Reframing reality:

How social media shapes our perception and challenges our agency

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Abstract

Social media has become an integral part of our everyday lives, providing us with a constant stream of information and social interaction. By shaping the way people view the world, influencing beliefs, opinions, and behaviours, social media impacts our understanding of reality. The blurring of lines between fact and fiction can have far reaching consequences on our agency.

This paper explores the impact of social media on people's perception of reality through the lens of ontological design. It examines ontological design to understand its principles and frameworks that articulate the relationship between people and phenomena. It also explores the limits of individual agency, and how social media constrains our ability to understand reality.

This research begins with a literature review of three parts: ontological design, agency, and social media, which are then analysed using the hermeneutic circle framework, and iterative inquiry framework leveraging Bronfenbrenner's ecological systems theory. The paper synthesizes insights on how social media is effective at influencing people, the way it can amplify tools of control, and why it continues to operate largely unchecked despite being viewed as a dangerous technology that causes harm in many societies around the world. Finally, it concludes with a set of principles for the agency and wellbeing of people and communities in the age of social media.

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Contributions

Ontological design is a theory that challenges our world view, with the concept that the objects we design design us back. My goal with this work is for readers to understand social media for what it is: a powerful tool that can design us in pervasive ways and which can put our agency at risk. As with how ideological conditioning works, through the incremental crafting of reality via social media, agency can be taken from people subversively from various vantage points so that we don't notice it.

This research employs the use of system mapping tools and frameworks for the synthesizing of various data points and research findings to distill insights: I review the building blocks of ontological design and apply its theories towards social media and reality construction. I also examine to what extent social media is pervasive in our lives through the iterative inquiry framework.

The insights gained from this research showcase the effectiveness of social media in influencing individuals and amplifying the tools of control (such as propaganda), while also examining the root causes of why social media companies cannot contain the harm caused by these platforms.

Finally, it presents a set of principles aimed as a guide towards the elimination of harm caused by social media, emphasizing the fact that current measures taken don't work. This report may be useful to designers interested in the application of ontological design frameworks and system design tools towards complex subject matter or in designing social media experiences. It may also serve to inform and guide individuals, professionals, policy makers and corporations with an interest in harm caused by social media.

Introduction

In a few recent conversations with friends, we've discussed a growing sense of cynicism about the state of the world. As we delved deeper into these discussions, I began to wonder whether this negative outlook has always been so pervasive or whether it has been amplified by our increased reliance on virtual communications during the pandemic. It might be possible that the algorithms behind platforms like Facebook, which curate and prioritize content in our newsfeeds, have contributed to this trend.

This paper examines the ways in which social media shapes our understanding of the world and ourselves through the lens of ontological design, which is concerned with designing the human experience through objects based on the principles of hermeneutic phenomenology. Ontological design posits that by designing objects, spaces, and experiences, we are architects of the human being itself.

If the technologies we use drive the essence of our being, then what forces influence our perception of ourselves and reality, and in turn, our agency? With the increasing connectedness brought by social media, how does this technology constrain our ability to shape our own perception of reality, and how might it affect the limits of individual agency?

Scope

The theory of ontological design is concerned with reality construction, and it is explored through the philosophies of hermeneutics and phenomenology exclusively. I reviewed selected writings about Gadamer and Heidegger's philosophy of hermeneutics and phenomenology to the extent of reaching an understanding of the key concepts and frameworks used in the theory of ontological design. I then reviewed selected works within ontological design for an understanding of the theory, though there is a breath of literature about the theory as well as applications of ontological design that could not be reviewed in the time frame of this project.

Social media is a type of online platform that enables people to share and exchange information, with key features that include user-generated content, the sharing and distribution of information, the ability to connect with others, and access to news and content. As social media continues to evolve and expand, new features may be developed to expand corporation's influence and reach to attract and retain more users and engage them in more pervasive ways. Since social media is a form of media, I bridged existing research of the media effects on reality construction and applied the findings to my analysis of social media. An understanding of agency is established through readings about Bronfenbrenner's ecological systems theory framework.

This report is concerned with understanding the effects of social media on human perception achieved through the application of frameworks of ontological design towards social media and humans, and through examination of the extent of influence that social media has on our agency through a systems framework that leverages Bronfenbrenner's ecological systems theory. The findings reflect an initial exploration of this subject matter through the synthesis of data points and research findings. Ultimately, the findings not only achieved a view of social media's influence on understanding reality, but also on human agency. To conclude the report, I present a list of principles for the agency of people on social media, which is a guide and starting point to begin to reimagine the design of social media.

Research question

To explore the effectiveness of social media's influence on individuals, the following research questions are articulated. They form the foundation of this paper, providing a strategic direction that shapes and informs how the research is to be developed.

Primary research question

How does social media impact our perception and agency, and what might we do about it?

Secondary questions

- How does social media shape our understanding of reality?
- What are the limits of agency under the influence of social media?
- What interventions can be implemented to effectively combat the harm caused by social media?

Methodology

The research deployed the following approach to achieve a comprehensive understanding of social media's influence on human perception and agency through the application of ontological design theory, synthesis methods, articulation of insights and strategic principles, while offering practical recommendations for addressing the harms associated with social media use.

Literature review

A literature review achieves an understanding of existing knowledge and research about the research areas of ontological design, agency, and social media. It identifies gaps and areas that require more exploring, theoretical models and frameworks that can be used to understand social media's impacts on humans. The literature review allows me to build a foundation of knowledge to inform my subsequent analysis.

Ontological design

I conduct a literature review of prominent writings from Heidegger, Gadamer, Willis, and Fraga to understand the theory of ontological design, the foundational building blocks of ontological design which are dasein and the hermeneutic circle, and how has ontological design been leveraged in practice in examining Escobar's theory and work in autonomous design. This is done with the goal of understanding the subject matter so that I can begin to investigate social media and reality perception through the application of ontological design theory.

Agency

A literature review of Adoni and Mane's *Media and social construction of reality* will unpack findings of how media affects how people perceive the world, how it influences their actions, the potential impacts on the wider society, and implications for agency. Furthermore, a review of LaMendola and Krysik's capability model and application of Bronfenbrenner's ecological systems theory will help me understand what it means to have agency, and what are the different levels of influence in which agency and wellbeing can be affected. The goal of this section is to understand how people can lose their agency, and to determine whether if influencing the perception of reality can lead to complacency and the perpetuation of the loss of agency or harm.

Social media

I investigate the rise of extremist ideologies and hateful content on social media platforms, particularly during the pandemic when people relied on the internet and social media for connection and information. I cite various examples of social media's harmful influences on society, reviewing the link between social media and the rise of forms of hate such as antisemitism, and radical ideological conditioning. The goal is to highlight how social media as an artefact can be a powerful tool used to influence a person's perception of reality, and the real-world consequences that it leads to.

Synthesis

I leverage frameworks for synthesis; the hermeneutic circle and the iterative inquiry to analyse social media by examining its potential effects on humans as subjects through the exploration of patterns, insights, and relationships. Synthesis allows me to integrate diverse perspectives and theories into a cohesive framework for understanding social media as a tool of influence on humans.

The hermeneutic circle

I use Heidegger's concept of the hermeneutic circle to understand the nature of the relationship between people and social media. The hermeneutic circle is used to articulate the process of understanding between context, which is a person's understanding of reality, and text or phenomenon. I follow the circular back-and-forth dialogue between social media as phenomenon and context as people's opinions and understanding of reality, supported with evidence. This analysis highlights how social media as a technology ontologically designs its users and their perception of reality.

Iterative inquiry

Looking beyond the nature of the relationship between social media and people, I examine the wider context by leveraging the iterative inquiry framework. I look at the groundwork laid by the Chinese government to exert control over its citizens in all aspects of social life through the analysing the effects of WeChat within the different levels of influence on Chinese and Chinese diaspora, their relationships within their communities, and wider society, as well as how WeChat as a platform effectively contributes to the control of individuals and a society. The choice to use WeChat as a case study is an attempt to highlight the extent of pervasiveness and control that is amplified by social media when a social media platform and the citizens who use the platform are subjects of an authoritarian regime, and how it can be used to manipulate and coerce people for the benefit of the ones who hold power.

Insights

To complete my report of social media's influence on human perception, I conclude with insights about social media and how it influences human perception. I start with key findings about how social media is effective at influencing people. Next, I unpack how social media can be used to amplify the effectiveness of tools for the control and manipulation of people and societies. Finally, I examine why might social media as a dangerous technology that causes harm in many societies around the world, continues to operate as usual. The articulation of insights sheds light on the harms caused by social media and can help to raise awareness about the issue and motivate action to address the harms caused by social media.

Design principles

To conclude this report, I distill my findings into actionable principles to be considered to ensure the agency and wellbeing of societies to combat the harm caused by social media when profits are prioritized instead. I follow up with examples of how these principles can be applied, catering to individuals, corporations, and policy makers who are interested in harm caused by social media. This can help guide policy and practice in a way that promotes positive outcomes and effective ways to mitigate and eliminate potential harm.

Chapter 1: Subject matter

Social media has become an integral part of modern society, and its influence is undeniable. With the advent of platforms such as Facebook, YouTube, WeChat, and others, social media transformed the way people communicate, interact, and digest news and information. Beyond just communication however, social media's influence has had a profound impact on people and societies. This paper reviews the function of social media platforms where users have access to content such as news, images, and ideas, and the ability to share and interact with it. This includes social networks such as Facebook, Twitter, Discord and WeChat, Multimedia sharing platforms such as Instagram and YouTube, discussion forums and bulletin boards such as Reddit and 4chan.

Ontological design presents the opportunity to view social media as a medium that designs people. The theory posits that the design of technology, systems, and structures shapes the way that people interact with the world around them. In the case with social media, then this means that these platforms shape people's behaviours, beliefs, and perceptions.

Leveraging the lens of ontological design theory can be useful in achieving an understanding of social media's influence on human perception and agency in several ways. Ontological design theory emphasizes the relationship between humans and things, or phenomenon, which can provide insights into the nature of relationships. It also emphasizes the role of context, as it recognizes the importance of context in shaping

human experiences and behaviour. By examining the context in which social media is used, including the external environment of cultural and social norms that shape how people are interacting with these platforms, can further shed light on how social media influences people. Ontological design theorists also recognize the role of power and control in shaping the design of things, which can be manifested in forms such as the ownership of corporations and technology, the concentrated power of a state, or the ways in which technology influences individuals and societies. Power influences the design of things, which in turn intentionally or unintentionally perpetuate existing power structures (Fraga, 2020). We end Part I by examining the work of Arturo Escobar's Designs for the Pluralverse as a case study that highlights the application of ontological design towards social good. Escobar builds a strong conceptual framework with insights from various scholarly and activist fields, centred on constructing multiple modes of existence, to provide a mechanism towards tackling urgent global crises such as climate change and social injustice through a dominant development paradigm (Murphy, 2019a).

We establish an understanding of agency through LaMendola and Krysik capability approach that leverages Bronfenbrenner's ecological systems theory, and then we review the role of media in the construction of an individual's understanding of reality from Adoni and Mane, and what are the implications to their actions and ultimately for the wider society. This chapter sets up the groundwork to begin our analysis of social media's impact on our understanding of reality and agency.

Part I: Ontological design

Ontological design is a philosophical and theoretical approach to the design of objects, systems, and environments. It emphasizes the role of ontology, which is the study of existence, in shaping the act of designing, the designed, and the designer.

