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UNIVERSITY OF CALIFORNIA,
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On (Mal) Functioning Belief Systems

DISSERTATION

submitted in partial satisfaction of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

in Philosophy

by

Rena Beatrice Goldstein

Dissertation Committee:
Professor Annalisa Coliva, Co-Chair
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2022

DEDICATION

To

my Vava and Papoo, Carol and Silvy Alcalay
and
my Safta and Saba, Gay and Robert Goldstein

for your unconditional love,
continual support,
and for connecting me to my Sephardic and Ashkenazi roots,
a heritage that guides my path
and connects me to a world beyond myself.

*Dear Great Creator,
you take care of the quality,
and I'll take care of the quantity.*

Julia Cameron
The Artist Way

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ABSTRACT OF THE DISSERTATION

On (Mal) Functioning Belief Systems

by

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Doctor of Philosophy in Philosophy

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This dissertation explores, broadly, how warranted processes of reasoning can prove adequate in one context but inadequate in another. Some environments, like the medical field and education, are particularly ripe with epistemic interactions where harms can occur from warranted reasoning processes. In the first chapter, I coin the concept “epistemic disadvantage” to capture contexts in which there is epistemic harm due to the asymmetrical relationship between knowers, yet that asymmetry is pertinent to the practice of knowledge. Cases of epistemic disadvantage occur in environments where access to alternative explanations or better evidential reasoning may be unavailable. In the second and third chapters, I begin to conceptualize how epistemic disadvantage is prompted by proper evidential reasons. In other words, when a knower commits an epistemic disadvantage against another, the lines of reasoning are those that, under conditions where harm does not occur, would be warranted. It is only in environments where such lines of reasoning do cause harm that we question its warrant.

Chapter two employs epistemic frameworks theorized by W.V. Quine and Ludwig Wittgenstein to describe how beliefs systematically interact with each other. Comparisons have been made between Quine and Wittgenstein, often with an emphasis on the (1) analytic/synthetic distinction, (2) propositions that can be known *a priori* or *a posteriori*, (3) mathematical and logical necessity, and (4) naturalism. This dissertation compares the epistemological claims of Quine and Wittgenstein, specifically related to how each conceptualizes the system of beliefs. I argue both frameworks support a version of confirmation holism—the view that justification for empirical beliefs entails appreciation of the full system of beliefs.

In chapter three, a Wittgensteinian framework is used to highlight the fact that stereotypes play a normative role in cognitive processes. In order to advance this argument, I develop an analogy between stereotypes and epistemic hinges that are needed for evidential significance. This reference to hinge epistemology explains how, in the good case of stereotyping, we use the stereotype to form expectations that guide our actions and choices in a profitable way; in the bad case, stereotype function analogously to hinges—instead of as an empirical generalization—such that even if there are good empirical reasons to abandon the stereotype, it is nonetheless kept in place. With this framework, we are in a better position to appreciate an epistemic problem of stereotyping, namely that it is difficult to determine whether a stereotype is playing the role of an empirical generalization or when it only *appears as such*.

INTRODUCTION

This dissertation explores, broadly, how warranted processes of reasoning can prove adequate in one context but inadequate in another. Some environments, like the medical field or education, are particularly ripe with epistemic interactions where harms can occur from warranted reasoning processes. In the first chapter, I coined the concept “epistemic disadvantage” to capture contexts in which there is epistemic harm due to the asymmetrical relationship between knowers, yet that asymmetry is pertinent to the practice of knowledge. Cases of epistemic disadvantage occur in environments where access to alternative explanations or better evidential reasoning may be unavailable.

To exemplify the epistemic disadvantage, I probe a historical case in medical history (the “curare case”). Curare is a poison that causes paralysis (but not numbing). In the 1940’s, some physicians came under the mistaken impression that curare could induce an altered state of conscious awareness, such that patients would experience anesthetic-like properties. Some patients reported complete conscious awareness and pain. Physicians did not believe them. It was not until a physician was induced with curare and reported conscious awareness that physicians adjusted the anesthetic compound.

I argue that physicians may have had countermanding reasons to believe in the benefits of curare, such as an eagerness to avoid cyclopropane, a highly explosive gas used to anesthetize patients. Using curare also made it possible to paralyze the body, which in turn made it easier to manipulate the surgical field as there was no muscle tone. One benefit of this was that patients no longer had to be strapped to surgical beds. For these, and other reasons I discuss, the Curare Case is a case of epistemic disadvantage because the harm against patients was nondeliberate, lacked effective use of concepts, and the exclusion of patients in medical discourse was warranted. Yet still harm was done.

In the second and third chapters, I begin to conceptualize how epistemic disadvantage can be prompted by proper evidential reasons. In other words, when a speaker disadvantages a hearer, the lines of reasoning are useful in morally just (or neutral) conditions. It is only in environments

where a hearer is harmed that we question the line of reasoning. I locate a framework on which beliefs are described as an interconnected body. Such a framework can be useful for understanding how reasoning processes can be warranted in some contexts and not in others. The epistemic frameworks relevant for conceptualizing how beliefs function within a system are those proffered by W.V. Quine and Ludwig Wittgenstein.

Indeed, there are a few reasons to prefer Quine and Wittgenstein's pictures over other epistemic frameworks. First, both frameworks eschew hierarchies of beliefs, where each belief in the framework is reducible to something more fundamental. Instead, beliefs have non-hierarchical relations to one another (although Wittgenstein does have a more 'foundationalist' story to tell than Quine). This takes care of some problems that arise with reductionism and infinite regresses. Second, since beliefs have relations, there is not a strict difference between categories of beliefs. There are categories that beliefs can fit into, but the categories are loose and can change with context. This is helpful for when we think of counter instances that may suggest whatever the context is does not really fit into that specific category. These two frameworks can easily accommodate counter instances by falling back on the relations beliefs can have to one another.

In the second chapter of the dissertation, I compare a Quinian and Wittgensteinian epistemic framework. Comparisons have been made between Quine and Wittgenstein, often with an emphasis on the analytic/synthetic distinction, propositions that can be known *a priori* or *a posteriori*, mathematical and logical necessity, and naturalism, amongst other topics. Here I make comparisons between how Quine and Wittgenstein conceptualize the system of beliefs. This comparison has not been given much attention except perhaps by Pieranna Garavaso and, later, by Daniele Moyal-Sharrock in a response to Garavaso. Such a comparison attends to the epistemology of *On Certainty* as it compares to the epistemological claims "Two Dogmas of Empiricism". I draw attention to the emphasis Wittgenstein places on the *role* propositions play in the system, in contrast to Quine's emphasis on *location* of propositions in the system. The distinction between *role* and *location* signals, I argue, a difference in how these frameworks conceptualize the boundary between empirical and logical propositions. The boundary line between empirical and logical propositions is drawn on the justificatory status of propositions

within the system of beliefs. The justificatory status of propositions in the system of beliefs tells a story about how background beliefs can affect evidential reasoning. If it is the case that the justificatory status of propositions can shift in the system, then there is reason to believe that the same norm governing proper evidential reasoning can also govern improper evidential reasoning.

Stereotyping typifies an instance of evidential reasoning that can be warranted in one context and unwarranted in another. When stereotyping, one makes quick judgments about our environment. Stereotypes include phrases like ‘Asians are good at math’ or ‘Jews are frugal.’ Yet stereotypes also include things like ‘tables are solid’ and ‘dogs have four legs’. What makes both kinds of stereotypes is that they are both categorical statements generalizing some attribute to members of a group. The same cognitive process can be useful in domains like the physical domain. Yet it can be morally consequential in the social domain. What is unique about the social domain that makes our cognitive processes sometimes unreliable or even unwarranted?

Many scholars have approached versions of this question by considering the power structures inherent in the social domain. For instance, Patricia Hill Collins (1986) argued that some stereotypes function as disguised images controlling social-identity (Collins 1986, p. 17; cf. 2000, p. 27). Collins drew attention to negative stereotypes of Black women. Such negative stereotypes controlled the image of Black women in society. Similar to Collins’s work, Lorraine Code (1999) pulled into focus power and ideology at play in our rational processes. She characterized social stereotyping as dogmatic, and provides the example of ‘women’s acquiescence’ as a generalized stereotype. Because this stereotype exists within the framework women inhabit, they begin to see themselves as “voluntarily occupying their rightful place” (p. 199). Given Collins and Code’s account of stereotypes, it would be reasonable to think that we should find ways to eliminate (or radically alter) stereotyping as a cognitive heuristic. The difficulty with eliminating or radically altering this cognitive heuristic is that in some domains, stereotyping has useful functions.

Social stereotypes pose an interesting problem: sometimes they have useful consequences (i.e., fostering rational behavior), and sometimes they produce morally harmful consequences.

Sometimes we cannot help but use a stereotype because it is a legitimate empirical generalization.

In chapter 3, I defend an epistemically neutral view of social stereotypes, which is to say that falsity or lack of justification (i.e., an epistemic failure) cannot be essential to the concept of stereotype. When stereotypes are genuine empirical generalizations, they can be either confirmed or disconfirmed. Yet what is tricky about confirming or disconfirming stereotypes is that there are different rules for what can count as evidence. A helpful epistemological framework for studying rules of evidential significance can be located in hinge epistemology. Coined by Professor Annalisa Coliva, hinge epistemology was initially derived from Wittgenstein's *On Certainty*. There are a number of accounts of hinge epistemology offered today. A common thread amongst various accounts is the following. Hinges are most commonly understood to resemble ordinary empirical propositions but in fact play a normative role, in the sense that they play a foundation role in order to bring evidence—whatever the evidence may be—to bear onto the justification of empirical propositions. I apply a hinge framework to the concept of stereotyping in an effort to show that stereotypes play a normative role in cognitive processes. I suggest that stereotypes function as *hinges*, that is as a norm of evidential significance.

The chapters in this dissertation are separate in their content, yet combined begin to show a picture of belief systems in which processes like stereotyping are necessary for productive epistemic practices. I hope to advance the literature by distinguishing the routinized forms of biased cognitive processes, which can be useful to navigate a complex world, from those processes which can lead to an epistemic failure or moral harm. Future projects may suggest helpful ways for educating the good kind of biases, while weeding out the bad.

CHAPTER 1: Epistemic Disadvantage

Miranda Fricker's (2007) analysis of asymmetric epistemic relations described the unjust epistemic exclusion of marginalized persons in knowledge exchanges. Such harms are forms of epistemic injustice. Yet more attention could (and should) be given to the distinction between epistemic injustice and epistemic harm, and to different types of epistemic harms. For instance, there seem to be situations where it is appropriate for lay people to be excluded from certain epistemic practices in virtue of their lack of expertise (where exclusion includes lack of ability to participate). Such situations are indicative of unintentional harms that result from impoverished epistemic environments. Harms resulting from warranted asymmetric relations are not, by their nature, unjust. Consequently, it is wrong to label these kinds of harms as instances of injustice; such harms are better described as forms of, what I shall call, "epistemic disadvantage"—related to, but distinct from, Fricker's terminology.¹

This paper seeks to fill a gap in the epistemic injustice literature by elaborating on the concept of epistemic disadvantage, carving out a heretofore unidentified space in the epistemic harm literature. Epistemic disadvantage occurs when **non-deliberate, asymmetrical relations exclude person(s) from social participation, leading to an intellectual or moral harm**. In other words, epistemic disadvantage marks when a person or group is *warrantedly* excluded from knowledge exchanges, but the exclusion results in an intellectual or moral harm. Epistemic exclusion has previously been characterized as a transgression against knowers' ability to participate in epistemic exchanges.² I introduce an expanded definition of epistemic exclusion, characterizing epistemic exclusion as either a warranted or an unwarranted epistemic process, in which a knower (or group of knowers) are excluded from a knowledge practice. An *unwarranted epistemic exclusion* occurs when a knower (or group of knowers) is (are) unjustly kept out of knowledge exchanges relevant to understanding their social experience. Unjust epistemic

¹ Fricker (2007) distinguishes between injustice and hermeneutical disadvantage, but she does not give a precise definition of the latter.

² Kristie Dotson (2012), for instance, characterizes epistemic exclusion as "infringement on the epistemic agency of knowers that reduces [their] ability to participate in a given epistemic community" (24). Dotson's characterization involves the unwarranted compromising of epistemic agency, or the ability to utilize shared epistemic sources in order to participate in or revise knowledge production. Cf. Irene Omolola Adadevoh (2011) and Cynthia Townley (2003).

exclusions mark instances of *epistemic injustice*. A *warranted epistemic exclusion* occurs when a knower (or group of knowers) is (are) justifiably kept out of knowledge exchanges relevant to understanding their social experience. A knower's agency might be warrantedly curbed in contexts where knowledge-labor is asymmetrically distributed, like in environments where there are experts and non-expert. Just epistemic exclusions mark instances of *epistemic disadvantage*.

It is part of good epistemic practices to share epistemic resources. Yet both unwarranted and warranted exclusions can leave marginalized groups vulnerable to harm. For this reason, it is important to account for a wider range of epistemic harms than are currently described. Otherwise the concept of 'epistemic injustice' risks being overstretched, losing significance of what it points to. Furthermore, epistemic harms are largely subsumed by the category of epistemic injustice, but this category misses a class of harms that occur in warranted asymmetric epistemic relations. Warranted asymmetric relations can give rise to non-deliberate harms in unfortunate historical circumstances. To motivate my argument, I will analyze a historical example from medical history, which I call the "Curare Case." This is a case in which curare (a poison that causes muscle paralysis) was mistakenly believed by medical practitioners to be a numbing agent in the 1940's. Patients suffered from their physicians' grave misunderstanding of the relevant properties of curare. I will highlight the ways in which this case demonstrates both forms of testimonial and hermeneutical injustice as well as a form of epistemic disadvantage.

In Section I, I explain three forms of epistemic exclusions: hermeneutical marginalization, non-dominant hermeneutical marginalization, and epistemic isolation. It is worthwhile going over the different types of epistemic exclusion because whether an exclusion is warranted or unwarranted can help us to distinguish whether the harm is a form of epistemic injustice or epistemic disadvantage. In Section II, I present epistemic disadvantage in light of the third type of epistemic exclusion: epistemic isolation. In section III, I analyze the Curare Case, a token case of epistemic disadvantage. Then in section IV, I conclude.

Section I: Epistemic Exclusions

In this section, I suggest that testimonial and hermeneutical injustice are cases of harm that stem from unwarranted epistemic exclusions. Well-known are two forms of unwarranted epistemic exclusions: hermeneutical marginalization (à la Fricker 2007) and non-dominant hermeneutical

marginalization (à la Rebecca Mason 2011). A third form of unwarranted epistemic exclusion, ‘epistemic isolation,’ has been proposed by Havi Carel and Ian James Kidd (2014; 2017). In what follows, I argue that epistemic isolation has a dual nature: there are forms of epistemic isolation that are both warranted and unwarranted, which in part depends on the historical context. Harms that stem from warranted forms of epistemic isolation are cases of epistemic disadvantage. I begin by laying out each form of epistemic exclusion. Then I show that there are cases of harm from asymmetrical epistemic relationships that do not fall neatly into any of these categories.

To begin, *hermeneutical marginalization* occurs when there is a global lack of conceptual resources, and as such social groups do not have adequate resources to make sense of their experiences (Fricker 2007: 153). A distinguishing feature of hermeneutical marginalization is the global lack of conceptual resources, which indicates that neither the marginalized group nor the group with social power have the relevant concepts available.

Fricker draws on Carmita Wood’s experience to represent hermeneutical marginalization. Wood experienced subtle microaggressions, groping, and forcible kissing by a distinguished professor at her place of employment. From the incidents, she developed somatic pain and was forced to quit her job. Wood applied for unemployment stating that she left for “personal reasons” (Fricker 2007: 150). Her claim was denied, however, since the termination cause was not considered justifiable at the time (pre-1970’s). Wood’s marginalized status, as a woman in a 1960’s workplace, meant that she was unable to stop the practice as it was not considered poor behavior by the institution or by broader social norms. Her status excluded her from communicating with those with social power (her employer). Eventually, Wood shared her experience with other women, who also reported similar interactions, which led to speak-outs and later filled a conceptual gap as women gave name to these negative social experiences: ‘sexual harassment’.

When these experiences first occurred in the workplace, women lacked the conceptual framework to make sense of the harassment. They did not know harassment was systemic. Their exclusion was as much a result from the unavailability of the concept of ‘sexual harassment’ to *anyone in society at the time* as it was from their *marginalized status as ‘women’*.

Hermeneutical marginalization is an unwarranted epistemic exclusion. It occurs, in part, from beliefs on structural identity prejudice. Identity prejudice is formed on the basis of negative stereotypes. Negative stereotypes can include propositions such as ‘Women are emotional’; ‘Muslims are extremists’; ‘HIV is a homosexual disease’; ‘Black people are violent’. These negative stereotypes on social identity reside in the repository of unconscious scripts, images, or concepts collectively shared by society.³ Negative stereotypes prejudice listeners against speakers, preventing speakers from communicating knowledge. Negative stereotypes evolve into injustice when a speaker is not given due credibility, because she is unwarrantedly excluded from the exchange of knowledge.

