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Beyond Argument? Addressing the Matter of Trust in Vaccine Hesitancy

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Beyond Argument? Addressing the Matter of Trust in Vaccine Hesitancy

By

Nicholas Kinnish

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Beyond Argument? Addressing the Matter of Trust in Vaccine Hesitancy

by

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ABSTRACT

There is no shortage of research implicating trust as a central concern for addressing vaccine hesitancy, even prior to the COVID-19 pandemic. Likewise, healthcare professionals have long called for increased resources and training to address the issue. However, despite this long-standing problem, and its recent foray into the social consciousness, there is still a significant lack of resources for resolving this issue. This thesis aims to address this deficit.

I offer a practical framework for healthcare practitioners, public health officials, and vaccine manufacturers for managing both trust and its related, but distinct, counterpart: distrust. This framework involves demonstrating (rather than arguing for) trustworthiness through three factors long cited in the interdisciplinary literature concerning trust: ability, benevolence, and integrity. After situating myself regarding the issue, highlighting why I am drawn to the topic and its continued importance, I develop this framework across four chapters. Firstly, I review the literature that connects this issue to trust, and related philosophical theory concerning this concept. Secondly, I offer a cross-disciplinary examination of trust and what it involves, separating it from various concepts to show how it is related yet distinct from distrust. Thirdly, I take these observations as grounds for a framework for managing trust *and* distrust in interpersonal relationships. Lastly, I synthesize these chapters to offer a practical approach to tackling vaccine hesitancy regarding trust and distrust rather than merely the former.

DEDICATION

To Lynn Kinnish. For all you did, and for all you could have done.

ACKNOWLEDGEMENTS

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CHAPTER 1

WHY WE SHOULD CARE ABOUT VACCINE HESITANCY IN A POST-V-DAY

CANADA

With the COVID-19 pandemic largely behind us in 2023, it is not unreasonable to wonder whether it is still worthwhile investigating the role of trust in vaccine hesitancy. Undoubtedly, some would suggest that the problem is essentially behind us. I hope they are right.

At the time of writing this thesis, the Canadian Government reports that eighty-seven percent of Canadians over the age of five years old are fully vaccinated. To most people, even when thinking back to pre-pandemic times, that kind of number seems to be representative of—or very close to—the idea of so-called 'herd immunity', which makes vaccination so effective in reducing the spread and threat of diseases, and neatly meets the "nearly 90% vaccine coverage" proposed by epidemiologists (Bolotin et al., 2021). Reaching such a high level of vaccination coverage in such a short time is a wonderful achievement, especially when considering that it was only on December fourteenth, 2020, that CTV shared the news of "V-Day" with us all, and mass vaccination across Canada began in earnest (Aiello & Forani, 2020).

For perspective, vaccination coverage for viruses like measles, polio, meningitis c, and diphtheria rests at similar levels of coverage despite decades of vaccine availability and similar requirements for herd immunity in Canada (StatsCan, 2021a). Indeed, despite these virus's devastating effects and occasional outbreaks,[1] we seem to have them under

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[1] Statistics Canada publishes weekly reports for measles outbreaks here: https://www.canada.ca/en/public-health/services/diseases/measles/surveillance-measles/measles-rubella-weekly-monitoring-reports.html

control for the most part. With that in mind, why worry about vaccine hesitancy in post-V-Day Canada?

I believe the answer to this question is that while we were effectively tackling COVID-19 through vaccination, we were not effectively tackling vaccine hesitancy throughout COVID-19. Notably, there is a lag between the degree of vaccine coverage in Canada and the degree to which the population willingly receives such vaccinations, and plenty of quantitative research supports this claim. To point to just three studies, one cross-sectional study of vaccine hesitancy found that more than forty percent of Canadians reported some degree of vaccine hesitancy, with rates increasing significantly among essential workers and (surprisingly) healthcare workers (Lavoie et al., 2022). Another study shows increased vaccine hesitancy concerning so-called 'booster' vaccines, which notably correlates with easing social restrictions such as 'vaccine passports' and other similar measures (Lazarus et al., 2023). Lastly, Statistics Canada found lower vaccine acceptance rates among visible minorities in Canada, despite an increased risk of infection and mortality from COVID-19 (StatsCan, 2021b).

While some of these studies suggest various factors impacting vaccine acceptance, and all of them stress the importance of addressing vaccine hesitancy, very few point to how to deal with the problem practically beyond a few concluding words. However, pointing out this lack of practical advice is not meant as a criticism of the researchers behind these qualitative studies. Instead, it is meant as a call to action for the rest of us.

Expert – Layperson Relations: A Problem to be Solved

Recent research into the future of epidemiology points out that the scientific community needs to put more effort into communicating with the public effectively, and there are conflicting ideas concerning how this communication should take place (Lau et al., 2020). Explaining why epidemiology lacks the tools for handling objections to its findings from the public is beyond the remit of this thesis. However, the practical impact of this issue is important to elucidate to drive home this problem and to show one of the reasons I am drawn to this topic at all. Throughout the COVID-19 pandemic, it became painfully evident that although epidemiologists, immunologists, and researchers in the health sciences in general may at times engage the public, they often are not exceptionally well equipped for it (nor should we expect otherwise).

Addressing the problem of vaccine hesitancy in the context of the COVID-19 pandemic opens up the question of who should be responsible for solving the problem and how they should do it. For the most part, the issue has been left to those in the health sciences and their supporting institutions. Their approach mainly revolves around attempts to refute misinformation in an empathetic way. The idea behind this approach is that the vaccine-hesitant population will accept evidence contrary to their beliefs, providing that the source can convince them that they have their interests at heart. However, this approach seems wrought with challenges from the start. Notably, experts in these fields are often not primarily concerned nor trained in handling the relationship between their research interests and the public. In other words, where other fields would typically hire public relations consultants, health science either ignores the need for public relations management or keeps it entirely in-house—often to their detriment.

Compounding the problem is the fact that these expert-layperson interactions often arise through a perceived need to address misinformation as part of an ongoing "war on science." So, experts in these fields often find themselves drawn into a dialogue that takes on a combative character rather than a collaborative one.

Indeed, there are many examples of how scientists' attempts to engage the public during the pandemic struggled to have their desired effect for precisely these reasons. Perhaps the most notable example of these public-layperson dialogues going awry involves Chief Medical Advisor of the United States, Anthony Fauci. A man with virtually unrivalled expertise in his field, Fauci spent the early part of the pandemic under the spotlight of public opinion while working day and night to engage both the media and the general public's concerns about the response to the threat of COVID-19 (Stieg, 2021).

However, Fauci's commitment to public health during the pandemic amounted to him (and other public health officials) receiving the collective moniker of "idiots" by then-President Donald Trump (Collins & Liptak, 2020). Worse still, Fauci's efforts did not just bring him criticism from the most powerful man in the country. Before long, he and his family faced harassment in public, trolling on social media, and even death threats deemed credible enough to warrant criminal charges, a successful conviction, and a custodial sentence for their sender (Murphy, 2022). Combining Fauci's example with the fact that scientists often have an ostensive lack of training in how to engage with the public concerning public health matters effectively leaves little room to wonder why the scientific community prefers to focus on their primary task of conducting scientific research—you really cannot blame them, either. Despite the successes of science in

tackling the COVID-19 pandemic, science has a PR problem its proponents are seemingly unequipped to address.

This problem remains clear even in lower-stakes scenarios than that of the chief medical officer of the United States. Indeed, researchers have even gone as far as to collaborate with entertainers to address the poor relationship between the public and science in light of the COVID-19 pandemic. Jennifer Nuzzo, an epidemiologist at John Hopkins University who employs a self-styled 'facts and empathy' approach, is one such example (Lunday, 2021), owing to her appearance in Amazon Prime's short film series: *Debunking Borat.*

The premise of this series is to attempt to debunk the conspiratorial beliefs of Jim and Jerry: two seemingly unwitting participants who invite Sacha Baron Cohen to stay with them during a stay-at-home order that supposedly occurred during the production of the series' parent film *Borat's Subsequent Moviefilm* in early 2020. The film portrays Baron Cohen and his production crew lodging in a remote cabin with the two individuals. Baron Cohen remains in character as Borat: the fictitious Kazakh journalist visiting America to make a documentary film. During the stay, Jim and Jerry share their various beliefs, with one such belief involving the existence of a vaccine microchip as a reason for vaccine hesitancy.

In the follow-up series (Baron Cohen, 2021), Nuzzo speaks with Jim and Jerry via video link and attempts to address the pair's vaccine hesitancy through fact-based arguments and empathetic dialogue. For example, Nuzzo explains that the technology necessary for a small microchip to pass through a needle does not exist, nor does the

technology necessary to power such a device via the human body. She also attempts to display a degree of empathy with Jim and Jerry, admitting to them that "there is so much misinformation out there […] a lot of people do believe it" (00:02:45). Despite her efforts, Jim and Jerry seem unconvinced, with Jerry repeating that under no circumstances will he receive any COVID-19 vaccines. While Nuzzo's arguments may seem convincing to many viewers, they seem to fail to change Jim and Jerry's minds, even if they enjoyed the discussion.

Personal Connections to Vaccine Hesitancy

Observing these two examples of expert-layperson interactions is part of why I am compelled to investigate how best to approach the problem of vaccine hesitancy. However, at the same time, these observations made me think back to why I am vaccine-acceptant. I will briefly explain my background and why I take a vaccine-accepting approach because such a discussion situates me within the debate, but also because understanding why we are not in epistemic cahoots with Jim and Jerry may become helpful in further discussions later in this thesis concerning our epistemic status as trustors of vaccines and vaccine science. More importantly, it may help to understand why individuals lack similar levels of trust later on.

My mother spent much of her life working as a nurse in various capacities within the British healthcare system. First, she worked as a Macmillan nurse offering care to cancer patients and their families through funding from the namesake charity Macmillan. Later, she became an intensive care nurse, and finally as a vaccine nurse at a healthcare unit in the south of England. Here, she worked recommending and administering all

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manner of vaccinations for the local community, from baby-boosters to travel vaccines, and she truly adored her work.

Perhaps owing to the long history of care-based work she committed her working life to, she felt heavily invested in providing carefully considered and personalized vaccine advice, and held herself deeply responsible for her patients' wellbeing, perhaps to a fault. As the job required, she remained up to date on the concerns of the World Health Organization regarding potential pandemics: quietly stockpiling fresh water in our garage during the 2005 and 2009 global bird flu and swine flu outbreaks, and even once brought home H1N1 vaccines for myself and my sister to ensure we were protected as soon as possible. As such, my entire life involves a trusting relationship with the idea of vaccination by proxy. At the same time, I was exposed to the behaviours that healthcare practitioners can adopt to facilitate trust in their roles (more on this later). However, it is not just the fact that I have familial ties to the work that goes on to bring populations under the protection of vaccines that makes me interested in the problem: it is the fact that she cannot help with it anymore.

In a cruel twist of fate, my mother succumbed to cancer in July 2020 and spent much of the pandemic's early days receiving end-of-life care. During much of this time, I remained in Canada under lockdown and unable to be there, not just to care for her, but to have the kind of conversations she would doubtlessly have relished about handling the problem. Had she not lost the battle for her life in 2020, I have no doubt she would have returned from retirement to help with the effort to deliver safe and effective vaccinations as soon as it was physically possible. So in this sense, I find myself not only in a position that holds me firmly on the accepting side of the vaccine debate but also compelled to

investigate the debate itself because it allows me to do a small part in helping people like her, who gave what they could to help keep populations safe, and as a way for me to think aloud about the kind of conversations we might have, if things were different for her, and the rest of us.

Academic Interests

As a card-carrying baby boomer, my late mother was an ardent user of the social media platform Facebook. In the weeks and months that followed her passing, I, too, found myself drawn to the platform to connect with the increasingly distant pre-pandemic social world. Inevitably, I became drawn to the newly organized anti-COVID-19 groups that emerged due to social restrictions.

At the time, I was studying towards a combined honours degree in political science and philosophy while developing a growing interest in argumentation theory: the study of how we persuade each other through arguments. As such, I became particularly drawn to the reasoning and argumentation between the various users that populated these deeply skeptical communities. For the uninitiated, these groups became the epistemic battlegrounds for longwinded lockdown induced exchanges between interlocutors that often would involve days, sometimes weeks, of argumentative exchange between individuals on either side of the vaccine debate, with very little progress towards a resolution—quite the opposite. Perhaps the most concerning observation regarding these interactions was how the parties to the dispute would regard the evidence for the claims of the other: they did not just doubt it; they largely outright denied that the other could provide acceptable evidence for the claims under any circumstances. In short, it often

seemed as if the arguers could not conduct meaningful discussions since their positions were held so steadfastly that stepping away from them was as good as contradicting themselves. Take this extract from one social media argument concerning COVID-19 vaccine trials, or lack thereof, that typifies this type of argument:

User 1: "[the vaccine is] Still in trials till 2023. Never been tested on animals before use. Hope you are happy with your choices."

User 2: "It's strange. Looks like a study may have been done with macaques. I think your data may be incorrect." [link in footnote][2]

User 1: "You can share all the bias reports you want. You do nothing but ignore and don't look up the facts. You are nothing but a troll."[3]

Admittedly, how we behave on social media tends to differ from how we handle in-person reactions. Such arguments are more entertaining than representative of a genuine state of affairs in the same way that reality television shows rarely present their characters in a way that resembles their off-screen personas. However, no shortage of research implicates heavy social media usage—the kind of usage that comes from engaging in day-long arguments with strangers—as a core predictor of vaccine hesitancy (see: Wilson & Wiysonge, 2020; Jennings et al., 2021). Furthermore, exposure to online misinformation regarding vaccines correlates with a refusal to accept contrary evidence (Pierri et al., 2022). In other words, social media's role in vaccine hesitancy is a topic of

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[2] https://www.biorxiv.org/content/10.1101/2020.05.13.093195v1
[3] As of February 2022, this argument was available here:
https://www.facebook.com/groups/3172087009541304/permalink/4383005851782741/

interest for those concerned with addressing the issue since it reduces individuals' amenability to reason.

Bringing these two interests together, I found a growing consensus among a multi-disciplinary group of scholars regarding the role of trust in vaccine hesitancy, particularly within argumentation theory and the philosophy of science. Indeed, the problem of trust, especially regarding expert-layperson and institution-public relationships, is an area of research that is gaining increasing interest in argumentation theory and the sciences, and so too, is the problem of vaccine hesitancy.

Moving Forward

By now, it should be clear why I am drawn to the issue of vaccine hesitancy, and why it is still an important issue worthy of discussion. To summarise, while we enjoy the successes of a mass vaccination program, the problem of vaccine hesitancy remains ever-present. Addressing this problem involves finding and applying a useful approach that experts can get to grips with, and I am drawn to the idea of investigating such an approach due to my position as a vaccine-accepting individual together with my experiences and observations during the pandemic and how they relate to my interest in argumentation theory. Scholarly research concerning vaccine hesitancy suggests that trust is central to the problem. Thus, the task ahead of me is to investigate the possibility of a trust-based approach to vaccine hesitancy that practically applies to expert-public relationships in the battle against vaccine hesitancy.

