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Systems of Information Dissemination

How the control and manipulation of information helps to maintain control, influence and money

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NEWS

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1. INTRODUCTION & CONTEXT

Lockdowns, protests, "fake news" - one cannot help but witness the destabilization of democracies occurring around the world and wonder – why is this happening? We are living in one of the most polarizing times in history, from politics to public health, social media to foreign wars, every new and relevant event is filtered through the prism of our culture war. Inspired by the COVID-19 pandemic, our team takes a deep dive into the systems of information generation and how information acts as a commodity to further the interests of traditional media, big tech, government actors, and experts. We demonstrate how narratives are amplified by the agendas of these actors to maintain power, money, and control through clicks, views, and votes.

The purpose of this design brief is twofold: (1) to illustrate the way information flows and is influenced in the current state, and the resulting impact it has on public discourse. "The growing fragmentation of our public discourse and the embrace of opinion as fact has evolved from disturbing trend to direct threat to our country and people." (Simpson, 2021). And (2) conceptualize a future state where we question and explore what the future of shared truth could look like. "We cannot develop shared solutions to the many challenges facing our nation today if we cannot have a civil debate and shared understanding of the evidence upon which good policy rests." (Simpson, 2021).

A causal layered analysis was used as a tool throughout the research to gain deeper understanding of how trends and problems that are occurring in North America may appear disconnected from each other but may have causes connected to systemic factors. Understanding how worldviews perpetuate this litany helped to guide better understanding. The deep unconscious layer of myths and metaphors changed as our research took a more human centered perspective.

Examination of Information dissemination through the causal layered analysis helped us to triangulate the research question. The global scale pandemic surfaced findings of increased and accelerated mistrust in government and medical experts, increase prevalence of vitriol, and polarization among citizens. Early in the research, systemic causes included the role of moderators and producers on social media and the need to create competition for consumers due to attention economy by using persuasion algorithms and miscommunication. Throughout the research, discovery of deeper systemic causes included historical systematic oppression, unclear and inconsistent communications to the public impacting health literacy. The worldviews that support or legitimize the litany and system causes include beliefs that news is bias, western medicine has caused historical harm among populations and government and science can not be trusted to care for citizens. The deeper unconscious dimensions of the problem reside within the myth that all people are cared for equally by public health and their government. The deep myth that the more informed citizens equal more power and that lived experiences, history and culture are valued as expert opinion.

Through this journey, we arrived at one overarching research question:

How might we re-build a society with shared truth and trust between institutions of power and citizens?

Understanding that our chosen question is complex, multi-faceted and complex wicked problem to solve, the research team opted to break the question into subcomponents:

- What is mis/dis-information and why does it happen?
- ▶ How is information currently generated and proliferated?
- What are the implications of disinformation?
- What are the systems behind polarization?
- What are the implications of polarization from a human centered perspective?
- What are the implications when citizens lose trust in expert opinion, science and government?
- What does the future of shared truth look like?
- Who wins when democracy fails?
- What does the future of democracy look like?
- Why are people losing trust in institutions?

Terms of Reference

The report will reference key topics and popular phrases throughout our analysis and discovery and design phases. To help create a shared understanding of challenges currently faced today, it is important to identify and define these terms:



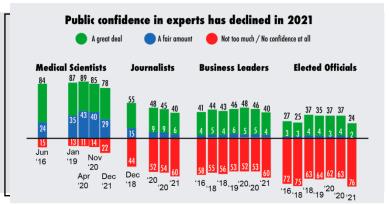
Disinformation Misinformation False news shared without False, misleading, or biased information that is deliberately knowledge or deliberate intent to mislead. Misinformation occurs created and spread. Information primarily on social media and manipulated to fit a narrative; through groups. propaganda. Fragmented / Shared Truth **Traditional or Corporate** Media Broadcast or print media conglomerates owned by billionaires or managed by a board of oligarchs

What is the challenge?

The legitimacy of institutions such as the media, the government, businesses, and experts, is an absolute necessity for a flourishing society and an inclusive, representative democracy. A lack of trust in these institutions and between citizens acts as a bedrock for civil unrest and the unraveling of the social contract. In this case, trust acts as the glue for economic progress and allows people to cooperate with one another (UN/DESA Policy brief, 2021). Trust in institutions has been in decline for decades and has been recently exacerbated by the topic of the COVID-19 virus. The inequal economic and social impact of COVID-19 cannot be understated. Perceptions of poor or corrupt government performance undermined the social contract and expedited the decline in institutional trust (UN/DESA Policy brief, 2021). As a result, COVID-19 is not just a pandemic but an infodemic that has been used by institutional actors to their benefit, leading to the unintentional result of eroding public trust.

BY THE NUMBERS:

Between 2020 and 2021 data indicates that trust has declined most significantly among journalists (-6 point drop), business leaders (-7 point drop) and elected officials (-13 point drop). The impact of COVID went beyond the death toll as the legitimacy of key institutions are now being questioned.