Ontology is the study of existence, which is concerned with the existence of things (including humans) in the world. To illustrate an example of ontology's exploration, it examines what is 'truth', how true is an observation about reality, and who gets to decide the legitimacy of what is 'real'? (Moon & Blackman, 2017)

Foundations

Many ontological design theorists associated with ontological design base their theories on the works of Martin Heidegger and Hans-Georg Gadamer in hermeneutic phenomenology. Hermeneutic phenomenology is a theoretical approach grounded in a constructionist paradigm of understanding reality. Constructivists believe that truth and reality are not singular or universal, that humans 'construct' their understanding of the world through experience and reflection (Pilarska, 2021), in comparison to positivists, who believe that there is only one reality, which can be measured, and external independent existence of things outside the mind, disregarding the lived experiences of individuals and subject matter (Patel, 2015).

Martin Heidegger argues, in his work: Being and Time, that human beings are fundamentally different from other creatures in the world, because they have the ability to be concerned with what it means to exist (Heidegger, summarized by Wheeler, 2020). Heidegger's notion of 'Dasein' provides a framework for understanding the subjective and lived experience of individuals and the way in which they exist in the world. In his view, Dasein refers to the way in which human beings are always "Being-in-the-world", and that they are essentially defined by their relationship to the world and their own existence (Heidegger, summarized by Wheeler, 2020). Heidegger's Dasein is a central building block to the theory of ontological design and is referenced in the works of ontological design theorists Willis, Escobar, and Fry. Heidegger's definition of Being as always situated in the world means that the understanding of existence is always related to the environment around us (Heidegger, summarized by Hartnett, 2021).

The hermeneutic circle is a fundamental concept in hermeneutics that refers to the idea that understanding is a circular process in which interpretation and understanding are constantly informed and re-informed by one another, thus, rather than through the layering of beliefs on top of foundations, understanding becomes clearer and clearer through presuppositions and interpretations (George, 2021). Similar to Dasein, the hermeneutic circle describes the role of interpretation as part of the human experience, emphasizing the interdependence between the interpreter and the object of interpretation. In the context of ontological design, the hermeneutic circle is relevant because it highlights the relationship between the parts (in this case, social media) and the whole (people's understanding of the world). Social media shapes people's understanding of the world, and people's understanding of the world shapes their use of social media. According to Heidegger and Gadamer, it is not possible to achieve understanding without presuppositions. In hermeneutics, Heidegger refers to pre-suppositions as anticipatory structure, while Gadamer as prejudices, and other ontological design theorists as a framework of understanding shaped by culture, history, and language (Grondin, n.d.). In other words, our pre-existing beliefs and biases, which are shaped by culture, history, and language, form the foundation for our interpretation of the world around us. The processing of the information encountered on social media, are filtered through these pre-suppositions, which can reinforce or challenge them.

The hermeneutic circle trap

According to Jean Grondin in his paper: *What is the hermeneutical circle*? both Heidegger and Gadamer embrace the inescapable circle of interpretation, not escape it, but that it should be used to further our understanding of understanding.

For Heidegger, understanding is guided by anticipations, and that these anticipations can be sorted through a process of interpretation: *Auslegung* and elimination of "false" anticipations, which are imposed through inauthentic sources such as tradition or dominant discourse: *Gerede*. He believes in the importance to acknowledge the existence of these anticipations and to strive for a more accurate and authentic understanding of things (Grondin, n.d.).

Similarly, Gadamer views the prejudiced nature of our understanding as that which makes it possible in the first place. These prejudices are rooted in time and history, with an effective history at work behind every effort at understanding, which is an understanding of which we may not be fully aware. Gadamer also argues the need to acknowledge presuppositions, to distinguish between adequate and inadequate presuppositions, however, he also recognizes that every understanding of this distinction is itself subject to the hermeneutical circle (Grondin, n.d.).

Grondin points out however, the flaw in both Heidegger's and Gadamer's argument to augment understanding towards a more authentic one. For Heidegger, how can one rid of the "bad" or "false" presuppositions if one's understanding is always governed by presuppositions from within the hermeneutic circle, that already determine what is "good" and "accurate". Gadamer argues that understanding can be achieved through constant and ongoing reinterpretation, that the "right" anticipations can be achieved through an "open" mindset towards the real nature of things, but how, questions Grondin, can one achieve openness if they are always prejudiced? (Grondin, n.d.).

Ontological design

Anne-Marie Willis defines ontological design in the paper: *Ontological Designing* as characterizing the relationship between humans and their environment (Willis, 2006). According to Willis, to design is fundamental to being human, and that the act of designing is "far more pervasive" than designers themselves recognize. When we design, according to Willis, to deliberate, plan, or scheme is to prefigure our actions. The act of prefiguring is from the object onto the designed, therefore, we are designed by our designing (prefiguring) and by our designs (such as a tool or environment), in other words, according to Willis, "We design our world, while our world acts back on us and designs us" (Willis, 2006).

Willis emphasizes that Ontological designing is concerned with the hermeneutics of design, which is in the nature and agency of design. To recognize that not only designers, but *things* design. This theory, according to Willis, should support an argument for a particular way to go about designing, to leverage ontological design in today's context, especially to resolve issues of ecological unsustainability (Willis, 2006).

Heidegger's concept of *Dasein*, and Gadamer's notion of interpretation serves as the foundational view in Willis' ontological design theory as it provides a framework for understanding the relationship between the human being and the world. Willis describes ontological design using the interaction between human and a tool as an example.

Knowledge comes to be inscribed by being with the 'designing-being' of a tool, this in turn modifying (designing) the being of the tool-user. This extends the understanding of design beyond that which would normally be thought of, such as, the mental prefiguration of what is to be made and the pattern or template that guides making. (Willis, 2006)

Willis leverages the hermeneutic circle as a basis of her theory of ontological design, referencing Heidegger's definition it.

It is useful to think of the hermeneutic circle in three moves, taking the example of language. While we cannot think outside of language, this does not mean we are totally programmed: (i) we are born into and come to be human in language; (ii) we appropriate it, modify it, perhaps put words together in ways that they have not been combined before, encounter new situations which require new words; (iii) thus in appropriating language we also change it, and language-as-changed in turn acts back on us as language users. (Willis, 2006)

She explains that while we can't escape from the hermeneutic circle as we are always situated in it through historical context, we may appropriate, modify, and repurpose our world, affecting and changing the world, while it in turn acts back on us, and the cycle continues. And so, the designed go on designing. Willis suggests the notion that we are in complete control of our lives and surroundings is a convenient but untrue assumption, but by acknowledging so, the influence of design becomes more apparent, and potentially more powerful. Perhaps then, by acknowledging the inscriptive power of design, we may be better able to navigate the ways in which we are influenced by technologies around us (Willis, 2006).

While Michaela Büsse in: *What are the politics of ontological design?*, commends Willis and her contemporaries in fundamentally widening the definition of what can be considered designed, she however critiques Willis' notion of ontological design as lofty and abstract, pointing out that what practice looks like is not addressed- such as how ontological design is informed by, and how they address different bodies differently (Büsse, 2022). Büsse also critiques that Willis' ontological design presents the framework of humans and being-in-the-world in an unrealistic vacuum that does not consider the weight of external forces (social, material, political). Büsse notes that while design may have the power to shape what it means to be human, the majority of people are unable to exercise this ability.

The notion of power

For Fraga, power is a key idea in ontological design. Fraga states that reality curation is self-defence, that although people are subjects of design, it is possible to "design ourselves back". He describes human and the external systems and objects one interacts with as one, together as subjectivity, which can be designed internally and externally the same (Fraga, 2020). He draws on the philosophies of Michel Foucault about power, where power is a relationship between things, such as the power dynamic between a kitten and a child. Power exists not only at an institutional, centralized level (e.g. a government, the media) but also on a disseminated level such as social conventions or interpersonal levels (e.g. vocabulary choice, the way letters arranged on a keyboard) (Fraga, 2020). Power also exists in discourse, "habits of language, forms of representation, codes and conventions that produce culturally and historically localised meanings" (Fraga, 2020). These discursive elements "create a regime of truth, a system that governs what passes as truth" (Fraga, 2020).

Context, according to Fraga, frames how people relate to truth, and truth, being a thing of this world, can be designed. Fraga, citing Nietzsche, articulates that power- not truth- is the variable that determines which interpretation of reality is true. Fraga indicates that discourse manipulation have been historically used by figures in power such as kings and high priests, to maintain their hold on power by shaping the narrative of reality (Fraga, 2020).

Fraga leaves us with a compelling argument: that design mediates power relations. Design can create powerful moral narratives in which people understand power relations. He emphasizes that interpretation is never objective as interpretation happens through moral and discursive filters. Design decisions, according to Fraga referencing Bruno Latour, always carry a political charge, and especially when design claims to be politically or morally neutral, it tends to perpetuate the existing order of power (Fraga, 2020).

Challenging the dominant systems of power

In this section, we will explore the application of ontological design through examining the work of Arturo Escobar. By examining Escobar's work, we may gain an understanding of how ontological design can be applied towards advocating for better futures of underserved communities and the environment.

Arturo Escobar is a Colombian activist-researcher who has worked with organizations fighting against extractivism, and promoting post-development and post-capitalist transitions (*Arturo Escobar*, 2013). In his recent book, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*, Escobar advances the application of ontological design by exploring a range of case studies in the third world. Through ontological design, and the re-orienting of the dominant ontology of how society perceives the concept of development, there is a potential to foster more sustainable forms of development by respecting the diversity of human cultures, and the ecological world.

Escobar analyses that the fields of developmental policy and planning, and design are political technologies of patriarchal capitalist modernity, which are key elements of today's globalized world. He leverages ontological design to situate progress from the lens of the underserved communities of the third world (Escobar refers to these communities as the Global South), weaving the notion that patriarchal and capitalist systems are detrimental to these communities as well as the ecological world. Escobar builds a strong conceptual framework using ideas and theories from different scholarly and activist fields, such as design theory, political ecology, political ontology, and cognitive science, demonstrating that these ideas are compatible with each other, while constructing his theory of the reconfiguration of design (Murphy, 2019b). He argues for the recognition of multiple situated worlds with the goal of enabling cultural and political autonomy in non-western societies. (Escobar, 2017)

To mobilize his vision, Escobar argues that for design to be used to its full potential to transform the world into a pluralverse, it is necessary to begin by reorienting it to become attuned to the relational view of the world through ontological design (Escobar, 2017). He describes human (western, capitalist) dominance(patriarchal) over nature and communities as a dualist occupation- an "ontological occupation of local relational worlds. He critiques dualisms, which are binary oppositions structuring the way we understand the world— such as nature/culture, subject object, and most famously in context of colonialism, developed/developing, implicating these distinctions in the perpetuation of existing power relations, and domination of certain groups over others. (Escobar, 2017)

Escobar presents transition visions that provide input for his transition design frameworks which are the degrowth, commoning, and post-development movements and the notion of *Buen Vivir*. The degrowth movement critiques capitalism, the economy, growth, and development. As economic growth is unsustainable, it is the main force behind

the destruction of ecosystems. The movement advocates for radical societal transformation, a change of culture, and the decentring of the economy within societal structure (Escobar, 2017). Escobar describes the commons, which are resources and assets such as forests and water to urban spaces and cyberspace, as a concept in which these resources are held and managed collectively by a community rather than by individuals or corporations. Degrowth and the concept of commons is key to the deconstruction of western dualities, which are the individual and the economy, and striving for the reintegration of the economy with society and nature, connecting people with their communities and the environment. (Escobar, 2017)

Escobar discusses how the paradigm of growth has been persistently deployed in the domain of development, which he argues as the mechanism for the cultural, social, and economic production of the Third World by the West. In the 1980s, cultural theorists coined the concept of "postdevelopment" which aims to displace the term development from its centrality in representing third world regions, create discursive spaces to end development as it currently is defined, and finding alternatives to development. (Escobar, 2017)

Finally, Escobar describes the notion of Buen Vivir, and the rights of nature. Buen Vivir, which is a movement that grew out of indigenous struggles, subordinates economic objectives to the criteria of human dignity, social justice, and ecology. (Escobar, 2017)

Escobar evolves ontological design through the visioning of transition design frameworks with an emphasis on placemaking and collaborative practice, grounding transitional design in an ecological vision. (Escobar, 2017)

Autonomous design

Escobar outlines how the concept of autonomous design relates to the struggles of grassroots communities to defend their territories and life worlds. Autonomous design, then, would take place to empower communities under conditions of ontological occupation, repression, and violence. Escobar describes the way of autonomous designing to strengthen the autonomy and self-determination of communities, through design's collaboration to realize their own goals and identities, needs, and desires, and to have the ability to shape their own environments as experts in their own ways of living, rather than being imposed by external forces.