Identity prejudice is never justified and ought not to inform whether non-dominant groups are included in knowledge exchanges. For this reason, identity prejudice gives rise to both testimonial injustice and hermeneutical injustice. Testimonial injustice occurs when a speaker’s credibility is considered deficient by a hearer in virtue of identity prejudice held by the hearer (Fricker 2007: 28). Hermeneutical injustice, on the other hand, occurs at a structural level, specifically when prejudice obscures an individual’s social experience from collective understanding (Fricker 2007: 155). When an area of one’s social experience is obscured from understanding, there is a gap: some concept is not available to make the experience understandable--this is what Camita Wood’s experience unfortunately describes. Gaps occur when social groups are unwarrantedly marginalized, since their experiences are not deemed authoritative. As such, social groups may be excluded from attempts at understanding negative social experiences. Thus, hermeneutical marginalization represents a type of epistemic exclusion that is never justified because it evolves from identity prejudice.

Similarly, *non-dominant hermeneutical marginalization* describes unwarranted epistemic exclusions. Non-dominant marginalization occurs when social groups are able to render their experiences intelligible, but their conceptual resources are not respected by the dominant group (Mason 2011: 298). Mason (2011) has argued that Fricker’s account of marginalization did not

³ For a detailed analysis of the injustices arising from negative stereotypes in the social imaginary, or unconscious repository, see Medina (2013).

acknowledge the knowledge capacities of marginalized groups, since Fricker failed to acknowledge the ability of non-dominant groups to make sense of their own experiences (p. 300).

Mason reinterpreted Wood's experience as a time when women were silenced by the dominant group (i.e., white men in 1960's workplace). It was in the dominant groups' interest to remain epistemically ignorant of their actions.⁴ Indeed, Mason argues that Wood's actions to seek out other women and voluntarily share her experiences of workplace mistreatment "betray Fricker's description of her as someone who failed to understand" (Mason 2011: 297). On Mason's interpretation, Wood had adequate resources. She could make sense of her social experience, but those resources were not respected by the dominant group. Non-dominant hermeneutical marginalization then also describes an unwarranted exclusion of credible testimonies on the basis of structural identity prejudice.⁵

Whether concepts are available can be contingent on historical circumstances. There can be contexts when concepts are unavailable to all members of society as well as contexts in which marginalized groups understand their own knowledge practices, while these practices remain unrealized to members of the dominant group. The relevant point is that both forms of marginalization describe unjust exclusions when some groups are excluded from processes that could help make their experiences understood. In the case of workplace harassment, Wood was denied credibility because she belonged to a socially powerless group (as a woman) in the workplace. Depending on what features of her case one highlights, different forms of exclusion emerge. The concept of sexual harassment was not available to society at large during the time Wood was employed. The society at large, then, suffered from hermeneutical marginalization. Yet one can interpret from Wood's position an ability to understand her social experience, lacking the standing to communicate her negative experiences. These are compatible

⁴ Charles Mills (1999) conceptualized a view of ignorance, which argues that ignorance is a cognitive dysfunction that distorts dominant groups' understanding (p. 18). A prominent form of epistemic ignorance is Mills' normative notion "white ignorance," an intentional, collective cognitive bias among white agents that causes false beliefs of other non-white groups (see Mills 2007). Examples of racially-based ignorant beliefs include the belief that whites and blacks had equal opportunities post-civil war (Mason 2011: 306), or that black Caribbean or Africans weren't soldiers in the British army during the Second World War—a fact that has been left out of most post-war films (Phillips & Phillips 1998: 5, as cited by Fricker 2016: 171).

⁵ Ultimately I disagree with Mason's critique of Fricker. Both hermeneutical and non-dominant hermeneutical marginalization are relevant to categorizing epistemic exclusionary practices.

interpretations, highlighting different phenomena. This method of teasing apart different phenomena in historical environments will be relevant to conceptualizing epistemic disadvantage, in particular to understanding forms of warranted and unwarranted exclusion in asymmetric epistemic relations.

Hermeneutical marginalization and non-dominant hermeneutical marginalization are exclusionary practices that occur on the basis of unwarranted beliefs about social identity. These exclusions are never justified, and they morally and epistemically harm both the listener and the speaker. The last form of epistemic exclusion we will discuss is *epistemic isolation*. Epistemic isolation describes when a person or group lacks the knowledge of, or means of access to, particular information. This form of exclusionary practice--unlike hermeneutical marginalization and non-dominant hermeneutical marginalization--can be either unwarranted or warranted, depending upon the circumstances.

I borrow the term ‘epistemic isolation’ from Carel and Kidd (2014; 2017), who locate forms of epistemic injustice in the medical field. They describe epistemic isolation as

situations where a person or group lacks the knowledge of, or means of access to, particular information; for instance, if they live within a politically repressive society *which forbids access to* the necessary sources of information in order to protect the government’s hegemony (for example, by blocking certain websites, outlawing certain literature, and so on). (2017: 183-4; my emphasis)

We can consider epistemic isolation as a coercive form of marginalization since, in the definition provided, persons are *forbidden* access to necessary sources of information. In other words, epistemic isolation describes when resources are coercively withheld from groups of potential knowers within a particular repressive society. For this reason, epistemic isolation can be one cause of a hermeneutical gap. According to Carel and Kidd (2014), epistemic isolation also points to when non-dominant resources are unjustifiably excluded. Non-dominant resources can include certain expressive styles, like emotional expressions of fear, sadness, anger, or intuition

about one's phenomenological experience. Such expressive styles are not generally considered rational evaluations of one's ailment by physicians in medical environments.

In addition, Carel and Kidd (2017) note that epistemic isolation "can take different forms, from physical exclusion to subtler forms of epistemic exclusion, such as the procedural insistence upon the employment of strenuous legal, medical, or academic terminologies and conventions" (p. 184). They assert that medical jargon, for example, excludes patients from engaging in the deliberative processes concerning their own diagnoses or treatment, since the medical field often relies on strenuous terminologies and conventions. And if the style of expression is not considered rational, then communication efforts to understand patient experience can be undermined (Carel and Kidd 2017: 184).

Carel and Kidd describe an unjustified form of epistemic isolation, a form that is coercive. By definition, then, epistemic isolation is unjustified and so is a form of epistemic injustice. But there ought to be a distinction between excluding groups on the basis of identity prejudice, or otherwise in an effort to maintain social power, and *warranted* exclusionary practices based on precise academic, medical, or legal knowledge. Conflating these two has the consequence of categorizing *expertise* as an unwarranted exclusionary practice.⁶ With expertise comes more precise category distinctions and a deeper knowledge of intricate processes. Generally speaking, a novice is not always in a position to evaluate the technical knowledge of experts, and that alone should not suggest an unjustified form of epistemic isolation.⁷ There are good reasons to exclude novices from some knowledge practices.

To be clear, epistemic isolation is unwarranted when a social group is denied access to information on the basis of an identity prejudice, such as when marginalized groups are kept out of universities (like when there are Jewish, or Black, or Asian quotas) or are segregated into poorly funded school districts. When a dominant group has a stake in maintaining social power by means of epistemic isolation, the exclusion is unwarranted. But there are also warranted forms

⁶ Following Goldman (2001), we can characterize an expert as one who can claim to have "superior quantity or level of knowledge in some domain and an ability to generate new knowledge in that domain" (p. 91).

⁷ To clarify, Goldman (2001: 90) suggests that novices tend to regard themselves as not being able to evaluate expert knowledge using his/her own opinion. To help novices, Goldman offers five strategies a novice can use to decide between two or more expert opinions.

of epistemic isolation, such as when individuals freely choose to forgo access to certain types of knowledge (e.g. choosing not to go to university, when university education is available at no cost). In these cases of voluntary epistemic exclusion, the exclusion is warranted. In cases of specialization, one must choose a focus in order to gain expertise, which is also a form of voluntary epistemic exclusion. Scientific fields are so specialized that it behooves one to rely on the knowledge-labor of others. For example, randomized controlled trials (RCTs) are an experimental design for causal inferences. They are meant to show the effect of treatment on a given population size with minimal error rate (Andreoletti and Teira 2017: 224).⁸ Often teams running RCTs require not only scientists to design the experiment, but technicians to run the equipment and statisticians to analyze data. Even though quantitative scientists undergo rigorous training in statistics, funding agencies usually encourage them to include a statistician on the team because statisticians have more experience and training analyzing data and serve to ensure that the data is sound. Due to the required years of rigorous training to analyze data, or produce sound experimental designs, it is difficult for someone without such training to both assess the experimental design or inferences drawn from it. Without training, one is justifiably excluded from related knowledge exchanges.

This is similar to justified epistemic exclusions in medicine, which relies on technical language to categorize illness. Medical expertise takes years to develop and a lack of expertise when diagnosing or suggesting treatment can cause serious harm. Medical decisions are arduous, require complex reasoning, and the ability to integrate nuanced features of a problem. Most patients do not have sufficient training to integrate nuanced medical information into observations of their own bodily experience. Moreover, most patients do not have the precise medical terminology to effectively communicate their experience. In this way, patients are isolated from medical decision-making processes. This isolation can be warranted when both parties agree to the distribution of knowledge-resources.

Specialized knowledge in any domain (be it in medicine or some other field) lends itself to the exclusion of some groups from deliberative participation. But that does not mean that the

⁸ For a discussion on the role of randomized controlled trials and mechanistic reasoning see Lijmer and Bossuyt (2009); for arguments on the ways diagnostic tests and procedures should be evaluated, see Kennedy (2016).

exclusion is wrong. Epistemic injustice describes wrongful exclusions, and any asymmetric relation that contains wrongful exclusions ought to be overturned--the asymmetric relation should be fixed so that the group initially kept from the knowledge exchange is admitted into the deliberative process. Warranted exclusion practices should mark those asymmetric relations that we value, like those between experts and laypeople, physicians and patients, parents and children, or teachers and students.

To summarize, the three ways in which groups can be excluded from knowledge exchanges are

Hermeneutical Marginalization (always unwarranted): social groups do not have adequate resources to make sense of their experiences, in which case the concept is not available to anyone in the society.

Non-Dominant Hermeneutical Marginalization (always unwarranted): social groups may have adequate resources (that is, their members can make sense of their experiences), but those resources are not respected by the dominant group.

Epistemic Isolation (can be either warranted or unwarranted): social groups lack the knowledge of, or means of access to, particular information.

Section II. Epistemic Disadvantage

In this section, I will develop the concept of epistemic disadvantage, which categorizes harms that result from such warranted exclusionary practices. As we discussed in the last section, at least one form of epistemic exclusions arises from the necessary distribution of knowledge-labor in complex epistemic environments. Epistemic isolation can imply the inability to understand or communicate using precision or mastery of certain terminology to effectively communicate one's experience. Although some exclusionary practices are warranted, there is still the risk of harm in any asymmetrical epistemic relationship. In asymmetrical relations between physicians and patients, for example, physicians can make wrong decisions that leave patients in serious pain, with lasting negative psycho-physiological effects.

Epistemic isolation, which results from an asymmetric relation, is part of the broader category of hermeneutical inequality. **Hermeneutical inequalities** are

non-deliberate, asymmetrical relations that either exclude one from social participation or obscure one's social experience from collective understanding.

Both epistemic injustice and epistemic disadvantage start from a hermeneutical inequality. On Fricker's (2007) view, a hermeneutical inequality becomes an "injustice only when some actual attempt at intelligibility is handicapped" (p. 160). That is, a hermeneutical injustice arises when it is "no accident" that a person's (or group) experience is not considered (Fricker 2007: 153). An injustice, then, is deliberate; injustice entails the deliberate exclusion of some groups from making their experience known. Epistemic injustice occurs when asymmetrical relations are deliberately maintained and marginalized groups are coercively excluded.

On the other hand, a hermeneutical inequality becomes an epistemic disadvantage when an attempt at intelligibility is handicapped by exclusionary practices that are merited, as opposed to deliberately and coercively maintained. Exclusionary practices can be meritorious when they follow from a just division of epistemic labor. It is not merited in the sense that one *deserves* to be in either the position of layperson or expert; it just so happens that we all have the possibility of ending up either in one or the other position at some time. When one is in a greater epistemic position, such that others rely on one for their knowledge or expertise, epistemic harm can occur against those who are not in an equal position. Recall that epistemic disadvantage occurs when **non-deliberate, asymmetrical relations exclude person(s) from social participation, which then leads to an intellectual or moral harm.** Epistemic disadvantage evolves from a hermeneutical inequality when a person or group without epistemic capability is harmed by one with greater epistemic advantage.

There are three key conditions that separate epistemic disadvantage from epistemic injustice. First, identity prejudice: epistemic injustice requires that one's experience is obscured on the basis of identity prejudice. Prejudice keeps some people from being heard when their testimony is not taken seriously (this is testimonial injustice). Sometimes testimony is ignored, not on the basis of identity prejudice, but because a speaker lacks precision or mastery of concepts.

Ignoring testimony on this basis is likely a case of epistemic disadvantage rather than a prototypical case of epistemic injustice.

The second is that epistemic disadvantage can be non-deliberate, even arising from circumstantial bad luck.⁹ Fricker gives the following example of hermeneutical disadvantage from the medical field. She writes,

If, for instance, someone has a medical condition affecting their social behavior at a historical moment at which that condition is still misunderstood and largely undiagnosed, then they may suffer a hermeneutical disadvantage that is, while collective, especially damaging to them in particular. They are unable to render their experiences intelligible by reference to the idea that they have a disorder, and so they are personally in the dark, and may also suffer seriously negative consequences from others' non-comprehension of their condition. But they are not subject to hermeneutical injustice; rather, theirs is a poignant case of circumstantial epistemic bad luck. (Fricker 2007: 152)

Fricker's focus is hermeneutical disadvantage, which highlights conceptual gaps in epistemic resources. I am expanding the concept of hermeneutical disadvantage to epistemic disadvantage by incorporating warranted exclusionary processes that keep one party from communicating their experience. A group with greater conceptual resources may have the concepts that a lesser conceptually resourced group lacks. Also, both groups may have the conceptual resources, but one group may lack the ability to effectively communicate their experience due to a lack of technical vocabulary.

Fricker asserts that hermeneutical disadvantage describes cases of "circumstantial epistemic bad luck" (2007: 152). I take it that the point of marking bad luck in epistemic environments is to

⁹ Dotson (2012) describes epistemic bad luck as having at least two features: (1) 'accidental or historically incidental' and (2) causing 'harm to knowers' (p. 38). There is a history of interlaying 'accident' with the concept of 'luck' (see for instance Unger 1968, Moriollo 1984, Harper 1996). But 'accident' is not an accurate description of Fricker's (2007) characterization of bad luck. Indeed, Fricker is explicit about the background view she takes on. She describes epistemic bad luck as the "epistemic counterpart to what Nagel (1979) calls 'circumstantial moral bad luck,' which is to say moral luck occurs when circumstances are beyond one's control (p. 25, as cited by Fricker 2007: 33). At present, I am not sure if anything hangs on this misunderstood conflation, and, for the purposes of this analysis, I must leave aside a more in-depth discussion of circumstantial epistemic bad luck.

note when an agent may not have direct access to the relevant concepts that can remove prejudice on judgments of credibility.¹⁰ At a general level, if one is in an environment where access to the relevant concepts are not available, the environment can be marked as circumstantial bad luck. The relevance of bad luck to epistemic disadvantage is that epistemic disadvantage picks out these environments in which one does not have access to the relevant concepts. Due to being in an environment where the relevant concepts are not available, the harm that arises can be said to be non-deliberate. In other words, epistemic disadvantage describes when social conditions lead to epistemic harm non-deliberately. The epistemic harm can be non-deliberate when, for instance, an agent (or group of agents) lacks access to the relevant conceptual resources to prevent bias from affecting judgments of credibility.

It is important to note that cases of epistemic injustice need not be deliberate. For example, one can downgrade the testimony of another due to implicit bias. This seems like a non-deliberate case of testimonial injustice. In addition, Carel and Kidd explicitly deny that the forms of epistemic injustice they identify are necessarily deliberate.¹¹ They write “we do not suggest that these strategies are systematically employed consciously or deliberately and certainly not with malice (although they may be)” (2014: 532). However, epistemic disadvantage ranges over particular cases in which there is no consciousness or deliberateness. Even though there can be testimonial injustice which is not deliberate, there cannot be epistemic disadvantage that is deliberate. The point I am trying to make is that we ought to reserve the concept of epistemic injustice for cases in which there is a kind of deliberateness. In epistemic environments where there is a hermeneutical gap, and epistemic resources are not forbidden, then I think it is prudent to refrain from describing the environment as necessarily prone to epistemic injustice, and instead use the concept of epistemic disadvantage to more precisely define what is at issue.

Clarifying the difference between epistemic disadvantage and epistemic injustice has the advantage of more precisely categorizing communicative exchanges. It can help with how to

¹⁰ Fricker (2007: 102) describes her account of luck as being a historical-constitutive form of bad epistemic and moral luck, which involves what reasons one can access--which affects what one does--and what reasons one can have--which affect who one is. Her concern is whether one can be culpable for failing to be testimonially virtuous if the requisite critical consciousness is unavailable. Ultimately, she argues a person cannot be blamed for failing to do something if one was not in a position to access the reason to do it (2007: 100-101), but such a person can be subject to moral negative reactive attitudes, specifically the ‘resentment of disappointment’ (2007: 104).