Trust in Government

The deterioration of trust has very real effects as governments struggle with compliance to public health mandates and their related protests. Poor government performance, scandals, and corruption undermine people's trust that public institutions are working for their and the country's best interests (UN/DESA Policy brief, 2021). Instead, the proximity to businesses of some political actors creates an additional layer of mistrust that their elected officials are in the pockets of private-sector actors. There is also a growing concern among experts that the crisis in public trust is contributing to extreme political views and in some cases violent conflict (UN/DESA Policy brief, 2021).

Trust in Media

Trust in news has been on a decline for decades (Fenlon, 2021) . A CBC article quotes "Trust in journalists is at a low worldwide, with one recent survey finding that 52 per cent of Canadians agree that most news organizations are more concerned with supporting an ideology or political position than with informing the public" (Fenlon, 2021). Additionally, the ad-supporting business model curbs journalists and commentators to embellish headlines and sensationalize stories for more views and attention. Greater attention means a greater audience for ad-paying dollars. Two-thirds of U.S. adults say they've seen their news sources report facts to favor one side (Shearer, 2020). Yet, readers generally tune into content whose biases knowingly match their own (Kolm, 2021). Viewers become loyal audiences to a narrative shaped by powerful actors and funders. No one knows what to believe as a result of these agendas and public trust in media is diminished greatly.

Trust in Big Tech

Big tech refers to Facebook, Apple, Amazon, Netflix, Google (FAANG) companies and any dominant technology companies in their respective market of Silicon Valley and the alike. Big tech has encountered a large public distrust after scandals such as Cambridge Analytica, data on the safety concerns on facial recognition and algorithms, persuasive design methods, and the gathering and exploiting of users personal data (Rosencrance, 2021). Big tech is motivated by getting users on platforms, maintaining their attention, and driving engagement (Harris, 2019). These tech companies use surveillance capitalism - the act of capturing surplus behavioral data to predict user behavior and serve up recommendations – and exploit this data to maintain their

monopoly (Rosencrance, 2021). This data is used to show content and ads that aligns with the users preferences. Through persuasive design methods companies feed on the attention of users (Harris, 2019). The user is kept on the app and their attention is used for profit, also known as the "attention economy". When attention is the mark for profit, tech companies are not worried about whether information circulated is true or false. In fact, an MIT study found that fake news spreads six times faster than true news (Vousoughi, 2018). Higher levels of engagement lead to more power for the big tech, but they act as tools to facilitate rapid spread of misinformation, the increase of polarization, and the breakdown of democracy.

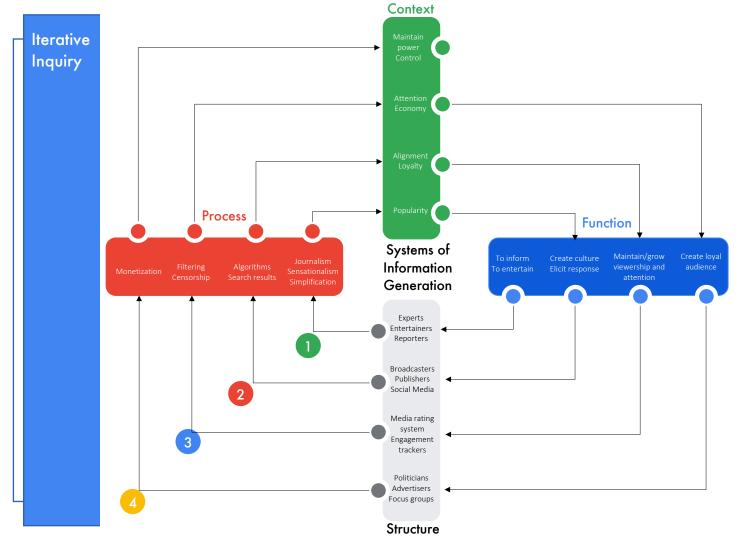
Trust in Public Health

The COVID-19 emergency saw a clash between the scientific method of public health and the need to communicate a rapidly evolving disease to the public. Trust in public health is crucial for compliance but officials had to communicate uncertain advice and seldomly even reverse advise, eroding public trust (Jennings et al, 2021). Through interviews with the public a common theme arose in our research, people did not know where to go to get information that was up-to-date, accurate and could be trusted. Whether it was the CDC or Health Canada, information around COVID-19 evolved rapidly. The rapid rate at which new information was presented to the public, or overruled previous information has been linked to increasing vaccine hesitancy (Jennings et al, 2021). Conspiracy, anti-vax beliefs, and low trust in institutions are linked to a greater reliance on social media for health information (Jennings et al, 2021).



2. ABOUT THE SYSTEM

Our research on information dissemination was the core focus of this system inquiry. What are the succession and effects of information dissemination? We gained clarity by defining the boundaries, functions, actors, and processes to frame the system using the iterative inquiry tool.