Escobar's vision for a pluralverse calls for a fundamental shift in how we think, design, live, and lays a pathway towards moving beyond the confines of patriarchal capitalism, and towards a more collaborative and economically sustainable future for all humans, and the environment.

Escobar's vision of design been described by Murphy as abstract and idealized. Since Escobar draws heavily on design theory, Murphy doubts the ability of his ideas to hold up when confronted with the messiness and complexity of actual design practice (Murphy, 2019b). The design theory upon which Escobar draws to establish his work follows a particular ideological angle, which limits the way Escobar understands its role. This in turn, may lead to the need for the rethinking of Escobar's autonomous design framework with a more grounded perspective to take into consideration the broader influences of societal factors (Murphy, 2019b).

Chapter summary

Ontological design is a framework that helps us understand that while we act upon the world, in turn, it acts back upon us. We learned about the foundation of ontological design through hermeneutic phenomenology, dasein and the hermeneutic circle. Through the theories of ontological design, we learn that one cannot escape the hermeneutic circle, that understanding is always confined within since we are products of our environment, and the environments are the products of us.

Ontological design examines the role of objects on humans and recognizes the powers at play. According to the theory of ontological design, power is exerted upon societies by shaping the very way in which reality is understood and constructed. Design, articulated by Fraga, mediates power. Through the design of things— words, concepts, spaces— ontologies are constructed and reinforced, perpetuating social hierarchies and power relations, enabling the continuation of the structures in power. Escobar draws on this notion to describe power in the form of a modernity based on an ontology rooted in the western notion of development; economic growth, dominance, and individualism, which have been devastating to indigenous communities and the environment.

Ontological design provides an opportunity to re-evaluate and challenge the status-quo, as Escobar has done so in his concept of the pluralverse, which recognizes the diverse ontologies and perspectives of different communities and cultures, challenging the western notion of development to promote social and environmental justice.

Social media is a crucial aspect of our designed world that has come to shape our daily lives in profound ways. While the theory of ontological design provides a framework for understanding the impact of technologies on our lives, the question of agency in the face of external influences remains unanswered.

What are the forces of social media that act upon people? If people are always situated in the designed world which acts upon them, is it possible to understand the layers of influence, the role our objects play, and how we perpetuate the existing order? To what extent may we reach a closer, authentic understanding of the external forces that influence people?

In the next chapter, we shift our focus to the notion of agency to investigate the ways in which agency can be impacted or taken away to gain a better understanding of what it means to have agency in our designed world. Through this exploration, we can then begin to uncover the dynamics between ontological design, power, and agency, and how social media mediates these interactions and in turn, shape our world.

Part II: Agency and the effects of mass media

The idea that media plays a significant role in shaping our perception of reality is not a new concept in media and cultural studies. Adoni and Mane's *Media and the social construction of* reality provides foundational insights in this area, presenting the notion that the media is not just a reflection of reality, but an active participant in creating it. LaMendola and Krysik's capability model and application of Bronfenbrenner's ecological systems theory contribute to our understanding of agency, and the different levels of influence that can affect it.

Human agency and ecological systems theory

People are now living in an era of accelerated change towards an information society, where information is becoming a central resource and driver of innovation and progress, with the proliferation of mobile devices and communication technologies, and an expansion in the scope of its technology applications in the public sector (LaMendola & Krysik, 2013). As a result, LaMendola and Krysik argue for a different ontological approach, or a shift in our fundamental understanding of reality, and the need to address the ethical issues and challenges that arise from the increasing use of information and communication technologies. A philosophy of information as a fundamental constituent of reality. This shift acknowledges that information is not just a product of human activity, but that it also has a role in shaping reality as a fundamental and pervasive aspect of our existence. (LaMendola & Krysik, 2013)

To evaluate human agency, LaMendola and Krysik leverage a capability approach (LaMendola & Krysik, 2013) which emphasizes the importance of human capability as the freedom from and the freedom to, such as to avoid deprivation and undernourishment, ability to become literate, protection from mortality or early mortality, political participation and freedom of speech. In summary, agency refers to the ability of humans (and non-humans such as plants, animals, machines) to act intentionally, to make choices that can affect its surroundings.

The capability model serves as the grounding principles of LaMendola and Krysik's application of Bronfenbrenner's ecological systems theory as a framework towards the understanding of the scope of human agency through the identification of different strata, or layers of influence with consideration of forces and actors from the individual to societal levels, experienced through direct and indirect interactions (LaMendola & Krysik, 2013).

LaMendola and Krysik suggest that agency is influenced by the relationship between the various actors (human and nonhuman) using Bronfenbrenner's four main levels of environmental influence:

Microsystem: The immediate environment in which a person interacts directly with (e.g. family, work, friends)

Mesosystem: The interrelationships among different elements of the microsystem (e.g. the connection between a person's workplace and the community)

Exosystem: The environment in which the person is not directly involved but can still affect them directly (e.g. a child's parent's workplace, the media, the government)

Macrosystem: The broader cultural, economic, and political systems (e.g. cultural values, social norms, economic systems) (LaMendola & Krysik, 2013)

This approach can be used to inform the design and implementation of public service implementations, or in the modelling of subjects for analysis, as well as encourage participation of the actors involved across the various levels of the system (LaMendola & Krysik, 2013).

The concept of freedom and agency is fundamental to our understanding of human rights, and the ability to make choices that shape our destinies and communities. However, what if the system in which we exist, such as our political, economic, and social institutions, are designed in a way that curtails our freedoms and choices, leading to a loss of agency? In these situations, people might feel that they are making their own choices, and exercising their agency within the system, when in reality, their choices are already limited by the system's design.

The effects of media on reality construction

Let's examine how the mass media may contribute to human conditioning. According to Adoni and Mane, the social construction of reality is a dialectical process between people and culture, which includes the mass media, in which people are both the creators, and subjects of the social world in which they create, meaning that the way people perceive and construct reality is shaped by their own actions and the social world around them.

Adoni and Mane reference the neo-marxist argument that the mass media reinforces the dominant ideology thereby ensuring the stability of the existing social order. Through the study of people's perceptions of social conflicts of varying distances to a person's direct experience, Adoni and Mane found that perceptions of social conflicts that are far removed from one's own life, were more influenced by mass media portrayals than perceptions of social conflicts in which they had direct experiences. This finding strengthens the claim that the mass media does influence one's understanding of the social world.

This analysis is further broken down through a holistic approach to the process of social construction of reality. According to Adorno and Horkheimer cited by Adoni and Mane, the function of the mass media is to perpetuate the existing social order, rationalizing it through ideology and thereby its legitimization. With reality distorted, the media expresses the ideology of the ruling class, with the goal to manipulate people into developing a "false" sense of understanding of the immediate social environment, values, and belief systems. (Adoni & Mane, 1984)

According to Noelle-Neumann cited by Adoni and Mane, as the media creates the false sense of the dominant opinions, it may cause individuals who may disagree, to withdraw their opinions from the rest of society for fear of rejection and isolation. This in turn, affecting the individuals' behaviour, as well as the way they interact with the system (e.g. through voting), succeeds in the altering of society to acquiesce to its goals. (Adoni & Mane, 1984)

Chapter summary

Our understanding of reality is largely shaped by mass communication technologies that influence how we perceive the world around us. It plays a role in reinforcing the dominant ideology and perpetuates the existing social order of a society, which may lead to a loss of agency for individuals. Our agency is further influenced by the relationship between various actors through different levels of environmental influence.

In the era of the television, mass media exerted influence on people through controlled broadcasting of content to the masses, having access to millions of people's attention. In a world where social media is readily available at our fingertips, on demand, which provides instant gratification and connectivity, what does the concept of influence look like?

If there is a lack of a dominant ideology, or culture in the discourses on social media, there lies potential for the spread of misinformation due to the lack of a shared understanding or reality. In the absence of a shared narrative, it can be challenging for individuals to determine what information is accurate and reliable.

In the following section, we will the interplay between the individual and social media, which may lead us to begin to make sense of the influence it wields and the fragility of human perception.

Chapter 2: social media's designing of people

Social media is a powerful platform that gives voice and mobilization to constructs that can undermine freedoms and existing power structures while engaging the full participation of its unsuspecting users. Its power is evidenced by the example of Russian agents with a malicious purpose to sow distrust in target communities, or simply by opportunists who create fake news to earn money from engagement (Jacoby, 2018a). The outcomes of these hostile actions have dire outcomes for communities and democracies from the spread of hate, polarization of communities, to the disempowerment of citizens in repressive regimes (Jacoby, 2018a).

The social media landscape

Navigating the online world can be a chaotic and disorienting. Your attention is pulled in many directions, your outrage engineered, to sway you towards a particular viewpoint, to make a purchase, or alter your thinking for better or worse. Issues require orienting; a construct that supports and help formulate one's opinion. Constructs are of opposites, and people are polarized. How can we navigate this battleground? Can one understand the system at play and what is at work in manipulating us?

Over the years, it's been found that the internet and social media contributed to the exponential rise in extremist ideology. Social media accounted for 27% of these cases between 2005 and 2010, and that number increased to 73% between 2011 and 2016. (Letzing & Berkley, 2021). As the pandemic began with many people under lockdowns beginning in 2020, the internet and social media became even more pervasive, when people with suddenly an abundance of free time and free attention, relied on internet access to connect with their peers, their communities, and to access entertainment.

One indicator of the rise of hateful ideology on social media is prevalence of, and increase in, antisemitism. To highlight the influence and power of social media for hate (racism, sexism, homophobia, religious extremism), the Anti-Defamation League (ADL) examined Twitter to gauge the prevalence of antisemitism between 2017 to 2018. It counted 4.2 million antisemitic tweets that were posted and re-posted by 3 million accounts (*Quantifying Hate*, 2018). During the (currently ongoing) coronavirus pandemic between 2020 and 2023, the ADL mapped a significant increase in Americans who harbour antisemitic beliefs, with some data points, measured at the highest level in decades (*Antisemitic Attitudes in America*, 2023). Social media corporations promised to crack down on antisemitism, but they took no action to remove a staggering 84% of antisemitic posts, whether by unwillingness or inability (Shivaram, 2021).