Moving from these initial motivations towards a clear and practical approach requires some initial ground-setting regarding the terms and ideas I have briefly

discussed. Therefore, in this thesis, I work towards a practical approach to vaccine hesitancy through four chapters. Firstly, I look at the nature of vaccine hesitancy and how scholars have shown that trust is the central concern. Here, I provide an overview of the philosophical theories regarding trust. Secondly, I offer a cross-disciplinary examination of the concept of trust and what it involves, separating it from various concepts to show how it is related yet distinct from distrust. Thirdly, I take these observations as grounds for a framework for managing trust *and* distrust in interpersonal relationships. Lastly, I synthesize these chapters to offer a practical approach to tackling vaccine hesitancy regarding trust and distrust rather than merely the former.

Before moving forward, I should note that I take on this thesis with some stylistic choices that (although becoming more common) may not be considered typical for a master's thesis, but I apply them for good reason. Firstly, I take an informal tone in my analysis, employing narratives and anecdotes while avoiding jargon as much as possible. I take this approach because any helpful discussion of how to manage vaccine hesitancy practically should be discernable not just to academics but to everyone. In this spirit, I also avoid taking on—and indeed distinguishing—a particular methodological approach. I take Frantz Fanon's quote that "there is a point at which methods devour themselves" as a warning that sometimes clinical examination leads to a limited analysis that can become a problem in itself (1967, p. 14). Given that this thesis centres around the concept of trust, I feel it essential to echo Fanon's sentiment in the interest of thorough and practical analysis besides one small but essential point. Throughout this thesis, I take the concerns of vaccine-hesitant individuals as genuine. That is to say: I hold that vaccine-hesitant people hold genuine concerns rather than for the sake of it or as a form of belligerence.

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This small but essential caveat serves as a symbolic reminder of why trust is important: it gives us a way to understand an increasingly complicated world.

CHAPTER 2

IT'S ALL ABOUT TRUST? SCHOLARSHIP SURROUNDING VACCINE HESITANCY AND TRUST

Vaccine Hesitancy, Trust, and Solutions So Far

In early 2021, I received an email from the professor of my then-online class in argumentation theory. The email, containing no body text but a subject line reading "of interest EOM," contained a quote from a review of the philosopher of science Maya Goldenberg's (2021) book *Vaccine Hesitancy: Public Trust, Expertise, and the War on Science*. Indeed, the quote from the review interested me. This simmering issue had come to the fore thanks to the global pandemic, and my fascination with the online arguments I found on Facebook during the various COVID-19 lockdowns had grown into a short research project concerning online arguments for vaccine hesitancy.

In her book, Goldenberg explains that vaccine hesitancy is an attitude of ambivalence to vaccines that is distinct from refusal, which is a behaviour (p.4). Elsewhere, Silvia Ivani and Catarina Dutihl Novaes (2022) define vaccine hesitancy as "a case of mismatch between what the scientific consensus recommends and the decisions taken by certain citizens" (p. 19). Indeed, scientific consensus supports the efficacy and safety of (properly approved and regulated) vaccines.

Nevertheless, vaccine hesitancy is not a new phenomenon. Although often a fringe view, vaccine hesitancy intensified following the publication of a now infamous

1998 article by A. Wakefield et al., which claimed to establish a link between MMR vaccines and autism (ibid). The article's findings were quickly debunked, and the article was retracted. However, these corrective measures seemingly failed to reduce vaccine safety concerns. Unsurprisingly, when the race to develop a vaccine in the fight against COVID-19 became of global interest, a resurgence in vaccine hesitancy came with it, particularly on social media.

With that in mind, I felt that examining these arguments as a research project in argumentation theory would be pertinent and potentially useful (and fun) for myself and others. During the project, I collected arguments from the social media platform *Twitter* relating to the topic of COVID-19 vaccines. It was slowly dawning on me that at the root of these arguments between those for and against the vaccines was a matter of trust, and Goldenberg's analysis echoed my burgeoning sentiments. During that project, I created the following table to map out the claims and supporting reasons I observed in these arguments.
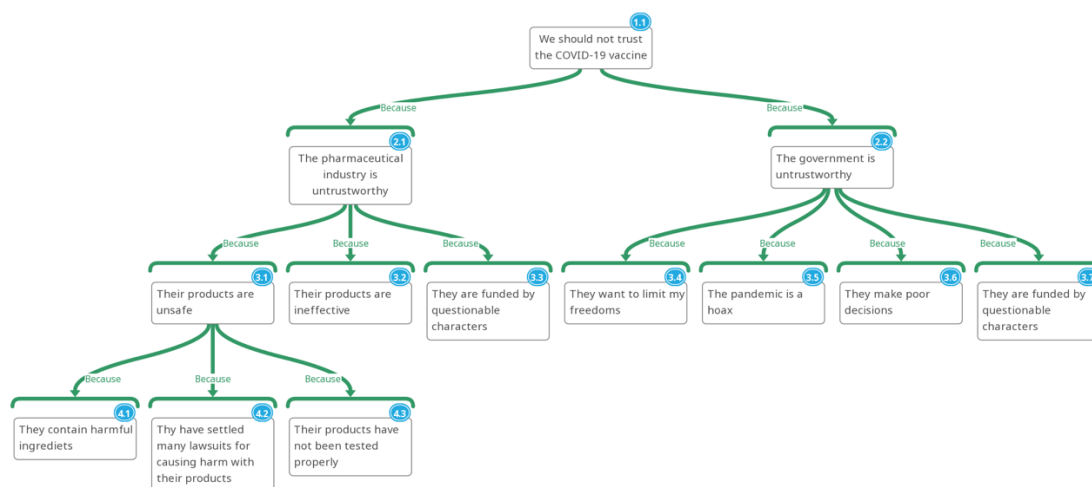
Figure 1: An argument map of vaccine-hesitant argumentation on social media

What began as a project to (perhaps glibly) point out the erroneous reasoning behind vaccine hesitancy had turned into something else: These people were not stupid nor ignorant. Instead, they genuinely did not trust what they saw as a vaccine industrial complex and wanted no part in it.[4] However, Goldenberg (2021) points out that while scholars and health professionals regularly cite poor public trust as a significant contributor to vaccine hesitancy,[5] they rarely develop these findings into strategies for addressing the problem (p. 111). In Goldenberg's view, this is partly because vaccine hesitancy is often framed in terms of "a war metaphor [which] entrenches an 'us' (science) versus' them' (publics) division that is not conducive to engagement and resolution" (p. 168).[6] The author supports this observation with three common explanations for vaccine hesitancy: public misunderstanding, cognitive biases, and science denialism (ibid).

Goldenberg's solution is to reframe the issue as a crisis of trust, and she develops a framework for rebuilding public-expert trust in five areas. She suggests that healthcare provider-patient encounters are essential inroads to rebuilding trust since studies show that individuals tend to trust physicians and nurses as a source of health advice (pp. 171-172). However, these experts rarely have the time (or billing codes) to discuss patients' worries. Thus, she suggests that healthcare providers should find ways to avoid dismissing patient concerns and allow for nonjudgmental responses and patience that build on the shared goals of the provider and patient. Next, she suggests that public health messaging must avoid contrasting values, such as conveying messages that valorize the

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[4] It is worth pointing out that alternate literature connects vaccine hesitancy with the spread of misinformation. For example, see Lee et al. (2022); Enders et al. (2022).

[5] There is extensive support for this claim in empirical studies that cover various social, ethnic, and economic demographics, see Lalot, (2022); Martinelli & Veltri, (2022); Liu, Zhao, Wan, (2023).

[6] Perhaps the most notable example is Tom Nichols's 2017 book, *The Death of Expertise*.

"naturalness" of breastfeeding alongside the benefits of (ostensibly) unnatural vaccines (p. 173). She proposes that vaccine mandates, although effective, must "distribute the burden of constrained choice equally throughout the population" (p. 176) and calls for greater diversity in science and healthcare to improve scientific research and increase sociocultural competencies in healthcare and health science (p. 180). Lastly, she suggests that greater accountability in the pharmaceutical industry alongside greater scrutiny regarding financial conflicts of interest between industry and health professionals is essential for rebuilding public trust in healthcare and health science (p. 182).

Goldenberg's account of vaccine hesitancy and its solutions broadly involve the idea that experts must rethink how they engage with the public by focusing on building trust. However, Ivani and Dutilh Novaes (2022) point out that expert-layperson engagements (which they refer to as public engagement or PE) are not without risk. The primary concerns are that PE absorbs a colossal amount of time and resources and detracts from furthering scientific research. PE also exposes researchers to personal threats and politically or ideologically fuelled attacks. Furthermore, PE can highlight instances of scientific uncertainty, creating a sense of fear, panic, or anger at the perceived incompetence of experts (p. 7).

Nevertheless, Ivani and Dutihl Novaes suggest that three approaches mitigate these risks sufficiently. Firstly, scientifically accurate information needs deploying in a way that earns the public's attention over what is politely labelled "more palatable content" (2022, p. 22). In other words, experts must be savvy communicators and utilize available platforms such as social media to share scientific (but not necessarily pro-vaccination) information. Notably, many already hold the basic skills to utilize these

platforms. Secondly, they support Goldenberg's suggestion that respectful face-to-face interactions between primary healthcare providers and the public increase trust and reduce the risk of threats and attacks (2021, p. 7). Lastly, they suggest that developing ways to convey complicated scientific information is essential to avoiding fear or panic (ibid).

The authors conclude by admitting that developing these approaches only somewhat helps mitigate PE problems. However, the alternative (i.e., not improving PE or even abandoning it) offers a far less desirable scenario, mainly since growing technological complexity means that "citizens are regularly confronted with choices that pertain to scientific and technological matters" (Ivani & Dutihl Novaes, 2022, p. 23). Thus, public literacy concerning these topics is increasingly important to science and the public.

Of course, the need for public literacy regarding science and technology does not have to fall at the feet of those directly involved in such fields. Indeed, when framing the issue of vaccine hesitancy in terms of trust, it is equally important that members of the public play a role in addressing the issue, particularly in light of the prevalence of misinformation in the world around us today. Recent studies suggest that misinformation is responsible for effectively decreasing public trust in vaccination from 89% in 2001 to 79% in 2021 (DeVerna et al., 2021; Reinhart, 2021). With this problem in mind, philosopher of science Lee McIntyre (2021) recounts numerous ardent vaccine skeptics, flat-earthers, and climate change deniers who renounced their beliefs in response to discourse with someone they trust.

As McIntyre shows, personal exchanges between non-experts are effective at changing the minds of vaccine-hesitant individuals when trust precedes respectful and warm dialogue (p. xiv). McIntyre offers several suggestions that can help facilitate these discussions: using graphs, charts, and tables, emphasizing scientific consensus, and refuting the content and techniques of misinforming sources (pp. 171-175). Importantly, these are only useful in the presence of trust, which McIntyre holds as central to the success of discourse that aims to change minds impacted by misinformation. This observation, when combined with the analysis provided by both Goldenberg (2021) and Ivani and Dutihl Novaes (2022), suggests that developing practical frameworks for addressing the issue of trust in vaccine hesitancy should pay attention to how those most closely related to the matter can build trust to facilitate safe and effective discourse.

In reflection, it really should not have surprised me that the issue of vaccine hesitancy was a matter of trust. Especially since healthcare professionals recognize that the efficacy of mass vaccination against diseases besides COVID-19 hinges on public trust. To cite just a few examples, Karafillakis et al. (2022) recognize that effective inoculation against human papillomavirus relies on positive exposure to pro-vaccination information from those they trust the most (in this case, their mothers). Similarly, Savci Bakan et al. (2023) show that parental perceptions of trust in healthcare providers and services are a significant factor in determining infant vaccination rates. Additionally, research shows that institutional trust, particularly regarding government, correlates with flu vaccine acceptance (Jamison et al., 2019).

Despite the consensus regarding the centrality of trust to vaccine hesitancy, there is still a shortage of research that aims to reconcile the problem in a way that speaks

directly to those most connected to the issue, such as healthcare practitioners, public health officials, and pharmaceutical companies. As mentioned in the previous chapter, experts recognize that they lack the training to handle the problem adequately and regularly suggest that developing resources to solve the issue should be high on the list of priorities for those experts who advocate for the safety and efficacy of mass vaccination. Combined with a shortage of research regarding how to solve the problem, we should not be surprised that vaccine hesitancy persists despite the successes of mass vaccination. However, to build a helpful framework for tackling the problem, we should first understand the matter at its heart: trust. With that in mind, I close this chapter by offering a brief (and by no means complete) overview of the philosophical theories of trust. In the following chapter, I turn to the work of trust scholars to dig deeper into the concept itself.

Theories of Trust

Like Goldenberg (2021), philosophers describe trust as an attitude we hold towards others. In this sense, trust differs from our mere reliance on objects. Here, trust is best understood, even in discussions of trust in institutions, corporations, or groups, in terms of an interpersonal concept since these forms of trust are "coherent only if they share important features of (i.e., can be modelled on) interpersonal trust" (McLeod, 2020). Often, philosophers frame trust in terms of a three-place relation that involves two people and a task and expectations about one of those people's commitment to that task (Hawley, 2014).

Motive & Non-Motive Based Theories

Where philosophers' theories of trust differ concerns *why* we utilize trust. Here, theoretical concerns are divisible into motive and non-motive-based accounts (McLeod, 2020). Naturally, these two opposing views each contain their own divisions. Regarding motive-based theories, there is debate concerning the *kind* of motives that compel us to trust. For instance, Russell Hardin's (2002) motive-based account involves self-interest, which boils down to a predictive account of trust. Here, a trustee's interests align with those of a trustor to the extent that the latter believes the former to have reason to behave in a certain way conducive to their interests (Dormandy, 2020, p.5).

Other motive-based accounts are normative and involve a trustor who believes a trustee to have goodwill, moral integrity, or virtue (Mcleod, 2020). In describing these accounts, Katherine Hawley (2014) points to Karen Jones' 1996 account as an example of normative accounts which involve "an attitude of optimism that the goodwill and competence of another will extend to cover the domain of our interaction with her" (quoted in Hawley 2014, p. 5). As Hawley points out, "[It] is important that optimism be an affective attitude, not (just) a belief, so that the justification conditions for optimism, and thus trust, are not purely epistemic" (ibid).