1. Micro

Information dissemination is stories retold by recollection and serial reproduction across different people in a chain through collective memories (Melumad et al., 2021). Retelling these stories is a strategic process where storytellers adapt and summarize a persuasive narrative that aligns with their agenda. Retellings include greater expressions of emotion when the reteller is instructed to be entertaining vs accurate (Melumad et al., 2021).

The structures that enable this function include experts, podcast hosts, users/viewers, entertainers, reporters, and political commentators. Key facts and 'snippets' are removed from original sources for distillation (Melumad et al., 2021). When sharing information in their domain of expertise, opinion

leaders take on the role of "guides" by providing interpretations and opinions for their brand's audience. Rather than simply being a memory process, these actors within the structure curate information to influence their agendas (Melumad et al., 2021).

Actors will use salient methods to gain popularity through sensationalism, dramatization, or negativity to grab their audience's attention. People often share due to self-enhancement motives. They are more likely to retell a positive story when talking about themselves and a negative story when talking about someone else (Deangelis et al., 2012). When more unusual or unexpected facts are more likely to be remembered, information will thus survive multiple retellings (Barrett & Chen, 2021).

2.Meso

New media in this meso structure increases polarization by enabling individuals to select outlets that confirm their prior ideologies in an echo chamber to elicit a response. From a political lens, politicians are incentivized to use media to polarize their citizens, which increases their net total turnout (Campante & Hojman, 2013). Aside from leveraging traditional broadcasters, there is a rapid takeover of traditional publishers' roles by companies such as Facebook, Snapchat, Google, and Twitter. These companies have evolved beyond their role as distribution channels and now control what audiences see and even what format and type of journalism flourishes (Bell et al., 2017).

3.Exo

Through intermediaries such as search engines, social networks and news aggregators, the accessibility and outcome of the perspective of content alter the visibility and attention which shape users' perspectives (Jürgens & Stark, 2017). Ultimately, populist and predatory actors utilize formative fissures on race, culture and economics to polarize their supporters and gain power and loyalty (Leidner & Kayworth, 2006).

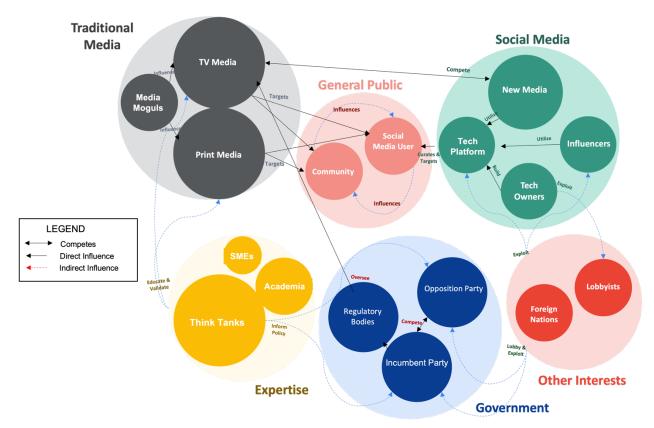
As businesses are adapting to capitalize on maintaining attention, traditional platforms are looking towards the guidance of exosystem actors for filtering and censorship. This business model aims to give users affirmation instead of information (New York Times Events, 2020).

4.Macro

The business model amplifies partisanship favouring loyalty to a brand or political lens. Actors take advantage of the attention economy to demonize their opponents, which acts as a funnel to expose citizens to more and more content from their "in-group" (McCoy & Somer, 2019). The monopoly of a handful of powerful tech companies will overpower the citizens, making it hard for them to make systemic change. Those in power will be the decider of ethics (Vogels et al., 2020).

3. INTRODUCTION TO ACTORS

The most influential stakeholders that direct and optimize our system of information were identified as the government, academia, traditional broadcasting media, industry experts, and social media. These stakeholders maintain power, authority, money and control through influence, engagement, tension, and close allegiance to one another over the strategic generation of information in our system story. The narratives that shape much of our cultural milieu are based of their driven agendas.



Each of the actors above have their own motivations to control the narrative and as can be seen above work with one another to mutual benefit. A deeper dive demonstrates their motivations:

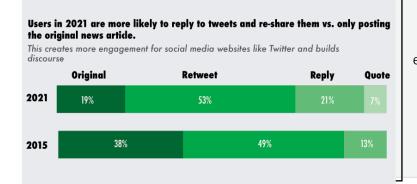
Traditional Media

Established media, both print and broadcast, are driven by views, ratings, and subscriptions. To get eyes on their product, writers and commentators are incentivized to embellish headlines and exaggerate stories that will win attention. Two-thirds of U.S. adults say they've seen their own news sources report facts meant to favor one side (Shearer, 2020). Yet, readers generally tune into content whose biases knowingly match their own, reinforcing positionality and partisanship. Viewers become loyal audiences to a narrative shaped by powerful actors such as business

leaders, oligarchs, domestic foreign governments, and funders. No one knows what to believe because of these agendas and public trust in media is diminished greatly.