Antisemitism that proliferated on social media led to the perpetuation of radical ideology that culminated in violence against Jews in Israel and the diaspora communities worldwide (Hagen, 2022). Perhaps even more troubling, is the growing deafening silence of apathy in the wider society (Abdul-Jabbar, 2020). Haunted by the words "a crowd gathered" in the captions of photographs and video footage exhibited at the United States Holocaust Museum, Jews worry where present day indifference towards injustice may lead us (Kleinrock, 2022).

Radicalization of all ideologies have shown monumental consequences, such as the January 6 United States Capitol attack. Far right ideology has grown in influence on mainstream politics and news in the United States. Radical ideology is so dangerous, that the American far-right is believed by experts and policy makers as a severe threat to the country (Perliger, 2023).

Social media has contributed to the rise of extremist ideologies and hateful content, and as more people turn to

these platforms for information, entertainment, and connection, they become vulnerable to manipulation. The prevalence of antisemitism is just one example of the harmful effects of social media. This section leverages various modelling tools to understand the effects of social media. Synthesizing research and data on this topic can help us understand the systems at play.

<u>Approach</u>

Given the significant role of social media in the dissemination of extremist and polarizing content, I analysed a few case studies of radicalization to understand the pervasiveness of social media.

First, I leverage the hermeneutic circle to understand how phenomenon (social media content) can affect individuals through the process of ontological design using the hermeneutic circle framework. Next, I use a systemic design tool, the iterative inquiry framework that leverages Bronfenbrenner's ecological systems theory to unpack the layers of influence against an individual to understand the full environmental context. I flesh this section out with Adoni and Mane's findings of media on reality construction to explain how one's behaviour might be influenced by social media. Finally, I summarize the main findings regarding social media's effectiveness at empowering authoritarian governments. Together, I aim to construct an understanding of social media's power and effectiveness, how social media leverages systems of influence on people, and what are the key issues that arise from social media technology.

The hermeneutic circle: the effectiveness of social media

Figure 1 provides a visual representation of the hermeneutic circle in action, illustrating the ongoing dialogue between context and phenomenon in the process of understanding. The figure demonstrates the movement from context to phenomenon, and from phenomenon to context, reflecting the circular nature of this interpretive approach to understanding.

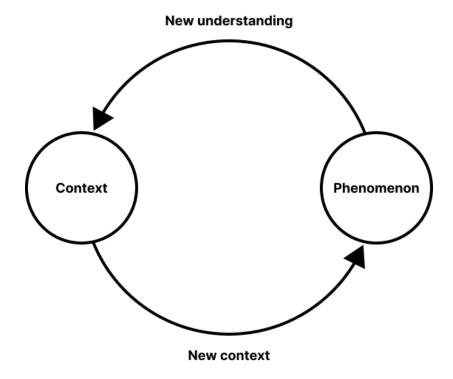


Figure 1. A visualization of Heidegger's hermeneutic circle which describes the process of understanding. Adapted from Wikipedia's "Hermeneutic Circle" (n.d.). CC-BY-SA.

Using the hermeneutic circle, we can analyse the nature of our experiences of social media as a process of interpretation, that involves a back-and-forth movement between our preunderstandings (prior assumptions, beliefs, values) and the content (content and actions) being interpreted. Through mapping out this dialogic process, we observe how our internal world shapes our interactions and understanding of social media, while social media in return influences our sense of who we are.

According to personal construct psychology, people are constantly assessing constructs which are bipolar in nature, such as good and bad. When they encounter new experiences, they will adjust their definition of good/ bad (Mason et al., 2022). Social media is effective that it has the potential to rapidly expose people to new ideas at a pace that matches their willingness to accept them (Matthews, 2022).

How ontological design works in this context, is that through design by phenomenon (social media content) encountered, at once or over time incrementally, a person adjusts their opinions and understanding of their context, which is in this instance, their understanding of themselves (e.g. values) and the nature of reality (e.g. the state of society) and phenomenon (e.g. an event). Through the ability to understand a person's context (political alliance, gender, race, location, social network context, etc.), social media has the power to design and influence people, such as to act in a certain way (e.g. purchasing a product or voting), or see the world in a certain way (e.g. radicalization), by catering to one's pre-conditioning through the strategic delivery of content.

Iterative inquiry: The effects of social media

Using research from Adoni and Mane regarding media on reality construction, LaMendola and Krysik's capability model, and Bronfenbrenner's ecological systems theory, I charted the effects of WeChat on Chinese-speaking Canadians and residents who may have ties to friends and family in China, as well as those who depend on Chinese language sources for news and information. WeChat's power is that it is a comprehensive and all-encompassing, tightly regulated and surveilled system, in which all Chinese citizens and diaspora depend on for essential services, for their needs, and to connect to their networks. I chose WeChat to showcase social media as a powerful technology that can be used to influence and oppress a society at large when controlled and leveraged by a powerful regime. Using the iterative inquiry framework, I attempt to break down the pervasiveness of WeChat by each layer of influence.

Figure 2 is an adaptation of the iterative inquiry framework (Van Ael et al., n.d.) that integrates Bronfenbrenner's ecological systems theory, Adoni and Mane's research, and LaMendola and Krysik's capability model. It maps the multilayered influences on human behaviour, decision-making, and agency in the context of WeChat.

The microsystem layer represents the WeChat platform in which a person performs tasks such as interacting with people, completing transactions, or sharing content. The mesosystem layer represents people's interrelationships among elements of the microsystem such as the connections between a person's contacts, group chats, popular influencers, and official accounts on the platform.

The iterative inquiry provides an additional framework to map *Context*, which is the system that is created to coordinate the processes and subsystems, *Function*, what are the activities the user needs to do, *Structure*, who and what elements are involved in the activities, *Process*, which the supporting processes of the system (Van Ael et al., n.d.). All work in synchronization to achieve the *Purpose* in each layer of the system.

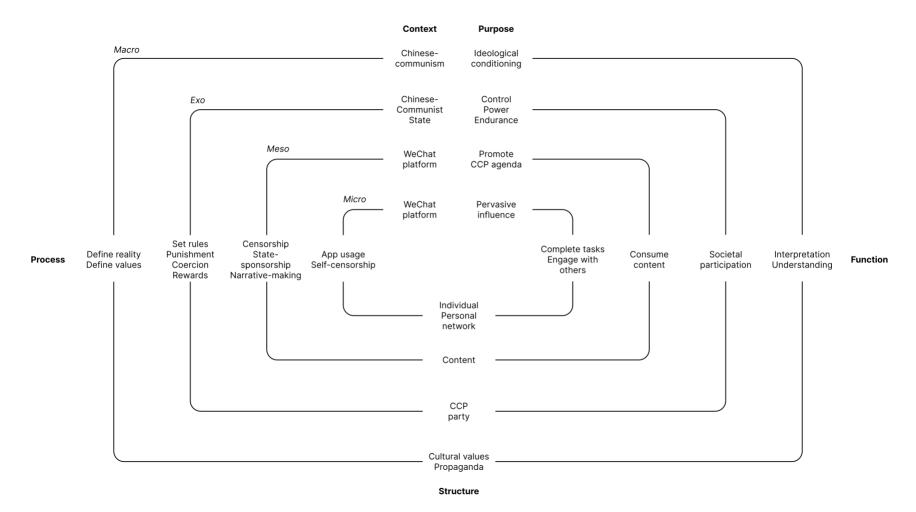


Figure 2. Iterative inquiry diagram leveraging Bronfenbrenner's ecological systems theory depicting WeChat's influence on people at four levels of environmental influence: microsystem, mesosystem, macrosystem, and exosystem. It also breaks down each layer by Function, Structure, Process, Context, which I have additionally adapted to include the Purpose of the system. Adapted from Van Ael et al. (n.d.). CC-BY-NC-ND.

Microsystem

Context: WeChat platform Purpose: Pervasive influence Function: complete tasks, engage with others Structure: Individual, personal network Process: App usage, self-censorship

The platform and the individual are at the heart of the microsystem. In China, WeChat is so pervasive, that it is extremely inconvenient to navigate without it. WeChat supports bill payments, money transfers, gifting, obtaining loans, and access to public or private services through direct integration with bank accounts, individual messaging and group messaging, blogging between friends and family, access to public content such as a live video feeds and channels. (LTL Language School, 2021)

The people of the microsystem, the Chinese diaspora and their communities may encounter or promote Chinesecommunist ideology. They might encompass the ideology to a certain degree themselves, are connected to someone in their community who fosters the ideology, or are connected to someone in their community who do not are physically living in China and are subject to the rules and regulations of the system of communist China.

When communications are being surveilled and censored, Chinese citizens who disagree with the state-sponsored point of view, or have grievances with the government, would carefully self-censor what they share online, and ensure that the opinions they profess should align with the state. Citizens have recently been encouraged to snitch on their peers should they express dissenting opinions or criticisms of the state through a national hotline (Muzaffar, 2021). It the dominant opinion is perceived to be a pro-China one, which reinforces one's pro-China stance, or lead to an exclusion of the ones who aren't.

Furthermore, WeChat and social media can be a tool for pro-China supporters to mobilize to coordinate to suppress dissent, within China and on foreign soil (Wang, 2019).

WeChat, throughout all the levels of influence, provides the platform at the heart of all activity. In the Microsystem, we look at the individual and the immediate systems in which they interact. Through WeChat, users are enticed to use it to access connection to others, while algorithms display popular and relevant user-generated content. Media and conversations are subject to censorship (Yang, 2020). Furthermore, within the ranks of the company, are party representatives (McMorrow, 2015) to oversee and enforce the operation and structure of the platform to meet the needs and goals of the government.

The purposes of the microsystem in this instance, are omnipresence, which ensure that Chinese citizens and diaspora are using the platform, and societal pressure, motivation, or persuasion to conform to the dominant ideology. This is achieved by the connecting of individuals to communities who encompass or promote pro-party worldviews. The processes involved in the success of the purpose is through the interaction with the platform for daily tasks, interaction with people in one's circles, the sharing of state-sponsored media, the fear of backlash or isolation if one criticizes the regime, and censorship of provocative terms, news, or user-generated media.

Mesosystem

Context: WeChat platform

Purpose: Promote CCP agenda

Function: Consume content

Structure: Content

Process: Censorship, state-sponsorship, narrative building

In April 2013, after Xi Jinping's appointment as president, an internal memo was circulated about the "ideological sphere", describing its state as an "ideological battleground". It includes seven forbidden topics, a set of principles to be followed; western constitutional democracy, "universal values" (quoted in the document), the notion of civil society, neoliberalism, the western concept of journalism, historical nihilism, and the questioning of reform and expansion (or party objectives). These principles are intended to promote ideological leadership, suppress opposing ideologies, control the media, and control public opinion on the internet. (Lemaître, 2022)

The content, which may be state-sponsored and produced media or user-generated material, is a key artefact of which the structure of the system (WeChat) promotes, consumed by the audience. WeChat as a platform allows and encourages access to this content, presenting this alongside relevant content of interest. The content of course is subject to censorship, preventing people the freedom to learn about or speak about controversial issues the Chinese Communist Party (CPP) sees as a threat to their power. State-sponsored messaging disseminated to their intended audiences ensure that the party narrative is enforced, allowing the achievement of its goal which is to promote its agendas.

Exosystem

Context: Chinese-communist state Purpose: Control, power, endurance Function: Societal participation Structure: CCP party Process: Set rules, punishment, coercion, rewards

The exosystem layer of influence is the state; the CCP which governs China, its citizens, and those who are connected to them. The CCP has a membership of 96 million members (Grünberg, 2022), with Xi Jinping at the top. Following Xi, the party's leaders are suspected to comprise of loyalists to Xi (Maizland & Albert, 2022).

