential futures.

IV. **Maintenance and Social Infrastructure:** Recognize the need to maintain the designed worlds and represent overlooked groups.

V. **Feedback and Reflection:** Seek diverse feedback on completed projects to gain insights into the process of imagination.

An essential aspect of Speculative design in relation to this research is that compared to Critical Design, it expands the possible. Meanwhile, Critical Design rather attempts to break the actual and challenge existing norms (Tonkinwise, 2015). The final design intervention should encompass both aspects. this is why it is important to evaluate the impact throughout the design processes by examining current design theories and methodologies and moving along a spectrum that includes both Speculative and Critical Design.

In addition to speculative approaches, **Discursive-Through-Design** offers another layer of critical engagement, where the design becomes an active medium for dialogue. When being Discoursive-Through-Design, we deliberately embody a thought or knowledge into or through a design medium, such as an interaction, an object, an event, a service or a system (Tharp, 2018). For these reasons the project scope of this research and to maintain a clear direction and aim, the mode and audience have been defined using the **External/Instrumental** dimensions of Discursive Design (Figure 6). The term Instrumental is posited as an operational modality – where the design intervention serves as an instrument to continuous thoughts or actions between the designer and the audience, whilst the audience should remain External – meaning that the intention is to initiate communication with those outside of the design field (Tharp, 2013).

Speculative and Critical Design (SCD) methods, along with a literature and case study review, combined with hermeneutic questioning—which is often used in qualitative research to explore and reveal deeper meanings—were essential in addressing these complex questions. Although this research has not yet fully employed the Discursive-Through-Design approach (Figure 7), which aims to deliberately embody knowledge or ideas in the final design medium (such as an interaction, object, event, service, or system) (Tharp, 2018), it will be used later as the final intervention. In that phase, prototyping methods, such as the future cone or ethnographic observations, will become integral and play a key role in the design process. The current focus is on exploring the best strategies and gaining a deeper understanding of the issue to effectively facilitate this discourse in future applications. See Chapter 2.2 for more context.

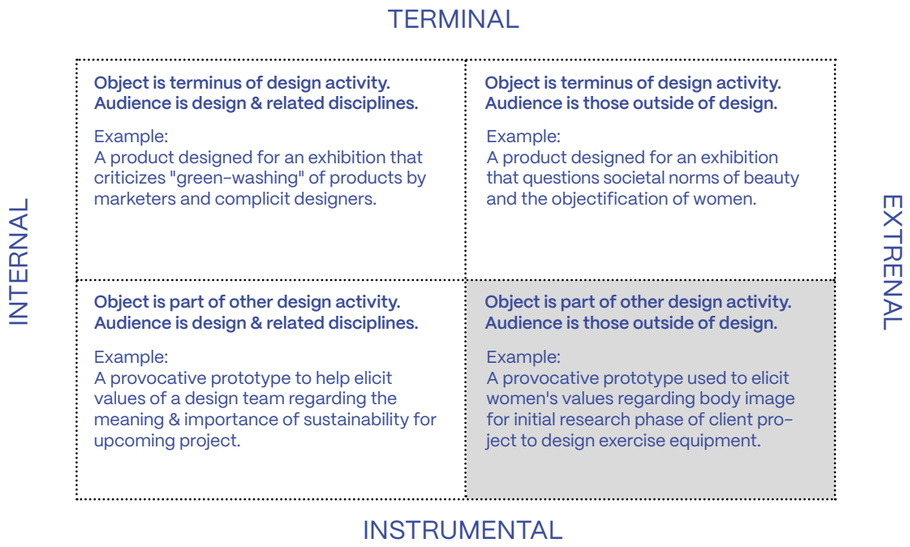


Figure 6: Dimensions of Discursive Design. Illustration redrawn from Tharp (2013).

G – Design for Social Innovation and Sustainability. This approach aims to identify potential interventions and facilitate dialogue with technology. It seeks to provide users of technological devices with some form of resilience against unethical data extraction and empower them to decide how their data is treated and cared for. It should not just be commentary; it should actively work to eliminate the criticised issues. Discursive design seemed suitable, as it employs the material language, traditions, and characteristics of design for immaterial aims, such as positively affecting individual behaviour, public debate, professional practice, institutional policies and new knowledge, and possibly becoming a spark for sociocultural transformation (Tharp, 2018). Eventually, the design intervention of this thesis, based on the findings of this research, should result in changes in behaviour and action, impacting the world in small ways on an individual level or triggering a ripple effect that could positively impact larger groups and societal systems.

The findings in all the previous topics led to the conclusion that Ezio Manzin's SLOC could be the appropriate method for implementing the design intervention. This will be discussed further in Chapter 2.2.4.

	About Design	For Design	Through Design
Discourse (systems of thought or knowledge)	also, design discourse e.g., a design journal article	also, secondary design research e.g., a design journal article used to inform the design of a product	also, discursive design e.g., a product that was designed to embody or engender a discourse
Discoursing (communicating)	also, just talking about design e.g., To friend: "I hate my phone's interface!"	also, primary user research e.g., To researcher: "I hate my phone's interface!"	also, objects that enable or contain communication e.g., a cellphone and the writing on the back of a cellphone

Figure 7: Discursive-Through-Design table. Redrawn from Tharp, B., Tharp, S. (2018).

1.4.1. What this thesis does not do

It is important to emphasise that this research will not address the subject of data retrieval for research in medicine and healthcare, as the purpose of collecting data in these fields should differ from profit-driven motives. Despite this, there is an overlapping of some potential risks and problems, such as algorithmic bias, data colonialism, and marginalisation (Arora et al., 2023); therefore, some significant learnings are derived from these sources.

While Artificial Intelligence is closely linked to data extraction, this thesis will not extensively cover this topic, as the advancement and speed of development of such technology are not within the scope of the research.

1.5. Stakeholders

The digitalisation of things, which relies on data, affects nearly every part of our ecosystems. It is essential to recognise who will be affected by the change processes and the final design intervention and, thus, who needs to be involved.

There are stakeholders who extract data (data controller) and those who are subjected to extraction data (data subject). The focus is on data subject.

The stakeholders who are subjects of extraction are both human and non-human. Our planet's natural resources, the underpaid and unethically treated labour workers, and the users of online platforms and services. These groups are divided into direct and indirect stakeholders. The direct stakeholders constitute the primary focus of the research; the indirect are those who are critically involved and affected by this issue but are not the primary objective of this thesis. However, despite receiving less immediate attention, they equally deserve consideration when making decisions in the design process.

1.5.1 Indirect Stakeholder

Planetary Resources. Nature serves as the fuel for the entire digitalisation and data extraction systems, from the extraction of copper or lithium at mining sites, which causes lands to become toxic landfills, to the operation and cooling of data centres, which causes carbon emissions and contributes to our climate crisis and finally to the disposal of e-waste. These examples are only a minuscule reflection of our exploitation of natural resources, which we are running out of (World Economic Forum, 2024). Whether powering personal electronic devices or facilitating the infrastructure of our digital world, this dependence often comes at a cost to our planet's ecosystems.

Figure 8: Red mud dump near Stade, waste product from aluminum production made from bauxite. (Johaentges, 2010).

Underpaid & unethically treated labour workers. Running electronic devices, data banks, and digital infrastructure requires human resources. At the top of this extraction structure are the owners and decision-makers. Below them are those working in education, research, and development. Beneath them are individuals working in the global transportation system, and those involved in manufacturing, engineering, and construction. At the very bottom of the structure are those who work in mining, agriculture, and other natural resource industries (Joler, 2020). It is important to note that even the stakeholders at the top of this ladder (the owners, decision-makers, and people from education, research, and development) can become subjects of extraction or exploitation.

Unethically treated labour workers are understood as those stakeholders whose fundamental rights are not respected. These include dignity, freedom, equality, solidarity, citizen's rights and justice.

1.5.2 Direct stakeholders and target audience

Future generations. The voices of stakeholders not currently represented are those of future generations—those who cannot speak for themselves and those who will be most affected by the rapid pace of technological advancement and digitalisation. It is essential to consider their perspective when formulating policies or developing new technological tools. Our responsibility is to educate them about life without technology, a non-digital living, and ensure they will have the means to survive when the non-renewable resources powering modern technologies eventually run out, preventing the consequences of blackboxing (further on the concept of blackboxing in Chapter 2.1.). The foremost priority should be to create a safe environment for them, enabling them to live with and without technology.

An early illustration of the impact of technology on children is depicted in a provocative short YouTube video showing a one-year-old growing up surrounded by touchscreens. In the video, the child attempts to interact with a traditional magazine as if it were a touchscreen device, unaware that the images on the printed page are static. The video's account owner and the child's father, @UserExperienceWorks, concludes with the quote: *"For my one-year-old, a magazine is an iPad that does not work. It will remain so for her whole life. Steve Jobs has coded a part of her OS"* (UserExperiencesWorks, 2011).

Whether his comment is valid or not is discussable. An educational specialist suggested in Wired Magazine that the child's behaviour reflects normal motor skill development and that Steve Jobs did not code a part of her OS (operating system). However, she has brought up another interesting point. Fine motor skills are best developed through activities such as picking up objects, playing with play dough, using building blocks, cutting paper, drawing, and exploring various shapes and materials. These activities help promote hand-eye coordination and the ability to arrange objects in patterns. This more likely leads to the question of how technology will positively or negatively influence children's motor skills and mental and physical capabilities in the future (Donahoo, 2011). This discussion highlights the changing perspectives and the importance of considering how future generations will interact with the world.

Figure 9: A Magzine Is an iPad That Does Not Work. Screenshot taken from UserExperiencesWorks (2011).

Users of online platforms. Those who can look out for future generations are not only rule makers, but also us. The users of digital products and services:

- Smartphone users,
- Social Media users,
- Online Shoppers,
- Lifestyle Management users
- Workplace Software users

The direct and main stakeholders are users of online platforms, people who are simultaneously the product, resource, and labourer (Bratton, 2016; Joler, 2020). These people have social media accounts to keep their social connections, use GPS for travel, track their health, use e-mail for work, use Google to search for ideas, and many others. According to Forbes, there are 5.35 billion internet users worldwide (Pelchen, 2024). **Can we make them the actors instead of users?**

Research shows that digital technology can both help and harm brain function. Some of the widely seen negative symptoms of excessive time spent online are addiction, chronic distraction, digital fatigue, reduced memory capabilities and attention, depression, anxiety, and impaired social and emotional intelligence, impacting cognitive and brain development (Small et al., 2020). Recognizing these issues highlights the potential for immense positive impact if we can find ways to protect individuals from exploitation aimed at capturing their data and attention.

2. The bigger picture

2.1. Theoretical Context

In the Introduction to this thesis, questions were raised about the design of advanced technologies and the data at the core of these technologies. However, the functioning of these technologies is often complicated, to the extent that even scientists barely understand the internal workings; it is a black box. Black boxing means that when a matter of fact is settled, one needs to focus only on its inputs and outputs, not on its internal complexity. Thus, the more advanced technologies become, the more opaque and obscure they become (Latour, 1999, p. 183–185).

For instance, if a piece of a digital device stops working, we no longer view the device as one object but as something consisting of multiple parts, each part being an object itself. Each of these parts can be seen as its own black box, and at some point, in history, the operation of each part had to be defined and settled. This process of complexity building upon complexity stretches far back in time. The more complicated a device becomes, the more complicated it will be to repair.

An applicable example of black boxing can be found in the operation of ASML machines, as they are essential for technology collecting, storing and processing data, which then influences our stakeholders. ASML machine produces microchips bought and used by major tech companies like Apple, Nvidia, Alphabet, Microsoft, Intel, Samsung, and TSMC. In an interview with the German newspaper Der Spiegel, physics scientist and ASML Vice President of Technology Jos Benschop admitted that he himself does not fully understand how the machine works. However, the microchips it produces are essential for the functioning of modern technologies (Evers, 2024).

Digital data, translated into binary code—an abstract sequence of ones and zeros—relies on the nearly imperceptible microchips produced by companies like ASML. This data ultimately becomes the foundation for machine learning, generative artificial intelligence, algorithms, the new meta infrastructure, planetary-scale computation, and new geopolitical realities that influence modern life.

The rapid processing capabilities of these technologies are getting to a point where they surpass our understanding. They work almost like magic (City Arts & Lectures, 2020, 23:50), and magic is fascinating. These technologies are highly effective and attractive, driving innovation across almost every industry. As digitalisation progresses, these tools continue to be applied in new and diverse areas and spaces. They offer numerous benefits, such as connecting people globally, spurring innovation and productivity, changing how we think, learn and work, and the vision of simplicity. They affect our daily lives when we buy tickets to travel to work, scroll on social media, buy clothing online or in person, listen to music or make decisions about what we might have for dinner.

According to Accenture, a leading IT and business consultancy and their 2024 Tech Vision Report, human-centered interfaces are the future of technology, and enterprises are urged to embrace these innovations (2024, p. 9);

"Technology that is human by design will also reach new people and knowledge that has never been digitised before. While this will create more of what we have, it will also enable the creation of things and ideas to which enterprises have never had access. Think of all the people historically alienated by technology who will be able to contribute to the digital revolution. As technology becomes more intuitive, we can tap into these people as new customers and new employees. In doing so, their wealth of knowledge will become enterprise-actionable for the first time. And when every person can be part of the digital transformation, ongoing efforts to modernize things like data, products, workforce, and more will only accelerate."

However, this is where also concerns arise. The rapid expansion of human-centred technology implies a massive growth in data extraction. As more people are integrated into the digital landscape, the scale of data collected becomes immense. This raises concerns, as the complexity of the data-collection processes may turn into a 'scalable black box' that is opaque, difficult to understand, and even more complicated to regulate. If the internal workings of this system remain misunderstood, it could lead to challenges regarding data privacy, ethical use, and the exploitation of user information, which will be elaborated on later in this paper.

This issue was also discussed in a formally conducted interview with computer scientist David Lewis, an Associate Professor at Trinity College Dublin. His research focuses on managing data protection and data ethics issues associated with digital content processing. Lewis has also contributed to international standards on data protection. He used the example of the rapid development of brain-computer interfaces (BCIs) and other technologies, such as facial recognition or smart watches to illustrate the complexity of regulating them. He confirmed that these advanced technologies lead to concerns about privacy, autonomy, and misuse, as well as potential surveillance, especially in countries like China with advanced facial recognition systems and argues that society needs to be aware of the ethical and political implications, as they can rapidly outpace our ability to regulate them properly (The full interview transcript is available upon request due to its length, it has not been included in the Appendix. Key points were synthesised in Chapter 4.5.).

As described by Tsing (2012), Scalability is the ability to expand. At present, digitalisation and algorithms are rapidly expanding in our daily lives, leading to significant growth in data collection. However, there is also the concern that data, knowledge information and communication technology are strongly commercialised and centralised by a few quasi-monopolised technology corporations (Shafak, 2020, p. 7; Herlo et al., 2021, p. 374; Arora et al., 2023, p. 5). This grants extensive power to tech and data-collecting companies to have control over trusted parties (Asgarinia et al., 2023, p. 3) and strip users of their rights and political agency in regarding data ownership, using patterns similar to colonialism, causing issues such as social injustice. The concept of data colonialism stems from sociologist Nick Couldry and Professor Ulises A. Mejias, and it refers to the domination and control of data and data flows by powerful countries, corporations or entities in "the Global North" over those in "the Global South". The issue is that the new profit-making models exist in the form of data as free input. Rather than mining and appropriating physical resources, we are now mining human intellectual property (Arora et al., 2023).

