# TECHNOLOGICAL HEALTH CLINIC

## Reframing and Reimagining our Relationships with Technology

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Master of Interdisciplinary Design 2020

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## NOTE TO READER

To give some background, the beginning of my work was concerned with questioning and exploring the potential of disrupting dominant narratives about mental and emotional strength, biased strongly towards happiness, improvement, and “better”. As a communication and graphic designer, this opened up my work to an experimental critical approach that through practical explorations and counterintuitive alternatives addressed and questioned contemporary problems, developed a critical sensibility towards mental health, looked for more than cures and fixes in a modern context, and above all questioned what is this normative 'better' or preferred, or 'normal' way of feeling or being, to which we can take corrective action. In said modern world, and in parallel to this continuous self-improvement, once and again technology appeared as a strong influence on the conversation about mental health. At first it appeared merely as a trigger, but it eventually shifted my interest to take technology as the lens to critically approach my ongoing work in view of the language that surrounds how we discuss technology, and the apparent hands-off position it puts us in as users. As I kept trying to understand why technology seems to amplify the effects of our interactions and behaviours, and how it reflects and modifies our self-perception, I approached my research with a perspective that allowed me to see more than what is apparent, and understand not only our place in the modern world, but also the place of the modern world in our lives to such a degree that it gives us better tools to navigate and experience it. It was an opportunity to reflect, debate, and examine our relation with technology through the lenses of meaning, identity, culture, and empathy that might illuminate why people march collectively into a world in which individual whims are catered to, but little thought is given to the collective world they are building.



We sometimes perceive technology to be a one-way street. It has provided us with endless information, comfort, and varied communications channels. Sociologist Arturo Escobar asks, does this matter? Does it matter whether we write with pencils or on an iPad? Whether we engage in activities collectively in the neighbourhood or in the solitude

of our individual rooms in nuclear homes? Whether we dance and make music with others or listen to it in silence through our earphones? (Escobar, 2018, pg. 30) We make these things as much as they make us, and we need to be able to interpret, see, and decide how we want to participate, in order to be more active users of them. Technology is different for all of us, which means there is no one-size-fits-all solution for our concerns and the futures they seem to point us to. I don't think we can figure out how to 'fix' technology, and I'm not saying we have to. But these diverse practices construct different selves and societies that we should pay more attention to, so we can further explore alternate ways to approach them.

My research led me to develop a space for wonder and engagement that delimits the work you are about to read in the format of a proposal, rather than a finished tangible product or concept. A proposal is an instrument for gathering and conveying the conceptual ideas of my research as not entirely literal, but as vehicle for expressing the grounding theory and journey of identifying the significant things we don't address in our relationship with technology, as well as expressing a way of design practice I wish to pursue going forward. My work recognizes technology as something we neglect – as we do the environment, for example – so that we can take more dutiful decisions and effective actions towards the future of techno-social relations by implementing these innovations into reimagining our institutional frameworks through each individual's participation and intelligent sense-making.



## ACKNOWLEDGEMENTS

Thank you, Craig, for mentoring and guiding me through this journey. You made all the difference.

Thank you, Gillian, for pushing me to care for my work and my writing.

Thank you to the design committee for the opportunity of being here, and a very warm thank you to the friends that help me build this new home.

# TABLE OF CONTENTS

## RESEARCH AND PRACTICE PROPOSAL for

# TECHNOLOGICAL HEALTH CLINIC

Reframing and Reimagining our Relationships with Technology

### 1.0 SUMMARY OF PROPOSAL

It is reasonable to argue that technology is disruptive, psychologically and socially; it can appear to be uncomfortably fast-paced, overbearing, and have unpredictable effects on our day to day behaviours, seemingly linked to anxiety, depression or stress (McFadden, 2019), and more so on socio-cultural values, perception, interdependence, and relational structures (Verbeek, 2005). Still, technology and society continuously co-shape each other. Systematic philosophy professor Hans Achterhuis reasons about the social logic of technology claiming that *'on the one hand, the development of technology is accompanied by a transformation of society, but on the other hand that process is determined by socio-cultural factors*' (Achterhuis, 2001, pg. 8). This co-shaping conditions us to passivity due to our disposition to technological optimism while generalizing the aftermath of this shaping as unfavourable, reducing what we believe, think or know about technology to a merely instrumentalist perspective, in which technologies are conceived as a neutral means to help carry out a specific practice, while denying that they frequently transform this practice in radical ways (Smits, 2001). In either case, the spectrum both removes the user from the context and frames them as victims, taking away the agency and responsibility we as individuals have on said outcomes.



The project seeks to develop techno-social literacies around our relationships with technology, the ways of being it co-constructs, and the behaviours it affords. Such literacy, as argued for by technology critic James Bridle, is seen as a necessary first step toward addressing a range of contemporary health conditions which are increasingly linked to our use of technology and immersion in media; it connects us to issues such as computational thinking (Bridle, 2019, pg. 4), novelty addiction, convenience culture, sedentary lifestyles,

and FOMO, to name a few. By critically looking at how we relate with technology, not as the source but rather the output of fundamental human ethos, the work seeks to reframe issues with technology as social rather than technical. As a result, a generative and ongoing process of restructuring practice and unveiling action turned my interest in empathy, un-wellness*, care, and agency into the concept of *technological health* as a propositional, exploratory design research approach. To expose the shift in meaning, culture, and value that our current relationship with our devices appears to highlight, my Research looks at intervention structures that could aid in reframing and reimagining our relationship with technology. A Technological Health Clinic is proposed as a means of Research into such relationships, venturing with lifestyle experiments that question the ways we act, resist, and behave, to open up possibilities for restructured agency and self-understanding through the increased perception of our techno-mutualism.

**Keywords**

Ontological design, critical design, design as research, mutualism, interdependence, exploratory, care, techno-social literacy, technological health, focal practices



**Key Terms**

Technological health: seeks to assess, disclose and describe the mutuality of how our relationship with contemporary technology is negotiated through everyday experience and practice.

Technological literacy: A person's ability to effectively access, manage, integrate, evaluate, create and communicate a personal understanding and discerning of technology, responsibly enhancing life-long learning skills for future progress, navigation and experiencing.

Device paradigm: refers to the cluster of technological phenomena that include "the cultural displacements, the commodification and mechanization, and their embedding in contemporary culture" (Borgmann, 1984)

Technological Determinism: a reductionist theory that assumes that a society's technology determines the development of its social structure and cultural values (Veblen, 1919).

Focal Things/Practices: A focal thing is something that has a commanding presence, which engages your body and mind, and engages you with others—a focal practice results from committed engagement with the focal thing.

Matters of Care: Interdisciplinary considerations of ethico-political engagement that frames the idea of care as a situated and committed form of speculation that simultaneously works to sustain the world we live in and opens it up to new constituencies and political stakes (Bellacasa, 2017).

