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The Epistemic Benefits of Worldview Disagreement

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Abstract:

In my recent book, *The Epistemic Benefits of Disagreement* I develop a defense of non-conciliationism, but one that only applies in research contexts: Epistemic benefits are more likely in the offing if inquirers stick to their guns in the face of disagreement (2020). I aim to expand my original account by examining its implications for non-inquiry beliefs. I'm particularly interested in broader worldview disagreements. I want to examine how inquirers should react upon discovering that they disagree about the truth value of a particular proposition because they disagree about a whole host of related propositions. I argue that in many ways, worldview disagreements are easier to work with than disagreement over isolated propositions, in part because it is easier to provide a set of criteria by which to evaluate worldviews. I conclude that my original argument can, at least in part, be successfully expanded to include worldview disagreement.

1. Introduction

In my recent book, *The Epistemic Benefits of Disagreement* I develop a defense of non-conciliationism, but one that only applies in research contexts (2020).¹ Epistemic benefits are more likely in the offing if inquirers stick to their guns in the face of disagreement. I point to numerous examples, particularly in the history of science to help demonstrate that this is the case. I also suggest there is some empirical evidence, albeit inconclusive, for my claims. However, I also say none of this guarantees there won't be epistemic losses. Rather, this is the best method for ensuring epistemic success in the long run. I aim to expand my original account by examining its implications for broader worldview disagreements. Much of my book focuses on two inquirers who disagree about the truth value of one particular proposition. But I want to now examine how inquirers should react upon discovering that they disagree about the truth value of a particular proposition because they in turn disagree about a whole host of related propositions. I argue that in many ways worldview disagreements are easier to work with than isolated propositions, in part because it is easier to provide a set of criteria by which to evaluate worldviews. It's thus easier to avoid the objection that appeals to future epistemic benefits risk licensing irrational dogmatism. But this ultimately involves a type of inquiry. Such worldview evaluation, if done sincerely, can yield similar epistemic benefits to the ones I have in mind in the book. I thus conclude that my original argument can, at least in part, be successfully expanded to include worldview disagreement, though not necessarily outside of research contexts.

2. The Epistemology of Disagreement

¹ All self-identifying references in the manuscript were diligently removed during the peer-review process, in compliance with the journal guidelines.

Suppose Sally and Jane are asked to evaluate the truth value of proposition P. Let's stipulate that they're both equally competent with respect to whether P (more on this later). Sally reflects on the relevant evidence and comes to believe P. Jane, on the other hand, examines the relevant evidence and comes to believe not-P. Now let's suppose that Sally and Jane both become aware that they disagree with one another. The epistemology of disagreement literature asks what Sally and Jane each are epistemically required to believe with respect to P. The literature thus wants to know whether the existence of peer disagreement constitutes (partial) defeat for P. Conciliationists argue that both Sally and Jane are required to conciliate in the face of disagreement and hence revise their respective beliefs (Christensen 2007; Elga 2007; Feldman 2007). The existence of peer disagreement, then, is a defeater. Weak conciliationists might say that while Sally needs to move toward not-P and Jane needs to move toward P neither need to move to such a degree as to have the rationality of their initial beliefs defeated. Strong conciliationists say that both must revise their positions such that their initial beliefs are now irrational (Matheson 2015). This response to disagreement, if true, has highly sceptical results. Much of the literature spends time either attempting to defend strong conciliationism or attacking it. The other main view is non-conciliationism which holds that neither Sally nor Jane are required to revise their initial beliefs (Bergmann 2009; Kelly 2005). Peer disagreement, as such, isn't a defeater. Finally, there are a few minority positions which claim that depending on the details of the specific case, Sally and/or Jane may sometimes be required to conciliate and sometimes be permitted to remain steadfast (Lackey 2010; Kelly 2010).²

² Some philosophers have also suggested that much of the disagreement in philosophy is verbal only (for more see Ballantyne 2016 and Chalmers 2011). Thus, apparently genuine disagreements are really only disagreements about terminology. But as long as there are at least some genuine, non-verbal

3. Loughheed on Epistemic Benefits of Disagreement

My target in my book is strong conciliationism. I aimed to show that, at least within the context of inquiry, it's often epistemically rational to remain steadfast in the face of disagreement. I thus aimed to show that strong conciliationism is often false within the context of inquiry. And I understood my argument to be a development of one initially gestured at by Catherine Elgin (2010). For my purposes I need to briefly summarize the main thrust of the argument I offer in the book.