¹¹ My thanks to an anonymous reviewer for making this point.

assign blame or praise, and where to focus ameliorative attention. With the concept of epistemic disadvantage, then the concept of epistemic injustice can range over communicative exchanges that are actually unjust. Epistemic disadvantage, on the other hand, ranges over contexts with the following three conditions:

- (1) Harms are non-deliberate, arising in circumstances of bad luck.
- (2) Speakers lack precision or mastery of concepts to effectively communicate their experience.
- (3) Affected participants are justifiably excluded or subordinated from the practice that could make the concept known.

Section III. The Curare Case

To bolster my claim that epistemic disadvantage contains three such conditions, I will analyze the Curare Case. I first came across the Curare Case while reading Carel and Kidd's (2014) applied analysis of epistemic injustice in the medical field.¹² Carel and Kidd argue that patient testimony is sometimes assigned a deflated epistemic status by providers. As I explained before, they suggest that the medical field's insistence on procedures which heavily rely on arduous legal, medical, or academic terminologies exclude patients, or force them to adopt an epistemically marginal role in decision making during consultations (2014: 520). Thus, some of the experiences of patients are coextensive with testimonial and hermeneutical injustices. In accordance with their analysis, Carel and Kidd label the Curare Case as an example of epistemic injustice. In some respect, I think they are right: the case demonstrates testimonial injustice. But I do not think this is a case of hermeneutical injustice. Instead, the case exemplifies the three central conditions for epistemic disadvantage.

Curare is a poison that produces skeletal muscular relaxation but does not cause analgesia or alter consciousness awareness (Smith et al. 1947: 1). The first documented use of curare in anesthesia was reported in January 1942. By December 1942, anesthesiologists suggested the safe use of curare as an adjuvant with other anesthetic agents, specifically cyclopropane (Bennett

¹² There are other concrete examples of testimonial injustices in the medical field. For example, see Freeman (2015).

1968: 484-92).¹³ In 1944, two physicians observed (or thought they observed) the successful dosage of curare to induce general anesthesia (Whitacre and Fisher 1944; 1945)—from my reading of the reports, it seems at some point patients lost consciousness, or lost any *sign of* conscious activity (Whitacre and Fisher 1945: 126).

Some physicians began using curare with preanesthetic medication only, and, in some instances, it was used without additional medication, especially with infants and small children (Smith, et al. 1947: 1). At least one patient (52 years old and weighing 180 pounds) reportedly complained “of pain and discomfort, but after 1 hour, when 200mg. curare had been given, consciousness was lost” (Whitacre and Fisher 1945: 126; see also McIntyre 1947: 195). In *Brainstorms Philosophical Essays on Mind and Psychology*, Daniel Dennett (1981) reports that some patients told physicians about feeling pain during surgery, but physicians did not take their testimony seriously (p. 209). Dennett attributes the credibility gap to the fact that many patients who received curare without anesthetic were infants and small children. It was not until 1947, when Smith, et. al. (1947) reported a trained observer’s experience under curare (without added analgesics), that patient testimony was believed.¹⁴

Carel and Kidd (2014: 534) labelled the Curare Case as a case of epistemic injustice.¹⁵ To say that this is a case of epistemic injustice is to say that there is both a credibility deficit (testimonial injustice) and that a person’s experience is deliberately made unintelligible by an asymmetrical power dynamic (hermeneutical injustice). *Prima facie*, the Curare Case shows an instance of testimonial injustice. Physicians used curare on patients without analgesic compounds, some who were infants and small children. Post-operatively, if the patient had sufficient language development to complain of pain, their testimony was not believed. This was likely due to an identity prejudice against children. Children, like animals, are often believed incapable of

¹³ See also McIntyre (1947). McIntyre writes, “In the opinion of the author a combination of cyclopropane and curare most nearly approaches the ideal in anesthesia; this is particularly true when deep relaxation of muscles is essential” (p. 193).

¹⁴ Smith et. al. were concerned about whether curare has any central depressant or analgesic properties (p. 1). Thus, they did not perform surgery on the patient, but took the testimony of the patient after being induced with curare. The patient indicated that “he can hear, see, and feel touch and pain as well as ever” when induced with curare (1947: p. 5).

¹⁵ Carel and Kidd (2014) introduce this example, alongside eight others, as “some examples of testimonial and hermeneutic injustice” (p. 533). They do not, however, explain why each case is an instance of epistemic injustice. I am filling in the details.

rationality; they are thought to be too emotional or not fully developed in this capacity. Furthermore, Smith et. al. (1947) documented a trained observers' reaction to curare because they believed that "subjective reports with regard to pain by patients....are not entirely reliable" (p. 3). Their reasons for why patient testimony are not reliable include that "pain modality is variable from patient to patient" and "that emotional stress per se may produce analgesia" (1947: 3). Yet they do not reflect on the fact that these reasons should also apply to physicians as well. Like any other patient, physicians too, *qua* patients, can be vulnerable to "emotional stress" produced by analgesia, and pain described by a physician is just as variable as that described by a patient. But physicians are granted a higher credibility status; they are granted expertise of bodily experience. So, when a physician reports pain, their testimony is believed. The same status is not granted to patients; they are not experts of their bodies. But the credibility inflation with regards to bodily experience given to physicians is little more justified than the deflation given to patients and children.¹⁶

The patients in this case can be thus described as experiencing testimonial injustice. They were not taken seriously on the basis of their status as non-expert, non-rational ill persons and/or children; they were not taken seriously as experts of their bodily experience. In fact, physicians valued their own discipline's expert opinion higher than that of their pediatric patients.

There is a reading of this case in which patients may have suffered from hermeneutical injustice as well. Hermeneutical injustice would indicate that patients were excluded from knowledge exchanges with physicians about their medical experience, and patient experience was deliberately obscured from collective understanding. Patients were excluded from knowledge exchanges. It is possible that physicians also had reasons to obscure patients' experience from collective understanding. Patients likely had an understanding of their own bodily experience of pain, but those with social power (the physicians) did not listen. In other words, the patients' conceptual resources were not legitimized. Their marginalized status made them vulnerable to hermeneutical injustice. Indeed, the Curare Case could be read as a deliberate, unwarranted exclusion of patient testimony by physicians.

¹⁶ Studies, in fact, suggest that children can make epistemic and moral evaluations. See, for example, Koenig, Tiberius, and Hamlin (2019).

What would be the reasons for deliberately excluding patients? One reason might be that physicians adamantly wanted to believe curare was an anesthetic and not just a muscle relaxant. Curare was, in fact, an improvement to alternative anesthetics used at the time. Ether and cyclopropane were two common anesthetic agents, yet both had serious risks for patients and physicians: ether is flammable and requires a prolonged period of time to produce anesthesia; cyclopropane is highly explosive (it was later used as rocket fuel). Furthermore, these drugs put patients at risk of aspiration (inhaling your own vomit) and post-operative nausea and vomiting.¹⁷ Curare was said to be an improvement. Bennett (1968), a leading researcher on curare in the 1940s-60s, collected the testimonies of early workers on the usefulness of curare. Many physicians reported that curare minimized “post-operative shock and depression,” showed “fewer post-operative complications,” protected patients from “traumatic fracture,” reduced the danger of “laryngeal spasm” as well as “cardiac arrhythmia.”¹⁸ Curare, if truly an analgesic, would have a “revolutionary effect on the practice of anesthesiology” and on patient care (Bennett 1968: 448).¹⁹ To physicians in the 40’s, these reports presented good reason to believe their own discipline’s expert opinion rather than that of their pediatric patients. Trusting fellow experts had the unintended effect of obscuring patient experience.

There are, however, a few reasons why the Curare Case does not neatly fit into the category of hermeneutical injustice. First, physicians had good reason to believe the testimony of fellow experts and did so on the basis of improving patient experience post-operatively. Physicians, whose social status enabled them to make decisions on behalf of patients, thought they were acting in their patients’ best interest. Furthermore, there is not a clear lack of conceptual resources. Recall that hermeneutical injustice indicates when some social group is marginalized. Marginalization can lead to either a global lack of conceptual resources (hermeneutical marginalization) such that a concept may not be available to anyone in society, or to a local lack of conceptual resources (non-dominant hermeneutical marginalization) such that a concept is

¹⁷ The risk of ether and cyclopropane on patients came from a discussion with retired anesthesiologist Stephanie Walden, M.D.

¹⁸ Various testimonies as cited by Bennett (1968: 448).

¹⁹ These testimonies were, however, later proven wrong. Reports on the benefits of curare were so mistaken that one report even suggested that curare eliminated deep anesthesia without the risk of hypoxia (Griffith 1951, as cited by Bennett 1968: 488).

available to the marginalized group, but their conceptual resources are not respected by the dominant group. In the Curare Case, patients and physicians shared the concept of pain. It stretches the imagination to think that physicians did not acknowledge patients' reporting of pain. Instead it may have been the case that physicians did not attribute the pain patients felt to the lack of a numbing agent.²⁰

If a communicative exchange can reasonably be categorized as *only* an instance of testimonial injustice, then there should be some caution to describing the exchange as a full blown instance of epistemic injustice. Epistemic injustice categorizes more than just one type of unjust harm. Indeed it is a broad category covering a range of unjust harms. Therefore, for some communicative exchange to be categorized as an instance of epistemic injustice, it must satisfy more than one of the subconcept. Otherwise, we should more precisely refer to the instance as what it is: for example, as either an instance of testimonial injustice, hermeneutical injustice, or contributory injustice. If an exchange is characterized as more than one of these, then the exchange is an instance of epistemic injustice. Thus, some communicative exchange is epistemically unjust if it is an instance of more than one subconcept. If, however, a communicative exchange is describable as, let us say, *only* an instance of testimonial injustice, then it is not a full blown case of epistemic injustice (which again, captures the range of unjust harms). This is where epistemic disadvantage plays a role by more precisely categorizing the harm.

I introduced earlier the method of teasing apart different phenomena within historical environments in an effort to understand forms of warranted and unwarranted exclusion in asymmetric relations. This is relevant in the curare case, since, granting that the curare case is an instance of testimonial injustice but not hermeneutical injustice, it is sufficient to show that the curare case is not merely an instance of epistemic injustice. To make the case that the Curare Case is an instance of hermeneutical injustice requires stretching the concept beyond its proper scope. Epistemic disadvantage plays a better explanatory role.

²⁰ This analysis evolved from discussions with Annalisa Coliva. I am grateful for her insight.

III.1 The Curare Case and Epistemic Disadvantage

Recall that the first condition of epistemic disadvantage requires that

(1) Harms are non-deliberate, arising in circumstances of bad luck.

There are some features in the Curare Case which should not be considered deliberate. Although physicians were mistaken about the benefits of curare, and their mistake subjected patients to the torture of full surgical awareness, their actions were not to the benefit of the structural power relation between themselves and patients. Rather, their actions were to the benefit of patient experience post-operatively. In addition, part of their mistake in reasoning can be attributed to how blood pressure was monitored at the time. Blood pressure and heart rate both increase when in pain. In the 1940's, without the benefit of continuous EKG monitoring, intraoperative blood pressure and heart rate were monitored every 20-30 minutes, as opposed to every 3-5 minutes, which is the standard of care today (Pardo and Miller 2017).²¹ Without taking these vital signs, it was impossible for the evidence (high blood pressure equating to increased pain) to be properly evaluated by physicians. Given the standard of care at the time, physicians made a mistake. They did not realize patients were in pain. Their continued use of curare, and the subsequent harm arose accidentally. Patients were unfortunately treated in a time when blood pressure was not as closely monitored.

The second condition of epistemic disadvantage requires that

(2) Speakers lack precision or mastery of concepts to effectively communicate their experiences.

The second condition of epistemic disadvantage indicates when one party in the epistemic relation is without the proper tools to effectively communicate their experience. This is almost an inverse of hermeneutical marginalization and non-dominant hermeneutical marginalization. In the Curare Case, the group with social power (physicians) have the adequate resources, but the

²¹ My gratitude is again owed to Stephanie Walden, M.D., who gave me the idea that doctors may not have been checking blood pressure regularly to notice that patients were in pain.

marginalized social group (patients) do not. Indeed, the concept in question may be, in fact, *available* to all. As I said before, both medical practitioners and patients had the concept ‘pain’. Neither attributed the pain to the lack of anesthesia. Patients certainly did not know what caused the pain they felt, and they did not have the sophisticated academic or technical resources to demonstrate that their pain was caused by a drug that only paralyzed muscles. Patient use of the concept ‘pain’ was disregarded by their physicians for systemic reasons. But the gap here concerns the *use* of the concepts, not its paucity. Physicians’ misapplied the concept of pain. They associated patient testimony about pain with a belief that ‘pain modality is variable from patient to patient.’ Indeed, physicians attributed the complaints of pain to dissociation or ‘emotional stress’ after surgery. Their mistake caused grave harm to patients as well as to the advancement of medical knowledge, which is both regrettable and deeply unfortunate.

Patients lacked mastery of the necessary concepts to communicate their experience. In the Curare Case, the marginalized speakers (patients) lacked the concepts possessed by the experts (physicians), and therefore could not communicate effectively to experts about their own experience. Patients would not know what substance they were given for anesthetic, nor could they pinpoint that curare was the direct cause of their trauma during surgery. For the case to be purely an instance of hermeneutical injustice, it must be that a concept is not available to some group—as in the case of ‘sexual harassment,’ which was not available pre-1960’s.

Finally, the third condition of epistemic disadvantage requires that

(3) there is a gap in conceptual resources and affected participants are justifiably excluded or subordinated from the practice that could make the concept known.

Epistemic disadvantage arises because the resources required for understanding one’s social experience are not available to the marginalized group. They are epistemically isolated, such that there is a lack of knowledge, or means of access to particular information. In the Curare Case, patients did not have the adequate resources to evaluate the decision-making process of physicians. The patients were epistemically isolated. The isolation was, however, warranted on the basis that patient knowledge did not contain ongoing research in the medical field. Granted,

their testimonies about feeling pain was unwarrantedly excluded—in that sense, patients were subject to testimonial injustice. But in the sense that patients could not have known that curare was not a numbing agent, and that physicians were under the mistaken impression that it was, they suffered from epistemic disadvantage. Carel and Kidd (2014) rightly point out that the knowledge of expert-patients, those who are able to navigate the more technical areas of the medical field, is still on the outside. It is not traditional for expert-patients to be invited to participate in committees that make determinations about changes to procedures. In this way, patients are unjustifiably epistemically isolated. Carel and Kidd have made the case that medicine would benefit from the participation of (even non-expert) patients on committees (2014: 532). But in the Curare Case, it is not certain that including patients on a committee would have resolved the epistemic disadvantage. Committees still rely on research conducted by medical experts, and it was, in part, the research on curare that was flawed. This is why the case represents an instance of epistemic disadvantage. The harm resulted from a justified, asymmetrical epistemic relation. It is not clear, as the case stands, that adjusting the structure of the institution would have prevented the harm.

Conclusion

I hope to have shown that the Curare Case exemplifies three conditions of epistemic disadvantage. The Curare Case shows that the harm patients incurred was (in part) non-deliberate, and the result of warranted asymmetrical epistemic relations. Physicians did not properly monitor blood pressure at the time, and they had countermending reasons to believe that curare was revolutionary (e.g., that curare reduced post-operative complications like traumatic fractures). Moreover, patients have a marginalized status, but their marginalization is not explained by hermeneutical marginalization, non-dominant hermeneutical marginalization, or the unwarranted form of epistemic isolation. It is, however, explained by warranted epistemic isolation, that is when the group with social power has the adequate resources to understand the epistemic environment, but the marginalized group does not. In the Curare Case, physicians had the resources to understand both the concept of pain and the more technical association between muscle relaxants and anesthetics. Yet physicians made a faulty decision on behalf of patients,

which led to grave harm. This harm belongs to the category of epistemic disadvantage, not epistemic injustice.

I want to stress that the concept of epistemic disadvantage is not in some way in opposition to epistemic injustice. Rather, the concepts can be co-extensive, ranging over the same phenomena, yet highlighting different aspects. Epistemic disadvantage fills a critical gap in our understanding of epistemic harms. For if epistemic injustice is put at the service of categorizing as unjust harms arising from testimonial exchanges with experts, there is a risk of further damaging our trust in expertise. So, it is important to distinguish between injustice proper and instances of disadvantage in our testimonial exchanges.

CHAPTER 2: On the Interconnectedness of Beliefs

Comparing the Epistemological Frameworks of Quine and Wittgenstein

W.V. Quine (1951) and Ludwig Wittgenstein (1969) have been compared often with an emphasis on the analytic/synthetic distinction, propositions that can be known *a priori* or *a posteriori*, mathematical and logical necessity, and naturalism, amongst other topics (e.g., Putnam 1979 or Goldman 1999, 2002). This chapter compares how Quine and Wittgenstein conceptualize the system of beliefs. This comparison has not been given much attention except, perhaps, by Pieranna Garavaso (1998) and, later, by Daniele Moyal-Sharrock (2000). Such a comparison focuses deeper attention on the epistemology of *On Certainty* (henceforth OC) and to epistemological claims made by Quine in “Two Dogmas of Empiricism” (henceforth “TDE”).

Following the interpretations of Garavaso and Moyal-Sharrock, this chapter elucidates Quine and Wittgenstein holistic views. Both Quine and Wittgenstein described a belief system. The starting place will be to consider Quine’s chart of a system in which beliefs hang together by various “strands” (“TDE,” 43); and Wittgenstein’s alluding to a “system of propositions” (OC, 142). I conclude that both frameworks support a version of confirmation holism, or the view that justification for empirical beliefs entails appreciation of the full system of beliefs.