Party members enjoy great benefits, such as holding top positions in government, military, education, state-owned corporations, healthcare, and banking (McMorrow, 2015), but to be able to gain esteemed membership, individuals need to pledge loyalty to the party, are subject to evaluation to ensure alignment of values and to Marxist ideology, and display obedience (McMorrow, 2015). Xi Jinping's leadership, the Chinese government has tightened its control over media coverage in and demanding absolute loyalty from state media ("Xi Jinping Asks for 'absolute Loyalty' from Chinese State Media," 2016). This is part of a broader trend in which the CCP is asserting its authority over all aspects of Chinese society. Dissent and public anger is seen as a threat to the party's legitimacy and stability (Bandurski, 2015). In response to incidents such as the Wenzhou train crash in 2011, which showed the potential for social media to shape public opinion and empower dissent, the government has cracked down on social media influencers (such as journalists, academics, or business people) who engage in dialogue against the party agenda (Bandurski, 2015).

This control extends beyond social media to the internet, with China's censorship apparatus blocking access to websites and foreign platforms to stifle dissent and control the sharing of information (Economy, 2018). The government also enforces censorship through laws and regulations that citizens and corporations to adhere to, further consolidating its control over the dissemination of information (Economy, 2018). These measures reflect the CCP's ultimate goal of maintaining a tight grip on power and shaping public opinion to reinforce its authority.

In addition to media control and internet censorship, the CCP also engages in elite capture, which involves the manipulation and control of key individuals in positions of power both domestically and globally to promote its agendas (Alliance Canada Hong Kong, 2021). This highlights the CCP's ambitions to expand its influence beyond its borders and maintain its grip on power through various means.

WeChat enables the state to exert its influence not only within the country, but beyond its borders, through the mobilization of its nationalistic supporters, propaganda dissemination, surveillance, punishment and intimidation (Alliance Canada Hong Kong, 2021).

The goal of the system is to exert control within itself and outside and maintain power through the continuity of itself, setting rules for the Chinese society, its members, setting terms of engagement for outside parties, coercing individuals to exert influence, and punishment to enemies and threats. The key functions involved that bring purpose to the system is for Chinese citizens to participate in society, and for outsiders to associate with CPP party members and Chinese citizens.

Macrosystem

Context: Chinese communism Purpose: Ideological conditioning Function: Interpretation, understanding Structure: Cultural values, propaganda Process: Define reality, define values

The Chinese-communist ideology is the cornerstone of the macrosystem. Ideology is a blueprint that is a set of beliefs and perspective for one to interpret the social and political world. Ideology works to perpetuate the dominant political

power, social structure, or a dominant way of thinking (Brown, 2017).

Ideological education is used to shape the values and beliefs of citizens, especially young people, in line with the ideology of the CCP. The government controls the education system and uses it to promote the values of socialism and Chinesemarxism while suppressing alternative perspectives, consolidating its role in different areas of society ("China Schools," 2021).

Chinese-communist Ideology is a set of cultural values and norms which permeates throughout each system of influence. It defines the vision and direction of the CCP, dictates the agendas to be undertaken to support and enforce itself, it resonates throughout the material distributed to the people via the media, and it is the worldview in which people see the world, that drive their actions.

Key actions that support the endurance of the Chinesecommunist ideology and the ideological conditioning of the individual starts by ontological design, which is the defining of how reality should be understood. A key tool that reinforces the party's goals and objectives is narrative or propaganda. Chinese-communist ideology also reinforces one's notion of accepted and forbidden behaviours, with emphasis on obedience to the state. To activate this system simply requires people to interpret reality.

Chapter summary

The CCP has laid out a comprehensive set of groundwork in complement to social media to exert control over its citizens. This includes ideological training for youth, tightening its grip on traditional media coverage, cracking down on dissent online through the punishment of individuals, creating regulations for corporations to adhere, censoring the internet, elite capture, with the goal to stifle dissent and maintain control over information sharing.

WeChat is an example of the power of social media, and the danger it can pose to society when controlled by the powerful. Social media has allowed the CCP to amplify its powers, as a new tool to control the spread of information and public opinions in China. Social media platforms, pervasive in Chinese society, allow the government to monitor citizens, censor content, and spread propaganda to shape public opinion and control the narrative around issues like social unrest, public anger, politics, and human rights. Moreover, social media has enabled the government to mobilize its supporters outside of its borders.

Chapter 3: Findings

To summarize my research, I distil the following insights into how social media exerts influence over people. Firstly, it is evident that social media has a significant impact on our perception of reality, and I unpack how elements of social media make this so. Next, we review how social media has created a new form of curating power and influence, enabling the disempowerment of people and communities. Finally, we unpack the reason why social media can continue with business as usual despite the dire consequences of this technology across the world.

The influence of social media

Social media holds a strong influence and control over individuals in how they spend their time, how they digest most of their information about the outside world, how they perceive information and reality, habit creation, and how their information is mined and used against them. People can't simply abandon social media platforms because they are so pervasive in their lives.

No control over displayed content.

The newsfeed is the central feature of social media. Users find updates from their peers, content they subscribe to, but also content that they don't subscribe to such as advertisements and popular media. The feed is so customized to a user's preferences that it is optimized to keep users on the platform and to keep coming back.

The common way in which content appears on the newsfeed is determined by popularity. The content that has the most engagement is displayed at the top of the newsfeed in an endless scroll. After scrolling for a certain amount of time, the newsfeed will refresh itself, so the social media corporation is always in control of the prioritization of content which the user is seeing.

Users have no control over what an advertiser wants them to see on social media platforms. They cannot opt out of viewing ads or fake news. Fake news is targeted to users through advertisements. Polarizing media is popular, driving high engagement from users through the like button, sharing, and viewing, which further amplifies its reach (Jacoby, 2018a).

Inability to understand true nature of content.

Content on social media appear to the user in the same format, and in the same space— in the newsfeed. Illegitimate sources of news can set up their posts and pages in a way that mimics authentic news organizations, giving the illusion of legitimacy. Foreign agencies such as the Internet Research Agency in Russia create propaganda to sow division between people in a targeted society. Third parties may create fake news, just to drive engagement, for profit. (Jacoby, 2018b)

In a landscape where the central source of information for people is littered with an amalgamation of legitimate news, fake news, and where popular opinions are amplified all presented in the same manner, it would be cognitive overload for a user to further work to decipher the true nature of the content.

No control over own data.

Information is collected about people that paints a picture of who they are. This makes people susceptible to influence the more advertisers and bad actors know about their audience, to better cater content to them to consume.

In the case of WeChat on citizens in China, it becomes an invasive database of an individual. Documented in the platform are their recorded thoughts and conversations, their physical movement, and personal and professional connections and affiliations. It also enables the ultimate surveillance capability when leveraging AI to find and identify people who may hold dissenting opinions and discussions.

Addictive interface.

According to Nir Eyal, author of Hooked: How to Build Habit Forming Products, technology has become compulsions and full-fledged addictions. Social media platforms are designed to create impulses in people through subtle psychological tricks— such as a like button— to keep people engaged with platforms. Craving is engineered in people, to come back to platforms when they feel a craving, which can be triggered by boredom, loneliness, frustration, or confusion. (Lewis, 2017) They are then encouraged to stay with features like the infinite scroll in which there is never-ending unpredictable and interesting content, seamlessly with hardly any interactive friction. (Rupp, 2022)

Social media platforms are addictive in that they create a false sense of urgency through notifications, engineering habits that reward users such as receiving new content with the pulldown-to-refresh feature, or dopamine effects when engaging with people and consuming pleasurable content, or feelings of anxiety such as fear-of-missing-out or the need for social validation. (Huntrods, 2021)

Addictive interfaces ensure that people will constantly engage with the platforms, whether they mean to or not, with negative consequences: lost time, limited ability to focus, and

possible lowered IQ, in a state of constant distraction even when their devices are turned off. (Lewis, 2017).

Pervasive in our lives.

Social media enables people to connect with peers, a platform to be heard, and to learn information about the world. With social media on their smartphones, people may easily be connected to social media at all times of the day when they may be busy or when they have a moment of respite.

In countries like the Philippines and Myanmar, not only do most Filipinos use Facebook, but is also the dominant platform for people to find information and news (Jacoby, 2018b). In China, it is extremely inconvenient for citizens and visitors to navigate the physical society without WeChat as it is integrated in so many aspects of daily life such as ride hailing, payments, and social interactions.

It isn't simple for people to remove social media in their lives because without social media, people lose access to their networks and the knowledge associated and distributed through social media platforms.

The power of social media in amplifying tools of control

Social media has become a powerful tool for authoritarian governments to exert control over their citizens. By leveraging the widespread use of these platforms, these governments can closely monitor their citizens, censor content, and spread propaganda to shape public opinion and control the narrative around sensitive issues.

Social media compliments the comprehensive set of ground work laid out by these governments, including ideological training, control over media, cracking down on dissent, regulating corporations, and censorship of the internet, serves to stifle dissent and maintain control and order.

It can enhance the effectiveness of techniques of control, such as propaganda, surveillance, mobilization, and foreign interference.

Propaganda.

Social media platforms enable governments to shape public opinion by controlling the information they see online. They can use social media to promote their own narratives and discredit opposing viewpoints.

In the Philippines, Ferdinand "Bongbong" Marcos Jr's election win in 2022 was seen by many proponents of free speech and democracy as a catastrophe(Coronel, 2022). It highlighted the dangerous power of misinformation campaigns on social media. The Marcos family were well known for corruption, the theft of US\$10 billion dollars from the Philippines, and a brutal martial law over 35 years ago that led to human rights abuses such as arbitrary arrests, forced disappearances, torture, and killings of 70,000 people including human rights defenders, opposition leaders, and journalists ("How Marcos Jr weaponised social media to rewrite history and win power," 2022). However, Marcos' campaigns over the years have been built on a mastery of social media starting from 2014 which helped his family dynasty's rehabilitation of its image through rewriting history (Heijmans, 2022). As a result, his voters believed in the false picture of stability and economic growth during the Marcos reign, and the lie that the Marcos' instead were victims of injustice (DeGuzman, 2022).

Despite the best efforts of journalists and fact checkers (Coronel, 2022), the Marcos election win highlights the stronger allure and power of misinformation to people. This exemplifies the fact that in the face of sophisticated storytelling and propaganda, truths and facts are ignored. Perhaps the most dangerous tool, propaganda enables oppressive powers to wrangle and maintain their grip on power while placating the oppressed people with a false view of reality.

Surveillance.

Social media platforms allow authoritarian governments with an effective way to monitor their citizens. In China, for example, the influence begins in the very structure of organizations that operate within its borders in which they must adhere to the CCP's mandates and with a party representative planted within.

Governments can use social media to monitor and track what people are saying online, identify who they are, who they interact with, and their activities with the goal of suppressing dissent and instilling the fear of punishment in people should they express criticism of the government (Wang, 2019).

Surveillance works to prevent people from sharing the truth about injustices, rallying support, or even voicing an opinion. On social media, where the majority of people connect, the absence of dissent further isolates and disempowers those who desire justice and change.

Mobilization.

Social media can be used to mobilize supporters by powerful governments and organizations to suppress opposition through targeted harassment campaigns. This can happen within an authoritarian regime's borders or inside.