The main problem with these accounts of trust is that they do not offer an adequate explanation for distrust—which any sufficient theory of trust should offer. Hawley explains that:

>[o]n the motives-based model, we might expect distrust to involve non-reliance, plus
>a negative attitude regarding the motives of the distrustee. This negative attitude must

go beyond expecting the distrustee to lack the motives required for trustworthiness. After all, inanimate objects lack the motives required for trustworthiness: they do not incorporate our interests amongst their own, and they do not act out of goodwill towards us. Yet we do not distrust inanimate objects, even when we decide not to rely upon them. (2014, p. 5)

In contrast, non-motive-based accounts encompass a variety of theories that attempt to explain trust as separate from reliance. For instance, both Hawley (2014) and Mcleod (2020) point to Richard Holton's (1994) "participant stance" account, which involves treating a trustee as a person rather than an object, to distinguish between trust and reliance. Here, the basis for trust is the trustor's belief in what they ought to expect of a person—i.e., the trustee (Mcleod, 2020). However, critics of the participant account note that this view fails to explain distrust in a satisfying way. Hawley points out that while the participant stance seems necessary for trust, it does not explain why we might feel betrayed rather than merely disappointed when trustees fail to meet our expectations. She writes that:

Where our trust in someone is limited, then so too is the extent to which we adopt the participant stance toward that person. But where we distrust, rather than trust, someone in a particular respect, this marks no diminution in our tendency to hold reactive attitudes towards that person. Indeed, attitudes such as resentment are to the fore in situations of distrust. (2014, p. 7)

Other non-motive-based accounts address the importance of responsiveness in matters of trust. According to Jones (2012), these trust-responsive theories propose that

"someone who is trustworthy […] takes the fact that they are being counted on to be a reason for acting as counted on (p. 66). Such an approach avoids the problems surrounding motivational accounts by "focussing on the characteristic reason the trustworthy are responsive to" rather than the structure of motivations, according to Jones (ibid). However, Hawley (2014) points out that we regularly trust others without them being aware, which she takes to show that such an account of trust is incomplete (p. 14). Furthermore, such accounts fail to explain clearly what makes specific responses appropriate. In other words, it is not clear what would make it appropriate to trust or distrust according to these normative accounts (p. 11).

Trust & Commitment

Given the issues regarding motive and non-motive-based accounts, Hawley proposes an account of trust that centres around commitment. Here, trusting someone to do something amounts to the belief that they have a commitment to that activity:

> To trust someone to do something is to believe that she has a commitment to doing it, and to rely upon her to meet that commitment. To distrust someone to do something is to believe that she has a commitment to doing it, and yet not rely upon her to meet that commitment. (Hawley 2014, p. 10)

Notably, this account clearly distinguishes trust from reliance while also addressing distrust. We do not attribute commitments to people or things we rely on. Similarly, the commitment account takes care of the matter of appropriate responses. It is reasonable to feel betrayed when people fail to meet commitments, but not when they are unreliable. Instead, we feel let down since there is no sense of commitment involved with reliance.

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For instance, we might feel betrayed when someone fails to keep a promise they make since it is a commitment to act in a certain way. However, we tend to feel differently when things (and indeed people) we rely on fail to meet our expectations.

Furthermore, the commitment account allows for instances when a trustee is unaware of their commitments. It merely requires the trustor's belief in the commitment rather than the trustee's awareness. Additionally, commitment accounts are non-motive-based, according to Hawley, because "it is enough to behave in accordance with one's commitment, regardless of motive" (2014, p. 16). Lastly, the commitment account of trust closely aligns with the definitions of trust put forward by scholars dedicated to the subject, which I detail in the following chapter.

From Theory to Practice?

Having discussed the connections between trust and vaccine hesitancy in recent literature, I have laid out an overview of philosophical theories of trust that inform them. Broadly, these theories are divisible into motive and non-motive-based groups, although other distinctions exist. The commitment account is the most salient of the available theories since it comfortably handles many problems in other accounts. Nevertheless, to give a complete overview of the various theoretical battlegrounds surrounding trust is a task large enough for its own major work. With that in mind, the above discussion of trust only provides a helpful introduction for a broad conceptualization of what comes next. Having defined vaccine hesitancy and its connection to matters of trust, I now turn to the interdisciplinary literature surrounding trust to build a clearer picture of what trust means,

what it involves, and how we start thinking about it in terms of the problem of vaccine hesitancy.

CHAPTER 3

WHAT'S TRUST GOT TO DO WITH IT?

It should be clear by now that there is a cross-disciplinary consensus regarding the importance of trust in managing vaccine hesitancy. Such wide-ranging support for this view would ostensibly suggest that what these terms mean and how they interact with one another is similarly clear in the recent literature that supports this view. However, despite such observations, the previous chapter's discussion shows that philosophical theories of trust often examine the concept broadly rather than looking deep into the practicalities of interpersonal trust. In terms of trust and vaccine hesitancy, it should go without saying that employing these concepts as solutions to problems comes with a responsibility to explain what they entail, especially since trust scholars note that the concept is often called upon "as a quick fix or catch-all solution without explaining exactly what they mean" (Möllering, 2006, p. 3). With that in mind, this chapter looks beyond the literature concerning trust and vaccine hesitancy to understand the meaning of trust and distrust according to scholars dedicated to these related but distinct concepts.

The Concept of Trust

Ostensibly, the most agreed-upon definition of trust in the interdisciplinary literature is that of Mayer et al. (1995), which suggests that it is "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other party will perform a particular action important to the trustor, irrespective of the

ability to monitor or control that other party" (p. 712). The following sections examine how trust scholars arrive at this central definition and clarify it against other related or often confused concepts.

Why do we need Trust?

Shortly after moving to Canada, I became a commission-based sales associate at a now-defunct big-box electronics retailer. I want to say that the many stereotypes surrounding such a career (and workplace) are not true, but that is not the case. Nevertheless, not all the stereotypes about commission-based sales are accurate. For one, being a successful salesperson did not necessarily mean you had to be ruthless and persuasive, hell-bent on extracting a sale from every customer while boasting of closing 'the deal' to co-workers in poorly decorated lunchrooms. In reality, you just had to build a sense of trust between yourself and the customer (or guest, as we would call them). According to my co-workers, I was good at building trust with my customers because of my English accent. This quality seemed to impart a sense of trustworthiness on my part, rightly or wrongly, which my associates would often call an unfair advantage when it came to sales. Apparently, my coworkers recognized that trust was an important part of being a good salesperson, and that trust was something that did not necessarily arise from good argument, or slick sales pitches.

The store management also recognized that the key to successful selling was trust, and this point would often theme our painfully stereotypical daily pre-opening meetings. Here, my days as a so-called "product expert" would begin with a pep-talk with our store manager, who would imbue on us some pearls of wisdom regarding the art of the deal

(rather than encouraging us all to speak with an English accent), and these pearls would regularly involve teaching us quick ways of building and gauging trust in the interest of sales. For example, in the event of a customer hesitating to make a purchase, one straightforward technique was to flatly ask, "Do you trust me?" This simple question was surprisingly effective. Although I rarely received a yes or no answer, the response to this question would immediately tell me how to move forward because it would act as a way to decide what else I could do to close the sale. If they declined to answer directly, more work was necessary to build the relationship. If the answer was somewhat positive, that usually meant we were close to a sale but required some other incentive. Occasionally, the question would close the sale and clear the air after a heated period of haggling and persuasion.

When reflecting on these interactions, I now wonder what I was asking of these customers with that simple question and what I was doing with the information I gained from the answer. Mostly, these questions are answered clearly in the literature surrounding trust. However, before looking at what the literature tells us about these points, I want to make clear what trust means and involves. Equally, it is essential to clarify how it differs from often confused terms that are sometimes involved with—but are not equivalent to—the concept of trust.

Conditions for Trust: Uncertainty, Risk, and Vulnerability

Like other often-evoked-yet-allusive concepts such as justice, freedom, or truth, trust has a definition built out of the common themes found in differing accounts. Such common themes include the conditions which bring about the need for trust in the first

place through to the outcomes of trusting relationships. With that in mind, I want to explore this definition of trust from the ground up by first discussing the conditions that undergird the current understanding of the term.

The fact that trust is so often evoked in discussions of social activity speaks to its necessity to human nature. For Luhmann (1979), trust allows humans to escape the state of chaos and paralyzing fear that philosophers summon to describe pre-societal life in the so-called state of nature (p. 4).[7] In Luhmann's view, trust is a "natural feature of the world, part and parcel of the bounds within which we live our daily lives," which suggests that trust "is not an intentional (and hence variable) component of experience" (ibid).[8] In other words, humans' ability to escape the disorder of the state of nature—a world that *lacks* trust—and to enjoy the benefits of an ordered society is predicated on the fact that we can conceive a notion of trust in the first place.

In the interdisciplinary literature, trust involves two rational agents, a trustor and a trustee, with the former placing trust upon the latter in regard to a task. For example, when thinking about vaccine hesitancy, this could involve a patient and a physician (or nurse), with the patient placing trust in the physician to vaccinate them. As in the philosophical literature, trust is framed as interpersonal and differs from the mechanical reliance we have on objects: we *rely* on our cars to start in the morning, but we *trust* people to fulfill their commitments. As such, trust does not permeate all our activities. Instead, trust is employed concerning interpersonal interactions, and under certain

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[7] Importantly, Luhmann views this state of nature not as one of distrust since this would presuppose the concept of trust (ibid).
[8] Such views are not limited to Hobbesian conceptions. Möllering (2006) points out that Confucius "regarded trust as a precondition for all worthwhile social relations 2,500 years ago" (p. 2).

conditions, with uncertainty being the most recognized condition for trust (Mayer et al., 1995). In other words, whenever we cannot easily calculate the probability of an outcome regarding others' commitments, we employ trust as a means of managing uncertainty, which explains why Möllering (2006, p. 3) and Skinner et al. (2014, p. 207) suggest that trust is so frequently treated as the solution for explaining social phenomena: the modern world is full of uncertainties that cannot be addressed through mere calculation of probabilities to arrive at a concrete resolution.

According to Luhmann (1988), these conditions of uncertainty mean that trust involves risk because the choice to trust involves choosing "one course of action in preference to alternatives, in spite of the possibility of being disappointed" (p. 97). Thinking back to my days as a sales associate, the condition of uncertainty is present for a customer: whether I can offer them the best deal is not immediately apparent and often not easily calculable, and the probability of a better offer elsewhere, though possible, is difficult to calculate with any degree of certainty. In other words, there is a risk in committing to a big purchase from a sales associate or a store in general. The wrong choice could come at a significant financial cost to the trustor. However, trust scholars such as Mayer et al. (1995) point out that though risk and trust are related, they are fundamentally different because trust "is a willingness to take risk" and not risk itself (p. 712). In this sense, risk is not necessarily prior to trust: it is part of the behaviours we are willing to commit to in light of trust.

Mayer et al.'s (1995) observations presuppose the idea that there must be a degree of vulnerability as a condition of trust. When choosing to trust, we make ourselves vulnerable to risk (ibid). When we enter into a trustor-trustee relationship, we decide that

a trustee can meet our expectations regarding their commitment as part of a risk management strategy. For example, when a customer responds to my blunt "Do you trust me?" question, I can glean the degree to which I am considered capable of meeting their expectations. At the very least, I can get a sense of how much "faith" they have in me. Notably, by trusting others, we do not immunize ourselves to the risks involved in that context. Instead, we choose to accept them to a certain degree.

Leaps of faith

The acceptance of dangers opens up a question: By what means do we move past these uncertainties and enter a state of positive expectation that allows us to trust? Möllering (2006) suggests that this moment constitutes a *leap of faith* that is an essential aspect of the process of trust (p. 110). The author proposes that this leap may occur in one of three ways.

Quoting Luhmann (1979), Möllering (2006) explains that the first way involves a trustor who makes "inferences beyond what the underlying information can actually support […] deliberately overinterpret[ing] whatever information is available to 'serve as a springboard into uncertainty' (p. 318)" (p. 112). This view suggests that we construct trust through fiction due to uncertainty to reconcile a lack of certainty. The second way also utilizes the construction of fiction but differs in that it involves "bracketing" out doubts and dangers (p. 115). In other words, we take a leap of faith by putting our worries to the back of our minds, hoping they will remain there. For example, a patient might put their doubts about vaccine safety aside in the hope that by trusting public health advice, they will put these worries to rest. The third way, according to Möllering, resembles

William James' discussion of faith as a way to reconcile matters that have no conclusive evidence. James states that "we have the right to believe at our own risk any hypothesis that is live enough to tempt our will" (quoted in Möllering, 2006, p. 119), which the author takes to mean that the actor's justifiable conviction to the truth of their beliefs enables action.

Notably, in each of these ways, some factor must be taken into consideration to designate *trustworthiness* upon a trustee. With that in mind, when I would ask my customers if they trust me, what qualities would they draw upon to take that leap of faith? In other words, what makes people determine others as trustworthy?

Trustworthiness: Ability, Benevolence, Integrity

Understandably, some might interpret the question of whether they trust another person as laying the ground for cooperative behaviour. After all, an affirmative response to the questions would seemingly bring about a form of cooperation to work towards a task, at least in my retail sales associate example from earlier. However, Mayer et al. (1995) point out that "trust is not a necessary condition for cooperation to occur, because cooperation does not necessarily put a party at risk" (p. 712). The authors point to examples such as the so-called prisoner's dilemma, in which actors may work together despite not necessarily trusting each other or when there is no perceivable risk to the parties involved. However, why would these actors choose to work together when risk is on the table? Trust scholars suggest these decisions involve judgments of *ability, benevolence,* and *integrity (*ABI*).* The first involves skills, competencies, or aptitudes that

Mayer et al. show as essential factors in considering a trustee's *ability* to meet commitments as a core characteristic of trustworthiness (p. 717).

Crucially, these authors explain that ability is domain specific rather than domain-general. For example, a customer might judge me to have the ability to secure a good deal on their new smart TV but not to mount it on the wall of their condo. Likewise, we might judge a pharmaceutical company to have the ability to produce safe and effective products, but not to give us healthcare advice. Interestingly, the role of ability in matters of trust highlights the distinction between trust and confidence, which requires previous engagement, according to Mayer et al. (1995, p. 713). These authors compare ability and the conception of *ethos* in Aristotle's *Rhetoric.* According to Tindale (2011), the Aristotelean conception of *ethos* encompasses an attempt to persuade an audience of the speaker's credibility or character through discourse (p. 343).

Similarly, Amossy (2001) suggests that *ethos* "designates the image of self built by the orator in his speech in order to exert an influence on his audience" (p. 1). This comparison highlights the point that judging a trustee to have the ability to meet commitments differs from being confident about the trustee's abilities since determining ability in matters of trust does not always occur in advance. For my smart TV-buying customer, their judgment of my ability relates to my actions at the moment. Indeed, these actions may appeal to my past activities or competencies. However, fundamentally, ability judgments do not strictly rely on previous engagements with that customer if the scenario involves forming a new trust-based relationship.

Naturally, the ability to meet commitments matters very little if a trustor deems us ill-willed or lacking in shared interests. Mayer et al. (1995) suggest that these concerns make *benevolence* the second characteristic in judgments of trustworthiness which broadly "suggests that the trustee has some specific attachment to the trustor (p. 718). Moreover, the trustor must believe that the trustee has positive intentions toward them. The trustee does not need to appear fundamentally altruistic—although perceptions of altruism would denote high levels of benevolence. What matters is that the trustor believes the trustee has their interests in mind as much as (or even more than) their own.

The role of benevolence as a factor in judging trustworthiness highlights Rousseau et al.'s (1998) discussion of *interdependence* as essential to trust itself. It follows that when we enter into trust-based relationships, we do so because "the interests of one party cannot be achieved without reliance upon another" owing to the uncertain conditions we face (p. 395). Rousseau et al. point out that interdependence shapes how we perceive risk and trust: we feel more secure in trusting someone who has something to lose too, and the greater the potential loss, the more they appear trustworthy. On the other hand, we may perceive a greater risk in trusting relationships with agents who have little to lose if they do not meet our expectations.