## 2.0 DETAILED DESCRIPTION

### 2.1 OBJECTIVES

- To explore the hidden, unacknowledged, and/or taken-for-granted relational characteristics of technology that co-shapes our understandings and relationships with others through everyday interactions with them.
- To identify, through participatory, critical interventions, the implications for individual and collective social well-being stemming from our increased use of technology.
- To produce critical design engagement that allow publics to reflect, debate and examine their relationships with technology through the lenses of meaning, identity, culture, empathy, agency, relationality, possibility, and how we are with things.
- To develop techno-social literacies towards 'technology health' that open up possibilities for understanding our own agency, while reimagining our relations with technology as 'matters of care' (Bellacasa, 2017).

## 2.2 CONTEXT

Several contemporary studies have shown links between increased access and use of connected technological devices, and a range of mild to serious mental and social health concerns. A 2012 study by the Pew Research Center's Internet and American Life Project, surveyed teens and young adults brought up from childhood with a continuous connection to each other and to information. Their research stated the effects of hyper-connectivity, and the 'always-on' lifestyles of young people, would be mostly positive between then and 2020, but it also predicted this generation will exhibit a thirst for instant gratification and quick fixes, a loss of patience, and a lack of deep-thinking ability (Anderson, Rainie, 2019). Cognitive neuroscientist Adam Gazzaley and psychologist Larry D. Rosen argue through their 2016 book '*The Distracted Mind: Ancient Brains in a High-Tech World*', how our increasingly information-saturated world has coupled with growing expectations of 24/7/365 availability and immediate responsiveness (Ramsdell, 2017). They explain that since our evolved ability to set high-level goals naturally collides with our ability to control our attention, working memory, and goal management, our hindered brain's performance is left especially vulnerable to distractions (Gazzaley, Rosen, 2018). Uber's 'quiet' service launched in the US in 2019 means that passengers can now request through their apps that a driver refrains from talking to them during their trip. This feeds from the idea that nuisance or bother is an undesirable aspect to our lives and exploits the commodity of convenience (Blackmore, 2019). Present day algorithms are capable of building complex representations of information, learn to experience environments, identify what seems to matter, and have developed a host of responsive and predictive capabilities (Zuboff, 2018). They now control the speeds of driverless cars, identify targets for autonomous military drones, find our soul-mates in online dating services, and evaluate our insurance and credit risks (Hills, 2018); all while merging quietly in the background of our lives. The implications discussed here are manifesting in a growing list of troubling technological conditions such as tribalism, echo chambers, data mining, and surveillance capitalism, among others.

Political theorist Langdon Winner expresses that once technologies become available, we tend to stop worrying about the development and the details of their operation. We want them to simply be useful, no longer considering it necessary to understand the conditions of its functioning, or if we do, forgetting about it as quickly as possible (Winner via Smits, 2001, pg. 159). We 'use' these 'tools' with little attention to the ways they unexpectedly arrange our lives.

Technology comes to us as ready-made solutions, and this defines our unthinking relationship with it, since we do not always understand the complex connections between our actions and their outcomes; it thus subjects the difficult task of measuring and mediating the inner working of technology to 'blackboxing'. French philosopher, anthropologist, and sociologist Bruno Latour presents blackboxing as a process that makes the joint production of actors and artefacts entirely opaque (Latour, 1999, pg. 183) as our technologies become more complex and sophisticated (Latour, 304). Blackboxing then, refers to the opacity that has been designed or built into processes, objects or systems, where it is not necessary for us to know how they work to use them, nor are we really invited to (Badke, C. Snyman, T., 2018). The complexity of the inner workings of these technologies is invisible and in many instances the only aspects we can actively engage with are their inputs and outputs. This affords our passive engagement and narrow understanding of the ways in which technology changes us, while at the same time it amplifies the ways of being it co-constructs.



Additionally, we do not perceive the decisions, values, and social conflicts that went into their development, since they get decontextualized both by design and by being born into them, resulting in them being regarded as a given. The nature of contemporary design itself plays a role in obscuring the development of technologies; as ideas are translated into new forms and visual languages, they are often decontextualized, betraying little of their conflicted past (Feenberg 14). Material processing decontextualizes objects from their natural roots as raw materials, while design, engineering, and marketing

decontextualize technologies from past technical and social developments, so that they can be introduced into new markets (Badke, 2015, pg. 14).

Winner argues that for a certain time, much of the progress made in bringing people out of burdensome lives from in early modern times relates to the optimism many have for new technologies, stating that “they certainly did believe these changes were for the better, but,” he goes on to add, “they also believed that somehow the process was beyond their control. They were mere spectators, consumers of change (Winner, 1986, p. 172). It could be argued that we are less naive and the issues and changes that have come to light about our relationship with technology are not always thought to be exclusively for the better, but the idea that we are mere spectators or consumers of change still feels prescient. Part of the issue, is then that we keep thinking technology, and the ways in which we relate with it, as separate from us. In reality technologies belong to an interconnected network whose parts cannot exist independently (Feenberg, 2009). What is more we tend to see technologies as quasi-natural objects, but they are just as much social as natural, just as much determined by the meanings we give them as by the causal laws that rule over their powers (Feenberg, 2009).



Not seeing things as part of us, or us of them, is a condition of the way we conceive of technology – as a useful tool - and the way these things are blackboxed leads our lives to not making time to think about them. It would seem that while we are caught up in using technologies, we don’t always think about what they rearrange or the changes they make, nor do everyday users necessarily have the literacy for confronting the wider meaning of things in their lives.

## 2.3 INTRODUCTION

*"You never change things by fighting the existing reality.*
*To change something, build a new model that makes the existing model obsolete."*
*— Buckminster Fuller*

Technological philosopher Albert Borgmann describes a device as 'a compound of commodity and machinery' (Borgmann, 2003, pg. 18); as a means to an end, devices increase the availability of a commodity or service, and while they push their transforming tendencies into the background, something is being pushed out of our lives (Wood, 2003, pp. 22-25). The principle of this relation is what Feenberg calls the 'paradox of action': human beings can only act on a system to which they themselves belong. Because we belong to the system any change we make in it affects us too. However, when we act technically on an object there seems to be very little feedback to us. But this is an illusion, the illusion of technique. It blinds us to the reciprocities of technical action. These are causal side effects of technology, changes in the meaning of our world and in our own identity (Feenberg, 2009). In accordance to the above, it can be said that the complexity of our relationship with our devices is a relational, non-neutral, and ontological one, where we are continually making and being made by technology, and so is technology making us and being made by us.



A number of theorists such as Bruno Latour and Peter-Paul Verbeek argue that we are failing to acknowledge the responsibility we bear for how we build and raise relationships with our devices, like in Latour's 'Love your Monsters' (Latour, 2011), or Verbeek's 'What things Do' (Verbeek, 2005). Our devices provide us with unprecedented levels of convenience and immediacy, and provide a host of incredible affordances for the way we do things, and even for new things we can do. While acknowledging that we have gained much through technological advancement, in our rush to convenience, connection, entertainment, information, access, or comfort, we are not often invited to pause and ask

what might we be losing or undoing in that exchange. Without an understanding of how we are changed by technological advances, a need arises to seek new knowledge that can assess, disclose and describe the mutuality of our role, both social and individual, in regards to our relationship with technology, and how it is negotiated through everyday practice. To re-think the shift in meaning, culture and value that technology appears to highlight, we need to understand the problem itself by ultimately questioning our shared systems of self-ness, perception, and relationality.