Social Media or Big Tech

Social media is motivated by getting users on platforms, maintaining their attention, and driving engagement. Social media companies use surveillance capitalism - the act of capturing surplus behavioral data to predict user behaviour and serve recommendations. Through persuasive design methods like autoplay, infinite scrolling as seen in TikTok, or recommended videos, companies prioritize attention over well-being. When attention is the product, social media companies are not worried about whether information circulated is true or false. Recommendations seem harmless until we realize that 64% of all extremist group joins are due to social media recommendation tools (Horowitz, 2020). Actors in social media or big tech also play a role in online news, opinion, government elections, and have the widest reach compared to other systems.



By The Numbers

Social media is driven by engagement and Twitter is a great case study. To drive engagement, Twitter introduced Quote Tweets (QT) and encouraged users to re-share stories and retweet articles. Since 2015, the number of articles posted without any additional commentary dropped from 38% to 19%. More people are now providing their own opinions, replying and QT-ing

Experts

Experts, in COVID and other topics, are motivated to be seen as credible sources. They create and shape data to provide insights and help shape discourse. Experts are relied upon to guide policy decisions by the government and business decisions by corporations. During the COVID-19 pandemic, trust initially increased across the spectrum but more recently has coalesced around liberals.

Government

The government is divided between Incumbent and Opposition parties, each with their own methods to gain and maintain power. Incumbent parties want to utilize their influence in media, social media and with experts to proliferate information that is supportive and positive of their governance and the parties' funders. Opposition parties are incentivized to highlight mistakes, misgovernance and incompetence whether perceived or actual. In recent times, incumbent and opposition parties have pushed to saying more polarizing and vitriolic statements to gain attention, go viral, and motivate their base to vote. Research indicates that a polarized population increases voter turnout (Campante & Hojman, 2013).

Corporations and other interests

Ninety percent of American news media is owned by five companies and stations such as Sinclair have a media presence that can reach nearly 72% of the American population (Who owns the media?, 2022). The influence of business on news media impacts what is reported, the lens taken and who the media is meant to reach. Moreover, other influencers such as foreign interests and lobbyists impact government policy and may even impact what goes viral on social media through manipulative methods such as astro-turfing and engagement farming.

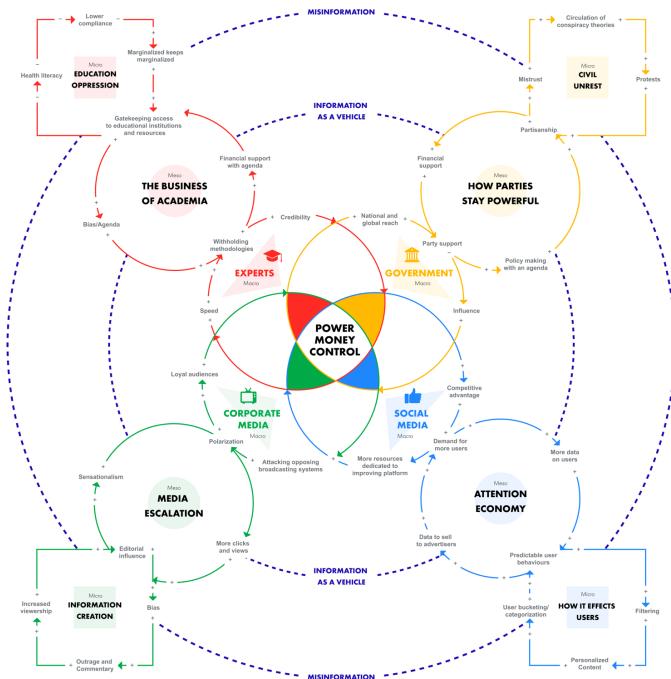


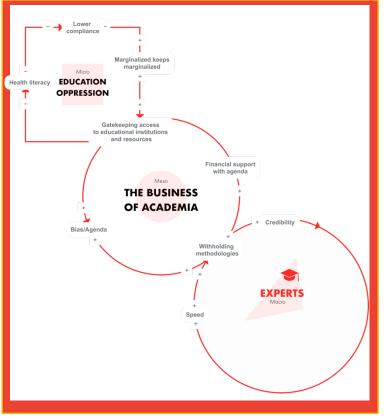
4. SYSTEM STORY LOOP

The information generation story loop outlines the actors and motivations at a macro, meso and micro level. The center dotted circle in the background of the story loop illustrates information as a throughline and narrative to control public opinion at a meso level, supporting the agenda of macro systems in sustaining power, money, and control.

The map illustrates how misinformation spreads to keep the actors in power. When power is involved, experts have identified two main themes of systems: Those in power seek to maintain it; and those in power have no incentive to change (Anderson & Rainie, 2020).

Decisions made by powerful actors at a macro level trickle outwards toward the citizens at a micro-level. These decisions are amplified, and the effects perpetuate the cycle of social inequity and marginalization. The reinforcing loops cause pent-up frustration, anger, and tension that fuels the community to build their independent networks of resources and safety nets (Herle, 2022).