The interpretation of Quine’s and Wittgenstein’s frameworks supporting a version of confirmation holism squares with the burgeoning field of hinge epistemology, and adds to the field of hinge epistemology a compatible system in Quine’s epistemology. Finding a compatible system in Quine’s epistemology can add credence to claims made in the field of hinge epistemology, specifically with regards to the indubitable status of propositions.

One contrast I sketch is that, on Wittgenstein’s view, the justificatory status of an empirical or logical proposition can change; while for Quine, there is the possibility of changing the status of a proposition, but it is not a change in the justificatory status. Wittgenstein’s system allows for changes in justification: propositions can play at one time a rule-like role and at another time an empirical role. For Quine, the change of a proposition’s status refers to revising the proposition

(or not) in light of recalcitrant evidence. Quine and Wittgenstein have different views on whether the justificatory status of propositions change.

Exegetical commentators Garavaso and Moyal-Sharrock disagree on an interpretation of Wittgenstein's conception of the logical and empirical categories. Garavaso claims that the categories are distinct only by a matter of degree; whereas Moyal-Sharrock argues that the categories, though permeable, are in-kind distinct. Which interpretation is correct bears on whether either (or both) frameworks can accommodate changes to the justificatory status of propositions. A hinge framework could import either a change in the justificatory status (on the Wittgensteinian view) or a single justificatory status (along Quinian lines).

Section I demonstrates that both the Quinian and Wittgensteinian frameworks are compatible with regards to a holistic system of beliefs. In Section II, I contrast the way the frameworks characterize the effect of revising statements on the system. One reason for this difference has to do with where the boundary line is drawn between empirical and logical statements. On the Wittgensteinian framework, the justificatory status of both empirical and logical propositions can change; whereas for the Quinian system, there can be no change to the empirical justificatory status or the logical justificatory status. In Section III, I argue that this difference does not preclude their compatibility, for indeed both systems accommodate the verification of statements to some extent. Such accommodation permits a kind of permeability as it concerns the relationship between statements and those that are adduced from them.

Section I. Textual Evidence for a Holistic System of Beliefs

There are a number of similarities between Quine's and Wittgenstein's holistic views of a system of beliefs. We can observe first that both Quine and Wittgenstein visualize a system of beliefs.

When we first begin to believe anything, what we believe is not a single proposition, it is **a whole system of propositions.** (*OC*, 141, my emphasis)²²

²² Other passages in *OC* likewise suggest a system. Garavaso (1998) cites the following in tandem with this one: *OC* 142, 255, 410, 144 (p. 255).

The totality of our so-called knowledge or beliefs, from the most casual matters of geography and history to the profoundest laws of atomic physics or even of pure mathematics and logic, is a **man-made fabric which impinges on experience only along the edges**. (“TDE,” 39, my emphasis)

The notion of system plays centrally in Wittgenstein’s account. Beliefs are not independent. We do not ‘believe a single proposition.’ Rather, we believe a ‘system of propositions,’ wherein both ‘premises and consequences’ provide ‘mutual support’ to one another (*OC*, 142). Imagine, as Wittgenstein does (*OC*, 143), a friend telling you of a recent climbing trip at Mount Whitney. You would not ask your friend, “did the mountain exist before your trip?” The belief, ‘the mountain has existed before the trip’ does not even come up. It is embedded within the system, “swallowed down” (*OC*, 143) with other beliefs, beliefs like ‘my friend’s testimony is reliable.’

Quine, too, describes a belief system, a ‘fabric’, in which all beliefs, from ‘geography and history to physics, mathematics and logic,’ hang together by various “strands” (“TDE,” 43). Statements closer to the periphery of the system are closer to experiential perceptions, like statements about physical objects; while statements in the inner system, statements pertaining to analytic truths or logical laws, are more remote from experience. Inner and outer statements are logically connected: statements in the inner system, like logical laws, are “simply certain further statements of the system, certain further elements of the field” (“TDE,” 39). Statements about logical laws are merely ‘further’ from experience than statements about physical objects. Though some statements are closer to the periphery and others further away, they are nevertheless logically connected. For Quine, this is indicative of the way “re-evaluation of some statements entails re-evaluation of others” (“TDE,” 39). Statements interconnected in the system form a “corporate body,” where statements face the “tribunal of sense experience” not individually, but together (“TDE,” 39).

The metaphor of a corporate body is characteristic of Quine’s holism. Quine is a holist about beliefs. He holds that the truth of statements depends “upon language and upon extralinguistic fact” (“TDE,” 38). In other words, the meanings of words is a function of beliefs, and a function of the totalizing system of beliefs held by speakers. This is a version of a semantic holistic thesis,

which more generally states that meaning is bound up with the collection of inferential properties of an expression.²³

In addition to promoting a version of semantic holism about beliefs, Quine is also a holist with regards to justification: the total system of beliefs can justify any given proposition. This is a version of confirmation holism, the view is that when confirming or disconfirming a proposition, we bring the complete theory to the tribunal of experience (cf. Baghramian and Coliva, 2020).²⁴ In other words, theories are confirmed or disconfirmed as a whole.

Though Wittgenstein does not hold a form of semantic holism, it is less obvious whether he can be ascribed a form of confirmation holism.²⁵ Wittgenstein does not have in mind theories; in other words, he is not equating language, or more generally our epistemic practices, to a theory (let alone a scientific theory). But analogously neither Quine nor Wittgenstein think one can directly confirm or disconfirm an empirical belief based solely on the deliverances of the senses. Confirming or disconfirming empirical beliefs also depend, in part, on collateral assumptions. This could be considered a form of confirmation holism, since justification for the empirical beliefs entails appreciation of the full system.

It follows from Quine's version of semantic holism that to revise a belief, such as 'the earth is the center of the universe,' is to change the meaning of the word 'earth.' Indeed, revising a belief requires, in some sense, revising the total system--of which Quine makes sense of by appealing to unstable mental states, such as hallucination ("TDE," 40). As a holist (in both senses of the term) Quine must consider reevaluation of the theory in its entirety when confronted with a recalcitrant experience. Either some proposition must be mistaken within the theory, or else adjustment must be made to incorporate the recalcitrant experience.²⁶ Whatever is decided, there are consequences for the whole theory: the theory must be revised or abandoned. Although one

²³ For arguments regarding the semantic holist thesis, see Michael Devitt (1993) for a critique and Jane Heal (1994) for its defense.

²⁴ Some accounts of confirmation holism have synonymized it with evidential holism, verification holism or, broadly, referred to it as the Duhem-Quine or Quine-Duhem thesis. The version of confirmation holism I am putting forward does not intend to use these terms interchangeably, and there is good reason to think that the terms should not be so used interchangeably. See Morrison 2010

²⁵ Many thanks to Annalisa Coliva for pointing out this nuance in Wittgenstein's writings.

²⁶ A "recalcitrant experience" can urge "re-evaluations in various alternative quarters of the total system" ("TDE," 40).

can discount evidence as speaking against a theory, Quine would not draw a distinction, in principle, between what counts as the solid elements of the theory and what lies at the periphery.

However, both Quine and Wittgenstein distinguish between revising a statement and adjusting the total system of beliefs.

But I distinguish between the movement of the waters on the river-bed and the shift of the bed itself; though there is not a sharp division of the one from the other. (*OC*, 97)

...in the cases which we are now imagining, our natural tendency to disturb the total system as little as possible would lead us to focus our revisions upon these specific statements concerning brick houses or centaurs. (“TDE,” 41)

Wittgenstein distinguishes between the temporary status of propositions and those propositions that hold fast. The image of the riverbed signals the connection between propositions that hold fast and those that are in flux. In the face of a recalcitrant experience, the entire system does not necessarily need to be given up. Rather, the status of the proposition ‘may shift,’ leaving intact the system.²⁷ For example, the proposition ‘no one has been to the moon’ was certain for Wittgenstein, though it is no longer.

If we are thinking within our system, then it is certain that no one has ever been on the moon. Not merely is nothing of the sort ever seriously reported to us by reasonable people, but our whole system of physics forbids us to believe it. (*OC*, 108)

Of course today people have been to the moon. But we do not need to give up the whole system in the face of this recalcitrant belief. We need only revise that one proposition. The system itself remains intact.

Whereas for Quine, arguably, it follows from his holistic view that in the face of a recalcitrant belief the whole theory would need to be revised in its entirety. This sounds odd. It indicates a

²⁷ To be clear, “may shift” refers to the riverbed, therefore to the system, not to empirical propositions.

disconnect between Quine's holism and his statement that 'our natural tendency to disturb the system as little as possible leads us to focus revisions upon specific statements.' It seems like Quine is implying that new evidence can prompt revising statements within the system, and that revising a statement does not entail revising the total system of beliefs. Yet this cannot be what he means in light of his endorsement of confirmation holism.

Two remarks can be made in defense of Quine. The first is that it may be disalogous to compare Wittgenstein's and Quine's remarks with regard to their use of the word 'system.' Quine is concerned with theories, even more specifically with scientific theories. Whereas for Wittgenstein, hinges form systems,²⁸ grounding the meanings of words.²⁹ But it is not clear that the Wittgensteinian system is comparable to a theory. As a matter of fact, some of the examples Wittgenstein provides very clearly show that we can revise certain hinges without touching other ones. For instance,

After putting a book in a drawer, I assume it is there, unless...“Experience always proves me right. There is no well attested case of a book's (simply) disappearing.” It has *often* happened that a book has never turned up again, although we thought we knew for certain where it was.--But experience does really teach that a book, say, does not vanish away. (E.g. gradually evaporate.) But is it this experience with books etc. that leads us to assume that such a book has not vanished away? Well, suppose we were to find that under particular novel circumstances books did vanish away.--Shouldn't we alter our assumption? Can one give the lie to the effect of experience on our system of assumption? (*OC*, 134, emphasis in the original)

General experience has taught us that when one places a book in a drawer, shuts it, and walks away, that the book will not vanish. The hinge on the belief that 'the book will not vanish' is the principle that "what has always happened will happen again (or something like it)" (*OC*, 135). Suppose one finds, under 'particular novel circumstances,' that books do vanish away. It seems then we have reason to alter the principle, 'what has always happened will happen again (or

²⁸ "I am not more certain of the meaning of my words than I am of certain judgments. Can I doubt that this colour is called 'blue'?" (My) doubts form a system" (*OC*, 126).

²⁹ "If you are not certain of any fact, you cannot be certain of the meaning of your words either" (*OC*, 114).

something like it)', that was previously a hinge. Yet Wittgenstein is not implying that the hinge necessarily needs to be revised, but that for the particular circumstances under which a book, when placed in a drawer, disappears, then *that* principle is not applicable. The principle no longer functions as a hinge in the system of beliefs, as it were. It is now in flux.

Imaginably, for Quine, the experience of a book vanishing from a drawer would prompt reevaluation of the principle 'what has always happened will happen again (or something like it),' and that re-evaluation would prompt revision of other interconnected propositions, perhaps to the point where something like the theory of object permanence is given up. This seems to make sense when under consideration is a scientific theory. It seems less cogent when language is under examination. However, keeping the proper object under consideration, scientific theory or language, lends cogency to Quine's claims.

Secondly, in defense of Quine, a coherentist picture of justification can make sense of the apparent conflict between Quine's holism and his assertion that some statements can be revised without revising the whole system. Coherentists hold that belief(s) can be justifiably held if the belief(s) form a coherent system. Neurath's metaphor, that while afloat on a boat, one can replace a plank one at a time without sinking, suggests a holistic picture of the system of beliefs wherein statements can be revised without revising the total system. In light of this, the apparent conflict between Quine's endorsement of holism and the assertion in *TDE* fades away.³⁰

We can conclude that there are similarities between the Quinian and Wittgensteinian and those similarities relate to a holistic picture. The Quinian picture entails a version of semantic and confirmation holism—that is, a holism picture about beliefs and justification. The Wittgensteinian picture is compatible with a version of confirmation holism. This means that confirming or disconfirming beliefs in the system entails appreciation of the full system.

³⁰ There is room here to question whether this is consistent with a thoroughgoing confirmation holism, but I will leave this worry aside for now.

We can map a version of confirmation holism onto both frameworks. Indeed, both frameworks suggest that a statement cannot be confirmed or disconfirmed when assessed in isolation from a system of which it is part.

All testing, all confirmation and disconfirmation of a hypothesis takes place already within a system. (*OC*, 105)

Statements about the external world face the tribunal of sense experience not individually but only as a corporate body. (“TDE,” 38)

According to Wittgenstein, both hypotheses, and testing hypotheses take place within a system. For Quine, confirming or disconfirming statements must be done as a corporate body, not individually. In a later passage, Wittgenstein continues that the test itself must be recognized in the logic of the system (*OC*, 110).³¹ For example, the proposition ‘God exists’ belongs to a system with concepts of God, existence, morality. Disputes about whether ‘God exists’ can result from competing systems, so that convincing one about the existence (or lack thereof) of God is difficult (if not impossible) when there is a misalignment regarding what counts as evidence for the proposition. The parallel with the Quinian framework is that propositions cannot be confirmed or disconfirmed when assessed in isolation from the system of which it is part.

To summarize, Quine asserts that statements are logically connected within the system, which parallel Wittgenstein’s remarks that ‘consequences and premises give one another mutual support’ (*OC*, 142; cf. Garavaso 1998, 256.) In these frameworks, the system of propositions holding together, mutually supported (or interconnected as it were) provides that no single axiom appears any more ‘obvious’ than another. The Quinian and Wittgenstein framework provide a holistic picture on which the confirmation or disconfirmation of propositions must be done within the logic of the system of which they are part.

Section II. Differences between the Wittgensteinian and Quinian Frameworks

³¹ “What counts as its test?-- ‘But is this an adequate test? And, if so, must it not be recognizable as such in logic?’ (*OC*, 110)

In the last section, we saw that both Quine and Wittgenstein differentiate between revising a statement and adjusting the total system of beliefs. At first it seemed like the two frameworks were disanalogous along this line. For Wittgenstein's view suggests that the entire system does not need to be given up when faced with a recalcitrant experience. On the other hand, Quine's view purports that the whole theory needs to be revised in its entirety if there is a recalcitrant belief. I showed that, given a coherentist picture, the Quinian framework parallels a Wittgensteinian one in that statements can be revised without revising the total system.

The frameworks, however, differ as it concerns the *effect of* revising statements *on* the system. The effect of revising statements on the system bears on the confirmation or disconfirmation of statements within the system of which they are apart. If we take confirmation holism seriously, then confirming or disconfirming statements within the system is adduced from a set of fundamental assumptions.³² Yet if there is an effect *on* the system, then conceivably any fundamental assumptions from which other beliefs are adduced may be affected too. In other words, these very fundamental assumptions could themselves be affected by the revision of statements. To clarify how fundamental assumptions could themselves be affected by the revision of statements, it is first helpful to get an understanding of which statements are considered revisable within the system. For on the Quinian and Wittgensteinian frameworks, there are differences as to which statements within the system can (or cannot) be revised.

For Quine, in principle, "no statement is immune to revision" ("TDE," 40). For any statement, whether an empirical proposition such as 'there are no such creatures as centaurs' or a logical law, like the law of the excluded middle, we can imagine a recalcitrant experience that would prompt its re-evaluation. Likewise, some beliefs held true in other parts of the system may prevent another belief from being revised, despite new evidence in its favor. If one believes that 'the government is not to be trusted,' one will not revise the belief that 'no one has ever been to the moon' despite evidence to the contrary. For if, according to the doubter, the official authorities (including the government, the media system, and scientific experts) are not to be trusted, then there is reason to doubt proclamations made by those authorities, such as 'human

³² Cf. to what has been termed hypothetico-deductive systems (e.g., Hempel 1950; Feigl 1950).

beings have been to the moon'. What this shows is that, on the Quinian system, beliefs can hold true in the face of recalcitrant experiences.

In contrast, the Wittgensteinian framework holds that 're-evaluation' of some propositions *does not necessarily* entail the re-evaluation of other propositions. Some beliefs are immune to revision.

And the bank of that river consists partly of hard rock, subject to no alternation or only to an imperceptible one, partly of sand, which now in one place now in another gets washed away, or deposited. (*OC*, 99)

Some beliefs comprise the 'hard rock' of the river. On one interpretation, such beliefs cannot be altered. For example, I could never alter my belief that 'my body has never disappeared and reappeared at times' (*OC*, 101) or that the 'sun is not a hole that leads to heaven' (*OC*, 104) or that 'I exist' or that 'there are physical objects.' These are not beliefs that I could come to question without the entire system of beliefs upending (Moyal-Sharrock 2000, p. 60).

Although re-evaluating some propositions does not necessarily entail the reevaluation of others, still, some commentators have interpreted these passages as implying that some alterations to the belief system are possible, albeit 'imperceptible.'³³ I know that, for instance, when water is at a rolling boil, it cannot freeze. If it *were* to--if at a rolling boil water suddenly froze before my eyes--I would be quite astonished! I may doubt it at first, and run the experiment again. Eventually, though, I would probably "assume some factor I don't know of, and perhaps leave the matter to physicists to judge" (*OC*, 613).