Understanding the role everyday people play in the shaping and conditioning of technology - the emotions we feed into it, the ends for which we use them – could aid in publics seeing their place and possible role in the nurturing of what society brings to life in and through their relations with technology.

**2.4 A Journey with Care**



Latour argues for the need of a critical examination of the construction of ‘matters of fact’ in the context of design research fields. He expands on matters of fact arguing for a shift to ‘matters of concern’, which broadens the matters of fact modernist approach to 'critique and visualize the complex and dynamic socio-technical systems and the controversial positions of stakeholders (Stephan, 2015, pg. 212) within them. As a practical alternative, it opens up the understanding of the object (matter of fact) into our relationship with the context (matter of concern), granting the development and dissecting of behaviours by introducing new options, representations, perceptions, and interactions. Latour's critical examination of matters of fact as matters of concern focuses on understanding social interpretations and courses of action. By considering other forces (natural phenomena, technological development, non-human interests) actively shaping the material making and remaking of the world, ‘matters of concern’ open up perspectives on the complex, contextual ways in which things assemble to exhibit the concerns attached to them, asserting their relevance and broadening their relatedness. To quote

Latour himself: *"The question was never to get away from facts but closer to them, not fighting empiricism but, on the contrary, renewing empiricism"* (Latour, 2004, pg. 231). The relevance of Latour's argument is that rather than withdrawing from facts, it considers a more thorough interpretation of our relationship with them by interpreting the experiences, insights, and behaviours that drive them.

Maria Puig de la Bellacasa, whose interdisciplinary work deals with science and technology studies, cultural geographies, and feminist theory, states that matters of concern addresses the relevance of working with individual understandings and knowledge, defending the importance of caring on the lives of things *'with the intention of not only respecting them, but of engaging with their becoming'*. (Bellacasa, 2011. pg.100). The problem with matters of fact that she highlights is the biased, negotiating terms that only add particular visions to the concern, by producing divergences, scepticism, oppositional knowledge, and ready-made explanations which do not expand on the critical discussion of the situation that Latour calls for, but rather aims to protest, to solve or save us from it. These approaches lead to reductionist visions of the issue instead of 'critical constructivism' by excluding concerns and awareness from the conversation. Constructivist thinking seizes knowledge as inseparable from the knower, being constructed for ourselves as we learn. It is not an understanding of the "true" nature of things, but rather a personal and social construction of meaning which comes out of the bewildering array of sensations and explanations which we fabricate for them (Hein, 1991).



In contemporary/modern times we experience technology as concerning, specifically the need for a shift of how we relate and question how technology co-shape us. The urgency for change is explored as a response to assess where, why, and how we are within our relationship with technology. While Latour's shift in focus from matters of fact to matters of concern can be seen as responding to aesthetic, ethico-political, and affective issues, Bellacasa, with a critical approach to things as introducing a need for care, explores how constructivist considerations for technology can help turn matters of concern for socio-technological assemblages into *matters of care* (Bellacasa, 2011). Bellacasa's study of the

ethos of care in technology expands on matters of concern by emphasizing caring responsiveness in technoscience in an integrated, speculative way, within the very life of things, rather than through normative added values.

Care understands that the concern in itself (technology) is not the issue that needs solving, but instead how we address it, think it, relate, and live with it. It promotes the re-examination of our current ways of being and living, re-thinking what seems strenuous about technology to take it into areas of empathy, ethics and affect, to look not only at what we engage with but also how we engage with it. Again, for Bellacasa care is a discussion about the possible repercussion on knowledge that ethical and political considerations could have about the way we are with technology (Jerak-Zuiderent, 2018). This version of caring with technology carries well the double significance of care as everyday labour of maintenance, which is also an ethical obligation to take care of things, remain responsible for their development, and engage appropriately with their becoming through consideration the many concerns attached to it.



Matters of care point specifically to an urgency to explore where, why, and how we are 'with' technology, a deeper understanding of our co-shaping relation with it, and an active shift in the ways we live with it. Caring in this context stands for '*a signifier of necessary yet mostly dismissed labours of the everyday maintenance of life, commitment to neglected things, and the affective remaking of relationships with our objects'* (Bellacasa, 2011, pg. 100). In this sense, matters of care stand for a version of 'critical' technological assessment that '*goes further than assembling existing concerns, yet resists the pitfalls identified by Latour: ready-made explanations, obsessions with power, and the imposition of moral or epistemological norms'* (Bellacasa, 2011, pg. 100).

### 2.4.1 Design Implications in Techno-care

To envision alternative ways of becoming involved with the conditions that result in our existing scenarios, matters of care also encourages a resistance to 'solving problems'.

Interaction and visual communication designer Ivica Mitrović indicates that *'from the modernist perspective, design has been primarily regarded as a problem-solving practice, usually dealing with problems detected by other professions';* in his words, *'the mission of design is closely linked to the needs of the industry or, in a broader sense, the creation of a better living standard*' (Mitrović, 2015, pg. 5). However, as a graphic designer and publicist Dejan Kršić points out, design has always been *'a signifying practice that generates, analyzes, distributes, mediates and reproduces social meaning, especially nowadays, in the context of the new social, technological, media, and economic conditions*' (Golub, 2014, pp. 20-26). Rather than solving problems, design as a medium of inquiry asks questions and opens issues to a discussion when engaged with a broader social context, while sustaining a nature of possibility. In this scenario design allows the examination of other ways of being with technology, instead of just dealing with its applications. Rather than rejecting or limiting it, or introducing a technological fix, or alternative form, it proposes instead to re-think the role of technology in everyday life by considering the logic between our conception, approaches, and conduct with it.



Exploring an idea of care that goes beyond a moral attitude within techno-science could count as more than responsible maintenance and instead determine alternative politics of caring. Firstly, care has the quality that it can be strongly directed as action - to care - into a notion of material doing. It allows us to understand caring as something to do, and extends a vision of care as an ethically and politically charged practice (Bellacasa, 2011, pg. 90) that lays down structures of participation and agency. Practices that include matters of care can serve to identify ways to argue and nurture for techno-care standpoints which inhabit a context of opposing interests and power relations, while also negotiating with visions of technological relationality that get overlooked in the process of problem-solving. Secondly, through reframing the problem of our relationship with technology we open up spaces for agency and experimenting with new behaviours which could make a place for new ways of living, types of care, and ways to understand how we perceive every day through integrated practice; with our everyday doings, knowledge construction in and about techno-care is a proposition to think *with*.

Caring to look with what's behind our behaviours with technology means to unveil some of the hidden, unconsidered, or taken for granted relationships we have developed with our devices that have larger implications for how we navigate our lives and relationships with others and the world through them. In bringing such relationships to the fore to have people question the ways of being we are currently cultivating, care relations open up spaces of possibilities to seek new relationships that we might want instead.

