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Perceived Doxastic Warrant and Socially Problematic Beliefs

by

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A THESIS

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Abstract

This thesis explores a problem I call *doxastic symmetry*. In examining the acquisition and persistence of socially problematic beliefs – climate change denial, racist assumptions, homophobic convictions, etc. – I suggest it is possible for individuals situated in problematic communities to be epistemically justified in holding problematic beliefs. Social groups require a division of cognitive labour and high levels of epistemic trust in order to function. More than this, there is good reason to think problematic communities operate in epistemically similar ways to their secular liberal counterparts. All this could lead to a stark implication: neither the fundamentalist nor the liberal is privileged in their doxastic warrant. Academic discussions of socially problematic beliefs have largely overlooked this problem. The main aims of this thesis are to (i) examine the acquisition and persistence of socially problematic beliefs, (ii) cash out the epistemic issues that arise due to our extreme epistemic dependence, and (iii) investigate the problem of doxastic symmetry. It might be the case secular liberals have better doxastic justification for their beliefs compared to those espousing socially problematic beliefs. However, we need to seriously address the potential for doxastic symmetry before we can assert this is the case.

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Chapter 1: An Introduction to Socially Problematic Beliefs

1.1 The Racist Consider an individual brought up in a racist family, embedded in a culture of systematic racism in the Southern United States in the 1950s and 60s who comes to (falsely) believe many things about the nature of their race – this is how Allen Buchanan characterizes his upbringing (Buchanan, 2004).¹ Under these circumstances, Buchanan (a white person), from the time he was born, was bombarded with false information about the superiority of white persons over people of colour. This stream of information, coming from authoritative figures (parents, teachers, religious leaders, other white members of society, etc.), was easily adopted as part of his worldview.

All of his experience seemed to confirm these beliefs. White people held societal positions of high esteem – this made sense since Buchanan was taught that Black members of society “were intellectually inferior” (2004, p. 96). Through explicit dogma and through observation of the (white) adults in his life, Buchanan learned to treat people of colour as inferior in every way. Society’s institutions obviously reflected these attitudes: “[Black people] were relegated to separate and inferior schools, were effectively excluded from voting, and could not use the same restrooms, hotels, or restaurants as [white people],” (Buchanan, 2004, p. 95). Additionally, white individuals held societal positions of high social status, offering reinforcement of racist attitudes of white superiority (Buchanan, 2004). More than this, when confronted with evidence problematizing racist beliefs, white authority figures would give reasons to dismiss such challenges. For example, when white individuals would encounter

¹ This is Allen Buchanan’s account of his own upbringing, which he discusses in (Buchanan, 2004). This example is also discussed in (Atchison, 2012).

obviously highly intelligent persons of colour, they would explain it away by saying things like “he must have some white blood” (Buchanan, 2004, p. 96).

Buchanan’s community continually reinforced a racist worldview. These attitudes were maintained by authoritative community members, and white individuals grew up adopting these racist beliefs as fundamental truths about their own superiority. Any hint of a challenge to these beliefs was met with accessible explanations making it possible to retain existing racist beliefs. Today, it is not controversial to condemn this system which kept Buchanan and many others blind to the falsity and moral deficiency of their worldview. However, it seems unfair to criticize these racist individuals based on the idea that *they should have known better*. How exactly *could* these individuals have known better if everything in their environment seemed to endorse white supremacy?

1.2 The Fundamentalist Consider an individual brought up in a Christian fundamentalist community. Fundamentalists prioritize “salvation goods” over “worldly goods,” taking their belief system to be infallible; they divide the world into *the trustworthy* (i.e. members of their community) and *those who cannot be trusted* (i.e. outsiders); and as a result, fundamentalist communities are extremely epistemically secluded (Baurmann, 2008, 2010). This means individual members lack interaction with diverse perspectives, and moreover, have readily available tools to dismiss any unfiltered information presented by non-partisans suggesting their beliefs are flawed.²

To those who are not members of the community, some of the beliefs fundamentalists endorse can seem wildly unfounded. Consider these points from the doctrinal statement of a fundamentalist church in the Southern United States:

² Here, I am adopting Michael Baurmann’s characterization of fundamentalists (2008). This example is also discussed in (Atchison, 2012).

We believe that the unsaved will spend eternity in torment in a literal hell. [...] We believe that life begins at conception (fertilization) and reject all forms of abortion including surgical abortion, ‘morning-after’ pills, IVF (In Vitro Fertilization), birth control pills, and all other processes that end life after conception. [...] We believe that homosexuality is a sin and an abomination which God punishes with the death penalty. [...] We oppose worldliness, modernism, formalism, and liberalism (Faithful Word Baptist Church, 2020a).

Additionally, this church endorses young earth creationism, asserts women are ontologically inferior to men, and insists the earth is roughly spherical, not flat (Faithful Word Baptist Church, 2020b).³ The fundamentalist within a community espousing a robust set of beliefs (like those above), has God-given direction on issues spanning from evolutionary biology, to the metaphysics of salvation, to gender theory, to theories about the shape of the earth. This makes any information presented by outsiders extremely suspect. If community experts impart knowledge on this wide range of topics, and easily explain why the rest of society has gone astray, there is always a reason for the fundamentalist to retain her doctrine.

Fundamentalist communities reinforce a worldview prioritizing Biblical narratives and supernatural goods over other information secular members of society might consider relevant counter evidence. If everything outside of God’s word – anthropology, biology, chemistry, physics, sociology, psychology, history, archaeology, etc. – is inferior to the information already in the fundamentalist’s possession, then how can she come to see any fault in her belief system? Again, like Buchanan, if everything in an individual’s epistemic environment is seamlessly interpreted to endorse existing beliefs, it seems problematic to insist she should have known better.

1.3 The Climate Science Denialist For an individual who rejects climate science, it seems the social and epistemic isolation is much less severe than the fundamentalist. It also

³ See sermons “The Age of the Earth,” “The Virtuous Woman,” and “Flat Earth Debunked” (2020b).

seems the widespread societal distrust of science is nowhere near as infectious as the systematic racism Buchanan describes. Still, the climate science denialist might be in a similar epistemic position to the racist and fundamentalist. A denier of climate science will reject scientists' reports claiming the earth's climate is becoming increasingly unstable due to human activity. The denialist does not reject climate science without reasons – in fact, they can give many good reasons for “disregarding the testimony of scientists, academics, and mainstream journalism” (Atchison, 2012, p. 70). In distrusting climate science, individuals believe politically left-leaning climate scientists and endorsers are anti-American, hostile towards industry, have bought into liberal bias, and lack the capacity to see climate scientist's conflict of interest. For example, a denialist could say, “climate scientists cannot be trusted because they have a strong conflict of interest: they want more money for their research, which will only come to them if they alarm the public and thus make it seem that their research is particularly urgent” (Atchison, 2012, p. 70).

This gives the climate science denialist accessible explanations for dismissing conflicting evidence. More than this, though, “there is enough hostility, contempt and condescension coming from liberals and scientifically-minded people that the attitude of particularistic trust [among distrusters of climate science] gets the support it needs” (Atchison, 2012, p. 70). As I will discuss in detail in Chapter 3, when members of epistemic communities have reasons to think non-partisans are hostile and not trustworthy, a particularistic trust develops, effectively excluding non-partisan views and explanations from (what others take to be) acceptable evidence. Additionally, particularistic trust easily lends itself to the anticipation of non-partisan arguments against climate science, for example, allowing the climate science denialist community to

produce convincing counter-explanations, inflating the credentials of members, and discrediting outsiders.

Even though the climate science denialist community seems much more likely to encounter evidence against their existing views – at least more than my previous examples considering racist and fundamentalist communities – the epistemic environment of the climate science denialist is similarly tenacious. This is because individual distrusters of climate science have many reasons to elevate the testimony of partisans and dismiss mainstream accounts of climate science. When an individual belongs to an epistemic environment constantly reinforcing his existing views and providing convincing explanations as to why everyone else is mistaken, he has many reasons to think climate science is a sham, and readily available mechanisms to dismiss evidence suggesting otherwise. Again, it seems there is some sense in which the climate science denialist has *no good reasons* to give credence to relevant evidence that does not coincide with his existing views. Can we fairly demand he do better? Should he have known better?

1.4 Should Have Known Better There is a view, sometimes articulated by academics and/or politically left-leaning individuals, that everyone who voted for Donald Trump in 2016 is ignorant, stupid, blatantly opposed to fundamental human rights, evil, or any combination of the former. The idea motivating this view seems to suggest Trump voters evaluated the available political information *incorrectly*, whereas the politically left-leaning population are *getting something right*. The left-leaning voter asserts, in some sense, Trump voters *should have known better*. If this is the case, and Trump voters in fact should have known better, this means they made some epistemic mistake that lead them astray. Perhaps they didn't acquire all the relevant information, or maybe they simply didn't complete their epistemic due diligence before forming

a political opinion. Some might suggest Trump voters *should have* evaluated the evidence differently, or they *should have* given left-leaning views more consideration, because *surely with some more rational effort, they would not have voted for Trump!* This attitude seems to be underpinned by a long-standing tradition in epistemology which assumes rationality is at the forefront of knowledge acquisition.

Epistemological accounts of belief emphasize the importance that beliefs be justified according to relevant factors. Epistemologists tend to agree that there must be a connection between the beliefs we hold and the ways in which these beliefs are formed (i.e. beliefs require doxastic justification). If the relationship between belief and truth is mere coincidence, it seems inappropriate to call such a belief *knowledge*. Consider this example:

Suppose that Ingrid ignores a great deal of excellent evidence indicating that a given neighborhood is dangerous, but superstitiously comes to believe that the neighborhood is dangerous when she sees a black cat crossing the street. Since forming beliefs on the basis of superstition is not an *epistemically appropriate* way of forming beliefs, Ingrid's belief is not doxastically justified [even though the neighborhood is, in fact, dangerous] (Ichikawa & Steup, 2001, my emphasis).

Doxastic justification requires beliefs be held *appropriately*. This idea resonates outside epistemology. People do not claim to believe something *just because they felt like it*. We give reasons for our beliefs.

Approaches to justification vary, depending on a theorist's epistemological leaning. A central idea in analytic epistemology, regardless of theoretical affiliation, is that doxastic justification cannot be rooted in *mere luck*. If I, on a whim, guess that it is eleven o'clock, and a friend wearing a functional, accurate wristwatch confirms my guess (to my own surprise), we are hesitant to say I *knew* the time. It seems at the time of my guess, I lacked knowledge. Additionally, consider Ingrid, discussed in the previous paragraph: she correctly believes a neighborhood is dangerous, but this belief is based on a chance encounter with a black cat, not

the relevant available evidence (Ichikawa & Steup, 2001). These examples show the resulting disconnect when doxastic justification is not appropriately connected to facts.

Being lucky does not always constitute faulty doxastic justification, though. There are other forms of luck perfectly compatible with appropriate doxastic justification. Suppose I win a set of history books in a raffle, and upon reading these books I correct many of my previous misconceptions.⁴ In one sense, I was very lucky to come into the possession of these books – but this luck is not incompatible with knowledge possession (Ichikawa & Steup, 2001). Truth and beliefs must share a connection via some sort of justifiable process. Reading history books is an epistemically appropriate way to acquire beliefs. Black cat sightings, on the other hand, are not. This idea extends beyond epistemology, of course, and informs our conceptions of belief formation, unavoidably playing a role in discussions of moral and political significance.

So, what's happening in the Trump voter case? For the Democrat, the idea seems to be something like "We Democrats are doxastically justified in our beliefs about political issues, whereas Trump voters are absolutely and positively unjustified." Taking pride in a perceived epistemic superiority, however, is likely unfounded. The Democrat, who thinks she is particularly enlightened on political and social issues, arguably acquires beliefs in the exact same ways as her Republican counterparts. We cannot arrive at a robust worldview alone: knowledge is a social enterprise. Individuals do not acquire beliefs according to careful analysis of the evidence and thoroughly calculated justification. Instead, we defer to trusted members of our social groups and those we consider epistemic authorities. In this Democrat-Republican example, we see a split between epistemic groups, and therefore, a divide between epistemic chains of trust. This seems to be the plausible candidate for the subsequent different beliefs about social

⁴ This example is adopted from (Ichikawa & Steup, 2001).

and political policy – rather than the individual stupidity of Trump voters. The epistemic processes leading to these differences are worth considering in detail. This is one aim of my project.

Perhaps one of these groups is, in fact, acquiring beliefs in more epistemically sound ways. It is certainly possible that certain epistemic groups have more reliable methods for sorting information and drawing the correct conclusions. However, it is extremely challenging for *individuals* to assert this is so. The liberal academic, like the fundamentalist, is not in a position to accurately or comprehensively evaluate their own epistemic circumstances. Blaming the Trump voter (or the climate science denialist, or the racist, or the fundamentalist) for what might seem like problematic beliefs suggests belief acquisition is a careful and deliberate individualistic process, and furthermore, suggests rationality plays a substantial role in mitigating the belief-relevant information we receive. Even though it is not uncommon for individuals to assert their worldview is the most consistent with scientific evidence, or that they are perfectly capable of altering their beliefs if the evidence were to change, there is good reason to think this is not how we actually base our beliefs.

1.5 Socially Problematic Beliefs There are many individuals who experience genuine (probably well intentioned) conviction according to what their non-partisans might call *problematic* worldviews. Many conservative Christian groups espouse homophobic beliefs, according to a particular interpretation of scripture. Many individuals believe scientists are not trustworthy due to conflict of interest, liberal bias, or a lack of transparency. Many individuals still acquire racist beliefs thanks to the continued effects of Canada and America's colonial history. These beliefs, no matter how well intentioned, lead to social problems. Homophobia, even in God's name, still leads to a portion of the voting population supporting policies resisting

the implementation of equal rights for the LGBTQ+ community. Well intentioned anti-science communities can undermine public perception of real threats to the larger population – consider the threats of climate change and under-vaccination. Institutionalized racism and *on the ground* racism further marginalize vulnerable groups. These views are usually condemned by the politically left leaning, scientifically minded, secular, liberal individuals in society as hindrances to social progress. These are the kinds of beliefs I will label *socially problematic*.

There are many reasons socially problematic beliefs are problematic – but I am sceptical these beliefs are problematic for epistemic reasons. We need political and ethical theories to ground rights claims and critique political policy. Assuming individuals espousing socially problematic beliefs are lacking doxastic justification – because they are stupid, because they believe in light of controversial evidence, because they elevate the testimony of their own social group, and therefore lack a balanced view of the evidence, etc. – is a precarious position to take. The central aim of my thesis is to explain why this is.

Some of the work in contemporary psychology, cognitive science, and the social sciences presents a compelling case suggesting beliefs are not simply acquired according to the evidence, as some epistemological accounts suggest. Contrary to some intuitive accounts, there is evidence indicating belief acquisition is subconscious and largely psychologically inaccessible. If the mechanisms governing belief acquisition and belief change are not accessible via reason, critical thinking, and education (the shining tools of liberal academia), then it is unclear how we can find methods for changing the minds of those espousing socially problematic beliefs. Much of the time, academics are keen to suggest education will solve many of the problems socially problematic beliefs pose. This suggestion fails to account for the fact that psychologically,

socially, and epistemically, humans are not in the position to reason objectively about evidence, especially when it does not align with our already existing views.

1.6 Thesis Outline In Chapter 2, I will trace some of the psychological findings which problematize epistemic critiques of socially problematic beliefs. Moving forward, and taking cues from social epistemology, Chapter 3 will examine epistemic trust mechanisms and how our division of epistemic labour can lend itself to problematic belief acquisition. Heavily filtered information paired with manipulated trust mechanisms can lead to the development of echo chambers – problematic social belief structures from which it is extremely difficult to escape. Chapter 4 will sketch a case of doxastic symmetry between individuals in secular society and individuals in socially problematic groups and go on to suggest academics tend to overestimate their own epistemic position. It is possible there are sophisticated social epistemic structures in problematic groups. It might be the case liberal, secular society is better off epistemically, but these claims need more substantiation.

Chapter 2: The Cognitive, Psychological, and Social Nature of Beliefs

2.1 Why Do We Need Beliefs? Before we talk about the psychology of belief acquisition, we must first understand how beliefs are characterized in the psychological and cognitive science literature.⁵ Psychologists and cognitive scientists tend to emphasize the importance of beliefs in order to explain their emergence. Of course, beliefs are important for a variety of reasons. Human beliefs span from banal and ordinary to hugely personally significant. Holding beliefs about life's simplest tasks is important: beliefs about my city's infrastructure and basic laws of physics allow me to cross the street on my walk to work. Holding beliefs of personal significance are also very important: beliefs about what it means to *live a good life* allow me to attribute meaning to my social relationships and general livelihood. Beliefs can be casual and rarely cross a person's mind, and at the same time beliefs can be identity altering, deep-seated, and central to one's worldview.

Social scientists provide many suggestions as to why beliefs exist in the first place, and why beliefs manifest in such varied ways. Some suggest beliefs provide a framework for "building an incremental knowledge base for understanding" (Smith, 2016, p. 3). It seems, in order to *understand* the world around us, we rely on belief acquisition. Others think beliefs are what filter the cognitive tools available to us, according to the circumstances in which we find ourselves needing them (Schoenfeld, 1983). This is just to say beliefs are thought to help us compartmentalize in problem solving. I don't need twenty minutes to sort through the different types of shampoo at the drug store: my beliefs, paired with other psychological factors, allow me

⁵ Here, I am adopting the structure of Aaron C. T. Smith's explanation of belief acquisition (2016, Chapter 1). He discusses beliefs, followed by cognitive mechanisms of belief acquisition, followed by social mechanisms of belief acquisition. I take this to be the most informative method for presenting an overview of the available literature.

to make a decision quickly. On the other end of the spectrum, studies show it is easier to make a weighty decision – for example, a decision about spiritual matters –when relying on fundamental beliefs (Smith, 2016).

Additionally, one of the more intuitively appealing theories of belief emergence suggests belief sets offer comfort, as the owner of a robust set of beliefs can feel more certain and secure (Smith, 2016). We want to feel certain in our decisions, but we do not have the cognitive capacity to take in the sheer volume of information available to us about each choice we make. Due to this limitation, “we cultivate our belief sets around the functions and practicalities of life” (Smith, 2016, p. 4). Another consequence of beliefs, as suggested by Dan Sperber, is that beliefs deliver social order through their prescriptions for thinking and behavior (Smith, 2016; Sperber, 1997). This is to say beliefs around moral and political principles standardize our judgments. As adults, we tend to have beliefs about familiar things – for example, government – and we respond favorably or unfavorably to propositions according to our predispositions (Smith, 2016). Moreover, some beliefs might occur by accident. Some psychologists and cognitive scientists suggest it is more work to discard a faulty belief, especially if it is dormant or not regularly called upon in day-to-day life, than it is to just live with it (Atran, 2002).

Beliefs allow us to make sense of our experience. Even the most seemingly innocuous beliefs serve us in our daily lives. We hold beliefs because, in addition to their evolutionary function, beliefs serve us personally and socially (Smith, 2016). In the style of Aaron C. T. Smith, I will treat beliefs as inseparable from thought, “and inseparable from their function” (2016, p. 14). Specifics about what exactly beliefs are and how they come about, of course, can get messy – quickly. This messiness is part of the reason some cognitive scientists suggest the cognitive and psychological foundations of belief have secured little attention (Bell & Halligan,

2013). This being said, like Smith, I suggest all of the theories highlighted above should feature in an account of belief. Although defining belief is complicated, there are themes in the literature which deliver dependable concepts informing discussions in both philosophy of belief and cognitive science. Philosophers typically take beliefs to be a propositional attitude, where the believer regards some belief as true or accurate (Schwitzgebel, 2011). Importantly, beliefs contain two components: some kind of content (a mental symbol) and some kind of conviction (authenticity) (Connors & Halligan, 2015; Smith, 2016).

Beliefs encompass a huge range of content. Beliefs can be mundane. For example, I believe unsupported objects will fall to the ground, and I believe the best way to brush my teeth involves maneuvering my toothbrush in gentle circles across the surface of my teeth. Beliefs can be moderately significant: consider social convention. I believe it is appropriate to maintain eye contact during conversations, for example, probably because this belief arises as a result of my social and cultural circumstances.⁶ Beliefs can also be highly personally significant. An obvious example is that a person's religious commitments can deeply infiltrate their identity and behaviour; but this is also true of secular beliefs, such as a person's commitment to environmental stewardship, or a person's political affiliation. Beliefs offer us banal instruction, instrumental to daily routines, but beliefs also help us make sense of injustice, death, and the purpose of life.