In the Philippines, during the reign of former president Rodrigo Duterte, journalists and fact checkers experienced incessant harassment by his administration and supporters. Maria Ressa, journalist and CEO of the Rappler news organization, was a main target of Duterte's targeted harassment campaign (Ressa, 2022). The harassment would be set off each time her team would publish information about the Duterte government's corruption, in which they would respond with the publishing of attacks on social media against the news organization as well as the individual journalists themselves (Ressa, 2022). These attacks would then be amplified over social media through paid actors or fervent supporters which worked to further discredit the organization and sow confusion amongst the public (Ressa, 2022). Polarizing content that gain popularity is further amplified through social media platform's algorithm increasing the audience reach (Ressa, 2022). Years of lies repeated over and over eventually paved the way for Maria Ressa's arrest, amid an unflinching audience (Ressa, 2022). While Maria Ressa and the Rappler gained worldwide acclaim abroad for journalistic integrity in the face of legal threats, the majority of people at home dismiss the outlet as "biased, negative, and unfair" (Esguerra, 2022).

Mobilization is effective outside a country's borders as well. On Canadian soil, pro-democracy supporters and protesters of Hong Kong have been targeted by agents and supporters of the CCP through propaganda online (Somos, 2021). Pro-China counter-protesters regularly show up to harass and drown out Hong Kong protesters. CCP actors harass protestors through taking pictures of protestors for identification purposes, which further instill fear, and other forms of harassment online and offline (Somos, 2021).

Foreign interference.

Social media allows governments to spread their message to foreign audiences, shaping international opinion. In Canada, China has been known to extend its influence to control favorable coverage online via WeChat and in traditional media sources to ensure the loyalty and support of the 40 million Chinese diaspora. This feat is achieved through the purchasing of media corporations, lobbying politicians to ban media corporations critical of the CCP from covering diplomatic events, lucrative rewards in advertising revenue or direct payments in exchange for favorable coverage, in what is noted as a global war for public opinion (Gillis, 2010).

China has been accused of political interference through a method known as "elite capture" in which they target provincial and municipal governments, who are less aware with foreign affairs as those on the federal level would be, with lucrative business and investment opportunities that benefit the local community (Alliance Canada Hong Kong, 2021). Furthermore, some politicians are allegedly under the influence of China, such as Ontario's past minister Michael Chan. CCP actors have been known to infiltrate community WeChat groups to influence Chinese-Canadians in electing politicians in favor of closer ties with China. (Alliance Canada Hong Kong, 2021)

No responsibility is taken over social media's problems.

In conducting my research and analysis on social media and its influence on people, was a notable lack of responsibility taken by the social media corporations themselves. While social media corporations under the influence of authoritarian states, such as WeChat, actively participate in the suppression of people's liberties, social media companies in the west however, which are part of free and democratic societies, value growth and profits over social responsibility, deny responsibility in the issues caused by their technology, are not susceptible to liability, and put the onus on the user to navigate false news and influence.

Growth is more important than social responsibility.

Facebook's mantra from the beginning was to connect all the people in the world (Jacoby, 2018a). Along the way, Facebook needed to be profitable, and eventually found their edge in advertising through its high userbase as well as the ability to cater advertisements to users in a way which makes them more susceptible to influence through the vast amount of personal data it knows about its customers(Jacoby, 2018a).

Keeping customers glued to their platforms, directly translates to more profits. The most polarizing and divisive content happen generate the most engagement, is then amplified to bigger audiences for even more engagement (Jacoby, 2018a). Keeping people on platforms with polarizing content, and then earning revenue through targeted advertisements is the underlying system in which social media corporations like Facebook make vast amounts of profits. In other words, it is against their interest to curb people from using the platform.

While Facebook and other platforms have amped up efforts to fight disinformation, they are grossly inadequate in dealing with the enormity of the issue (Jacoby, 2018a). Activists call for a dramatic overhaul of how they run their businesses, but while profits continue to improve year over year, they continue to run in the style of business as usual, while the societal vulnerabilities caused are not prioritized (Jacoby, 2018a).

Social media corporations deny fault and are inadequate in handling issues they cause.

When Facebook announced the newsfeed, Mark Zuckerberg excitedly claimed that they will transform the news industry and the way people read their news. Facebook however, regularly employs its label as a technology entity to avoid taking editing responsibility (Jacoby, 2018a).

After many misinformation scandals, Facebook has always downplayed their role (Frenkel et al., 2018). For example, during the United States election run in 2016 the led to Donald Trump's presidency win, Zuckerberg claimed that trolls and fake news were only a small fraction of the content on Facebook. Zuckerberg also expressed doubt that people can be swayed by fake news, and rather, the voting outcome should be more indicative of the people's true voice (Jacoby, 2018a). In 2018, the UN accused Facebook ad other social media platforms as responsible for inciting violence against Rohingya Muslims in Myanmar. Facebook's response about the steps they had taken is that they had been focused on fighting the issue in Myanmar as early as 2015, that they are working with local organizations to "get ahead" of similar issues (Jacoby, 2018b). It is clear however that Facebook's efforts were not enough, and according to a UN report, Facebook was "slow and ineffective" at tacking misuse while providing an "enabling environment" for the proliferation of human rights abuses (Beake, 2018).

Social media corporations are not held responsible for the dissemination of malicious content.

While traditional media companies are held accountable for their journalism with responsible editing, social media companies like Facebook are not. To monitor the amount of user generated data is a monumental, if not an impossible task. Due to this reason, Section 230 of the Communications Decency Act is in place to ensure the feasible operability of technology companies. It is meant to protect them from liability based on the content uploaded by third parties or its users (*Department of Justice's Review of Section 230 of the Communications Decency Act of 1996.*, 2020).

Therefore, social media companies are not responsible for harm caused, such as in the case of a teen suicide as a result of cyberbullying (*Can Social Media Companies Evade Accountability?*, 2023), or if users on Yelp left a bad review that led to a restaurant closing (Morrison, 2020). While there is bi-partisan effort in the US to repeal or reform this act (Morrison, 2020), doing so will change the internet as we know it, for better or for worse, when social media companies are forced to take responsibility for the harm caused by people using their platforms.

Accountability is in the hands of the user already dependant on social media.

In the Facebook Dilemma, when questioned about accountability when something disastrous happens on Facebook, Monika Bicker, a Facebook executive, made the claim that the Facebook users themselves will hold them accountable by leaving the platform should they feel unsafe. However, the platform continues to tell the world, and market to users that they are in control, through staffing efforts, and creating dedicated teams to curb misinformation and abuse. By downplaying their role in crises, creating an illusion of control in combatting abuse, Facebook is ensuring that people will continue to trust using these platforms.

When social media is deliberately designed to make it difficult to discern between content that should be trusted and what shouldn't be trusted, how will users know what to believe or what is the nature of the battlefield? When users rely on Facebook for information, to connect with people, or if their habits make them crave social media, it is very difficult to simply close their accounts and leave the platform. At this point, users have no other choice but to use Facebook and other forms of social media to access meaningful engagement with others.

Chapter summary

Social media has a profound impact on people, shaping how they spend their time, perceive information, and form habits. The newsfeed, the central feature of social media, prioritizes content based on popularity and paid features, leaving users with little control over what they see. This results in the spread of illegitimate news sources that mimic authentic news organizations, making it challenging for people to differentiate between real and fake, objective and malicious content. When social media platforms collect data from people, they further disempower citizens to become susceptible to influence. Furthermore, the addictive interface creates impulses in people, making them crave and return to the platform, ensuring social media's pervasiveness.

Moreover, social media has become a tool for governments to monitor citizens, censor content, and spread propaganda to shape public opinion. It amplifies the effectiveness of techniques of control which includes propaganda, surveillance, mobilization, and foreign interference. As a result, governments can leverage social media platforms to shape public opinion, monitor citizens, mobilize supporters to suppress opposition. Evident in the Philippines, social media has been leveraged to employ these tactics which led to the election win of Ferdinand "Bongbong" Marcos Jr, highlighting the power of misinformation campaigns on social media.

Finally, the lack of social responsibility among social media corporations is apparent. While social media platforms under the influence of authoritarian states suppress people's freedoms explicitly, social media corporations in the west prioritize growth and profits over social responsibility. They deny responsibility for the issues caused by their technology and put the onus on users to navigate false news and influence. They are further not held responsible for the dissemination of malicious content, and leaving accountability in the hands of the users who are already dependent on social media and susceptible to influence.

In conclusion, social media is a powerful force in the lives of people and societies. Its pervasive nature, power, and lack of accountability have far-reaching implications on our society. To ensure the safety and interests of people are protected, it is important to consider the impact of social media, and the potential for abuse.

Chapter 4: Principles for agency in the age of social media

Social media is a powerful tool that can design the way we think, how we act, and one that can ultimately influence our societies. With such power, it is imperative that social media corporations and governments take measures to protect the wellbeing of individuals and the societies in which they live.

To achieve this, I've developed a set of principles based on the research and findings so far in this report that support individuals to have the ability to exercise agency when using social media.

Each principle identifies which problems articulated in the previous chapter is addressed and includes suggested actions that can be taken by individuals, social media organizations, and policy makers to bring to life and mobilize this vision.

Principle 1: Discourage addiction and social media dependency.

Addiction to social media has been engineered to keep people engaging with platforms constantly from compulsions to addictions (Lewis, 2017). Platforms should enable people to access information without the employ of emotional manipulation. Features like endless scroll, or reels that string together endless content and advertisements across users' screens deprave users of choice (Lewis, 2017), preventing people from disengaging with platforms. Empower people by promoting autonomy and a healthy relationship with social media.

Key problems addressed

- Addictive interface
- Susceptibility to propaganda
- Focus on growth over social responsibility
- Pervasiveness of social media

Suggested actions for individuals

- Encourage the use of alternative forms of communication, entertainment, and information finding.
- Make choices to prioritize protection against addiction
- Put pressure on policy makers and social media organizations to combat social media addiction and dependency.
- Protect yourself from influence through education about propaganda, media literacy, and critical thinking

Disengage from social media platforms by using alternative forms of communication, such as end-to-end encrypted platforms like WhatsApp and Signal, eliminating unnecessary interaction with a newsfeed. People can leverage news aggregator platforms such as Feedly to build their own feed from trusted information sources, so that they can always control the nature of content and the way in which it is consumed, reducing the reliance on social media's feed, and its consequent influence.

When engaging with social media, people can make deliberate choices that prioritize safeguarding against addiction with strategies such as: setting limits on usage and taking breaks from social media regularly; identifying content that triggers addictive behaviour or negative emotions, such as posts from certain individuals or topics that tend to cause stress and anxiety; engaging in other activities that provide fulfilment such as spending time with loved ones; and setting personal goals and priorities for social media use, regularly assessing whether they align with their well-being and values.

Another way to combat social media addiction and dependency is through putting pressure on policy makers and social media organizations. By raising awareness about the negative impacts of social media addiction and dependency, people can help educate others about the risks associated with excessive social media use, enabling individuals to become more aware of their own habits and take steps to manage their dependence. By applying pressure on social media companies, individuals can influence platform designs and features to enable healthy usage.

Education about propaganda, media literacy, and critical thinking can equip people with skills to recognize unhealthy behaviours, harmful content, and resist influence tactics when encountering harmful information. Media literacy can equip people to analyse, evaluate, and verify the information they come across to determine the credibility and reliability of information and sources. Critical thinking can also help people to approach content with a more intentional mindset, such as questioning their own assumptions, openness to other perspectives, and also taking on a critical lens about their own social media use, to help them make decisions on how to navigate content encountered on social media and how to better control their own usage.