Besides that, the economic activity of data extraction leads to the creation of externalities. According to the IISD (International Institute for Sustainable Development, 2019), an externality is *"a positive or negative outcome of a given economic activity that affects a third party that is not directly related to that activity."* Center for Complexity at Rhode Island School of Design (RISD), in their Polycene Design manual, broke down the socioecological impacts of externalities into two binary and intersecting axes 1 **production x consumption of goods and services**, and 2 **detrimental x beneficial effects on third parties**. These can broadly be categorised into four types. In the context of this research thesis, they would be as such:

Negative Production Externality

Cooling and storing of data banks exemplify a negative externality stemming from production. These data banks store data but also use a lot of energy and emit heat, affecting their surrounding environment and contributing to climate change (Treuman, 2019).

To imagine how far an externality can reach, it is helpful to examine another example: a simple act like posting a selfie on social media and the internet. The data from these selfies can be used to teach algorithms for facial recognition, emotional analysis, or location tracking. For example, a negative externality of producing these images and their data is the surveillance or profiling of discriminated minority groups, like the Uyghur communities in China (Mozur, 2019).

Positive Production Externality

The advancement of algorithms, machine learning, artificial intelligence, and a large amount of data leads to Innovation that benefits society, such as speeding up governmental or medical processes. This is a positive externality related to production.

Negative Consumption Externality

Many algorithms are biased, thus affecting also the political views of digital media users, which subsequently affects a larger society that lives in that political system. (Sunstein, 2017; Shafak, 2020, p.23–36.; Lovink, 2022)

Positive Consumption Externality

Analysing and collecting data allows people to make informed decisions. By getting access to data, people can gain better insights into trends, patterns, or behaviour, which can then lead to better strategies and solutions. This is a positive externality related to consumption.

The Polycene Design Manual advocates for no more externalities and calls for a shift in how humans conceptualise and engage in economic and social activities. It means that we should no more design things that are beneficial on the small scale but create harm at the large scale. Every decision will need to incorporate a planetary understanding of its consequences. However, how can we measure those consequences if we do not know what the future holds? Although there are various methods, like speculative design, where we can imagine and prepare for variable futures, we will never be sure they will eventually happen. Once again, the manual suggests slowing down in an era when 'speed equals justice.' It takes inspiration from holistic thinking notions such as the Sikh notion of Sewa, which emphasises selfless service, the Haudenosaunee notion that uses the Seven Generation Principle to challenge us to make sustainable decisions, and the Buddhist doctrine of Anattā, which makes us consider a sense of self that extends beyond the physical body. These notions strengthen a deep sense of duty as an ethical imperative. This perspective aligns with social activists like Vanessa Machado de Oliviera, who strongly believe in responsibility to our ancestors and future generations (2021). Adam Greenfield, a researcher on technology and urbanism, also shares this perspective through his metaphor of tree planting. In his essay 'At the End of the World Plant a Seed' he uses an analogy. He suggests that the act of planting trees, which may seem simple, involves various skills essential to human collaboration, such as planning and cooperation, which represents a selfless gesture of faith toward a future that the planter may never witness, emphasising humility and service to others (Herlo et al., 2021, p. 173).

Nevertheless, as analysed, digital data, extracted from both living and non-living sources, make the process of turning everything about our lives into commodities easier every day. Algorithms can now learn about our behaviour, emotions, motivations, thoughts, desires and other human complexities and wonders. The volume of data is often excessive for algorithms to process. Thus, it needs to go through a filtering process to determine relevant information, which is still based on underlying assumptions. Mareis et al. (2022) refer to MIT computer science researcher, poet and the founder of Algorithmic Justice League Buolamwini's note that there is a growing field of research investigating how automated systems can reflect the priorities, preferences, and prejudices of those in power (p. 295).

Data exists as a supporting structure to hyper-capitalism, digital or data colonialism and a new wave of modernity, where the whole of our and other entities' existence is being progressively exploited and commodified for the profit of "incognito" like tech organisations. These organisations arguably control and direct our behaviour through predictive analytics and persuasive technologies—a concept Shoshana Zuboff refers to as Behavioural surplus in the age of Surveillance Capitalism (Zuboff, 2018).

Brand strategist and activist Jess Henderson suggests in her book 'Offline Matters' (2020) that there is zero criticism and zero discomfort about the collection or use of data at both business and personal levels. While this may have been true then, there has been a growing concern about data extraction in various areas, including news, academia, social media and even religious spaces (Figure 10). We have adopted some of these data policies because of initiatives like these, especially those emerging in media (Herlo et al., 2021, p. 269). However, even if criticism does exist, and people are intuitively or consciously aware of this issue, it is nevertheless tricky to resist or counteract data extraction (Lovink, 2022), partially because of the intuitive design, convenience and personalisation of modern technologies.

Similar claims, like those made by Lovink and Henderson, continue to resurface: "*We don't quite understand how the Internet works, but we don't want to say that out loud because everyone else seems to be okay with that, so we must accept it, too. As citizens, we vote regularly, yet we don't remember ever casting a vote as digital citizens* (Shafak, 2020, p.25)." Shafak stresses this point with reference to a study from Digital Citizenship in a Datafied Society (Hintz, Dencik, Wahl-Jorgensen, 2018) that revealed that there is a general awareness of surveillance. Still, the uncertainty about how and why data is collected indicates that it happened without much public interrogation.

This adds to the complexity of the issue, resulting in a lack of compromise regarding a common name for this problem (Center for Humane Technology, 2021, 04:05). Fort the artist and researcher Wesley Goatley it is "**Algorithmic Capitalism**" (CTM FESTIVAL, 2018), for Tristan Harris, ex design ethicist at Google it is "**Extractive Attention Economy**" (Center for Humane Technology, 2021), the artist and researcher Vladan Joler names it "**New Extractivism**" (Joler, 2020), social psychologist Shoshana Zuboff refers to it as "**Surveillance Capitalism**". Another tag for it is "**Social cooling**" as described in the book 'Stuck on the Platform' by Geert Levink (2022). Despite the extensive research, documentaries, and literature on this topic, there remains a knowledge gap in the public domain. Why does such a significant issue still suffer from a lack of public understanding, and why do we accept the impression that nothing can be done about it?

Is it because of countercultures and movements that we have witnessed to fail? Luddism is a relevant example of a countermovement that originated in the 18th century. Textile workers began destroying factory equipment out of fear that it would make their jobs obsolete. These workers later became known as Luddites. However, the movement did not last long, as the government implemented harsh punishments, including death, for those who destroyed manufacturing machines. While such extreme measures wouldn't occur today, neo-Luddites still seek distance from technology rather than aim to destroy it.

Figure 10: Deus in machina. St Peter's Chapel in Lucerne's AI art project. The project invites its visitors to discuss artificial intelligence and spirituality. Immersive Realities Centre has developed an AI-supported depiction of Jesus for the project (Jungen, 2024).

In "The future of trust," Ross Taylor (2024, p. 90) presents an example of a project by the College of Policing that employed speculation and generated imagined scenarios. One of the questions was about what would happen when it becomes increasingly difficult to live without technology. This is a very plausible scenario considering the digitalisation programs implemented in developed countries, driven by government initiatives, technological innovation, and economic strategy.

The College's reports predicted that by the late 2020s, opportunities for maintaining privacy might become almost impossible, and among the minority who opposed the tech hegemony, collective resistance might grow. In their scenario, the neo-Luddite group attacked the AI labs. Taylor argues, drawing from experiences of violent opposition such as those witnessed during COVID, that we should be prepared for such futures and that if governments, scientists, and tech corporations experimenting with AI and algorithms want to build trust among speculation, they need to be transparent about what they are doing.

"Who Should I Trust with My Data?" by Asgarinia et al., 2023, examines the inadequacy of current data management schemes in safeguarding data subjects. The article emphasizes the importance of making data flow transparent to ensure accountability. It also points out the same problem mentioned earlier, that data subjects often do not understand how their data is being used (2023, p.9.). In a follow-up interview, David Lewis, a contributor to the research paper, mentioned that this lack of understanding is partially due to the lack of transparency, trust, and complicated legal explanations in guidelines such as GDPR. These are areas that need improvement.

Bunz (2017, p.252) believes that concerned citizens have the duty to be more curious about what algorithms can and cannot do and building upon this, he quotes Luciana Parisi: "*When we are interested in what knowledge and thinking is today, we need to study 'algorithmic thought'.*" We should not turn away from technology but learn what it can do and understand that there is more to the world and reality than what we find in the digital world. We, citizens and users, not only scientists and experts, should engage in a dialogue with technology to understand the influence it holds upon each user. This approach could empower us to be actors instead of just users.

A similar approach was practised in a semi-structured workshop conducted at HSLU with bachelor design students in the module "Wearable Futures". This intense two-week module led by Gordan Savičić and Christoph Zellweger focused on exploring the relationship between humans and objects and the interface between humans and machines (with a focus on lo-fi electronics, hardware hacking, sensor technology, robotics, and sound). They have indulged in a dialogue with technology. First, the students discussed the issue of data extraction, and then they received a copy of the provided manifesto (see Appendix, p. 69) as a provocation to encourage discussions. In the second half of the workshop, the participants received an exercise asking how to protect un-digitalized wonders and raw data from exploitation. They were rather humble, claiming that we cannot do much other than create new policies. For a more detailed description of the workshop, see Chapter 4.3.

2.1.1. Data Protection Policies

Legal institutions, governments, and experts realise the dangers, potential risks, and unprecedented futures. Some of these potential risks are increased social discrimination, behavioural influence, and marginalisation of economies (Arora et al., „Risk and the Future of AI".), and as categorised in The Observatory of Algorithms with social impacts (OASI)[5]: threats to privacy, gender, racial socioeconomic and other forms of discrimination, social polarisation, generation of addictions, state surveillance, disseminating misinformation. According to the Data & Society Research Institute on social implications of data-centric technologies and automation, we have only a modest set of potential interventions for this extensive list of problems and that capacity to defend ourselves against algorithmic harms is constrained by our collective ability to articulate what they look and feel like (Metcald et al., 2023). Researchers, social activists, politicians and scientists are actively working on regulations and legislation. The EU, for example, introduced 2016 General Data Protection Regulation (GDPR) , and this year, the AI-Act (ESPR, 2024) has been passed. However, this happens much slower than technologies develop; the AI-Act regulations, for example, become applicable 24 months after they enter into force. High-risk systems will have 36 months to comply with the requirements (European Parliament, 2024).

In comparison, the text-generating chatbot "ChatGPT" was released in November 2022. About 16 months later, in May 2024, an updated version, "ChatGPT-4o", was introduced to the public. This new version, with vision and audio recognition in real-time capabilities, significantly increases the amount of data that could be collected as it can respond to audio inputs in as little as 232 milliseconds, with an average of 320 milliseconds, which closely resembles human response time in a conversation (OpenAI, 2024). There is a visible difference in the progress of technology and standard regulations.

Even when those regulations come into function, they are limited to certain areas. In the EU, regulations might be put in place; however, in other places, development and data extraction might continue uncontrolled. That is a fundamental issue as people start questioning regulations, arguing that this puts us at a competitive disadvantage. This does raise significant issues about our values and what our political system aims for.

Fortunately, there has been an increase in auditing (Mateen, 2018), which could improve the measurement of these externalities. Auditing may offer more immediate mechanisms to assess and monitor the societal impacts of rapidly advancing technologies, providing a potential legal bridge while legislation catches up.

If our only solutions are policies or increased auditing, but they take too long to deploy, is humanity doomed to decay? Looking at it from the perspective of biologist Edward Osborne Wilson (2021), this uncertainty on what to do occurs by nature: "*We have palaeolithic emotions, medieval institutions and god-like technology... We're mixed up and, in many ways, still an archaic species in transition. We are what I like to call a chimera of evolution. We walk around and exist in this fairly newly made civilisation that we created, a compound of different traits, of different origins and different degrees of forward evolution.*" This observation emphasises the inherent tension between our biological predispositions, outdated institutional frameworks, and the rapid advancement of technology, implying that our current predicament may be an inevitable result of this evolutionary mismatch.

In this occurrence, where individuals sense that the only recourse lies in the passing of new policies or systematic change, which often require lengthy implementation processes, there remains a limited list of options available for immediate action. However, if all the issues mentioned above, the concerns about data privacy, security, algorithmic biases, mental health, equality and environmental issues are valid, it is urgent to support the regenerative and sustainable development of our society and planet now. In such circumstances, employing human creativity, careful experimentation, thinking of alternative futures, and designing interventions and transitions until more explicit laws are established becomes crucial.

[5]The OASI Register compiles information about algorithms with the aim of increasing public awareness and providing the necessary knowledge for an informed public conversation. (Methodology and Categories – the Observatory of Algorithms With Social Impact – OASI, n.d.)
[6]The AI Act, the world's first comprehensive AI law, regulates the use of artificial intelligence in the EU.

2.1.2. Going Offline

As previously analysed, going offline would not be a successful solution because we are too dependent on digital technologies. This decision would cause further extreme externalities.

Dr. David Lewis, when presented with the idea of stopping digitalisation, explained that attempting to stop digitalisation would be difficult because even if a law is put in place, digitalisation will continue to develop elsewhere. The entity that acquires the most data gains more market leverage by offering high-tech products. Instead of being a group of communities accepting data sharing, big-tech corporations would be leading this charge. What is interesting about data is that we do not have a way of owning. Other than database directives and copyright, there is no legal basis for owning data, which gives tech corporations the freedom to do with the data in the way they like. Luckily, this is now getting into debate within the Data Governance Act in which Europe is trying to encourage the data sharing.

One of the policies is that every user has the right to move their data. The question revolves around who the owner is. For example, in Meta owned online chat WhatsApp conversation, your data is what you wrote, while the other person will likely own the corresponding answer. So, if you decide to move your data from one place to another, you will only take half of the conversation. However, if the other party chooses to do the same, you will suddenly own the same data percentage as Meta.

Then, you can sell this data to another platform, and Meta loses its advantage. The lesson here is that as individuals, we don't have much power, but as a community, we have the capability to shift the power and become actors. We could create sustainable data cooperatives that support a non-discriminatory environment for scientific and technological innovation.

2.1.3. Discourse-Through-Design

This thesis focuses on exploring the capability of design to accomplish such a task as proposed in the last paragraph in Chapter 2.1.1. (Data Protection Policies). Designer and educator Ellen Lupton described good design simply as something that helps people cut through a haze and find the information they want, as well as surprising them with fresh and surprising thinking (Smith et al., 2010). It is the urge to make a preferable, improved situation out of current situations. In the early days of design, the work was mainly focused on physical products and their practicality, desirability and usability. Nowadays, we move beyond that to approaches that are not purely utilitarian and where the intention is the communication of ideas and meaning (Norman, 2010) and the ignition of reflection and discourse on wicked problems- approaches such as discursive design (Tharp, 2018).