One consideration concerning the interplay between risk, trustworthiness, and interdependence is that a trustor can force an agent into a trustee role by increasing the risks involved for them in a way not dissimilar to the idea of mutually assured destruction.[9] AMC's television series *Better Call Saul* provides a powerful (albeit

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[9] This term refers to the Cold-War era military strategy, which posits that the threat of nuclear attack is significantly reduced when a response of equal or greater force is assured.

fictional) example of this interplay during the episode "Nippy." Here, following the successful robbery of a department store, the character of Gene disbands his group of co-conspirators but informs them that he has covertly collected evidence of their criminal activities leading up to the robbery that would lead to far greater criminal charges on their part should they ever feel compelled to offer information regarding the crime, and his involvement, to the police. Furthermore, since the crimes occur across state lines, no one authority can promise any form of immunity from prosecution. Here, Gene has placed a higher degree of risk upon his co-conspirators regarding their activities but also increased his trust in them by force.

Of course, the act of forcing trustworthiness on a trustee only works on the assumption that the trustee will act in a way that is congruent with a shared principle (such as a desire to avoid prosecution, in the prior example), which is why Mayer et al.'s third characteristic of trustworthiness, *integrity*, is so-often cited in the trust literature (1995, p. 720). For these authors, integrity concerns the "consistency of the party's past actions, credible communications about the trustee from other parties, the belief that the trustee has a strong sense of justice, and the extent to which the party's actions are congruent with his or her words" (p. 719). In this sense, integrity is the glue that holds trustworthiness together since one's ability and benevolence hold little weight should we witness (or hear from others) that the trustee is likely to violate our perceptions of these other factors relating to trustworthiness.

Notably, while assessing a trustee's integrity may involve predictability, these authors stress that matters of trust go beyond mere predictability. Here, the authors explain that "[one] can believe such a trustee to be predictable in a situation in which the

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trustee influences resource distribution between the trustee and the trustor but also be

unwilling to be vulnerable to that trustee" (p. 714). In other words, predictability is not

enough to make the trustor vulnerable to the risks involved in a particular scenario.

Trust is Dynamic

The ability to influence the dynamics of a trusting relationship, whether by

testimony that aims to construct a sense of trustworthiness as trustees or by coercively

placing trust in a trustee through the manipulation of risk, is one way of demonstrating

why trust scholars treat trust as dynamic rather than static. More commonly, scholars

suggest that trust is dynamic because trusting relationships involve a process whereby

trust is built, monitored, and maintained. Here, rational agents keep track of their trustees'

adherence to the commitments they deem applicable in a given context and update the

degree to which they consider these actors trustworthy.[10] For example, Rousseau et al.

(1998) frame trust as a process of three phases: building, stability, and dissolution, which

take place in a circular way (p. 396). In other words, as our trusting relationships mature,

we modify the degree to which we trust a given trustee in a particular context. Notably,

the dissolution of trust can also typify a refinement: the more we know about each other,

the more specific our judgments of others' ability, benevolence, and integrity become.

Moreover, we may find ourselves trusting an agent to a high degree concerning one

particular activity and highly distrusting them regarding others, which suggests that trust

and distrust are separate concepts rather than positions along the same spectrum.

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[10] Notably, the same is true of distrust—a discussion topic that follows later in this chapter.

Trust: A Summary

Having looked at the literature that informs this definition of trust, we can resolve some of the questions posited earlier in this chapter.[11] Trust is a prerequisite to a functioning society. We use trust when conditions of uncertainty prevail and when we cannot clearly calculate probability regarding the potential risks of a given scenario. Unable to fully reconcile these conditions, we accept a degree of vulnerability and take a leap of faith in the process that allows us to move forward.

When we ask someone to trust us, as I would in my career as a sales associate, we are effectively asking that person if they deem us to have the ability, benevolence, and integrity that constitute a favourable judgment about our trustworthiness and the answer we get might be indicative of which of these factors they perceive us to hold or lack. At the same time, trustors and trustees can manage these factors to change the dynamics of a trusting relationship, and this shows us how trust is not only changeable but a cyclical process. With these points in mind, entering into a trusting relationship means more than merely cooperating, being confident about outcomes, or appealing to reliability. It requires a trustor willing to be vulnerable to risk and a trustee displaying an appropriate balance of ability, benevolence, and integrity.

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[11] Recall that trust scholars largely agree with Mayer et al.'s 1995 definition, which states that trust is "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other party will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (p. 712).

What about Distrust?

Underneath this discussion of trust lie lingering concerns about whether trust can be misplaced and what it means to distrust or be deemed worthy of distrust. I have only mentioned distrust briefly, hinting at a possible distinction between trust and distrust. With that in mind, I now want to turn to this notion to build a clear and distinct conception of the term and explain why it is separate from trust.

Despite my days as a sales associate often relying on trust-based relationships, there was also an aspect of the job that involved distrusting customers and my co-workers. Indeed, the job involved spending much of my day trying to earn an income by initiating what we would call 'interactions' with potential customers (or guests, as we referred to them). The aim was to start a relationship with the guest and get on first-name terms. This process began with asking if someone was helping them and whether anyone else had helped them prior. Once you had secured this interaction, which we often would, they were considered *your* customer.

Part of the reason for this practice was that shoppers often visit multiple stores before making a purchase, and sometimes that would mean there was a chance they would return to the store after your shift had ended, only for a co-worker to ring through your sale, and "scoop" your commission. Additionally, sometimes shoppers would return later and try to get a better price from another associate, deliberately excluding the fact that they had recently received a quote from another associate. In any case, these issues would often lead to a dispute between associates that would fall on the manager to resolve.

To address this issue, the store's (unwritten) rule was that once you secured this interaction, any sales in the near future under that customer's name were considered yours (along with any commission) because whether the guest or your co-workers mentioned your name or not, the above process meant that you could plausibly claim that any potential or actual purchases were due to your prior efforts as a salesperson. From this rule came the practice of spending a few minutes a day looking at the recent sales information to see if you recognized a customer's name attached to another sales associate's transaction. This tactic was a reasonably easy way to shore up your income in an otherwise unpredictable environment, and all it required was remembering a name and a few minutes scanning through the previous day's sales data to see if one of your guests had made a purchase. Furthermore, it also added a sense of accountability: if you tried to "scoop," you could be caught.

Considering this example, it seems apparent that distrust played a significant role in my day-to-day activities. Notably, trust and distrust—seemingly opposed to each other—are ever-present. Although I trust my co-workers to follow a procedure and my customers to mention my name if they return to the store in the future, I am distrustful enough to check the day's sales data to find out if they had made a purchase unbeknownst to me. Furthermore, managing this distrust seemed to serve a similar end to that of trust by allowing me to earn commission. It seems, then, that trust and distrust are not the opposing concepts they seem at first. Instead, they are related but distinct ways of navigating uncertainty. In the following sections, I look at how scholars deal with the concept of distrust and distinguish it from trust and other related terms.

Defining Distrust

Echoing Mayer et al. (1995) and others, Lewicki et al. (1998) suggest that trust involves "confident positive expectations regarding another's conduct," while distrust involves "confident negative expectations regarding another's conduct" (p. 439). Here, the authors treat the former to mean that we assure ourselves that an agent intends to act in a manner that is good-willed or virtuous, and the latter to mean "a fear of, a propensity to attribute sinister intentions to, and a desire to buffer oneself from the effects of another's conduct" (ibid).

This distinction differs from earlier accounts of trust and distrust in that it draws attention to our confidence in others rather than the types of behaviours which might typify trustworthiness and its distrustful counterpart. In behavioural accounts, such as that of Govier (1998), these two concepts exist in a bipolar relationship where "To trust or distrust is to have expectations about how a person is likely to behave" (p. 132). As such, perceptions of negative behaviours create a belief that an agent is worthy of distrust, thereby reducing their perceived trustworthiness.

For Lewicki et al. (1998), bipolar accounts lead to the assumption that trust and distrust have positive and negative connotations, respectively. In other words, trust is good, and distrust is bad. However, the authors point out that this assumption ignores the social context in which trusting relationships exist and illicitly frames the dynamics of such relationships in a unidimensional sense in which individuals seek balance and consistency in their relationships because "psychological imbalance is an aversive condition that social actors seek to resolve or minimize" (p. 441). As the authors point

out, our relationships are not unidimensional, but multiplex. Though we might seek to balance, a state of imbalance is more common, even regarding mature trust relations. They argue that trust and distrust can coexist in our relations because we learn to cooperate with others by gaining more knowledge about them that we apply contextually. In the authors' view, these relationships are composed of facets which aggregate into 'bands,' which are groupings of facets defined by experiences in a particular context (p. 443). The broader the experience across multiple contexts, the broader the bandwidth, with bandwidth representing the "scope of the domains of interpersonal relating and competency that are relevant to a single interpersonal relationship" (ibid). As such, the more mature our relationships become, thanks to the frequency, duration, and diversity of challenges that relationship partners experience, the more textured they are regarding specific trust and distrust qualities. To make this point, the authors offer a taxonomy in the figure below:

High Trust Characterized by Hope Faith Confidence Assurance Initiative	High-value congruence Interdependence promoted Opportunities pursued New initiatives	Trust but verify Relationships highly segmented and bounded Opportunities pursued and down-side risks/vulnerabilities continually monitored
	2 | 4 1 | 3	
Low Trust Characterized by No hope No faith No confidence Passivity Hesitance	Casual acquaintances Limited interdependence Bounded, arms-length transactions Professional courtesy	Undesirable eventualities expected and feared Harmful motives assumed Interdependence managed Preemption; best offense is a good defense Paranoia
	Low Distrust Characterized by No fear Absence of skepticism Absence of cynicism Low monitoring No vigilance	**High Distrust** Characterized by Fear Skepticism Cynicism Wariness and watchfulness Vigilance

Figure 2: Lewicki et al.'s (1998) taxonomy of integrated trust and distrust (p. 445).

In the figure, trust (the vertical dimension) and distrust (the horizontal dimension) are laid out to show high and low expressions of each concept. Importantly, high expressions of distrust and low expressions of trust are not congruent since they are conceptually distinct conditions (p. 445). However, other integrations of these concepts are possible and are represented in cells 1-4.

Most of my relationships with co-workers and customers as a sales associate fit into cell 4 (high trust and high distrust) and cell 1 (low trust and low distrust), respectively. For the former, while I have reasons for trust in some respects (shared interest in following policy and reciprocity therein), I have reason to distrust (such as wariness from past negative experiences and individual self-interest). I believe that my co-workers will abide by the store's policy regarding interactions, but I continually verify the applicability of this belief. For the latter, I have low trust in them due to a low level of interdependence and use a degree of monitoring, thanks to a low level of distrust. Notably, as these relationships develop, they may become more like cell 4 relationships should I find that they fail to meet my expectations or cell 2 relationships if we have repeated positive engagements. In the worst possible case, customer and co-worker relationships may become cell 3 relationships thanks to extremely adverse outcomes of our engagements.

Distrust: Contributing Factors

As Lewicki et al. (1995) observe, this framing of trust and distrust as distinct concepts requires that we are capable of ambivalence to the coexistence of positive and negative attitudes towards a single agent (p. 448). In other words, regarding trust and distrust as distinct concepts, we allow ourselves to trust in one regard and distrust in another, depending on context (p. 449). Indeed, the commonality of ambivalence is supported in Möllering's discussion of leaps of faith. If we allow ourselves to trust through bracketing, faith, or otherwise, the same is possible for distrust, too.

Lewicki et al. (1995) cite studies that offer empirical support for the idea that we employ a degree of ambivalence in matters of trust. One study of college students finds that "it is possible to measure trust and distrust as separate constructs and that these constructs have separate and distinct patterns of variation across gender, year of college, and time span" (ibid), while another demonstrates the coexistence of trust and distrust in relationships between politicians and journalists. Here, the latter must build trust relationships with the former to gain information, while at the same time maintaining a level of skepticism regarding the information they receive.

However, there may be a difference between distrusting a source and distrusting the information they share. For example, suppose a politician, unbeknownst to them, shares information that turns out to be false when scrutinized by the journalist, despite it being considered accurate at the time: it seems likely that the journalist would treat this as either a case of the politician sharing disinformation (information shared with the intention of deceiving), or misinformation (information shared without the intention of deceiving, but is false). Seemingly, the journalist would make a judgment that corresponds to their perception of the politician's trustworthiness or dis-trustworthiness, with the latter (intentionally disinforming) seemingly more likely to elicit a sense of distrust. However, given that scholars point out that these are two distinct concepts, what remains unspecified is the factors that deem us worthy of distrust since it must be more than a mere lack of trustworthiness.

Distrust: Ability, Benevolence, Integrity?

Given this observation, it may help to clarify that although trust and distrust are distinct concepts, they are *related*. Indeed, a relationship exists between the factors impacting trustworthiness and its counterpart. With that in mind, I take the position that judgments of ability, benevolence, and integrity are involved in both concepts, particularly when considering that, at their core, trust-based relationships involve information exchange between agents. Looking at these factors once more, judgments of ability regarding distrust are relatively simple: We deem someone worthy of distrust because we decide that they lack the ability to hold themselves to the commitments they claim they can keep. However, more interestingly, these judgments involve assessments of one's benevolence and integrity, too—particularly when framing our relationships in terms of exchanges.

For example, when individuals share information with each other, one agent might share information that, although true, is shared for the purpose of deceiving. Fallis (2014) describes a case in which an agent deceives a villain that intends to harm the agent's friend—despite providing accurate information regarding their whereabouts which would invariably lead to a false conclusion (p. 138). Similarly, to reframe an earlier example, a politician may share accurate information with a journalist to distract them from the matter at hand. At first, such examples do not seem immediately related to expressions of trust or distrust in Lewicki et al.'s taxonomy. However, these examples draw our attention to a distinction between sharing disinformation and lying that highlights the factors impacting trustworthiness *and* dis-trustworthiness. While lying always involves false belief, disinformation may involve accurate information. With this

distinction in mind, an agent's concern for truth plays a role in both trustworthiness and dis-trustworthiness as a matter of integrity: when we lie, we show a lack of concern for the truth, which harms trustworthiness, and promotes dis-trustworthiness. At its core, lying involves appealing to a sense of integrity to deceive. Liars rely on the listener presupposing they are truthfully reporting information, and use this presupposition to convey false information.

Notably, lies and disinformation are not necessarily harmful to benevolence because they are not always related to bad intentions. We might lie to protect others, to be polite, or to avoid unnecessary conflict. Similarly, disinformation may aim to distract an agent for non-harmful reasons. For example, we might lie to a child that Santa exists and use objects of disinformation to further their false belief: both are for seemingly 'good' reasons. In this sense, lying and disinforming can impact one's benevolence positively and negatively, depending on the deceiver's immediate goals.