I do not want to get bogged down in the scientific details here, because it is clear beliefs are varied and complicated. Often, beliefs are caught up in a conglomeration of social and cultural circumstance, the cognitive mechanisms that lend themselves to belief retention, and the psychological limitations of optimal belief uptake. Beliefs offer instruction in virtually every

⁶ This example is discussed in (Smith, 2016).

circumstance: they help us understand the world in which we live, they offer comfort, they affect our social order, and they are tenacious.

2.2 The Involuntary Nature of Belief Acquisition The secular, liberal, politically left-leaning individual, who assumes she is in a position of epistemic superiority, might suggest her beliefs were acquired much more soundly than the fundamentalist, racist, or climate science denialist. She might think her doxastic justification is superior due to more reliable belief formation, or due to better, more comprehensive evidence, or due to genuine causal connections between facts in the world and the beliefs she holds. She could provide a host of epistemic reasons for why she thinks her beliefs are better justified in favour of climate science, for example, and therefore why her denialist counterpart lacks proper doxastic warrant.

In assuming epistemic superiority, this secular, liberal, etc. individual is implying she is psychologically equipped to evaluate the relevant evidence, has the capacity to reliably form beliefs about contentious issues (on which she is not an expert), and reason accurately about her epistemic position. Recall the Democrat-Republican divide I sketched in Chapter 1: when a person says the Trump voter is “stupid,” she is suggesting she and her fellow Democrat voters are *getting something right*. If she is getting something right, and pejoratively characterizing her *mistaken* counterparts, then it seems she takes herself to be correct via some praiseworthy process, not by mere luck. This, of course, also goes for the secular liberal criticizing the racist, fundamentalist, and climate science denialist.

We have reason to think this presumed epistemic superiority is not well-founded. Consideration of the cognitive mechanisms of belief acquisition and the psychological processes of human reasoning give us grounds to think belief acquisition is a subconscious process, heavily reliant on social factors, and resultant beliefs are rarely available for introspective criticism. If

this is the case, claims of epistemic superiority based on individual merit are suspect. Here, as I trace some of the relevant cognitive science and psychology, it becomes clear that belief acquisition is radically dependant on an individual's epistemic environment.

First, we should draw attention to the belief acquisition process. Michael Connors and Peter Halligan offer a helpful cognitive account of belief formation (2015). They provide a roadmap, highlighting the influences leading to cognitive changes that spur belief uptake and retention. According to their theory, belief formation begins with a *precursor*, or something to trigger a new belief. Some input that grates against an individual's existing beliefs or an input that cannot be explained by a person's existing belief set could constitute a precursor (Connors & Halligan, 2015). Obviously, the best candidates for a precursor are challenges to an individual's prevailing sense of meaning or identity (Smith, 2016). However, any experience that cannot be seamlessly interpreted could spur a series of cognitive events leading to belief change.

New evidence could constitute a precursor. This could be new information presented to us, or a novel experience in day-to-day life. We often encounter new evidence via formal instruction. For example, when elementary students learn about the structure of the solar system for the first time, their teachers present new information, and offer explanations of how this might fit with previous experiences such as star gazing, air travel, etc. New evidence can also come to light in less formal ways. This could be something banal – maybe a person had no idea that many North American mammals undergo seasonal fur colour changes. If an individual thinks hares are exclusively brown, and then stumbles upon a white hare in January, this new evidence might constitute a precursor.

Obviously, the more emotionally charged and worldview-altering new evidence is, the more likely it is this new experience will kickstart these cognitive mechanisms associated with

belief change. Much of the time, belief change occurs through consistent exposure to events generating some cognitive dissonance. Consider how a homophobic parent might come to terms with their child coming out as LGBTQ+. Perhaps this parent holds a set of beliefs about homosexuality being unnatural and immoral, rooted in a set of religious beliefs about God's ordinance. When this child comes out as gay, their homophobic parent (or parents) must reconcile their beliefs about what it means to be gay and what they know about their child. If this parent believes their child is a good person, and at the same time believes it is deeply sinful/evil/immoral to be gay, they will somehow have to resolve this tension. They can deny their child is *truly* gay, they can abandon the belief that their child is a good person, they can give up their beliefs about the nature of homosexuality, they can seek out other doctrinal traditions that reconcile homosexuality and God's order, etc. Regardless, due to the new prevalence of this tension, some sort of resolution must occur. When we receive new evidence calling some of our deep-seated beliefs into question and there is not an easy method for resolving the tension, there is potential this will kickstart the cognitive mechanisms of belief change. Of course, this is an extreme example.

Connors and Halligan's theory is one that builds on itself. After a precursor has caused tension in a belief system, an individual moves into the next phase, the *search for meaning* (Connors & Halligan, 2015). This is not overly controversial: when a person cannot make sense of an event or information, they will (with the help of their existing belief set) reason about how this new evidence fits into their worldview. People must walk a tightrope "accommodating new ideas arriving via a precursor and avoiding the paralyzing impact of cognitive dissonance if it aligns poorly with established beliefs" (Smith, 2016, p. 31). The label "search for meaning" might make it seem like we are hardwired to introspect about conflicting beliefs, but there is

reason to think just the opposite. We intuitively avoid uncertainty in beliefs, so the search for meaning likely occurs quickly and subconsciously (Connors & Halligan, 2015; Smith, 2016). If we can interpret experience according to our existing beliefs, that is exactly what we do; and when there is ambiguity in our experience, existing webs of belief will persist. As the phenomenon of confirmation bias predicts, those “proto-beliefs” developed during the search for meaning that complement one’s existing belief set, seed more effortlessly – and for those that present a challenge to existing beliefs, we are skilled at finding what we need in order to escape discomfort (Smith, 2016, p. 31).

The third phase of cognitive belief formation, according to Connors and Halligan, is *candidate belief evaluation* (2015). This is where the proto-beliefs acquired during phase two undergo some sort of functional testing. Here, unsurprisingly, the “emotion-inducing, socially driven, and consistent” proto-beliefs are the ones that stick (Smith, 2016, p. 32). Connors and Halligan point out the important factors for phase three: the proto-beliefs that pass evaluation must be both “observationally adequate (i.e., explain the precursor), yet also be consistent with existing beliefs” (Connors & Halligan, 2015; McKay, 2012; Stone & Young, 1997). This phase, like the others, is far from idealized. People do not adopt optimal hypothesis-testing strategies (Evans, 1989; Gilovich, 2008; Johnson-Laird, 2006; Nickerson, 2007). People are overly influenced by confirmatory evidence and ignore claims that are critical of their position (Nickerson, 1998, 2007). Also, and unsurprisingly, people tend to focus on heuristics (Gigerenzer & Gaissmaier, 2011; Gilovich, Griffin, & Kahneman, 2002; Kahneman, 2011; Kahneman, Slovic, Slovic, & Tversky, 1982). All this occurs thanks to the psychological mechanisms in place. This means knowledge adopted in this phase is likely distorted to fit the original hypothesis (Connors & Halligan, 2015). Supporting this, research suggests beliefs may

persevere even if initial evidence for the beliefs is discredited (Anderson, Lepper, & Ross, 1980; L. Ross, Lepper, & Hubbard, 1975; L. D. Ross, Lepper, Strack, & Steinmetz, 1977).

Once a proto-belief is determined to be worthy of possession, it becomes entrenched at phase four: *accepting or holding the belief* (Connors & Halligan, 2015). Subjects will likely be unable to access the many unconscious processes involved, “and may only become consciously aware of the belief when asked to reflect on it” (Connors & Halligan, 2015; see also Halligan & Oakley, 2000). An individual’s awareness of a new belief’s acceptance may or may not draw their own attention. Phase five, connected to this acceptance, points to the fact that the new belief will lead to concrete new behaviour, emotional commitments, and/or deepened convictions. Connors and Halligan label this final phase the *consequential effects of holding a belief* (2015). The effects of holding a belief involves dealing with ambiguity in ways that extend and allow for the deepening of an individual’s convictions. There is ample evidence suggesting “beliefs can act to bias the perception and interpretation of information so that it is consistent” with an already existing belief set (Connors & Halligan, 2015; see examples in Gilovich, 2008; Hastorf & Cantril, 1954; Jones & Russell, 1980; Lord, Ross, & Lepper, 1979; Vallone, Ross, & Lepper, 1985). More than this, these new beliefs will inform future attempts to explain evidence and filter what other proto-beliefs may be accepted (Connors & Halligan, 2015). Further, beliefs can influence memory, which only makes belief formation even more biased. Once a belief is formed, it can “promote the encoding and retrieval of memories that are consistent with the cognitive and emotional content of the beliefs” (Connors & Halligan, 2015; see examples in Conway, 2005; Danion, 2014).

Drawing on contemporary psychology and cognitive science, Connors and Halligan present a compelling case that psychological bias and the subconscious cognitive mechanisms

guiding our ability to accept new information is a largely involuntary, biased process – or at least a process in which individuals do not objectively reason about the adoption of a new belief. The evidence above presented by Connors and Halligan is just the beginning. Social scientists and psychologists have long been studying the faulty nature of human reasoning. Humans perform poorly when it comes to basic logical tasks (Evans, 2002), humans are notoriously bad when it comes to probabilistic reasoning (Kahneman & Tversky, 1972; Tversky & Kahneman, 1983), and humans are subject to imprudent biases in decision making (Kahneman et al., 1982). So even if conscious reasoning was readily available in the belief acquisition process, we do not have good reason to think this would make the process reliable. All this information might lead us to think it is simply the case that humans are *bad reasoners*, and we just need to get better.

However, if belief formation depends on these psychological mechanisms – mechanisms that are largely out of our control and mostly subconscious – it seems *demanding better reasoning* is not easily doable, and therefore is not a useful strategy for improving belief acquisition in epistemic communities espousing socially problematic beliefs.

Connors and Halligan are not alone in their suggestions about belief formation. In their related work in the psychology of reasoning, Hugo Mercier and Dan Sperber develop a theory accommodating the evidence that humans are terrible reasoners. As we saw above, Connors and Halligan allude to this evidence, continually acknowledging human reasoning is subject to many shortcomings. Of course, the main aim of Connors and Halligan's theory is to suggest the mechanisms behind belief acquisition are usually not subject to formal conscious reasoning, and even the small snapshots of formal reasoning we do see when humans grapple with beliefs are heavily biased. Human reasoning, riddled with biases, offers a method for bolstering existing

belief systems, rather than providing a method for careful consideration of the objectively relevant factors. Mercier and Sperber offer a compelling account of why this is.

As Mercier and Sperber point out, studies have long been suggesting reasoning does not appear to enhance individual cognition, as many philosophers and psychologists once thought (2011, p. 60). In fact, individual cognition worsens when humans are required to reason under cognitive load (Mousavi, Low, & Sweller, 1995). More than this, our reflective mechanisms for reasoning (system 2 reasoning) tend to *explain* our intuitive cognitive outputs (system 1 reasoning), rather than *correct* intuitive mistakes. If reasoning were a mechanism for avoiding bias and reaching objectivity, this would not be the case. Moreover, reasoning in humans does not seem to function as a mechanism for prediction and control, as many scholars have also claimed. Mercier and Sperber suggest prediction and control is better understood as a process utilized in human learning processes, not formal reasoning processes. Therefore, Mercier and Sperber suggest we need a theory that more closely tracks the phenomenon of human reasoning. Theories suggesting human reasoning is a readily available tool to improve an individual's performance in decision making and basic cognitive tasks seem to overestimate the reality of human cognition. If reasoning is a mechanism which has evolved to handle such a workload, why do humans perform so poorly (so often) in basic reasoning tasks? Such views cannot accommodate the reality of the incurred costs of bad reasoning (Mercier & Sperber, 2011). This is why Mercier and Sperber suggest reasoning has evolved to allow efficient communication via arguments, and therefore is a mechanism for improving a community's collective information.

According to Mercier and Sperber's theory, since reasoning clearly isn't well suited for individual cognitive tasks, it must better be suited for something else. They assert, "The emergence of reasoning is best understood within the framework of the evolution of human

communication” (Mercier & Sperber, 2011, p. 60). Reasoning allows humans to engage in argumentation that makes communication more reliable and therefore, more advantageous (Mercier & Sperber, 2011). As the theory goes, humans have had to exercise epistemic vigilance (to some extent), since communication is threatened by dishonesty. This epistemic vigilance can be understood within the framework of contemporary psychology: (i) humans calibrate trust according to competence and benevolence (Petty & Wegener, 1998), and (ii) humans check the coherence of incoming information with what they already know (Connors & Halligan, 2015). These psychological mechanisms are immediately useful in vetting incoming information, but they are also useful in the context of argument evaluation (dialogic environments).

If Mercier and Sperber are correct in their hypotheses that human reasoning is best suited for dialogic contexts, then there are many areas where we should expect humans to reason well. First, reasoning should do what it evolved to do – produce and evaluate arguments – and therefore function best in argumentative contexts. Moreover, reasoning should exhibit a strong confirmation bias. Since the function of reasoning is to convince others of a position, confirmation bias works in favour of confirming one’s own claims, naturally complemented by a bias in favour of disconfirming opposing claims and counterarguments. Additionally, when reasoning about one’s own opinion, humans should typically reason in anticipation of other’s counterarguments. Last, reasoning should work to convince others, not work in favour of objectivity or truth (Mercier & Sperber, 2011).

The evidence is overwhelmingly on Mercier and Sperber’s side. Many studies demonstrate reasoning does best in argumentative contexts. People are generally able to understand argumentative fallacies (Corner & Hahn, 2009; Hahn & Oaksford, 2007, experiment 3; Neuman, 2003; Neuman, Weinstock, & Glasner, 2006; Weinstock, Neuman, & Tabak, 2004) and

react to them appropriately (Corner, Hahn, & Oaksford, 2006; Hahn & Oaksford, 2007; Hahn, Oaksford, & Bayindir, 2005; Oaksford & Hahn, 2004; Rips, 2002). People can also be skilled arguers, and much of the time produce and evaluate arguments felicitously (Blum-Kulka, Blondheim, & Hachohen, 2002; Hagler & Brem, 2008; Resnick, Salmon, Zeitz, Wathen, & Holowchak, 1993; Stein, Bernas, & Calicchia, 1997; Stein, Bernas, Calicchia, & Wright, 1996). Group reasoning produces much better results than even the best individual performer in cognitive tasks (Blinder & Morgan, 2000; Laughlin, Bonner, & Miner, 2002; Laughlin, Hatch, Silver, & Boh, 2006; Laughlin, Zander, Knievel, & Tan, 2003; Lombardelli, Proudman, & Talbot; Michaelsen, Watson, & Black, 1989; Sniezek & Henry, 1989; Stasson, Kameda, Parks, Zimmerman, & Davis, 1991; Tindale & Sheffey, 2002). Better quality and a higher quantity of arguments are produced in a group setting when individuals are motivated via confirmation bias (Dawson, Gilovich, & Regan, 2002). Mercier and Sperber's fourth prediction – humans reason proactively anticipating arguments others might offer – is bolstered by much of the motivated reasoning literature. Individuals seek out information that confirms their existing position, and this tendency only intensifies once an individual states her opinion (Lambert, Cronen, Chasteen, & Lickel, 1996; McGuire, 1964; Millar & Tesser, 1986).

All around, when it comes to evaluating information and forming beliefs, it seems humans do not *objectively* reason about what's relevant. However, when it comes to belief formation about arguments, the psychological mechanisms in place serve us very well. The supposed flaws of our psychology actually serve us for the better in dialogic contexts. Just because human reasoning doesn't headline belief formation and evidence evaluation in a carefully objective way, this shouldn't lead us to believe human reasoning itself is egregiously flawed. Rather, human reasoning is a specialized function for a certain kind of cognitive and

social interaction. Of course, this information alone does not allow us to draw normative conclusions, but it is important to consider the psychological evidence demonstrating why belief systems are so tenacious. As Mercier and Sperber put it, “Reasoning can lead to poor outcomes not because humans are bad at it, but because they systematically look for arguments to justify their [own] beliefs or their actions” (2011, p. 72). That’s just what reasoning is for.

Some sort of more effective epistemic vigilance, then, might be the key to acquiring beliefs (more) soundly. We are equipped with a cognitive suite of mechanisms for evaluating whether our counterparts present us trustworthy information. This set of cognitive tools available to us, though, heavily favours those who already share our worldview. An intuitive explanation for this might suggest this is due to a lack of diverse information: it might be the case that beliefs persist within groups that do not encounter serious counterevidence to some widely held position. Even if counterevidence is readily available, though, we still might have reason to think individuals lack the motivation to change. There are many instances of clear resistance to so called *objective* evidence in epistemically isolated groups. The psychological nature of epistemic vigilance provides insight into C. Thi Nguyen’s characterization of epistemic bubbles and echo chambers (Nguyen, 2018). I will get to Nguyen’s formal account in Chapters 3 and 4, but here it suffices to say there are psychological and cognitive reasons for the emergence and persistence of epistemic isolation. Epistemic isolation, of course, comes with political and social consequences. All three of my token examples in Chapter 1 – the epistemically secluded racist, fundamentalist, and climate science denialist – demonstrate this is the case.

Much of the time, we intuitively assume there are techniques to mitigate bias, and subsequently mitigate the deleterious consequences associated with epistemic communities espousing socially problematic beliefs. However, since the cognitive mechanisms available to us

heavily favour partisans, our resources are far more limited than we might think. Teaching and exercising critical thinking skills, which supposedly helps us overcome bias on an individual basis, does not yield very good results (Ritchhart & Perkins, 2005; Willingham, 2008). More than this, the phenomenon of belief perseverance is “one of social psychology’s most reliable phenomena” (Guenther & Alicke, 2008, p. 706; see also L. Ross et al., 1975). With this in mind, let us look to the partisanship to which human psychology lends itself.

2.3 Psychology Encourages Partisanship Some studies suggest only 10% of people convert to a faith other than the one they acquired when young (Bryant & Lamb, 1999). We must consider why this is. At first, this statistic might seem incorrect. Obviously, conversion *does* occur, and it does *seem* like there are many avenues an individual can pursue if they want to evaluate certain beliefs they hold. For those members of the approximately 90% of people who believe according to the doctrine of their upbringing, it might seem belief change is easy and accessible. I am suggesting the supposed avenues for belief evaluation and belief change through introspection and reflection are merely illusory – the psychological evidence in the previous section seems to indicate humans are bad at evaluating and accessing their own beliefs.

For many readers, I am sure it seems false to suggest humans do not easily access and evaluate their own beliefs (if *I* can’t access my own beliefs, *who can?*). We don’t treat our beliefs like they are a mere product of our social and epistemic environments. Instead, we tend to think rationalistic epistemological accounts are an accurate representation of belief evaluation – we assume our beliefs are consistent and well-grounded, even though most of the time we are psychologically unaware of why we assume this is the case. Since we take ourselves to be *rational* (which we take to be equivalent with *intelligent*), we presume our beliefs are properly justified. In this sort of overly-rationalistic account, we think proper justification must be

evidence-forward and subject only to purely epistemic considerations: justification must objectively coincide with the evidence, we must be adequately exercising our formal reasoning, and our mental faculties do, in fact, have the power to evaluate the stream of incoming information. The psychological evidence suggests beliefs are not subject to this kind of direct access. That is just to say, beliefs are not subject to the types of epistemic exercise we tend to associate with traditional doxastic justification.

Belief conversion, even for those who have converted, remains a mysterious process (Rambo, 1999; Rambo & Farhadian, 1999). Belief acquisition in general, as we have seen, remains a largely subconscious process. More than this, there is reason to think the bulk of belief acquisition occurs through an individual's social and cultural groups (Smith, 2016). One practical consideration emphasized in the philosophical literature is echoed in discussions of psychological mechanisms of belief acquisition: individuals do not have the mental capacity, epistemic resources, or time to investigate the grounding of each belief they hold. This simply means there is a high degree of trust in testimony for the transmission of knowledge. This epistemic trust, however, seems to be context specific.

A context specific trust emerges due to the influence of our social groups in belief acquisition. Recall, humans calibrate trust according to perceived competence and perceived benevolence (Petty & Wegener, 1998). There are methods – we usually take these methods to be objective and reliable – to evaluate the competence and benevolence of others in our community. For example, we judge others according to education and professionalism, we associate a high social status with intellect and capability, and we favour leaders with charming personal characteristics (Baurmann, 2008). Since we assess incoming information according to our existing beliefs, though, it is easy for a particularistic trust to develop. Belief acquisition occurs

largely beyond our conscious awareness, in a specific epistemic environment. Due to the social and epistemic mechanisms within our environment, we are mostly unaware of the impact of our community on our beliefs. This influence extends beyond specific instances of belief and affects our trust patterns, as well. My worldview informs who I consider to be trustworthy – and my worldview is acquired thanks to my epistemic community, in which belief acquisition is influenced by many non-epistemic factors.