Let's now suppose that Sally and Jane are two scientists who disagree about whether P. Let's further suppose that their research is primarily concerned with whether proposition P is true. I suggest that many definitions of epistemic peerhood are too strict or too broad (2020, Ch.3). They are too strict if they require that Sally and Jane need to be exact cognitive and evidential equals with respect to whether P. For no two people in the real world are ever *exact* cognitive and evidential equals (this is especially so if one's cognition is, at least partly, a result of one's entire life history). Thus, strict notions have it that epistemic peers are closer to something like epistemic clones which is implausible (Elgin 2018, 15). Broader definitions of peerhood are looser in saying that peers need only be approximate cognitive and evidential equals. Yet this is problematic too because even slight cognitive or evidential differences could explain why Sally and Jane disagree in the first place. Suppose Sally has just one very small piece of additional evidence regarding P that Jane doesn't possess. This would be important

disagreements in philosophy then what I say applies to those disagreements. Likewise, even there only verbal disagreements in philosophy what I argue in this paper will still apply to those disciplines in which genuine disagreement exists.

because it could be the *decisive* piece of evidence regarding P. If this is right, then it's difficult to see why we should treat Sally and Jane as evidential equals with respect to P (and hence difficult to see why we should treat them as epistemic peers with respect to P). My proposed solution is what I call 'Sceptical Epistemic Peerhood'. I claim that if neither Sally nor Jane have any reason to suppose the other person has worse evidence or cognition with respect to P, they should treat each other as if they are epistemic peers. If Jane were to cite the disagreement about P itself as the reason to downgrade Sally from the status of peer, it would unfairly beg the question against Sally. Likewise, the very same strategy is also open to Sally (Lougheed 2020, 52-53). Appeals to the disagreement itself do not establish a relevant epistemic asymmetry.

After establishing how two researchers like Sally and Jane can properly be considered epistemic peers, I provide the main argument of the book. I claim that Sally is justified to remain steadfast that P (and Jane that not P) if she reasonably believes that there are epistemic benefits in the offing if she remains steadfast that P. This means continuing to inquire whether P and operate as if it is true in related inquiries. I argue that, minimally, the individual researcher herself must have access to the long-term epistemic benefits (or reasonably believe she will have access to them) in order to rationally believe P in the face of disagreement. It would be a bonus for Sally if there are short-term epistemic gains and her research community also benefits. In sum, I hold that (i) remaining steadfast in the right sort of cases really will yield positive veritistic results but also (ii) cognitive diversity is in general a good methodological approach to success inquiry.

I further offer a number of reasons in defense of this argument, what I call 'The Benefits to Inquiry Argument'. I begin by offering four different examples where disagreement between scientists resulted in epistemic benefits. Ignaz Semmelweis was a doctor in the 19th

century who believed there was a correlation between hand-washing and infant mortality rates. However, bacteria had not yet been discovered and his colleagues ridiculed him for his belief. Semmelweis persisted in defending his position with rigour. While it's true the benefits were gained until after his death, his work was influential (Lougheed 2020, 65-67). I also mention Darwin and Galileo as inquirers who remained steadfast in the face of disagreement and because of this there were epistemic benefits in the offing. Finally, I also cite a current case of disagreement about whether footprints discovered on the coast of Greece are indeed footprints. Given the age of these footprints, if they really are *ad hominin* footprints it would disconfirm the theory that human life arose (exclusively) in Africa. Even though this dispute is not settled (and we may well never have enough information to resolve it), that the disagreement helps various anthropologists and geologists think more carefully about their respective positions. This is, itself, an epistemic benefit to remaining steadfast in the face of disagreement (Lougheed 2020, 68-69).³

There is also some empirical evidence for the Epistemic Benefits to Inquiry Argument. Scott Page argues that when certain conditions are met (e.g. the problem is sufficiently difficult) heterogeneous groups of less talented individuals *always* outperform homogeneous groups made up of more talented individuals with respect to problem solving and prediction (Lougheed 2020, 70-71; Page 2004). Hugo Mercier and Dan Sperber have argued extensively against the dual processing theory of mind (2017). Instead, they defend the *Argumentative Theory of Reasoning* which suggests that while humans aren't necessarily good at constructing arguments for what they believe (just think of all of the cognitive biases we now know about), humans are quite good at thinking of objections to arguments offered by other people. The adaptive purpose of

³ I realize that this argument requires epistemic consequentialism to be true and I defend it in the book. See Lougheed 2020, 96-100.

argumentation is persuasion and hence effective communication. It's also about helping people establish who they are able to trust. While this theory is highly controversial, if it is correct, then it constitutes empirical support for the Benefits to Inquiry Argument (Lougheed 2020, 73-77).