### 2.4.2 Call for Literacy

Artist and writer James Bridle in his latest book 'New Dark Age: Technology and the End of the Future' discusses the uncertainty and natural susceptibility we feel towards technology, and calls for the need of new maneuvering strategies to expand our understanding of the systems we engage and participate with when inhabiting techno-social networks. Among the focal points of his work is an argument for practicality, trust, resistance, and more than anything, literacy regarding the invisible and interwoven nature of our complexly entangled relationships with current technological systems (Bridle, 2018). Literacy, more than understanding or knowledge, repurposes and re-thinks different technological relationships in different ways, and builds conscious participation with their shaping and directing.



Altogether, this aims for the transformation of society into a culture of individuals free to make their 'own' history through their choices, and not simply those prescribed by the system (Russell, 2016). The evolution of our understanding of the role of transitory technologies in our culture and everyday life features how the rapid growth of technology affects our capacity to sort, resist, and critically examine what aspects of our lives are affected by what technological convenience hides. Whether consciously experienced or not, technology has the power to challenge the political dimensions and structures of human activities within their relational layouts. Winner describes these political qualities in his concept of 'shadow constitutions' which he describes as A) a hidden set of laws that derives from the properties of technology to reconstruct social roles and relations that

puts us into specific power relationships, and B) a more general influence on everyday behaviour, norms and values, self-understanding, and perception (Winner via Smits, M., 2001). Contemporary concerns and visions of technology need to be involved with the examination of our ongoing and forthcoming relation with our devices not just to anticipate, but to actively shape technological futures through their effects on collective imagination.

### 2.4.3 Raising Ourselves with Technology

It is easy to believe the transformative nature of the depths and extent of social, political and economic realities presented by technological advancements is a one-dimensional interaction that ends the moment we turn away from our devices. But as Latour reminds us, Dr. Frankenstein's crime was not that he invented a creature through some combination of hubris and high technology, but instead that he abandoned the creature to itself (Latour, 2011). For Winner, this seeming disposition we have to passively fall victims of what he calls 'technological somnambulism' is, in reality, wilful forgetfulness, and it intently partakes in breeding those outcomes (Winner, 1986, pg. 10). By not concerning ourselves with the details of the operation, functioning, and development of our devices, we consequently determine our careless relationship with technology. When Dr. Frankenstein meets his creation on a glacier in the Alps, the monster claims that it was not born a monster, but that it became a criminal only after being left alone by his horrified creator, who fled the laboratory once the horrible thing twitched to life. "*Remember, I am thy creature,*" the monster protests, "*I ought to be thy Adam; but I am rather the fallen angel, whom thou drivest from joy for no misdeed... I was benevolent and good; misery made me a fiend. Make me happy, and I shall again be virtuous*" (Shelley via Latour, 2011). One might in this respect and accord with the Frankenstein's story say that in this invisible composition, we give technology power for we deem it harmless in our perceived independence from it. However, by re-thinking how we build and raise the relation we have with technology we can instead reflect, prescribe, and unveil specific

ways of being where we as users and society recognize our co-shaping role in the making of technological structures and lifestyles. Such a reflective practice could allow for new ways of acting instead of just reacting to the technological matters of concern we find ourselves confronted with.

Expanding on the possibilities for design research practice in the field of technology studies, the objective is not to counter, but rather work with what's concerning. For feminist cyborg scholar Donna Haraway, technology links people in a web of affiliation, exploitation and solidarity (Weigel, 2019). Her work describes our epoch (the Anthropocene) as one in which the human and nonhuman are inextricably linked in 'tentacular' practices. Instead of denying the 'Anthropocene' - humankind as the biggest influence on earth's environmental problems, least with an unhelpful and unproductive degree of inevitability - Haraway builds a proposal for a Chthulucene: an interwoven, non-hierarchical, symbiotic mode of living across species, replacing 'human relations' with 'kin', which could bring about a transformation in our power structures and priorities (Haraway, 2016). To stay with the trouble, the Chthulucene imagines ourselves as participants in collective world-making, and asks us to not only diagnose problems but to embrace our roles as techno-scientific fabulists (Kenney, 2019). It makes inspiring and imaginative use of science fiction, art projects, geology, evolutionary theory, developmental biology, science and technology studies, anthropology, environmental activism, philosophy, feminism (Franklin, 2019), and many other ways of thinking and knowing about ourselves and our worlds that build relations through ways of being.

## 2.5 Precedents

As a representation of an expanding constructivist look on contemporary technology approached by varied fields and experts such as educators, science and technology studies, artists, engineers, and designers, the following theoretical projects serve as the foundation of work that seeks to localize and tackle everyday concerns and challenges through a 'futurity' approach that sets the premise of looking at what lays behind our relations with that which we find troubling. By invoking an experimental spirit that allows for other influences, ways to act, material interventions, and new interface construction, critical technology collectives work with these ideas and try to fill the gap between literacy and technology. Their relevant, creative, and exploratory methods tackle and develop new ways of approaching these matters and concerns. They drive away from solutions, and present new worlds through alternate futures that understand contemporary technologies under more social, collective, and flexible engagements.

Artist, educator, and activist Taeyoon Choi's "School for Poetic Computation", “Distributed Web of Care” (https://sfpc.io), and “Artificial Advancements”, use a range of participatory projects, such as hand-made circuits, sign language, or cooking, to contemplate the connotation and act of resistance that coding and hacking electronics can have in politics, disability, the logic of capitalism, and the deep affection algorithms and programs have in our lives.



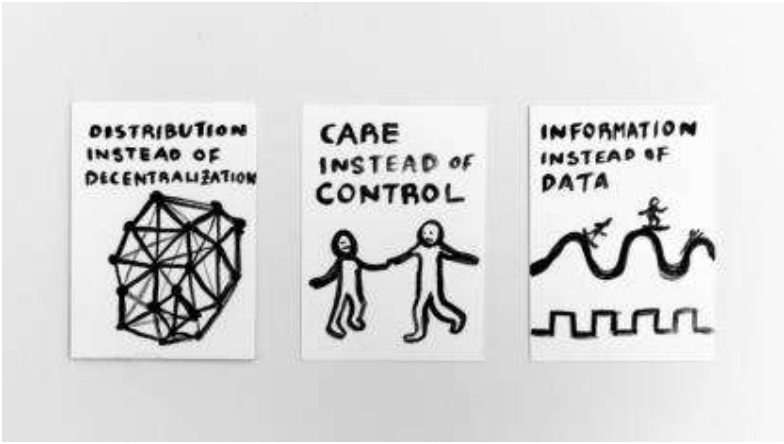
Through the promotion of attention and support between people in communicating, acting, and socially engaging, his work extends an initiative on exploring alternative priorities of collective agency and individual ownership of data and code. By engaging with views of personhood and technology, Choi offers the concept of ‘Soft Care’, which focuses on implicit, nuanced and intricate forms of care between people and within oneself (Choi, 2018). Soft care investigates narratives around technological innovation and explicit solutions, problematizes the focus on cure versus care, and challenges the concept of normalcy, disability, and impairment. Soft care supports transformative experiences of learning, making, and taking care of mental and physical health.

Altogether, the purpose of his work aims at creating a future that is built with trust and care, where diverse communities are prioritized and supported. His projects envision what care means for a technologically-oriented future.