Experts

Experts maintain credibility as 'the expert' by maintaining control over their scientific information and knowledge translation. Open access to scientific methodologies is delayed as experts await peer review which can take up to a year and a half after scientific discovery. (Public Health Agency of Canada, 2021). Waiting to be 'right' maintains control but can cause harm. A barrier to access to peer reviewed expertise is paywalls and open access. This actor maintains control by identifying deep subject understanding with limited access to other which enables the speed at which information travels (Public Health Agency of Canada, 2021). The act of gatekeeping

information omits, deletes, and prohibits the expression of specific ideas, creating a filtering bias (Jürgens & Stark, 2017).

The act of withholding methodologies can be traced to the financial support of donors that are beholders to the financial business agendas. For example, cooperative education programs withhold access to working experiences to influence the exchange of information, which then enables students to gain credit in their major to fund the business of academia (Thiel & Hartley, 1997). Bias agendas are also created through financial donations from billionaires who fund scientific studies which have different protocols than research grants. Grants require rigorous peer review vs private donation. As billionaires are predominately white, the fund disease areas that affect whites (Edwards, 2013).

Gatekeeping resources decrease access to literacy at a micro-level level, such as health literacy. The lack of clarity causes confusion and feelings of stupidity, as identified from our user interviews with citizens. The lack of clarity causes disengagement from advice if communication is not easily understood. Lack of clarity drives polarization as we saw with confusion over efficacy of masks, whether COVID-19 was airborne or surface, debate over hydroxychloroquine, over how many boosters. Low health literacy leads to lower levels of trust and adherence to recommendations.

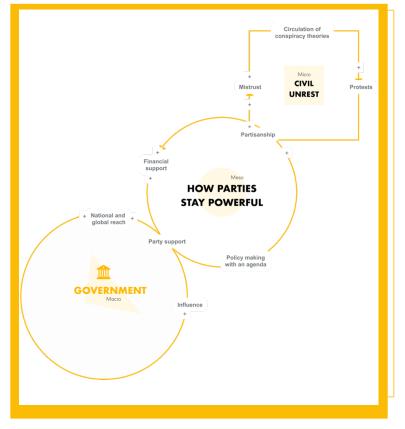
In the case of the COVID-19 pandemic, the lived experiences of citizens are not reflective of the narratives they consume. They look for local data to help guide their decision-making. However,

since many of these datasets do not always exist on such a granular level, this information gap feeds into a larger social narrative about the suppression of critical data and the power structures' media's unwillingness to substantively engage with the subjectivity of coronavirus data reporting (MIT Visualization Group, 2021). The lack of understanding causes speculation and lowers compliance, keeping marginalized communities in a cycle of knowledge oppression.

Government

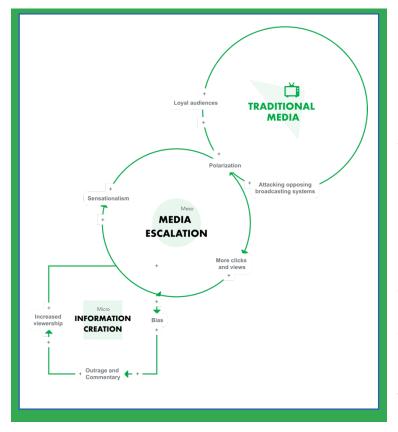
Information is a tool used to shape political agendas and gain or maintain power. Leaders use polarizing and vitriolic statements to gain attention, go viral, increase financial support and motivate their base to vote. Media incentivizes politicians to polarize their citizens, which increases their turnout come election time (Campante & Hojman, 2013). At the mass level, more significant partisan divisions in social identity generate hostility toward opposition partisans that encourages extreme tactics and undermines compromise and civility (Tucker et al., 2018).

In contrast, for parties that are already in power, withholding information or influencing the narrative around information as it comes out is highly effective. We hear it all the time as powerful politicians race to "get out ahead" of an incoming story. A great



example of this was the Mueller Report and the Trump administrations influence on its findings. Special Counsellor Bob Mueller investigated Donald Trump and his election campaign for collusion with Russia and documented his findings in the Mueller Report. The Mueller Report was handed to Trumps Department of Justice in 2019. Bill Barr, then Trumps Attorney General, redacted the report heavily and summarized the report in a letter for release. The control of information in this case allowed Trump to state that he had been absolved of any wrongdoing. A federal judge in 2020 criticized Barr saying his early description of the report did not match the Special Counsels actual conclusions (Polantz, 2020).

The effects of misperceptions at the individual level can aggregate into distortions in collective public opinion that likely affect policy and election outcomes (Tucker et al., 2018). Furthermore, partisanship created by political parties creates mistrust which furthers the search for truth to sensemake. This mistrust leads to research at the micro-level by connecting new narratives that circulate conspiracy theories that lead to civil unrest and protests that perpetuate partisanship (Herle, 2022).