The most important objection that I respond to is the one claiming my argument shows that remaining steadfast is practically rational but not epistemically rational. I answer this objection by stating the relevant difference is between synchronic epistemic reasons and diachronic epistemic reasons, and not between practical and epistemic reasons. Epistemologists are almost exclusively concerned with synchronic epistemic reasons. However, when diachronic epistemic reasons are taken into consideration (whether on their own or as part of an all-things-considered epistemic rationality) the Benefits to Inquiry Argument succeeds (Lougheed 2020, 94-107).

There are a number of places where one might be tempted to press my argument. For example, while I acknowledge the possibility of negative epistemic results as a real consequence of the argument, I never provide extensive details with how one might avoid them. How does Sally know whether she is in the right type of disagreement such that continuing to believe P won't make her epistemically worse-off in the long run? Likewise, while I address the objection that my argument is only about practical reasons, we might push back on the relevance of the distinction between synchronic epistemic reasons and diachronic epistemic reasons. Even if my response succeeds it does so on the assumption that some version of epistemic teleology is correct, which is far from uncontroversial. Furthermore, while I also mention different doxastic states, and argue that the benefits will be strongest if Sally really believes P (as oppose to merely accepting or entertaining P), we might wonder whether this

assessment is empirically well-informed. After all, it is an (in principle) empirical question whether tentative doxastic states could yield the same positive veritistic results. While these would make interesting paper topics, I'm going to pursue a different line of thought. Instead of examining potential objections to my argument, I want to explore whether it could be expanded beyond research contexts. In other words, let's grant that main thrust of my argument in the book is right (i.e. that we could fill-in the required details and answer important objections). The question I want to pursue here is this: can the Benefits to Inquiry Argument be expanded to contexts outside of inquiry?

4. Non-Inquiry Disagreement

In this section I examine whether the Benefits to Inquiry Argument can be successfully expanded beyond research contexts. There are three different sort of non-inquiry beliefs I have in mind.

4.1 Expanded Research Disagreements

One way that a belief could be considered to be 'outside' of a research context is by supposing that because Sally and Jane disagree about P they likely disagree about many other inquiry beliefs related to P, say, Q, R, S. When combined together, these beliefs constitute a large and important part of their respective worldviews. They could be essential parts of their worldviews such that if they were to give them up or change them significantly, then it would be appropriate to say they have adopted an altogether different worldview. For instance, suppose Sally and Jane disagree about whether incarceration is the most just way of dealing with perpetrators and

victims of crimes. It's easy to imagine them disagreeing if it turns out that they disagree with many other more fundamental questions of justice. And of course, issues fundamental to justice will further connect to many other important beliefs.

4.2 Trivial Non-Inquiry Disagreements

Another way that a belief could be outside of a research context is that it is about a disagreement straightforwardly not about inquiry. This would be one in which Sally and Jane aren't disagreeing in their capacity as scientists. Suppose they disagree over the score of the hockey game played yesterday. Sally believes proposition M which represents the proposition that 'the Toronto Maple Leafs defeated the Boston Bruins on April 19th, 2019 by a score of 2 to 1'. Sally believes not M, claiming that the Bruins won the game. This isn't, in any clear sense, a research context even though Sally and Jane can inquire into whether M (i.e. they could easily find the score of the game on the internet).

4.3 Non-Trivial Non-Inquiry Disagreements

We might think that the score of a hockey game is trivial (though as a Canadian I object!) and that disagreements about such trivial topics aren't that interesting. I'm not going to offer necessary and sufficient conditions for when a belief is non-trivial versus trivial; there will be vague and difficult cases. Likewise, what is trivial and non-trivial could ultimately be (at least partly) subject dependent. But let's just suppose that the distinction between trivial and non-trivial non-inquiry beliefs is indeed genuine. Here's an example of disagreement about a non-

inquiry belief that isn't trivial: Suppose Sally attends her local church and finds herself in disagreement with much of the priest's homily. Sally isn't really in a research context when she attends church. She might be attending with a sincere desire to learn, but she will be given or taught the relevant information as opposed to learning through her own inquiry. She's not inquiring as such. Yet such religious disagreements may well amount to broader worldview disagreements. This is true both at the level of inter-religious disagreement and intra-religious disagreement. By this I mean the disagreement between Sally and her priest might indicate that they disagree about a whole host of other propositions.

4.4 Clarifying the Types of Disagreement

It should be clear by now that I'm not just interested in disagreements about propositions outside of research contexts. Rather, I'm most interested in such disagreements that turn out to represent broader worldview disagreements (i.e. the two peers discover that their initial disagreement amounts to disagreement about many other interrelated propositions). This is because it's easier to motivate my original argument about the epistemic benefits of disagreement with respect to worldviews as opposed to individual propositions. In my book I'm most concerned with disagreements about individual propositions within the context of inquiry. I now turn to interested in disagreements in non-inquiry contexts that amount to broader worldview disagreements.