*CPU Dumplings Workshop* is a cooking class to learn the fundamentals of computation.

Participants perform all the operations of a CPU (Central Processing Unit) by learning to chop chives, mince onions, fill and fold dumplings to become a part of a human computation that simulates a CPU instruction set.

https://taeyoonchoi.com/poetic-computation/cpu-dumplings/




The Distributed Web of Care (DWC) is a research initiative on communication infrastructure, exploring the Distributed Web as a peer-to-peer, alternative web which prioritizes collective agency and individual ownership of data and code.

https://taeyoonchoi.com/soft-care/distributed-web-of-care/



In a like manner (although not always about or in relation to technology), artist, designer and engineer Natalie Jeremijenko's NYU Environmental Health Clinic or 'XClinic' focuses on exploring and localizing challenges to develop and prescribe systems that improve human, cultural, and environmental health and processes by creating artistic experiments and opportunities to understand and improve our relationships with natural systems. Her interventions engage with wonder, approaching health from an understanding of its dependence on external local environments, rather than on the internal biology and

genetic predispositions of an individual (http://www.nyu.edu/projects/xdesign/clinic/); thus resulting in prescriptions not for pharmaceuticals but for actions: local policymaking, urban interventions, public pop-up experiments, community/citizen science, and referrals not to medical specialists but specific art, design, and participatory projects. By shifting from an atomized internalized understanding to an environmental understanding of health, Jeremijenko approaches the problem of agency and aggregate local action. Through experimenting with structures of participation (who addresses what, what addresses whom, who listens, what hears and who or what acts) her work focuses on interactions between devices and "users", and pays attention to peripheral engagement between participants/people, around things, and within systems.

*"Traffic Circle"* in Ghent, Belgium as part of the *'How to Save the World'* project.

https://www.youtube.com/watch?v=l6tS9dJe-nk



*"For the Birds"*.
Whitney museum installation, second part of her ongoing Ooz projects which reverse-engineers" zoos, producing new interactions between animals and humans.

http://www.nyu.edu/projects/xdesign/ooz/exhibitions.html


Similarly, Mexican artist Pedro Reyes' 2011 project "SANATORIUM" (http://www.pedroreyes.net/sanatorium.php) is a temporary clinic that provides short,

unexpected therapies. The only way to experience this project is to sign up as a patient; SANATORIUM starts with an interview where you are diagnosed and then appointed to experience at least 3 of 16 available therapies (Reyes, 2011). These therapies are variations or mash-ups of existing schools such as Gestalt psychology, theater warm-up exercises, Fluxus events, conflict resolution techniques, trust-building games, corporate coaching, psychodrama, and hypnosis. SANATORIUM works with each individual's narratives in non-professional conducted sessions. It democratizes therapy, explores psychodynamic tools and alternative lifetimes, and by reintroducing the concept of 'sociatry' - proposed by Reyes as the *'technique to heal social systems*' or *'the art and science of healing society*' (Reyes, 2011). It understands and applies the capacity that we have to build compelling social relationships, either with our everyday objects or each other.

*SANATORIUM*, Group Activity, instruction piece. *Stillspotting*, Guggenheim Museum, NY, 2011
http://www.pedroreyes.net/sanatorium.php

The notion of a clinic is key here, more than anything for being a familiar physical space, both as the idea of a place you go to heal or get better, and through the language that surrounds it. It is a 'place' (museum, university, gallery, classroom, etc.) that gathers and presents these design actions in an un-ironically prescriptive manner through face-to-face encounters and conversations. With such conceptual, imaginative propositions and projects about technology and futures, the closeness of our collective understanding of what a clinic is and does tie to the public's previous knowledge, and into participating at the same time as being open-minded. These expansive scopes are an exploration of the crossover capabilities of design interventions to instigate debate, raise questions, propel thinking, raise awareness, provoke action, open discussions, and offer alternatives while involving the public as active agents (Young, 2014) in the shaping of their futures.

### 2.5.1 Summary of findings



The role of these hypothetical, somewhat playful scenarios is the formulation of imagination spaces driven not by solutions, but instead by questions, thoughts, ideas, and possibilities, explored through the language of design. They help us see that the way things are now is just one possibility, and not necessarily the best one. (Dunne & Raby in Michael, 2012, pg. 172). They experiment with lifestyles and ways of being, trying out new things, offering possibility, questioning, fracturing our passive ways, tracing what's wrong, and offering something different. It is not a practice set on stating that there is a better world that society can and should progress towards, to quote Russell, but instead *"one whose interests lie in picking up on relevant problems and presenting these up to a public*" (Russell, 2016, pg. 52). Opening up conversations on possible ways to take control of the circumstances that affect and change the story we tell about the future of techno-mutualism implies new kinds of practices that call to an engaged form of thinking, resisting and reflecting on the ways we behave with things that may lead to emancipatory knowledge.

Examining the framework between potential changes in the development of techno-social relations which spark from a place of empathy and care may lead to participatory actions for a 'post-optimal' world. As presented by Dunne, post-optimal devices afford to design a social and ethical aim for the development of progressive, thought-provoking, and culturally enriching technological explorations. The conceptual analysis of post-optimal techno-social cohabiting could lead not only to different and experimental ways of being, behaving, perceiving, relating, and imagining with technology, but also to broaden design capabilities as a medium for critical reflection of the cultural, social, and ethical impact of how we are with technology.

## 3.0 PROPOSED TECHNOLOGICAL HEALTH CLINIC

### 3.1 TClinic: Co-imagining an active involvement with our futures

Driven by the need to promote new techno-social literacies with technology, to re-think how we might reframe and reimagine the ways we understand, care, and raise ourselves in relation to our techno-social systems has led to the development of a proposed design research space, the Technological Health Clinic or TClinic.

The TClinic was developed to address the notion of 'technological health'. Technological health is defined as a 'concern' for the ways we are with technology - the ways it acts upon us, the relationships and ways of life it fosters, and the ways we conduct ourselves with and through it. In addressing technological health concerns the research seeks to assess, disclose, and analyze the mutuality of how our relationship with technology are built and negotiated through everyday experience and practice.

The TClinic is a space to gather insight and prompt engaging actions that question, wonder, and reflect upon our present ways of navigating technological relationality in our lives. Working with people who have concerns with their present relations with technology, the TClinic is proposes to research and develop new understandings of how we are raising ourselves with technology. It seeks to ontologically reorient our misplaced care '*for*' our technologies towards notions of *'caring-with'* technology, and ultimately promote collective technological literacies that can help us navigate our relationships more actively.



To do this, the TClinic proposes a two part structure:

a.) A **PARTICIPATORY TECHNOLOGICAL HEALTH CLINIC,** aimed at gathering insight and inspiration on matters of concern and care in technological health.

b.) A **TECHNOLOGICAL HEALTH DESIGN STUDIO**, aimed at designing works that critically engage publics in design and debate about techno-social literacy.