However, doubting that at a rolling boil water cannot freeze is different from doubting a belief like 'I am seeing the world with two eyes.' At first glance, there is the difference of definiens. That is, the phrase 'object x has property y,' could be defined by the sentence, (W): 'O(x) = y'. (W) could be satisfied as such: 'If water is at a rolling boil, then it registers above freezing

³³E.g., Duncan Pritchard (2016) argues that hinge commitments "might change over time, [but] these changes are entirely at the periphery and the rate of change is inevitably slow" (p. 97).

temperature.’ Thus the relationship between boiling water and freezing is definitional. Upon further consideration, however, there is a consideration of foundational beliefs. If I doubt my visual perceptions, then I have reason to doubt any belief formed on its basis; the “foundation of all judging would be taken away from me” (*OC*, 614). This is the difference between revisable beliefs and beliefs that form the ‘hard rock’ of the riverbed. Thus, for Wittgenstein, there is a distinction between the almost imperceptible shifting of the riverbed, and the way in which the water flows in it.

We can take away that, for Quine, *any* statement can be revised. For Wittgenstein, some statements *cannot* be revised—if a statement plays a foundational role, then it must hold fast. Those statements that hold fast are, in a sense, fundamental assumptions (or commitments) that knowers adduce from when confirming or disconfirming other statements within the system.

The proposal that some statements hold fast marks a sharp difference between the Quinian and Wittgensteinian systems. For Quine, we tend to focus revaluations *not* on amending theoretical statements (being “centrally located within the total network”), but on reevaluating statements with “sharper empirical reference,” located at the periphery (“TDE,” 41). Quine appeals to hallucinations and to even “amending some logical laws” to demonstrate the possibility that any statement in the system of beliefs can be “held true in the face of recalcitrant experiences,” (“TDE,” 40).³⁴ But, he says, our “natural tendency” is to “disturb the total system as little as possible” (“TDE,” 41). Since theoretical statements are located centrally in the system, they have less noticeable connections to any particular sense data.³⁵ Thus, for Quine, it is possible to revise the entire system, as even logical laws are amenable to revision. Wittgenstein implies that, given our nature, it is not possible to revise the entire system.³⁶

³⁴ “Even a statement very close to the periphery can be held true in the face of recalcitrant experience by pleading hallucinations or by amending certain statements of the kind called logical laws” (Quine, “TDE,” 40).

³⁵ “The latter statements may be thought of as relatively centrally located within the total network, *meaning that little preferential connection with any particular sense data obtrudes itself*” (Quine, “TDE,” 41, my emphasis).

³⁶ “Doubting and non-doubting behavior. There is the first only if there is the second” (*OC*, 354). “Now I would like to regard this certainty, not as something akin to hastiness or superficiality, but as a form of life” (*OC*, 358). See also *OC*, 512, 558, 616.

Another reason for this difference has to do with where the boundary is drawn between empirical propositions and logical propositions. Wittgenstein draws a line between contingent propositions and unrevisable propositions, though the division is not sharp (Moyal-Sharrock 2000, 55).³⁷

But if someone were to say “So logic too is an empirical science” he would be wrong. Yet this is right: the same proposition may get treated at one time as something to test by experience, at another as a rule of testing. (*OC*, 98)

For Wittgenstein, the status of propositions are not cemented (‘the same proposition may get treated as something to test and at another time as a rule for testing’). Even propositions comprising the ‘hard rock’ of the riverbed (that is, the hinges in the system of beliefs) can come under investigation.

That is to say, the *questions* that we raise and our *doubts* depend on the fact that some propositions are exempt from doubt, are as it were like hinges on which those turn. (*OC*, 341)

I have arrived at the rock bottom of my convictions. And one might almost say that these foundation-walls are carried by the whole house. (*OC*, 248)

When propositions exempt from doubt (hinge propositions) come under investigation, the statuses change. They are no longer hinges. The status of propositions is, then, fluid (or revisable). That the status of propositions is revisable does not mean that hinge propositions are dubitable. When a proposition is in the position of a hinge in the system, then it is not doubtable. Following the interpretation of Coliva (2010), the indubitable nature of some statements does not preclude shifting from a hinge to a logical or empirical proposition. Imagine an arborist assessing the age of a redwood in Big Sur. She takes empirical measurements, like the circumference of redwood, then calculates its diameter, and compares the diameter to the growth factor of the species. In drawing her conclusion for the age of the redwood before, she has within her system

³⁷ Moyal-Sharrock argues that, for Wittgenstein, “the status of our propositions seems not to be permanently fixed: a priori or ‘hard’ propositions--what he later compares to ‘hinges’--can become objects of investigation, hypotheses” (p. 55).

of belief a commitment to, something like, ‘the earth has existed for a very long time.’ Yet her commitment to ‘the earth has existed for a very long time’ is without grounding. Were she to investigate her system of beliefs, noticing perhaps the commitment to ‘the earth has existed for a very long time’ then that commitment no longer functions as a hinge in the system of beliefs.³⁸

Notice from this one similarity between the frameworks is that distinguishing between empirical and logical propositions *cannot* be drawn on *the basis of content* (Garavaso 1998, 257). In an exegetical commentary on Quine’s and Wittgenstein’s remarks on the logical and the empirical, Pieranna Garavaso (1998) argues that both frameworks separate the empirical from the logical by a matter of degree (rather than in kind). A proposition about the physical world will not always be “contingent and empirical” (e.g., when ‘the earth has existed for a very long time’ is taken for granted) and propositions about logical laws will not always be “necessary and irreversible” (e.g., the law of excluded middle, when it comes under the light of investigation) (Garavaso 1998, 257).

In a response to Garavaso’s rapprochement of the two frameworks, Daniele Moyal-Sharrock (2000) argues that Garavaso conflates the logical and empirical categories on Wittgenstein’s account because of a misunderstanding regarding the riverbed analogy (*OC*, 96-9; Moyal-Sharrock 2000, p. 54). Moyal-Sharrock argues that, for Wittgenstein, there is not a sharp categorical between the logical and empirical. Although it is suggested that the status of logical and empirical propositions can change, nevertheless the categories remain distinct (p. 54). This debate has important epistemological consequences. The pertinent question is can the justificatory status of propositions change?

If the status can change, then propositions are the sorts of things that can become empirical when before they were grammatical or normative. This implies that the same proposition can be justified on the basis of sensory perception (empirical) or can be unjustified, yet necessary for (or

³⁸ This interpretation raises a fundamental consideration in *On Certainty*, namely whether I can ever really doubt something like ‘the earth has existed for a very long time’. Like the Idealist who claims to doubt there are other minds, is that doubt genuine? Does an idealist change anything in their behavior on the basis of that doubt? Wouldn’t we change our behavior if we truly doubted something like that? We may doubt it in the philosophical context, but then Wittgenstein remarks that the philosophical context is not a genuine context (*OC* 347). I may, however, doubt something like ‘the earth has existed for a very long time’ if I am hallucinating—a context which Quine takes seriously. But it is unclear whether Wittgenstein would take seriously the hallucinatory state.

constitutive of) justification. In other words, depending on the context, a proposition can change its justificatory status. For instance, ‘here is my hand’ can be justified, in one context, on the basis of sensory evidence; such as when an anesthesiologist asks me “what is this?” as (s)he waves a hand in front of me. In this context, the proposition is a hypothesis (Moyal-Sharrock 2000, p. 56). In another context, like in Moore’s “A Defense of Common Sense” (1925), if the statement ‘here is my hand’ were to be doubted, then it would become dubious as to what the word ‘hand’ intends. In this context, the meaning of the word ‘hand’ is constitutive within the language (Coliva 2010). On this view, then, the same statement (e.g., ‘here is my hand’) can have more than one justificatory status, and which status will depend on the context. It can either have an empirical justificatory status or, if it is functioning as a grammatical rule or norm, a logical justificatory status.

If the status cannot change, then propositions are not the sort of things that can become empirical when before they were grammatical or normative. This implies that a proposition cannot be, depending on the context, at one time justified on the basis of testimonial or sensory evidence (empirical) and at another time be unjustified. On this view, a proposition cannot have more than one justificatory status. The status will either have an empirical justificatory status or a logical justificatory status, which does not change.

One conclusion to draw from this analysis is that the frameworks do not entirely differ with regards to the effect on the system when beliefs are revised. Upon first glance, it seemed that only the Quinian framework allowed for adjustment of the entire system, as Wittgenstein holds that, given the type of beings we are, revising the system is not possible. However, it is also compatible with the Wittgensteinian framework that justificatory status of statements within the system can change. One reasonable inference is that, while the system does not change—that is, that some propositions are exempt from doubt does not change, the composition of the system can change—propositions exempt from doubt may, in another context, come under scrutiny.

Section III. Further remarks on revising the system

Both frameworks allow for the revision of (at least some) propositions. I argued at the end of the last section that the frameworks are compatible, too, with regards to the effect of revising statements on the system. The composition of the system is affected by possible changes to the justificatory status of statements. In this section, I develop this claim further by elaborating on the distinction between empirical and logical propositions. I conclude with the suggestion that this difference is not as substantial as it seems.

In the last section, I noted a dispute between commentators Pieranna Garavaso and Daniele Moyal-Sharrock. Recall that the dispute pertained to the distinction between empirical and logical statements. Although unacknowledged by Moyal-Sharrock, Garavaso's analysis is consistent with Moyal-Sharrock's interpretation that these categories of propositions are distinct. What Garavaso suggests is that, while this distinction is not based on the content of the propositions, it is based on the role, or function, the proposition plays in the system of beliefs. In other words, the distinction between logical and empirical propositions is based on whether the proposition functions as a 'hinge' or as a scientific claim.

However, Quine does not emphasize the role propositions play in the web. Instead, Quine speaks to the location of propositions.

The latter statements [i.e., statements of physics or logic, or ontology] may be thought of as relatively centrally located within the total network.... ("TDE," 41)

Some statements are *located* closer to the periphery, and have "sharper empirical reference" than "highly theoretical statements" that are located more centrally in the system ("TDE," 41). *Location* connotes something different from *role*.

In the Quinean system, statements at the periphery do not necessarily have the same justificatory requirements as inner-web statements. For example, the statement ‘There are brick houses on Elm St’ is given by my sensory experience of seeing a brick house (or hearing through testimony) on Elm St. It is, as Quine says, a matter of fact. In contrast, some statements, such as ‘we ought to permit classes as entities’, are given by conceptual schemes or frameworks. Indeed, Quine asserts that the difference between empirical and logical propositions ‘is only one of degrees,’ turning on our ‘pragmatic inclinations’ (“TDE,” 43). At the outskirts are propositions only revisable on the basis of experience. Other propositions, laws of physics or the mathematical laws and logical laws for example, are toward the center and therefore less revisable.

Quine asserts that statements of physics or logic or ontology may be thought of as centrally located within the total network in the context of observing that we have a ‘tendency to disturb the total system as little as possible,’ which leads “us to focus our revision upon statements” at the periphery (“TDE,” 41). This means that those statements in the inner web are revisable. Revisibility is not based on the content of a proposition, but rather on its placement in the overall system.

Placement in the system signals propositions do not change categorical functions. Logical propositions, for instance, occupy the same location, which is to say they do not morph into empirical-type statements. The collapse of the analytic-synthetic distinction, for Quine, pertains to revisability. It does not pertain to the permanency of the justificatory status of propositions. In other words, propositions, on the Quinian framework, do not change their status just because they are either revised or kept despite recalcitrant evidence. It is not that they are turned into rules (or vice versa they are turned into empirical propositions), whereas before they played the opposite role. They still have the same status as either logical statements or empirical ones.

In contrast, a Wittgensteinian framework metaphorizes the role propositions play in the system. For Wittgenstein, the difference between ‘propositions exempt from doubt’ (*OC*, 105) and empirical propositions is not, as Moyal-Sharrock notes, a matter of degree. Whether a proposition is justified on the basis of sensory perception (empirical) or is unjustified, yet

necessary for or constitutive of justification (a hinge) depends on the role the proposition plays. That is, when a proposition plays a hinge-like role, it is unjustified; when it plays an empirical role, a proposition is justified on the basis of sensory or testimonial evidence (etc.). ‘Here is my hand,’ is indubitable in contexts when it plays a grammatical role, like in Moore’s proof of an external world. In other contexts, however, such as when an anesthesiologist asks me “what is this?” as they wave a hand in front of my eyes, the proposition ‘Here is my hand’ is a hypothesis (Moyal-Sharrock 2000, 56). For the most part, it is not due to pragmatic inclinations that some propositions belong “to the logic of our scientific investigations that certain things are indeed not doubted” (*OC*, 105). Some propositions play an indubitable role.

So, to metaphorize the *role* of a proposition indicates that propositions can change their justificatory status depending on the context. Propositions can change their role, moving from hinges to rules of evidential significance depending on the context. The difference between logical and empirical propositions, on the Wittgensteinian framework, is effectively a difference of the justificatory status of propositions.

To summarize, a Quinean system does not accommodate a statement changing its justificatory status. Propositions do not play a different role; they do not move from the center of the web to function at the outer. This is what the metaphor of ‘location’ signals. In contrast, a Wittgensteinian system can accommodate a statement changing its justificatory status.³⁹ This difference pertains to the *effect of* revising statements *on* the system. The system, on the Quinian framework, largely holds its shape—logical and empirical propositions hold their justificatory statuses. The system, on the Wittgensteinian framework, is more like a flowing river—the justificatory statuses of propositions move as sediments do. On the Quinian framework, the effect of revising statements on the system is negligible; whereas on the Wittgensteinian framework, the effect can be markable.

³⁹ There is, in the *Philosophical Investigations* (§23), this sense of multiple role playing in the language-game. The many roles of propositions in language-game can include ‘giving orders,’ ‘reporting an event,’ ‘forming or testing a hypothesis,’ ‘making up a story,’ ‘guessing riddles,’ ‘praying,’ ‘asking,’ or ‘greeting,’ amongst others. “Hello” may play the role of greeting, or it may play the role of questioning (“Hello?”) or of sarcasm (“Hello?!”). An utterance (‘hello’) or proposition (e.g., “‘Hello’ is a form of greeting”) may play different roles in different contexts.

Although this presents a substantial difference between the two systems, there is one similarity worth noting. Both systems include the possibility of change in the system. On the Quinian framework, propositions are either revised or kept the same despite recaltriticent evidence. So there is still something like the possibility of change but it is not a change in the location--that is, a change in status from empirical to logical (or vice versa). Rather, propositions are subject to verification and control.

There is something similar to propositions being subject to verification on the Wittgensteinian framework as well. Wittgenstein holds that, given our nature, broadly speaking, revising the total system is impossible. Some propositions must be held fast, even in the face of recaltriticent experiences. Some propositions, like 'there is an external world,' remain firm (even when hallucinations disconfirm them). When a proposition has the role of a hinge on beliefs, it is something for which one cannot bring empirical evidence to bear on it. The statement is a fixed point. Yet *the role of a proposition is open to verification*. To say that the role of a proposition is open to verification is to say that the justificatory status of statements in the system can be verified. Depending on the context, the same proposition (e.g., 'here is my hand') can play a different role within the system.

Let us return to where we began in this section, and make some remarks about the effect of revising statements on the system. I mentioned that the effect of revising statements on the system bears on the confirmation or disconfirmation of statements within the system. We have observed that for both the Quinian and Wittgensteinian frameworks, there is something open to verification: on the Quinian framework, statements themselves are subject to verification whereas on the Wittgensteinian framework, the justificatory status is open to verification.

The initial contrast of the effect of revising statements on the system is not as substantial as it first seemed. For Quine, statements can be revised. For Wittgenstein, the justificatory status can be revised. Such revision bears on confirming or disconfirming statements in the system. For confirming or disconfirming statements conjoins with background assumptions or subsidiary

hypotheses.⁴⁰ On a Wittgensteinian or Quinian framework, when deciding whether some fact, *f*, ought to stand as evidence, *e*, for a hypothesis, *h*, one must appreciate the whole of the system of beliefs. On the Wittgensteinian framework, grounded or ungrounded beliefs can inform belief in *f* as *e* for *h*; and on the Quinian system, both logical and empirical statements can inform belief in *f* as *e* for *h*. Furthermore, revision of statements in the system (or of their justificatory status) can affect whether one uses *f* as *e* for *h*. Thus, both the frameworks suggest a kind of permeability as it concerns the relationship between statements and those that are adduced from them.

Conclusion

In this chapter, I compared and contrasted the epistemological systems of Quine and Wittgenstein. Both frameworks suggest a holistic picture wherein propositions must be confirmed or disconfirmed within the logic of the system of beliefs. One pertinent difference between the two systems is the effect of revising statements on the system of beliefs. This difference reflects that on a Wittgensteinian system, the justificatory status of a proposition can change, whereas on a Quinian framework, the status will either have an empirical justificatory status or a logical justificatory status, which does not change.

Yet this difference brings out the way in which neither holds that the system of beliefs, as it were, could be other than it is, both frameworks purport that there is the possibility of verification. In the Quinian system, any propositions are subject to verification and control. On the Wittgensteinian system, the role of propositions is subject to verification. Both frameworks suggest, then, that the relationship between statements and those that are adduced from them is permeable. This analysis brings out a similarity between the two systems. Both epistemological systems pay attention to the interconnectedness of beliefs. Understanding the differences and similarities between these two systems squares with a hinge epistemological framework for the ways that background assumptions influence evidential reasoning.