I'm not taking a firm stand on how to carve up these categories. There may be overlap and vague cases. Surely there are other ways to categorize them too. But grant, for the sake of argument, that at least some disagreements amount to overarching worldview disagreements.

Also grant that there is a meaningful difference between trivial and non-trivial disagreements. I thus want the reader to suppose that Sally and Jane discover that they disagree about a whole host of interrelated propositions, not just P. Their disagreement over the particular proposition P is just an instantiation of their broader worldview disagreement.

4.5 What is a Worldview?

I won't attempt to offer necessary and sufficient conditions for what constitutes a worldview. Minimally, W is a worldview for an agent if it represents a significant number of important propositions for that agent. It must be the framework in which an agent interprets and understands the world around her. If a worldview is the totality of propositions one believes, then each person has a unique worldview. But this is too fine grained for my purposes. For there is overlap between many different worldviews. For example, many different people accept the theory of gravity or theory of general relativity while it being intuitively true to say that many of these same people hold very different worldviews. When there is enough overlap between the propositions two agents hold, we can say they share the same worldview, even though they do not agree on every proposition. It may help to think of a worldview as a web of beliefs. Almost all of our webs overlap with one another's, but they do so to varying degrees. While this description of what constitutes a worldview lacks certain details, it is sufficient for my purposes. I'm optimistic that what I say in the following will be consistent with many different understandings of worldviews. I now want to briefly explain how a disagreement between Sally and Jane about P might ultimately amount to a broader worldview disagreement.

5. The Epistemic Benefits of Worldview Disagreement

Now that we have a sense of what a worldview disagreement might look like we can continue to ask whether my original Benefits to Inquiry Argument can be expanded to include them. The answer is, I think, clearly ‘yes’. There is a plausible sense in which it could be expanded accordingly. What I say here is intended to apply to what I’ve called ‘expanded research disagreements’ and ‘non-trivial non-inquiry disagreements.’ I won’t concern myself with ‘trivial non-inquiry disagreements.’

Suppose Sally and Jane discover that their disagreement about P is ultimately a result of their disagreement over a whole host of interrelated issues. It’s easy enough to see how this could occur. Maybe Sally and Jane are both cosmologists who seek to explain the origin and beginning of the universe. Sally is an atheist and so doesn’t believe God exists, such that on her view God can play no creative role in the universe. But Jane is a theist who thinks God created the universe. Clearly, then, they don’t just disagree about the origins of the universe. When Sally and Jane discover they are in such a situation they cannot point to their broader disagreements as a reason to remain steadfast. This is because the other propositions under dispute are also subject to rational evaluation (more on this later). Likewise, Sally and Jane are both entitled to make this move. Jane can’t say ‘of course I disagree with Sally about the truth value of P. We disagree about the origins of the universe because we disagree about whether God exists’. This *explains* the existence of the disagreement but doesn’t show that either can remain steadfast. The strong conciliationist will simply maintain that the disagreement is now pushed back to those other propositions.

I argue that remaining steadfast in one's worldview, at least in the context of research, can also yield positive veritistic results in the same way my original argument claims doing so can with respect to individual propositions. Consider the following argument I call the Benefits of Worldview Disagreements Argument:

- (1) If agent *S* encounters epistemic peer disagreement over proposition *P* and subsequently discovers that disagreement over *P* entails a disagreement over her worldview *W* (a set of propositions including *P*), then in order to rationally maintain *W* she should examine whether *W* is theoretically superior to the competing worldview.⁴
- (2) If *S* evaluates the theoretical virtues of *W*, then *S* will gain a better understanding of *W*, including being better informed about the truth value of *W*.
- (3) *S* discovers an epistemic peer who believes not-*P*.
- (4) *S* subsequently discovers that the disagreement about whether *P* entails a disagreement between two competing worldviews *W* and *W**

Therefore,

- (5) In order to rationally maintain *W*, she should examine whether *W* is theoretically superior to *W**

Therefore,

- (6) *S* should evaluate the theoretical virtues of *W*.

Therefore,

- (7) *S* will gain a better understanding of *W*, including being better informed about the truth value of *W*.⁵

⁴ Robert Mark Simpson Simpson speculates that a similar principle may be true: [W]hen someone believes [a worldview *W*], she should evince a robust kind of personal commitment to [W]. This means being prepared to defend [W] by stating the case in [W's] favour, but it also means – perhaps more importantly – making it one's business to rebut the arguments and reasons that others adduce in their cases against [W]. When an individual [believes *W*], on this view, this makes her a committed stakeholder in the discourse about [W]. She cannot just think of herself as a spectator waiting to see how the case for or against [W] pans out and adjust her views as necessary (Simpson 2013, 570).