Individuals rarely cite partisanship as a reason for endorsing certain beliefs, even though this seems to be the case much of the time. Geoffrey Cohen conducted a series of studies seeming to demonstrate not only that individuals rely on identifying resonance with their social group in order to endorse certain beliefs, but also that individuals seem relatively unaware of their group's influence when it comes to these judgements. In a study of political policy evaluation, "For both liberal and conservative participants, the effect of reference group information [knowing whether the policy was brought forward by a Democrat or Republican] overrode that of policy content" (Cohen, 2003, p. 811). Whether the content is normative or descriptive, it seems people tend to defer to their appropriate social counterparts. Social attitudes, underpinned by beliefs, are strong predictors of behaviour (Kraus, 1995).

2.3.1 Motivated Reasoning and Partisanship Motivated reasoning offers an explanation as to why beliefs are so strongly connected to partisanship. Psychologically speaking, those who are content in their social and cognitive circumstances are poor candidates for belief change (Smith, 2016). This might suggest contentment itself (social or otherwise) is a motivating factor, influencing reasoning and belief acquisition. Although motivated reasoning is a well-documented psychological phenomenon, early articulations of motivated reasoning in the 1970s were heavily scrutinized. In its early years, motivated reasoning was underdeveloped, and

it was simply taken for granted that individuals were motivated to make self-serving attributions which lead them to believe whatever they wanted to believe. Critics met this view with explanations for the phenomenon in entirely cognitive, non-motivational terms, suggesting it wasn't explicit motivation pushing individuals to reach seemingly biased conclusions, but instead, "people could draw self-serving conclusions[...] because these conclusions seemed more plausible, given [participants'] prior beliefs and expectancies" (Kunda, 1990).

The contemporary literature is much more nuanced. Many studies across different research paradigms indicate motivating factors and directional goals "affect people's attitudes, beliefs, and inferential strategies" (Kunda, 1990). The idea that self-serving biases are just a by-product of human cognition itself, unmitigated by external factors, is therefore no longer tenable (Kunda, 1990). Of course, initial conjectures suggesting *people just believe what they want to believe* is misleading as well. Motivated reasoning is certainly a cognitive process: cognitive mechanisms play a role in producing biases insofar as they "provide the mechanisms through which motivation affects reasoning" (Kunda, 1990). Unsurprisingly, explanations offering the intricate details of exactly *how* all the cognitive processes work together are incomplete. However, cognitive scientists and psychologists recognize the compelling cognitive and psychological evidence for motivated reasoning's effects regarding belief formation. This, of course has implications for our ability to reason about evidence in general. Here, I will take *motivated reasoning* to be a human reasoning mechanism that enhances the use of cognitive processes "that are considered most likely to yield the desired conclusion" (Kunda, 1990). Motivated reasoning is an available cognitive tool that allows us to hold onto existing belief structures and dismiss challenges. In its simplest terms, motivated reasoning occurs when

external factors motivate individuals to arrive at particular conclusions, undeniably affecting reasoning outcomes.

Motivated reasoning (unsurprisingly) plays a substantial role in belief retention as well as belief acquisition. In a series of experiments, when presented with a fake medical test result, participants made use of every opportunity to discount results (Ditto & Lopez, 1992; Ditto, Munro, Apanovitch, Scepansky, & Lockhart, 2003; Ditto, Scepansky, Munro, Apanovitch, & Lockhart, 1998). When participants were asked to mention events in their medical history that could have affected results, those who were motivated to believe the test yielded a false positive came up with more of these events, and the number of events was negatively correlated with the evaluation of the test (Ditto & Lopez, 1992; Ditto et al., 2003; Ditto et al., 1998). Motivated reasoning, although it offers justificatory reasoning for previously held commitments, is not haphazard or uncoordinated. Time and time again, individuals are extremely skilled in coming up with arguments and reasons to justify a position (Mercier & Sperber, 2011). Reviewers tend to seek out flaws in papers they have rejected when they disagree with the conclusions (Koehler, 1993; Mahoney, 1977). Some studies have seen participants alter memories to bolster a positive self-image (Dunning, Meyerowitz, & Holzberg, 1989; M. Ross, McFarland, & Fletcher, 1981; Sanitioso, Kunda, & Fong, 1990). Others still have seen participants alter their causal theories in order to remain fixed in their commitments (Kunda, 1987). Individuals motivated to stand firm in their beliefs are cognitively equipped with mechanisms allowing them to efficiently produce reasons for doing so. In this way, it seems counterevidence is often easy to sidestep.

Above, we see motivated reasoning at work as individuals consider results of health assessments, report on self-image, and perform intelligence tasks – the results of which are perceived to be central to a person's identity and well-being. If a person recognizes they have

been mistaken about one of these features, the blow can be devastating. This is just to say people are highly motivated regarding these types of identity-central characteristics, and the results of the above studies seem quite plausible. Identity-central beliefs span much farther than this type of self-evaluation, though. Social mechanisms in a person's epistemic environment contribute to motivated reasoning in many different ways. We see this at work in virtually every epistemic group – from stigmatized counter-culture groups motivated to retain their conspiracies, to politically left-leaning secular individuals motivated to retain their commitment to policies put forward by Democrats.

2.3.2 Stigmatized Knowledge and Social Reasons for Belief Studies show that social circumstances are highly influential when it comes to belief persistence, as well as belief acquisition. This becomes especially clear in studies of “stigmatized knowledge” (Thompson, 2005; van Twist & Newcombe, 2018). Members of certain social groups will hold particular claims as true, even though those claims have been marginalised by the institutions which typically demarcate (for the public) between fiction and fact. In these cases, social reasons for belief often appear to be more compelling than empirical truth or falsity of a theory itself. It is unlikely individual members of stigmatized groups actually value solidarity over truth – even in studies where partisanship mitigates receptiveness to a proposition, participants do not cite partisanship itself as a reason for belief. Instead, it seems individuals treat social affiliation as a *measure of truth*. Individuals trust the members of their own epistemic circles, so the endorsement of partisans is epistemically valuable. In this way, the social benefits of group solidarity, having a clear moral and belief-based community, and the tangible every-day effects of belief are *effectively* held over truth (van Twist & Newcombe, 2018). It often appears as if people value social solidarity over truth since our epistemic communities heavily mitigate our

ability to reason about evidence. We tend to think things are true because respected and trustworthy individuals around us say so. Since we tend to reason along partisan lines, it seems individuals favour a consistent and predictable social environment over the actual *truth value* of their beliefs. This is not surprising, since individuals in stable, resilient environments are less receptive to conversion experiences (Rambo, 1993).

Suzanne Newcombe and Amanda van Twist argue conspiracy theorists adopt rational social reasons for remaining part of a stigmatized group (2018). It is not controversial to suggest social membership in general comes with benefits. Humans are intensely social, and social belonging improves health outcomes, for example (Walton & Cohen, 2011). Conspiracy theorists, like members of other groups, “work actively to reinforce [their] beliefs with bonds of social identity”(van Twist & Newcombe, 2018, p. 154). This then contributes to isolating attitudes dividing the world into the ignorant (them) and the enlightened (us), while at the same reinforcing lines of reasoning confirming the group’s established beliefs. We can also see similar mechanisms at work in religious groups. Research conducted by Richard Sosis and Eric Bressler suggests rituals within religious communities allows members to signal solidarity and promote intragroup cooperation (Sosis & Bressler, 2003).

In offering compelling narratives explaining why outsiders are mistaken about the group’s deeply held beliefs and through psychological mechanisms identifying motivating factors for belief, there always seems to be good reason to think one’s own social group is correct. More than this, and perhaps unsurprisingly, these mechanisms can lend themselves to extreme positions. Social processes are dynamic and mutually adaptive within social groups (Baurmann, Betz, & Cramm, 2018). This means any number of social factors can influence the shape of beliefs within the epistemic community. The social dynamics of epistemic groups can

sometimes facilitate isolation and radicalization – not based on individual eccentricities, but due to the mechanisms by which beliefs of groups socially adapt.

As some of the above evidence suggests, motivating factors can allow humans to *reason away* challenges to existing beliefs – I will cover this in more detail in Chapters 3 and 4 using Nguyen’s account of echo chambers and epistemic bubbles. There are clear examples of resistance to evidence in secluded religious communities and conspiracy theorist groups. Consider the fundamentalist, who coincides with the scientist on the topics like gravity and theories about the shape of the earth, but adamantly opposes evolutionary theory and dismisses scientific reports on the age of the earth. For many members of secular society, scientific evidence about earth’s shape and scientific evidence about the age of the earth are *evidential equals*, so to speak. I am happy to epistemically defer to the scientist on both of these topics: I dismiss flat earth theory and I affirm the earth is approximately 4.5 billion years old. Similarly, consider the climate science denialist who may recognize the expertise of scientists working in the medical field, but insists climate scientists are corrupt and cannot be trusted. Again, I take myself to know the earth’s climate is becoming increasingly unstable, just as I take myself to know language is processed in Broca’s area and Wernicke’s area in the human left brain. Concerning my beliefs about the age of the earth, the shape of the earth, the earth’s climate, and language processing, I take myself to be justified in believing all these things *for the same reason*: reports from the scientific community.

For individuals within these isolated groups, however, the evidential weight of scientific testimony is not always corroborated by existing beliefs. Theories of gravity will hold evidential weight in epistemically deviant communities because we *all* constantly experience the earth’s gravitational pull. The fundamentalist’s existing beliefs allow for the adoption of gravitational

theories because there are reasons for the fundamentalist to think physicists are *on the right track* when it comes to gravity. Theories about the age of the earth, however, clearly conflict with the fundamentalist's higher order evidence. Even though scientists were right about gravity, and right about the shape of the earth, among many other things, the fundamentalists have good reason to think scientists are mistaken about the earth's age. Theological experts in the fundamentalist community reveal God's truth: the age of the earth can be found in scripture. Scriptural accounts will coincide with science (or at the very least, *not conflict* with scientific accounts) on many things, but when scripture has something unique to say about metaphysical reality, this is the preferred evidential account in a fundamentalist community.

This is not necessarily due to faulty individual epistemic activity, either. When I hear scientific testimony about the age of the earth and the shape of the earth, I trust scientists' accounts because, for me, there are not strong reasons to discount either of these theories. However, if scientists presented a theory that seemed wildly implausible according to what I take myself to know, I would need good reasons to take them seriously. If tomorrow, the scientific community addresses the public and insist they have conducted many studies yielding compelling evidence that the earth is in fact only 5 minutes old – the history books and our memories of the past have been artificially implanted – I will need substantial evidence to take this account seriously.⁷ As an individual, I do not have the specialized knowledge to evaluate the scientific studies themselves, so this substantial evidence must include many psychological and social reasons for belief beyond mere scientific consensus. I would (likely) need to see uptake from my social group, I would need readily available explanations connecting this account to my experience so I can make sense of it, I would need to encounter reinforcement of these ideas

⁷ The "Five-Minute Hypothesis" is a thought experiment from Paul Viminiz

coming from my own epistemic environment, etc., as we see in Connors and Halligan's accounts of the psychological mechanisms of belief change.

We shouldn't expect the *burden of evidential uptake*, so to speak, to be the same for members of different epistemic groups. The fundamentalist lacks robust reasons to take evolutionary biology seriously. This is why fundamentalists are motivated to reason about particular instances of scientific evidence. To non-members, it seems inconsistent and perhaps epistemically irresponsible that these groups at the same time dismiss particular instances of scientific consensus while maintaining many mainstream scientific views. However, there is reason to believe these are instances of conflicts of evidential ordering. Just as I am unlikely to adopt the Five-Minute Hypothesis without substantial motivation beyond *mere* scientific testimony, the fundamentalist dismisses the 4.5 billion-year hypothesis *because she has good reason to think scientists are mistaken*. The fundamentalist is not *stupid* or *epistemically incompetent*, instead she lacks the additional tangible reasoning to think scientific accounts of the age of the earth are plausible.

For these sorts of reasons, climate change denial and public reasoning regarding scientific evidence secures significant attention in the motivated reasoning literature. Differences in belief – especially related to issues involving resistance to scientific consensus, such as climate change – are often motivated (Campbell & Kay, 2014). This isn't, however, due to scientific illiteracy. When individuals are interviewed about basic scientific concepts, scores do not suggest the general public is ignorant about the aims of science or simple scientific facts (McCright & Dunlap, 2011; McCright, Xiao, & Dunlap, 2014). These same individuals, however, do not give relevant empirical evidence uptake when it is perceived to conflict with their worldview (McCright & Dunlap, 2011). Although it is tempting for members of non-stigmatized groups to

claim epistemic superiority on this matter, the benefits of group solidarity and shared sets of values *extends* to secular communities and contributes to motivated reasoning in similar ways, as I will discuss in the next section.

2.3.3 Politically Motivated Reasoning Social reasons for belief are compelling even for those who do not belong to stigmatized groups. The same type of phenomena is observed outside cultic milieu and isolated religious groups. Political affiliation, for example, is one area where individuals consistently allow motivating factors to influence their reasoning on policy (Cohen, 2003). More than this, studies show an individual's endorsement of certain political views tend to line up with their endorsement of seemingly unrelated theories. This suggests social reasons are a motivating factor in political reasoning. In one of many studies conducted by Stephan Lewandowsky, Klaus Oberauer, and Gilles Gignac, paralleling previous work, results showed that endorsement of free-market economics predicted rejection of climate science (Lewandowsky, Oberauer, & Gignac, 2013). These results provide empirical support for previous suggestions that conspiratorial thinking contributes to the rejection of science. Acceptance of science, by contrast, was strongly associated with the perception of a consensus among scientists (Lewandowsky et al., 2013).

In another Lewandowsky & Oberauer study, we see similar results with further explanation. Even though cognitive mechanisms driving individuals toward their desired outcomes do not differ across political boundaries, in the United States, rejection of science is more prevalent in the political right (Lewandowsky & Oberauer, 2016). Accounting for educational backgrounds of participants did not reveal expected results, either. Counterintuitively, these psychologists found that general public education and scientific literacy do not mitigate the rejection of scientific findings, but instead increase polarization across

partisan lines – it takes specific knowledge of scientific mechanisms to increase acceptance of scientific results (Lewandowsky & Oberauer, 2016).

We are mistaken if we label those who reject scientific findings as entirely ignorant or scientifically illiterate. Recently, scholars have noted that some Americans who incorrectly answer factual questions about science are not necessarily clueless. Rather, many more people can identify what scientists say than report corresponding personal beliefs (Baord, 2014; Kahan, 2015). A study conducted by John Pasek reveals that religiosity and partisanship moderate the extent to which Americans *identify* scientific consensus and subsequently *assert* beliefs that contradict their perceptions of consensus (Pasek, 2018). It is not that the public does not know what scientists say about issues like climate change, or the age of the earth, or the efficacy of vaccines, it is that some individuals have reasons that count against scientists' claims – especially when individuals feel these claims could threaten their deeply held beliefs. Within epistemic communities, there are readily available counter-explanations and lines of reasoning providing community members with good explanations *for* or *against* certain beliefs. Divides on issues like climate change or vaccine efficacy occur because group members on both sides of an issue take themselves to have good reasons for their beliefs. It is not a case of incompetence or blatant inability to *connect the dots*, so to speak.

Average citizens do not have the specialized knowledge to evaluate scientific evidence and alter beliefs accordingly. This, of course, means we rely on experts to report scientific findings (and many of the implications) to us. However, as the above studies show, the ability for individual laypersons to accept this information and form beliefs accordingly is heavily motivated by partisanship. For laypersons, polarization increases along partisan lines when scientific data is reported to the public, even when evidence is abundant and strongly favours a

particular conclusion (Lewandowsky & Oberauer, 2016). Individuals consistently affirm beliefs according to their social group, even though they may not be aware of it, and partisan affiliation often predicts the endorsement of seemingly unrelated beliefs – regardless of political affiliation (Cohen, 2003; Lewandowsky & Oberauer, 2016; Lewandowsky et al., 2013). As this research suggests, we have good reason to think motivated reasoning is a factor here. This is especially clear when considered in relation to the cognitive science suggesting the factors underlying belief formation – including motivating factors like social affiliation and coherence with existing beliefs – are largely subconscious.

Granted, it seems individuals are unlikely to believe just anything they are told, even within their epistemic group or along partisan lines. Obviously, individuals are highly dependent on others for information, but this leaves us vulnerable to misinformation and trickery. For this reason, psychologists have studied our built-in hardware that pushes us to vet the information we receive. Dan Sperber and his cohort argue that humans are equipped with a suite of cognitive mechanisms for epistemic vigilance (Sperber et al., 2010). The key to exercising caution in the ways of information sorting, though, is relevance of information presented to individuals. People tend to take a more sceptical stance when presented with information that is relevant to them, and contradictory to their previously held beliefs (Sperber et al., 2010). When individuals have a high level of trust in a person transmitting belief-pertinent information, and there is no significant threat to existing deeply held beliefs, there is much more susceptibility for uptake. However, when information is presented to an individual and there is some perceptible threat to their worldview, human psychology is well-equipped to identify the problems in counterevidence. This is just motivated reasoning in action.

2.4 Second-Hand Knowledge The above considerations seem to suggest that an in-depth understanding of an issue or epistemic competence to assess belief-relevant information is not required for knowledge (or not required for an individual to profess knowledge). Again, it is widely held that epistemologically, for beliefs to be justified, we need a tangible connection between belief and truth. To profess knowledge, we care that beliefs be justified in an epistemically appropriate way. The structure of our society – a division of cognitive labour and limited epistemic and cognitive resources available to individuals – automatically demands we rely on the testimony of others for knowledge transmission. Since we divide epistemic labour, the testimony of experts is an efficient way to improve our collective information. Therefore, since knowledge must be a social enterprise, expert testimony is an epistemically appropriate way to acquire knowledge. I am not a climate scientist, and yet I believe – that is, I take myself to know – human activity is causing the earth’s climate to become increasingly unstable. I will further discuss testimony in Chapter 3.

Reliance on testimony is necessary, regardless of an individual’s epistemic circumstances. It seems unfair to criticize climate science denialists as scientifically incompetent, when similar social and psychological considerations are governing both the denialist and the sympathizer’s belief acquisition processes. Individuals are susceptible to motivated reasoning regardless of social/political affiliation. It is widely recognized that beliefs are acquired through one’s social and cultural groups, rather than through carefully calculated examination of evidence *for* and *against* a particular position. Belief change and belief acquisition do not seem to be accessible via rational evidential reasoning, as some epistemological accounts suggest, either. Instead, humans possess a suite of reasoning mechanisms that allow us to favour previously held beliefs. We actively brush away challenges our deeply held convictions, and we

are skilled to reason in biased ways, bolstering our existing worldviews. The academic conversation in this area is gaining traction, with many philosophers and social scientists investigating the ways in which individuals can evaluate conflicting claims in their epistemic environment.

Some philosophers advocate we abandon the idea that individuals have the tools to independently assess specialized knowledge claims. I trust the consensus of climate scientists because of their epistemic position and proven expertise, not because I evaluate specialized studies and deem the science unobjectionable. Thomas Atchison explains how difficult it is for laypersons to access expert's explanations, highlighting how underprepared the vast majority of citizens are in identifying trustworthy information and further, trustworthy *sources* of information (Atchison, 2012). Atchison asserts, "In the current epistemic environment, no feasible improvement in the information-seeking efforts of individual citizens is going to enable them to acquire the needed knowledge" (Atchison, 2012, p. 64). This is due to both the psychological mechanisms in place, and the lack of expertise of laypersons in areas where they form beliefs. Atchison's research looks at the examination of political policy: even those individuals willing to investigate governmental policies, political candidates, the legitimacy of a scientist's claims, etc. are not in an epistemic position to gain insight. The solution, then, cannot be left to individual epistemic agents. As Atchison puts it, in order "to improve the level of public knowledge, we will need to improve [the epistemic] environment" (Atchison, 2012, p. 64).

Superficially, it might seem that dogmatism is the real problem in groups espousing socially problematic beliefs. It seems individuals who better exercise critical thinking skills and more thoroughly investigate readily available information will end up with better (*truer*) beliefs.

The psychological and the (epistemic) environmental limitations make this extremely difficult, though. Granted, much of the time, trust in testimony is required for knowledge acquisition. However, the human psychology that creates a *need* for these epistemic chains of trust unavoidably leads to motivated reasoning and confirmation bias and belief polarization. As I will discuss in Chapters 3 and 4, epistemic environments might have the power to prevent individual epistemic agents from differentiating between accurate, expert accounts vs. blatantly false, unqualified testimony.