Corporate Media

On a macro level, corporate media conglomerates maintain their monopoly in the industry by remaining loyal to the narrative of their audiences and funders, and attacking opposing broadcasting systems. This keeps them in power and control of a narrative that influences public opinion. An example of this is seen in "recent research which strongly implies that newspapers and especially cable news can change people's voting behavior, especially those without strong partisan attachments" (Guess et al., 2021). This partisan media keeps their audiences polarized as well.

On a meso level, polarized audiences are upkept with clickbait-friendly titles, sensationalized headlines, and embellished reporting. The news director, producer, and researchers will take part in an editorial meeting to discuss what stories merit coverage in the newscast and how to cover them (Schultz, 2005). Audiences succumb to this grab of attention, resulting in more clicks and views for the publication. Greater exposure to partisan news can cause immediate but short-lived increases in website visits (Guess et al., 2021). Moreover, corporate media conglomerates may own hundreds of niche publications that cover a range of audiences. For example, The Torstar Corporation owns the Toronto Star and operates more than 80 newspapers across Canada, including the StarMetro chain of free daily newspapers (Canadian Media Ownership Index, n.d). This monopoly is powerful and maintains power through attention and reach of their audiences.

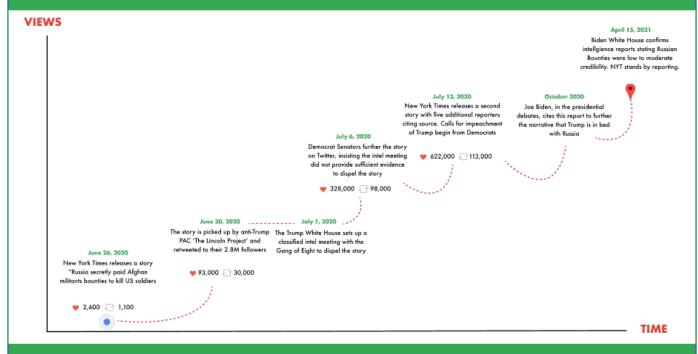
On a micro level, clicks and views funnel audiences to engage in bias that confirms their own (Kolm, 2021). A bias view of one side of an issue can lead to more outrage and commentary, more engagement with the news media content, more publicity, and thus more money.

The narrative fed to audiences guides public opinion and gains the media outlet power. The buyout of niche publications gains the conglomerate control. And the viewership gained by sensationalized and embellished stories gains the media company money. We can see an

example of how money, power, and control are used by weaponizing information to oppose others and maintain power.

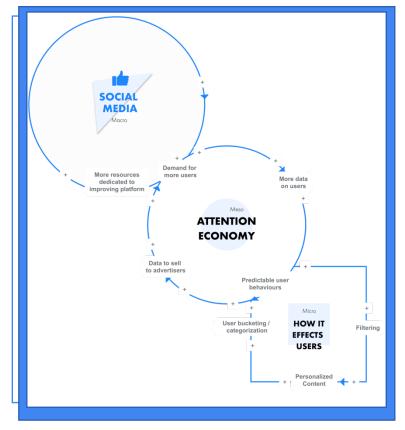
Case Study

This case study is an example of how information can be manipulated and used as a weapon by politicians against their opponents to manufacture outrage and polarize their voters. It also exemplifies the close relationship corporate media has with other facets of power such as government parties and experts.



In the summer of 2020, The New York Times led with a bombshell report that Russia was paying Afghan extremists to target and kill American soldiers. Not just one story, the NYT publishes two separate reports a few weeks apart that were further reinforced by other mainstream outlets such as the Washington Post. The Trump government denied the report amid calls for impeachment, set up a meeting with the Gang of 8 to share intel but Democrats did not believe the Trump administrations conclusion. Then-candidate Joe Biden used the report to attack Trump during the fall presidential debates and stir his voters along the narrative that Trump was in bed with Russians. Once elected, his intelligence service walked back reports. One year after this information was used to weaponize the political narrative, the Biden administration stepped forward to say that the intelligence report had low credibility.

Social Media



Social media platforms such as Twitter, Facebook, Instagram and TikTok model their business based on attention and engagement (i.e. follows, clicks, views, re-shares and comments). These companies build their own power in one of two ways: through advertisers which monetize on attention and through their own valuations. Engagement is key to either methodology, a more engaged platform is more lucrative to advertisers as their ads will reach more eyeballs. A more engaged platform is also more attractive to shareholders and investors as it signals continued growth and revenue generation. In February, Facebook shares dropped 26% as the company missed user targets, lost users and

as a result also lost revenue (Milmo, 2021). Therefore, more engagement results in more money, power, and control for the social media giant.