For Chisholm and Freehan (1977), these goals are divisible along positive and negative lines. These distinctions are not implications of their normative status, or good or bad, but indicate the extent to which they represent increasing or decreasing beliefs. Broadly, *positive deception* involves [1] causing, [2] creating, or [3] maintaining false beliefs, and *negative deception* involves [4] causing ignorance, [5] causing the loss of true belief, or [6] preventing the acquisition of true belief (pp. 144-145). Notably, they point out that the extent to which these six forms of deception impact one's epistemic status determines their intrinsic disvalue, which increases from [6] to [1]. At the lowest level [6], the deceiver obstructs true belief formation. However, at the highest level [1],

the deceiver plays a causal role in creating false beliefs, significantly impacting one's epistemic status.

With this in mind, we can see that although these forms of deception are not tied to either a sense of trustworthiness or dis-trustworthiness, they show that judgments of benevolence may involve the extent to which we perceive others as attempting to impact our epistemic status. These judgments inform our perceptions of others' trusting and distrusting qualities. In other words, when we perceive others as intentionally causing us to take on false beliefs, we deem them far less benevolent than if they merely distract us from true beliefs.

We can glean from this distinction that while trust and distrust are distinct, the factors that impact trustworthiness and dis-trustworthiness are not: one's perceived ability, benevolence, and integrity determine the latter as much as the former, albeit as distinct measures of one's overall character.

Trust, Distrust, and ABI: Perception is Everything?

Throughout this chapter, I have offered an examination of how an interdisciplinary group of scholars determine the nature of trust, distrust, and the relationships between these concepts, and others. I have shown how Mayer et al.'s (1995) definition forms a strong basis for conceptual distinctions and connections between these terms, and how these support an account of trustworthiness centred on an ABI framework. From this discussion, it seems that how we perceive each other plays an important role in trusting relations, and that is partly why the above discussions of factors relating to trustworthiness or dis-trustworthiness are often prefaced with phrases like "a

sense of […]" or "judgments of […]". At their core, judgments regarding ABI involve one agent's account of another. In other words, we determine one's ABI regarding a particular context based on how we perceive them. These judgments are fundamentally subjective in nature, but as Mayer et al. (1995) observe, involve "intelligence; character (reliability, honesty); and goodwill (favorable intentions toward the listener)" (p. 717).

Of course, these judgments are not necessarily truth-tracking: they are subjective views based on a combination of our values and experiences with each other and may involve perceptions that are not necessarily true. In other words, ABI is a *sense* of trustworthiness or dis-trustworthiness that we construct in our minds to navigate the social world. What becomes apparent, then, is that we only ever have a certain amount of control over the degree to which others trust us. Indeed, some individuals may still think even the most trustworthy people are not trustworthy at all.

However, while judgments about trustees take place in the minds of trustors, it also follows that trustees can impact these judgments through their actions. Considering this point, I want to return to a concept mentioned earlier in the discussion of trustworthiness: *ethos*. In the following chapter, I investigate its role in determining ABI to show how both trustors and trustees play a role in developing trust, and distrust. In other words, where the earlier discussion of looks at what constitutes trustworthiness, the following section looks at how we perceive these constitutive factors, and make judgments in that regard. With this discussion in hand, I then begin to stake out a framework for building trust and managing distrust.

CHAPTER 4

MANAGING TRUST AND DISTRUST: UNDERSTANDING THE ROLE OF ETHOS

Ethos: A Primer

The centrality of *ethos* to trust is apparent when looking at the term's Ancient Greek origins as the word for character (Amossy, 2001, p. 1). Here, Aristotle saw *ethos* as one of three modes of persuasion, or proofs, that appeals to the speaker's character. Together with *pathos*, which appeals to the audience's emotions (Aristotle & Kennedy, 1991, p. 39), and *logos*, which is reason-giving to put the audience in a particular state of mind (Matsen et al., 1990, p. 120), these three modes form the basis for Aristotle's rhetoric, which he calls "the faculty of discovering the possible means of persuasion in reference to any subject" (Rhet. I.2, 1355b26f). In this sense, a successful rhetorician excels at discovering what is persuasive in a given scenario, just as a successful physician excels at discovering the proper treatment for a given patient (Rapp, 2022).

We can think about how these three modes of persuasion interact through the example of a job interview. In these scenarios, the interviewee might appeal to their prior positions as reasons (*logos)* for why the interviewer should hire them. However, reasons alone are not enough, and the interviewee needs to effectively speak to the suitability of their personality (*ethos*) by gauging what will resonate with the interviewee on an emotional level (*pathos*). Notably, the interviewee has a lot on their hands: they must see what balance of these modes best appeals to the interviewer, the nature of the modes themselves, and the relationships between them at the same time. In some cases, the interviewee may lack the ideal qualifications but may land a job regardless because they

managed to detect the personality traits the interviewer is looking for while appealing to the values and ideals that strike a chord in their mind.

Ethos: Prior and Discursive

It should come as no surprise that ethos is fundamental to matters of trust since it appeals to our characteristics and impacts how trustors make ABI judgments. Drawing on Aristotle, Ruth Amossy (2001) explains that we construct ethos discursively during discourse, creating an impression of the self in an audience's mind, which they then connect with a known category (p. 8). In this sense, the words we utter and how we say them effectively paint a portrait of who we are in the minds of others. For instance, a speaker who "extols the qualities of adversaries presents him-or herself-as someone who is honest and impartial," while demonstrating a "concise and blunt manner of speaking" might indicate the speaker's integrity for the listener (ibid). However, it is worth pointing out that the speaker rarely finds themselves with a "blank slate" to build a conception of self. Instead, initial conceptions of others in the listener's mind usually involve appeals to familiar stereotypes that partly make up what Amossy calls "prior ethos," which we then modify through discourse to present a "discursive ethos" (ibid).

Practically, our initial impressions of others involve perceptions that appeal to things we are familiar with, combined with any other relevant information we know. For example, although I have never met Canadian Prime Minister Justin Trudeau, I have an impression of his character and knowledge of his activities, qualifications, and qualities. Similarly, I have yet to meet my new neighbour across the street, but I have a sense of them insofar as I can judge their ethnicity, age, and family status. In both cases, these

impressions are the construction of prior ethos of these individuals in my mind. Notably, their complexity varies: I might have a more thorough sense of who Justin Trudeau is than my new neighbour. If I meet Trudeau or my neighbour, both can modify my sense of who they are through speech. The success of these modifications involves accurately detecting the kind of behaviours I might deem relevant to the qualities they wish to extol juxtaposed with my prior sense of them, as Amossy explains:

> The orator builds his or her own image as a function of the image he or she forms of the audience, that is to say, of the representations of what a trustworthy and competent orator is in the eyes of the public as the orator imagines it. He or she has to guess how the audience conceives of a trustworthy politician, a reliable administrator, a genuine artist, or an intellectual. An orator also has to choose a presentation of self as fulfilling the expectations of the audience if he or she wants to be elected president, selected for a good job, or trusted when expressing ideas about literature or politics.

Furthermore:

> If the speaker has to adopt a self-presentation that suits his or her purpose, he or she also must determine the image the audience holds of the speaker. Sometimes this is a private image limited to the circle of the family, friends, and colleagues; sometimes it is a public image widely circulated in the media. (Amossy, 2001, pp. 6-7)

The key takeaway is that the image of who we are according to others comes in two forms. A prior ethos is the image of self which occurs before discourse and discursive ethos is what we construct at the level of speech to modify the prior

construction. With this in mind, we can make some observations about the construction of ethos and trust-based relationships.

Firstly, without discourse between agents, the degree to which a trustee seems trustworthy to a trustor is grounded in prior ethos. This point explains why we are reluctant to place trust in strangers because the less we know about someone, the greater the perceived risk, and why the social world is full of attempts to convey prior ethos in the absence of discourse. For example, product advertising appeals to popularity via sales numbers (100,000 customers cannot be wrong!). Indeed, in the absence of familiarity, we often look for cues that indicate that others may be trustworthy.

Secondly, trustees can create a sense of trust, and indeed distrust, through speech. What we say and how we say it impacts perceptions of the self that people hold. Thirdly, the more we know about our image in the minds of others, together with an understanding of the kind of image they might feel conveys trust, the better equipped we are to build trustworthiness. In other words, being in a solid position to build trust through discourse involves understanding the gulf (or lack thereof) between how we perceive ourselves regarding a certain quality, the way others see us regarding that same quality, and the determinants of that quality in the mind of others.

Seemingly, the role of prior ethos, or understanding how others view us, is of great importance to trust. Not only because trust is theoretically possible in the absence of discourse but because it is indicative of the kind of discourse that is effective in the construction of discursive ethos. If trustworthiness and dis-trustworthiness involve ABI, we will do well in understanding the inputs we use to determine these qualities prior to

interpersonal relationships if we want to examine how to build trust and manage distrust. With that in mind, it is worth digging deeper into prior ethos before considering its discursive counterpart. In particular, investigating the broad "cues" that we rely on to make everyday decisions regarding who to trust.

Prior Ethos & Coarse Cues

Amossy's (2001) analysis of ethos holds that we employ a form of stereotyping when we judge others prior to discourse (p. 8). Broadly, this involves a process that connects sense data (what we see, hear, smell, and feel) to rough social, ethnic, and political categories,[12] which paint a mental picture of who people are and what they are like, concerning our values and beliefs regarding those same categories.[13] The normative status individuals place on these categories speaks to how we perceive each other and determine trustworthiness. However, what remains to be clarified is why we make these often-unconscious assumptions about others, especially when we think about the common-adage regarding assumptions: we seem to want to avoid mistakes, so why are we seemingly pre-disposed to making them?

Psychologists such as Hugo Mercier (2020) argue that, despite common adages, relying on assumptions to navigate the social world is a valuable evolutionary skill set. Notably, Mercier explains that the use of assumptions based on categories, or cues, occurs throughout the animal kingdom, mainly when competing species' survival often

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[12] i.e., kinds of things.

[13] To refer to an earlier example, my mental picture of Justin Trudeau involves categories such as white, male, liberal, Canadian, and so on. Yours might include these same categories, and others too, but those categories may have different normative statuses according to your values or beliefs.

relies on them being able to emit or receive information in the absence of a shared form of communication, such as a language:

> For genuine communication to exist, there must be dedicated adaptations on the side of the entity sending the signals, and on the side of the entity receiving the signals […] If one side is endowed with specific adaptations, either to emit or to receive some information, without a counterpart on the other side, there is no genuine communication. Instead of communication, there can be cues, which only require adaptations on the receiving side. For instance, adult mammals can differentiate babies from adult members of their species. But they do not need communication to do so; they can rely on cues—most obviously, size. (Mercier, 2020, pp. 18-19)

The author goes on to explain that since species are often competing for resources, it is often advantageous for them to develop "unreliable signals [that are potentially] harmful to others" (p. 20), especially between predator and prey. However, these signals must have some plausibility, otherwise, they lack evolutionary stability, which is necessary for such signals to persist:

> If a prey is nearly certain to escape its predator, they are both better off if the predator doesn't attack at all, and they can both save some energy. But prey can't simply send predators a signal meaning "You can't catch me!" All prey would have an incentive to send this signal, even if they were too young, old, tired, hurt, or unprepared to escape the predator. Predators, then, would have no reason to believe the signal. For such a signal to function and to last, it should be disproportionally likely to come from prey fit enough to escape. Otherwise, it is not evolutionarily stable, and so it

will be selected out and eventually disappear (or never appear in the first place). (p. 23)

In the animal kingdom, one example of how these signals gain credibility is the gazelle's method of deterring predators by "stotting" (performing high jumps when they notice predators). According to Mercier, gazelles do this to signal to predators that they are aware of their presence and show them that they are plausibly capable of outrunning them and are, therefore, not worth chasing (pp. 16-25). According to Mercier, these predator-prey cues demonstrate the development of reliable evolutionary functions that allow information sharing without direct communication.

However, given that humans are rarely in predator-prey relationships, the constraints that make our signals plausible are not as clear, so how does the use of cues persist in modern society? Mercier suggests that the solution for keeping signals reliable involves cost (p. 25). Here, what matters is not that the signaller gives up something in return for reliability since "what matters is a difference—between the costs of sending a reliable and an unreliable signal—the absolute level of the cost doesn't matter" (p. 26). For Mercier, this solution explains ostensibly bizarre behaviours, such as purchasing luxury items to signal wealth or attending regular prayer to signal a commitment to a religious group (p. 25).

Signalling Trustworthiness and Dis-trustworthiness

Mercier's discussion provides a helpful insight into why prior ethos is prevalent: It is an evolutionary mechanism ingrained within us to garner reliable information about the social world. With that in mind, what signals might make us trust and distrust each other?

Signalling trustworthiness involves sending a signal the receiver deems reliable due to genuine cost. Signalling dis-trustworthiness involves sending signals the receiver deems unreliable due to a lack of genuine cost for the sender. These findings underscore an earlier point:[14] With regard to prior ethos, deeming someone trustworthy involves perceiving their signals about a certain quality to come at a genuine cost, and that signal being a positive determinant of that quality. In contrast, deeming someone worthy of distrust involves perceiving their signals about a certain quality to lack genuine cost, despite that signal being a positive determinant of that quality. To demonstrate this point regarding trust, Mercier uses a hypothetical example of a schoolyard fight: "if you get in a fight with an unpopular wimpy kid, it doesn't cost others much to take your side. But those who support you in a fight against the school bully are risking something, and their commitment is all the more meaningful" (pp. 241-242). In comparison, we might deem those who take our side in a fight as dis-trustworthy if they fail to properly demonstrate their commitment despite claiming to take our side in a fight. It is one thing to say you stand on one side of a fight, but quite another to actually get involved.

Schemes For Perceiving ABI Signals

Now is an excellent time to synthesize the discussion of perception, prior ethos, signalling, and determinants of trustworthiness or dis-trustworthiness and stake out a framework for managing trust and distrust. To briefly summarize the discussion so far, we make judgments regarding ABI based on perceptions of character, and one

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[14] Recall that following an analysis of Amossy's discussion of prior and discursive ethos, one observation is that effective discourse involves understanding the gulf (or lack thereof) between how we perceive ourselves regarding a certain quality, the way others see us regarding that same quality, and the determinants of that quality in the mind of others.

component of these judgments is prior ethos, which relies on our evolutionary skill to emit, receive, and interpret social signals that we deem reliable when we determine them to come at a genuine cost to the sender.

With these observations in mind, we can form schemes as templates for understanding each component of the ABI judgments for trust and distrust. Note that the following schema holds concerning the distinction between trust and distrust: if we do not perceive the signals that determine trust, that does not mean we distrust them—we lack reason to trust them. Likewise, lacking a reason to distrust someone does not mean we trust them.

Trusting Ability (TA): A trustor believes a trustee to have the ability to meet commitments because they perceive the determinant signal to be reliable because incorrectly sending such a signal comes at a genuine cost to the trustee.

Distrusting Ability (DA): A trustor believes a trustee lacks the ability to meet commitments because they perceive the determinant signal to be unreliable because incorrectly sending such a signal comes at no genuine cost to the trustee.

Trusting Benevolence (TB): A trustor believes a trustee to have benevolence towards them because they perceive the determinant signal to be reliable because incorrectly sending such a signal comes at a genuine cost to the trustee.

Distrusting Benevolence (DB): A trustor believes a trustee lacks benevolence towards them because they perceive the determinant signal as unreliable because incorrectly sending such a signal comes at no genuine cost to the trustee.