Suggested actions for social media companies

- Adopt policies and practices that account for the empowerment of people and discourage addiction
- Create visibility by tracking metrics that account for harm caused
- Design and implement features that promote user autonomy and establish healthy boundaries for media use

By prioritizing the protection against addiction, encouraging more responsible practices through policies, metrics that track harm, and new features that promote autonomy and establish healthy boundaries with social media, companies can help address the pervasive problem of social media, addiction and dependence, user susceptibility to propaganda, as well as growth's importance over social responsibility. By creating a positive and healthy experience for users, these companies can foster trust with their users. They can also better navigate risk, leading to long-term positive outcomes. By adopting policies and practices in favour of the empowerment of people, social media companies can innovate new and better ways to engage users, redefining the business model and relationship one that causes serious harm in many ways, to one that promotes well-being and autonomy. This can establish trust and build a loyal user base that values their commitment to responsible and ethical practices, leading to the longevity of the company in the face of changing customer needs and values.

Social media companies can leverage data to better understand the full picture of their impact. Tracking harm caused can help better equip organizations to recognize and respond to new and emerging threats, enabling them to effectively prevent harm and possibly mitigating reputational damage and financial repercussions to the company. Tracking metrics of harm caused can accountability for the people and community well-being, increased (and healthier) engagement, which can result in growth and profit in a sustainable way.

Social media companies can also design and implement features that promote people's autonomy. This can involve providing people with tools and resources to manage social media use, allowing people to define and customize how they interact with content and the nature of content to which they are exposed. By designing features that promote healthy boundaries and autonomy, social media companies can create a healthier and mutually-beneficial relationship with people, which can lead to increased engagement, positive feedback, and a stronger reputation.

Suggested actions for policy makers

- Regulate the deployment of addictive elements
- Provide educational and awareness programs to promote the healthy use of social media
- Provide educational programs about propaganda, media literacy, and critical thinking to combat misinformation

Regulating the deployment of addictive elements in social media can be effective towards reducing the problem of addictive interfaces. This can involve measures such as setting limits on the deployment of features like infinite scrolling, notifications, and auto-playing videos— all of which lead to compulsive behaviour and addiction. By regulating these features, policy makers can help people in maintaining a healthy relationship with social media while also compelling social media companies to aid in the well-being of their users, despite consequences to their bottom line.

By providing educational and awareness programs to promote the healthy use of social media is another way policy makers can address the problem of social media addiction and dependence. These programs can help people understand how social media platforms work and how to use them in healthier ways. Educational material can include information on how to manage time spent on social media, setting healthy boundaries, and how to avoid triggers that lead to addictive behaviour. With these resources, policy makers can empower people to become more discerning consumers of social media content, reduce addictive behaviours, and reduce their susceptibility to propaganda.

Furthermore, policy makers can invest in educational programs that teach individuals how to recognize and analyse forms of propaganda, enhance media literacy, and develop critical thinking skills. These skills can help people identify fake news and propaganda, reducing its impact on individuals and the wider society. Media literacy programs championed by policy makers can enable individuals to become better equipped to analyse and question content they encounter on social media, ultimately contributing to a more informed and credible public discourse.

Principle 2: People should understand the social media system.

People should have the tools to understand how social media monetizes user data when they use social media. This includes the algorithms and data collection methods used by platforms for profit. By better understanding the social media business model during everyday transactions, and how they partake in it, people can make informed decisions about how they use social media technology, and advocate for changes that better align with their interests, values, and needs.

Key problems addressed

- Inability to understand true nature of content
- No control over own data
- Susceptibility to propaganda
- Focus on growth over social responsibility

Suggested actions for individuals

- Education about how social media platforms collect, use, and trade your data
- Advocate for better transparency in how data is being collected and traded by social media companies

When people understand how social media operates, they can make more informed decisions about how they engage with these platforms, interpret content, and protect themselves from potential harm. Furthermore, understanding how data is collected, stored, and used can help people become more aware of the value of their data, thus advocating for how it should be protected from being collected and used. This can also raise the question of data ownership, and the extent of companies' rights to store and handle it.

By advocating for better transparency, people can play an active role in shaping social companies' practices, leading to greater accountability among social media companies towards the adoption of responsible business practices, and a more positive impact on society.

Suggested actions for organizations

• Adopt transparency in data transactions

Organizations can earn the trust of their users through the adoption of transparency in the transactions between users and the platform, which consist of the collection, usage, and trade of data between people, the platform, and third parties. By making their data collection and usage practices transparent, organizations can provide people with a clear understanding of how their data is being used and what they are agreeing to when they are using social media platforms. The transparency of the transaction can also help users understand the nature of their interaction with the content displayed, which can inform better decision making in how they interact with social media and reduce susceptibility to harmful influence.

Transparency in how data is handled can benefit corporations in helping to rebuild trust with people, essential to building a strong brand reputation and in fostering long-term customer loyalty. It can also mitigate risk of legal action and regulatory penalties, particularly in the wake of the social media scandals highlighted in this report. Finally, transparency can be a competitive advantage for companies that are able to demonstrate a commitment to user privacy and data protection.

Suggested actions for policy makers

• Require transparent data transactions between social media corporations and people

Policy holders can enact policies that require social media corporations to be transparent in their data transactions with users. This can include laws that require companies to provide clear and concise information about how user data is collected, used, and shared. Additionally, policy makers can require companies to obtain explicit consent for the collection and use of their data, in addition to providing users with the ability to control and manage those transactions.

By enacting policies that promote the transparent handling of data, policy makers can help individuals understand the social media system, and how their data is being used.

Principle 3: Have autonomy over what we see on social media.

The current business model of social media's allows for the purchase of people's attention. With the newsfeed as it currently is today, people have little control over what content they see amidst trending posts designed to continuously engage people and targeted advertisements. People should have autonomy over their attention on social media and be able to decide the type of content they want to see. With more autonomy, people can actively reduce encounters with harmful content.

Key problems addressed

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- Inability to understand true nature of content
- No control over displayed content
- Susceptibility to propaganda
- Focus on growth over social responsibility

Suggested actions for individuals

• Advocate for more control over what information is displayed, and how it is displayed

Being able to control what people see and how content is seen can improve people's mental resilience with less exposure to harmful or confusing content such as fake news and hate speech. It will enable individuals to feel more in control of their social media experience, reducing feelings of being overwhelmed or addicted to social media. Advocating effectively can involve creating awareness campaigns, joining social media activism groups, contacting elected officials to take action, signing petitions, or boycotting and divesting from social media companies that are doing harm.

Suggested actions for organizations

- Provide users with more options to personalize their experience on social media
- Offer transparent and clear content filtering options for users to manage their feeds

Having greater control over what information is displayed (such as types of ads) and how it is displayed (such as the placement of ads) will help people better interpret the nature of the content they view. More control can also include the ability to access more information about the content and the ability to verify sources and the intent of the content displayed, which can further empower individuals to better understand the nature of the content on social media, reducing their susceptibility to propaganda.

Some of these features may include the ability for better customization, stronger filtering options, and the option to opt out of third-party messaging and advertisements.

Suggested actions for policy makers

- Hold social media corporations accountable for the distribution of harmful content to users
- Develop regulations that require social media platforms to provide transparent and clear content filtering options for users to manage their feeds

Policy holders can develop regulations that require social media platforms to remove or effectively limit the spread of content that violates community standards. This will incentivize social media corporations to prioritize solutions to effectively reduce and prevent harm caused by its technology. Policy makers can also develop regulations that require social media platforms to provide transparent and clear content filtering options for users to manage their feeds. Both actions can compel social media companies to innovate new means of growth and enabling people to have more autonomy and control over their social media experiences, supporting their ability to combat the harmful effects. Principle 4: Protection and control over privacy and data in the hands of the users.

A person's privacy and control over their data shared with platforms should not be limited to personal data, but it includes metadata and how it is handled, governed, and exchanged. People should be able to determine the conditions in which self-generated data is to be traded and used for profits. Enabling people to be able to participate in the data economy results in more transparency in the transactions that social media platforms currently exclusively controls and profits from third party advertisers and actors.

Key problems addressed

- Inability to understand true nature of content
- No control over own data
- Susceptibility to propaganda
- Susceptibility to surveillance
- Focus on growth over social responsibility

Suggested actions for individuals

- Advocate for ownership of user-generated data (metadata) and control over how it is handled and traded
- Rally behind new forms of social media where users have control over their data and privacy, such as those in the Web3 space
- Limit the amount of personal information shared with platforms and consider using VPN and ad-blockers

Currently, user-generated data, or metadata, is fully owned and controlled by social media organizations to use and sell at their discretion. For example, an insight derived from user generated data on Facebook or Instagram cannot be removed or altered by the user, and further, it is used to categorize and group users, packaging users and their attention to sell to third parties. People have no control in this transaction. If people advocate for the right to own meta-data generated from their activities, they can therefore dictate how their metadata can be collected, used, and traded, forcing social media corporations to revisit the existing harmful business model. With an active role in the trade of their own data, people will be able to understand how their information is being used, view what parties are purchasing their information, and come to a better understanding of the nature of the content they are viewing, reducing their susceptibility to propaganda. Furthermore, with the ability to own and control their own metadata, people can better protect themselves against surveillance that relies on the collection and processing of information about people.

Currently, there are new forms of commerce and community in the Web3 space that enable the ownership and trade of digital assets. Rallying and supporting these initiatives can enable further investment and development of new social platforms and incentivize existing social media corporations to adopt new features that support people to own and control their own metadata.

Finally, people can consider limiting the amount of personal information (including metadata) shared with platforms through regular audits and manual deletion of stored information, if possible, as well as the employ of software such as VPN and ad-blockers. VPN software can better protect people from being monitored, and against data collection by creating an encrypted connection between a person's device and the internet. This encrypted connection hides a person's IP address and online activities from internet service providers (ISPs), websites, and third-party trackers, making it more difficult for them to collect data on the user (Why You Need a VPN, 2019). It's important to note, however, that VPN providers themselves may collect data on users, such as Facebook-owned Onavo Protect app which collected information on users despite claiming to protect and encrypt user activity (Vicente, 2021), so it's crucial to choose a reputable VPN provider.

Ad blockers are browser extensions that can prevent ads from displaying on web pages, thus, protecting user privacy. By blocking ads, people can further prevent the collection of their data by ad networks and reduce the risk of being tracked and targeted by advertisers or third parties.

Suggested actions for organizations

• Design a new form of commerce where users can have more control over their data

With increasing criticism and potential legal action from people and regulators, social media companies may need to revisit new forms of data trade which is more transparent and less harmful to society. As people become more aware of the value of their data (including both personal data and metadata), and the misuse and exploitation of it, trust in social media companies may continue to erode if social media companies don't act to better protect people and societies from harm. Furthermore, with potential growing pressure from people, and evidence of serious damage caused by social media to people and societies, lawmakers and regulators may establish new data privacy regulations that could impose fines and penalties on companies that fail to comply with evolving data rights and people's need for protection.

A new platform that enables users to have more control over their data, and possibly have the autonomy to participate in its trade, might offer a competitive edge to social media corporations. It can enhance trust and loyalty to the platform when users have more stake in its success, building stronger, mutually beneficial relationships with users. It may also provide new monetization opportunities beyond the traditional advertising model, for example, if people would be willing to pay for a service that enable monetization options or for control of their data and what they view on social media platforms.