⁵ Of course, *S*'s epistemic peer will also gain these benefits with respect to their own worldview. While for the sake of simplicity I'm just focusing on one of the peers, the argument is that *both* peers will benefit.

Now, the question remains whether this can also apply to non-inquiry beliefs. Suppose Jane is attending her local Mosque and the Imam says something about Islam that she believes is false. The disagreement here too could be the result of broader disagreements. Or, more to the point, maybe Jane encounters disagreement about her belief that God exists while chatting informally with her work colleague, Bill, over lunch. She discovers Bill is a naturalist and hence does not believe that there is a God. Let's suppose that after more discussion they both affirm that they are epistemic peers with respect to the question of whether God exists.⁶

It's difficult to see how the epistemic benefits associated with worldview disagreement could obtain if *no inquiry* is taking place. While in this situation Jane and Bill aren't acting as researchers, remaining steadfast could perhaps be justified if the disagreement prompted them to explore (i.e. research) their respective positions in more detail. If the disagreement triggers a sort of re-evaluation of their respective worldviews, then maybe the Benefits to Worldview Disagreement Argument can properly be said to apply in such cases. Perhaps one might object that it is likely only those with certain psychological dispositions will find themselves wanting to conduct inquiry into their beliefs upon discovering disagreement. The scope of the argument, then, is limited in applying only to a small number of people. But this conflates the descriptive with the normative. I'm making a claim about what agents *ought* to do upon discovering they're in a worldview disagreement, regardless of whether they are so inclined.

So let's say P is interconnected to many other propositions and hence should be considered an important part of S's worldview. When S encounters a peer who believes not-P and subsequently discovers her peer's worldview is W* there now exists a disagreement between the truth of W or W*. In the real-life disagreements I am interested in, there will be

⁶ That is, they are epistemic peers according to my conception of peerhood, Sceptical Epistemic Peerhood.

numerous disagreements that are ultimately worldview disagreements.⁷ Finally, I do not deny that a worldview can (and indeed probably does) contain certain doxastic attitudes that are not reducible to propositions. But in order to make meaningful epistemic evaluations, the comparison has to be between competing truth values of a proposition. Notice that while this argument does not require that an agent necessarily modify her beliefs in the face of disagreement, she does have an obligation to examine the theoretical virtues of W. This may or may not lead to a change in particular beliefs, enough of which may constitute a change in worldview.

The most promising way to understand worldview evaluation is by taking the *best* version of the worldview in question and subjecting it to objective criteria.⁸ Two peers always have different bodies of evidence for their worldview. However, it does not follow that their worldviews cannot be scrutinised using objective criteria. When a worldview disagreement occurs between two agents, they ought to consider the best idealized version of each worldview. This means using the best public evidence and reasons available in support of the view in question. Finally, the best version of the worldview in question should be subjected to the evaluative criteria I outline later in the next section.

Premise (1) is the first controversial premise. It is the consequent of (1) that warrants the most explanation in the argument. Why think that the rationality of W depends on how it exemplifies various theoretical virtues? I have two primary responses to this question. First, consider that worldviews are, at least in part, *explanations* of the features of the universe.

⁷ This claim is, I suppose, ultimately subject to empirical scrutiny.

⁸ I'm using 'objective' here for the sake of simplicity. But I don't mean anything more than what the parties all agree upon (i.e. I just mean intersubjective agreement).

Worldviews are comprehensive theories about the universe. They are theories of everything.⁹ For every (or almost every) fact in the universe, a worldview will have an explanation of the fact in question.¹⁰ Second, there could be other things required of S in order to rationally maintain W. To my mind, understanding worldviews as theories is the simplest and most accurate way to compare competing worldviews. But I do not deny it might be necessary to employ other methods. Thus, I claim that examining the theoretical virtues of W is sufficient for the rationality of W, though perhaps not both necessary and sufficient.

The other controversial premise is (2). Why think that if S evaluates W, she will gain a better understanding of W, including being better informed about the truth value of W? While (2) is not as controversial as (1), it does require further explanation. In the next section I motivate the argument by discussing its connection to the Benefits to Inquiry Argument. I conclude by offering criteria for how an agent might evaluate worldviews which also explains (1).

7. Worldview Evaluation

⁹ I'm using a rather restricted understanding of worldview to emphasize the interconnectedness of beliefs. However, less restrictive definitions could apply to views like Marxism or Liberalism. These are worldviews in the sense that they provide explanations of a broad range of phenomena, particularly with respect to human behaviour. I think that with some modifications, the Benefits of Worldview Disagreements Argument could apply here too. Thanks to an anonymous referee for pressing me on this point.