⁴⁰ The requirement of subsidiary hypotheses to confirm or disconfirm statements was widely discussed in the Vienna Circle. Although, the discussion was framed around adducing the truth of sentences from observational evidence.

CHAPTER 3: A Stereotypical Hinge Framework

For the most part we do not first see, and then define, we define first and then see. In the great blooming, buzzing confusion of the outer world we pick out what our culture has already defined for us, and we tend to perceive that which we have picked out in the form stereotyped for us by our culture. (Lippmann, 1922, p. 81)

When we stereotype, we make quick judgments about our environment. Familiar stereotypes (at least in the United States) include statements such as ‘Asians are good at math’ or ‘Jews are frugal’. Stereotypes also include statements such as ‘tables are solid’ and ‘dogs have four legs,’ even if we do not normally talk about them as stereotypes. What makes these stereotypes is that they are categorical statements generalizing some attribute to members of a group. Linguistically-speaking, stereotypes can be understood as generic generalizations, where it is unclear whether a stereotype’s attribute is meant to apply to *all* instances within the category, *most* instances, or at least *one* instance within the category. For instance, ‘dogs have four legs’ seems true despite the fact that not *all* dogs possess the property, *having four legs*.

Stereotypes can benefit human cognition by forming quick mental representations of conceptual categories. Reliable stereotypes, even negative ones, constitute a proper part of a person’s rational resources (cf. Erin Beeghly 2015). That is, sometimes stereotypes *do* work: they track reality and function as helpful heuristics. Yet stereotyping other people can have moral consequences. Indeed, stereotypes can often contribute to oppressive power dynamics. For example, negative stereotypes of Black women as aggressive, stubborn, overbearing figures (oft-labeled as Sapphire caricature) contrasts stereotypical images of femininity as meek and docile (Patricia Hill Collins 1986).

The above two aspects of stereotypes and social stereotypes pose an interesting problem. On the one hand, stereotypes seem required for abstracting from experience, which is an important epistemological practice; stereotypes can play a legitimate role in our system of beliefs.

However, stereotypes also can be insidious, contributing to unequal power distributions and oppressive structures. To see this problem, consider the following two scenarios:

Stereotype 1: “Children have wild imaginations.”

A child cries from a dark room, “There’s a monster under my bed!” Stereotype 1 can tell a parent how to respond, with comfort rather than fear of an intruder. But where Stereotype 1 can be helpful in one context, it can be harmful in another, such as when a physician or parent discounts a child’s report of pain.

Stereotype 2: Women experience hormonal increases and abdominal pain during menstruation.

Lara goes to hospital for horrible pain in her abdomen, but the attending physician attributes the pain to premenstrual syndrome (PMS) and recommends Advil. Lara later learns that in fact some ovarian cysts had burst. Stereotype 2 can help physicians quickly assess which test to administer or how to proceed diagnostically. But it can be harmful if it leads to a bad assumption about a specific event on the basis of the statistically most likely scenario.

Stereotypes are difficult because they present as sometimes helpful heuristics about the world. Sometimes we cannot help but use a stereotype, not because it appears as a legitimate empirical generalization, but because it *just is* a legitimate empirical generalization. In this chapter, I defend the view that social stereotypes ought to be defined in an epistemically neutral way. To define social stereotypes in an epistemically neutral way is to say that falsity or lack of justification (i.e., an epistemic failure) cannot be essential to the concept of stereotype; that is, it remains an open question whether certain stereotypes are good or bad, just or unjust.

When stereotypes are genuine empirical generalizations, they can be either confirmed or disconfirmed. Yet what is tricky about confirming or disconfirming stereotypes is that there are different rules for what can count as evidence. There are rules that guide a variety of generalizations we make. Since stereotypes present linguistically as generic utterances, we can

draw a comparison between the normative rules that guide generics with those that guide stereotyping (*qua* generalization). In this chapter, we will consider three rules that underpin the cognitive process of stereotyping: the rule for majority generalization, the rule for striking property generalization and the rule for characteristic generalization (cf. Leslie 2007, 2008).

Furthermore, confirming or disconfirming the veracity of a generalization depends, in part, on the system in place. A helpful framework to elucidate just how confirming or disconfirming a generalization depends on the system in place can be drawn from Wittgenstein's *On Certainty*. In *On Certainty*, Wittgenstein asserts that a statement cannot be confirmed or disconfirmed when assessed in isolation from a system of which it is part.

All testing, all confirmation and disconfirmation of a hypothesis takes place already within a system. (OC, 105)

According to Wittgenstein, both hypotheses, and testing hypotheses take place within a system. In a later passage, Wittgenstein continues that the test itself must be recognized in the logic of the system.

“What counts as its test?-- ‘But is this an adequate test? And, if so, must it not be recognizable as such in logic?’” (OC, 110)

For example, the proposition ‘God exists’ belongs to a system with concepts of God, existence, morality. Disputes about whether ‘God exists’ can result from competing systems, so that convincing one about the existence (or lack thereof) of God is difficult (if not impossible) when there is a misalignment regarding what counts as evidence for the proposition. A Wittgensteinian framework can help bring out the way that stereotypes play a normative role in cognitive processes.

I suggest that stereotypes function as *hinges*, that is as a norm of evidential significance. Hinges are most commonly understood to resemble ordinary empirical propositions but in fact play a normative role, in the sense that they play a foundational role in order to bring

evidence—whatever the evidence may be—to bear onto the justification of empirical propositions. I employ Coliva’s hinge epistemology framework, which holds that hinges can have dual roles including the role for evidential significance. I suggest that this interpretation of hinge epistemology can illuminate the normative dimension for the veracity of stereotypes.

By the end of the chapter, I aim to have motivated a viable view of stereotypes where stereotyping is a cognitive process important in the formation of concepts in which one generalizes categorical attributes to instances of a kind in a given context. In feminist epistemology, stereotypes have been discussed largely (and rightly so) in the negative, as epistemic failures. However, that is not entirely the case, and I argue that we should not always think of stereotypes as a deficiency. Feminist epistemology can (and ought to) make room for epistemic neutrality for two main reasons. First, because a neutral account highlights a difference between stereotypes (as such) and when stereotypes evolve into prejudices. Secondly, we can locate a problem with stereotyping in that stereotypes can, at times, *appear as* an empirical generalization, making them neither confirmable or disconfirmable, and sometimes as *just* empirical generalizations. The problem of stereotyping regards the ambiguity of when it is a generalization or when it appears as such.

The distinction between a stereotype that *appears as* an empirical generalization and a stereotype that *just is* an empirical generalization brings into focus the ways in which stereotypes can be difficult to overturn even when presented with counter evidence; in other words, stereotypes play a normative role in cognitive processes. There are a number of ways to flush out the normative role stereotypes play. The normative framework I employ in this paper is hinge epistemology. There is a *prima facie* analogy to be made between stereotypes and hinges. If hinges are the kinds of things that are necessary for epistemic productivity, then there are grounds to say that stereotypes, too, may not merely be deficiencies but also necessities for proper epistemic practices.

In section I, I motivate a neutral account of stereotyping, and in section II, I elaborate on three generalizing rules underpinning the cognitive process of stereotyping. In section III, I draw out the normative role stereotypes can play, and in sections IV and V, I give a hinge account of

stereotyping. The hinge account explains how, in the good case of stereotyping, we use the stereotype to form expectations that guide our actions and choices in a profitable way; in the bad case, the stereotype keeps functioning as a norm—instead of as an empirical generalization—such that even if there are good empirical reasons to abandon the stereotype, it is kept in place. In such a case, one might say that the stereotype becomes a prejudice.

Section I: Accounts of Stereotypes

Some social psychologists and feminist epistemologists give epistemically neutral definitions of stereotypes while others define stereotypes as involving an epistemic and moral failure. An epistemically neutral definition implies that an epistemic failure is not essential to the concept of ‘stereotype’. A definition of stereotype that includes an epistemic failure is one that imports something bad about the cognitive routine in use. Something that involves an epistemic failure can be morally neutral, and something that is epistemically neutral can be morally problematic. For instance, the stereotype that Mexicans in the U.S. are ‘illegals’ is morally problematic despite what statistics report.⁴¹

Definitions of social stereotypes have been evolving. In *Social Psychology*, stereotype has been defined as⁴²

[Epistemically Neutral]

Perceiving what one’s culture has already defined. (Lippmann 1922)

A generalization. (Vinacke 1949)

A category. (Secord 1959)

A cognitive construct. (Hamilton 1981)

⁴¹ Many thanks to E. M. Hernandez for adding this nuance between what is morally problematic and epistemically neutral.

⁴² This is a sampling of definitions relevant to this discussion. For a more comprehensive overview of these (and other) definitions of ‘stereotype’, see Brigham (1971); see Kanahara (2006) for definitions of ‘stereotype’ as a group concept.

Beliefs about groups of individuals that can be both positive or negative, correct or incorrect, complex or simple. (Kanahara 2006)

a type of prototype applied to groups of people with social consequences. (Rosch 2011)

[Epistemic Failure]

A bad generalization or category incorrectly learned. (Klineberg 1951)

A fixed impression that does not well conform to the fact represented. (Katz & Braly 1953)

An exaggerated belief associated with a category. (Allport 1958)

Within Feminist Epistemology, 'stereotype' has been defined as

[Epistemically neutral]

widely held associations between a given social group and one or more attributes, entailing a cognitive commitment to some empirical generalization about a given social group. (Fricker 2007, pgs. 30-31)

playing a special role in categorizing individuals and forming expectations about them... as either concepts of social groups or as psychological items necessary for the formation and use of concepts. (Beeghly 2015, p. 680)

[Epistemic Failure]

resembl[ing] categorizations and classifications: they derive from cultural traditions; they generalize and abstract from experience.' Categories and classificatory schemes differ...from stereotypes in their open-ended, 'fallibilist' possibilities, which contrast with the dogmatic rigidity of stereotypes. (Code, 1991, p. 191)

One common theme definitions of stereotypes tend to share is that stereotypes generalize. This characterization of stereotype is consistent with defining 'stereotype' as a prototype applied to

groups. Indeed, stereotypes have been defined in terms of prototypes (see above the definition pulled from Rosch 2011). Prototype is sometimes described as the demonstration of an essence (in the Aristotelian sense), and sometimes as a mental representation of category resemblance (cf. Rosch 1988). The prototypical member from the category ‘tree’ will be defined by the “clearest case” (Rosch 1988, p. 36) of tree we can think of—a conifer, perhaps. What counts as a prototypical member can vary depending on one’s region, culture, history, etc. Classification of a prototypical member in a given category is not a clear matter—as Rosch noted, there can be a family resemblance amongst members in a category. The sense in which Rosch (2011) characterizes stereotypes in terms of a prototype is when a prototype applies to groups of people. She writes,

Social stereotypes are a type of prototype; it tends to be called a stereotype when it applies to a group of people (determined by factors such as race, ethnicity, gender, sexual orientation, religion, occupation or nationality), and it has social consequences. Such stereotypes can be elusive and difficult to change partly because they are the result of a natural aspect of the cognition of concepts. (p. 102)

That is, there is a sense in which a stereotype represents a typical case of a member in some group of people. As Rosch notes, both prototyping and stereotyping are heuristics that play a role in forming expectations about our environments. According to Rosch, stereotyping is the aspect of prototyping that involves making generalizations of attributes to members of a group.

Philosophers, however, tend to characterize stereotyping as a cognitive process separate from prototyping; stereotyping, instead, is required in the formation of concepts of social kinds (Beeghly 2015, p. 678). Beeghly draws on Fodor’s hypothesis that forming stereotypes is a “*stage* in concept acquisition” (Fodor 2010, p. 150, as cited by Beeghly 2015, p. 678). Stereotypes, Beeghly suggests, are “necessary for acquiring concepts of social kinds and also for seeing individuals as members of those kinds” (p. 678). For this reason—that stereotypes are a necessary part of acquiring concepts of social kinds—it feels too reductionist to say that stereotypes are a type of prototype when prototypes are applied to group membership.

Indeed, stereotypes do more than just demonstrate a typical case of a member in some group of people; they also help us form expectations about individuals based on group membership. Forming expectations is not traditionally the role ascribed to ‘concept,’ but rather associated with the structure of concept-formation. Hence, some psychologists have associated stereotypes with

other representational processes, like schemas. According to psychologists Susan Fiske and Patricia Linville (1980), the cognitive concept of schema captures

cognitive structures of organized prior knowledge, abstracted from experience with specific instances; schemas guide the processing of new information and the retrieval of stored information. (p. 543)⁴³

There is a sense in which a schema provides a framework for the interaction of associable attributes of what is expected or unexpected of members in a given category. Beeghy (2015) argues that on a view of stereotypes as schemas, stereotypes are conceived as containing “information about social groups...and what group members ‘ought’ to be like” (p. 678). Schemas, then, help us “form expectations about them [group members] and structure our interactions accordingly” (p. 678).

Beeghy contrasts this view with one on which stereotypes are conceived as “web-like associations stored in slow-learning memory,” where slow-learning memory functions to “retain and deploy information about what our environment is typically like” (Smith and DeCoster 2000, as cited by Beeghy 2015, p. 678). On this view, stereotypes form “networks of associations with social groups” (p. 678).⁴⁴

So far, we have noticed that the concept of stereotype sometimes gets defined in terms of prototype and sometimes in terms of schema. The relation between schema, prototype, and stereotype does not need to have strict boundary lines, at least not for our purposes. Yet an account of stereotypes need not posit what the exact nature is of mental states (Beeghy 2015, p. 679). For the debate regarding the problem of stereotyping is really a debate about the negative effects of stereotypes, not the intrinsic wrong of stereotyping. The intrinsic wrong of stereotyping captures the fact that a stereotype (*qua* generalization) may not capture some cases outside a

⁴³ Cf. Fiske and Taylor (1991): schemas “represent knowledge about a concept or type of stimulus, including its attributes and the relations among attributes” (p. 98). Although, like the concept of stereotype, there are many variations in definitions of schema.

⁴⁴ One interesting contrast Beeghy brings out as it pertains to these two accounts of stereotypes as schemas is the way in which stereotypes can be conceptualized as having (or not having) propositional content. This distinction maps onto a distinguishable view of stereotypes as either tacit categorizations of members into groups or as reflective uses of categorizations. Whether stereotypes are conceptualized as having propositional content is relevant to an account of the normativity of stereotypes, especially one that draws upon the hinge framework. That hinges have propositional content is debated. The same debate would then map onto a normative account of stereotypes that borrows its framework. The discussion of stereotypes in this paper may lend insight to the arguments on propositional content within hinge epistemology. I must leave aside this point for now, but it is an interesting direction for future research.

given generalization.⁴⁵ Whereas the negative effect of stereotyping captures the sense in which a given stereotype may have moral consequences on members of the social kind.

The reason it is about negative effects of stereotyping and not intrinsic wrong is that we are constraining the discussion to the social domain. In other domains, like those that range over physical objects, stereotyping does not have serious ethical consequences. In any given environment, when one comes across a table, the negative consequences of stereotyping that table as having the attribute of solidity is rather minimal. At worst, you might be in some environment where the stereotype about tables being solid may not serve you—perhaps while playing a game in virtual reality, it’s possible some tables aren’t solid, an attribute that may harm a character being played. But within the social domain, the effect of wrongly stereotyping another person based on a perception of certain characteristics as a group could be both morally and epistemically harmful. In the social domain, we have added implications to understanding the epistemic nature of our stereotypes. Understanding the epistemic nature of stereotyping has to do with whether we recognize our stereotypes as generally reliable or not. Recognizing the reliability of our stereotypes impacts the moral respectfulness we show others.

What these accounts have in common is the following. Stereotypes generalize, and due to that property they help us form expectations about individuals based on group membership. Stereotypes are also important in the formation of concepts. Given this, the account of stereotype I have in mind is the following.

Stereotyping is a cognitive process important in the formation of concepts in which one generalizes categorical attributes to instances in a given context.

Call this the epistemically neutral account of stereotyping. This account can remain neutral on the exact nature of mental states involved when stereotyping.

⁴⁵ The account presented in this chapter is compatible with an account of stereotyping Erin Beeghly (2015) recently developed, an account she labeled the *descriptive view of stereotypes*. Beeghly (2021) adds to the descriptive view of stereotypes a normative account, which she calls the constitutive view. She argues that one payoff of the constitutive view is that it has resources to solve certain ethical problems with stereotyping (p. 557). This chapter presents an alternative account of stereotyping, one that I call the *hinge view of stereotyping*. Similar to Beeghly’s account, it maintains a constitutive view. Unlike Beeghly’s account, the hinge view of stereotyping keeps the normative and descriptive aspects together; there is no need to layer a separate normative account on top of a descriptive one. Furthermore, the hinge view of stereotyping lends insight into the epistemic problems with stereotyping in the social domain, while also making sense of the necessity of stereotyping in reasoning processes—hence why I refer to my account as epistemically neutral, rather than as merely descriptive.

In feminist epistemology, much of the discussion has focused on stereotyping as an epistemic failure. One worry is that the epistemically neutral account of stereotyping misses this feature. One might think a neutral account of stereotyping is counter to the following characterization of stereotyping.

Stereotypes unwarrantably generalize a positive or negative attribute to a person on the basis of their belonging to a social group or type.