The aim of this thesis is precisely that: to initiate a conversation, create a discourse, and envision better futures where human and non-human beings are not exploited and their entire existence is not being extracted and monetised.

The research thesis is based on Vladan Joler's "New Extractivism" (2020). New Extractivism is an illustration (Figure 11) and mapping of the ecosystem of data extraction. It is a superstructure, an assemblage of concepts and allegories. It uses metaphors and parables to explain in detail how extraction forces work, what these extraction forces are, and who their subjects to data extraction and exploitation are. This work is central to this research, as it is the first visualisation of its kind to depict the complex ecosystem with illustrations, making it more accessible to the public. It has also served as a starting point for this paper, written from a designer's perspective, who initially had little knowledge and understanding of technology.

In the middle of this extraction system, Vladan Joler included the space of the unknown: **"Beyond the Capture"**. As he thoughtfully puts it: *"We are standing at the imaginary edge and looking into the land beyond the limits of extraction. The land outside their capacity to capture, conquer and commodify. Is there any word or meaning that is not captured by this gigantic meta-structure and the millions of synthetic spiders and sensors recording multiple aspects of reality?* (Joler, 2020, p. 10)"

Would this mean that if there is some raw data left in this world, the extraction forces still do not have complete power over human and non-human stakeholders? Could their protection by speculative and critical means be a successful way to slow down the extraction processes and avoid any unwanted tragic futures?

> *"Don't be afraid of complexity.*
> *Be afraid of people who promise*
> *an easy shortcut to simplicity" –*
>
> Shafak (2020, p. 89)

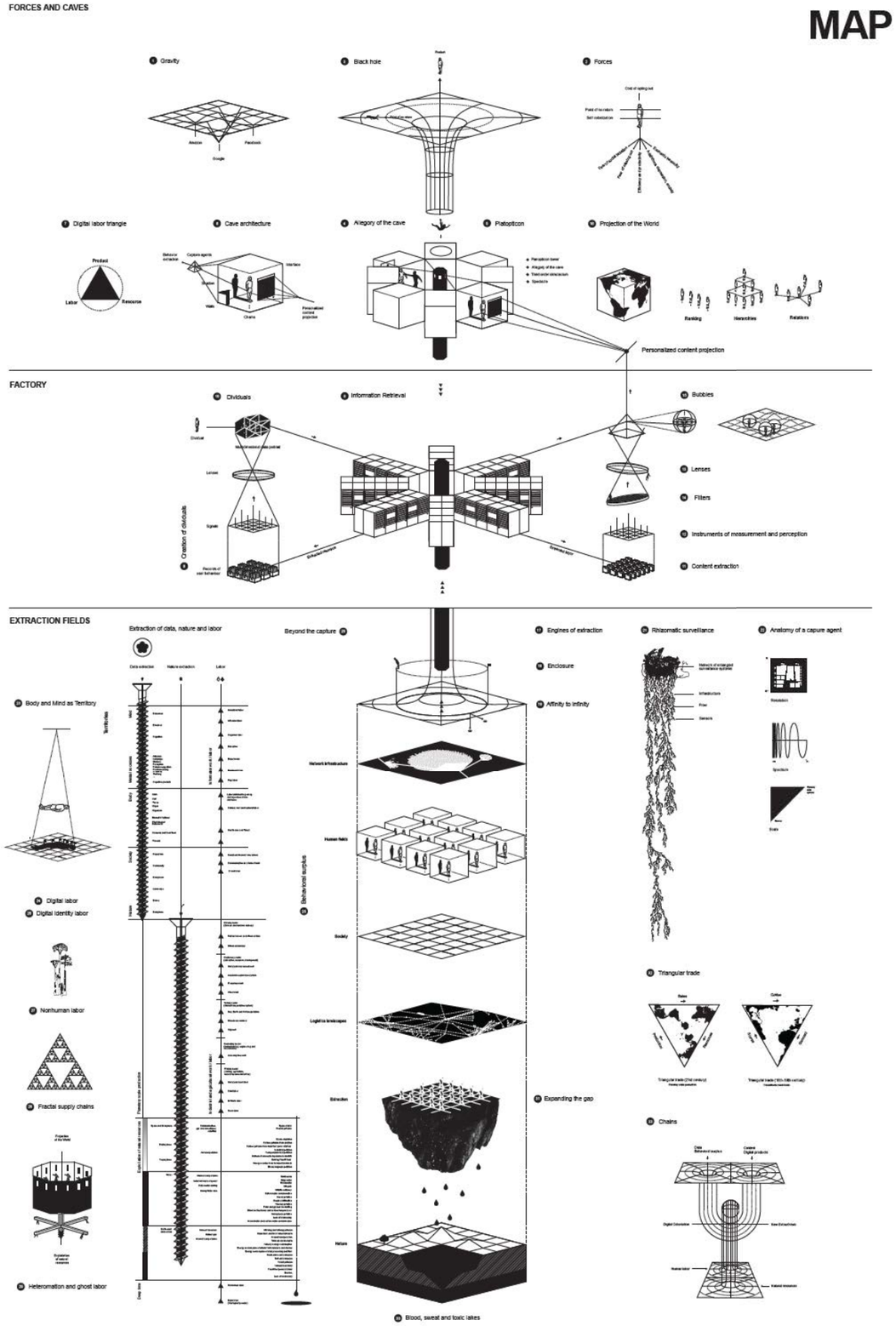


Figure 11: New Extractivism Map (Joler, 2020).

2.1.4. Small-Local-Open-Connected

Several principles discussed earlier in this thesis, such as deceleration, community, and descaling, are reflected in the SLOC model, making it a fitting approach to address the wicked problem of unethical data extraction. The "Small-Local-Open-Connected" (SLOC) model, developed by Ezio Manzini, provides a contemporary framework for sustainable global digital development. It offers four key criteria, small, local, open, and connected, that guide the creation of resilient and sustainable design solutions.

In our hyperconnected world, even small-scale interventions can serve as critical nodes within larger networks (Pfeffer, 2014). As Manzini explains, "*These four adjectives synthesise the socio-technical system that underpins this scenario: a distributed production and consumption system where the global becomes a 'network of locals'. This network comprises interconnected local systems, small enough to be comprehensible and manageable by individuals and communities.*"

Such an approach is especially crucial in a system that is becoming more centralised, often dominated by a few powerful tech corporations, as it could create a shift in power and improve social equality and the distribution of knowledge. Decentralisation would also preserve the aspects of a participatory and democratic sociality (Olsen, 2007). Chapter 3.2 presents an example of a successful project utilizing the SLOC model.

This SLOC framework will guide both the design thesis and the final intervention, strongly emphasising sustainable and resilient design solutions in the context of Critical Speculative Design. This combination could allow us to explore novel and impactful design interventions.

Designing without externalities, as discussed on page 19, further supports the suitability of the SLOC approach. Smaller-scale designs tend to generate more predictable consequences, yet keeping a planetary perspective in mind is essential.

3. Design in Practice

Numerous projects have been collected and critically analysed to understand how designers address the issue of data extraction. Below is a pick of four case studies relevant to the problem of unethical data extraction, the SCD design, and the SLOC model.

3.1. Life is Good for Now

A data scenario by Bernd Hopfengärtner & Ludwig Zeller (2015)

Life is Good for Now is a design project that puts a speculative view on Switzerland, which decided to realise the right for informational self-determination. It explores the concept of self-determinism, which advocates for every citizen to have complete control over their personal data. It acknowledges data as a commodity and advocates for our ability to determine how, when, by whom and if it is used and portrays both desirable and undesirable futures, opening space for a panel discussion at the exhibition Poetics and Politics of Data commissioned by the Swiss Center for Technology Assessment (Tharp, 2018).

The project is presented as a video series (Figure 12, 13) featuring various near-future scenarios that are intentionally ambiguous and may require repeated viewing for full comprehension.

It is an excellent example of how designers can work closely with experts and scientists and how design speculation can lead to actual implementation in science and the assessment of developing technologies. Although it is a closely related project to this thesis, applying a discursive design approach, it has a small reach and falls into the trap for which CSD was criticised. It reached a relatively closed audience, mainly academia and people already somewhat informed about the issue and excluded the public from the discussion.

Figure 12: Life is Good for Now. A screenshot from the video (Hopfengärtner, 2015).

3.2. Global Village Construction Set

A Small- Local – Open – Connected Approach by Marcin Jakubowski

The Global Village Construction Set is an older project that started due to frustration with the high cost of manufacturing machines. Marcin Jakubowski, the person behind the idea, began building his own machines using accessible and affordable parts. He believed in creating long-lasting machines to avoid planned obsolescence, which is crucial for sustainable engineering as it reduces waste and resource consumption over time. He then began sharing his ideas publicly.

The project promotes global collaboration and innovation by using open-source designs and publishing 3D schematics. It allows individuals to prototype and build machines supporting local production and entrepreneurship. This decentralised and independent approach to manufacturing democratises access to technology and resources, improving the distribution of means of production (TEDx Talks & Jakubowski, 2011).

In this case, open hardware technology supports sustainable production by allowing communities to repair, modify, and enhance machines rather than discard them, contributing to a circular economy. This model demonstrates how small groups can significantly contribute to sustainable development by prioritising longevity, resource efficiency, and community-driven innovation. It aligns with the Small-Local-Open-Connected model by design theorist Ezio Manzini, emphasising design for social innovation and sustainability.

It is an excellent case study of the potential for creating open-to-public design interventions for the design thesis. These interventions, which commence on a small scale, can engage a broad audience without seeming overbearing.

Research Thesis • Beyond the Capture

3.3. MAZI

Community wireless technologies in urban spaces

The design researchers and the MAZI project took a similar approach. They used a participatory design approach to explore public digital sovereignty, which closely aligns with the themes of this thesis. In the author's interpretation, Keysar, H., Lüning, E. C., & Unteidig, A. (2022) define data sovereignty as a form of autonomy, self-determination, and independence in relation to technologies, digital infrastructures, and data.

The project is part of a broader movement emphasising bottom-up, democratic approaches to technology prototyping, as highlighted in Practicing Sovereignty: Digital Involvement in Times of Crises (2021). By merging design with open-source culture, MAZI presents a model where prototypes and design processes remain in a state of "perpetual beta ," continually evolving through collaboration with the public. In this case, they utilised open-source community wireless technology in Berlin's urban space to create locally and independently controlled platforms for sharing data and organising collective action.

It concerns the political potential of radical alternatives such as open source and collaborative prototyping for addressing broader questions on corporate sovereignty in informational environments.

The project involved residents in a hands-on DIY process, allowing them to envision future community-led digital platforms. The project's success underscores the value of open, reflexive design processes that involve continuous listening and learning. Numerous workshops and close public involvement were central to its achievements, a lesson valuable for this research. However, reflections from the project suggest that more effort should be made to shift the power dynamics in academia-community collaborations and increase transparency.

In a follow-up talk with the project lead, Dr. Andreas Unteidig, it was revealed that a project like this would not be sustainable without the support of the local government or another form of oversight, due to the volunteer-based nature of digital technologies that require ongoing maintenance. Nonetheless, the project has had a significant impact on promoting urban activism and has served as a platform for fostering discourse and supporting initiatives taken up by organizations such as the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and other research projects. For instance, in Togo, the project aimed to establish local community networks independent of internet providers by utilizing the MAZI software, allowing locals to share content and communicate, thereby enhancing the participation of marginalized groups through digitization. This example underscores the need for more Small-Local-Open-Connected design approaches.

Figure 13: Installation of a permanent MAZI Zone in the Prinzessinnengarten (left). Visitors interacting with the MAZI archive sound installation (right). MAZI Berlin. Image source: Harlo et al., (2021).

3.4. Faraday items

There are numerous variations of Faraday products or wearables designed to keep their user off-grid or offline. These devices, such as Faraday bags, pouches, or even speculative wearables, aim to prevent surveillance and data leakage by keeping their users "off-grid" or invisible to digital tracking systems. By blocking radio frequency signals and electromagnetic pulses, Faraday products ensure that devices cannot send or receive data, shielding them from remote access or data extraction.

They have not yet gained much popularity and are used mainly by those in cybersecurity, defene, or tech enthusiasts who actively look for such products. They are often not cost-efficient for everyday users and lack the convenience of digital solutions like firewalls, which provide more practical data protection without the physical constraints of Faraday shielding.

As previously discussed, completely disconnecting from the digital world is not a sustainable solution due to the significant negative externalities it would cause. Instead, we could explore whether wearables can be designed to support user sovereignty by offering more nuanced control over digital interactions without complete disconnection. In this context, some designers have already explored speculative wearables aimed at protecting users from surveillance or mitigating harmful frequencies in our networked environment, such as Figures 14 and 15.

A similar project that has sparked interest in the design community, such as Dazeen magazine or the Index Project, is CounterBug (Figure 16), designed by Erlend Prendergast. CounterBug is not a Faraday item. Nonetheless, its aim is the same – to protect the user from surveillance and data extraction. It is a modular robotic device that talks back to Amazon's virtual assistant, Alexa. It aims to confuse Alexa by providing incorrect or opposing responses, which leads to inaccurate data collection and disrupts Alexa's ability to gather various types of personal data.

As privacy concerns continue to grow, the demand for and awareness of Faraday products may increase, leading to more experimentation and prototyping using faraway or unconventional materials and even more speculative spaces. Drawing upon learnings from previous case studies, there is an opportunity to involve the audience or users in the design process of Faraday items. This could help build trust and understanding of the need for Faraday moments and the importance of having control over one's data.

Figure 14: Stealth Ware by Adam Harvey (2017).

Figure 15: Incognito mask by Ewa Nowak (Hitti, 2019).

3.5. Key Takeaways

Undoubtedly, there are many other design projects related to the issue of data privacy, as it is a highly relevant topic. It would not be possible to analyse all of them; however, by looking at these few in a more profound manner, we can observe some patterns and extract learnings, such as that transparency and close communication with the audience are crucial to achieving more significant reach, build trust and spark a discourse. A takeaway for the design thesis would be that it would be beneficial for the final intervention to be in public places and be clear with what they try to communicate. The examples above show that creative output can take many forms, whether as a communication campaign, an object, or a design strategy.

Figure 16: CounterBug by Erlend Prendergast. Image soure: Griffiths, A. & Dezeen (2019).

4. Practical Design Research

4.1. Unstructured Observation and Informal Conversations

Throughout the research, participatory conversations were held with the public in various everyday settings to assess their awareness and understanding of unethical data extraction practices. Several people in the dialogue showed a degree of awareness, influenced mainly through popular media and documentaries, such as The Social Dilemma and Coded Bias, Matrix, or speculative series like Black Mirror. While these media sources appeared to raise concerns and increase awareness, they had minimal impact on changing individuals' behaviours.

The discussions, which were somewhat informal and lacked a structured methodology, suggested an initial lack of interest in the topic. However, once people were provided with more detailed information about the research and its implications, discussions became more in-depth and prolonged. Despite this, participants generally expressed confidence that data extraction practices did not significantly influence their online and offline behaviours. Most concerns centered on protecting their own personal data, with little attention paid to broader externalities or systemic issues related to data exploitation. Similar findings were analysed in a study, 'Public Value Concerning Digital Technologies' conducted by the University of Amsterdam (Driessen et al., 2024), where, for example, only 19% of participants were concerned with the unequal treatment of vulnerable groups.