Suggested actions for policy makers

- Strengthen laws and policies around data privacy and ownership to promote greater control and protection for people
- Encourage the development of alternative, privacyfocused social media platforms, such as decentralized platforms that leverage Web3 technology

When privacy standards are set and enforced, social media companies are more likely to prioritize user privacy and commit to effectively eliminate social harm, rather than just focusing on maximizing profits. One of the ways in which data protection regulations can be strengthened is by exploring the concept of metadata ownership. It can enhance people's privacy rights by giving them more control over how their metadata is collected and used. It can then promote greater transparency and accountability among social media organizations that collect and process metadata, leading to better protection against social harm like the surveillance of people when people can manage their information collection, and people's susceptibility to propaganda when people have an active role in the trade of their information.

Encouraging the development of alternative, privacy-focused platforms can foster competition and innovation in the social media industry and encourage existing platforms to improve their privacy practices. This can lead to better services for people, and more responsible behaviours from social media companies to meet new consumer demands. Principle 5: Profits should not take importance over protection from social harm.

People should be fully protected against harm caused by social media. The current model is not working to prevent harm caused to individuals and societies, and social media corporations can't keep up with the issues it causes (Jacoby, 2018b). While it is important for corporations to make a profit, it should not come at the expense of causing social harm. If current policies and procedures are failing to address the social harm caused by social media, then a significant transformation is needed in the industry's business model, with a renewed focus on prioritizing the well-being of people and communities.

Key problems addressed

- Inability to understand true nature of content
- No control over displayed content
- Susceptibility to propaganda
- Susceptibility to surveillance
- Mobilization of bad actors and harassment
- Foreign interference
- Focus on growth over social responsibility
- Denial of fault in harm caused
- Social media's protection from responsibility for harm caused, & accountability in the right place

Suggested actions for individuals

 Demand better protection against harm from social media platforms by raising awareness, rallying and mobilizing support, and lobbying government representatives

To effectively advocate for protection against harm from social media platforms, individuals and groups can begin through raising awareness and education about the harms caused by the technology and industry; the deceitful nature of content through the design of user-interaction and content; the denial from social media of harm caused while raking in profits; and social media's unbridled collection, use, and trade of user-data (metadata), manipulation of people's behaviour, and the wielding of influence over people and societies that lead to people's susceptibility to propaganda, enabling of foreign interference, harassment, and surveillance.

By bringing together like-minded people, groups can create a united front that will likely be taken more seriously by social media companies and policy makers. Mobilization could take the form of boycotts, holding rallies and protests in person and virtually through social media campaigns, raising awareness and gathering more support. By lobbying elected officials, people can directly influence policy decisions towards better protection against harm caused by social media. These actions can bring attention to their cause, and pressure social media corporations and policy makers to act. For individuals who live in oppressive regimes, employ the use of anonymous communication tools and VPNs when advocating against the harmful content on social media, especially if it has potential to attract government crackdown.

Suggested actions for organizations

 Prioritize the well-being of people and communities by adopting and implementing procedures that *effectively* combat social harm

It's time for social media corporations to prioritize the wellbeing of people and communities over growth and profits. The harmful effects of their practices have been exposed; people being left in the dark about how their information is collected, used, and sold; their lack of control over what they see on social media; susceptibility to influence in exposure to propaganda, surveillance, the mobilization of bad actors and harassment, foreign interference in their communities; social media's denial of fault in harm caused; and the continuance of these harmful practices with little regulation or oversight. People will no longer tolerate these harmful actions, and social media corporations need to adopt and implement procedures that *effectively* combat and eliminate social harm.

Current efforts are not effective in preventing societal harm. It is becoming increasingly clear that **social media companies rely on the harm caused to people and societies to remain profitable**. Social media relies on its pervasiveness in people's lives and people's addiction to its platforms to effectively wield influence; that influence is exactly what third parties are paying for.

To eliminate social harm, social media companies need to rethink their business and operating model. It's essential firstly, to recognize the powerful influence of their platform on people and societies. Next, it's essential to adopt companywide policies to effectively combat harm. Finally, if the success of social media companies is predicated on the harm caused to individuals and communities, then this practice must come to an end.

Social media corporations need to redefine and redesign social media platform's relationship with people, to one that prioritizes transparency of data collection practices, accountability for harmf caused, and the well-being of people and communities.

Suggested actions for policy makers

• Establish regulations and laws that require social media companies to prioritize the protection of people and communities from social harm

Establishing regulations and laws to address social harm caused by social media can be effective by providing a clear framework and guidelines for social media companies to follow. This can include penalties for non-compliance or incentives. Policy makers can also work with social media companies to create guidelines and set best practice targets to effectively reduce social harm, and provide support for research and development of new technologies that promote people and community well-being.

This approach ensures accountability and transparency for companies to be held accountable for their actions, and furthermore, it can send a strong message to the industry that social harm will not be tolerated. It can encourage a shift in the industry's business model, and an effective lever to creating a safer and healthier environment for individuals and communities.

Chapter summary

These principles can be used as a guide to enable change and promote agency in the age of social media. As individuals, we can hold social media platforms and policy makers accountable through advocating for policies and regulations that protect our privacy and well-being, as well as through our consumer choices. For policy makers, it is essential to recognize the impact social media has on society and take steps to promote social justice and equity when using social media. For organizations, taking steps to effectively reduce social harm is especially relevant in the face of public and regulatory scrutiny, where the longevity of social media brands are at stake. By following these principles, people, organizations, and policy makers can work towards creating a safe environment both online and offline for all people.

Chapter 5: Conclusion

In this research, I've sought to understand the ways in which social media affects people, by applying an ontological design lens to the medium. This framing highlighted the immense power that social media has over people; that it's an interface that compels people to interact with it constantly, that it can manipulate people through the engineering of a world view catered to each person, that it can be used as a tool to undermine people and communities around the world, and the fact that there are currently no meaningful interventions to undo the harm caused.

In chapters 1 and 2, we took a deep dive into the philosophies of hermeneutics and phenomenology which is the philosophy ontological design is based upon, and the theories of ontological design to achieve an understanding of what it is, and the power in which it holds. We reviewed Escobar's work in Designs for the Pluralverse as inspiration to what ontological design can achieve. We then learned from LaMendola and Krysik's work that agency refers to the ability to act intentionally and make choices that affect their surroundings. Their employ of a capability approach emphasizes the importance of human capability as freedom from, and freedom to. This understanding of agency is leveraged in our analysis of social media's effects on people. We then examine Bronfenbrenner's ecological systems theory and apply it to a case study of social media; WeChat, to understand all the levels of influence exerted upon the Chinese people. We also reviewed learnings from Adoni and

Mane's work, to establish an understanding the workings of media's effects on people and applied these insights towards our analysis of social media's effects on people's understanding of phenomena while also leveraging the hermeneutic circle as a framework to highlight how social media's effective at achieving this end.

In chapter 3, we the reviewed the conclusion of the report which culminated in three sets of insights that articulate the power of social media and its impact on humans. It is first established that social media is effective at influencing people due to several factors: that people have no control over the content displayed on their newsfeed, that people are unable to discern the true nature of the content they are viewing, that people have no control over how their own data is handled and shared, and that social media platforms are addictive and pervasive in people's lives. Next, the report establishes that social media can be a powerful platform to exercise the control over people and populations in concert with the following tools: propaganda, surveillance, mobilization to suppress opposition and dissent or sow chaos, and foreign interference through the shaping of international opinion and influence foreign governments. These tactics are illustrated through examples in the Philippines, China, and Canada. The last set of insights emphasized the failure to contain the damage caused by social media, and the lack of responsibility taken due to the following reasons: that social media corporations prioritize growth over social responsibility, evidence of social media corporations' denial of fault and inadequacy in dealing with the issues caused, that as technology companies, social media corporations are

protected from liability from Section 230 over the content in which its users post and becomes amplified to far-reaching audiences, and that accountability is somehow left in the hands of platform users, who are already dependent on social media.

Finally, at the end of this report in chapter 4, we established a set of principles that aims to bring back agency to people when using social media platforms through the following ways: discouraging social media dependence and addiction, enable an understanding of the social media ecosystem commerce platform for people, give people the choice in what content is displayed to them, give people absolute control over how their data and profiles are handled, sold, and shared, and the of protection of people and communities from social harm should be prioritized over all else— especially profits.

Further research

In conclusion, this research on the effects of social media on people has delivered important insights and recommendations. It has shown that social media is a powerful tool that can shape our reality and affect our agency in subtle yet pervasive ways, and highlights the need for a new approach to designing social media experiences that considers the harm caused, or potential harm caused, by these platforms and the limitations of current measures to combat it. The report's contributions lie in its application of ontological design frameworks and system mapping tools, shedding light on the effectiveness of social media in influencing people and amplifying tools of control. It also presented a set of principles for the agency of people on social media, which serves as a guide and starting point for designers, policy makers, and corporations to reimagine its design.

While this research provides an initial exploration of the subject matter, there is still much to be done in terms of understanding the breadth of literature on ontological design, its applications, as well as the exploration of new and innovative design solutions for social media. Future research could expand on the findings of this report to examine the effectiveness of the principles presented, and their potential impact on the design of social media experiences.

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Appendices

The appendices section of this paper provides additional information and resources that may be helpful for readers to further understand some of the topics discussed.

Appendix A: Escobar's autonomous design offers an elaboration of Escobar's autonomous design framework, summarized, as a reference for readers interested in exploring applications of ontological design theory.

Appendex A: Escobar's autonomous design

Escobar's framework for autonomous design involves a systemic approach to understanding and addressing community problems, with the results reflecting the complexities of the problem and the community's unique circumstances. This framework is based on the following presuppositions.

- 1. That the communities practice design themselves
- 2. Each design activity begins with the idea that the people of the community are experts and practitioners of their own knowledge and must examine their own reality.
- 3. Design begins with an inquiry about itself, in which the community investigates as part of the co-design process.
- Each design process involves the use of problem statements and possibilities (alternative courses of actions) which enable the designer and the community to generate a baseline understanding and agreement about the objectives of the design work.
- 5. The goal is the understand the complex reality of the community and the problem(s) it faces. The outcome if the design should result in the creation of a series of tasks, organizational practices, and criteria to assess to performance of the results. (Escobar, 2017)

Escobar's principles of autonomous design

Escobar's principles of autonomous design, as described in his book *Designs for the Pluralverse*, are aimed at empowering communities and shaping a pluralverse, where diverse forms of life and ways of being can flourish.

- The main goal is the realization of the communal, the created scenario for the community's self-creation and successful coupling with the external global environment.
- 2. Honours the history and traditions of the communities, and the and potential for auto-creation of new futures.
- 3. Promote non-traditional forms of organization that is non-liberal, non-state-centred, and non-capitalist.
- 4. Create a more liveable and sustainable environment that support community well-being.
- 5. Promotes self-organization and self-renewal of communities while recognizing the external social and technological actors.
- 6. Values the natural world to people and well-being with attention to creating ecologically sustainable environments.
- 7. Prioritizing commoning, or the trading resources without the involvement of the market or state and encourage social and economic objectives over growth and profits.
- 8. Aligns with the movements for Buen Vivir and the rights of nature, and related trends (degrowth, commons).

- 9. Create opportunities for diverse and unique expressions of life to flourish on the planet, a form of design for the 'pluriverse'.
- 10. Seek to enable humans to re-engage with nature in mutually beneficial ways, by creating opportunities for communities to reconnect with their ecological heritage.
- 11. Values the interconnectedness of humans, society, and nature, to maintain balance in the face of ecological collapse. (Escobar, 2017)

Escobar concludes that autonomous design is a response to the need for innovation and creating new ways of living which have arisen from the global south's communities which struggle for their self-determination and defence of their territories against external forces that threaten their existence. It seeks to support these communities in their struggle by articulating and developing their own solutions to their problems.