Call the above *the epistemic failure view of stereotype*. On this view, when one stereotypes, one unwarrantably attributes a negative attribute to a person on the basis of their belonging to a social group or type. What, then, are the distinguishing conceptual features of ‘stereotype’ and ‘prejudice’?

In both social psychology and philosophy, stereotypes have been linked closely to prejudice. Accounts that link stereotypes to playing a role in prejudice tend to view stereotypes as a morally suspect cognitive process. For instance, in *The Nature of Prejudice* prominent psychologist Gordon Allport defined stereotype as “an exaggerated belief associated with a category” (Allport 1958, p.187). Allport implied that stereotypic thinking was a foundation for prejudicial thinking.⁴⁶

Characterizing ‘stereotype’ as a foundation for prejudicial thinking has been sustained in recent accounts by feminist epistemologists. Fricker (2007), for instance, defined the concept of *identity prejudice* as conditioned by shared imaginative conceptions of social identity. Shared imaginative conceptions are attributed to a person’s social identity often with (or sometimes from) a stereotype. Fricker (2007) defines stereotype as “widely held associations between a given social group and one or more attributes” (p. 30). This is an epistemically neutral definition because there is no assumption that the association between the group and attribute(s) are reliable or unreliable, or that it carries a positive or negative valence. That is, an epistemically neutral definition may incorporate a stereotype that is both epistemically unreliable and positively

⁴⁶ See, for instance, Allport (1958), chapter 2. Cf. Dovidio, Glick, and Rudman (2005).

valenced (e.g., physicians know anything pertaining to medicine) or one that is negatively valenced but reliable (e.g., men are more likely to commit murders). Falsity or lack of justification is not essential to the concept.⁴⁷

Following Fricker, some scholars have taken to defining prejudice by incorporating the concept of stereotype. For instance, Endre Begby (2013) defines prejudice as “a negatively charged, materially false stereotype targeting some social group and, derivatively, the individuals that comprise this group” (p. 90). Begby’s definition separates false stereotypes from true ones. Thus, Begby’s definition of prejudice is not epistemically neutral as the definition of prejudice requires an incorrect stereotype. In contrast to an epistemically neutral definition, we can say that a categorization involving false (or incorrect) epistemic concepts incorporates a view of said concept as epistemically bad.

Situating the concept of stereotype within an epistemically bad category has precedence. Almost a decade before Fricker or Begby, Lorraine Code (1999) analyzed social stereotyping and its involvement in standard epistemology. She argues that stereotypes are dogmatic and rigid, which contrasts with the open-ended, fallible nature of categorizations and classification. Evidenced in Code’s characterization of ‘stereotype’ is an epistemic failure.

Maintaining a stereotype against counter examples, for instance, can be considered epistemically culpable; and there can be a morally vicious element as well. That seems the same for the concept of ‘prejudice’ as well. Indeed, this is what Fricker is thinking about when she distinguishes between stereotypes and prejudices. On Fricker’s view, it is neither the fact that there is a connection between negative attributes and a particular social group nor the fact that this association might have negative consequences. Rather, if we hold a certain social stereotype, then we are liable to treat a social category of which the stereotype pertains to in a morally applicable way. The point Fricker makes is that a stereotype evolves into a prejudice when the stereotype is held against counter evidence. In other words, if one sticks to a generalization, even

⁴⁷ Cf. Boncompagni’s (2021) recitation of Fricker’s view: “What distinguishes a prejudice from a stereotype, which in Fricker’s view is a mere generalization concerning a social group, is that the subject holding it resists evidence against the prejudice, and such resistance is blameworthy” (p. 3)

when presented with evidence falsifying the statistical significance of the generalization, then one is prejudiced. Prejudices cannot be easily overturned in the face of new evidence.

A criticism of Fricker's view of stereotyping is that it ignores some kinds of negative stereotypes and stereotype threats. Stereotype threat describes the contingency of identity; that is, it describes when, in a certain context that a stereotype may apply to an individual based on their belonging to a certain group, an individual fears being seen or treated in terms of the stereotype (Steele 2011). A black man walking the street alone at night may be stereotyped as dangerous by passersby. He may fear being treated as a dangerous person on the basis of this stereotype threat. Furthermore, the threat of stereotypes can affect one's ability to perform a task. Women who are told (consciously or unconsciously) that their rational, logical, or mathematical abilities are inferior to men may end up performing less well on related cognitive tasks. If an individual is aware of a negative stereotype against his/her social group, s/he may meet (either positively or negatively) the expectations set by that stereotype.⁴⁸

Patricia Hill Collins has argued that some stereotypes function as disguised images controlling social-identity (Collins 1986, p. 17; cf. 2000, p. 27). Drawing on Mae King's (1973) and Cheryl Gilkes' (1981) analysis of stereotypes, Collins notes that negative stereotypes of Black women as aggressive, stubborn, overbearing figures (oft-labeled as Sapphire caricature) contrasts stereotypical images of femininity as meek and docile (p. 18). Labeling Black women as Sapphires aims to control images of womanhood, and is "an effort to put all women in their place" (p. 17). These controlling-images of Black women may *appear as* generalizations of an attribute applied to a group. It does not matter what percentage of Black women might fit the Sapphire caricature. The caricature is used to subordinate the status of Black women in society.

Section II. Three Rules for Generalizing

One thing we can observe about stereotypes is that they present linguistically as generic statements, which have a kind of semantic underspecification as it concerns the scope of the quantifiers. Take the stereotype, 'Asians are good at math' or even something like 'jews are

⁴⁸ The effect of stereotype threat has been well-studied. See Spencer, Logel, and Davies (2016) for an overview of the literature.

frugal.’ What these two stereotypes have in common is that they are both generalizations, and the scope of the quantifiers is ambiguous. For example, it is not clear if the speaker means most Jews are frugal or all Asians are good at math, just some. It is ambiguous. This ambiguity opens up a range of possibilities for what rules guide any particular generalization.

In this section we will consider three rules for generalizing: majority generalization, striking property generalization or characteristic generalization. These three rules were originally norms noticed by Sarah-Jane Leslie (2007, 2008) as rules that guide determination of the truth or falsity of generic utterances.⁴⁹ Recall that generic utterances are propositions that have ambiguous quantifiers, and are the linguistic means to communicate generalizations. That is to say, a generic utterance is an utterance of generalization in a language.

I am concerned not with utterances in a language, but with belief-formation. The connection between generic utterances in language and stereotyping in thinking routines is that both are forms of generalizing. Stereotypes are a cognitive generalizing function, and generic utterances are a linguistic one. This connection enables a cross-comparison, and will clarify the difficulty regarding when we are licensed to confirm or disconfirm a stereotype.

Consider the following three rules for generalizing:

1. Majority generalizations: for an attribute, α , to be appropriately generalized to a group, Γ , there must be a statistical correlation between α and Γ .

That is to say, an attribute is generalized to a group on the basis that *most* in the group have that attribute. Majority generalizations capture statistical significance. Leslie exemplifies majority generic utterances with propositions like ‘cars have radios’ and ‘barns are red.’ These days, most cars have radios. So, the generalization, cars have radios, is confirmable on that basis. Counter instances to majority generalizations are not significant if *most* of the kind have that property. For instance, not all barns in the United States are red, and observing a green barn does not

⁴⁹ Cf. Haslanger (2012, chapter 17; 2014, pgs. 451-452).

disconfirm the generalization, ‘barns are red,’ because a predominant number of barns in the U.S. are red.

2. Striking property generalizations: an attribute, α , is generalized to a group, Γ , on the basis that *at least one member of* the Γ has α .

Striking property generalizations do not purport to be a good example of the group. Instead, the striking property generalization is confirmable if α is true of *at least one member of* Γ . This is to say that a member of Γ is a reasonably good predictor of having α , and, furthermore, members of Γ that do not have α are disposed of, in the right circumstance, to have it. A common example of striking property generic utterances is ‘mosquitoes carry West Nile virus.’ The bare plural ‘mosquitoes’ generalizes about a property all mosquitoes can exhibit. Counter instances to striking property generalizations are not significant if α is true of at least one member in Γ . Hence, not all mosquitoes carry the West Nile virus (indeed, only a small fraction of mosquitoes do carry the virus, and those that do are not characteristic of their kind) but, to satisfy this rule, it is only required that at least one mosquito carries the virus.⁵⁰

3. Characteristic generalizations: For an attribute, α , to be characteristic of a group, Γ , is to say that there is **more than** a statistical correlation between α and Γ .

This is to say that an attribute is generalized to a group on the basis that the attribute is *characteristic* of the group. If α is characteristic of Γ , then α purports to be a good example of what Γ will exhibit. Leslie’s examples of characteristic generic utterances are ‘tigers have stripes’ and ‘dogs have four legs.’ When making a characteristic generalization, we are applying a certain rule: that the attribute, stripes, is a good example of what tigers will exhibit. Any counter instances (e.g, if some statistically significant number of tigers had no stripes) disconfirms the generalization only if the counter instance is also characteristic of the group. If

⁵⁰ An alternative reading of this utterance is that the true subject here is ‘West Nile virus’, though it is positioned as the object; that is to say West Nile virus is carried exclusively by mosquitos. The point I am trying to make, however, is that the confirmation or disconfirmation of some generalizations is governed by the following norm: so long as at least one member of Γ is observed with α , then the generalization is true. Many thanks to Carolyn Baer for suggesting the problem with this example.

the counter instance is not significant (e.g., it is a genetic anomaly that tigers do not have stripes), then the generalization can be said to be true.

I have put forward three rules for generalizing: majority generalization, striking property generalization or characteristic generalization. Each provides norms that guide when counter instances are appropriate to disconfirm a given generalization in some context. That is to say, confirming or disconfirming the veracity of a generalization depends on whether the generalization conforms to a rule. Therefore, confirming or disconfirming the veracity of a stereotype (*qua* generalization) depends on whether it conforms to a rule.

When stereotyping, these rules for generalizing are implicitly followed. When one stereotypes, one does not think about whether the stereotype conforms to a rule; that is, one does not confirm or disconfirm the stereotype on the basis of the rule for majority generalization, striking property generalization or characteristic generalization (or a mix of these rules, or on another rule I have not put forward here).

Section III. The Normativity of Stereotyping

Stereotypes (*qua* generalizations) can appear as mere-empirical knowledge; that is, they appear to say something factual. Stereotypes that *appear as* empirical generalizations may in fact function as something else, like a controlling image. There is a tension between determining the technical accuracy of a stereotype and stressing the power dynamics underlying the process of stereotyping in the social domain. In Collins' words, the tension is between the "dialogue of determining the technical accuracy of an image [and] stressing the power dynamics underlying the very process of definition itself" (p. 17). For decades, Black feminists have questioned the credibility of those possessing the power to define images of identity, and it remains still relevant to tease apart the 'technical accuracy of an image' and 'the power dynamics underlying the process.'

What can be taken away from this discussion is that when stereotypes *appear as* empirical generalizations, the generalization may be something more pernicious, like a controlling image, a

stereotype threat, or evolving toward prejudice with resistances to counter evidence. We can separate, however, when a stereotype *appears as* an empirical generalization and when it *just is* an empirical generalization. When a stereotype merely appears as an empirical generalization, it is what Collin's refers to as a controlling image. The stereotype *appears to* generalize an attribute to a group, yet it does not matter whether any member actually has that attribute. Recall the caricature of Black women as Sapphire. The Sapphire stereotype, as a controlling image, *appears to* generalize the attribute 'overbearing' to the category BLACK WOMAN. The stereotype is used to control images of Black women in contrast to stereotypical images of femininity.

A stereotype that functions as a controlling image is different from a stereotype that *just is* an empirical generalization. As an empirical generalization, a stereotype generalizes an attribute to a group, and it does matter whether members have that attribute. For instance, 'dogs have four legs' generalizes the attribute 'legs' to the group 'dog.' If no dogs had four legs, then the stereotype would be false. The tricky thing about stereotypes that *just are* empirical generalizations is that the stereotype can be true even if *all* instances within the category have said attribute, or if *most* instances have said attribute, or if only *one* instance within the category has said attribute. That is, the stereotype 'dogs have four legs' seems true despite the fact that not *all* dogs possess the property, *having four legs*. This is the problem of stereotyping that we will discuss in sections IV & V.

Section IV. Hinge Framework for Stereotyping

We are now in a position to bring out a hinge framework for stereotyping. There are a variety of accounts of stereotypes, and some of these accounts define stereotypes as generalizations. What hinge epistemology brings is a normative framework to stereotyping (*qua* generalization). To stereotype is to make judgments with concepts that generalizes categorical attributes to instances in a given context following certain norms. The point of treating stereotypes as hinges is to show the way in which stereotypes may not get revised even when it can be shown that the empirical evidence actually does not support the stereotype. The reason, I intend to argue, is because stereotypes can work as rules of evidential significance.

In this section, I give some preliminary remarks on Coliva’s account of hinge epistemology. I then move to the aspect of the hinge framework that I think relevant to an account of stereotyping, namely the function of hinges as rules of evidential significance. There are two senses in which a hinge is a rule of evidential significance. (1) When a hinge functions as a rule for evidential significance, the hinge needs to stay put for the evidence (e.g. perceptual experience) to amount to a justification for a belief about a physical object (e.g. “Here is a mug.”). (2) The hinge can also determine what counts as evidence. This regulates membership in a class. For the purposes of this chapter, the relevant sense is (1).

Hinge epistemology pertains to, among other things, the study of our most basic assumptions, such as ‘there is an external world’ or ‘I exist’.⁵¹ Initially derived from interpretations of Ludwig Wittgenstein’s *On Certainty* (1969), hinge epistemology purports, broadly, that justification of beliefs function in a system of assumptions (Coliva 2015, 2019; cf. chapter 2). The term ‘hinge’ metaphorizes the role that some propositions play within the system of beliefs. It is pulled from the following passage in Wittgenstein’s *On Certainty*.

That is to say, the *questions* that we raise and our *doubts* depend on the fact that some propositions are exempt from doubt, are as it were like hinges on which those turn. (OC, 341)

Wittgenstein remarks that hinges play the role of ungrounded assumptions required for justifying other beliefs. Some beliefs are exempt from doubt; they function as hinges on which the justification of other, dubitable propositions turn. As Anna Boncompagni (2016) writes, hinges are propositions that remain “fixed in virtue of the movement around it,” like an “axis of rotation” (p. 80; see OC, 152). Ungrounded assumptions are, some contend, constitutive of our rational practices.⁵²

⁵¹ Some hinge epistemologists do not agree with the idea that hinges are assumptions or with the idea that philosophical theses like ‘there is an external world’ could be a hinge commitment. For alternative views, see Wright (2004), Moyal-Sharrock (2004), Aston (2015), and Pritchard (2015).

⁵² See Coliva (2015).

Examples of hinges from Wittgenstein's *On Certainty* include propositions such as 'I am a human being' (OC, 4), 'there is an external world' (OC, 20) or 'the earth has existed a very long time' (OC, 233). Added to Wittgenstein's observations are perceptual hinges such as 'I am not dreaming' (Coliva 2015, p. 66); and local hinges, shared by communities at certain points in time, such as 'the earth is round,' 'a king can make rain' and (one Wittgenstein held) 'no one has ever been to the moon' (Boncompagni 2019, p. 173; cf. Moyal Sharrock 2005; see OC, 291, 132, 106). Hinges are ones that "no human being could give up" because of the foundational role they play in the system of beliefs (Moyal-Sharrock 2000, 60). In addition to specific hinge commitments, accounts have put forward an overarching certainty that all specific hinge commitments are manifesting, namely the *über-hinge* 'I am not radically and fundamentally mistaken about my beliefs' (Pritchard 2016, p. 95). Held in common by many accounts is that hinges are often tacit, unspoken, and sometimes unnoticed.⁵³

Coliva's (2010) exposition of hinges brings out the way in which hinges can have more than one role. Hinges can be rules of evidential significance or meaning-constitutive rules (2010, p. 10). Some hinges can have a double role, while others may play just one. Depending on the context, the role(s) of a hinge can change.

When a hinge functions as a rule of evidential significance, Coliva has in mind that a hinge defines what does or doesn't count as evidence (Coliva 2015, p. 41). For example, Coliva offers the example of a visual perception of a mug as evidence for the belief that 'there is a mug here,' only if there is a hinge in place according to which 'there is an external world,' or 'my senses are reliable.' My belief that 'there is a mug here' is evidenced by my sense perception of the mug. The evidence is itself justified by the hinge 'there is an external world' or 'my senses are reliable.' In other words, for evidence *e* to become justification for one's belief in a visual perception, *v*, a hinge needs to be in place. The hinges, however, are not themselves rationally evaluated; they are, rather, exempt from doubt. Hence Wittgenstein's metaphor of a hinge—"some propositions are exempt from doubt, are as it were like hinges on which those turn" (OC 143). It is part of the regalia of justification that some propositions remain fixed,

⁵³ Hinges and ordinary empirical and logical propositions have some relations. Logical propositions are established by rules, while hinges play a rule-like role. Empirical propositions must be grounded for knowledge, whereas hinges are ungrounded yet constitutive of knowledge.

arational, and certain. Although not rationally evaluated (thus ungrounded), hinges still play a role in the justification for empirical beliefs, like ‘there is a mug here’.