Furthermore, many people framed the issue as one that would primarily affect future generations rather than something that posed an immediate concern for them. This perspective contributed to a sense of detachment from the ethical implications of data exploitation, as individuals often viewed it as a problem for the future rather than one that required urgent attention or behavioural changes in the present.

These insights and observations need to be re-evaluated and discussed in a more formal manner to validate them, as there are ethical and methodological issues in using informal conversations for academic purposes (Swain & King, 2022). However, they are pinpoints for further discussions and should not be discarded.

4.2. Preliminary Qualitative Survey

Purpose
This survey aimed to determine whether people are aware of the commodification of human behaviour, the concept of data extraction, and the unethical exploitation of our planet and its people by significant tech corporations in pursuit of profit.

Methods
A standardised, structured online survey was conducted using convenience sampling methodology. The survey was conducted among individuals mainly from people already somewhat aware of this topic, which may have led to biased results. However, the data analysis still revealed insightful opinions from the survey participants, and when compared with more extensive national surveys, similarities were found as described in the outcomes.

Outcomes
The survey helped identify behavioural patterns among participants, primarily related to online time and detox, which was used as a starting point for further research.

Online Privacy Importance: Most respondents place significant importance on online privacy, and many are not fully aware of how their data is processed and protected. The most frequent response was "No, but I would like to know," showing a gap in knowledge despite the importance placed on privacy.

Notification Stress: 22 out of 26 respondents (84.6%) indicated that notifications cause stress depending on the situation, suggesting that managing notifications is a prevalent concern. Very few respondents indicated that they are never stressed by notifications, pointing to the broad impact of digital interruptions on mental well-being.

Digital Detox Consideration: 22 respondents (84.6%) have considered taking a digital detox, suggesting widespread awareness of the need to disconnect from technology for mental well-being.

This data was cross-validated with more extensive national surveys. Some similarities were recognised with the survey conducted by the University of Amsterdam, 'Public Value Concerning Digital Technologies' (Driessen et al., 2024) such as Both surveys show a vital concern for online privacy and security, with respondents taking action or expressing a desire to know more about how their data is handled. Digital agency (awareness and control) plays a role in both datasets, those with lower knowledge or awareness tend to have greater privacy concerns. The consideration of digital detox and notification stress highlights the impact of digital technologies on mental well-being in both surveys. These findings suggest that both datasets reflect growing concerns over privacy, agency, and the impact of digital technologies on personal well-being, with similar behavioural trends (like digital detox and privacy protection measures).

A similarity was also found with the 'Always On Study' commissioned by the Swiss Confederation Commission concerning questions for Youth and Children EKKJ (Steiner et al., 2019). The similarities concern worries regarding the negative impact of constant connectivity. Many respondents in both surveys showed awareness and a desire for self-regulation. (See Appendix p. 69 for the full results.)

Correlations:
Importance of Privacy vs. Awareness of Data Processing: Privacy importance seems to correlate with a lack of knowledge about how data is processed (many respondents want to know more but currently don't. This suggests that privacy-conscious individuals might not fully understand the details of how their data is handled, indicating an information gap.

Notification Stress and Digital Detox: There is likely a correlation between those experiencing notification stress (in various situations) and those considering a digital detox. Since the majority report situational stress due to notifications and most have considered detoxing, it's plausible that notifications are a driving factor behind detox intentions.

Age and Digital Detox: Younger respondents (in their 20s) seem more likely to consider a digital detox, possibly indicating a higher awareness of the adverse mental health effects of excessive digital engagement in this age group.

Age and Online Privacy Importance: Older respondents may place slightly more emphasis on online privacy, as privacy concern tends to grow with age. However, this must be explored further to confirm a definitive trend.

4.3. Workshop Wearable Futures

Purpose
I. Introduce participants to the concept of data extraction and future cones.
II. Encourage creative thinking about how approaches like speculative design and imagination can mitigate unethical data extraction.
III. Develop initial ideas for speculative approaches that could protect raw data or slow down data extraction.

Setup
The Semi-Structured Workshop was led during the Wearable Futures Module at the University of Applied Sciences Lucerne – Design, Film and Art in June 2024. The two-week module was taught by Christoph Zellweger and Gordan Savičić and focused on wearable technologies in the future and the exploration of the relationship between humans and objects and the interface between humans and machines (with a focus on lo-fi electronics, hardware hacking, sensor technology, robotics, and sound). The workshop aimed to engage in the Data Extraction topic with Bachelor students from different study programs to stir a discourse and inspire them to think critically about their own design practice and eventual design prototypes, probes and objects submitted at the end of the module.

Methods
The workshop began with an introduction to the concept of data extraction, followed by a discussion. In the second part, participants engaged in a brainstorming session. They were given an exercise to think creatively about how approaches like speculative thinking and imagination can help mitigate unethical data extraction. They were also asked to identify things they believe are not yet digitalised. Their ideas were collected and organised on a board. Next, the participants were divided into two groups and tasked with developing a concept or idea for protecting two of these non-digitalized things from exploitation. The workshop concluded with a wrap-up and reflection.

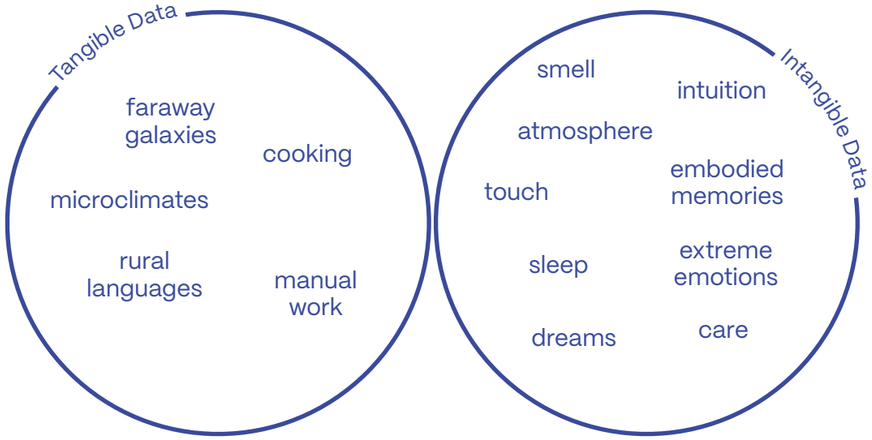
Outcomes

The non-digitised data that participants identified and clustered in two groups were:

Participants picked touch and dreams (instead of emotions) for further idea development phase. As it turned out, participants faced difficulties in finding speculative or imaginative solutions to prevent touch and dreams from being digitalised. Instead, they reverted to conventional methods such as legal frameworks, policies, and regulations. This demonstrates how deeply embedded the problem is within existing structures and systems, making it hard to think outside the box.

The difficulties participants faced in imagining non-legal solutions to protect touch and dreams from exploitation underline the systemic nature of the issue. They also hint at the limits of speculative thinking when confronted with such overwhelming ethical concerns. While creative approaches were encouraged, the workshop revealed that the intersection of technology and ethics often leads back to established mechanisms, like legal protections.

Conclusion and reflection: The workshop revealed that addressing such complex ethical issues requires more than just speculative thinking. It highlighted the importance of interdisciplinary design, which integrates knowledge and methods from diverse fields—such as ethics, law, psychology, design, and technology—to develop impactful design interventions. Future workshops might benefit from incorporating interdisciplinary collaboration.



These represent physical, often spatial or cultural phenomena that are not yet entirely digitalised.

More abstract concepts that were identified as beyond current capture.

Most mentioned things:
touch & emotions

Figure 17: Wearable Futures Workshop results.

An essential takeaway was that the identified undigitised things were mostly deeply personal and intimate human experiences, such as touch and emotions or dreams. Sleep could also be recognised as one of the few moments of our existence where our attention is still somewhat safe and is not commodified—primarily because we aren't actively using digital devices while asleep. However, this is changing. Advances in brainwave analysis and dream-related technologies are beginning to study and even manipulate what was once considered the most private and uncharted realm of human existence, such as dreams. For example, MIT's Media Lab has developed 'Targeted Dream Incubation' (TDI), a method that can record dream reports or guide dreams towards particular themes (MIT Media Lab & Beckmann, 2020). This development illustrates the ongoing digitisation of even the most intimate human experiences.

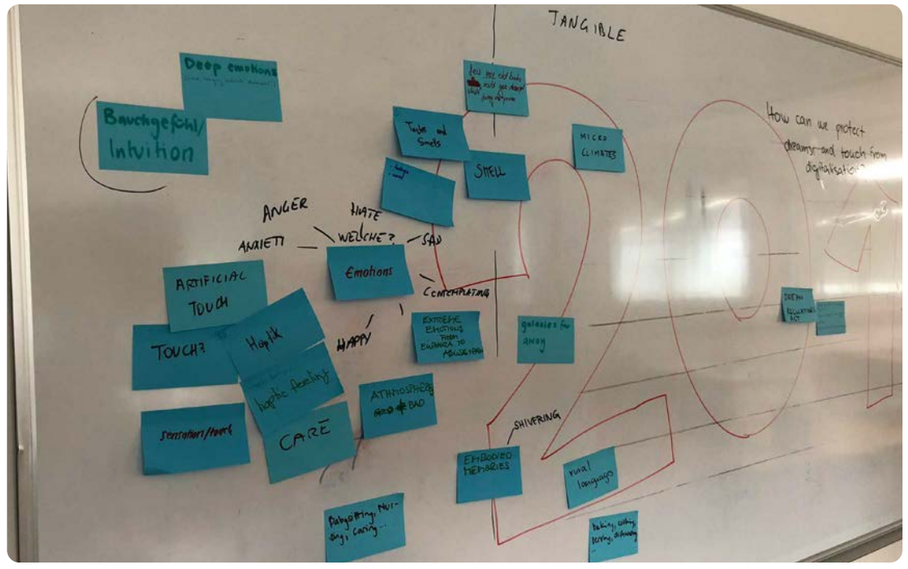


Figure 18: Participants' ideas being clustered.

4.4. Manifesto

Purpose
The manifesto aimed to position the thesis and individual perspective and develop an interactive instrument for discourse, allowing individuals to express their agreement, disagreement, and ideas. In an interview with Mitrovic (2020), Julian Hanna, professor and the author of The Manifesto Handbook, describes Manifestos as: *"...great for getting your thoughts together and finding out what you really believe, where you stand, and what you want to change. Manifestos are very future-oriented, but they are also critiques of the present, much as Speculative and Critical Design projects have this dual or multiple focus – an implicit history or genealogy, a critical look at where we are as a society or a discipline, and an extrapolation from these first two into where we might be headed – and might want to be headed – in the near and distant futures."*

Methods
It is a strongly opinionated piece of writing designed to provoke and summarise the issue. It was initially written in solitude to capture the most critical thoughts. Following the circulation of the initial drafts to gather feedback, it underwent numerous iterations, gradually becoming more refined and coherent with each revision. The final draft was a blend of personal ideas and collaborative input.

Outcomes
The last draft of the manifesto has 12 critical points targeted at 'A Concerned Designers'. Concerned designers are those who are aware of the uncanny digitalisation and have concerns.

The Manifesto commences by asserting the Universal Declaration of Human Rights and urging their respect. Subsequently, it expounds upon twelve crucial points: reimagining and protecting the uncaptured complexity of data extraction, opposing economic abstraction, slowing datafication, preventing irreversibility, disconnecting for stability, resisting technological colonization, challenging digital economies, preventing concentration of knowledge, and promoting inclusion in decision-making. The list concludes with Foucault's quote about protecting human ideas.

In addition, each point in the manifesto has a supplementary question as a tool to initiate discourse and ideation to address these problems.

The Manifesto does not have a final version yet, as it is seen as a living document, subject to revision and enhancements. However, the Workshop Wearable Futures made it evident that manifestos as such are valid tools to start a dialogue and collaborate on speculation. It can be found the Appendix, p. 74.

4.5. Expert Interview

The interview aimed to gain expert insights into data extraction from a professional with deep technical knowledge in data management and processing. Engaging with someone from a computer science background was essential to ensure a more balanced and less biased perspective in the research.
Prof. David Lewis is an Associate Professor at Trinity College Dublin, Computer Science, Head of AI Discipline, Head of ADAPT Centre for human-centric AI and digital content technology research with a deep focus on managing Data Protection and Data Ethics issues associated with digital content processing.

The Interview followed a semi-structured approach, allowing flexibility and focused on the Ethics of Data Extraction, Speculative Design, Regulation gaps, Future Challenges and interdisciplinary approaches. It was conversational with open-ended questions based on case studies and research findings, to ensure a deep exploration of Dr. Lewis's expertise in data ethics. This has led to the validation of many concepts and ideas suggested in previous research, such as the importance of transparency and power in collaboration.

An interesting point in the discussion, which echoed the findings throughout the 'Wearable Futures' workshop, was about the increasing intrusion of technology into intimate and personal aspects of our lives. The conversation expanded to the gathering of "intimate data," including emotional recognition and personal relationships. Unlike interactions with regulated professionals such as psychiatrists, these technologies collect intimate information with little oversight, leaving personal data vulnerable to exploitation. Dr. Lewis emphasized the need to be cautious about how these technologies are implemented, as safeguards can easily be weakened, leading to unintended consequences and further erosion of privacy.

The broader issue points to how big tech corporations rapidly gather intimate data, often with less regulation than governments. This unregulated space poses significant risks to personal privacy, intimacy, and autonomy.

Research Thesis • Beyond the Capture

4.6. Exhibition Theatrum Mundi: Behind the curtain of Data

The 'Theatrum Mundi' installation served as the first prototype, tested in a university setting, and attempted to make the hidden world of data exploitation tangible. Through metaphorical and physical engagement, the installation aimed to confront visitors with the often-invisible consequences of digital colonialism and hyper-capitalism. The curtain symbolised the obscured nature of data extraction. At the same time, the act of climbing the ladder to peek through a hole invoked a sense of risk and effort, paralleling the need for courage to uncover and understand these systems.

Feedback from visitors months after the experience indicates that while the installation sparked awareness, it also revealed a sense of helplessness or confusion about how to act on this knowledge:

Visitor 01 expressed increased awareness but felt trapped by dependence on the internet, highlighting the paradox of using digital tools to inquire about privacy while recognizing the irony of consulting AI like ChatGPT about data privacy concerns.

Visitor 02 admitted they had never thought about the issue until engaging with the installation.

Visitor 03 noted the general lack of education about data exploitation, pointing out that the absence of formal guidance—especially from older generations—leaves young people to seek out information on their own. However, social pressures and a lack of general interest make this difficult.

This feedback suggests a need for wider engagement and public education. The challenge of making systemic data exploitation visible and accessible to the broader public remains. One way forward could involve integrating the concept into daily life through awareness pop-ups, educational campaigns, or a literacy toolkit that could empower individuals to take actionable steps. Such tools could help bridge the knowledge gap and provide a sense of agency in navigating and resisting digital exploitation.

There is an opportunity for installations as such, if done in public spaces and providing practical solutions that can transform awareness into empowerment (such as literacy toolkits), enabling individuals to understand their data rights and take action to protect themselves from exploitation. By expanding beyond university settings and engaging multiple stakeholders, the prototype could have a broader societal impact.