**PARTICIPATORY TECHNOLOGICAL HEALTH CLINIC**

The participatory clinic gathers testimonies to examine every day experiences to identify present public technological health concerns. This initial section of the work is crucial for determining the concrete social interdependence we have with our technologies, as well as to represent the new meanings and ways of life those relationships afford. Additionally, collective participation offers shared perspectives which communicates insights and connects to other's experiences. By encouraging dialogue and interaction that is based on self-reflection and the promotion of expanding cultural understandings of technology, practicing care with our technological relationships brings about the significance of possibility, patience, and kinship.

**TECHNOLOGICAL HEALTH DESIGN STUDIO**

Building off the matters of concern and care identified in the Participatory Technological Health Clinic, The Technological Health Design Studio seeks to develop design interventions that engage publics with a critical reimagining of their position within techno-social relationships. These design actions afford a broader attention to shared assumptions and matters of concern coming through our daily perceptions of technology. Ultimately translated as speculative studio interventions, the activities of the Design Studio afford the development of literacies and care that create practical narratives where preferable futures can be collectively imagined, played and debated. By setting the framework in which participants can engage with these issues, these conceptual design practices foster a literacy which can offer alternative possibilities for techno-relationality through a new format of design practice.



The two parts of the clinic work together to gather insights and use those insights to create design works that engages publics in questions concerning our technological relationships, enabling its audience to take a deeper look at what is neglected on their relations with technology, therefore making way to opening up agency and reorienting how we want to live our lives with technology, not just how we want our technologies to be.

**OBJECTIVES**

- Confront our sometimes passive and uncritical engagement with technology, to understand and navigate the complex ways of life they shape for publics and societies, and open up new possibilities for caring and raising ourselves with them.
- Explore the hidden, unacknowledged, and/or taken-for-granted relational characteristics of technology that co-shapes our understandings and relationships with others through our everyday interactions with them.
- Co-develop the ability to effectively access, manage, interrogate, evaluate, create and communicate a personal understanding, discerning and practice of technological relationality.
- Identify, through participatory, critical interventions, the implications for individual and collective social well-being stemming from our increased use of technology.
- Produce critical design engagement that allow publics to debate and reflect upon issues of misplaced care and agency within their relationships with technology.



The proposed research bargains with dawning conceptions of technology to combat misplaced care, uncritical engagement, and unresponsiveness, and could aid the public in bringing back agency into the engagement with their technological relationship by tackling their initial insights and concerns under a more actionable understanding of them.

Over the following section, the proposed methodologies of participatory research, critical design, and ontological design will be discussed and analyzed through examples of participatory workshops and design studio work. These efforts and interventions are meant to imagine how a change of our understanding of the relationships we build with technology could responsibly enhance long-lasting self-reflection, restructure technological instrumentality, sharpen consciousness, and broaden perspectives that open up new possibilities for caring and raising ourselves with technology. As a collective approach to building up preferable futures beyond our current techno-social

understanding, the learning-actions that the TClinic opens the possibilities for afford new understandings and ways of living and being with technology.

## 3.2 METHODOLOGY

The TClinic addresses and reimagines our interdependence and passive navigation of technology through design literacy, responsibility, and agency. In the process of generating and communicating this knowledge, the key methods designated in the work to be made with the clinic are framed as Participatory Research, Design as Research, and Ontological design. These alternative opportunities and structures for engagement are explored through collective, receptive, and wonder-driven experiments that work with reflexivity and questioning as opposed to solutions and technological improvement.

The research developed with these methods re-frames care through collective involvement and engagement with critical design actions.



### 3.2.1 Participatory Research

Conceived as a participatory 'clinic', in which participants come to share and explore their experiences concerning their own technological health, the Technological Health Clinic proposes to involve participants in two phases:

1) An opening, grounding phase as cultural/ethnographic research participants, where members of the public are brought to the clinic to identify issues and matters of care as the clinic's patients. Social and affect probes work to provide the informed grounding and 'inspirations' that will be taken up in the work of the THealth Design Studio.
2) A post-design research phase of engaging with the outcomes of the critical design studio work developed. Engagement with the studio work involves the public, not as co-creators but rather as representational participants in the research, where

their engagement and reflection upon the presence and ideas reached through the work is the research output.(see 3.2.2 Design as Research).

Through a series of participatory probes and workshops involving the participation of people, as experts and agents of their own techno-social experiences, the research supports a discursive, experience-centred setting that opens up the opportunity for unveiling underlying problems with our everyday technological entanglements. This makes for a diverse representation of areas of concern and responses, as well as a process that allows participants to experience a deeper involvement with relationality, engagement, and the questioning of our collective role in the making of the situations we unwarily fall into with our everyday technologies. As with Escobar's concept of 'autonomous design', aiming for more collaborative and place-based approaches attends to questions of environment, experience, and politics, while focusing on the production of human experience based on the radical interdependence of all beings (Escobar, 2018), and for this project as well, the interdependence we have with non-beings.



The integration of people's experiences allows design to engage with concrete social realities. For Feenberg, it's in everyday experiences that the enactment of new meanings is discovered which cannot be treated as merely arbitrary. These meanings appeal precisely to a present ground while pointing beyond modernity, and find alternatives in a closer connection between politics and technology. He goes on to argue:

> "*The norms controlling technical practice can only emerge from the shared experience of a community, a world. Worlds in this more or less Heideggerian sense must be understood as realms of practice rather than a passively observed nature to which "values" are ascribed. Worlds are built out of myriad connections uncovered in the course of everyday experience as Heidegger explains in the suggestive first part of Being and Time. These form a horizon within which actions and objects take on meaning. Meanings are not things we have at our disposal, but frameworks, perspectives which we inhabit and which contribute to making us what and who we are. Meanings are enacted in our perceptions and practices."*

People's experiences develop a conceptual realm for approaching and communicating insights to others. Offering shared perspectives connects the individual user's experience of interacting with everyday devices to a techno-culture dominated by a lack of self-reflection, and back into the possibilities of care and being actively involved with our technological relationship. Fostering dialogue with non-creatives through a performative practice generates insights on multiple scales, from recognizing areas of concern to "staying with the trouble". It highlights the significance of shared culture for technological health to thrive.

### 3.2.2 Design as Research

Critical design is a practice that uses the language and structure of design to engage the public with imaginative, reflective, and critical spaces that aim to enable action through insightful, provoking questioning of how the world could be (Dunne, 1999). It is a propositional work space that most relevantly can engage people in thinking through work that shifts the research itself to becoming the end point of the design. Correspondingly, Design as Research (DaR) is a generative research space that connects critical design explorations '*as research'* which looks at ideas in situ and produces new knowledge about situations through configuring relations, objects, or scenarios, that privileges an active engagement with its audience directed towards perception rather than understanding (Russell, 2016, pg.48). This sort of design work can be applied as a research strategy dedicated to transcend social conformity, passivity, and similar values of capitalist ideology, in hopes of bringing about social emancipation (Bardzell and Bardzell via Russell, 2016). Design explorations are less likely to be products for consumption, than an array of scenarios, performances, digital renderings, events, workshops, or publications aimed at a public rather than users (Gentès and Mollon, 2015, p. 85). From such a perspective, critical design can be appreciated as a practice that uses design to comment and reflect while enabling its public to be more critical about their everyday lives (Russell, 2016, pg. 48).