Trusting Integrity (TI): A trustor believes a trustee to have integrity because they perceive the determinant signal to be reliable because incorrectly sending such a signal comes at a genuine cost to the trustee.

Distrusting Integrity (DI): A trustor believes a trustee lacks integrity towards them because they perceive the determinant signal to be unreliable because incorrectly sending such a signal comes at no genuine cost to the trustee.

Of course, the usefulness of these schemes relies on our ability to recognize them in practice. To do so, we can utilize Lewicki et al.'s (1995) taxonomy of integrated trust (see: Figure 2) to build a sense of what each scheme might look like and create critical questions which test whether an agent's behaviours indicate a particular scenario. Concerning trust, Lewicki et al. suggest that high levels of trust involve hope, faith, confidence, assurance, and initiative. In contrast, low levels involve a lack of hope, faith, and confidence, as well as passivity and hesitance.

Thinking about each of these determinants of trustworthiness, what kind of behaviours might indicate high and low levels of **TA**? Presumably, they would involve an eagerness to cooperate, a lack of scrutiny towards their competencies or qualifications, and a sense of confidence in the trustee on the part of the trustor. Similarly, high trust in one's abilities might involve approval of the trustee's prior domain-specific activities.

For example, you might choose to see a particular hairdresser because all your friends who use them have great haircuts. In contrast, low trust might involve a degree of scrutiny towards the same competencies and skills or hesitation regarding endorsing the

trustee. For example, you might have low trust in your local councillor based on their lack of qualifications or apparent experience.

Each of these **TA** behaviours is pursued because a trustor believes the parts constituting a trustee's prior ethos come at a genuine cost to them. In contrast, behaviours that indicate **DA** would take the form of rejecting the validity of a trustee's skills, cynicism towards their competencies, and skepticism or wariness regarding any seemingly positive determinants. Following this approach, we can think of some critical questions regarding each of these schemes that look for the specific behaviours that indicate them.

TA: Critical questions.

CQ1: Is the trustor eager to cooperate with a trustee?

CQ2: Does the trustor approve of the trustee's competencies?

CQ3: Does the trustor approve of the trustee's prior activities?

DA: Critical Questions.

CQ1: Is the trustor fearful of cooperation with the trustee?

CQ2: Does the trustor seem skeptical of the trustee's competencies?

CQ3: Is the trustor cynical of the trustee's prior activities?

TB: Critical Questions.

CQ1: Are there interdependencies between the trustor and trustee?

CQ2: Does the trustor have high-value congruence with the trustee?

CQ3: Does the trustor pursue opportunities with the trustee?

DB: Critical Questions.

CQ1: Is the trustor wary of forming interdependencies with the trustee?

CQ2: Does the trustor hold themselves to values that conflict with the trustee's?

CQ3: Does the trustor avoid opportunities involving the trustee?

TI: Critical Questions.

CQ1: Does the trustor show confidence in the trustee?

CQ2: Does the trustor recommend the trustee to others?

CQ3: Is the trustor willing to be vulnerable to the trustee?

DI: Critical Questions.

CQ1: Is the trustor watchful or vigilant of the trustee?

CQ2: Does the trustor suggest others be cautious of the trustee?

CQ3: Is the trustor fearful of making themselves vulnerable to the trustee?

Looking through these sets of critical questions, we can see that answering questions affirmatively indicates trust in Tx questions and distrust in Dx questions. However, it is worthwhile noting that although an entire set of responses in the affirmative gives a clear indication, these questions may yield responses somewhere in

between, such as "somewhat," which can help to discern high perceptions of trustworthiness from low levels, particularly when thinking about the overall picture. Furthermore, some questions might not be answerable because we need more information about the agent or because they fail to make apparent expressions that match these schemes. Nevertheless, these schemes help get a general sense, specifically, a sense of what factors appear most apparent or pressing regarding the agent's perceptions of a trustee.

Using Schemes and Critical Questions in Practice

To show how we can use these schemes and critical questions, we can apply them to two trustees mentioned early on, Anthony Fauci and Jennifer Nuzzo, and get a sense of their prior ethos and the kind of discursive ethos they should consider going forward. Here, the aim is to understand how a trustor perceives a trustee in terms of their ABI signals. Of course, it is clear that in both examples, the trustees in question have already engaged in discursive ethos with the trustors. However, since we recognize that trust is cyclical, involving building, stability, and dissolution, taking stock of prior ethos can occur at any point before further discourse. With that in mind, these examples look at prior ethos as if further discourse were to occur rather than as if it is yet to occur. Admittedly, it is difficult to avoid anachronism in such examples. Nevertheless, we can still look to these examples to test the practicality of using these critical questions.

Case Study: Fauci & Navarro

Anthony Fauci's position as a public official handling the US federal government's response to the COVID-19 pandemic allows us to frame the speaker-

audience relationship fairly broadly: his audience is seemingly the public. At the same time, this makes it difficult to make any reliable claim about how that audience perceives him. In other words, we want to avoid generalizing about the opinions of such a large group. With this in mind, we will use arguably the most vocal group in Fauci's speaker-audience relationship: his critics. Notably, Fauci's critics were often White House officials, which allows an analysis of prior ethos in which the social status between the speaker and audience is relatively similar to the general public.

Seemingly, Fauci's critics practically lined 1600 Pennsylvania Avenue's hallways, and their thoughts on Fauci were heard far beyond its walls. Indeed, as the pandemic washed across the United States in 2020, it was followed by a steady stream of articles, interviews, and opinion pieces in the US press that offer an insight into perceptions of the infectious disease expert and his responses to them. White House trade advisor Peter Navarro went as far as to write an opinion piece for *USA Today*, in which he offers perhaps the clearest example of someone who perceives a trustee as fundamentally worthy of distrust. In his article, Navarro's central criticism is that Fauci "has been wrong about everything" (2020). In support of his position, Navarro speaks with both skepticism and cynicism towards Fauci's recent decisions, claiming that he "was flip-flopping on the use of masks" compared to Navarro (ibid), who claims to have ensured stockpiles of masks and other protective equipment long-before Fauci had made up his mind.

Looking at the critical questions regarding **TA/DA**, Navarro displays a low level of trust and a high degree of distrust. Although he ostensibly cooperates with Fauci "with skepticism and caution" (ibid), he frames him as incompetent and refuses to approve of his prior decisions. Navarro does not merely *lack* approval for Fauci's competencies or

prior activities: he actively voices his disapproval and cynicism, indicating distrust of Fauci's abilities.

With regard to determining Navarro's perceptions of Fauci's benevolence, there are clear interdependencies between the two. Both are concerned with the operation of an entire nation. However, more specifically, Fauci's decisions, be it to recommend border closures, or stay-at-home orders, impact the interests of Navarro as a trade advisor. Navarro's concern for the economic impact of the pandemic makes him less than thrilled about these interdependencies, which also shows that they stand at odds regarding how to approach the issue at hand and may even see each other as holding conflicting interests. At the same time, Navarro does not avoid opportunities involving Fauci, so we can think of the answers to critical questions regarding **TB/DB** as demonstrating low trust and high distrust.

Lastly, what does Navarro's article tell us about his perceptions of Fauci's integrity? Notably, Navarro makes repeated efforts to draw attention to what he feels are inconsistent actions on Fauci's part throughout the article, but most perspicuously, he writes:

Fauci was telling the White House Coronavirus Task Force that there was only anecdotal evidence in support of hydroxychloroquine to fight the virus, I confronted him with scientific studies providing evidence of safety and efficacy. A recent Detroit hospital study showed a 50% reduction in the mortality rate when the medicine is used in early treatment. Now Fauci says a falling mortality rate doesn't matter when it is the single most important statistic to help guide the pace of our economic

reopening. So when you ask me whether I listen to Dr. Fauci's advice, my answer is: only with skepticism and caution. (Navarro, 2020)

Navarro shows little to no confidence in Fauci, nor is he assuring of his abilities or willing to be vulnerable to him. He openly explains that he is cautious of him and implies that others do the same out of a concern that adverse outcomes are all but certain should we place our trust in him. Yet again, Navarro demonstrates the same low trust and high distrust regarding the **TI/DI** scheme and, likewise, overall.

Concerning the *costs* involved in these signals, it seems that Navarro perceives Fauci's signals as lacking genuine cost because he views him as miscalculating or uninterested in the economic impact of his actions, which are a far greater concern for Navarro owing to his position in government as a trade advisor. In other words, Navarro perceives Fauci's signals as uncostly because Fauci is miscalculating their true impact— they do not come at a genuine cost because Fauci does not realize the actual cost.

Case Study: Nuzzo, Jim, and Jerry.

Tasked with engaging Jim and Jerry, two vaccine skeptics from Sasha Baron-Cohen's *Borat Subsequent Moviefilm*, epidemiologist Jennifer Nuzzo's appearance in episode two of *Debunking Borat* is an example of constructing discursive ethos rather than prior ethos. With that in mind, looking at Jim and Jerry's perceptions of vaccine science introduced at the beginning of the episode is the best way to consider Jim and Jerry's perceptions regarding Nuzzo.

In the episode, we hear that Jim and Jerry's vaccine skepticism is partly due to their belief in the conspiracy theory concerning a theoretical study investigating the

possibility of storing information regarding a patient's vaccine history within their body through quantum dot dye. The episode explains that this study, although purely theoretical, became of interest to conspiracy theorists because the study is funded partly by the Bill and Melinda Gates Foundation. Eventually, the study came to undergird the belief that Bill Gates and those interested in vaccine science want to track or control the public by implanting microchips within them.

With these connections in mind, Jim and Jerry presumably see Nuzzo as, at the very least, complicit and, at most, directly involved in the alleged plans to microchip the global population. While there is a clear expert-layperson relationship between the pair and Nuzzo, the scenario is particularly interesting because for the trustors, the discussion, although occurring through video conferencing, is likely the first opportunity to speak directly to an expert regarding their concerns. For Jim and Jerry, entering into a trust-based relationship with Nuzzo involves a change in belief: accepting a true belief and giving up a false one. Despite differences from the earlier example of Fauci and Navarro, the scenario is similar: Jim and Jerry have low trust and high distrust in Nuzzo. Owing to their conspiratorial beliefs, they would answer the $\mathbf{T}x$ questions negatively and $\mathbf{D}x$ questions affirmatively. With that in mind, why explore this particular example if the output from our analysis is essentially the same?

Primarily, the example speaks to how prior ethos is sometimes constructed in a way similar to "guilt by association." In other words, the reasons for Jim and Jerry's skepticism do not involve Nuzzo's actions (at least directly), but because she is perceived as part of the group involved in the conspiracy. In this instance, understanding prior ethos becomes more complex. We need to grasp how the trustors perceive a trustee indirectly

from the accounts of others and how those perceptions relate to the trustee. Like it or not, these perceptions impact Nuzzo and any discourse considering them. For instance, Nuzzo might distance herself from these perceptions or accept them and offer discursive ethos to reconcile the issues on their behalf. Nevertheless, even if Nuzzo chooses to distance herself from the perceptions of the group as a whole, they are still a factor for consideration. If she is seen as a part of a dis-trustworthy group, any attempt to distance herself from them can be construed as equally worthy of distrust.

Echo Chambers and Epistemic Bubbles

One way to think about these indirect perceptions is to consider the source of information at hand. Most of us gain knowledge about the world around us indirectly from various sources such as social media, interpersonal discussions, or television and print media. For instance, each morning, I browse the news on the BBC News app to read the headlines, scroll through Facebook to see what my friends are talking about, watching, or listening to, and watch a few new YouTube videos about topics I am specifically interested in. Broadly, these sources form an information network I rely on to learn about the social world. Notably, these networks do not give me a complete picture of the world. Instead, these networks are a way for me to gain knowledge in an incredibly complex world efficiently. Although I am only getting a small insight into the world, it is often sufficient for my day-to-day life.

At their core, these information networks allow us to filter the news we need in the face of an overwhelming influx of information. According to Nguyen (2020), these filters are at their best when they "focus [our] attention on relevant, useful, and reliable

information" while providing sufficient coverage about what is going on around us (p. 143). Citing Goldberg, Nguyen explains that we can think of this as "coverage reliability – the completeness of relevant testimony from across one's whole epistemic community (Goldberg 2011: 93–4)" (ibid). In other words, the filter we use to gain knowledge must involve reliable information that is broad enough to deliver an accurate picture of the world. Otherwise, we end up with an understanding that lacks adequate exposure to essential facts and a balance of accounts or opinions. Considering Jennifer Nuzzo's prior ethos, good coverage would offer a complete picture of who Nuzzo is, her qualifications, competencies, and perhaps a variety of views regarding her and her expertise. In contrast, bad coverage would involve a myopic or skewed account of these facts and opinions that fails to provide a complete picture to the trustor.

When we have a skewed perception, we are prone to making inaccurate judgments about others. With that in mind, it is worth considering how we find ourselves in these situations. Indeed, we place a high value on making correct judgments, so why would we be susceptible to such inaccuracies? Notably, Nguyen points out that having bad coverage of the world around us is not a personal flaw but the outcome of two flaws in the information systems we rely on, which he refers to as *echo chambers* and *epistemic bubbles*.

Epistemic bubbles, the less concerning of these two flaws, are a socially constructed epistemic status where relevant voices are excluded as a source of knowledge (Nguyen, 2020, p. 142). Here, sources of expertise regarding a particular area of knowledge are omitted from the information networks we use to gain knowledge. For

Nguyen, these bubbles lead to inadequate epistemic coverage of relevant information (p. 143).

This lack of adequate coverage occurs in both indirect and direct forms. The first involves a systemic lack of access adequate to the knowledge landscape, such as insufficient access to various news media, contrary political viewpoints, or relevant scientific research. The second is a more significant concern and involves the active manipulation of the knowledge landscape by an external actor. The most obvious example is how Google searches, social media platforms, and other online information sources employ algorithmic filtering to show us the information we supposedly want to see, suggests Nguyen (p. 144).

For Nguyen, the primary issue with epistemic bubbles involves "bootstrapped corroboration" (p. 144). This issue creates false confidence in our knowledge status since corroboration usually indicates that we are correct. When bootstrapped corroboration occurs in this way, we fail to consider the broader knowledge landscape and the contrary accounts it may contain. Fortunately, addressing the problem of epistemic bubbles only requires sufficient inclusion of relevant information to the network to burst the bubble, and one good piece of information that casts doubt on our current view bursts the bubble.

On the other hand, echo chambers are different from epistemic bubbles since they *actively* discredit opposing information. Nguyen explains that entering an echo chamber involves becoming part of "an epistemic community which creates a significant disparity in trust between members and non-members" (p. 146). In other words, we enter echo chambers with a particular set of beliefs that become amplified and legitimized by the

active defence against and discreditation of other sources of information in the knowledge landscape. Here, encountering contrary views has the opposite effect since they are treated as malignant forces. Thus, the chamber is strengthened by contrary information, leading to further isolation for its members.