There is a psychological case backing up the social scientists' identification of social partisanship and belief retention. It is not surprising that the study of the cognitive mechanisms of belief acquisition and belief persistence reveal a person who is socially comfortable is unlikely to undergo significant belief revision. As Smith puts it, “[those who are] content appear to be poor candidates for change,” due to the fact that “stable, resilient environments generate fewer members receptive to a conversion experience” (Smith, 2016, pp. 42-43). Simply put, our social counterparts have a great deal of influence on the beliefs we acquire. This social influence – constant reinforcement within our social circles and common explanations for why non-partisans are mistaken – leads to deeply entrenched beliefs. Partisanship, in this way becomes a marker of truth.

2.5 Evidence It seems from all the information presented above, individuals will accept certain claims as evidence – and potentially adopt these claims as relevant contributors to belief – so long as they (i) trust the source of the information, and (ii) the information does not present a significant threat to their existing worldview. This makes some intuitive sense. For example, I am happy to defer to the particle physicist (based on her expertise) regarding the behaviour of electrons passing through a magnetic field. The nature of electrons is far removed from any of

my deeply held beliefs and I trust that scientists are competent in delivering facts to the public. However, the conservative evangelical Christian professing young earth creationism, reasons in ways that discount arguments for trusting scientific consensus on the age of our planet. Evidence suggesting the earth is approximately 4.5 billion years old presents a substantial problem for her worldview (or so she perceives) if it is, in fact, true. Since this is the case, she has incentive to distrust this information presented to her. Notice, this is the case even though the young earth creationist has no expertise in evolutionary biology, the chemistry of carbon dating, or literacy in astronomical physics.

To reiterate some of the points discussed in the previous section, the young earth creationist's rejection of scientific reports on the age of the earth is not due to idiocy. She has good reason to think scientists are mistaken regarding the earth's age. This is because she takes herself to have better evidence than the scientists: God's word. Likewise, though, I (a secular liberal) also have no expertise in evolutionary biology, the chemistry of carbon dating, or literacy in astronomical physics. So why does my broader trust in science emerge? The answer is simple: because I have incentive to trust the information presented to me via scientific testimony, and the fundamentalist has little to none when these claims threaten her deeply held views. For me, scientific consensus is the *best* evidence available to me – and I take this to be the case because I already trust science as a discipline and most importantly, theories of evolution indicating we live on a 4.5-billion-year-old earth is no threat to my worldview.

Since the psychological factors do not allow us to reason accurately about evidence, we are therefore epistemically vulnerable, potentially adopting false beliefs. This is not to say humans are *never* able to resolve disputes according to the relevant factors. There are times when resolving disagreement is a simple task. If a few friends and I are to divide the bill four ways

after dinner, and we are epistemic peers, in some broad sense – that is, we have the same evidence, reasoning abilities, training, etc. – and I incorrectly claim we each owe \$21 while the others correctly claim we each owe \$24, there is an easy method to resolve the dispute. One of us grabs a calculator or a pen and paper and *shows her work*, so to speak. This method is effective in showing me *that* I am incorrect, and additionally, offers to show me *why* I am incorrect. In a case like this, though, the relevant evidence (the basic rules of arithmetic) *counts as evidence* for all of us. In cases of a mistake like this, the flaw in reasoning will be obvious: after some time considering the arguments put forward, resolution will almost certainly follow.

Many of the beliefs which might be considered socially problematic – racism, homophobia, climate science denial, etc. – do not present an easy opportunity for such instruction. These deeply held beliefs are usually tied up in some part of a person’s social/religious/cultural identity, and therefore the counterevidence presented will be held up under much more scrutiny. In this way, thanks to the psychological mechanisms at work, individuals will often be able to sidestep serious challenges to existing belief sets. A socially problematic belief is not subject to a readily available decision procedure for showing why a counterpart is mistaken. The kinds of beliefs that orient an individual’s worldview are the kinds we cannot label “incorrect” with a comprehensive and conclusive account of the world backing us up. Such an account does not exist. We cannot show our work on pen and paper like we can when I make an arithmetic mistake. At the same time, however, it seems we should be able to epistemically criticize socially problematic beliefs, stemming from these seemingly inaccessible worldviews. If a racist falsely believes there is some metaphysical superiority in the colour of his skin, we should be able to pick out the egregiously false propositions to which he adheres and bring them to his attention. We have a problem, however, if we think this is easily achievable.

The nature of belief persistence – our hardwired psychology – means we do not have readily available decision procedures to show a counterpart why their beliefs are problematic.

More than this, genuine conviction rarely *consciously* correlates with available evidence. Catherine Elgin provides an argument suggesting we arrive at conviction (a requirement for belief) subconsciously. David Lewis, for example, famously argued for the existence of infinitely many possible worlds. He believed this to be true; he was undeniably bright, philosophically gifted, and thorough and careful in argumentation. In Elgin’s words, “I cannot refute his position; it is admirably well defended,” but “I do not believe that there exist real possible worlds” (Elgin, 2010, p. 59). In addition to the irrefutability of his position, David Lewis is not Elgin’s (or my own) epistemic peer – he is an epistemic superior. Elgin points out that in many areas of study, we are happy to revise our beliefs to accord with the experts. The difference between Lewis and a physicist’s *expert opinion* is hard to pinpoint. It seems like a bit of an argumentative cheat to say Lewis’ reasoning **must** be flawed. It should at least give us pause that “the number of able philosophers who cannot find a flaw in the argument is legion” (Elgin, 2010, p. 60). I hold that David Lewis was much more intellectually capable than I am, and at the same time I do not advocate his metaphysical position. Am I being unreasonable?

Clearly, I do not find Lewis’ evidence compelling. In order for me to *be convinced*, there is some sense in which the evidence must *convince me* of something. Different beliefs can arise from the same evidence set – that is just the phenomenon of belief polarization (Batson, 1975; Jern, Chang, & Kemp, 2014; Lord et al., 1979; Munro & Ditto, 1997; Plous, 1991). As Elgin says, regarding Lewis’ modal realism: “I simply cannot believe it. Since ought implies can, that I cannot believe it entails that it is not the case that I ought to believe it” (Elgin, 2010, p. 61). Generally, people will hold their beliefs to be true. If an individual decides to believe *A* just

because he wants to, then his believing *A* would not amount to his believing that *A* is true. This severs the connection between truth and belief, according to Elgin. It is unlikely that an individual will assert she *believes* something if she does not regard it as *true*. Since belief is accompanied by conviction, Elgin asserts belief must be involuntary (Elgin, 2010, p. 62).

There are many reasons to think belief acquisition, belief retention, and belief change are governed by psychology, cognitive processes, and social factors beyond our direct control. Given the layperson has no specialized knowledge (even specialists have a very narrow scope of expertise), we all rely on epistemic chains of trust for knowledge transmission. More than this, the psychology suggests we are not in the position to accurately reason about the beliefs we acquire, rather our epistemic environments have a seemingly domineering grasp on our worldviews. This goes for the isolated fundamentalist and the scientifically minded academic alike. Therefore, our account of social epistemology must account for the psychological reality and take testimonial concerns seriously.

2.6 Why Highlight the Psychology? Given my emphasis on psychological and cognitive mechanisms of belief acquisition, some readers might suggest I am too insistent that the *basis* for any given belief is its *origin*. It seems we offer reasons as to why our beliefs are better than others, and these reasons have nothing to do with a belief's ancestry. More than this, it could be the case that these *reasons* are what give us proper doxastic justification, regardless of the actual belief acquisition processes. As the argument goes, even though non-truth-relevant psychological factors seem to be instrumental in belief formation itself, we should still be able to accurately characterize socially problematic beliefs as worse than secular liberal beliefs (namely, by pointing to *bad reasons* provided in favour of problematic beliefs, and *good reasons* in favour of secular liberal beliefs). This sort of argument gives us good reason to think the psychology *alone*

does not cause concern for the sort of symmetrical epistemic grounding I am concerned with in this chapter. Even though the liberal and the fundamentalist *acquire* beliefs in the same ways, this does not entail they are epistemic equals in doxastic justification. In this way, my emphasis on psychological and cognitive mechanisms might seem misguided.

The important upshot of my account is that these concerns only arise if our reasons-giving processes are entirely separate from our psychological processes – and as we will see in what remains of this thesis, they are not. We give reasons in favour of belief, but these reasons are indexed to particular social spaces, which are influenced by the psychological and cognitive mechanisms lending themselves to partisanship and motivated reasoning. As I will discuss in detail in Chapter 3, the involuntary non-truth-relevant psychological mechanisms that play a role in shaping our belief acquisition and tendency to favour partisans also has implications for the sorts of *reasons for belief* we are able to provide. Some philosophers suggest we determine the epistemic status of a belief according to its origin – that is, we must acquire beliefs according to correct inferences and unbiased, comprehensive, objective evidence. Of course, other philosophers disagree and suggest the quality of an individual's reasons in favour of belief determines a belief's epistemic status. My attention to the psychology in Chapter 2 and my attention to the social emergence of reasons-giving in Chapters 3 and 4 accounts for both of these philosophical views.

Chapter 3: Epistemic Deference and Echo Chambers

3.1 Knowledge from Testimony Social epistemology secured relatively little attention before the significant developments made by C. A. J. Coady, F. F. Schmitt, B. K. Matilal & A. Chakrabarti, and Russell Hardin in the 1990s (see Coady, 1992; Hardin, 1997; Matilal & Chakrabarti, 1994; Schmitt, 1994). These projects examined testimony and sought to develop theories of knowledge recognizing our epistemic dependence on others for belief acquisition. A clear theme throughout the work of these scholars is that we do not acquire knowledge through individual scrutiny of evidence according to some idealized epistemic standards – instead, we acquire almost all of our knowledge through information we receive from others. It is clear we heavily rely on members of our community to reliably deliver belief-relevant information to us. We rely on others for our beliefs about “the food we eat, the medicine we ingest, the products we buy, the geography of the world, discoveries in science, historical information, and many other areas that play crucial roles in both our practical and our intellectual lives” (Lackey, 2006, p. 432).

Out of this literature, two schools of thought emerge about how and when testimony acts as proper justification for beliefs: reductionism and non-reductionism. Reductionists will assert some non-testimonially based reason is needed in order to accept testimony as justification for believing some proposition. Global reductionists assert a hearer of testimony needs a non-testimonial reason to believe testimony (as a source of belief) is *generally* reliable, whereas local reductionists assert individuals need a non-testimonial reason to believe *specific instances* of testimony are reliable (Lackey, 2006). This attitude – not taking testimony as a basic source of doxastic justification – stems from a set of epistemic principles insisting there must be a tangible

connection between individual epistemic agents and evidence in favour of belief. When individuals rely on basic sources of doxastic justification (sensory perception, memory, inference, etc.) to form beliefs, it seems there is a concrete connection between the epistemic agent herself and the belief-relevant information she receives. Reductionists assert testimony is too far removed from individual epistemic activity to be considered *basic*.

Reductionists' concerns about grounding testimony as doxastic justification are well founded. If testimony is a basic source of doxastic justification, *trust itself* becomes an essential mechanism for acquiring beliefs. This is why, in some sense, reductionists assert we should approach testimony critically: default trust leaves us vulnerable to misinformation. In other words, placing so much onus on trust seems intellectually irresponsible. Individual epistemic agents should have some tangible method for evaluating incoming information. With our basic sources of doxastic justification, we see how easy this is: I have good doxastic justification to assert "I am seated on a blue chair," because my sensory perception generally delivers reliable, belief-relevant information. It is not so obvious how I am tangibly connected to evidence when I receive testimony.

These reductionist efforts surrounding testimony try to marry traditional epistemic conceptions of doxastic justification to our obvious reliance on testimonial belief-relevant information. It is clear that individuals constantly rely on others for information, but keeping traditional epistemic conceptions of evidence evaluation and belief revision intact requires a concrete foundation for testimonial justification. This is why reductionists ground this justification in non-testimonial ways. Reductionists assert there must be sufficient *positive* reasons to trust accounts of testimony. A typical reductionist account might suggest these positive reasons are the result of induction: for example, we might observe "a general conformity

between facts and reports” and then, “with the aid of memory and reason, we inductively infer certain speakers, contexts, or types of reports are reliable sources of information” (Lackey, 2006, p. 439). In this way, reductionists *reduce* the justification of testimony to the basic sources of doxastic justification, such as sense perception, memory, inductive inference, etc. (Lackey, 2006).

Although reductionists recognize testimony as a source of belief, and therefore gesture at the project of social epistemology, reductionist accounts of testimony remain too individualistic. Reductionism inflates the role of individual epistemic agents in evidence evaluation by suggesting these individuals have access to tangible methods for accurately evaluating the quality of incoming testimony. This conception seems to improperly situate individuals, both psychologically and pragmatically. Global reductionism seems obviously overly demanding: in order to adequately supply non-testimonial reasons for testimony as *generally* reliable source of belief, “one would have to be exposed not only to a non-random, wide-ranging sample of reports, but also to a non-random, wide-ranging sample of the corresponding facts” (Lackey, 2006, p. 440). Moreover, though, local reductionism also seems unrealistic: from the time we are toddlers, we accept testimony as a reliable process for assisting us in navigating the world. Additionally, as cognitively capable adults, we seem to trust testimony without requiring the types of reasons reductionism demands – perhaps this is because we don’t have the time or resources, or this might be some evolutionary feature of communication. Regardless, in the words of C. A. J. Coady, “it seems absurd to suggest that, individually, we have done anything like the amount of field-work that [reductionism] requires” (1992, p. 85).

Unlike their reductionist counterparts, non-reductionists claim testimony is a basic source of doxastic justification, just like sense perception, memory, and inference (Lackey, 2006).

Simply put, “so long as there is no available evidence against accepting a speaker’s report, the hearer has no positive epistemic work to do in order to justifiedly accept the testimony in question” (Lackey, 2006, p. 438). This makes epistemic trust the crucial mechanism through which we acquire information. Subsequently, though, this leaves us extremely vulnerable to misinformation. As we place such a great amount of trust in our community members and the institutions on which we depend for reliable information, we raise the epistemic stakes, so to speak. If we misplace our trust, and rely on the wrong individuals or wrong institutions, we can easily acquire false beliefs – much of the time to our detriment.

I take the project of social epistemology to be a serious challenge to traditional, perhaps overly individualistic, accounts of epistemic mechanisms at work in belief acquisition, and therefore align myself with the non-reductionists. Non-reductionism takes more seriously our extreme epistemic dependence, and therefore takes more seriously the project of social epistemology. Also, this paints a much more realistic picture of belief acquisition. Humans do not have the cognitive capacity or epistemic resources to investigate the grounding of the beliefs they hold. Instead, we are required to trust community members for nearly all of our belief-relevant information. More than this, I do not meet testimony with immediate skepticism: I do not personally know the scientists conducting climate science research, or the journalists reporting on climate change, but I still take their claims seriously. Human psychology equips us with many non-epistemic mechanisms for evaluating the trustworthiness of our fellow community members; and moreover, high levels of epistemic trust in a community leads to better collective information.

Trust, then, inevitably plays a crucial role in our epistemic lives. It is not controversial to point out that we constantly epistemically defer to others. Although this dependence means we

know relatively little individually, it also means we collectively will have access to highly specialized knowledge. This is the trade-off when we cognitively divide up the labour of knowledge acquisition. As we see in secular, scientifically-oriented societies, “the more society is based on an epistemic division of labour, the more dependent the individuals on sources of knowledge whose reliability they can hardly evaluate themselves” (Baumann, 2008, p. 47). It is easy to see we are heavily epistemically dependant on experts whose qualifications are opaque to laypersons. Elijah Millgram calls this the problem of hyper-specialization (Millgram, 2015). Human knowledge “has splintered into a vast set of specialized fields that depend on each other,” and no single person has the capacity to manage such a massive amount of information (Nguyen, 2018, p. 8). This is why we are forced to trust each other (Millgram, 2015).

Consider the ways in which we trust experts. I am in no way equipped to evaluate the virtues of one antibiotic over another, and I am not prepared to evaluate the expertise of any given medical doctor.⁸ Instead, I rely on “a vast network of institutional licencing practices in order to choose my health care sources” and this includes things like “journal peer review, medical board exams, university hiring practices,” etc. (Nguyen, 2018). The important upshot here is that, as a layperson, I am not equipped to evaluate the expertise of my doctor, but I am not equipped to evaluate the institutional structures in place, either. I pick my doctor according to availability and word-of-mouth – not according to an explicit recognition of the medical school my doctor attended, not according to her medical board examination scores, not according to the prestige of the hospital at which she conducted her residency, etc. Much like the virtues of one antibiotic over another, I cannot reasonably evaluate the qualifications of my doctor, and I cannot reasonably make a judgement about the institutions which allow doctors to practice – although, I

⁸ This example comes from (Nguyen, 2018).

certainly trust my doctor to treat myself and my family when sick. Very often, this is how trust operates in our communities. We trust according to a long chain of field-wide links (Philip, 1993).

More than this, any so-called “neutral evidence” depends on robust and lengthy chains of epistemic trust (Millgram, 2015). To once again use one of C. Thi Nguyen’s examples, I trust mechanical engineers because they produce operationally useful tools, and I know they trust applied physicists, who trust theoretical physicists, and so on (Nguyen, 2018). I do not trust theoretical physicists because I accurately evaluate their work. Instead, I generally trust *science as a discipline* because I take it that scientific investigation is behind the bridge I cross on my way to work, the electricity that allows me to have hot water and an operational stove, and the engine that powers my car. Field-wide links, of which laypersons are often entirely unaware, are the chains of trust which reliably deliver useful information. As long as these systems of knowledge production continue to be reliable and useful for average members of the community, we seem to be content in continuing to place our trust in these systems. As individuals, we have strategies (although they are limited) for ensuring we are navigating these chains appropriately. Consider how we conduct epistemic litmus tests: when I encounter an individual in favour of sexual orientation conversion therapy, for example, I automatically discredit them on all social and moral topics.⁹ These are the kinds of tactics we must use in order to navigate our hyper-specialized world (Nguyen, 2018).

These tactics, as useful and efficient as they are, are also prone to misuse. Since we are so radically dependant on others for information, it is difficult for individual members, acting alone, to escape an epistemic system that delivers falsehoods. Such high levels of trust in society

⁹ This example comes from (Nguyen, 2018).

implies the quality of our beliefs “is not dependent on the quality of our individual insight, but on the quality of collective knowledge acquisition which the single individual influences only marginally” (Baurmann, 2008, p. 47). This is obvious in the cases of my first three examples. The Southern racist, the fundamentalist, and the climate science denialist are all members of an epistemic community espousing beliefs a secular liberal would label *wildly mistaken*. For the individual fundamentalist (or racist, or climate science denialist), however, the psychological mechanisms reinforcing these beliefs paired with the extreme dependence on others for belief-relevant information, leaves her in an epistemically precarious position. It is extremely difficult for any of these individuals to seriously consider alternative worldviews – and secular liberals tend to assert a change in worldview is what is necessary to combat the problematic beliefs which the fundamentalist, racist, climate science denialist, etc. embrace.

As we saw in Chapter 2, the psychological and cognitive limitations placed on belief change are very restrictive on individual epistemic investigation. More than this, since individuals are so epistemically dependent on others for information, we are left wondering whether conversion for those espousing socially problematic beliefs is simply an unrealistic expectation. Perhaps individuals are at the mercy of their epistemic circumstances. This is a conclusion many scholars try to avoid. Here I will sketch some of the work in social epistemology tracing the mechanisms through which trust can lead us astray, cashing out the details using Nguyen’s conception of epistemic bubbles and echo chambers. Then I will examine some proposed solutions to the dangers of epistemic isolation.

3.2 Better or Worse as an Epistemic Community Some epistemological accounts of testimony and doxastic justification recognize our psychological limitations as individuals, and therefore assert secular liberal epistemic superiority must be rooted in our situatedness as a

community. Due to the cognitive and social mechanisms of belief acquisition, I allow that it is possible for different epistemic communities to situate their members more or less appropriately. Many philosophers, however, are uncomfortable with the notion that perfectly responsible epistemic agents might acquire true beliefs in one community, and false beliefs in another. In Chapter 4, I will discuss this doxastic warrant in detail. Here, I only want to highlight the *possibility* individual doxastic warrant can be symmetrical across a wide variety of epistemic circumstances – including the secular, liberal communities to which academics belong, **and** the communities outlined in my initial examples, perpetuating socially problematic beliefs. It is understandable why many oppose this view. Intuitively, as scientifically minded individuals, we want to definitively claim epistemic superiority. We tend to think those in socially problematic communities do not have the relevant information, or do not engage appropriately with alternative views, or fail to recognize they belong to a community with worse institutions for delivering appropriate beliefs. These are some of the underlying assumptions of Alex Worsnip, Allen Buchanan, and C. Thi Nguyen. In the following pages, I will examine the epistemic diagnoses of these philosophers, and go on to evaluate their suggested solutions to our epistemic vulnerability.