¹⁰ The language of facts is possibly misleading. For instance, some worldviews will deny that there are any moral facts. But there is still the fact of the existence of certain moral intuitions that the worldview will have to explain. This will involve telling a story that accounts for the existence of moral intuitions while showing how this is consistent with there being no moral facts.

Perhaps the most important question regarding the Benefits of Worldview Disagreement Argument is about what it means to inquire into the truth of a worldview. In answering this question, I will show (i) how epistemic benefits could arise from such inquiry and hence (ii) what an agent should do upon discovering a worldview disagreement. Before proceeding, however, I want to explain a principle that in the book I refer to as the ‘Giving Up Principle’ (from here on ‘GUP’). This principle, when violated, is supposed to inform the inquirer in question that remaining steadfast in their initial belief is epistemically irrational. It’s supposed to inform the inquirer when epistemic benefits from remaining steadfast aren’t in the offing. Here’s how I formulate it:

An agent is irrational to continue to believe proposition P when reasons she is aware of ought to convince her that her belief in P is mistaken (Lougheed 2020, 64).

I realize now that I never really offers an explicit set of criteria for when GUP obtains. While this doesn’t show that GUP is false, it does raise the worry that it’s uninformative. For surely an agent ought not to believe what is false. But the very question is whether peer disagreement provides such reasons. Or put differently, the worry is that GUP offers this sort of advice: ‘only remain steadfast in the face of disagreement when there are epistemic benefits in the offing and refrain from doing so when there are no epistemic benefits in the offing’. Thus, it doesn’t tell us specifically how to identify whether such epistemic benefits are in the offing.

This section thus represents not only an expansion of my original argument, but plausibly a *better* argument than the one I offer in the book. Why? Because it is easier to identify a set of criteria by which to evaluate worldviews than it is to identify a set of criteria to evaluate individual propositions. In expanding my original argument beyond individual propositions to worldviews the argument is easier to formulate because it’s easier to explain how a principle like GUP applies to it. I’m now going to briefly discuss the sort of criteria I have in mind. These

criteria are not intended to be comprehensive. Rather, they are intended to show why it is more reasonable to pursue worldview evaluation as opposed to evaluating individual propositions.

The first criterion I offer is coherence. There are two different types of coherence. First, *external coherence* is about how well a worldview coheres with the most up-to-date scientific knowledge (Vidal 2012, 319). Fit with scientific knowledge can be parsed out in many ways, including but not limited to, explanatory scope, fit with current data, simplicity, internal consistency, and predictive power. I will say more about some of these below. Second, *internal coherence* is about how well the propositions within a worldview cohere with one another. If it could be demonstrated that a worldview is logically inconsistent, then one would be irrational to continue to believe the worldview in question.¹¹ But logical inconsistency is rarely, if ever, shown to explicitly apply to worldviews. It is more common that tensions exist between particular propositions within a worldview, as opposed to outright logical contradictions.

Another criterion is *explanatory scope*. The more phenomena that a worldview can explain, the better. All else being equal, a superior worldview will explain more than its competitors. Explanatory scope can be all encompassing or subdivided into different areas. In other words, one worldview might do better at explaining one set of data, but worse than another at explaining a different set of data. All else being equal, the worldview that provides correct explanations on the largest number of topics should be considered superior with respect to explanatory scope. Of course, all else will not be equal if certain topics are more important than others. Thus, simply tallying the total number of topics each worldview can explain better than its competitors will not necessarily provide the most accurate results. Additionally, *fit with*

¹¹ This is disputed by paraconsistency advocates (e.g. Graham Priest). Likewise, some have also objected to coherentist theories of justification on the basis that logical consistency is actually too high a standard to meet.

current values is an important virtue too. For some worldviews will fit better than others with the current values affirmed by the topic in question.

Simplicity is a theoretical virtue and different worldviews vary in their complexity. There are different types of simplicity, including “descriptive simplicity (how easy it is to state the theory), simplicity of hypotheses, inductive simplicity (e.g. using ‘straight rules’, or some such), simplicity of postulated laws, formal simplicity, and so on...” (Nolan 1997, 329). As part of simplicity, qualitative parsimony is often considered a theoretical virtue. Qualitative parsimony refers to the number of *kinds* of entities that a theory postulates to explain various phenomena. More controversially, quantitative parsimony might also be considered a virtue. This is the idea that it is better – all else being equal – to postulate a fewer *number* of entities themselves as part of an explanation (Nolan 1997, 330). In addition to simplicity *predictive power* is a virtue, all else being equal. A superior worldview will have better predictive power than its competitors.