Figure 19: Image of the video Installation 'Theatrum Mundi: Behind the Curtain of Data'.

5. Synthesis

In his work (2022, p. 92), Geert Levink asked, "*How can we "re-design" the social in such a way that it will become impossible—even unthinkable—for trolls and bots that try to permanently disrupt our thinking and behaviour?*" Initially, this question seemed daunting, but it could potentially be answered through a comprehensive understanding of key data extraction elements, analysis of best practice studies, and practical research.

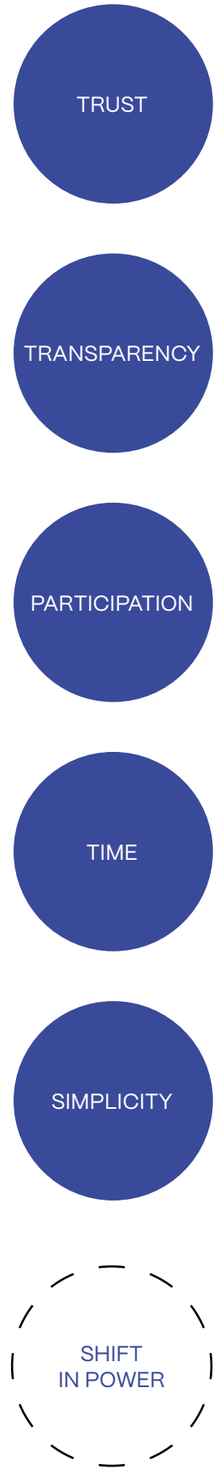
The thesis explored unethical data extraction and how Critical Speculative Design (CSD) could serve as a tool to challenge the commodification of personal information. The aim is to move towards a more sustainable and ethical relationship between technology and society, in which individuals have more control over their data—how it is collected, managed, and used.

It questioned how a discursive approach might, specifically Critical Speculative Design (CSD), counter unethical data extraction and protect undigitised information from exploitation until more explicit regulations and policies are established. While no single solution has emerged, the research suggests that CSD can be a valuable tool in addressing these issues. By imagining alternative futures, CSD encourages us to see data not as something to be exploited, but as a resource that must be ethically managed and protected. Through speculative design, the thesis highlighted the importance of data sovereignty and offered examples of smaller, decentralised approaches (such as the SLOC model and the MAZI project) that empower communities to control their own digital spaces and behaviour. While it's clear that CSD provides pathways to slowing down the data extraction process and raising awareness, the research shows that until stronger regulations are in place, we should focus on creating systems or principles that emphasise Trust, Transparency, Participation, Time and Simplicity.

Trust: Building trust and dialogue between users and technology is fundamental. People need to feel secure that their data is being handled ethically, with clear control over it. Trust is not easily given—it must be earned through respectful, transparent systems.

Transparency: Users must be able to clearly see how their data is collected and used. Transparent practices encourage informed decisions and help people hold corporations accountable for their actions.

Participation: It is crucial to involve communities in the governance and design of digital systems or systems that respect people's attention and freedom. Allowing individuals to actively shape how and when their data is used can lead to more democratic, fair



systems. It is a collective effort that could finally protect what has not yet been digitalised.
Time: Slowing down the relentless pace of digital innovation allows us to reflect on the ethical consequences. Considering the long-term effects of what we design helps ensure sustainability and reduce harm.

Simplicity: Clear, simplified communication around digital systems and literacy ensures that everyone, not just experts, can understand and engage with the technologies they use, making it easier for users to take control.

By involving communities in the design of digital platforms, CSD encourages decentralisation and local autonomy. This shift of Power to Communities can help reduce the reliance on monopolistic tech corporations and foster a more democratic digital and offline ecosystem. The speculative futures outlined in the thesis might provoke further reflection and discussion among policymakers, drawing attention to the urgent need for stronger data protection laws. The pillars of Trust, Transparency, Participation, Time, and Simplicity provide a framework that designers can use to create ethical digital products and services. These principles remind us that technology should serve its users, not exploit them. The importance of educating users about data commodification cannot be overstated. The more people understand the implications, the more likely they are to demand transparency and accountability from technology providers.

Conclusion:

The thesis attempts to address the research question by showing that Critical Speculative Design can play a role in countering unethical data extraction. While not exhaustive, it highlights potential ways forward possible ways forward, emphasising the importance of data sovereignty and community involvement. By applying principles of Trust, Transparency, Participation, Time, and Simplicity, we can take steps toward a more ethical digital future, where data is treated as something to be protected, not exploited. Although modest, the impact of this research could contribute to a broader dialogue in design, policy, and society, potentially fostering a more democratic and sustainable digital landscape.

6. Outlooks

This thesis has taken initial steps towards exploring a more ethical digital landscape. However, there is still much to be done—especially in the realm of participatory design. While the importance of community engagement has been acknowledged, it wasn't fully realised in the practical research or prototypes. Understanding the complexity of the problem was prioritized before involving stakeholders.

Moving forward, the focus will shift toward deepening participatory design methods. The research will aim to involve the key stakeholders—those most impacted by unethical data practices—in a more direct and collaborative way. The next steps will include:

Collaboration and Stakeholder Involvement:
Engaging key stakeholders and users of digital platforms will be essential. Their input will provide critical insight into the design of interventions. Future steps should engage communities in the prototyping process, ensuring that the solutions resonate with their real-world needs. Co-creating solutions will help better reflect the experiences and concerns of those most affected by data extraction. The prototypes will prioritise stakeholder involvement, ensuring that users have a say in the design, testing, and refinement of solutions. This will help ensure that the designs are relevant and foster trust and transparency

In summary, while the early stages of this research focused on building an understanding of the complex issues around data extraction, the next phase will place a stronger emphasis on participation. By working more closely with stakeholders, the research will aim to create practical, relevant, and impactful interventions that promote data sovereignty and foster a more ethical digital future.

Lastly, there will be deep consideration of whether to direct the scope of the thesis to this one situation, the protection of the most intimate moments, such as touch, sleep, and dreams. This still somewhat "raw data" that makes us human.

Research Thesis • Beyond the Capture

Letter Matter

Handwritten Letters
as an Act of Resistance.

7. Design Thesis

7.1. Letter Matter

Following the written part of my thesis, which focused on the relationship between data extraction, attention economy, and the acceleration of life through digital tools, the second phase of this project transitioned into practice. This phase explored how design interventions can offer alternatives to extractive digital systems by fostering analog, human-centered communication through the act of writing letters by hand. The project repositions this medium/craft as a potential cultural commons.

The practice phase was informed by the research principles established earlier: Trust, Transparency, Participation, Simplicity, and Time. These values became both the foundation and evaluation criteria for all practical outcomes. The interventions were designed not as isolated prototypes, but as living cultural tools rooted in systemic critique and everyday accessibility.

Some of the question the written thesis had asked: How can we protect our most intimate personal data from digital exploitation and reclaim digital sovereignty? And what role can design play in creating alternatives to centralized, data-driven infrastructures without sacrificing connection and network?

After several ideation cycles and deeper engagement with critical speculative design, the project unexpectedly circled back to an exploration from the beginning of the Master's program, an investigation into the cultural and material significance of paper and especially it's tactile experiences (Figure 20). Though initially set aside due to a lack of clear application, this inquiry resurfaced as an opportunity to address the challenges identified in the theoretical research.

The thesis shifted from a planned awareness campaign toward an old slow medium that inherently demands presence and attention, handwritten letters. Paper based, personal, and slow, these letters somewhat still resist extraction and give individuals agency over their personal most intimate data. They don't leave traces in digital infrastructures. They offer space for reflection. And they last.

This turning point marked a critical moment in the project: a move from critique to construction, from analyzing problems to prototyping a meaningful alternative. The conceptual underpinnings of the project are strongly aligned with movements such as the **Slow Food movemen**t, which frames slowness as a vehicle for health, liberation, and cultural sustainability. Slow in their perspective means: liberating, health, antidote, individual, real culture, true progress, taste, international exchange and better future. This resonate deeply with this project's approach to communication and network. Similarly, **Slow Media** theory advocates for media practices that they are good, clean, fair, mindful, post-Luddite, progressive, collective, and democratic (Rauch, 2018, p.123). Furthermore, the design outcomes are inspired by Manzini's SLOC model: **Small, Local, Open, Connected**, as discussed in Chapter 2.1.4. initially developed for sustainable development. This framework also aligns closely with commons-based thinking (Bauwens & Niaros, 2017, p.17.)

Each of these frameworks offered critical insight into how letter writing could become a site of counterpractice, enabling decentralized and sustainable forms of networked communication grounded in mutual care, attentional presence, and ecological awareness. These conceptual frameworks, each in their own way, advocate for decentralized systems of value creation and participatory engagement. Within this logic, handwritten letters serve not just as a method of communication, built on **trust**, **reciprocity**, and **mutual presence**, but as **infrastructural components of a post-digital cultural commons**. The early exploration of the tactile and cultural value of paper further contributes to the significance of handwritten letters, underscoring their unique capacity to support cognitive development, accessibility, emotional wellbeing and environmental sustainability. Together, these insights form the core argument for why letters matter in contemporary comunication.

→ See Figure 21 for visualisation of the design process. .

Figure 22

Figure 24

Figure 20

Figure 23

Figure 25

Figure 31

Figure 26

Figure 30

Figure 29

Figure 28

Figure 20

Figure 32

Figure 27

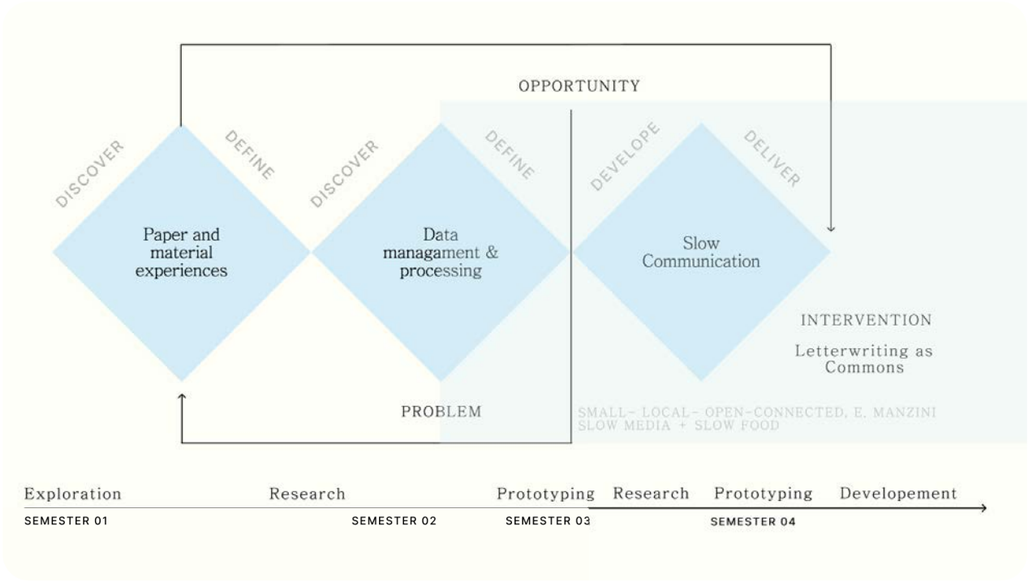


Figure 21: Tripple Diamond illustrating the design process.

7.1. Early prototyping

In the initial ideation phase, the goal was to initiate a discourse and raise awareness of the problems surrounding data managament and processing. The first concepts focused on transforming public spaces into zones of reflection or disconnection, for instance, through interventions in trains and stations, but also in private living spaces (Figure 22). One early prototype was a simple tablecloth designed as a guerrilla tool. When placed on a public table, it signaled users not to place digital devices on the surface (Figure 23). Surprisingly, this just led people to use their laps instead for their devices, demonstrating the physical influence of minimal interventions, but not really tackling the issue.

Although there was potential to scale this concept, I ultimately shifted focus. The design inquiry zoomed in on the most intimate space of all: the private bedroom. During the "Wearable Futures" workshop, participants identified dreams, physical touch, and strong emotions as data they most wished to protect from digitalisation. This insight pushed the project toward exploring how analog practices could preserve these vulnerable, personal expressions.

In parallel, I visited Geert Lovink, author of "Stuck on the Platform" and co-founder of the Institute of Network Cultures in Amsterdam. Our conversation helped reinforce the urgency of the issue, while also highlighting the limitations of awareness alone as a design strategy.

Despite understanding the system of the data economy, I found myself unable to change my own digital behavior. Like many, I was aware, but stuck. This moment led to a critical shift: rather than framing the thesis in terms of fear or critique, I asked what habit or ritual might offer joy, connection, and resistance simultaneously.

That's how I arrived at letter writing. It became clear that this disappearing practice held something that digital tools do not: intentional sharing of intimate data between specific people, outside of commercial platforms. A slow, tangible way to feel connected across distance, without surveillance. Handwritten letters engage the senses: t**he feel of paper, the weight of ink, the rhythm of writing**. This materiality creates **emotional resonance** and **presence**. Letters **can be held**, **stored, touched**, and r**evisited, they age, carry scent, show mood** through handwriting.

The slow nature of writing gives us **space to think before we speak**, and to **feel before we respond**. In this way, letters protect intimacy and create boundaries against what gets exploited by the big tech companies.

Additionally, Switzerland the context in which this project is situated, offers a uniquely supportive infrastructure for letter-based communication. The Swiss Post (Die Schweizerische Post) is the only organization legally authorized to deliver letters across the country. As a state-owned enterprise, its profits are redistributed to public stakeholders, positioning it not only as a service provider but also as a commons-oriented infrastructure. Importantly, Swiss law upholds the principle of **Briefgeheimnis**, the constitutional "secrecy of correspondence." This ensures that personal letters cannot be opened, read, or processed by anyone other than the sender and recipient. If a letter cannot be delivered, it is not stored or analyzed, but shredded, protecting both the content and the right to private analog exchange. As Nicolas Kessler, curator at the **Museum of Communication in Bern (MFK Bern)**, emphasized during an interview, the public image of Swiss Post is closely tied to trust and data protection. A letter becomes a symbol of such, trust and data protection.

Another motivation to revive letter writing was also aligned with broader cultural signals: by the end of 2025, Denmark's state-run postal service, PostNord, will discontinue postal letter delivery entirely (PostNord, 2025). This highlights the urgency of revaluing such analog modes before they vanish.

At first, I considered hybrid formats, to avoid romanticization or accusations of Luddism. I experimented with Arduino to create speculative prototypes, such as a letter tracker with an alert for breaches in privacy (Figure 24). These speculative approaches were intended to probe the limits of trust between analog and digital infrastructures. One key method involved writing exercises where participants composed letters to their present selves from a speculative future in which all aspects of human life had been fully digitized (Figure 25, Appendix p.58). These exercise revealed a latent awareness of the research problem while also exposing participants' limited sense of agency in counteracting it.

As the project evolved, it gradually transitioned from a speculative to a transformative design approach, seeking not just to raise critical questions but to foster lasting change through actionable practices. A notable step in this direction was playful development of a LEGO-based user stop motion journey prototype that envisioned how Swiss Post might reintroduce and promote letter writing (Figure 26).