Of these philosophers, Buchanan most explicitly suggests there is a definite asymmetry in doxastic justification between those espousing socially problematic beliefs and those in secular liberal society, even though individuals acting alone do not significantly alter their epistemic environments. If individuals are so limited in their epistemic agency, we must be able to explain why epistemic *communities* can be better or worse than others. Recognizing individual epistemic vulnerability due to the psychological and social mechanisms assisting us in navigating the world, many suggest claims of epistemic superiority must come from the identification of

problematic *structures* in an epistemic environment. This identification can act as a method for making inferences about the quality of information one's epistemic community is delivering.

Secular liberal society is the epistemically *best off*, according to the analyses of Buchanan, Nguyen, and Worsnip, because liberal communities place epistemic agents in a better position to acquire accurate information. This is presumably due to the superiority of our institutions. Liberal institutions encourage critical thinking and diversity of perspective. Those in communities embracing socially problematic beliefs fall victim to epistemic bubbles, or echo chambers, or a combination of the two. If these communities lack information or foster an environment so hostile towards outside opinions that it is extremely difficult to give any serious consideration to alternate views, then it seems liberal institutions are better, on the whole. The readily available, diverse sources of evidence present in liberal institutions better situate individuals to receive true information. If this all holds, even if individuals are limited in their epistemic abilities, the supposed symmetry between epistemic communities espousing socially problematic beliefs and scientifically dependant secular society, seems broken. In the following pages, keeping the potential for doxastic symmetry in mind, let us consider the details.

3.3 A Lack of Information Alex Worsnip does not offer a specific diagnosis for communities like the socially problematic examples outlined in Chapter 1, so his position will take some teasing out. First, Worsnip makes the case that the ways in which we seek out belief relevant information are epistemically important. Some scholars make the opposite case: an individual's evidence gathering methods are not epistemically significant, and evidence gathering should be governed by exclusively pragmatic and moral considerations. According to this view, the only epistemically relevant mechanisms we should care about are those associated

with belief formation itself and belief's relationship to the evidence an individual has acquired. Worsnip is decidedly against such a view.

The intentional and inadvertent filters placed on our epistemic activities are not insignificant: filters on our evidence acquisition and bias present in our evidence set will affect epistemic outcomes. Consider one of Worsnip's examples: you are at a party with a group of economics professors. As you socialize, you poll the professors and ask whether or not each of these individuals thinks interest rates will go up next year. Every single professor replies with a resounding "yes." You then take yourself to have good evidence that interest rates will, in fact, go up. However, unbeknownst to you, before the party, each professor was asked about their interest rate predictions, and those who predicted interest rates would remain the same or go down, were immediately removed from the premises. Now, it seems, your evidence is faulty (Worsnip, 2019).¹⁰ Biased filters, then, seem to be epistemically problematic. Even though you were unaware of the filter placed on your evidence in this case, it seems you still missed out on relevant information.

Since bias and partisanship filter the belief relevant information we receive, Worsnip asserts we must avoid, where we can, illicit influences on belief (Worsnip, 2019). For Worsnip, one primary illicit influence on belief is motivated reasoning – particularly, motivated reasoning according to our pre-existing normative views (Worsnip, 2019). Since humans are prone to reason in the direction of their existing views, we should expect reports, stories from news media and testimony of partisans alike, to be biased. When individuals “are illicitly influenced in what they believe, it will be epistemically dangerous to take what they say on trust, without considering arguments and evidence presented by those with different views” (Worsnip, 2019, p.

¹⁰ Worsnip discusses this example, initially brought forward by Roger White (2010).

15). This is why Worsnip's main aim is to establish that we have an epistemic obligation to seek out evidence from diverse sources.

Worsnip's assessment of the groups espousing socially problematic beliefs in my initial examples in Chapter 1, would criticize these communities for allowing illicit influences to affect belief acquisition processes. These groups form beliefs based on a heavily filtered evidence set. Motivated reasoning about existing beliefs and consuming additional biased evidence sources contributes to a problematic epistemic environment in which individuals are led astray. Consider the fundamentalist: she is explicitly taught to distrust non-partisans, she is presented scriptural evidence for a number of propositions essential to fundamentalist doctrine, she receives evidence from trusted community members that suggest outsiders make use of faulty belief acquisition mechanisms (science), and is taught that without scripture individuals cannot know the truth about reality. This leads to a biased evidence set – and although she might form beliefs reasonably according to the evidence she has, Worsnip would assert there is something seriously epistemically wrong with endorsing such filtering, and therefore individuals are epistemically obligated to diversify their evidence.

3.4 A Failure of Institutions Allen Buchanan provides a related, but distinct diagnosis of those endorsing socially problematic beliefs. Buchanan asserts that since we are so radically epistemically dependant on others, and since trust manipulation threatens us with the potential for misinformation, the best way to combat our epistemic vulnerability is to select social arrangements that prevent the inculcation of false beliefs. He argues liberal institutions, and their more prevalent methods for allowing citizens access to positions of epistemic authority, paired with broad-based egalitarianism, provide important safeguards against the risks of socially inculcated false beliefs (Buchanan, 2004). More than this, Buchanan claims an effective

discipline of social epistemology is only likely to exist in a liberal society (Buchanan, 2004). This is because, for Buchanan, social epistemology requires free access to information about relevant epistemic authorities and conditions conducive to investigation of the rationality of epistemic deference. For Buchanan, this all ties together to imply liberal institutions are superior in two ways: (i) they contain the mechanisms and attitudes required for detection and correction of false beliefs through their *efficient allocation of epistemic deference*; and (ii) they provide favourable conditions for the development of an environment in which members can reflect on epistemic resources, and *access intellectual tools for improving the epistemic environment* (Buchanan, 2004).

Let us look at the details of Buchanan's argument. Recall from Chapter 1, Buchanan provides an analysis of occurrences of racist upbringings as cases of "socially inculcated false beliefs" (Buchanan, 2004). He begins by outlining his own upbringing in a racist family, embedded in a culture of systematic racism in the Southern United States. Buchanan claims it was "largely through luck" he managed to leave this toxic social environment, and he recounts his sense of betrayal as he came to realize much of his worldview was rooted in false beliefs (Buchanan, 2004, p.95). Obviously, these false beliefs put Buchanan at a *moral risk* – he believed (falsely) that the colour of a person's skin determined their value, and this could have led to his direct participation in hate crimes. More than this, Buchanan shows that false beliefs can put individuals at a *prudential risk* – that is, the individuals believing falsehoods risk their own direct harm (Buchanan, 2004 pp. 96). Falsely believing a conspiracy about international Jewish control networks and taking Hitler's government to be benevolent, for example, put non-Jewish Germans at an enormous prudential risk during the reign of the Third Reich. These beliefs led to the successful execution of Hitler's policies, including the widespread systematic

killing of non-Jewish Germans (Buchanan, 2004). This assessment motivates Buchanan's claim that we should care that our beliefs are *true* – believing falsehoods puts us at risk.

We constantly and unavoidably depend on others for information. This is why our epistemology must be social, and this is why Buchanan emphasizes the need for reliable institutions. Since we depend so heavily on others, we are vulnerable to the types of moral and prudential risks Buchanan brings to our attention. Mitigating the risks and escaping false beliefs are not easy tasks, though – especially for individuals belonging to groups espousing problematic beliefs, such as Buchanan's former racist community. As we will see in Nguyen's work, and as Buchanan recognizes, cognitive distortion can be systematic, and there are mechanisms through which problematic epistemic structures may reinforce themselves. Individuals are typically taught strategies, explicitly or implicitly, for evading evidence that presents a challenge to their beliefs. (I think this includes anything from "you can't trust a Republican" to the full-fledged dismantling of epistemic trust networks through conspiracy theories). Buchanan notes, "the same social processes that instill false beliefs [...] make it difficult to correct them" Buchanan 2004, 97). A simple example of this has been displayed in the classrooms of American elementary and secondary schools. When teachers presume girls do not have an aptitude for STEM courses, teachers expect less of their female students. This, then, often leads to poor performance in the classroom (see Baenninger & Newcombe, 1995; Reyna, 2000; Spencer, Steele, & Quinn, 1999). For Buchanan, we can mitigate the *risks* associated with false beliefs, the *difficulty escaping* problematic epistemic structures, and the *perpetuation of problematic beliefs* within these structures through the social epistemology delivered through liberal institutions.

For Buchanan, the epistemic issues in socially problematic groups are structural. These structural problems arise due to the lack of institutional mechanisms connecting the

qualifications of experts to the topics on which these experts deliver information, and a lack of layperson access to evaluate these connections. For Buchanan, a certain level of epistemic egalitarianism and free access to information is necessary to empower individual community members to participate in knowledge production to the extent that they can keep experts accountable. According to Buchanan's analysis, the heart of the issue in problematic groups is simply that they lack the qualities of liberal institutions. There is not the same free access to information, and power imbalances between laypersons and supposed experts do not allow for the accountability that we see in liberal society. Moreover, there is a disconnect between objective qualifications of experts and the scope of their professed expertise. For Buchanan, there is a level of deception in socially problematic communities, due to reinforcement mechanisms that discount alternative views and inflate confidence in the group's existing views. Buchanan's former racist community constantly delivered lines of reasoning bolstering a worldview of white supremacy. More than this, there were readily available counter-explanations further justifying racist attitudes, therefore making it harder to escape the beliefs inculcated by the community.

3.5 In the Language of Epistemic Bubbles/Echo Chambers We can understand both Worsnip and Buchanan's diagnoses of communities endorsing socially problematic beliefs within C. Thi Nguyen's framework analyzing *epistemic bubbles* and *echo chambers*. As Nguyen introduces these terms, *epistemic bubbles* and *echo chambers* are "distinct, but interrelated" (Nguyen, 2018, p. 1). Both are "problematic social structures," leading individuals astray, and "both reinforce ideological separation" (Nguyen, 2018, p. 1). Nguyen insists it is important to keep these two phenomena distinct, as epistemic bubbles are much less insidious than echo chambers. An epistemic bubble is "a social epistemic structure in which some relevant voices

have been excluded through omission,” whereas an echo chamber is “a social epistemic structure in which other relevant voices have been actively discredited” (Nguyen, 2018, p. 2).¹¹

For Nguyen, epistemic bubbles occur due to the structure of social association and our dependence on community members for information, and there isn’t necessarily any devious intention to omit alternative views. Clearly, individuals are highly epistemically dependant on others, and through normal social processes of social selection and community formation, we inadvertently filter the information we receive. We make efforts to remain close with friends, who usually share some of our values (political, cultural, religious beliefs, etc.), and through this filtering of views via social association, we inflate our epistemic self-confidence (Nguyen, 2018). External factors can also filter the information we receive. External filters may be commonplace, such as story selection in news media; they may be more extreme, such as governmental censorship; or they may play a role in shaping the information available to us, such as the algorithmic filtering of our online searches. The problem with epistemic bubbles is that they over inflate an individual’s epistemic confidence through what Nguyen calls *bootstrapped corroboration* (Nguyen, 2018). This is just to say that since those stuck in epistemic bubbles encounter agreement with their existing views so frequently, they become over-confident in these views. For Nguyen, though, epistemic bubbles are easy to pop: introduction to relevant information that has been missed will effectively dismantle this epistemically problematic structure.

We can think of Worsnip’s analysis as an examination of the problems arising from epistemic bubbles. Worsnip’s primary concern is that bias affects our evidence due to motivated portrayals of information, and inadvertent or intentional filtering of information. In this way,

¹¹ Nguyen builds on Kathleen Hall Jamieson and Frank Capella’s work on echo chambers (see Jamieson & Cappella, 2008).

Worsnip characterizes communities espousing problematic beliefs not according to the actual belief acquisition processes, but according to the omission of essential information from the community's evidence set. This is an instance of an epistemic bubble: when a community intentionally consumes biased media and there are many filters on the belief-relevant information they receive, it is clear this can result in faulty beliefs. In agreement with Nguyen, Worsnip asserts, although the emerging community may acquire many false beliefs, it should be easy to correct this sort of epistemic misstep: introduce the missing information.

This is our first indication that Worsnip's analysis, on its own, does not entirely capture the epistemic shortcomings of communities espousing socially problematic beliefs. Certainly, these groups heavily filter information and are forming beliefs according to biased evidence, however, there seems to be clear *resistance* to evidence in these groups that mere introduction of alternative views does not fix. This just means the socially problematic communities in my Chapter 1 examples are not *only* problematic in virtue of being epistemic bubbles. This being said, Worsnip's focus on news media and his analysis regarding obtaining relevant information in a such a technologically dependant world, all seem to be important and plausible points, although I will not discuss them here.

When it comes to communities like the ones in my Chapter 1 examples, *echo chamber* seems to be a much more accurate label. Echo chambers operate according to a pervasive manipulation of trust (Nguyen, 2018). Unlike the more natural occurrence of epistemic filtering that occurs in epistemic bubbles, echo chambers result due to explicit, authoritative discrediting of alternative views. For this reason, "echo chambers explain what epistemic bubbles cannot: the apparent resistance to clear evidence," as we see in my initial examples (Nguyen, 2018, p. 2). For individuals in echo chambers, perhaps for reasons beyond their control, it is possible they

follow good epistemic practices and still acquire false beliefs. This is because echo chambers foster an environment riddled with readily available counter-explanations, undermining the trustworthiness of those expressing alternative views (Nguyen, 2018). In this way, echo chambers operate by discrediting non-members, and amplifying the epistemic credentials of community members. For the racist, the fundamentalist, and the climate science denialist there seem to be good reasons to distrust outsiders and there are many plausible counter-explanations for why non-partisans are mistaken.

There are a number of mechanisms allowing this trust manipulation process to be effective. Like epistemic bubbles, those in echo chambers encounter constant agreement and reinforcement of their current views, boosting self-confidence. Additionally though, echo chambers are equipped to pre-emptively discredit outside sources (Nguyen, 2018). Active attempts to discredit outsiders and bolster the epistemic image of insiders is designed to *credentially isolate* community members – this means members are “actively alienated from usual sources of contrary argument” (Nguyen, 2018). More than this isolation, however, echo chambers protect themselves with another epistemic mechanism Nguyen labels *disagreement-reinforcement* (Nguyen, 2018). A disagreement-reinforcement mechanism brings members to believe that the mere existence of the expression of beliefs contrary to those possessed within the echo chamber should reinforce the community’s initial position (Nguyen, 2018).

Consider an isolated fundamentalist, similar to the one in my introductory examples, who wholeheartedly believes her fellow fundamentalists are to be trusted, and outsiders are to be distrusted. Suppose she is taught that powerful members of secular society hate that the fundamentalists have the truth, and these people will therefore constantly try to undermine her community’s knowledge. She is told outsiders will call fundamentalists *crazy, conspiratorial,*

unscientific, and these outsiders will offer so-called *evidence* – obviously fabricated and designed to undermine fundamentalist truth – in attempts to convince others she and her fellow fundamentalists are mistaken. Then, when this fundamentalist encounters outsiders trying to undermine her epistemic grounding in this way (perhaps with genuine evidence contra fundamentalism), these events only work to strengthen her initial convictions.¹² This disagreement-reinforcement acts as a kind of “epistemic inoculation” (Begby, 2020; Nguyen, 2018). In making predictions that work to undermine contrary testimony, “inside authorities not only discredit that contrary testimony, but increase their trustworthiness for future predictions” (Nguyen, 2018).

Echo chambers function parasitically on the nature of epistemic trust (Nguyen, 2018). As discussed in the first section of this chapter, it is impossible for humans to navigate such a specialized world without trusting others for critical information. If individuals failed to rely on the appropriate chains of trust or refused to epistemically defer, the loss of knowledge would be devastating, and life’s simplest tasks would become cripplingly demanding. Since humans are so epistemically dependant, Nguyen admits much of the time, members of echo chambers might appear plausibly blameless (Nguyen, 2018). This is why echo chambers are so hard to escape. Where epistemic bubbles pop with exposure to relevant sources of information, echo chamber escape is elusive. It seems a fundamentalist raised in an epistemically isolated community, who exhibits many epistemic virtues – perhaps she evaluates counterevidence according to her background beliefs, investigates the reliability of experts in her community according to what she already knows, etc. – can still be epistemically trapped. This is because, on an individual level, she acquires beliefs in perfectly epistemically reasonable ways. Just like her secular

¹² Nguyen discusses a similar example in (Nguyen, 2018).

counterparts, she learns theories about the world, life experience bolsters these theories, she reasons about counter evidence, considers the credibility of experts within her community, and as a result, functions with a robust worldview that instructs her happily about daily life. It is extremely unlikely secular evidence will effectively convince her of anything.

When we assume new outside evidence should be compelling for the fundamentalist, this seems like an overly reductive expectation of testimonial encounters. It is simply not the case that humans extract themselves from existing circumstances in order to evaluate evidence: we cannot investigate the general reliability of testimony, and we do not automatically meet testimony with skepticism, especially when the testimony is coming from trusted partisans. This evidential issue seems to be rooted in a familiar problem to social epistemologists working in peer disagreement. There is a principle, rooted in traditional epistemological accounts, suggesting evidence must be commutative – that is, the *ordering* of evidence shouldn't impact the conclusions drawn from the evidence set. This means, ideally, two individuals observing the same set of evidence should arrive at the same conclusion, regardless of prior beliefs. Belief polarization, however, demonstrates this epistemic ideal does not always hold up. Obviously, since humans seem to assess incoming evidence according to an existing set of beliefs, we lose evidence commutativity.

This push for commutativity of evidence is an attempt to preserve objectivity. If historical ordering of evidence did not matter, it seems plausible that we would be able to present evidence and see the subsequent correction of socially inculcated false beliefs. If we view a set of evidence *objectively*, with no priority given to one piece of evidence over another according to the order in which these beliefs were acquired, a reasonable epistemic agent would arrive at the proper beliefs. As the *principle of commutativity of evidence* goes, what is reasonable to believe

depends on one's *total evidence*, without privileging certain beliefs due to their previous uptake (Kelly, 2008). The problem is that humans constantly violate this principle. Our psychological mechanisms for epistemic vigilance and our reliance on testimony give us good reason to think humans assess incoming information according to existing beliefs. Therefore, as we see in Nguyen's analysis, as long as new pieces of evidence are assessed using the agent's currently held beliefs, then the "early education in an echo chamber becomes domineeringly powerful" (Nguyen, 2018). Considering the commutativity of evidence principle is useful for Nguyen, because it offers a potential avenue for exploration in loosening the grip of an echo chamber on its members. If an individual is to find their way out of an echo chamber, they must undo some of the influence of historical ordering on their evidence. This task, however, will be extremely challenging thanks to the psychological and social mechanisms in place.

Buchanan's characterization of the epistemic mechanisms perpetuating socially problematic beliefs seems to be an instance of what Nguyen would call an *echo chamber*. Buchanan recognizes the obvious resistance to evidence, due to the readily available counter-explanations that reinforce problematic views. This is partially due to a sort of credential isolation – Buchanan highlights how Black community members were barred from certain positions in society, which both confirmed a view of white superiority, and further contributed to the marginalization of non-white community members. Sources of contrary views were removed from Buchanan and his fellow white citizens due to a version of Nguyen's disagreement reinforcement mechanism. Any contrary views expressed by people of colour or progressive white community members were not taken seriously: this sort of resistance was expected and explained away. When Black members in Buchanan's proximity demonstrated intelligence or skill, this was dismissed as an abnormality; and more than this, people of colour could not

advocate for themselves in ways white members of the community would give serious consideration.

In this way, echo chambers are extremely difficult to escape. Nguyen's analysis makes this especially clear: outside evidence does not carry epistemic weight inside an echo chamber. It seems contrary evidence is needed to influence problematic beliefs, but the mechanisms at work within echo chambers make such a shift in perspective highly unlikely. More than this, the psychological and cognitive mechanisms do not work in favour of belief change, either. Motivated reasoning is nearly inescapable, those who are content in their social circumstances are poor candidates for belief change, and trust heavily mitigates our receptiveness to new information. All of this means the individuals perpetuating socially problematic beliefs rarely have good reasons to change their minds. The socially satisfied racist, fundamentalist, climate science denialist, and other individuals similarly situated in echo chambers, instead have good reasons to continue their epistemic activities in the same ways as have always been successful.

3.6 Solutions Nguyen, Worsnip, and Buchanan all recommend solutions to the tenacious problem echo chambers present. Worsnip and Nguyen offer individualistic solutions, while Buchanan offers a social, and therefore more plausible, option. All three of these scholars recognize the difficulty human psychology poses when it comes to evaluating evidence, and these accounts do not underestimate the role of trust in belief acquisition – this is absolutely necessary in an analysis of groups espousing socially problematic beliefs. These solutions are successful to varying degrees, and although all three contribute to the discussion in important ways, I will go on to criticize the general optimism of these accounts, and contemporary social epistemological accounts of echo chambers more generally.