The initial description of the objective criteria emphasised fit of the worldview with current scientific knowledge. But the objective criteria can be broadened in scope. It could plausibly include how well the worldview fits with both empirical facts and non-empirical facts. Discussion of disagreement naturally tends to highlight the differences between worldviews. But there is actually much more agreement between many competing worldviews than disagreement. The disagreements are highlighted because they are discussed more than topics of agreement. But there is widespread agreement about many non-empirical facts. How a worldview explains and fits with these non-empirical facts is just as important as how it fits with empirical facts. Consider that there is widespread agreement about the existence of things

like evil, goodness, pain, pleasure, beauty, love, truth, and falsity.¹² Certain worldviews will better explain the existence of these facts than others. This description of theoretical virtues is brief and there are no doubt complexities here. Philosophers of science have offered much more detailed accounts of these different virtues, along with sometimes arguing a particular virtue should be rejected. However, for my purposes this discussion suffices to show that it is easier to offer a set of criteria by which to evaluate a worldview than an individual proposition. Finally, while I have spoken much of ‘fit’ with various facts in explaining the evaluation it’s important to remember that one benefit of all this evaluation is that the agent will be better positioned to discover whether her worldview is true or false.

8. Avoiding Dogmatism and Promoting Epistemic Benefits

This argument about the benefits of worldview disagreement does a better job of avoiding the potential for dogmatism than my original Benefits to Inquiry Argument. This is because I have offered criteria by which to evaluate worldviews, while I failed to offer any such criteria with respect to GUP. The application of my expanded argument, then, to real-world cases of worldview disagreement is easier to make than the one discussed in my book. In light of all this we might reformulate the ‘Giving Up Principle’ to:

**The Giving Up Principle: An agent is irrational to continue to believe worldview W when an evaluation of W in light of theoretical virtues ought to convince her that her belief in W is mistaken.*

¹² It is impossible to create a list that will be uncontroversial amongst philosophers. Still, if one is a realist about any other domain outside of science, they will have to admit non-empirical facts into their ontology.

Finally, one might rightly demand more specific information about the purported epistemic benefits of worldview evaluation. The first sort of epistemic benefit is that of simply gaining true beliefs and avoiding false beliefs. However, there will likely be cases of worldview disagreement that two opponents will be required to give up or significantly modify their worldviews. Yet there are still epistemic benefits to be gained from the very process of re-evaluating one's worldview. One of these epistemic benefits is that of increased *understanding*. In recent years epistemologists have given increased attention to the phenomenon of understanding as opposed to knowledge.¹³ For someone might be said to know a lot but understand very little. Understanding involves grasping different concepts and how they relate to one another. Thus, agents will gain a better understanding of their worldview by weighing it against different theoretical virtues. This is clearly an epistemic benefit. Finally, if one doubts understanding is suitably epistemic, remember that the process of evaluation is also about truth and falsity. The person in question is better able to know whether her worldview beliefs are *mistaken*.

8. What if Worldview Disagreements are Deep?

Some say that worldview disagreements are 'deep', and this is sometimes meant to imply that they are not subject to rational resolution. The concept of deep disagreement arises in Wittgenstein's *On Certainty* where he argues that disagreements are deep when they are over *hinge commitments*. For Wittgenstein, hinge commitments are not subject to rational evaluation. Robert Fogelin's 1985 paper, "The Logic of Deep Disagreements," is sympathetic to

¹³ For example, see Kvanvig 2003.

Wittgenstein's approach and generated much of the contemporary discussion on the nature of deep disagreements.

I do not claim that the following account captures Wittgenstein's own view about deep disagreements precisely. I do not wish to wade into interpretive issues regarding *On Certainty* in particular, and the later Wittgenstein more broadly.¹⁴ Furthermore, I take the Wittgensteinian theory of deep disagreements to represent a cluster of similar views (Fogelin 2005; Hazlett 2014; Godden and Brenner 2010). The Wittgensteinian theory of deep disagreements says that a disagreement is deep when it is over a hinge proposition.¹⁵ Chris Ranalli explains that "hinge commitments are the background presuppositions of our world views and general areas of inquiry, such as physics, history, or geology" (forthcoming). According to Crispin Wright they are:

'unearned certainties' or 'standing certainties' – certainties one brings to any normal context... It is the idea of a 'hinge' proposition as a kind of 'certainty of methodology', as it were – a proposition a doubt about which would somehow commit one to doubting not just particular beliefs which we already hold but aspects of the way we habitually praise beliefs. (Wright quoted in Ranalli forthcoming).

Duncan Pritchard explains that "the suggestion is that the very possibility that one belief can count as a reason for or against another belief presupposes that there are some beliefs which play the role of being exempt from needing epistemic support" (Pritchard quoted in Ranalli forthcoming). It is these exempt beliefs that are hinge propositions. A main worry for the Wittgensteinian theory of deep disagreement is to explain why disagreements about hinge commitments are not subject to rational resolution. Or, the theory needs at least to explain why

¹⁴ For more on these interpretative issues see Pritchard 2011.