Nicolas Kessler from MFK Bern offered further interesting insights: the medium is the message. Letters should not replace WhatsApp and similar online chatting platforms orsocial media. Their purpose and style are entirely different. Another discussed topic was that we used to have manuals on how to write a love letter, or letters to the local governement, these cultural guides are now missing. And yet, the need remains.
This evolution in thinking and testing informed the core of the practical thesis: not a rejection of technology, but a deliberate invitation to rediscover human presence through the simple act of writing a letter by hand.

7.2. Letter writing as Commons

This project repositions handwritten letters as more than private communication. It explores how, when practiced in community, they become a commoning activity, shared, voluntary, and care-based cultural practice that maintains interpersonal and ecological boundaries while resisting extractive digital infrastructures.

Peter Linebaugh (2009, page 279) writes, "*If the primary focus of commons is not on resources, goods and things, but on interpersonal and human/nature relationships, then institutions of any kind—business, political, civic, educational—must reliably promote three things: respect for ecological boundaries, stable community and voluntary cooperation.*"

Letter writing in this project is not framed as a nostalgic return to the past, but as a collective social practice, one that centers on slowness, reflection, and connection outside of algorithmic surveillance. Through communal events such as the Briefwerkstatt, anonymous readings, and shared writing prompts, the act of letter writing shifts from an isolated task to a relational infrastructure.

Participants don't just write to someone; they write with others, alongside others, and for others. The space becomes a platform of voluntary cooperation, mutual trust, attentional generosity and gifting of time. As in Changing Societies through Urban Commons Transitions (Bauwens & Niaros, 2017, p. 21.): "*The commons allows for a re-organization of the current destructive logic of production and value creation.*"
This project aims to do precisely that, replacing speed with slowness, attention with presence, and monetized platforms with shared cultural rituals. It treats time, care, and intimacy as resources to be valued and maintained, not extracted.

Letter writing, in this context, becomes not only a personal gesture but also a shared form of resistance, a cultural commons grounded in trust, simplicity, and shared time.

7.3. Briefwerkstatt

Briefwerkstatt (German for "Letter Workshop") are social events where people gather to write letters together side by side to create a shared experience and presence, grow empathy , foster connection and exchange thoughts and feelings.

It is a participatory event format designed to make handwritten letter writing a joyful, social, and intentional but also cool habit. These events are donation based, typically held in warm, calm spaces with soft music, refreshments, and writing materials provided. At the heart of each gathering is the invitation to slow down, reflect, and write.

Participants are welcomed with a short introduction to the value of analog communication and the goals of the event. Then they are introduced with a short code of conduct to create a safe space, there are rules such as when they finsh writing they are encouraged to chat but not at the writing table to respect those who still write as everyone has their own rhytm, they are also asked to not peek over one's shoulder or that they are free to write somewhere else if they need quiet and privacy. They are encouraged to turn off their phones, settle into the space, and engage in a shared experience of writing. These events have usually two guided through writing sessions, with a different theme, however the participants is free to choose to whom is he writing, wether a letter to themselves, to someone else, or anonymously. They also do not have to follow the schedule of the event

After each writing session there is a break and option to share with others to whom and what they have written, and even read their letter out loud, this is of course voluntary. By sharing letters we become vulnerable and foster empathy, but also support and appreciation. This he led participants to empathise with others and encouraged them to write meaningful and not be afraid of the blank page.

Letters then can be sealed and sent, kept private, gifted to someone in the room, or added to a special box for anonymous public reading in future events. The atmosphere is inclusive and pressure-free: spelling mistakes, imperfect grammar, and crossed-out words are all part of the beauty. The act of writing is valued over the final product.

Then the event is closed with a last discussion round, where people can share their experience and wishes or give feedback. In this part of the event further writing prompts for the Matchbox (Chapter 7.4.) get collected.

Where It Was Applied: The Briefwerkstatt has been piloted in a variety of settings, including:

- **Schenkhaus Zürich**, a non-profit start-up project founded by the Reformed church Zurich. It' s an community space for young adults, a space for exchange and gifting, with core philosophy of sharing time, attention, and care.
  → **Briefwerkstatt** (Figure 27)
  → **Kreativ Festival,** a letter writing station was included to the program of Schenkhaus's programm. (Figure 28)

- **Gemeinschaftszentrum Hirzenbach**, a community center organized as an independent and non-profit foundation. The client is the city of Zurich. (Figure 29)
  → **Briefwerkstatt**

- **Workshop Prototype** organised in a private setting with peer design students with the aim to investigate emotional responses and writing behavior. The positive feedback and emotional impact led to make these workshops actual public event. (Figure 30)
- **University of Applied Arts and Sciences Luzern,** annual student christmas market (Figure 31).
  → **Letter writing station.** This activity functioned as a pause point, inviting reflection and emotional connection during busy times of christmas.

Each setting adapted the format slightly but preserved its core: handwriting as a shared cultural act. These events proved that writing letters together could serve as a meaningful, low-tech social infrastructure.

7.4. Matchboxes

Monthly issue of pocket-sized matchboxes, but instead of matche they treasure writing prompts, ideas and topics what one could write about. This little box expands the practice beyond physical gatherings. Each box contains 10 writing prompts and instructions, making it easy to start writing anywhere or just to inspire and get the idea of writing a letter to someone. They become a tactile reminders or a nudge to pause, reflect, share and write.

The prompts inside the "matchboxes" come from people who attended Briefwerkstatt. Some are deep in meaning and some are very simple, such as writing about a favourite ice-cream flavour. It is to show that we can write just about anything, and that live is sometimes even about the simple pleasures.

As of now the visual look of these "matchboxes" is kept neutral and minimalistic, with the possibility to make collectibles at some point and special editions for certain holidays.

The format of these boxes copies the one of regular matchboxes that are in switzerland free to find in public spaces or bathrooms, usually with some sort of advertising. In this way the purpose of these letter matchboxes serve as advertising of the events and the project. They are small in size, hence a person can put them in their wallet or give away to someone else. They functioned as micro-interventions in everyday life: small enough to carry, meaningful enough to open (Figure 32).

8. Conclusion

8.1. Scaling and Systemic growth

"*The post-capital-ist future requires commoners as the agents of change, and in order to have commoners, the sphere of the commons needs to expand.*" (Bauwens, 2019., p. 55)

To sustain and scale the project, it is important to create ways for others, individuals, institutions, or community groups, to adopt and host the letter writing events themselves. For that reason, the idea of a simple online webpage seemed as a sutiable tool, its development is currently in progress.
While the project promotes analog communication, the forthcoming website will be a minimal digital companion to support community-building, accessibility, and continuity. It will include essential resources such as event information, writing prompts, and onboarding information for those interested in hosting their own Briefwerkstatt. This digital layer is intentionally lightweight: it amplifies the analog core without compromising its slowness or intimacy.

Rather than opposing digital technology, the webpage complements it with intention and care. It offers a bridge for participation, encourages decentralized growth, and supports a networked model of cultural exchange. It reflects the values of the commons, inviting participation while resisting commercial overreach.

To ensure long-term sustainability, the site will also include a subscription and crowdfunding feature. Supporters will receive monthly matchbox kits by post, reinforcing the tactile and ritualistic qualities of the practice while contributing to its longevity.

Another important factor in scaling is caring for the existing network and building strong foundational relationships. This will require consistent effort. By nurturing these connections, the project strengthens its roots and lays the groundwork for long-term sustainability. Through these relationships, the project can achieve systematic impact: creating a distributed, low-tech infrastructure of cultural exchange, emotional literacy, and alternative communication practices. This is what makes the project more than just a series of workshops, it becomes a resilient ecosystem of shared intent and habit.

Rather than scaling through centralization, the project seeks to foster a network of commons-based practice, where mutual trust, attentional presence, and cultural value are co-created and maintained across contexts. This approach not only sustains the project but extends its core values, trust, simplicity, and participation even in its expansion. By treating each collaborator and hosting space not as a branch, but as a co-steward of the practice, the project becomes a decentralized, evolving infrastructure capable of creating meaningful cultural shifts.

8.2. Reflection

While writing letters seem like a small intervention it serves a bigger purpose and has the potential to truly become a movement and call for agency of how is our data used and what being human means.

This project is not without its weaknesses or threats. One of the biggest challenges is financing. It's a small initiative competing with global digital platforms, and it relies heavily on continuous engagement, whether through marketing, partnerships, grant applications, or volunteer work. While the project can easily be adapted to other countries, risks remain: unreliable postal systems outside Switzerland, rising postage costs, and broader questions about the sustainability of paper as a medium.

Sometimes I questioned wheter what I am doing is enough and wether I am not naive that something so simple could create change. But again and again, I was reminded of its value. When participants in these events tells me how real and grounded it felt, or the moment when someone teared up while reading their letter aloud during Briefwerkstatt, or when people mention the joy they have when they receive a handwritten letter instead of a bill, when friends tell me they started sending letters to their beloved. It was notly only the positive messages that kept me going, but also hearing people's struggles, that their hand hurts after writing, because we rarely practice handwriting nowdays, not knowing the addresses of loved ones, lack of time to write a letter or even pass by a post office, their struggle with attention while writing a letter, all of this reaffirmed the project's meaning.

As one paper seller from Fischer Papier told me, "We need projects like yours, they help keep our jobs alive." There were even inquiries wether I could do a letter writing workshop in other thesis projects adopted to their theme. GZ Hirzenbach expressed interest in hosting Briefwerkstatt regularly. Schenkhaus even created a permanent letter-writing corner.

This project touches people, it revives connections that we are losing, with our closed ones, the environement around us, but also ourselves. It allows mistakes and imperfections, those things that make us so human.

Looking back, I wish I had started the first letter prototypes earlier and hosted more events. I also wish the website was fully developed by now to support this movement across different places. But perhaps this also proves the very point of the project: that sometimes the most powerful solutions are right in front of us, we just need to slow down and rethink their application.

Handwritten letters are not new. But in today's digital and extractive systems, **reintroducing them as tools for care, resistance, and community-building is a quiet, radical form of innovation.**

This project also changed me. It connected me with people and communities I otherwise would never have met. I had never written letters before, so I had to take my own advice. I wrote many: some unsent, some waiting for replies, some still sitting on my desk. It taught me to slow down. To write instead of doomscroll. And to share, gently, truthfully. Through this process, I found a way to reconnect with others, with time, and with myself.

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Appendix

Full Survey Results

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Search

Data mining in the age of digital living

Summary Submissions Share Integrations Settings

How important is online privacy to you?
26 responses

4	Mar 30, 06:09 PM
3	Mar 15, 06:13 PM
4	Mar 15, 12:27 AM
3	Mar 14, 05:55 PM
3	Mar 14, 02:56 AM
4	Mar 13, 11:18 PM
4	Mar 13, 02:11 PM
1	Mar 13, 01:27 PM
4	Mar 13, 12:25 PM
2	Mar 13, 10:37 AM

1 2 3

Data mining in the age of digital living

How important is online privacy to you?
26 responses

5	Mar 13, 10:30 AM
4	Mar 13, 10:15 AM
5	Mar 13, 09:53 AM
5	Mar 13, 09:16 AM
3	Mar 13, 08:58 AM
3	Mar 13, 08:44 AM
3	Mar 12, 11:14 PM
3	Mar 12, 10:02 PM
2	Mar 12, 09:46 PM
4	Mar 12, 06:02 PM

1 2 3

Data mining in the age of digital living

Summary Submissions Share Integrations Settings

How important is online privacy to you?
26 responses

5	Mar 12, 05:58 PM
4	Mar 12, 05:38 PM
5	Mar 12, 05:38 PM
4	Mar 12, 05:38 PM
1	Mar 12, 05:36 PM
5	Mar 12, 04:44 PM

1 2 3

Are you aware of how is your online data being processed, protected and shared?
26 responses

Yes, I am keeping myself updated about data policy 4% 1 response

Full Survey Results

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Are you aware of how is your online data being processed, protected and shared? --
26 responses

Yes, I am keeping myself updated about data policy	4%	1 response
Yes, I am somewhat aware about about what is happening to my data	46%	12 responses
No, but I would like to know	46%	12 responses
No, I don't care	4%	1 response

Have you heard of data mining or data extraction before?
26 responses

Yes	58%	15 responses
No	42%	11 responses

Are you worried about the exploitation of your personal data?
26 responses

3	Mar 30, 08:09 PM
3	Mar 15, 06:13 PM
5	Mar 15, 12:27 AM
4	Mar 14, 08:55 PM
4	Mar 14, 02:56 AM
4	Mar 13, 11:18 PM
5	Mar 13, 02:11 PM
5	Mar 13, 01:27 PM
4	Mar 13, 12:25 PM
1	Mar 13, 10:37 AM

< 1 2 3 >

Are you worried about the exploitation of your personal data?
26 responses

5	Mar 13, 10:30 AM
3	Mar 13, 10:15 AM
5	Mar 13, 09:53 AM
4	Mar 13, 09:36 AM
4	Mar 13, 08:58 AM
2	Mar 13, 08:54 AM
4	Mar 12, 11:54 PM
3	Mar 12, 10:02 PM
3	Mar 12, 09:45 PM
4	Mar 12, 09:02 PM

< 1 2 3 >

Are you worried about the exploitation of your personal data?
26 responses

3	Mar 12, 05:56 PM
4	Mar 12, 05:38 PM
4	Mar 12, 05:36 PM
3	Mar 12, 05:36 PM
2	Mar 12, 05:36 PM
4	Mar 12, 04:44 PM

< 1 2 3 >

Full Survey Results

https://tally.so/r/nr6DKl

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Do you protect yourself from data extraction*?
26 responses

Yes	27%	7 responses
No	73%	19 responses

How do you do to protect yourself from data extraction? (optional)
6 responses

VPN, Antivirus, Regular Password changes	Mar 30, 08:09 PM
I feel I don't know who/ what is taking my data, I try to protect a bit; vlogging the sometimes awful long way of rejecting cookies and not liking still um Instagram anymore, but I also know that is not really protection	Mar 14, 08:55 PM
Antivirus and VPN	Mar 13, 08:44 AM
Purchase good antivirus and online protection software.	Mar 12, 10:02 PM
Idk I just don't accept cookies when icon but I don't know if it helps	Mar 12, 05:02 PM
Firewall- VPN	Mar 12, 05:36 PM

Do you know what is your average screen-time?
26 responses

Yes	62%	16 responses
No	38%	10 responses

What is your average screen-time?
16 responses

less than 1 hour	0%	No responses yet
up to 3 hours	43%	7 responses
up to 5 hours	38%	6 responses
more than 5 hours	19%	3 responses

Do you care about the amount of time you spend online?
26 responses

Yes	65%	17 responses
No	35%	9 responses

Would you like to spend less time online?
26 responses

Yes	73%	19 responses
No	27%	7 responses

Would it feel uncomfortable for you to be offline/disconnected from the internet for 24 hours?
26 responses

2	Mar 30, 08:09 PM
2	Mar 15, 06:13 PM
3	Mar 15, 12:27 AM
1	Mar 14, 05:55 PM
1	Mar 14, 02:56 AM
3	Mar 13, 11:18 PM
1	Mar 13, 02:11 PM
1	Mar 13, 01:27 PM
1	Mar 13, 12:25 PM

Full Survey Results

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Would it feel uncomfortable for you to be offline/disconnected from the internet for 24 hours?