Nguyen adds that echo chambers utilize epistemic mechanisms that are not ordinarily problematic and applies them in a way that perverts their functions (p. 148)—for example, taking the redaction of the infamous MMR vaccine study of Wakefield et al. as evidence of a conspiracy to cover up the risk of autism from the vaccine. Hyper-specialization of the modern knowledge landscape plays a role in this practice, suggests Nguyen, since "[h]uman knowledge has splintered into a vast set of specialized fields that depend on each other. No one human can manage that information" (p. 148). Echo chambers play on this problem to plant seeds of doubt where trust should grow: we should seek expert views to bolster our knowledge when necessary. Of course, some may argue that this solution merely shifts the problem to one that involves discerning who is an expert on a given topic. Nevertheless, from this discussion, we can build a working template for identifying these flaws concerning judgments of prior ethos.

The trustor is subject to an Epistemic bubble if:

1. The trustor lacks adequate coverage of the epistemic landscape.

2. An unintended filter or an external agent is responsible for this lack of coverage.

3. Should contrary evidence enter the bubble, the trustor will accept it and the bubble will burst.

Similarly, if the trustor is subject to an echo chamber, then:

4. The trustor's information source actively promotes an epistemic disparity between themselves and others through discreditation.

5. The trustor's information source attempts to utilize otherwise unproblematic methods to pervert the knowledge landscape strategically.

Returning to Jim and Jerry, they likely unintentionally lack adequate epistemic coverage: they are not intentionally unaware of Nuzzo or her competencies; it is just that their filter does not pay attention to a who's who list of epidemiologists. Though they might believe that epidemiologists are untrustworthy owing to their beliefs in vaccine microchips, they are seemingly open to contrary evidence. When Nuzzo explains that the belief is implausible since microchips are not yet small enough to pass through a needle, they openly admit that they had wondered about this issue as a reason to doubt what they believe. In this sense, Jim and Jerry accept contrary evidence regarding the belief and the prior ethos they hold regarding epidemiologists as "the bad guys."

Furthermore, neither Jim nor Jerry seems to suggest they have accessed an information source with any epistemic advantage to Nuzzo or anyone else. Lastly, neither seem to respond with information that further perverts the knowledge landscape, i.e., bringing in further evidence to suggest Nuzzo is untrustworthy or that her beliefs are contrary to theirs. With this analysis, Jim and Jerry are subject to an epistemic bubble rather than an echo chamber: Nuzzo merely has to present herself in a way that counters the construction of prior ethos for them to begin to see her as less worthy of distrust and more trustworthy. Although it is not immediately apparent that Jim or Jerry are entirely

convinced, Nuzzo has made a small but significant impact on the pair's beliefs and made inroads for greater trust.

However, what kind of scenario would Nuzzo have on her hands if Jim and Jerry were seemingly in an echo chamber? Nguyen suggests that in these scenarios, changing beliefs, and therefore the construction of prior ethos, is much more cumbersome and involves what he calls an "epistemic reboot" in which:

> The agent is permitted, during the belief re-acquisition process, to trust that things are as they seem and to trust in the testimony of others. But they must begin afresh socially, by re-considering all testimonial sources with presumptive equanimity, without deploying their previous credentialing beliefs. Furthermore, they must discard all their other background beliefs, because those potentially arose from the flawed credential structure of the echo chamber, and very likely have been designed to support and reinforce that very credential structure. Our rebooter must take on the social epistemic posture that we might expect of a cognitive newborn: one of tentative, but defeasible, trust in all apparent testimonial sources. (pp. 157-158)

The author goes on to describe real-world examples of such reboots. These examples involve a trustee who works to build trust with the trustor through discursive ethos, which exposes the latter contrary evidence (though not necessarily discourse) that leads the agent to realize they are subject to an echo chamber, and the recognition of which leads them to reduce distrust and increased trust in the agent who facilitates this process. Interestingly, Nyugen's primary example involves Derek Black, a former white nationalist who, after being outed as a white supremist by his university campus

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community, became aware that his beliefs resulted from an echo chamber thanks to a Jewish classmate, Matthew Stephenson, who worked to build trust by repeatedly showing kindness towards him (p. 158). Astonishingly, Stephenson's efforts led to Black renouncing his long-held extreme beliefs, and to become an outspoken critic of white nationalism.

Saslow's (2016) article in the *Washington Post* details Stephenson's attempts to build trust with Black, which are seemingly expressions of ABI. Notably, Stephenson sought to express his benevolence by inviting Black to Shabbat dinners after being shunned by the campus community, following revelations about his beliefs and background as part of the white supremacist media group *Stormfront.* Although Black was wary of the invitation, he eventually joined Stephenson for dinner, and to play board games, all while avoiding the topic of Black's background. Over time, these interactions likely built a perception of Stephenson's integrity, allowing for Black to listen to Stephenson's advice and criticisms regarding his white nationalist roots, which Black took onboard presumably because he felt that Stephenson was able to have the ability to be trustworthy thanks to the objectively costly signals Stephenson was sending.

With Nyugen's discussion in mind, although trustees may find themselves facing a choice about how to respond to the construction of prior ethos that results from an echo chamber or epistemic bubble, in these scenarios building trust and managing distrust still involves the same factors: ability, benevolence, and integrity. What is especially interesting here is that what made Stephenson's discursive efforts so effective is that he evidently considered how Black perceived him and tailored his interactions with these perceptions in mind. Black's beliefs included the idea of "white genocide," a conspiracy

theory revolving around the idea that Jews are conspiring to eradicate so-called "white culture" through mass immigration (Flanagan & Wilson, 2022), so Stephenson invited him to dinner because it seemed like Black had never really met a Jewish person before.

At the dinners, Stephenson ensured the conversation steered clear of anything that might make Black uncomfortable and asked his friends to do the same. Black would go on to attend weekly dinners and eventually began to open up about his beliefs and, through discourse, came to reject them. Overall, Stephenson's approach to building trust involves understanding how the construction of prior ethos opens the doors to effective trust-building through discursive ethos.

What About Discursive Ethos?

Considering the importance of prior ethos and its formation, the question of the right way to engage in discursive ethos looms. With all these things considered, what words will be most effective in building perceptions of trustworthiness and managing perceptions of distrust? Indeed, the answer to this question seems central to any framework that seeks to resolve an issue related to interpersonal trust. However, the discussion so far tells us something interesting: it is seemingly better to think more carefully about prior ethos than discursive ethos since a firm grasp of how others perceive us presents an opportunity to foster an environment that promotes the kind of epistemic reboot that occurred in the example of Derek Black. In other words, understanding how others perceive us means that we do not have to rely so heavily on smooth-talking, clever arguments, direct refutation, or other forms of persuasion to resolve trust issues. Instead, we focus on challenging (or reinforcing) the ABI judgments that inform prior ethos and build trust through the behaviours that surround discourse. This process involves

behaving in ways trustors recognize as coming at a genuine cost to the sender. In other words, we must show trustors that we acknowledge they are taking a risk in trusting us and offer genuine demonstrations of our ability, benevolence, and integrity. We must then manage these perceptions, owing to the cyclical nature of trust discussed earlier.

Why this approach? Firstly, it involves lesser degrees of belief change. We have a lot on our hands when we try to persuade others to change their mind regarding a deeply held belief discursively, and far less when we merely want to challenge assumptions about whether we are trustworthy one at a time: particularly when many of these assumptions are formed unconsciously, or without our awareness. At the same time, getting a sense of what others think about us, much like Stephenson did with Black, pops an epistemic bubble since it presents first-hand evidence that contradicts those assumptions about whether we are trustworthy or worthy of distrust. Perhaps most importantly, Stephenson's example shows that this approach can handle the most demanding scenario: breaking an echo chamber.

Secondly, considering how others perceive us is one way to send costly signals that keep communication reliable. As shown with Stephenson's efforts to build trust with Black, it takes time and effort to consider how others feel about us, and any insincerity in that regard comes with the risk of making us seem manipulative, glib, self-interested, and thus worthy of distrust.

Thirdly, thinking about how we appear to others as trustees is a way of acknowledging the risk that trustors take when they make the so-called "leap of faith" to trust. Making an effort to appreciate how others perceive us is one way of bridging the

uncertainty surrounding scenarios that involve trust by adding relata that can facilitate a leap to trusting in one of the three ways Möllering suggests.

Putting it all together

Having dived into the nature of trust and distrust, we have come away with the conclusion that one way of managing trust and distrust is to consider how trustors perceive us, then prove that we recognize the risk they take in trusting us by sending costly signals that speak to our ability, benevolence, and integrity regarding the task we wish to be trusted. In other words, if we want to be trusted, we need to reinforce the perceptions that make us appear trustworthy and address the perceptions that make us appear worthy of distrust. One way to do this is to engage in discourse. However, as we have seen, it is possible to make assessments about these perceptions prior to discourse, and with a grasp of these perceptions in hand, we can tackle the problem of distrust, and build trust in a way that involves breaking down smaller, often unconsciously held beliefs that support these perceptions. In other words, treat the symptoms of the problem rather than developing a cure that ignores the problem's practical impact. After all, if trust and distrust are cyclical, we should not be thinking about a cure: We should treat the symptoms, offer regular checkups, and address changes as and when they occur.

How do we treat these symptoms concerning vaccine hesitancy? So far, I have looked at schemes to help identify perceptions of trust and distrust via the behaviours that are indicative of them in each of the three factors relating to them: ability, benevolence, and integrity. Next, I apply these ideas to the issue of vaccine hesitancy and distill these

ideas down to manageable heuristics that can help health professionals to diagnose and treat the symptoms of vaccine hesitancy in a manageable and helpful framework.

CHAPTER 5

AN ABI FRAMEWORK FOR VACCINE HESITANCY

In the most fundamental sense, vaccine hesitancy is a crisis of trust between the public and health experts who support vaccine science. However, prior to the COVID-19 pandemic, there was a tendency by experts to frame the issue as a kind of "war on science." On the one side lies experts from various professional fields who collectively hold the knowledge and expertise to develop, administer, and advocate for vaccines and mass vaccination programs in the interest of public health. On the other lies a group of laypersons who are skeptical of all that these experts hold dear—at least in terms of vaccine science. In this framing, the public is misinformed, misguided, or unaware about what is good for them, while the experts, despite all their expertise and training, are left banging their heads against a wall to try to get them to see the error in their ways.

Thankfully, this framing is now all but left behind. For all the misery of the COVID-19 pandemic, one helpful thing that has come out of it is a reminder of the interdependencies between experts and the public. In other words, COVID-19 is a reminder that health science (and science in general, for that matter) can only function with the public being amenable to its practices and products and that work should be done to manage the communication that facilitates this relationship. At the same time, it is no secret that health professionals already have their work cut out, and it takes little to understand why such a framing exists. One only needs to reflect on the endless images of weary doctors, surgeons, nurses, and care workers trying to sleep in hospital hallways

amidst a global health crisis to know that, at least sometimes, it must feel like a one-sided job. Similarly, the endless stream of television video conference interviews with forlorn experts, all of whom trying to solve the most significant public health crisis of the modern era, shows that public health and healthcare careers are physically and mentally draining jobs on all levels.

For these reasons, I felt hesitant to develop a framework for handling public trust in relation to vaccine hesitancy. Given that this is an issue that impacts every one of us, why should the problem of public trust in vaccines fall on those people who already have so much on their plate? Ostensibly, the answer is contained within the reframing of the issue from a war on science to an issue of trust: (health)science needs the public at least as much as the public needs them, and that requires the requisite work to ensure the two groups appreciate each other appropriately.

Nevertheless, the context of the problem means that if those outside the health sciences are going to help with the problem, we need to do it in a practical way, and that is the aim of this last chapter. Here, I distill the previous chapters into a set of useful, practical frameworks for addressing vaccine hesitancy for three groups that most clearly need them: healthcare practitioners, public health officials, and the producers of vaccines because building public trust in them builds trust in vaccination. Treating trust as cyclical, the aim here is to offer an abductive approach to identifying the behaviours that indicate perceptions of trust and distrust in public-expert relations in terms of ABI, together with a remedial course of action. Notably, the goal is to avoid the need for discourse until necessary by creating conditions that make it productive. Here, the aim is to recognize that trust and distrust are always present in any interpersonal relationship,

and rather than attempting to refute the reasoning behind them, it is better to manage them by sending costly signals that undo *inaccurate* perceptions of our ability, benevolence, and integrity. The caveat, then, is that it is not enough to merely apply these frameworks to gain trust because they tackle *misconceptions* rather than accurate conceptions: to be trusted, you must actually have a sufficient degree of ability, benevolence, and integrity.

Healthcare practitioners: How to get patients and vaccinate them

For healthcare practitioners, building trust in vaccines requires that vaccine-hesitant patients perceive them with high trust and low distrust regarding vaccination. In other words, patients (and, where pertinent, their legal guardians) must believe their family doctor, practice nurse, or other practitioner has the ability, benevolence, and integrity necessary for them to take a leap of faith and be vulnerable to them regarding their medical opinion and skills concerning vaccines. Furthermore, since trust is cyclical, it is essential that these practitioners stay aware of changes to these perceptions and respond appropriately to the management of both trust and distrust.

High trust: Maintain ABI

Thinking about the cycle of trust in terms of vaccines in practitioner-patient relationships, healthcare practitioners have a wealth of information at hand to allow them to get a sense of how patients might perceive them and vaccines prior to discourse (i.e., in-person discussions). For example, during a visit to their healthcare provider, a patient's medical history may shed light on their views concerning vaccines overall and can serve as a record of their behaviours. A long history of vaccine administration, with regular

seasonal flu shots, COVID-19 boosters, and other related treatments, is a good sign that a patient has a high degree of trust in terms of ability, benevolence, and integrity in their healthcare practitioner.

Nevertheless, these positive signs should not mean practitioners can neglect to maintain this trust. Here, practitioners should use these positive signs to maintain trust. Practically, this involves practitioners staying current on healthcare-related matters relating to the patient and their wellbeing while ensuring that the potential for inconsistent visits to the practitioner is avoided. These simple measures are strong demonstrations of ABI. For example, suppose a patient regularly visits their practitioner for a seasonal flu vaccine. In that case, it is worth taking the time to share information about any relevant new developments: inform patients about improvements to vaccine efficacy, speak about ways to combat the spread of the virus that are relevant to them, and continue to ensure that the patient's broader health concerns are addressed.

As simple as these measures sound, they reinforce *ability* by building on positive prior engagements and competencies, *benevolence* by showing concern for the patient beyond the walls of their office, and *integrity* by consistently recognizing the patient's needs and concerns. Notably, these signals of ABI carry weight in the patient's mind when they are perceived as genuine. With that in mind, practitioners should avoid ways to deputize these interactions or reduce them to afterthoughts. In other words, enact these behaviours during appointments face-to-face and avoid making patients fill in survey forms—discuss their concerns instead. Close off interactions by arranging follow-ups— avoid making them call to rebook appointments or wait at a front desk. Explain new

treatments and products to patients—do not merely hand them pamphlets or suggest they research things online.