Alex Worsnip offers the most intuitive solution. Like many other philosophers working in the epistemology of testimony, Worsnip advocates for diversifying sources amidst the epistemic problems posed by echo chambers and epistemic filters. Although it might seem diversity shouldn't matter if we are consuming exclusively reliable sources of evidence, Worsnip argues against this position. Worsnip rightfully claims we are not in an epistemic position to gauge how incomplete a set of evidence is, and moreover, we are psychologically not very good at evidence evaluation in the first place (Worsnip, 2019). Additionally, Worsnip argues *across the board* partisanship is irresponsible since this just becomes a version of the economics professor party – constant reinforcement of our own views overinflates our epistemic confidence. Trust in partisans, in virtue of the fact that they are partisans, filters information, therefore restricting the evidence available to us. According to Worsnip, then, all this points to a simple conclusion: we should diversify our sources of information in order to make our evidence set more robust. It is decidedly worse to consume exclusively biased and partisan sources for evidence. Therefore, we have an epistemic obligation to diversify the sources we consume (Worsnip, 2019).

I have already suggested, in line with Nguyen's analysis, Worsnip's method does not work for escaping echo chambers. Exposure to alternative evidence should burst an epistemic bubble, but echo chambers do not dissipate so easily. The psychological mechanisms influencing belief acquisition and the trust mechanisms discounting alternative views provide compelling reasons for those in echo chambers to think they are decidedly correct in their views. Worsnip insists seeking out diverse sources as evidence is a tangible step individuals can take to improve their evidence, and thus combat the bias that infiltrates one's evidence set via filters and motivated reasoning. The problem with this suggestion is one that Nguyen takes up in his

proposed solution: humans evaluate evidence according to existing beliefs sets, meaning alternative views are not likely to receive uptake when individuals already have a robust worldview.

Nguyen's proposed solution takes seriously the implications of the *commutativity of evidence* principle. Obviously, if individuals acquire beliefs according to an existing worldview, their evidence is no longer commutative, and when this principle is violated, there is a chance relevant evidence will be dismissed. Nguyen endorses the view that what is *objectively* reasonable to believe depends on one's *total evidence*, but he also recognizes how challenging it is for individuals to access their total evidence as separate from historical order of uptake. Even though this separation might only be possible in theory, Nguyen claims the solution must come from undoing some of the influence of historical ordering on evidence. Escaping an echo chamber requires an actual separation of an epistemic agent from their existing views, so they can adequately assess their total evidence. Nguyen calls this a *socially epistemic reboot* (Nguyen, 2018).

A socially epistemic reboot is reminiscent of Cartesian skepticism, and Nguyen recognizes the practical limitations of such a proposed solution. This reboot would involve reconsideration of credentialing beliefs, reconsideration of testimonial sources of knowledge (minus previously held credentialing beliefs), and discarding background beliefs so an individual can epistemically start over (Nguyen, 2018). The practical limitations of such a proposal are debilitating, since such a dramatic turn in the life of an individual belonging to an echo chamber seems unlikely. Nguyen recognizes that the psychological limitations are likely beyond what we could reasonably expect of epistemic agents (Nguyen, 2018). More than this, Nguyen recognizes such an undertaking would only be justified if the individual had a significant reason to think

their entire belief system was flawed – and “echo chamber members don’t seem likely to have access to any such apparent reason” (Nguyen, 2018, p. 12). In this way, Nguyen is not seriously endorsing a Cartesian *method of doubt*, but instead demonstrating how domineering echo chambers become, and therefore how complicated any proposed solution must be.

Buchanan offers a social solution, insisting echo chambers are instances of epistemic structures running amok. It is clear Buchanan is aware of the trust mechanisms that are highly effective in keeping echo chambers isolated. Knowledge production couldn’t occur without these trust mechanisms, but without the proper institutions ensuring there are accountability mechanisms for experts and widespread egalitarian attitudes empowering individuals, a system is likely to inculcate false beliefs. Buchanan insists the perpetuation of falsehoods in echo chambers is not due to the problematic behaviours of individual citizens; instead echo chambers can develop in the absence of liberal institutions.

Although we are always at risk for acquiring false beliefs, since our epistemic dependence leaves us reliant on others for information, Buchanan claims liberal institutions significantly reduce the moral and prudential risks of epistemic dependency (2004). Moreover, he claims liberal institutions are the most *epistemically* attractive option, since they can deliver a “sophisticated and flexible social division of cognitive labour” (2004, p. 99). Key liberal institutions must possess 3 qualities:

(i) They must be effective institutional arrangements for “freedom of thought, conscience, expression, and association,” and democracy must be understood as the “institutionalized opportunity for all to participate as equals” (Buchanan, 2004, p. 99).

(ii) In order to more broadly emphasize liberal institutions’ affinity for epistemic virtues, liberal institutions must also include a “comparatively large role for merit in the social identification of reliable sources of belief” where *merit* is to mean “the possession of objective qualifications rationally related to the functions of particular social roles and positions” (Buchanan, 2004, p. 99).

(iii) Last, the epistemic virtues of liberal institutions depend on “a broad culture of basic moral egalitarianism” meaning members must have the epistemic confidence to challenge relevant epistemic authorities, and the humility to listen to their fellow citizens when they raise challenges (Buchanan, 2004, p. 99).

These tie together, for Buchanan, as *the* formula allowing a social division of epistemic labour. If there isn't equal opportunity for participation in epistemic structures – that is to say if there is no opportunity for members to express thoughts freely, or if there are large power imbalances between those who produce the knowledge and those who rely on such experts – then the community will fall short of Buchanan's standards for *liberal*. More than this, if the qualifications of experts in society are too opaque, or not relevantly connected to the knowledge they deliver, then again, such a community will not be liberal. For Buchanan, these three components of liberal institutions ensure the social division of labour occurs in a way that both facilitates the maximal production, transmission, and preservation of true beliefs; and maintains a low risk of producing and transmitting false beliefs (Buchanan, 2004).

Liberal institutions will allow for the free exchange of ideas, as a moratorium on creative and free expression would stifle our collective ability to develop ideas and further our epistemic enterprise (Buchanan, 2004). Specialized knowledge production requires consultation and deliberation among experts, and these conversations must occur with access to information and freedom of expression. Buchanan goes on to assert freedom of opinion and the free exchange of ideas prevents unwarranted epistemic deference (Buchanan, 2004). When individuals are allowed to question the authority and legitimacy of the methods through which experts are qualified to make decisions for the rest of society, it prevents individuals from trusting excessively or without proper justification. Buchanan would assert the clearest example of this is in the scientific research community. I would go further to say other communities benefit from this sort of epistemic feature: theological development, for example happens through great

scrutiny and deliberation among a set of individuals possessing a specialized knowledge set (namely, theologians with a specialized knowledge of scripture and doctrine). As Buchanan rightfully claims, freedoms of expression, thought, and association certainly seem necessary for knowledge production.

Additionally, Buchanan claims liberal institutions should deliver the benefits of a cognitive division of labour: high quality knowledge in exchange for greater amounts of epistemic trust. Effectively achieving an efficient *liberal* cognitive division of labour comes with two constraints: there must be “merit-based competition for expert status,” and there must be appropriate limits on epistemic deference “imposed by a broad-based critical attitude of epistemic egalitarianism” (Buchanan, 2004, p. 106). For Buchanan, the conditions granting expert status within a community, and the community-wide attitude of egalitarianism are the most important mechanisms through which we can distinguish liberal societies from nonliberal societies. In a community, there must be available processes through which individual laypersons can identify experts as possessing qualifications objectively relevant to their area of expertise (Buchanan, 2004). In a liberal society, then, the general public “will have access to information on the basis of which to determine whether the process for creating or identifying objects of epistemic deference are in fact performing as those who control the process say they are” (Buchanan, 2004, p. 115). This is to say, individuals must have access to methods through which they can evaluate the qualifications of those to whom they epistemically defer – and importantly, the attitude of egalitarianism present in a community is what empowers individuals to investigate these groundings of epistemic deference.

Buchanan claims liberal institutions tend to rely more heavily on *objective qualifications* of epistemic authorities and provide more effective provisions ensuring these qualifications are

relevantly linked to the beliefs on which these authorities are considered reliable sources, compared to nonliberal societies (2004). Moreover, Buchanan insists liberal institutions will prevent nonmerit considerations from playing a role in the allocation of epistemic deference (2004). When nonmerit considerations influence the appointment of epistemic experts in a community, the community is at a higher risk for misinformation. This is why Buchanan emphasizes the necessity of a widespread attitude of epistemic egalitarianism. For Buchanan, an attitude of epistemic egalitarianism is what encourages individual members to constrain their trust in the status of experts (Buchanan, 2004).

In order for this system of accountability for experts to play out appropriately, enough people within the community must be sufficiently motivated to seek out relevant information to challenge and consider the qualifications of appointed experts, and this is only likely to happen in liberal societies (Buchanan, 2004). Moreover, when a community effectively embodies an attitude of egalitarianism, according all individuals basic and civil rights, and careers within the community are open to all based on merit rather than restrictive bureaucracy, it is difficult to maintain social attitudes that devalue certain groups of people. For Buchanan, merit-based evaluation of experts is essential. When nobody is systematically barred from holding positions where their skills can be observed and checked, it is much more difficult to maintain bigoted views (Buchanan, 2004).

Free access to information, appropriate appointment of *objectively* qualified experts, and an attitude of epistemic egalitarianism combine to deliver more reliable social structures to ensure our reality is not distorted in ways that put us at risk. Buchanan consistently argues that those in liberal societies are far better off than those in modern nonliberal societies. It is clear Buchanan thinks those stuck in echo chambers lack one, or all three, of his requisite features of

liberal societies. As Buchanan's argument goes, the epistemic environment resulting from his three key features is epistemically *best*, and he speaks as if modern secular society is *liberal* in some important sense. Granted, *liberal* is a sliding scale for Buchanan, so we do not have to perfectly meet his standards in order to maintain the epistemic benefits liberal societies offer. For Buchanan, there are clear ways to distinguish whether or not an epistemic community is better or worse off: look at an epistemic community's institutions and judge them according to the three criteria. Echo chambers, isolated epistemic communities, and those who misappropriate experts are all in much more dire epistemic circumstances than those of us in secular liberal society, according to Buchanan.

Buchanan's approach attempting to resolve some of the issues of echo chambers is fitting: since knowledge is a social enterprise, we must look at the social mechanisms allowing echo chambers to develop. It is not individual epistemic missteps that lead to epistemically isolated communities perpetuating socially problematic beliefs, but instead the nature of epistemic trust, psychological mechanisms of belief acquisition, and consistent discrediting of alternative views that keep echo chambers estranged from relevant evidence. One downfall of Buchanan's account is his overestimation of our individual capacity to access expert's qualifications. It could be the case we have reasons to think liberal institutions are epistemically better than isolated communities, but it seems unrealistic to suggest we know this due to individual empowerment and investigation into particular instances of expert qualifications. Our hyper-specialized world simply is not set up for transparency of expert's qualifications. Even though I have access to information about the qualifications of my medical doctor, I do not investigate them – this is because I do not have the time and resources to obtain this information, and I could not accurately assess this information even if I did have it.

3.7 Too Much Optimism? The accounts I cover in the previous section insist there are good reasons to think secular members of liberal society are better epistemically situated than those in communities espousing problematic beliefs. Nguyen, Worsnip, and Buchanan seem to take for granted that members of liberal communities are in an epistemically better position than their problematic counterparts to acquire *true beliefs*. This is due to better trust mechanisms – in echo chambers, disagreement-reinforcement and credential isolation undermine the trustworthiness of non-members and inflate confidence in partisans. Liberal society is supposedly better due to the *objective relevance* of experts' qualifications and egalitarian principles which allow laypersons to participate in collective epistemic activities. These principles, paired with free(r) access to information, give us accessible methods through which to make our evidence sets more robust. Since there is more information available, and more engagement with diverse sources, we are able to access to the relevant evidence, and resist the bias in the sources of evidence we consume.

Since average community members do not have the necessary skillset to assess the hyper-specialized information on which we rely for belief acquisition, for Buchanan, we must combat this epistemic vulnerability through evaluation of our institutions, and mindfulness of behaviours that are epistemically important. For individuals with a robust worldview, it is extremely difficult to psychologically access beliefs and undergo the critical examination required to assess the truth value of certain views. This is why these theories push for institutional assessment; and endorse promising individual behaviours as methods for adjusting one's epistemic position.

The main shortcoming of these theories is that assumptions of secular liberal epistemic superiority are unsubstantiated. These authors all write as if secular liberals are better off than their socially problematic counterparts, but some of the reasoning as to *why this is* goes unsaid.

Granted, echo chambers are extremely tenacious, and human psychology easily lends itself to further embedding in problematic epistemic structures. This obviously makes escape extremely challenging. Nguyen, however, argues as if he is decidedly not in an echo chamber, without distinguishing between features of secular epistemic groups and problematic epistemic groups.

The characteristics of echo chambers do not exclude themselves from existing in liberal circles. It is glaringly clear that the fundamentalist (or the racist, or the climate science denialist), for example, is likely in an echo chamber. There is epistemic inoculation, counter-explanation for all arguments members might expect from non-partisans, and there is a great disparity of trust between community members and non-members. It seems to me this is all possible within secular liberal communities as well. We are exposed to more diverse sources of information, yes; but *more* information does not secure unbiased uptake of information. Epistemic inoculation and counter-explanations are offered in secular communities, too: we immediately dismiss young earth creationism, and all arguments for such a view. We epistemically inoculate university students with the *bad arguments* they will hear in favour of socially conservative political policy. When I hear a person advocating for conversion therapy, I immediately dismiss their arguments for *all* their views.

More than epistemic inoculation and counter-explanation, so-called manipulation of trust also occurs in virtually every epistemic community. More than this, it is hard to see how trust strategies in liberal epistemic communities differ significantly from those in echo chambers. We calibrate trust according to partisanship, not the relevance of an expert's qualifications, simply because we are not equipped for such assessments (Lewandowsky & Oberauer, 2016). In this way, it is unclear what Buchanan's claims (2004) about egalitarianism encouraging citizens to challenge the relevance of experts' qualifications could mean: we don't have the specialized

knowledge to perform such an evaluation, so we must adopt other strategies (Baurmann, 2007; Nguyen, 2018). More than this, an abundance of information available to us does not guarantee we acquire better beliefs. If we possess a robust worldview, we are psychologically prone to cling to it: beliefs bias the perception and interpretation of new information so we can make sense of evidence according to previously held beliefs (Connors & Halligan, 2015; see examples in Gilovich, 2008; Hastorf & Cantril, 1954; Jones & Russell, 1980; Lord et al., 1979; Vallone et al., 1985).

It seems there is at least some explanation missing as to why I am decidedly not in an echo chamber, or something very closely resembling an echo chamber. These challenges I raise are not intended to suggest Buchanan, Nguyen, and Worsnip are entirely mistaken in their proposed strategies for epistemic improvement. I only want to suggest that in academic writing on echo chambers and epistemic processes perpetuating problematic beliefs, there tends to be an assumption that liberal scholars cannot fall victim to these sorts of problematic epistemic structures. At the same time, it is not abundantly clear that those in secular liberal society are immune from echo chambers. In fact, there is reason to think belief reinforcement, belief acquisition, and attitudes of epistemic participation are much more similar across epistemic lines than we tend to think. This is the position I will take up in Chapter 4.

Chapter 4: Potential Doxastic Symmetry

4.1 Taking Symmetry Seriously I take doxastic warrant to be much more symmetrical across epistemic boundaries than academic discussions tend to assume. Much of the time, when analyzing the epistemic structures of communities, scholars tend to think members of liberal, secular society are subscribing to the *correct* epistemic authorities, whereas racists, fundamentalists, climate science denialists, etc. are terribly misinformed. In this way, these scholars would assert liberal, secular citizens are appropriately justified in their beliefs, and their socially problematic counterparts are not – or secular liberals, at the very least, have *better* doxastic justification for their beliefs than their counterparts. This assumption might be true, but in order to accept these assertions, we need more convincing evidence suggesting this is so. In the following pages, I will examine Worsnip, Nguyen, and Buchanan's accounts of the supposed asymmetrical nature of doxastic warrant. Even though all three of these accounts contribute valuable points to general discussions of structural epistemic mechanisms, each evaluation falls short in substantiating claims about the epistemic superiority of secular liberal society.

Since the psychological and cognitive mechanisms underpinning belief acquisition and belief persistence are largely inaccessible, and since these mechanisms are influenced by a number of social factors beyond an epistemic agent's control, individualistic accounts of doxastic asymmetry are problematic. Individuals do not have the specialized knowledge to evaluate community experts and will accordingly calibrate trust according to partisanship – this occurs regardless of epistemic affiliation. These are good reasons to think Worsnip and Nguyen's endorsement of individualistic strategies for escaping epistemic circumstances will not be effective, as I discussed in Chapter 3. More than this, though, these individualistic accounts do

not leave much explanatory room for grounding claims that secular liberals are decidedly epistemically better off than their socially problematic counterparts. At the individual level, the mechanisms through which fundamentalists (and members of other socially problematic groups) calibrate trust and evaluate incoming belief relevant information are the same as those of the secular liberal. Individuals are radically epistemically dependant on others for information and acquire beliefs according to psychological mechanisms beyond conscious awareness – and since partisan affiliation strengthens as life experiences confirm existing trust structures, it seems average members of fundamentalist communities have good reasons to believe the propositions liberals label *problematic*.

Buchanan recognizes our extreme epistemic dependence and (correctly) insists the remedy for the inculcation of false beliefs must account for the social nature of belief acquisition and consider the role of the epistemic institutions in our communities. There is still a problem with his analysis, however. Buchanan's claims insisting liberal epistemic structures are *obviously superior* fall short in two ways. First, although he frames his solution as purely social, he is still overly optimistic about the individual's ability to evaluate their epistemic circumstances. A significant portion of Buchanan's argument rests on the idea that liberal societies allow for transparency of expert's qualifications and individual empowerment of citizens to challenge authority, and thus engage in epistemic activities. As I highlighted in Chapter 3, much of the psychological and epistemic analysis suggests individuals are rarely able to evaluate expert qualifications, and therefore have little at their epistemic disposal to challenge expert testimony, as Buchanan insists is necessary. Second, Buchanan consistently assumes the types of epistemic accountability and deliberation present in liberal society are not found in socially problematic communities – this dismissal is much too quick.

The academic framing of issues surrounding epistemic mechanisms associated with problematic belief formation has largely overestimated the epistemic position of secular liberals and underestimated the sophistication of socially problematic communities' epistemic activities. If we take seriously the implications of epistemic dependency and the psychology of belief acquisition, we will see our secular, liberal attitude of superiority is not obviously substantiated by the evidence. Much of the academic discussion focuses on the problematic epistemic practices occurring in echo chambers, while ignoring the fact that similar epistemic mechanisms operate in secular, liberal communities. Either echo chambers are far more common than scholars like Nguyen tend to think, or we must allow for the possibility that individuals in socially problematic communities can operate in epistemically reasonable ways. The conversation tends to ignore the potential for analogous epistemic structures between liberal and problematic groups. Additionally, scholars often overinflate the disanalogies between problematic communities and secular liberal society. Before we reach any conclusions about epistemic superiority and insist secular liberals are epistemically *best off*, we must seriously consider the argument for a potential doxastic symmetry.

4.2 (Individualistic) Doxastic Symmetry Both Nguyen and Worsnip recognize the risks of our extreme epistemic dependency, however both accounts fall short due to their individualistic approaches. Recall, Nguyen suggests escape from an echo chamber requires reconsideration of *all* beliefs. In order for an individual to acquire a more accurate worldview, they must acquire beliefs according to a more commutative evidence set. Although this solution seems infeasible, Nguyen hopes to demonstrate the power of an echo chamber's hold on the credentialing beliefs of its members. Nguyen makes many insightful claims about how epistemic structures prohibit efficient and responsible individual epistemic engagement – all of his concrete

examples, however, point to socially problematic groups. Nguyen's account does not suggest it is impossible for echo chambers to form in secular society, but (in the tone of liberal academia) his account seems to point the finger at socially problematic groups without the recognition that many of the epistemic mechanisms at work within echo chambers bear a resemblance to liberal epistemic practice. The missing piece of Nguyen's argument then, is an explanation of what distinguishes a secular liberal individual from a member of an echo chamber – or explicit consideration that we academics might, in fact, be stuck in an echo chamber ourselves (although it does not seem Nguyen is willing to suggest echo chambers are commonplace in secular society).