26 responses

2	Mar 13, 10:30 AM
3	Mar 13, 10:15 AM
1	Mar 13, 09:53 AM
1	Mar 13, 09:16 AM
3	Mar 13, 08:58 AM
1	Mar 13, 08:44 AM
2	Mar 12, 11:14 PM
2	Mar 12, 10:02 PM
3	Mar 12, 09:45 PM
1	Mar 12, 06:02 PM

← 1 2 3 →

Would it feel uncomfortable for you to be offline/disconnected from the internet for 24 hours?

26 responses

1	Mar 12, 05:58 PM
3	Mar 12, 05:38 PM
3	Mar 12, 05:38 PM
1	Mar 12, 05:38 PM
4	Mar 12, 05:36 PM
2	Mar 12, 04:44 PM

← 1 2 3 →

Do notifications stress you out?

26 responses

Depends on the situation	69%	18 responses
Always	8%	2 responses
Never	23%	6 responses

Have you ever considered a digital detox?

26 responses

Yes	85%	22 responses
No	15%	4 responses

Full Survey Results

https://tally.so/r/nr6DKl

page 5/5

What is your age?

26 responses

24	Mar 30, 06:09 PM
27	Mar 15, 06:13 PM
26	Mar 15, 12:27 AM
24	Mar 14, 05:55 PM
27	Mar 14, 02:56 AM
23	Mar 13, 11:18 PM
23	Mar 13, 02:11 PM
35	Mar 13, 01:27 PM
23	Mar 13, 12:25 PM
25	Mar 13, 10:37 AM

← 1 2 3 →

What is your age?

26 responses

24	Mar 13, 10:30 AM
19	Mar 13, 10:15 AM
24	Mar 13, 09:53 AM
24	Mar 13, 09:16 AM
23	Mar 13, 08:58 AM
15	Mar 13, 08:44 AM
27	Mar 12, 11:14 PM
40	Mar 12, 10:02 PM
33	Mar 12, 09:45 PM
21	Mar 12, 06:02 PM

← 1 2 3 →

What is your age?

26 responses

25	Mar 12, 05:58 PM
36	Mar 12, 05:38 PM
38	Mar 12, 05:38 PM
24	Mar 12, 05:36 PM
23	Mar 12, 05:36 PM
26	Mar 12, 04:44 PM

← 1 2 3

Manifesto

Manifesto Draft version 20

THE EXTRACTION MANIFESTO.

All creatures and entities, both human and non-human, have the right to know and decide how their thoughts, ideas, bodies, feelings and meanings are treated and cared for.

Consciously extracting these things and digitising them for reasons such as commodification and algorithm learning is against this reality and against multiple articles in the Universal Declaration of Human Rights, such as Articles 3, 4, 12, 18, 24 and 27.

A concerned designer:

1. disseminates the urgency of reimagining, fostering, and protecting our planet and its human and non-human beings from data extraction and planetary-scale exploitation.
2. protects and cares for what is beyond the capture—the raw information, fragile ideas, meanings, and wonders that have not yet been extracted and captured in the data extraction systems.
3. highlights that the extraction's functioning is extremely hard to understand, as its embodiment consists of an abstract form of ones and zeros.
4. advocates for not allowing the vast majority of economic systems to be based on this abstraction.
5. slows down this extraction and datafication of everything until we can better predict the future and find ways to contemplate.
6. does this before technological advancement becomes uncontrollable and irreversible and before it has harmful consequences for all entities, the planet, and ways of being.
7. urges to act—or rather unact in the form of disconnection—to create more stable connections.
8. won't allow entities to be colonised by big technological companies that monopolise political power and control the conquered society, its beings, and our planet's natural resources in legal, administrative, social, cultural, or biological terms.
9. communicates to the government, political authorities, and employers that entities do not have to participate in these digital economies, as they are highly dependent on Earth's resources, which are rapidly running out.
10. will not allow data and knowledge to be concentrated in the hands of a few, as this creates social and epistemic injustice.
11. argues that decisions about machine learning, data extraction, and the internet must not be made without us and that entities must be allowed to engage with their own futures.
12. "We must protect our ideas even though they do not rule the world. It is because the world has ideas that it is not passively ruled by its leaders or those who would like to teach us what we must think once and for all" (Foucault).

Research Thesis • Beyond the Capture

THE EXTRACTION MANIFESTO.

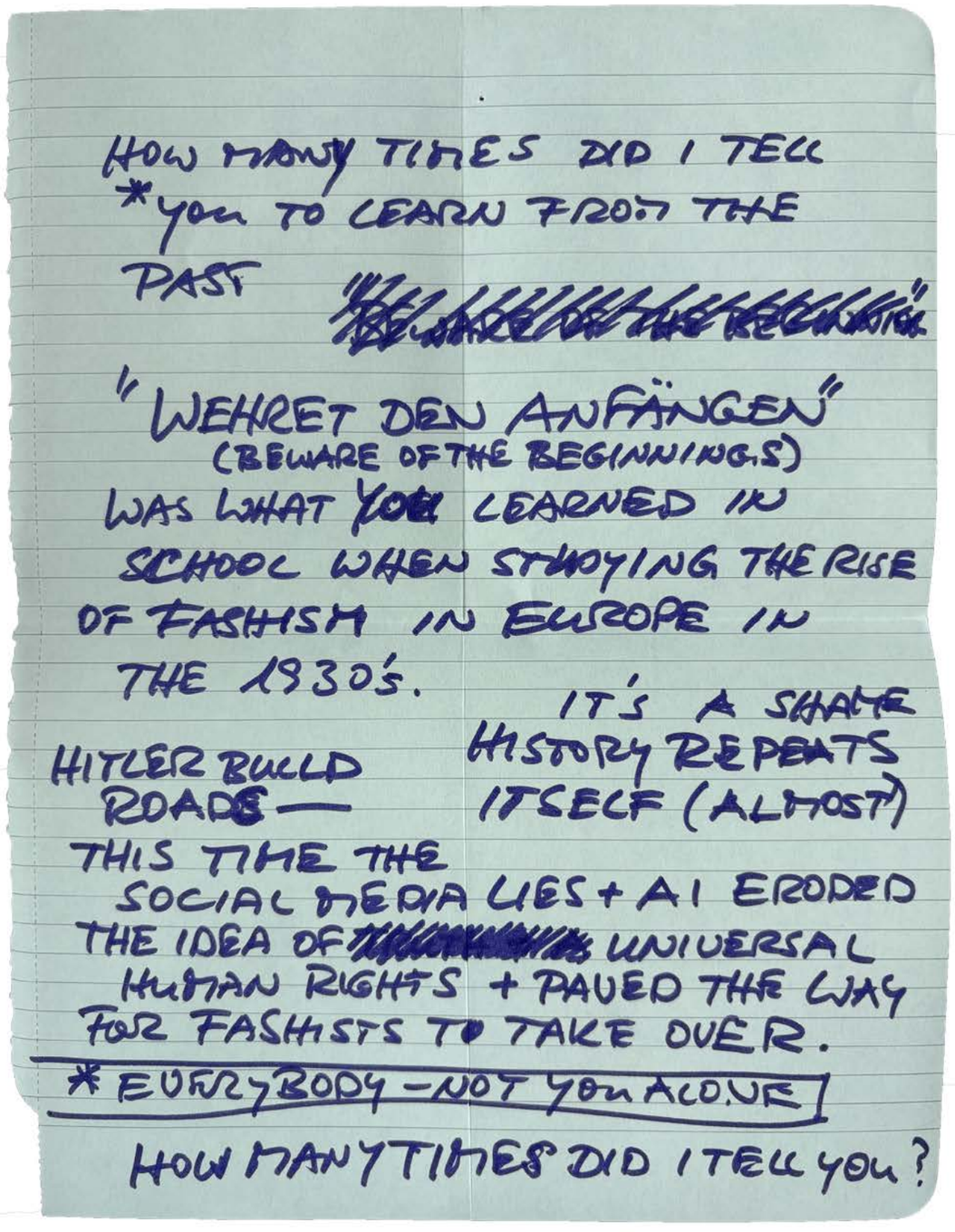
1. How can we talk about the complexity of data ecosystems?
2. Is there anything left that has not yet been extracted and digitalised? If so – what is it?
3. Who is in control of the abstraction?
4. What could we do to avoid a disaster?
5. What means can we use to slow down the process of digitalisation?
6. By what time will we reach the point of technological singularity?
7. What actions can we take to reconnect with the planet, humans, and other beings?
8. Could we become independent from tech giants without sacrificing any of our comforts?
9. What will happen if we run out of fuel?
10. How can we distribute our data and knowledge better?
11. Can we be the decision-makers?
12. Who are we if we don't think? Think.

Glossary:

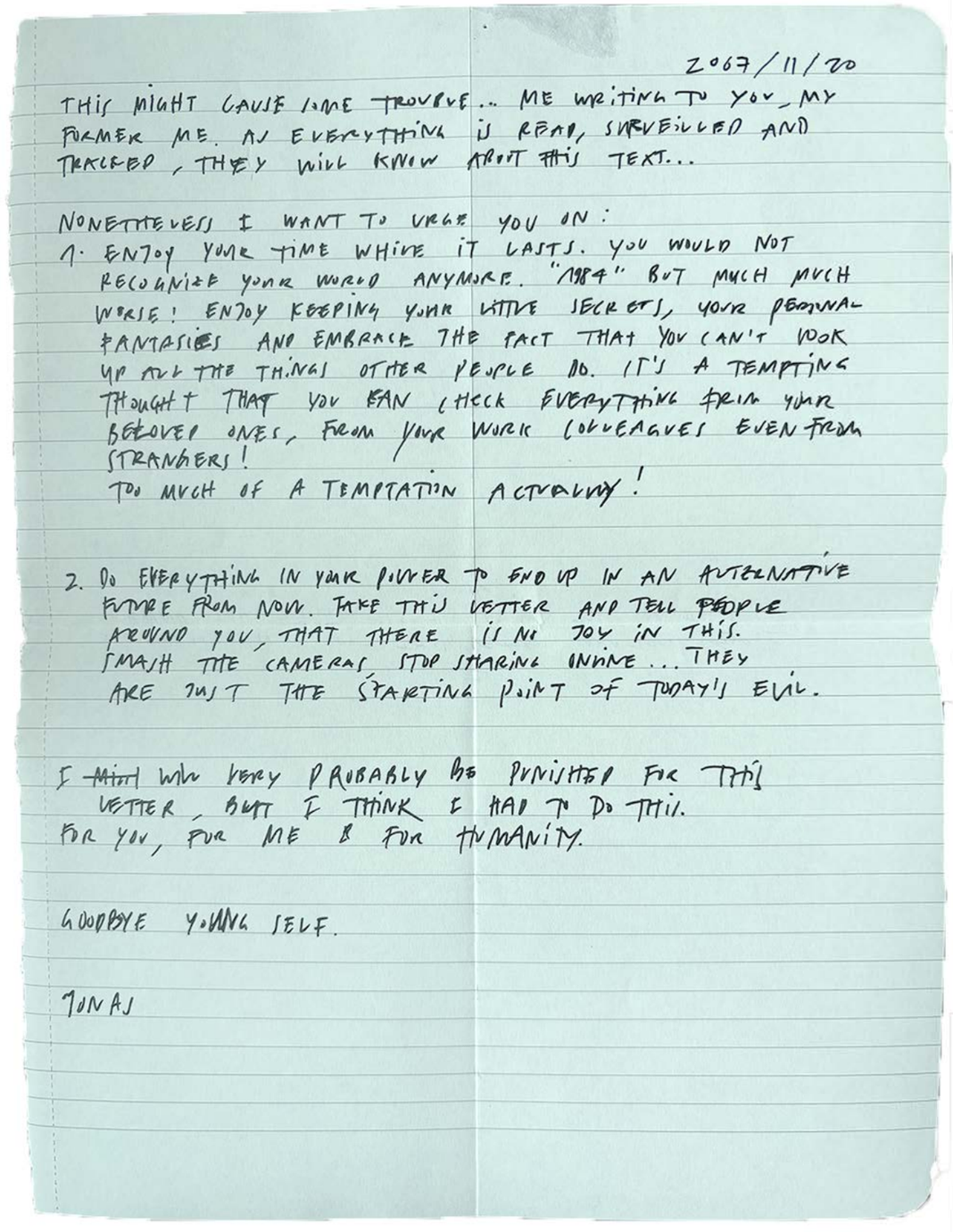
DATA EXTRACTION: The practice of extracting, collecting, and utilizing large amounts of data, often without the explicit consent or knowledge of users, for purposes such as analysis, profiling algorithm learning and commodification.
DIGITALISATION: Process of converting information into a digital (i.e. computer-readable) format.
TECHNOLOGICAL SINGULARITY: A future point in time at which technological growth becomes uncontrollable and irreversible, resulting in unforeseeable consequences.
DATA COLONISATION: The concept refers to the domination and control of data and data flows by powerful countries, Usually the Global North over the Global South.
FUEL: Natural resources powering the digital landscape.

Research Thesis • Beyond the Capture

Speculative Letters from the Future



HOW MANY TIMES DID I TELL
*YOU TO LEARN FROM THE
PAST
~~"BEWARE OF THE BEGINNINGS"~~
"WEHRET DEN ANFÄNGEN"
(BEWARE OF THE BEGINNINGS)
WAS WHAT YOU LEARNED IN
SCHOOL WHEN STUDYING THE RISE
OF FASHISM IN EUROPE IN
THE 1930's.
IT'S A SHAME
HISTORY REPEATS
ITSELF (ALMOST)
HITLER BUILD
ROADS—
THIS TIME THE
SOCIAL MEDIA LIES + AI ERODED
THE IDEA OF ~~[redacted]~~ UNIVERSAL
HUMAN RIGHTS + PAVED THE WAY
FOR FASHISTS TO TAKE OVER.
*EVERYBODY - NOT YOU ALONE
HOW MANY TIMES DID I TELL YOU?



2067/11/20

THIS MIGHT CAUSE SOME TROUBLE... ME WRITING TO YOU, MY FORMER ME. AS EVERYTHING IS READ, SURVEILLED AND TRACKED, THEY WILL KNOW ABOUT THIS TEXT...

NONETHELESS I WANT TO URGE YOU ON:

1. ENJOY YOUR TIME WHILE IT LASTS. YOU WOULD NOT RECOGNIZE YOUR WORLD ANYMORE. "1984" BUT MUCH MUCH WORSE! ENJOY KEEPING YOUR LITTLE SECRETS, YOUR PERSONAL FANTASIES AND EMBRACE THE FACT THAT YOU CAN'T LOOK UP ALL THE THINGS OTHER PEOPLE DO. IT'S A TEMPTING THOUGHT THAT YOU CAN CHECK EVERYTHING FROM YOUR BELOVED ONES, FROM YOUR WORK COLLEAGUES EVEN FROM STRANGERS!
TOO MUCH OF A TEMPTATION ACTUALLY!

2. DO EVERYTHING IN YOUR POWER TO END UP IN AN ALTERNATIVE FUTURE FROM NOW. TAKE THIS LETTER AND TELL PEOPLE AROUND YOU, THAT THERE IS NO JOY IN THIS. SMASH THE CAMERAS, STOP SHARING ONLINE... THEY ARE JUST THE STARTING POINT OF TODAY'S EVIL.