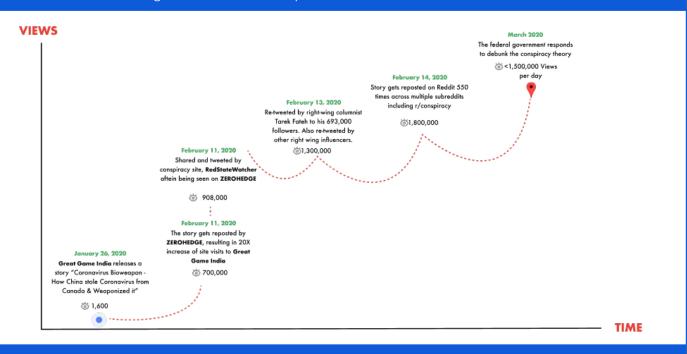
Through engagement, the algorithm can identify user preferences, hot topics, political philosophies, and general interests. The algorithm collects extensive personal data on users to create recommendations for users, establish foresight on interests, and gauge the supply and demand for products or content. Social media conglomerates stay in control through the competitive advantage in targeted and predictable behavior to sell to organizations such as political parties to further the goals of their agenda (Laidler, 2019).

On a micro level, these platforms have evolved beyond their role as distribution channels, and now control what audiences see and even what format and type of journalism flourishes. Moreover, it is in a platforms best interest to have consistent engagement and so sensationalism, polarization, and the building of echo chambers are all in their best interests. An example of this is in the data that fake news spreads six times faster than true news, showing that regardless of true or false, information benefits the system (Vousoughi, et.al, 2018). The consumers and citizens using social media as a platform are exposed to biased views based on how engineers create filtering and categorization to push more personalized content and increase attention which then magnifies their confirmation bias. Intermediaries such as search engines, social networks and news aggregators, paired with intrapersonal factors shape users' attention by altering the visibility and hence the accessibility and outcome of perspective of content (Jürgens & Stark, 2017).

To summarize, engagement and the development of echo chambers is in the best interest of social media companies, as demonstrated in the following case study:

Case Study:

Little known misinformation website Great Game India released a story about the COVID virus being manufactured in Winnipeg before being shipped to Wuhan and accidently released. Fed a healthy a dose of shares, likes and re-tweets from the far right universe the story went viral before the Canadian government could respond.



An example of a case study of how quickly misinformation spread through the case study of Great Game India. A little-known organization who released a story about the COVID virus being manufactured in Winnipeg before being shipped to Wuhan. It was a conspiracy that had no basis in reality where In the span of 3 weeks... the federal government had to respond and intervene.

It was rooted in a few people who got fired in Winnipeg and took out their frustration through the exaggeration of their story through the Great Game India website. Next far-right conspiracy groups took it and blew it up Tarek Fateh, a Toronto Sun journalist saw an increase to 2 million a month of viewership. How quickly misinformation can spread and how sharing algorithms to create conflict in order to entice engagement.

Summary

By analyzing the systems of experts in public health, government, corporate media, and social media, we were able to find the agenda of maintaining power, money, and control as the underlying theme behind these current systems. In each macro, meso, and micro level, we found information to be a thread and tool to maintain their own agendas. At various points along these throughlines, business models, and interactions with citizens, information became distorted. However, we found that regardless of whether the information is true or false, these actors maintain their power. In fact, in many cases, misinformation and polarization benefits the power of key actors in these systems. By gatekeeping information, citizens assemble bits and pieces of narratives to sensemake unknown circumstances and process grief of traumatic experiences (Herle, 2022). Our research has shown that these actions are involved in the micro, meso, and macro communities and perpetuate the cycle of misinformation.



5. FUTURE STATE DESIGN

In envisioning a future state, a three horizons diagram can help identify the ideal future and steps to get there.

Current State

The levers of power and influence intermingle. The government, tech, traditional media, and big business collude and intermingle. This relationship influences policies, impacts lives and exploits citizens - pitting them against one another.

Blackbox tech algorithms target users, build echo chambers and thrive on attention. Broadcast media acts to influence and maintain the status quo by controlling the narrative.

Citizens do not trust these institutions or one another, creating harrowing effects on our society.

Disruption

Captured Disruption: Censoring in social media and broadcast media may control the narrative in the short term, but only extend the lifespan and capture the current state.

Harnessed Disruption

Disruptors that can bring to fruition and harness the ideal future state (H2+) quicker include enabling individual and local journalism to drive pluralistic narratives, proactive policymaking, and strong anti-corruption laws.

Ideal future

The ideal future can be nourished into existence by adding diversity in tech, political and broadcasting leadership, reducing marginalization of voices and diversifying perspectives in decision makers. Other ideals would include rewarding media companies beyond clicks and views and into KPI's that measure user wellbeing, building transparency in algorithms, and labeling true or false information based on peer-reviewed sources. Having independent economies in journalism, active citizenry, and funding transparency could also help citizens regain trust in governmental institutions.



Utilizing the three horizons we identified and bucketed interventions to build a future state.

Our recommendations require the system to transform utilizing both top-down societal interventions as well as bottom-up individual interventions - both are needed to for the ideal future state to come to fruition. Ultimately the weight of future state design falls to both all the actors in our systemigram, from government actors to big tech, corporations and news media, there is no single panacea to solving the challenge of information generation & dissemination.