Low Trust: Working on Bedside Manner

Thinking back to Lewicki et al.'s (1995) trust taxonomy, low trust in vaccines ostensibly involves a medical history with inconsistent or partial vaccination records, perhaps even missed appointments, reluctance, or passivity concerning timely vaccination. Since trust is cyclical, we can expect that these trends may arise, persist, and decline, and understanding where the relationship exists in this cycle should be the first thing practitioners who suspect a patient to have low trust in vaccination should consider. If trust appears on the decline, understanding the cause is paramount. Practitioners should discern whether there are reasons for this decline in terms of ABI: Did the patient respond poorly to a prior treatment, which might indicate a declining sense of *ability*? Has the patient declined to share relevant health information in a recent appointment, suggesting a poor sense of *benevolence?* Perhaps the patient's recent appointments were cancelled by the practitioner, and they have been visiting less regularly since due to poor perceptions of *integrity.* On the other hand, perhaps a patient has consistently been inconsistent in receiving vaccines: are there ABI-related reasons that might explain why?

It might take some time to understand why patients have low trust, but things can turn around with routine treatment. Demonstrate *ability* by explaining why a prior treatment failed to meet expectations promptly and research and explain alternatives that might better suit the patient. Demonstrate *benevolence* by avoiding the assumption that 'no news is good news,' make contact with patients who have fallen off their regular visit

schedules and commit to revisiting patient concerns where it is impossible to address them immediately. When patients miss appointments or decline to accept medical advice, take time to understand their concerns and make smaller demonstrations of *integrity* by giving patients reasons to be confident and taking responsibility for inconsistent advice or treatment when it occurs.

In all of these instances, the signal is costly through a straightforward means: honest acknowledgment of declining ABI in a way that sets out new and achievable commitments. With that in mind, reconciling low-trust relationships should avoid giving a sense of denial, blame avoidance, or insincerity and demonstrate a recognition of the trustor's vulnerability. Practitioners should try to refrain from utilizing opaque policy, bureaucracy, or clerical errors as justification for a failure to meet patient expectations. Instead, practitioners should approach the rebuilding of trust by presenting a specific goal they aim to fulfill, which sends a signal that is costly because sending it incorrectly (i.e., setting an unachievable goal) is destined for failure, effectively reciprocating the sense of vulnerability that falls on the patient when trusting their practitioner.

Low Distrust: Patients Under Observation

Like practitioner-patient trust, understanding where these relationships exist in the cycle is the first important step to managing practitioner-patient distrust. However, how we recognize and handle low distrust depends on whether it exists in tandem with high or low trust. In terms of low levels of trust and distrust, this likely presents as patients who tend to avoid, but not fear, practitioner-patient interactions. For example, a patient who

only visits their healthcare practitioner when they face no other choice and already seems to know what approach is necessary to solve their issue.

As we have seen, distrust is not necessarily bad, particularly when paired with high trust. Nevertheless, practitioners should look for patients in epistemic bubbles that might lead to increasing distrust. Practitioners should ensure they provide time and space for patients to raise concerns about past and future treatments and stay up-to-date regarding the latest developments that concern their patients' wellbeing. By ensuring patients are exposed to accurate information regarding vaccine science as much as any other health matters of concern, practitioners can guard against epistemic bubbles by providing the appropriate information to pop them.

High Distrust: Diagnose and Treat

Returning to Lewicki et al.'s (1995) taxonomy, patients who express high distrust in practitioners and vaccination are likely to be wary or vigilant of practitioners. When paired with high trust, this might mean that patients display trust in one area of expertise and not others since this combination of trust and distrust tends to involve highly segmented relationships. In these instances, the domain-specificity of *ability* is a likely crux, and patients most likely trust in their practitioner's ability for one thing but not another. Here, practitioners should utilize the more domain-general factors of *benevolence* and *integrity* to facilitate a decrease in distrust. High distrust means that patients will eschew vulnerability in that domain, so the key is to facilitate one of the three "leaps of faith" that Möllering (2006) suggests we employ when choosing to trust. For example, giving patients a good reason to bracket out domain-specific doubts by

demonstrating a broader set of competencies that strengthen the interpersonal relationships between the practitioner and the patient.

To do this, practitioners should take an interest in patient wellbeing during interactions, highlight any shared interests, and make time during consultations for more informal discussions that might bring up topics of shared interest. Where possible, avoid overly transactional interactions: make time for patients to talk about something other than health concerns. Next time you make a big life purchase, notice that salespeople often employ this technique. They will skillfully redirect the conversation to allow the customer to speak about themselves and their interest and engage with it before moving on to more difficult discussions like extended warranties. This approach is effective because it evokes a sense of benevolence via an interest in the person and their interests rather than the sale.

In contrast to the other scenarios, practitioners are unlikely to have many patients with low trust and high distrust and are unlikely to be frequently engaged with them. Instead, these are more likely the kind of patient that avoids all engagement with health services until it is impossible not to or no longer has any choice in the matter, such as in the case of emergencies. They likely have limited medical records, lack a family doctor, and express wariness. In these scenarios, the difficulty for healthcare practitioners is that emergency medical situations are less than ideal spaces for anything beyond the immediate issue.

The good news is that these scenarios are fertile grounds for demonstrating integrity, and even small gestures can work towards this goal. Give patients clear

expectations about wait times and treatment outcomes, and follow through on these commitments. The journey away from low trust and high distrust is likely a slow one, so making sure that patients receive follow-up assessments, referrals to outpatient services, and other relevant services is an effective way to make sure that they are given exposure to practitioners that can continue to turn their perceptions around. Here, the aim is to build the foundation for countering the prior perceptions of healthcare practitioners that fuel vaccine hesitancy. In other words, fostering the kind of epistemic reboot Nguyen (2020) suggests can address the matter of trust and slowly disrupt the perverted information streams that echo chambers rely on to exist.

Public Health Officials: ABI in Public Engagement

By public health officials, I mean those whose role involves engaging the public about their expertise in preventing disease in communities and organizations. Broadly, this group includes everyone from government-appointed epidemiologists to family physicians. With that in mind, much of the advice concerning healthcare practitioners may be applicable when considering managing trust and distrust in these roles. However, much of this advice relates to individual one-on-one communication. Here, I look at less hands-on forms of expert-public engagement and offer ways to manage trust and distrust regarding ABI. Notably, the same considerations of high and low trust and distrust levels are applicable. However, here I focus on trust and distrust management in simple terms, given the size of this discussion group.

Ability, Benevolence, and Integrity in Public Engagement

It would be an understatement to say there is no shortage of public judgment concerning health officials' ability to meet commitments during the COVID-19 pandemic. Indeed, organizations, governments, and workplaces often came under immense public scrutiny for their competency in advice that aims at reducing the spread of COVID-19 or regarding the roll-out of vaccines and related vaccine policy at all levels. These criticisms often stem not from a perceived lack of expertise or qualification but because the messaging or advice contradicts prior advice. Of course, the unprecedented nature of the Covid-19 pandemic meant that, at times, scientific uncertainty would be visible for all to see and largely unavoidable. With that in mind, taking on Ivani and Dutihl Novaes's (2022) observation regarding public engagement may offer a workable way to increase trust in terms of ability for public health officials. Here, public health experts should aim to deliver public health messaging that utilizes state-of-the-art platforms and popular media. The aim is to deliver messaging in palatable and engaging ways that garner public attention and compete with alternative messaging from contrary sources.

One way to do this might involve documentaries and films that inform the public in an entertainment setting since notable examples have impacted public behaviours. For example, Ken Loach's 1996 television play *Cathy Come Home* is notable for addressing perceptions of homelessness in the UK audience, leading to public calls for government policy change, and the creation of the homeless charity *Crisis* in 1967 (Fitzpatrick & Pawson, 2016, p. 543). Similarly, television chef Jamie Oliver's documentary *Jamie's School Dinners* changed the public view of childhood nutrition in 2005.

Looking to these examples as ways to deliver more effective public health messaging concerning issues may help develop these creative yet effective forms of engagement. Notably, such approaches can help increase a sense of *benevolence* and *integrity* by developing para-social relationships: a phenomenon that commercial brands now rely on to market their products via social media influencers. Here, audiences form subconscious bonds with entertainment personalities they view on video streaming platforms such as YouTube or Twitch, which research shows are reliable ways of building brand loyalty through trust (Breves et al., 2021). Here, brands garner trust by proxy since the influencer or media personality sends costly signals to the audience regarding their brand. Since an influencer's reputation depends on giving accurate information to the audience, the signals are deemed accurate because the risk of mindlessly promoting products or brands is significant, so any endorsement carries genuine credibility. These approaches, now firmly embedded within our information networks, are fruitful yet underappreciated means for public health to build increased trust in themselves as experts and in vaccination as a health measure.

Likewise, where public health experts should build trust by adopting new approaches to messaging, managing distrust means avoiding the kind of public-service-message approaches that prevailed during the pandemic. Avoiding broad yet unclear, poorly prepared, or inconsistent press-conference messaging that highlights uncertainty where possible and devoting those resources to well-managed (and perhaps smaller-scale) engagements may help to avoid the kind of mass disapproval that often occurs in response to ever-changing public health messaging. Similarly, responding to new public health developments consistently requires the public to understand why they occur. As

Ivani and Dutihl Novaes (2022) point out, public health officials should refrain from delivering scientific information in opaque and complicated ways and consider how to effectively relay important information promptly. One way to do this is to encourage researchers to develop their work into digestible articles for public consumption. In short, finding ways to give greater public access to scientific information, promote scientific literacy, and decrease distrust.

Vaccine Producers: Trust in Big Pharma

It is no secret that the pharmaceutical industry suffers from an image problem. Indeed, despite the effectiveness and availability of modern medicine, there is no shortage of arguments against the pharmaceutical industry that impact public trust. Many of these criticisms revolve around the profit-making nature of the industry. Indeed, these criticisms are not new, with the COVID-19 pandemic only adding insult to injury. David Badcott (2013) suggests that the key criticisms of the pharmaceutical industry involve the medicalization of disease, excessive profiting from disease, dubious marketing, 'curating' medical literature and unduly influencing the publication of scientific data, neglecting unprofitable markets, and taking advantage of patent systems (pp. 249-250). This barrage of accusations is not without convincing support. For all the good of modern medicine, there is undoubtedly much work to be done to reduce the high levels of distrust and increase trust in the pharmaceutical industry.

Cuba, Wellness, and Trust: Lessons to be Learned?

However, other areas of the world hold far less contempt towards the producers of vaccines, with one notable example being Cuba. In 2021, when many Western nations

were struggling to develop and distribute Covid-19 vaccines, Cuba had produced and distributed their own vaccine, allowing them to achieve an 81% vaccination rate: a number that placed them sixth in the world in terms of vaccination coverage at the time (Byrne, 2021). Given Cuba's complicated economic and political circumstances, these successes caught the attention of those interested in the race to vaccinate populations, and their observations may provide a helpful analysis for understanding the problem, despite dissimilarities between the healthcare system of Cuba and other nations.

Jennifer Ruth Hosek (2022) notes that expressions of confidence in Cuba's (state-owned) pharmaceutical industry are widespread, and this confidence is due to a combination of lived experiences with disease and clear messaging about the benefits of vaccination and other areas of public health. Hosek notes that Cuba's approach to public health includes:

News briefings from the national director of epidemiology, Dr. Francisco Duran, infomercials, popular songs and billboards and human-focused documentaries about doctors in COVID-19 wards like Volverán los abrazos (hugs will return) and on the scientists developing vaccines, like Soberania (which means sovereignty). Further, the respondents of my inquiry believe that Cubans don't pay much attention to fake news about vaccines that arrives from abroad via social media. (Hosek, 2022)

She explains that vaccination is the norm, despite a lack of mandates. According to her research, "Even Cubans who are skeptical of their government in other areas stated that the only reason for Cuban medical experts to do their work is to save lives […] many talked about how financial interests play into health care in other countries, making it

potentially less trustworthy" (2022). Lastly, she notes that Cubans often have close

relationships with healthcare providers, which Esposito et al. (2016) describe as a

wellness rather than illness model of healthcare. Here, community wellness is achieved

by fostering strong relationships between families and practitioners (arms of the

pharmaceutical industry and the state), leading to less of an expert-public divide: people

can put a face to the name of the producers and distributors of medical products.

Ostensibly, there is a high degree of trust and a low distrust in Cuba's state-operated

pharmaceutical industry. Even in the face of distrust in government, individuals express

their faith in vaccination and the industry behind it.

While Cuba's healthcare infrastructure differs markedly from that of other nations,

this approach does offer some valuable ideas for a framework that builds trust and

manages distrust elsewhere. Firstly, building trust in healthcare practitioners in the ways

suggested here does have the side effect of building trust in the pharmaceutical industry

via expressions of benevolence and integrity. Secondly, effective and clear yet creative

messaging that utilizes popular communication platforms helps both public health and the

pharmaceutical industry. Thirdly, finding ways to reduce the perceptions of an "us versus

them" scenario regarding the public and vaccine industry helps to increase trust and

reduce distrust. In this sense, many approaches outlined for practitioners and experts have

proxy benefits and direct applicability to big pharma's image problem.

At the same time, this means that big pharma's image problem needs (willing)

help from elsewhere. With that in mind, one way that pharmaceutical companies could

manage distrust is to reduce the focus on behaviours that Badcott (2013) suggests

actively create distrust and redirect those resources towards developing better-trust-

building resources for practitioners and public health officials. This approach might involve offering research funds for community health studies or developing new techniques for facilitating a shift towards community wellness rather than illness models. These approaches may, if well implemented, free up more time for doctors, nurses, and health professionals to engage the public more effectively in the ways I suggest and develop a greater sense of ability, benevolence, and integrity, for each of these three groups most closely involved in the battle against vaccine hesitancy.

Conclusions and Further Thoughts

In this thesis, I have offered a framework for addressing the problem of vaccine hesitancy in terms of managing trust and distrust. The framework I offer involves understanding what behaviours make us worthy of trust or distrust: ability, benevolence, and integrity. Key to this framework is appreciating how others perceive us in these terms and then acting in ways that either promote further perceptions of trust or challenge perceptions of distrust. One might argue that these suggestions amount to a very simple message: If you want to be trusted, don't argue for it. Instead, you should act in a way that shows you are worthy of trust and not worthy of distrust. Of course, this is true, but such a framing ignores what this thesis aims to contribute: that we should think about our actions in terms of a cycle of ability, benevolence, and integrity rather than merely as demonstrations of trust or distrust. By thinking about trust and distrust in this triad of factors, we can make more effective efforts to tackle problems relating to trust, such as the one between vaccination experts and the vaccine-hesitant public.

One aspect of this framework is that it avoids discourse as a means of persuasion. Instead, it involves managing perceptions through actions leading up to discourse. In this sense, some might feel that analyzing how we should argue in the interest of trust is at least worthy of discussion, especially if such a framework fails to achieve its goals. Setting aside the impossible nuance of such an analysis, I hope that the attention given here to the importance of ABI and the cyclical nature of trust-based relationships is enough to show that discourse is the tip of an enormous iceberg of approaches to building trust. While there may be a worthy discussion about how discourse can build trust, the kind of analysis I provide should precede it for there to be any real bite: If we do not understand what makes us trustworthy before we speak, we speak about trust without purpose. With that in mind, I hope that the findings of this thesis are helpful in future research into building trust through discourse, and at the same time, I hope that it is not necessary in practice.

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