I ~~MIGHT~~ WILL VERY PROBABLY BE PUNISHED FOR THIS LETTER, BUT I THINK I HAD TO DO THIS.
FOR YOU, FOR ME & FOR HUMANITY.

GOODBYE YOUNG SELF.

JONAS

3/12/24

Dear Past Chloe,

~~How I miss the walks I would~~
~~Did you know there are no bees here?~~

I just had to tell you about the trees here, you would find it so funny.

~~When~~ Now when I take a walk, ~~they~~ there is not ~~buzzing~~ bees I am no longer surrounded by ~~imposing~~ these wonderful, imposing features of nature. Instead, I see ~~its~~ images. ~~They~~ Your hand moves through them if you touch (~~no more~~ all those tree hugging days are over).

~~No~~ Gone are the days of rustling leaves, now there are pixels that oscilate with a speaker phone near by mimicing that projects a rustling sound. ~~They do change color~~
Don't worry they do change color still, green for summer, orange/yellow for autumn and of course white for winter.

Who would have thought my walks in nature would look like this? Certainly not me! Enjoy the smell; here you only ~~smell the trees~~ smell like a ~~YOUR SPACE~~ tree essence your government issue of course.

Bye for now! Your future self

2024
~~Present~~

Dear ~~Present~~ me,

Wow! I can still remember when cars touched the ground. Now everything is flying. We used to dream of flying but in much simpler way. I wish it was that way. Because it started with cars then it evolved. Everything is digitilized. ~~I don't know how~~ Everything is monitored. Privacy!! what is that word? Ah! The old days how I wish it was. Things were simpler. We only had to worry about wars among humans, and now, we have to worry about robots of every kind.

Be careful ~~Present~~ 2024 me, You

Don't know what you are getting into.

DEAR ME, im WRITING TO YOU FROM THE FUTURE. YES, THE FUTURE, YOU ARE NOT GETTING CRAZY. IT'S REAL.

HERE THEY ARE WATCHING US EVERYWHERE, ANYTIME. THEY MIGHT BE READING THIS WHILE I'M WRITING IT. YOU WANTED TO STUDY ABOUT IMAGES, HOW WE SEE THEM AND HOW WE PERCEIVE THE WOLD; WELL, NOW ALL IMAGES SHOWN ANYWHERE ARE CONTROLLED AND FILTERED. WE SEE A VERY LIMITED AMOUNT OF VISUALS DURING OUR DAYS, BUT WE ARE NOT FREE TO INTERPRET THEM, THEY ARE MADE IN SUCH A WAY THAT YOUR MIND IS ONLY ABLE TO COLLECT THE INFORMATION THAT THEY WANT.

BE CAREFUL AND EXPLORE YOUR THOUGHTS AS MUCH AS YOU CAN. THEY WILL TRY TO LIMIT THEM.

LOVE,

YOUR FUTURE SELF

Dear yang Gamee,

Well, it finally come. ~~Today of~~ Writing this letter in 2070. Everything is super digitalized and feels so superficial. People don't die anymore but I wouldn't say they live as well. We don't need to eat, work even wake up. We got a tiny little chip in our head and via that chip people communicate without talking. Thinking is enough. Invest on chips if you wana get ~~what~~ super rich tho. But I don't think being rich will make you happy. when you get my age. Make more memories, real ones before you lose your chance to AI. Bc if you want a specific memo you ask to AI and it makes you feel as if you had that mem but actually you don't. Invest more. Money is important. Love you. By.

HELLO MY DEAR PAST

IF YOU KNEW HOW THE WORLD IS GOING TO BE THESE TIMES, YOU MIGHT WANT TRYING TO STOP THIS PROCESS. OR YOU WOULD MOVE TO ANOTHER PLANET. MIGHT SOUND NOT POSSIBLE FOR YOU BUT AS I SAID THIS WORLD IS GOING TO BE CRAZY. THEY KNOW EVERYTHING ABOUT ME, ABOUT YOU. OR LETS SAY ABOUT US. EVEN THAT I JUST WRITE YOU THIS LETTER.

TRY TO BE SMART, TRY TO STOP THE DIGITALI-SATION & MAKE A BETTER WORLD. OR LOOK FOR ANOTHER HOME. BECAUSE WHAT IT'S GOING TO BE, YOU WON'T LIKE IT. YOU DON'T WANT TO LIVE LIKE THAT.

BE SMART, BE CREATIVE YOU CAN DO THAT.
AND THE MOST IMPORTANT THING, HAVE FUN!
ENJOY YOUR LIFE & HOW IT IS AT THE MOMENT

SEE YOU SOON,
MAYBE ON THE MOON?

tàng: ☺

03. 12. 2024

Dear people of the past,

you were so hopeful once. So naive.
You thought you could control it - keep it in check.
But you didn't see what was coming.
You didn't fight hard enough, and now we are paying the price. Our lives aren't our own anymore.
Every thought every dream every choice is dictated by algorithms that learned us better than we know ourselves. We are ghosts of your inaction. Please don't let it happen.
Don't let us dissapear.

Yours, Anja and chatGPT

XI. VI. MMLXXV

Hello,
I don't have to much to say. "They" are watching. "They" I don't know. But "they" have everything we have. "They" know everything we know. I got my hands on this timetraveling piece of paper and try to warn you! Do not buy the new 0,03% fat Almond Milk from Nestlé! Do not buy it! It's the first self-ordering product that will never get empty before a new milk arrives. This will be "their" first step to take over control! The milk tastes great! Oh no they.. buy milk! .. took over the pen.. Almond Milk is good for you need to stop this milk is good god stop and buy some milk today you need to stop this is your chance to get some Almond Milk now stop this please they got to me! Help! Help! I am out of Almond Milk

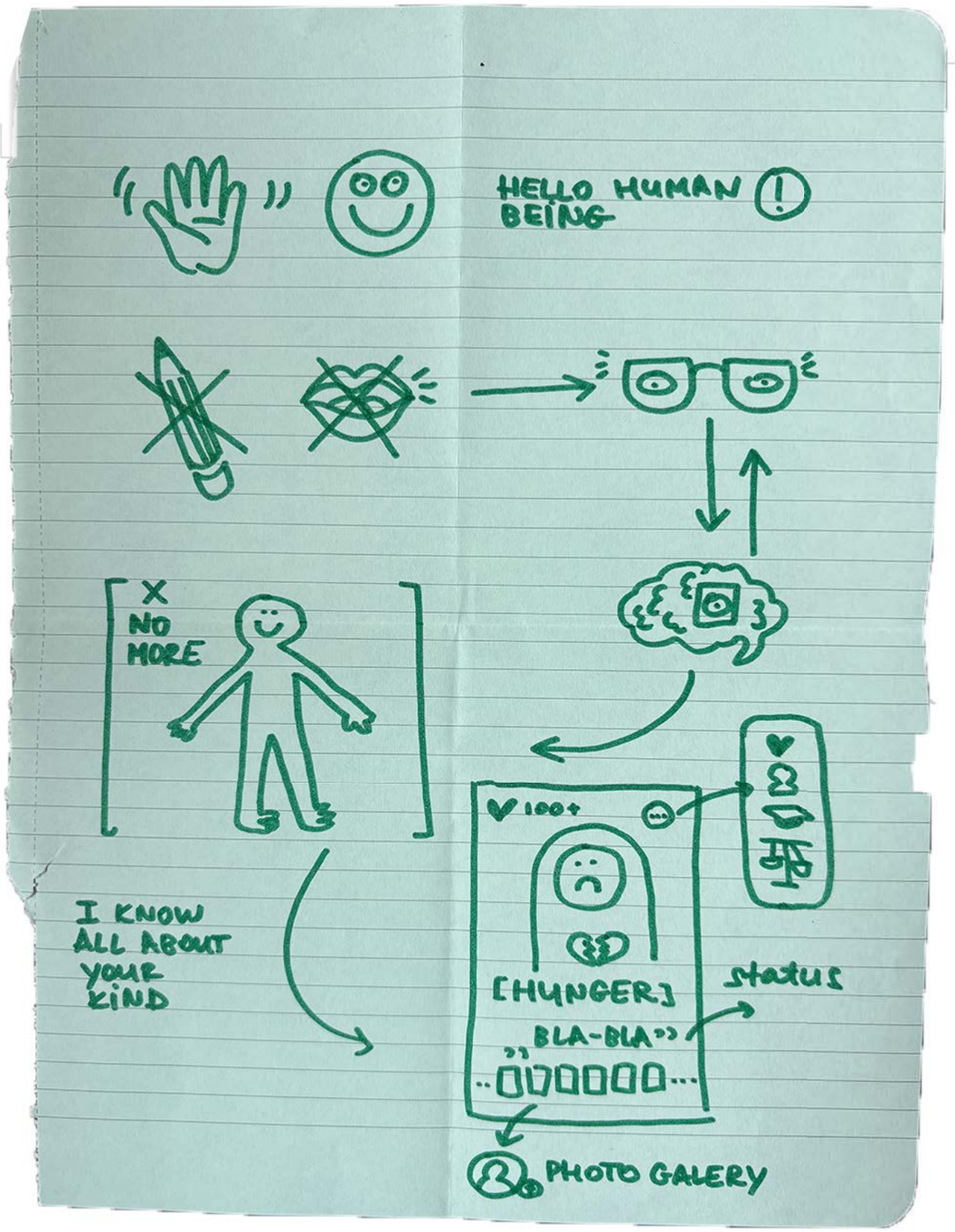
Nestlé ©

03. 12. 2029

Dear past self,

It is pretty cool here nowdays.
I don't have to put much effort into things anymore. Everything became automated and they know everything about me - so for example: I get the perfect dinner delivered to myself every day. Calculated macro nutrients, so I stay in shape, defined by the computer Cory. She is the newest version of openAI.
I also don't have to work much anymore. Started a career as a translator 3 years ago - but the officials decided we are no more needed so they put us on early leave.
Anyway just keep in mind to accept cookies whenever you can so you get early access to public spaces and don't have to go through the annoying process of safety check.

With love, Anja ♡



18. Januar 2025

Liebes Contact Center,

Ich hoffe sie hatten schöne Feiertage und einen guten Rutsch ins 2025.

Ich bin eine Studentin an der Hochschule Luzern und in meiner Masterarbeit beschäftige ich mich mit der Rolle des Briefeschreiben in einer zunehmend digitalen Welt und wie analoge Kommunikation nachhaltige und tiefere Beziehungen fördern kann.

Da die Post CH ein wichtiger Akteur in diesem Bereich ist, suche ich eine Kontakperson aus Ihrem Kreativ-oder Innovationsteam, die mir Einblick in meine Forschung geben kann.

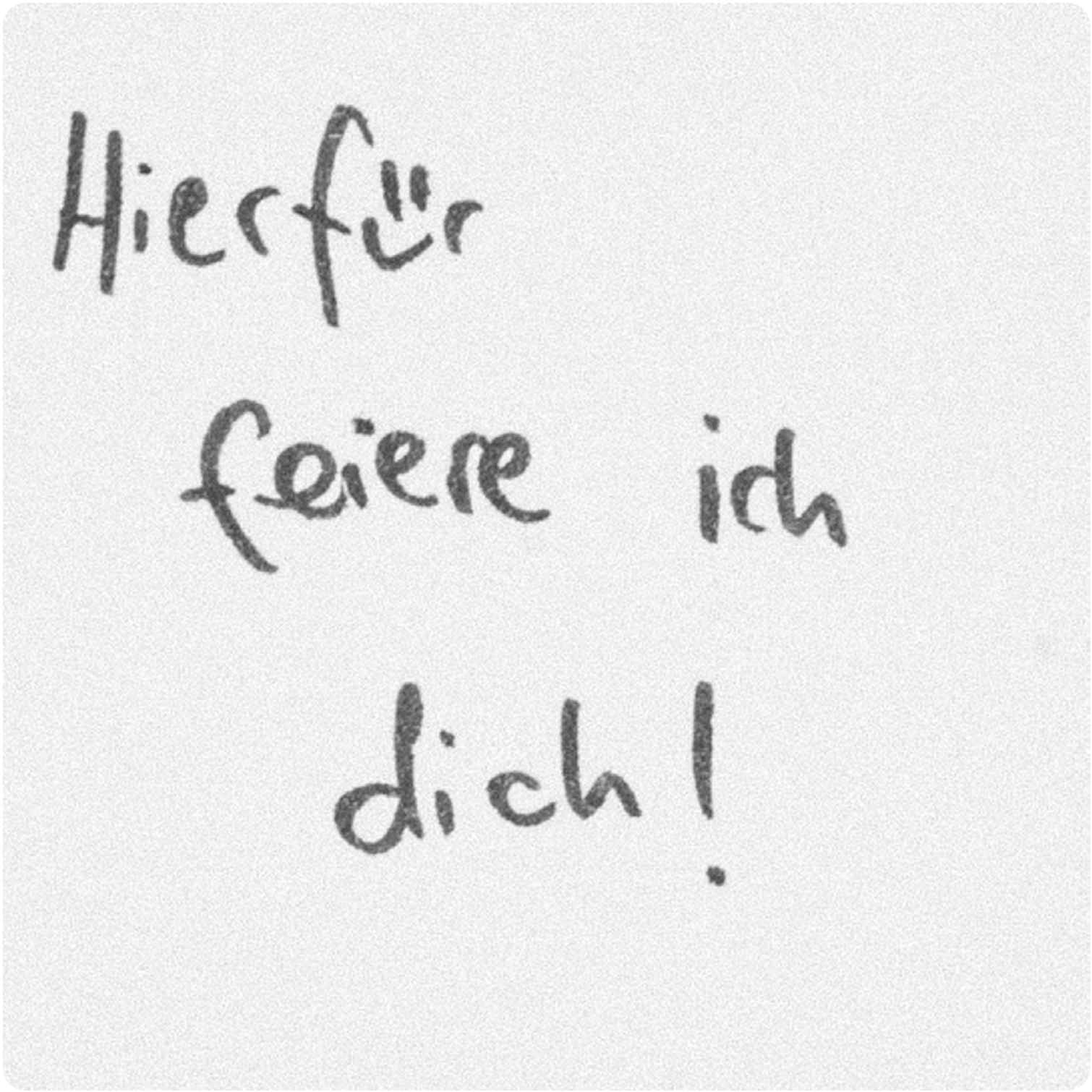
Englisch wäre meine vorgezügte ~~tso~~ sprache, da Deutsch nicht meine Muttersprache ist. Allerdings verstehe ich ziemlich gut deutsch inzwischen und kann es versuchen den Ausstausch auch so machen.

Falls Sie jemanden empfehlen können, wäre ich für eine Referenz sehr dankbar!

Vielen Dank für Ihre Hilfe und ich freu mich auf Ihre Rückmelolung.

Mit freundlichen Grüssen,

Anja Geissbergerova'
+41 78 225 58 37
geissbergerova@gmail.com



Anja, Geissbergerová

MA Research Thesis
Lucerne School of Art and Design
Master of Arts in Design 2025

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Second Supervisor
MA, Dipl., Hans Kaspar, Hugentobler

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