Anna Boncompagni (2021) applies this notion of evidential significance to the case of prejudice. When applying this notion to the case of prejudice, Boncompagni focuses on the epistemology of testimony. In the case of testimony, the piece of evidence is someone’s words. For instance, imagine someone tells me that ‘it will rain tomorrow.’ I can (or cannot) take these words as evidence for the belief that it will rain tomorrow. What grounds this person’s words as constituting a piece of evidence or not, according to Boncompagni, is a hinge related to the reliability of one’s testimony. Belonging to a particular category can affect whether one’s testimony is considered reliable. For instance, the testimony of a child who is not looking outside, who I know is not an expert, would not be justification for the corresponding belief, ‘it will rain tomorrow.’ If the person giving testimony belongs to a respectful category—perhaps I hear it from a meteorologist—then such testimony might constitute justification for the corresponding belief, ‘it will rain tomorrow.’

Boncompagni (2021) suggests a hinge account of identity prejudice is

A hinge that associates a social group and certain disparaging attributes, regulates judgment towards that social group, and displays some (typically epistemically culpable) resistance to counterevidence owing to an ethically bad affective investment. (p. 8)

This account adds a normative element to judgements of credibility, which is absent on Fricker’s view. A hinge that plays a role of evidential significance regulates what can or cannot count as evidence for a given belief. On this view, prejudices “decide whether what a person says has evidential significance” (Boncompagni 2021, p. 9). That is, prejudices “regulate judgment” (p. 8) about the credibility of a person’s testimony on the basis of their belonging to a group with certain social-cultural images (or scripts) attached.

Section V. Stereotypes and hinges

Earlier I suggested that we create stereotypes by following rules of generalizing. The difference between a stereotype and a generalizing rule is that a stereotype can play two roles. A stereotype can function as an empirical generalization—in which case it is linguistically and epistemically synonymous with generic utterances and generalizing rules. Here stereotypes can act like tools, guiding belief-forming judgments in useful ways. Yet a stereotype can also *appear as* an empirical generalization. When stereotypes *appear as* empirical generalizations, it acts as a filter for what can and cannot count as evidence. Indeed, the hinge is needed for evidence to be justification for a belief. In the latter case, stereotypes can evolve into prejudices, such that even when there are good empirical reasons to abandon the stereotype, it remains in place.

When functioning as an empirical generalization—that is, as a tool—the stereotype can be confirmed or disconfirmed by a reasoner. If it turned out that the majority of *f*'s are not *g*'s, or that characteristic, *h*, which we take to be characteristic of a sample is actually not the most characteristic (or is not widely accepted), a reasoner ought to revise belief in a stereotype.

When in the bad case of stereotyping (that is, when stereotypes evolve into prejudices) then the stereotype functions as a norm—that is, as a filter—rather than as an empirical generalization. Negative stereotypes work such that, given certain evidence, e.g. seeing a black woman, the evidence can be taken to support the belief “here is someone aggressive or stubborn.” The insidious aspect of when a stereotype *appears as* an empirical generalization is that one may not revise belief in the stereotype despite evidence to the contrary. When stereotypes work in this way, they seem to function like hinges. Recall that a hinge is needed, on Coliva's account, for evidence to justify an ordinary empirical proposition (or to motivate a doubt about it). For example, the hinge ‘there are physical objects’ is needed for the experience of a mug to provide justification for the belief ‘here is a mug’. When stereotypes are functioning in similar ways as hinges, then stereotypes make possible what can serve as a justification. But they are also not the kind of thing that we are free to reject.

The point is that empirical evidence may not disconfirm a stereotype when the stereotype functions as a norm dictating what will (or will not) count as an element of the class. Indeed, the hinge epistemology framework is quite useful for identifying this feature. Given the normative

nature of stereotypes, the hinge framework explains why, even when presented with contrary evidence, a reasoner may not be free to revise a bad stereotype.

To exemplify how stereotypes and hinges are related, consider a fictitious scenario. To make clear the distinction between stereotyping *as such* and stereotyping that *appears as*, I will separate the two so that we can see the scenario in the good case (stereotypes *as such*) and the bad case (when stereotypes *appear as*).

*AS SUCH: TEACHERS ARE TRUSTWORTHY*⁵⁴

A child develops the stereotype ‘teachers are trustworthy.’ This stereotype is as a tool guiding the child's belief formation that an attribute, *a*, is generalizable to a group, Γ , on the basis that her teacher said “*a* is generalizable to Γ .”

In the good case, we could see the stereotype ‘teachers are trustworthy’ functioning as a tool for making generalizing inferences. As a child meets other teachers, she would likely apply the stereotype, ‘teachers are trustworthy,’ in each meeting. This would likely serve the child well, as it would not close off epistemic horizons and possibly lead to knowledge gain.⁵⁵

Alternatively, we might see the stereotype functioning in the following way.

APPEARS AS: TEACHERS ARE TRUSTWORTHY

A child develops the stereotype that ‘teachers are trustworthy.’ The stereotype filters evidence that would speak in favor of a child's belief formation that an attribute, *a*, is generalizable to a group, Γ , on the basis that her teacher said “*a* is generalizable to Γ .”

⁵⁴ Thank you to Salvador Escalante Diaz Barreiro for initially providing me with this scenario.

⁵⁵ Others have located hinges in trust. Coliva (forthcoming) locates the hinge deeper than at the level of the stereotype. She writes about it as “an attitude of openness” and a “reliance on objects, people, and cognitive faculties.” On this view, the hinge wouldn’t be located in the stereotype, but rather in the attitude of trust.

As I have suggested, when stereotypes *appear as* they act like a filter for what speaks as evidence for a certain category of beliefs. Stereotypes that *appear as* can be helpful, when for instance, a student receives solid evidence for “*a* is generalizable to Γ ” from a teacher. The student is liable to receive not just facts about the world, but also future instances of knowledge on the basis that when the student meets a teacher, she will count as evidence the teacher’s testimony.

This function may work well until, say, the student meets with a teacher who inculcates false beliefs. Imagine in the science classroom, a substitute teacher testifies that some of the information the students have been given is false. Perhaps the substitute inculcates the belief ‘the earth is flat.’ The stereotype would be doing harm. The stereotype dictates that testimony from a teacher is trustworthy, so a student is liable to accept the teacher’s testimony as evidence for the belief ‘the earth is flat,’ even when faced with evidence to the contrary. For instance, a peer may say “this isn’t right!” Yet a student with such a stereotype may ignore counter testimony as evidence if the evidence is not testimony from a teacher.⁵⁶

There are other ways stereotypes that *appear as* can be epistemically harmful. Suppose the student suffers from a traumatic experience with a teacher. The damage could impact the stereotype, such that the stereotype becomes ‘teachers aren’t trustworthy’. The child may then generalize that ‘teachers aren’t trustworthy,’ even in contexts where a specific teacher may be trustworthy. Again, the stereotype acts as evidence which speaks in favor of the belief “this teacher is not trustworthy”. In a context where a teacher *is* trustworthy, then the stereotype is doing no good. It is a kind of epistemic failure for the student may distrust the teacher’s assertion that some *a* is generalizable to Γ , leading her not to accept that fact, when indeed she ought to.

If this account is right, then we can locate the epistemic difficulty when stereotyping. The difficulty pertains to when a reasoner has (or does not have) good reason to overturn a belief in a stereotype when it *appears as* an empirical generalization. A stereotype that *appears as* functions like a hinge, such that it is needed for evidence to speak in favor of a belief. In such cases where

⁵⁶ This runs into peer disagreement. What if two teachers make competing claims, one testifying the earth is flat and another teacher testifying it isn’t? How does a student decide who to listen to? There is much literature on the topic of peer disagreement. See e.g., Coliva and Doulas (2022), Kusch (2021), Christensen (2014), or Enoch (2010).

a stereotype is not an ordinary empirical proposition, given some evidence, a stereotype can be taken as support for a belief. In the above example, the stereotype, ‘teachers are trustworthy,’ is needed for evidence to count in favor that *a* is generalizable to Γ . In the case where a student has a bad experience with a teacher, the stereotype, ‘teachers are trustworthy,’ then, may guide when evidence motivates doubt about an empirical proposition (or speaks in its favor).

Overturing a belief may be important when the stereotype involves an epistemic failure and/or could lead to a moral harm, such as in the case where the stereotype, ‘teachers are trustworthy,’ leads a student to accept a teacher’s testimony as evidence for the belief ‘the earth is flat,’ even if there evidence to the contrary is present. An epistemic problem of stereotyping pertains to when a stereotype functions as a normative guide for whether evidence can be taken as support (or doubt) for some propositional belief. When a stereotype *appears as*, it is unclear if contradictory evidence from a different source would be taken as counter evidence (if, e.g., one believes that all and only teachers are trustworthy). Continuing with the case above, the stereotype not only guides whose testimony counts as relevant evidence, but it also serves to dissuade the student from incorporating prior knowledge or experience from counting as evidence for or against a belief (e.g., against the belief that the earth is flat).

We have a starting point for understanding when one may have warranted reasons to *not* overturn a belief, even when faced with counter evidence. Holding firm to a belief in the face of counter evidence is generally considered an instance of prejudice (as discussed earlier). However, one difference between the epistemic problem of prejudice and the epistemic problem of stereotypes *appears as* is that, unlike prejudice, a subject may have *good reason* to hold firm to a belief in the face of counter evidence. In the good case, stereotypes enable one to gain knowledge from a trustworthy source. Yet when the stereotype *appears as*, it is unclear that it is serving as a good. Indeed, in the latter case, stereotyping may be deeply problematic when the stereotype evolves into a prejudice, which could lead to an epistemic failure or moral harm.

Conclusion

Earlier we distinguished between stereotypes that can *appear as* an empirical generalization from stereotypes *as such*. The difference between a stereotype *as such* and a stereotype that *appears as* is that a stereotype *as such* is an empirical generalization. An empirical generalization can be confirmed or disconfirmed and, I have suggested, empirical generalizations are constitutive of our epistemic practices. This means that stereotypes are also constitutive of our epistemic practices as well. Since stereotypes are constitutive of our epistemic practices, it is important that an account of stereotypes is framed in such a way that epistemic failure is not essential. The account I have outlined here does just that.

I started by motivating a neutral account of stereotypes. I considered what rules underpin stereotyping by making a cross-comparison with the rules that guide generic statements. Hinge epistemology provided a way to look at the norms that when evidence amounts to justification for a belief. I suggested that, when stereotyping, there are hinges that guide belief-forming processes. Following Coliva (2010), I sketched an account of hinges that function as rules of evidential significance. When a hinge functions as a rule of evidential significance, it dictates what can or cannot count as evidence. In the case of stereotyping, when a stereotype *appears as* an empirical generalization, it functions as a hinge such that it needs to be in place for evidence to become justification for one's belief.

What does this account get us? The nice thing about this account is that it maintains a neutral stance while also explaining the normative function of stereotyping. The neutral account of stereotyping makes plain that stereotyping is part of basic reasoning practices. The account also shows that there can be problems with stereotyping even when an epistemic failure is not involved. We located a genuine epistemic problem of stereotyping. When there is no defeater for applying a generalization in a specific context, a reasoner may be justified in retaining his/her belief in a stereotype. This reflects an epistemic problem that arises when a reasoner must judge whether counter instances are applicable to disconfirm a generalization when applied in a particular context. The problem is that a reasoner may hold firm to a stereotype in the face of counter evidence if the stereotype is functioning as a hinge that guides what evidence is relevant.

CONCLUSION

I introduced this dissertation project with the view that beliefs are interconnected in a system. Such a view underpins the epistemological systems of Quine and Wittgenstein. The interconnection of our beliefs makes sense, as well, in a broader conception of the interconnection of the human condition. To make clear what I am getting at, consider an analogy with the view that social reality is interdependent. Martin Luther King Jr. visually captured this point when he said, in his 1967 Massey Lecture #5 (Christmas Sermon on Peace):

It really boils down to this: that all life is interrelated. We are all caught in an inescapable network of mutuality, tied into a single garment of destiny. Whatever affects one directly, affects all indirectly. We are made to live together because of the interrelated structure of reality.

Did you ever stop to think that you can't leave for your job in the morning without being dependent upon most of the world? You get up in the morning and go to the bathroom and reach over for the sponge, and that's handed you by a Pacific Islander. You reach for a bar of soap, and that's given to you at the hands of a Frenchman. And then you go into the kitchen to drink your coffee for the morning and that is poured into your cup by a South American. And maybe you want tea: that's poured into your cup by a Chinese.

Or maybe you desire to have cocoa for breakfast, and that's poured into your cup by a West African. And then you reach over for your toast, and that's given you at the hands of an English-speaking farmer, not to mention the baker. And before you finish eating breakfast in the morning, you've depended on more than half the world.

This is the way our universe is structured. It is its interrelated quality.

We aren't going to have peace on earth until we recognize this basic fact of the interrelated structure of all reality.

Dr. King speaks to the reality that all human beings rely on each other to live. The walls that surround me, the table I am writing from, the paved paths outside my door, the streets we drive on, the bowls we eat from, the food we eat are not of my own doing. These are made from the labor of others. In just this way, knowledge is shared. Knowledge, whether it be about numbers or social experience, is gained via shared communicative pathways. Our thinking routines help us navigate those pathways. Thinking routines help us discern when to incorporate new information or when to discard it, when an interlocutor is trustworthy or untrustworthy. How do we know when our thinking routines are following the right patterns for incorporating information and trusting others?

In the first chapter, I developed the concept of epistemic disadvantage, which characterizes reasoning processes that are warranted, but can lead to epistemic harms. In the second and third chapters, I conceptualized how epistemic disadvantage is prompted by proper evidential reasons. In other words, when a speaker disadvantages a hearer, the lines of reasoning are useful in morally just (or neutral) conditions. It is only in environments where a hearer is harmed that we question the line of reasoning.

The first step in this analysis was to locate an epistemic framework that could lend insight into how beliefs function in evidential reasoning practices. Evidential reasoning is used when deciding whether some fact, f , ought to stand as evidence, e , for a hypothesis, h . Evidential reasoning functions, in part, with assumed background beliefs. Assumed background beliefs inform why one does or does not believe f as e for h . A domain in which this is most apparent is the science of medicine. Many choices that physicians make, both with research and during clinic hours, depend on background beliefs that inform an overall picture of the world.

To illustrate this, recall the following scenarios from the Curare Case:

- (1) Physicians used curare to sedate patients during surgery. Afterward, patients testified that they experienced pain while in surgery. Yet recent testimony from other physicians

extolled the benefit of curare as an analgesic. Valuing the testimony of fellow experts over their non-expert patients, physicians did not believe patients' reports of pain.

(2) Part of the mistake in the physician's reasoning at the time can be attributed to how blood pressure was monitored. Blood pressure and heart rate both increase when in pain. In the 1940's, without the benefit of continuous EKG monitoring, intraoperative blood pressure and heart rate were monitored every 20-30 minutes, as opposed to every 3-5 minutes, which is the standard of care today (Pardo and Miller 2017). Without taking these vital signs, it was impossible for the evidence (high blood pressure equating to increased pain) to be properly evaluated by physicians.

(3) Physicians' explained patients' reports of pain by appealing to beliefs which, if not false, were at least misleading, as such beliefs were ultimately not pertinent to the case at hand. They associated patient testimony about pain with a belief that 'pain modality is variable from patient to patient.' Indeed, physicians attributed the complaints of pain to dissociation or 'emotional stress' after surgery.

In context (1), epistemic norms governing how information is acquired (and generated) in the medical field influenced the testimonial channel such that physicians valued fellow expert testimony over non-expert patients. Norms governing acquisition activities provide (to borrow John Greco's phrasing) a "gatekeeping function" in which experts employ certain norms that exert a kind of "quality control" that allows only the best information into the system (2020, p. 39).

In context (2), physicians did not correctly associate an increase in blood pressure with pain (because they lacked the proper medical technology). The state of affairs (increased blood pressure) was not taken as evidence for the hypothesis (that patients are in pain). The third context is a classic case of inference to the best explanation. If physicians believed that complaints of pain pointed to 'emotional stress' after surgery, then physicians will take the presence of pain as evidence of 'emotional stress'. Yet the same state of affairs could have been taken as evidence for a different hypothesis. Suppose that physicians believed not that pain is

evidence of emotional stress, but that it is evidence the numbing agent was ineffective. Physicians will then take pain as evidence for an ineffective numbing agent. The same state of affairs can be taken as evidence for different hypotheses.

These three contexts demonstrate (1) how norms regulate behavior, (2) when a state of affairs is ruled out as probable evidence for a hypothesis, and (3) when the same state of affairs can plausibly account for two different hypotheses. Since norms play a role in background beliefs of evidential reasoning, hinge epistemology provided a good framework to describe how beliefs systematically interact with each other.

There are some interesting questions that stem from this dissertation project. For starters, Coliva's (2010) exposition of hinges brings out the way in which hinges can have more than one role. She suggests that hinges can be rules of evidential significance or meaning-constitutive rules (2010, p. 10). Some hinges can have a double role, while others may play just one. Depending on the context, the role(s) of a hinge can change. In this dissertation project, I described the ways in which the rules underpinning stereotyping function as rules of evidential significance. What would it look like for the rules underpinning stereotyping to function as meaning-constitutive rules? More broadly, what makes it the case that specific rules are associated with particular expressions in a language? Are there domain-specific differences in the association between rules and expressions? How can we be aware of these rules, such that we can properly confirm or disconfirm them in a given context?

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