The four intervention buckets can be defined as:

1. Separating money from information & decision making

One of the key challenges in the present horizon is the proximity many of the actors have to money and its subsequent influence. Government actors, both incumbent and opposition parties, utilize lobbying and business funding to finance their campaigns making it extremely difficult to make policy for their voters. Big Tech preys on users, exploits their data and uses its algorithm to drive engagement. Established News corporations vie for influence with corporations and government actors resulting in bias seeping into information generation.

In an ideal future:

- There will be clear transparency laws in elections and for government officials' fundraising. A third-party commission will enforce transparency laws robustly and across the board.
- Ads will be removed from social media, reducing incentives for predatory data mining and creating genuine digital public spaces.
- Open, transparent science to improve access to emergent discoveries & innovation and increase health literacy among citizens

2. Empower diverse and local voices to emphasize a pluriverse

To unify and further mend current divisions the system needs to move towards a pluriverse paradigm, which incorporates human-centred ethnic, racial, and ideologically diverse viewpoints. Emphasizing local voices that can help shape national dialogue around key issues. There is a challenge in providing information from a top-down approach we currently see today, where the same Ivy league decision makers shape and influence discourse, whether its mask mandates or racial protests. Giving power at the ground level, to those who are marginalized and allowing their story to reach a wider audience can help create broader empathy and understanding.

In an ideal future:

- Empower minority and marginalized groups to have their own voice throughout the information generation process by diversifying boardrooms, broadcasters, and reporters
- Engage and amplify local and micro-journalism so that stories are told by people impacted by current events

3. Inject transparency into technology and social media companies

Rather than censoring news, blockchain will utilize to track information generation and attention economy causal loops. Technology will clearly articulate where a story comes from, the process of development, and who is amplifying the headlines. This transparency allows users to recognize bad actors & bias easily. Preventing the use of bots and other conversation multipliers can help tech companies and individuals better manage the information ecosystem. These tools will empower everyday people to battle misinformation at a more individual level.

In an ideal future:

- ▶ Information can be tracked as its shared over social media through a blockchain ledger.
- Regulation on social media providers would limit the data they harvest and allow users to take back control of their privacy via open -source algorithm transparency and resets.

4. Reduce polarization through citizen assemblies and subordinate goals

Superordinate goals are defined by the American Psychological Association as 'a goal that can be attained only if the members of two or more groups work together by pooling their skills, efforts, and resources and/or a goal that takes precedence over one or more other, more conditional goals". (APA, April 28, 2022). Superordinate goals promote civility by the removal of competition, as incivility is marked by competition. (Civil politics/social psychology: evidence-based methods for intergroup civility). Through superorderinate goals, individuals can connect with one another and move beyond their differences to become universal citizens.

Psychological theories on conflict illustrate how contact hypothesis, dialogue groups, citizens assemblies and perspective taking are successful in reducing conflict between polarized groups because of the root of these interventions is in the theory of superordinate goals. (De-Witt, Lee 2019). Interventions that would foster superordinate goals would reduce the desire for mutual radicalize and foster greater empathy among racial, ethnic, religious, political, and ideological divides.

In an ideal future:

- Media and social media could take a role to be intensified to hold citizens platforms or assemblies, where citizens can take perspectives of others to cultivate empathy and work to solve common challenges. This would be a paradigm shift from the 'side taking' and polarization built into current social media.
- Campaigns that fosters mindset of universal citizen with a larger sense of self in order to bridge small

STEP INTO THE FUTURE

I It has been nearly 50 years since the outbreak of COVID-19 global pandemic. This past week the World Health Organization deemed the virus over, citing no new cases or variants emerging in the past decade officially. Hannah Kar a medical expert from the University of Columbia appeared on Fox News citing some of the most notable cultural changes we have witnessed since COVID 'went away'.

A recent study by Pew research noted diversity in political and broadcasting leadership up by 80%. The average citizen surveyed agreed to witnessing a clear paradigm shift in which narratives shown in traditional media "tell real stories about real people" and are frequently reported out on by citizens in the community. The stories featured are "intriguing and informative". This is a drastic change to the divisive and vulgar, tone and tenor of mainstream news media typically moderated by talking heads and personalities during COVID-19. Racialized people groups have expressed a stronger sense of empowerment as they are seeing and hearing themselves in executive boardrooms, as broadcasters, and reporters.

Micro-journalism is now better diversified so that stories are told by people impacted by current events. Many in communities across Toronto had been cancelling cable and newspaper subscriptions out of repulsion to the polarizing and culturally insensitive cancelling narratives flooding the outlets regularly.

Today, COVID-19 is gone. For the first time in our lifetime, we have open science to improve health literacy. As a democratic society our information is now being tracked as its shared over social media through a blockchain ledger. This regulation on social media providers would limit the data they harvest and allow users to take back control of their privacy via open -source algorithm transparency and resets. We are seeing clear transparency laws in elections and for government officials fundraising. These transparency laws are both powerfully and robustly enforced across the board through a third-party commission. Most notably the removal of ads from social media has reduced incentives for predatory data mining and creating true digital public spaces. These are just some of the shifts a post-COVID world has ushered in.

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