A different problem arises in Worsnip's analysis. Recall, he suggests diverse sources of information will lead to a robust evidence set, allowing individuals to come to better, less biased beliefs. The methodology here seems promising: intuitively, we might think diversification of our available information would provide us with appropriate evidence, and therefore, through examination of the evidence, we would come to better beliefs. The problem here is that partisan epistemology, encouraged by psychological mechanisms of trust calibration and belief acquisition, tends to prevent these supposed robust evidence sets and unbiased beliefs from developing. Even if diverse information is available to me, since I reason according to my existing beliefs and defer to sources I take to be trustworthy, I do not have a good reason to investigate information I believe to be faulty. Both of these accounts suggest individualistic options are available to combat the problematic beliefs perpetuated in epistemic isolation (when they are not), and fail to acknowledge that equally justified doxastic warrant *could* develop between individuals in problematic groups and members of secular society.

First, let us consider how *individual* doxastic symmetry might develop. Recall from Chapter 2, we have good reason to think the psychological and cognitive mechanisms behind belief acquisition occur beyond our conscious awareness. Even though epistemic ideals might require evidence commutativity, it seems the psychological reality is that humans reason according to existing beliefs. Intuitively, we avoid uncertainty: we defer to our existing worldviews when presented with evidence that does not coincide with deep-seated beliefs, in order to escape cognitive dissonance (Connors & Halligan, 2015; Smith, 2016). More than this, the contemporary division of cognitive labour requires high levels of trust in order to gather belief-relevant information, and our trust mechanisms encourage us to defer to partisans. It seems to be the psychological reality that humans are equipped with a suite of cognitive and psychological mechanisms that direct us to trust partisans over outsiders.

This means the individual raised in secular, liberal society is no more aware of the coherency of her worldview, the objective grounding of her beliefs in evidence, the quality of expert testimony on which she relies, etc. than her socially problematic counterparts. Humans epistemically defer, regardless of social circumstances. Since we rely on others for belief acquisition, it is hard to see how individual epistemic strategies can defend against the inculcation of false beliefs. The fundamentalist, the racist, the climate science denialist, and the secular liberal all calibrate trust in others for belief-relevant information, are psychologically disposed to trust community members, and epistemically defer in order to acquire beliefs. For these reasons, it seems individuals have few tools at their disposal to improve their epistemic position. This means individual doxastic warrant across community boundaries could be symmetrical, at the individual level.

Although Nguyen's analysis of epistemic bubbles and echo chambers is the most intensive account available in the contemporary literature, he fails to address exactly how we can distinguish whether or not we (secular liberals) belong to an echo chamber. Individually, since we are so reliant on others for belief acquisition and since we do not have the specialized knowledge to assess incoming information from community experts, it is very difficult for a layperson to recognize *if* and *when* they are acquiring false beliefs. Recall, this is why echo chambers form and are so difficult to escape: Nguyen asserts echo chambers operate according to an explicit manipulation of trust. Consider some of the key features of echo chambers: active discrediting of alternative views, readily available counter explanations, credential isolation, disagreement reinforcement, epistemic inoculation, and clear resistance to evidence as a result of trust mechanisms at work.

Surely, the characteristics of echo chambers can inculcate false beliefs and encourage the perpetuation of falsehoods. Nguyen's careful analysis misses one important point, though: it seems many of these epistemic tools are at work in liberal society as well. In virtue of being a secular, liberal, politically left leaning academic, I am automatically a member of a certain epistemic community. In this community, I encounter constant reassurance of my worldview. Of course, this kind of epistemic overconfidence does not mean I am in an echo chamber, but instead might occur naturally due to my overt and inadvertent epistemic filters: my friends share similar political views, my social circle tends to epistemically defer to the same experts that I do, these people receive the latest news from the same sources I do, etc. Further, though, and inching closer toward echo chamber tendencies, in my epistemic community there are readily available counter-explanations both (i) discrediting non-partisans and (ii) amplifying the credentials of members.

Consider the hostility with which I meet anti-feminist sentiment in conservative Christian circles. Many conservative evangelical sects of Christianity suggest due to both biological differences and God's ordination, men are more suited to leadership roles and women are suited for supportive roles and child-rearing. There are many available counter-explanations available to me in dismissing these claims. First, I have many reasons to think those advocating such a view are not credible. I know feminist philosophers of science have found significant methodological problems in sociobiology and evolutionary psychology, so I do not trust the supposed *biological science* on which these arguments rely (Fehr, 2011). I know conservative Christian groups are often hostile towards other scientific theories, such as climate change, so I infer this group could rely on faulty evidence more generally. More than this, I can construct a historical narrative in which the development of the church relies on patriarchy and violence to control vulnerable groups (women and others), giving me a reason to think sexism is a consistent pattern in the church, especially right-wing affiliated evangelicalism, and therefore another reason to think these groups believe many falsehoods about the nature of sex and gender.

Second, in my epistemic community, I have many readily available counter-explanations that effectively inflate the credibility of partisans. I do not trust conservative evangelical anti-feminist narratives because (in my view) they do not come from credible sources. Things such as university degrees, scientific research, and academic contributions in feminist philosophy and gender studies are trustworthy markers of expertise/competence for me. Where socially conservative evangelicals might dismiss university education as *liberal indoctrination* and gender studies and feminism as simple *deviation from the natural order*, I take these methods to be essential for knowledge production. The words *feminism*, *liberalism*, *evolution*, *global*

warming, etc. carry a different connotation for the secular member of society compared to the fundamentalist or conservative evangelical.

This shows us how social environments can shape our conception of credibility: religious doctrine and scripture do not have substantial evidential weight for me, but in fundamentalist communities, these things are given top priority. This is not how I typically think of my community members versus fundamentalists, though. When I hear conservative evangelical narratives about God's ordained natural order, elevating men as superior in intellect and leadership skills – appealing to scripture and supposed biological differences manifesting in God's creation of humanity, etc. – I dismiss these ideas because my epistemic community is more reliable. The *evidence* used in these arguments gives me a good reason to think my epistemic community is more reliable: this is because *we* make use of the *correct* types of evidence, where fundamentalists are mistaken (or so my reasoning goes).

In secular, liberal communities we also see instances of credential isolation, disagreement reinforcement, and epistemic inoculation. Recall, credential isolation occurs in an echo chamber when members are “actively alienated from usual sources of contrary argument” (Nguyen, 2018). In my epistemic community, I am constantly alienated from sources of contrary argument. It seems these efforts are often active, even if they are the result of epistemic litmus testing or other epistemic strategies for acquiring information. These strategies *effectively* teach me to isolate myself from contrary sources of argument. If I hear arguments in favour of sexual orientation conversion therapy, I take this as an *epistemic reason* to unsubscribe from these sources of information. This combines with a version of disagreement reinforcement to further affirm my confidence in my epistemic community's superiority. Granted, disagreement reinforcement in secular liberal society seems weaker than the extreme case of the

fundamentalists' confidence that *the mere existence of external challenges* function as confirmatory evidence. However, similar to the fundamentalist, liberals often view external challenges as an indication they are in a superior epistemic position. Consider movements aiming to disrupt capitalist structures – progressive protesters met with extreme hostility from corporate industries take the mere existence of these challenges to further confirm the importance of their cause, for example.

Credential isolation and disagreement reinforcement, then, are tools we use to epistemically inoculate members of society. Recall my example from Chapter 3: we (as instructors) inoculate university students in our classrooms. We provide good reasons contra movements like climate change denialism and give our students basic arguments as to why these denialists should not be taken seriously, effectively isolating the credentials of our group. This seems very similar to instances of credential isolation in socially problematic echo chambers. We suggest denialist arguments are riddled with argumentative gaps and motivated reasoning (as if we are immune). We suggest climate science denialism is a politicized tool through which candidates can appeal to powerful corporations to fund campaigns, implying the existence of these arguments demonstrates non-partisans are fundamentally opposed to liberal ideas and scientific investigation. Using polarizing language to cast the motivated reasoning of climate science denialists in a negative light suggests we (as liberals) should dig in our heels to counter these dangerous ideas. When we suggest non-partisans are opposed to liberalism and science, we provide (supposed) good reasons to think we are decidedly correct about these issues – a sort of disagreement reinforcement mechanism. Conveying all these arguments to our students, we inoculate them against other epistemic communities. In effect, we teach them strategies to (i) avoid counter argumentation, and (ii) reason in ways that are secular, liberal friendly.

Here, it might seem Worsnip's argument in favour of evidence diversification is extremely important in combating the epistemic mechanisms of echo chambers. Although this approach seems promising, it encounters a serious problem after considering individual capacity to evaluate evidence in the first place. Recall from Chapter 2, our epistemic circumstances have a domineering command on our ability to evaluate incoming information. Since the sheer volume of belief relevant information available to us is so great, we must make use of some social, psychological, and epistemic strategies to navigate the world. We do not have the time or resources, as individuals, to evaluate each source of incoming information. So, we possess psychological mechanisms to calibrate trust, we situate ourselves socially in epistemic networks in order to receive the information relevant to us, and therefore our epistemic circumstances become a filter on the beliefs we acquire. We do not have good reason to think we can overcome our epistemic circumstances as individuals.

The hyper-specialization of our world makes it extremely difficult to evaluate incoming information, and this is why we must trust each other in belief acquisition. The trust structures that emerge seem to encourage partisanship since (individually) we are wildly underprepared to navigate the world. Individuals do not have the expertise to evaluate credentials or the institutions which place experts in their epistemic position. I do not *only* put my trust in expert testimony on climate change, for example, I also put my trust in a vast network of research standards, university requirements, academic publishing guidelines, media outlets reporting this information, etc. I am in no way qualified to comment on the effectiveness of these standards, and moreover, even if there is relevant information available to me on these credentialing mechanisms, I do not have the time or resources to conduct an investigation. It is this individual

limitation that requires such radical epistemic dependence in the first place. More information available does not seem to mitigate these effects of epistemic dependence.

If I have a robust set of beliefs and I seek out evidence contra my worldview, and I make use of the epistemic strategies available to me as an individual, it is highly unlikely I will see any value in this supposed diversification process. As an individual, the best I can do is defer to the experts and community members I trust, critically reason according to my already established beliefs, and greet this supposed counterevidence cognitively equipped to reason in motivated ways.

4.3 Individual Epistemic Responsibility As I discuss in Chapter 2, it seems psychological and social restraints on belief acquisition are unvaried across social circumstance. Both the secular liberal and the isolated fundamentalist acquire beliefs according to trust and are almost never able to reason critically about their own worldview (at least not with any objectivity). Still, focusing so heavily on the psychological restrictions might suggest secular liberals, although equally burdened by the psychological limitations, are still *epistemically* better off than socially problematic groups. Perhaps secular liberal communities tend to produce more epistemically responsible individuals – immediate observations might suggest secular liberals, in virtue of having access to more diverse evidence sources and more perceived emphasis on open-mindedness and critical thinking, make it more likely that individuals will act in epistemically responsible ways.

Accounts of epistemic responsibility tend to assert epistemic agents must *act* in responsible ways. Since beliefs are not under our direct control, an account of the ethics of belief must account for the involuntary nature of belief acquisition. This is why *epistemically responsible agents* must act in ways conducive to appropriate belief acquisition. This means

epistemically responsible agents must (i) *reason properly* about the evidence in their possession and moreover, (ii) *acquire that evidence properly* (Kornblith, 1999). *Reasoning properly* about beliefs has secured the attention of many scholars – epistemologists of every stripe will recognize that egregious deductive and inductive mistakes can result in unwarranted beliefs. If I affirm the consequent – incorrectly deduce “P” from the premises “ $P \rightarrow Q$ ” and “Q” – I am epistemically at fault for my inappropriate reasoning.

Appropriate *acquisition* of evidence is relevant to an individual’s beliefs as well, though. So epistemically responsible agents will need to *act* in responsible ways in order to best situate themselves to acquire the best evidence (and subsequently, acquire the best beliefs). Accounts of epistemic responsibility, then, will offer an idea of what these responsible behaviours look like. At the very least, individuals will desire true beliefs, and allow this desire to influence their actions. Different academic accounts of epistemic responsibility will characterize *epistemically responsible behaviour* in different ways. For example, virtue epistemology orients epistemic practice around idealized epistemic virtues, and suggests we should strive to act according to these epistemic standards (see Heersmink, 2018). Other academics working in epistemic responsibility, especially feminist epistemologists working in topics of epistemic injustice, suggest our epistemic behaviour should be analyzed as inextricably connected to our moral behaviour (see Fricker, 2007; Medina, 2013). More traditional accounts of epistemic responsibility focus on the overt epistemic control we can exert through behaviour, such as seeking out reliable methods for knowledge acquisition (see Ichikawa & Steup, 2001).

Although these diverse accounts of epistemic responsibility ground our epistemic obligations (as individuals) in different ways, they tend to converge on many aspects of what it means to act epistemically responsibly. Widely accepted principles of epistemic responsibility

address evidence responsiveness, critical evidence evaluation, and diverse intellectual engagement. As these principles suggest, individuals should be responsive to evidence, as blatantly ignoring new, belief relevant information is epistemically irresponsible. We also tend to think individuals should be intellectually careful and thorough, since blindly following authority can lead to the inculcation of false beliefs. Moreover, individuals should be intellectually tenacious, since individuals who think carefully and work to pursue understanding will be more likely to avoid faulty reasoning. Additionally, individuals should be open minded and should be willing to consider alternative views (perhaps in order to be more evidence responsive), because more robust evidence sets will lead to better beliefs. Individuals should work to engage and educate themselves on relevant others in their proximity in order to reduce the perpetuation of harmful beliefs about different groups. These behaviours highlight some of the core commitments of theories of epistemic responsibility. Individual epistemic agents should make every effort to consume evidence in *proper* ways, critically evaluate incoming information, respond to evidence appropriately, and consider alternative views.

With these sorts of principles in mind, academic discussions of socially problematic beliefs might recognize some degree of psychological symmetry between the belief acquisition processes of liberals and isolated groups, and still deny any symmetry in individual doxastic warrant. We tend to think liberal society meets these epistemic standards better than isolated, socially problematic groups. Even if the psychological and social factors mitigating belief acquisition cause the same problems in every type of epistemic community, some might suggest secular liberals are still better off in virtue of secular, liberal *epistemic* practice. I strongly oppose this view, at the individual level. There is good reason to think there is an individual *epistemic* symmetry between socially problematic groups and secular liberal communities on top of the

psychological and cognitive symmetry of belief acquisition processes. In the following sections, I will examine Michael Baurmann's work in the epistemology of fundamentalist communities and Regina Rini's consideration of epistemic reasons in favour of partisan epistemology to show how epistemic symmetry might emerge between individuals in liberal communities and individuals in isolated problematic groups.

4.3.1 The Epistemic Legitimacy of Fundamentalist Communities Here, it is helpful to consider the epistemology of fundamentalist groups to highlight how individual doxastic symmetry might emerge. We have reasons to think epistemic methods of belief acquisition in liberal, academic communities – methods we typically think distinguish us (liberal academics) from epistemic groups like fundamentalists, or climate science denialists – may also be at work in communities espousing socially problematic beliefs. Michael Baurmann, a contemporary philosopher, examines the social processes of belief acquisition across different epistemic groups. His investigation suggests, epistemologically, fundamentalists and secular liberals defer and acquire beliefs in very similar ways. This might superficially seem to be a contentious claim: how can we consider such epistemically different groups to be equally justified in their belief acquisition? If we seriously consider the implications of the social nature of epistemology and the mechanisms (both psychological and epistemic) working to reinforce partisan epistemology, it becomes harder and harder to distinguish the secular liberal individual from her fundamentalist counterparts in doxastic warrant. The relevant epistemic considerations and psychological factors at play, suggesting belief acquisition is largely subconscious, and highly dependent on epistemic environment, suggest it is possible the fundamentalist and secular liberal are equally justified in their beliefs.

Baurmann's account defends the fundamentalist in her belief acquisition, despite belonging to a potentially unreasonable group. It is easy to criticize fundamentalism as such ideologies are often quite extreme, but such beliefs may "emerge as a result of individual rational adaptation to the context of special living conditions" (Baurmann, 2008, p. 46). A fundamentalist community and a secular group will *both* have a system for dividing up epistemic labour. The more the workload is divided up, the better and more reliable the information becomes. However, this division also results in a greater level of trust in testimony. We saw this in section 3.1: cognitive division of labour betters our collective information, but it comes at the cost of more trust in other citizens. Since this is the case, as long as individuals have good reason to trust their social counterparts, "individuals could be epistemically perfectly rational in a social system of abundant irrationality" (Baurmann, 2008, p. 47). Wrong insights do not have to indicate irrational behavior.

4.3.2 Science Baurmann highlights what secular individuals typically take to be a sound form of knowledge acquisition: public trust in science. It is important to consider the epistemic chains of trust that allow scientific researchers to effectively transmit information to the rest of us. Members of secular society (generally) give credence to science as an institution that reliably delivers information to laypersons. Within the scientific community, experts are allowed to dissent, hypotheses must line up to a high standard, and controversy is checked by the media/*normal* people to prevent *false prophets*. Science operates in a social setting where questionable claims from the experts are "systematically contested and scrutinized" by dissenting experts (Baurmann, 2008, p. 48). The controversies are reported and discussed by all sorts of individuals. All of the information presented influences the members of the larger social group and prevents them from trusting one-sided accounts. This system is not reliable due to *individual*

epistemic exercise, though. Recall, individuals are not qualified to accurately assess specialized knowledge claims. The social systems in place are supposed to provide enough checks and balances to deliver reliable information. Of course, this means individual epistemic strategies are dependent on the epistemic environment (Baurmann, 2008, p. 48).

Fundamentalists communities may operate according to a similar sort of epistemic exercise. For the ordinary fundamentalist (that is, not a pastor or theologian), when it comes to matters of spiritual and metaphysical reality, this knowledge is acquired from others. It is a subscription to an epistemic authority which allows this knowledge transmission to take place, just like scientific knowledge transmission in secular society. It is often suggested that average members of fundamentalist communities are brainwashed and indoctrinated through fear: this is a common misconception. Of course, it is important to differentiate between paternalistic indoctrination and legitimate belief acquisition processes. For clarity, Baurmann labels the different authorities on which fundamentalists rely for their knowledge acquisition as either *paternal* or *expert*. A paternal authority is one that relies on a power dynamic and the average member's fear of the consequences of disobedience. If God is at the same time a father who knows best, wants best, and makes decisions for you, but offers a threat of eternal condemnation for slip ups, this relationship borders on ownership and relies on fear transferring into obedience (Baurmann, 2008, p. 50). Baurmann discharges such reliance as an illegitimate form of belief acquisition.

Fear mongering that leads to blind obedience is obviously not analogous to what is happening outside fundamentalism: being bullied into a set of beliefs is not going to result in the sort of collective accountability we see in secular research communities, for example. Non-fundamentalists rely on expert authorities to deliver information. These authorities are trusted

members of the community with a certain set of qualifications. Expert authorities know better, are benevolent, and are qualified in this way to make decisions for others (Baurmann, 2008, p. 50). This type of belief acquisition *does* happen in fundamentalist communities, likely in a very similar fashion to secular individuals acquiring insight according to scientific authority in academia, or more general public trust in science which is common in secular society. The fundamentalist, like the liberal academic, relies on her community for information about the world. When the community functions on the assumption that outsiders are to be mistrusted, and the community keeps authorities accountable to the (community acknowledged) epistemic standard, individual fundamentalists arrive at their beliefs in perfectly justifiable ways.

Consider the process in liberal and open society outside fundamentalist communities: scientists present theories, and we (those who are not experts) discuss and deliberate while coming to terms with the claims. Then, we proceed to gauge the theory's plausibility: the less plausible, the more evidence we need in order to accept such a postulation. In fundamentalist communities, trusted community experts – typically pastors and theologians – present theories, and those who are not experts come to terms with the claims, gauging plausibility and considering the implications. In both of these cases, the experts in the epistemic community provide explanations that connect their theories to average members' previous experience, allowing the general public to bridge the gap between old and new information. As we saw previously, social mechanisms allow humans to effectively bolster existing beliefs and dismiss challenges. Experts aid us in this process. In the same way a fundamentalist will bolster beliefs about the age of the earth in appeals to scripture and appeals to experts in their community, the secular non-fundamentalist appeals to their analogous evidence and experts, although arriving at different conclusions. Virtually every aspect of reasonable epistemic practice is unavoidably

connected to trust in testimony. The social and psychological factors that build our epistemic chains of trust are remarkably unvaried across social circumstance – and yet, they give rise to very different sets of beliefs.