The use of critical design as a research approach probes ways to foresight more desirable futures by engaging the public in developing a collective conversation regarding technological literacy; the development of alternatives that move beyond a functional understanding of how technologies work could make way to also include how they shape our perceptions, condition our choices, and why they appear to us in the ways that they do. The experimentation with generative, situated interventions and participatory probes reimagines a variety of meanings, connotations, and expectations that aims the Research at the TClinic to offer an alternative to technological instrumentality or Determinism.

The studio outputs of the Technological Health Clinic embrace a range of methodological frameworks that seek to interrogate our techno-social relationships in order to build understanding and literacies around them. Critical design work creates a point of research for the audience or participants, who in turn carry the research forward by participating. By reframing these relationships and its audience, participatory and public engagement, self-reflection, and building literacies through critical design work is where new knowledge is created. Applied as the framework of the clinic, participatory research identifies matters of care and concern while design as research engages publics in reflecting upon their relationships and the ideas raised in the participatory stages. Both these work to build literacy in publics.



### 3.2.3 Ontological design

According to design writer, editor, and educator Anne-Marie Willis, ontological designing is (i) an exploration of design which understands design as a subject-decentred practice, acknowledging that things as well as people design, and (ii) an argument for particular ways of going about design activity (Willis, 2006, pg. 84).

Design structures our being-in-the-world, and our being-in-the-world structures the kinds of designs we make. The biggest take on the need for designers in Research is for the revision of modernity such that new futures, worlds, and ways of being are possible through unrestrained participation and reconceptualization of agents and their

knowledge. Bringing back Escobar's pluriversal approach, design offers tangibility, thought translated into materiality.

> *"Design, by virtue of its materiality, 'hardwires' particular kinds of politics into bodies, spaces, or objects. The design of infrastructure has implications for what kinds of relationalities are possible when humans occupy those spaces or access those resources. Changes in infrastructure design have the potential to change relationality; hence material designs have ontological implications. If we are to change our being-in-the-world, we need to consider our ontology, the infrastructure of our reality, as something with the potential to be designed. To do so successfully, Escobar argues, ontological design ought to be for and from spaces of political autonomy." (Thompson, 2018).*

Ontological design is concerned in understanding different implied ways of building up literacy and agency by acknowledging that which is already happening but has become concealed in our current, passive world-making. Technological health tunes in to look at how our technological relationships came to be, and by understanding them, attempts a dispositional change or shift to occur. Primarily the need for ontological practices appeals to effective communication; changing behaviours is better adopted through habit and repetition than through reason and common sense, and by appealing to uncovering and unconcealment, it becomes possible to think old ideas in different ways. So, while Latour and Winner express and argue for the need to raise our technologies, I argue for the need to raise ourselves in relation to technology, to work with these systems, build them, and understand them to possibly shape them in different ways.



Regarding this relation to ontology, the TClinic's research orientation presents the opportunity for the production of new knowledge and understandings on structures of engagement, that address emerging concerns and behaviours on the current social challenges dwelling around our relationship to everyday technological devices. Through sharing the empirical learnings and insightful outcomes of critically reflecting the constant interaction with technology, technological health seeks to explore the deeper relationship

we all have with our technologies—and the behaviours building those relations—to gather insight and engage in learning actions that open the possibility for new ways of living and being with technology.

One of those areas of exploration, for example, is Borgmann's calling into question the technological shape and character of everyday life; by looking at the human relation to every day through the 'device character' of technology, the focus is framed as enacting the possibility for new engagements with technology instead of turning away from it. Winner's work interprets an understanding of how technology acts on us. American author, media theorist and cultural critic Neil Postman argues for resisting technology. In contrast, Borgmann's pinpointing and diagnosing modern everyday problems and concerns with technology serves the purpose of having different focuses on our lives to be able to understand it, and develop responsibility on our own life choices. By creating the favourable conditions in which technology becomes less compelling and different kinds of engagements thrive and flourish, Borgmann's proposal for treatment is experienced in the application of focal practices. Borgmann describes many of our cotemporary consumer experiences, including technological engagement with media and entertainment, as *low threshold* activities, easy to get into, easy to get out of; they hold little significance and we move on easily from them to the next thing, yet they easily displace other things in our lives. When we care for one thing we are often not caring for something else. Focal practices (for example, tending a fire, preparing a meal, hiking, learning and playing a musical instrument, gardening, etc.) are considered to have a higher threshold, even being somewhat burdensome to get into; they take effort, time, and even a certain level of skill. However, their essence is engagement, not convenience, and the increased effort is often related to an increased significance. Interaction with focal things and practices generates a new perspective on life in the technological world that makes possible the assessment of the mundane (Heikkero¨, 2005, pp. 251 - 259). These perspectives expand on what Latour expressed as 'loving your monsters', seeing technology not as the problem which creates issues to be solved, but rather a reflection of our ways of living, nurturing, behaving and being with technology, showcasing a problem of agency and care.

The journey entails that creative questioning and re-thinking can make the difference between getting to unveiling action, issues, and circumstances of our present ways of being with technology. Instead of tackling our technological health concerns just as problem-solving meant to redesign tech or improve life quality, the research looks to reveal new influences, knowledge, and insight into the problems of misplaced care, misunderstood mutuality, and the futures these are allowing.

### 3.3 RESEARCH-CREATION SUPPORT MATERIAL

Developing my own understanding of matters of care in techno-science needed me to first dive in design projects that could help me get in touch with my own insights and previous knowledge, the language around it, what possible mediums I could lay on to showcase my results, and where did that research fit in my coming work, in order to see how it altogether could guide my journey. As mentioned earlier, the work presented and performed with and through the clinic is not about tangible results or solutions, but about the journey of identifying alternative design approaches to problems, public engagement to develop literacy, collective reflection, and ontological reorientation of our concerns with technology. The research outlined here seeks to develop new insights on how to use design as a critical practice to engage the public to question the radical ways technology co-shapes our ways of being, while providing participants with critical and creative tools for imagining what a technological literacy, and the world it brings with it, might look like.

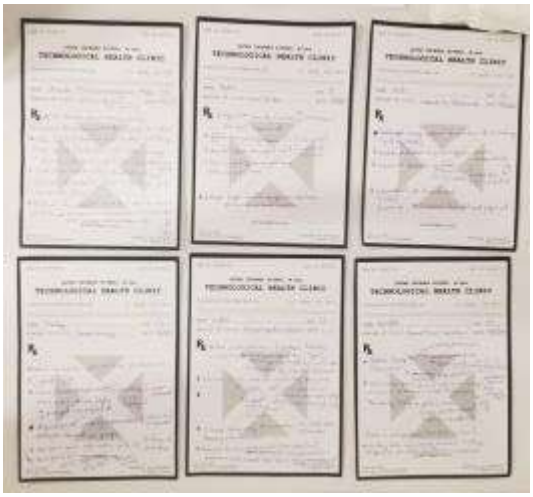


#### A. TClinic: Pop-up walk ins

The TClinic pop-up was the first test of a participatory, immersive, one-on-one approach that the clinic's model employed in its first stages. It was inspired by Natalie Jeremijenko's XClinic and Pedro Reye's SANATORIUM, and their respective approach to public health and engagement through a familiar, somewhat playful, clinic-like institutional language.