Perhaps an objection to this line of reasoning would point out fundamentalist authorities tend to be ideological, so we cannot hold them up to systematic scrutiny and a collective “yardstick of common sense,” as we can with scientific authorities (Baurmann, 2008, p. 51). This might have some intuitive appeal, but members of secular society adopt beliefs according to ideological authorities as well – sometimes these ideological authorities even come from the scientific research community. Humans assess ideological experts according to their position in society, their credentials, their competence, and their personal characteristics (Baurmann, 2008). For example, if ideological authorities have a high status in the social hierarchy, are successful economically, are charismatic, and are perceived to be particularly skilled, then we are psychologically more likely to think “these facts are indirect indicators that their ideology, their ideas and world views may also have substance and validity as they seemingly provide useful and effective guidance in life” (Baurmann, 2008, p. 53).

Humans assess expert competence in ways that are in no way related to specialized evaluation of the actual tasks at hand. Humans are cognitively equipped to be epistemically vigilant, but assessments of trustworthiness and competence stems from perceived benevolence, as Baurmann suggests (see Mercier & Sperber, 2011; Petty & Wegener, 1998). A layperson cannot evaluate the quality of scientific research. If average members of epistemic communities were expected to evaluate expert’s claims, we would all need specialized knowledge in a vast number of fields. This is simply impossible. This is why we have a scientific community, a peer review process, and public avenues to widely share information. Further, this is why

fundamentalist communities have benevolent theologians (or experts in the hermeneutics of scripture), who reliably report God’s divine instructions for productive endeavours on earth. Since *individuals* do not possess the specialized knowledge to evaluate experts’ claims, we evaluate these experts in the most reliable ways available to us. This is why Baurmann’s account is so insightful. In epistemic communities, average members do not have the expertise to access *fundamental truths* – be they theological or scientific – but we do have assigned experts to deliver this information to us. If everything in our epistemic environment indicates *our* experts are *more trustworthy, more benevolent*, and have access to the *proper evidence*, then our doxastic warrant seems justified. A symmetry emerges here, though. The fundamentalist and the secular liberal both meet these requirements.

4.4 Partisanship is in Our Epistemic Best Interest Much of the above discussion of individualistic tendencies to trust partisans and our lack of capacity to extract ourselves from existing beliefs to *objectively evaluate evidence* makes it seem as if humans are simply irresponsible in reasoning and epistemic strategy. In my previous examples, it seems the most important factor playing a role in my evaluation of incoming belief relevant information is partisanship. It seems I take conservative evangelicals, or fundamentalists, or climate science denialists to be decidedly mistaken on moral, political, or other normative issues because they do not share my worldview – psychologically *and* epistemically, I defer to partisans. The fact that an epistemic group is anti-feminist, or blatantly sexist, or resistant to clear scientific evidence works to secure my confidence in my own epistemic community, thanks to the epistemic mechanisms in place.

Of course, there are many psychological reasons as to why partisans heavily influence knowledge acquisition, substantially discussed in Chapter 2. *Highly rational* consideration of the

objective facts is simply not how humans reason about evidence, and this is certainly not a primary method through which humans acquire beliefs. When acquiring beliefs, humans are cognitively prepared to defer to members of their own group and protect existing belief structures. Many social factors direct belief acquisition, and epistemic communities require high levels of trust in order for experts to effectively communicate information. Even from a purely epistemic point of view, however, it is not surprising that epistemic agents elevate the testimony of partisans. Moreover, this does not make us epistemically irresponsible. With Regina Rini's analysis, I want to highlight that partisan epistemology is not unreasonable or irrational as some epistemological accounts might suggest (2017).

Rini sketches a realistic picture of individual epistemic practice, taking into account the epistemic factors that encourage us to reason along partisan lines. Rini argues that when it comes to politically relevant claims, it makes the most sense for an individual epistemic agent to align with fellow partisans (Rini, 2017). *Partisan affiliation* itself is meant to embody an individual's value commitments. Of course, not all groups are monolithic entities lacking diversity, but generally, sharing a partisan affiliation means sharing some significant number of normative values. When I share partisan affiliation with another person, I know she and I coincide on (at least some) normative claims. In this case, as Rini puts it, from where I'm standing, "she *tends to get normative questions right*" (2017, p. 51).

Extending this trust beyond normative claims might seem suspect. However, this extension is likely the result of a series of epistemic principles we take to be important. Epistemically speaking, we tend to assert individuals should only trust *reliable* sources for information. On the one hand, individuals are committed to believing that those with whom they share a worldview are reliable (if I didn't think this group was reliable, why would I continue my

membership?). This automatically elevates the epistemic position of my partisans, in my eyes, making them seem more reliable across the board. So Rini's claim that "it is sometimes reasonable to be differentially receptive to normative testimony from others, depending on their partisan affiliation" extends even further (2017, p. 50). People have good epistemic reason to trust their partisans on normative and descriptive claims, over non-partisans. It also happens to be the case that humans are very good at this. Thanks to the psychological mechanisms in place, human reasoning – especially when it comes to belief acquisition and belief persistence – seems to seamlessly complement partisan epistemology. More than this, though, preserving mechanisms that elevate partisan testimony and undermine the accounts of non-partisans is in our epistemic best interest. If we know non-partisans are mistaken, and at the same time we want reliable information, why should we consider a non-partisan's conflicting beliefs in the first place, let alone take them seriously?

This highlights why epistemically isolated communities are not being unreasonable when it comes to inconsistent uptake of scientific testimony. As secular liberals, we tend to think we are epistemically *better* because we defer to science *as a whole*, whereas fundamentalists might accept medical science and reject scientific accounts suggesting the earth is 4.5 billion years old. We take this to be blatant inconsistency, and inconsistency is epistemically irresponsible. This is not a straightforward case of a fundamentalist asserting P and $\neg P$, though. The fundamentalist is not conveniently picking and choosing her epistemic sources – she is instead, being a responsible epistemic agent and critically evaluating incoming information according to what she already knows. When scientific testimony conflicts with higher order evidence, she has reasons to think the scientists are mistaken. As I point out in Chapter 2, as secular, liberal individuals, we would do the same thing if presented with strange scientific findings. I am unlikely to believe the world

is five minutes old without substantial motivation beyond mere scientific testimony – this is just the psychological reality of belief acquisition. In this way, the fundamentalist is not *stupid* or *epistemically incompetent*, she just lacks additional tangible reasoning to think scientific accounts of the age of the earth are plausible.

4.5 We Need Different Approach As individuals, we are bound by many psychological, cognitive, social, and circumstantial factors in belief acquisition. In this way it seems improvement in epistemic environments and combating socially problematic beliefs will not be achieved by improving individual epistemic practice. It is overly demanding to suggest individual fundamentalists need to overcome their sexist, homophobic, unscientific, etc. beliefs through diversification of evidence and reconsideration of their worldview via commutative evidence. Moreover, it is problematic to suggest the devious mechanisms of echo chambers are not at work in secular, liberal communities. All I wish to say here, is that academic assumptions about the epistemic superiority of individual members of secular liberal communities needs more explanation. Consideration of the individual mechanisms of epistemic deference and belief acquisition suggest we are all extremely dependent on others for information, and individual epistemic position is radically contingent. If secular liberals are, in fact, epistemically superior to their isolated problematic counterparts, I doubt this is due to some asymmetry of individual epistemic practice.

The discussion above is not to suggest the psychological, social, and epistemic factors influencing belief acquisition leave us without strategies for sound epistemic practice. It seems to be the case that humans are psychologically prone to reason in motivated ways, defer to partisans, resist evidence, fail to seriously engage with alternative views, in addition to a host of other epistemic sins, making us prone to mistakes in *individual* epistemic activities. This does

not mean we should not work to better our individual epistemic practice, it just means significant epistemic improvements are not likely to come from improved individual epistemic practice alone. Instead, accounts of epistemic responsibility must take into account the notoriously problematic human psychology of the situation and shift attention to social mechanisms that can lend themselves to better collective knowledge acquisition.

4.6 (Social) Doxastic Symmetry Baurmann's account above gives a good account of how *individual* and *social* doxastic symmetry come apart. The individual fundamentalist seems equally justified in her beliefs as her secular counterpart, but we can still point to shortcomings in her epistemic environment. Social approaches to this problem will aim at improving the epistemic position of community members, making it more likely they are able to acquire true beliefs, and further, better individual practices *within proper social structures* could be a promising method in searching for a solution. It is not the aim of this project to cash out the details of a social solution to problematic beliefs. Instead, here I will highlight – similarly to individual discussions of doxastic warrant – how academic discussions of problematic beliefs tend to underestimate the social epistemology of these communities.

This is Buchanan's shortcoming. He explicitly draws an epistemic asymmetry between socially problematic groups, or echo chambers, and communities possessing liberal institutions. Although all communities will inculcate *some* false beliefs, liberal society will *best situate* epistemic agents to acquire true beliefs, so his argument goes. Buchanan happily recognizes our epistemic dependence on others, and the resultant high levels of trust we see in society. He also does not deny that individuals in isolated epistemic communities will be dependent on others for belief relevant information, and therefore recognizes that trust plays a large role in belief acquisition across epistemic boundaries. For Buchanan, the key difference lies in liberal

institutions' capacity to effectively establish a *true social epistemology*. Where isolated problematic groups rely on experts who are not properly qualified, and individuals find themselves in a power imbalance which prevents them from participating in knowledge production, liberal institutions ensure egalitarianism and objective qualifications encourage a spirit of epistemic participation.

Buchanan seems to think secular liberal structures guarantee an epistemic asymmetry between liberals and socially problematic groups. Although this is possible, I want to suggest this is not immediately obvious. It is certainly possible that secular liberal structures can better ensure epistemic position of community members, but Buchanan dismisses the possibility that socially problematic groups can operate in socially epistemically sound ways. Since individuals are highly dependent on others for information, we should not be surprised that there are similarities in *individual* epistemic strategies and belief acquisition across epistemic boundaries. However, we also have good reason to think it is (at the very least) possible that socially problematic communities' institutions function similarly to liberal institutions. Again, my intention in this analysis is not to dismantle Buchanan's approach, since attempts at combating socially problematic beliefs must account for our individual limitations, and on this front Buchanan does a good job. Instead, I hope to highlight how academic conversations might be overestimating the epistemic position of secular, liberal society, or underestimating the capacity of socially problematic groups to function reasonably in their socially epistemic practices.

Let us remind ourselves of Buchanan's key characteristics of liberal institutions. Liberal societies will (i) allow for the freedom of thought, conscience, expression, association, and citizens will have an equal opportunity to participate in the democratic process. Liberal societies will (ii) appoint experts according to merit based, objectively grounded qualifications. And

liberal societies will (iii) function according to a broad attitude of moral egalitarianism. These three characteristics work together to effectively keep knowledge production efficient and accurate, according to Buchanan. Community experts must possess a set of qualifications *objectively related* to the topics on which they report. For Buchanan, individual mechanisms of epistemic responsibility are what keep the social system functioning properly. He suggests access to methods through which individuals can evaluate the credentials of experts providing testimony, and individual epistemic confidence acquired through attitudes of egalitarianism will prevent unwarranted epistemic trust. Although Buchanan's account is sensitive to our psychological limitations in many ways, and claims to be social in nature, much of his account is individualistic. What Buchanan fails to address is the possibility of similar *social structures* emerging in socially problematic groups.

As we saw implicitly in Baurmann's account in Section 4.3, it is possible that fundamentalists do divide up epistemic labour. There are clear social structures of experts transmitting information to average members of the community, and these experts are qualified in meaningful ways. In secular society, experts are recognized as experts in virtue of their credentials. For example, we expect our medical doctors to have completed medical school, and scientific researchers to have university degrees and their research to have undergone peer-review. Medical school and peer-review are *credentialing mechanisms* – hoops through which we expect our experts to jump in order to ensure our experts are, in fact, qualified. More than this, we trust experts in secular society according to a host of social reasons: personal characteristics, a certain level of social standing, and general recognition amongst other experts are all indicators our medical doctors or researchers are trustworthy. Epistemically isolated groups, like fundamentalists, also divide the cognitive labour according to credentials. Group

leaders have formal training in hermeneutics of scripture, indicating they are competent in reporting on God's intentions for earthly conduct. Leaders will also display competence in other areas, allowing members to reasonably trust them. Social markers of success can indicate some given ideology is plausible. Although hermeneutics, general competence, and social standing seem epistemically unrelated to matters of fundamentalist expert testimony to those of us in secular society, these types of credentialing mechanisms are present in virtually all epistemic communities.

Since experts are often ideological, the appointment of experts in epistemically isolated communities might seem less objective than those in secular society. However, liberal society appoints and defers to ideological experts via the same assessment structures (i.e. social and psychological mechanisms). Buchanan explicitly asserts liberal institutions prevent non merit considerations from influencing the appointment of experts, and therefore the allocation of epistemic deference. However, this claim seems to lack explanation. If secular society has any sort of ideological expert, we will assess them according to tangible credentials – namely, social standing, personal characteristics, and general competence. Buchanan insists the difference is that institutionally, we (liberals) prevent non-merit considerations from playing a role in expert appointment since our institutions have high standards for demarcating experts. In this way, Buchanan fails to account for the existence of credentialing structures in socially problematic communities.

In advocating for liberal institutions this way, it seems Buchanan wants to capture situations where fundamentalist leaders, for example, provide so-called expert testimony on everything from gender issues, to the metaphysical weight of Jesus' crucifixion, to the age of the earth. Surely, there is not an objective qualification connecting a theological expert in an isolated

religious community to their testimony that the earth is 6,000 years old. The epistemic weight of theological evidence in this religious community, though, likely takes priority over the testimony of evolutionary biologists. So, from within this religious community, average members are reasonably deferring to the expert who reports according to the *correct evidence* – the expert who is qualified in the study of doctrine and scripture.

Credentialing mechanisms allow for some sort of social division of cognitive labour in problematic communities. Buchanan's claims that social epistemology does not develop in these groups seems unsubstantiated. Although, it is likely the case that wider trust networks and more inclusive communities will better situate epistemic agents, it requires more attention in academic discussions of epistemic structures. Socially problematic communities do divide up cognitive labour and defer to experts according to social structures in place, as we do in secular society. Experts in fundamentalist communities can be charismatic figures who are "socially, economically and politically successful," these individuals "may rise to the top of the societal hierarchy," they often have "a high standard of education and professionalism (there are theologians, engineers, doctors and physicists among them)," and they often demonstrate "exceptional abilities as social leaders and mediators" (Baurmann, 2008, p. 53). The critical examination of these processes must consider credential mechanisms and the weight they carry across epistemic circumstance. It seems unlikely that a fundamentalist would be able to accept claims about sexual orientation and gender identity from a sociologist or gender studies professor – these credentials hold no weight. Instead, fundamentalists defer to community experts with credentials they recognize: (i) expertise in theological study, and (ii) the social and psychological mechanisms which demarcate trustworthiness. Accessing this impasse in a constructive way is what is necessary for approaching divisive issues across epistemic boundaries.

4.5 Overestimation of Asymmetry The philosophers discussed in this chapter suggest the psychology and social mechanisms to which we are bound do indeed indicate individual epistemic agents are highly dependent on their communities for beliefs. If we cannot avoid motivated reasoning about counterevidence and if we are highly skilled at bolstering our existing views, then it seems individuals are unable to significantly improve their epistemic environments. The proposed solution by some philosophers is, therefore, some sort of social approach – individuals cannot reliably reason about incoming information, so we need some kind of institutional improvements to the epistemic environment in order to better our epistemic position. These philosophers tend to conclude secular scientific approaches leave epistemic groups in the best possible epistemic position. Therefore, the secular, typically liberal, scientifically-minded groups are *in fact* in the best epistemic positions – meaning the fundamentalists, the conspiracy theorists, the racists, etc. are still worse off epistemically than the enlightened, scientifically-minded folk. This is where my position diverges, if only slightly. In academic discussions of epistemic structures allowing for the development of socially problematic beliefs, we cannot take secular, liberal epistemic superiority for granted.

Concluding Thoughts

While I emphasize the importance of carefully evaluating the justification of socially problematic beliefs, and I suggest we must consider the possibility of symmetrical doxastic warrant, I am not advocating we embrace a sort of epistemic skepticism. Instead, I am suggesting the existing literature is overconfident in secular liberal epistemic superiority. It is very plausible secular liberal epistemology is definitively better than that of socially problematic communities. We have good reason to think the quality of an individual's beliefs is largely dependent on their epistemic environment, so it must also be the case that certain epistemic communities better situate their members to acquire true beliefs. This is why Buchanan's approach to socially problematic beliefs is so promising. However, if there is a problem with belief acquisition mechanisms, we have good reason to think individuals can do little *acting alone* to correct these missteps. This is why Buchanan's account does not provide appropriate methods for combating epistemic vulnerability. If we insist individuals have the specialized knowledge and other epistemic resources to accurately evaluate the relevance of community expert's qualifications to maintain high levels of accountability, we are simply mistaken. In order to substantiate claims about the epistemic superiority of liberal society, we need to point to indicators that are tangibly available to citizens.

Since individuals are so dependent on others for belief-relevant information and have little ability to assess incoming belief-relevant information, individual scrutiny of testimony is not the answer. More than this, individuals do not seem to have the capacity to accurately evaluate the specialization of experts, meaning Buchanan's criteria for individual investigation of expert qualifications is also misguided. When a social group displays clear resistance to

evidence, perhaps the result of manipulated trust leading to misplaced epistemic deference, and bias and motivated reasoning so heavily filter the information consumed by community members that belief change seems nearly impossible, the individuals caught up in this environment have little at their disposal to help them see why specific beliefs are problematic. Suggesting individuals need to act alone to combat their epistemic vulnerability is too much epistemic load to place on individuals. Instead, we need reliable mechanisms through which individuals can accurately identify the quality of the socially epistemic structures delivering beliefs within their communities.

Although the aim of this thesis is not to provide a thorough answer on this front, we can reasonably infer a solution will require more tangibly available strategies for individuals to evaluate the quality of their epistemic environment. Individual investigation is not a tangible method for evaluating information. Dialogic contexts, though, might provide a promising area for further investigation. As Hugo Mercier and Dan Sperber point out in their research, humans reason best in dialogic contexts (2011). When humans evaluate arguments for/against a certain view, we reliably perform evaluations and form beliefs soundly. Humans reason best when there is an opportunity to collectively evaluate arguments. Group settings remarkably improve reasoning outcomes: for example, in studies where individuals fail to come up with the correct answers to basic logic problems, groups of individuals consistently reach an accurate consensus (Laughlin et al., 2002). This might be an indication that better beliefs will form in environments conducive to genuine engagement in dialogic form. Properly identifying those epistemic communities possessing dialogic opportunity and those that do not, is something individuals could use as an indicator of their epistemic condition. This means the philosophical literature discussing avenues for accurate evaluation of one's epistemic environment must point to tangibly

identifiable characteristics indicating an epistemic community delivers beliefs according to dialogic mechanisms. These characteristics might include availability of diverse *argumentation* for/against certain views, and more inclusive structures (since dialogic engagement will not discriminate based on previously held views).

This, of course, does not lead to overwhelming optimism regarding individual epistemic position. More study is needed in establishing claims of secular liberal society's epistemic superiority. Additionally, it is important to recognize that individuals espousing socially problematic beliefs have claims to (sometimes perfectly reasonable) doxastic justification. This recognition is especially important in academic discussions. The racist, fundamentalist, climate science denier, and Trump voter have good reasons to maintain their existing beliefs – and so do we. The epistemology, existing trust structures, extreme dependence on fellow community members, and psychological mechanisms of belief persistence allow individuals to dismiss challenges to existing beliefs. More than this, secular, liberal, politically left-leaning, academics base beliefs according to the same structures. So, if we are assuming secular liberals are justified in their beliefs according to better psychological basing or better reasons cited in favour of belief, we are mistaken. This is why academic discussions must better account for the potential emergence of doxastic symmetry. Most importantly, we need tangible and realistic epistemic indicators to allow individuals to demarcate between problematic epistemic structures and those which are most conducive to maximizing truth and minimizing the inculcation of falsehood.

Further research investigating our epistemic environments is extremely important. An underlying aim of my investigation concerning doxastic warrant is to lay some of the theoretical groundwork required to approach an atmosphere conducive to more meaningful academic discourse and to aid in bridging harmful ideological gaps between members (and epistemic

groups) of society. Knowledge is a social enterprise, and like the fundamentalist, I am radically dependent on my social counterparts for belief-relevant information. I acquire beliefs according to a set of psychological mechanisms, heavily influenced by partisanship, which heavily affect my reasons-giving processes for justifying belief. Automatically assuming I am in an epistemically superior position compared to my socially problematic counterparts, is – you guessed it – problematic.

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