Like a standard health clinic, the walk-in version of the TCinic used a familiar institutional script, but asked participants about their technological health concerns to grasp what the present state of their relationship with their devices is, how they perceive and talk about it, and what prescriptions for design actions could be taken on the next stages; it highlighted that, even if the individual process could be helpful for the person in question, it might not address the issues of caring with or staying with the trouble, determined previously to be concerning. Participants showed similar individual concerns however, and led the research to look into how can we impact technological health by improving

collective relations to our devices. Inspired by these set of ideas to analyze through a technological lens cultural participatory processes, the walk in clinic tested critical thinking as involvement that resulted in testimonies determined to impact health by improving collective understanding of our relations to devices.





**B. ECHO – Relational Surveillance**

To more tangibly showcase what it means to explore and experiment with technological health concerns, ECHO worked towards the creation of a collaborative and speculative group design project that would critically explore design through the lens of Intersectional, Feminist, and Decolonial perspectives. It took an everyday device

(smartphone) and reframed the discussions we have about its use, the implications of its becoming, and the possibilities of building a different world around it.

This particular piece took a critical design approach to analyze and create alternative understandings of how complex emerging issues might be reframed and rethought to open up new ways of seeing everyday technologies. It spoke to how technology shapes our experiences, seeing ourselves in relation to those around us, where our agency lays on those scenarios, and how individual reflection can integrate us back with the world.




The design worked around ideas of agency and the constructed personas we build through social media, and worked to repurpose an existing structure of surveillance technology as a tool of individual reflection. The intention was to shift towards prioritizing embodied experiences over our society's increased dependence on digital devices to construct our identities and make sense of and relate to the world around us. This type of work was meant to break the taken-for-granted world that we have built with our present te'chnological devices, and look into alternative presents. The concept developed was *'Relational Surveillance'*, which shifts the notion of surveillance capitalism from exploiting and profiting from personal data to shift to an emphasis on personally reflecting with

public and privately amassed data. It flipped the use we currently have of our smartphones (as platforms that project us for others to see) into a more transforming, reflective, experience of looking at ourselves from the other's perspective, all through a technological lens.

**C. Silver Fruit**

Silver Fruit was a project that focused more attention to devices themselves, and how they might tell a story of unacknowledged value, disposability, and our anthropocentric attitude towards the technologies of our time. This project played with the idea of archaeological futures, to expand our experience of actively engaging in a relationship with our devices' history. The outcome was a museum exhibition that played with the idea of re-looking at the material history of everyday rapidly obsolescence in consumer electronics from a perspective of 'deep geologic time'. Deep geologic time considers time on a scale of geological epochs, rather than the day-to-day concerns of human understanding and relationships with time.



They key resolve of the project was to become more aware of what it is that actually makes up the technologies with which we interact every day. By relating and seeing them as more than inanimate objects and tools of our convenience, and more as beings that carry with them depth and stories that transcend us, we could extend to these devices some more respect and thought before acquiring and disposing of them.

The above critical and participatory imagination spaces are driven not by solutions, but instead by imaginative questions, probes, ideas, and possibilities explored through the language of design. Research that incorporates speculative scenarios and participatory design methods moves forward the engagement of publics; in questioning present conceptions of technological co-shaping to develop meaningful, unveiling actions, the work of the clinic is set to see the larger implications of not actively participating in the shaping of technological relationality. It aims to probe our beliefs and values, challenge our assumptions, and encourage us to imagine how what we call 'reality' could be different. These sorts of explorations help us see that the way things are now is just one possibility, and not necessarily the best one. They experiment with lifestyles and ways of being, trying out new things, offering possibility, questioning, fracturing our passive ways, and tracing what's wrong as a reflection upon our present ways of navigating technological relationality in our lives.

### 3.3 EXPECTED OUTCOMES

Opening spaces that explore issues with our relationship with technology is ultimately about how we approach problems in design practice, where we usually aim to solve them without further thinking of what the deeper problem really is. In our demand of immediateness and action, we as a society too often seek and offer solutions without necessarily stepping back and evaluating the roles we play in the arrangements that lead to the problem in the first place. This is where I see a lack of literacy, which in turn results in little agency to act on what we find concerning. The work of the clinic doesn't tell people what to do, but opens a door so people themselves take the next step and seek out the real problems in complex situations, to open up discussions and debate on possible approaches as grounding research.

Critical design takes on difficult problems to open possibilities about how we can work differently as a practice, how to tackle instead of solve or fix a situation. In other words, is about the possibility of thinking in opposition to uncritical conformity. For technological health, this is presented as a combination of collective participatory and reflective actions that seek to open new understandings of our responsibility to our technological relationship's nurturing. As a society, to transition from our current, disconnected ways of relating to technology into identifying matters of care in techno-social relationships could aid in helping us navigating them differently. By gaining insight into them, understanding where the conflict lays, and defining areas of care and concern, a more conscientious involvement with the relations we have with our everyday devices and with the ways they shape our experience could lead to people engaging with their concerns under a more literacy-informed perceptual understanding of the connections that lead their lives. Strictly speaking, technological health seeks to reintroduce its public back into the world. In Russell's words, its aim is to "explore alternative views of the world that point out to a pluralism of alternative knowledge claims or forms, beneath current paradigms, not stating directly that things could be better or that our world is fundamentally in crisis, but understanding that we can begin to develop emancipatory knowledge" (Russell, 2016).

The TClinic is an immersive, exploratory opportunity for working with practice-led research projects, through actions that open up conversations on possible ways to take control of the circumstances and implications of our technological health. Testing critical thinking as involvement results in testimonies determined to impact agency by improving individual and collective understandings and knowledge of our relations to technology. Based on these findings, a studio space that actively thinks, cares, and learns through engagement with questions concerning technology sets up on an ongoing research and design practice to continue to investigate these issues. It is a space that seeks imaginative ways to navigate large complex issues through design practice that works with the public to engage in these ideas motivated by empathy, patience, wonder, and hope for the futures we can or could build if we made space for them in our collective imagination. This implies cultivating a collective technological intelligence as a key aspect of literacy, creating a more informed, collective, and active involvement that goes beyond an understanding of how technologies work to foster comprehension of the value systems, contexts and consequences of the relationships we build with them.



The proposal of a Technological Health Clinic rises from a profoundly personal wish to better help others and myself discern what is painful and problematic in our lives, and shine a light on the capacity we possess to comprehend it, change it, and grow from and with it. None of this is to say that this will solve the anxiety and strain that swiftly coming technologies and futures bring with them, and more literacy or agency could not be enough to resist them. But these concerns are complex for they mostly showcase the relationships we have with ourselves. Approaching them from more than a self-assured compliance may start by taking responsibility and become aware of the things we put in the world, accepting that they are not separate from us and that our relationship to them is a social and paradoxical one. These issues will remain complicated and frightening until we dare face them and borrow from current and past wisdom and ideas to analyze our role to fit a more down to earth, less alarmist vision of technology.

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