¹⁵ See Pritchard 2016 for more on hinge propositions.

rational evaluation is more difficult than assessing any ordinary ‘whole system’ of interconnected (non-hinge) propositions (Ranalli forthcoming).

There are two main theories of hinge commitments which dictate slightly different answers to the question of whether deep disagreements are subject to rational resolution.¹⁶ The first says that hinge commitments are non-epistemic and hence “are outside the scope of rational evaluation, and as such are *neither justified nor unjustified*” (Ranalli forthcoming).¹⁷ If this view is correct, then deep disagreements are not subject to rational resolution. This in turn would imply that worldview disagreements are not subject to rational resolution, on the intuitive assumption that they are indeed deep (because they are over hinge commitments). This account of hinge propositions poses a serious challenge to the Benefits of Worldview Disagreement Argument since I’m concerned with the *epistemic rationality* of worldviews. Thus, any theory of worldview disagreement which says that such disagreements are really about non-epistemic hinge commitments is incompatible with the way in which I’ve tried to expand my original argument. Notice that this isn’t because on this account hinge commitments are epistemically irrational. Rather, they are simply beyond or outside of the domain of epistemic rationality; they are a-rational.

Of course, others do hold that hinge commitments are indeed epistemic and hence “are within the scope of rational evaluation, and are potentially justified or unjustified, but in a non-paradigmatic way. In particular, our justification for hinge commitments consists in having a *default entitlement* to trust or accept them, in the absence of evidence or anything which

¹⁶ For my purposes I use ‘hinge propositions’ and ‘hinge commitments’ interchangeably.

¹⁷ For defenses of this view see: Moyal-Sharrock 2016.

indicates that they're true" (Ranalli, forthcoming).¹⁸ Ranalli argues that on this view it is less clear whether deep disagreements can be subject to rational resolution. He explains that:

On the one hand, they won't be able to exchange reasons in the ordinary sense, since they will lack evidence – or in general, anything which favors the truth of their hinge commitment – which rationally ought to get them to retain or change their attitude. On the other hand, the theory permits that there is *some* degree of rational support for hinge commitments by way of a *default* non-evidential *entitlement* to trust them. Provided that one *can* exchange this non-evidential rational support then there will be a sense in which disputants can rationally resolve their deep disagreements, namely, by appealing to the hinge commitments that they are mutually entitled to trust (Ranalli forthcoming).

While this position is interesting in that it explains how deep disagreements might be subject to rational resolution, this idea does not easily apply to the argument I'm trying to defend. Ranalli continues:

[W]hile hinge commitments are justifiable on this account – and thus inside the space of epistemic reasons – it is not by way of evidence or anything which indicates that the hinge commitments are true. But cases of deep disagreement seem to be ones in which the disputants present what strikes them as *evidence for* their beliefs and *evidence against* their opponent's beliefs (Ranalli, forthcoming).

To make what should by now be obvious to the reader explicit, I've been assuming throughout that some version of evidentialism is true. Indeed, it's puzzling why anyone who

¹⁸ For defenses of this view see Wright 2004b, 2014; Hazlett 2014b; Williams 1991.

isn't sympathetic to evidentialism would be worried by something like epistemic peer disagreement in the first place (I leave it to the non-evidentialists to say otherwise). Part of the challenge in the epistemology of disagreement literature is based on the idea that both Sally and Jane appear to be equally rational in their initial beliefs at least *prior* to discovering that they disagree with one another. For they've each evaluated their first-order reasons for P and arrived at their particular doxastic attitude toward P in light of those reasons. The discovery that they disagree with one another is second-order evidence about P, but evidence nonetheless. The debate in the epistemology of disagreement is about how to treat that additional second-order evidence. It's thus difficult to understand how either theory of hinge commitments is consistent with my argument, however a connection isn't impossible.

This connection can be established by asking another remaining question: if worldview disagreements are deep is there really any epistemic benefit to evaluating them? The answer is, I think, clearly 'yes'. Suppose we take the Benefits to Inquiry Argument at face value and claim that Sally and Jane should each re-evaluate their own worldviews upon becoming aware that they disagree with one another. This might lead them to discover all sorts of interesting truths, even if their hinge commitments are outside of epistemic reasons or held for non-epistemic reasons. Or Sally and Jane might discover all sorts of epistemic reasons for holding their particular worldviews even if they aren't the actual reasons why they hold them.

I close this section by raising an objection to the idea that people have many different and often competing hinge commitments. But being able to use the same language, along with being able to communicate effectively is a strong indication of mutually shared concepts. It's true that shared language doesn't imply universal agreement (this is obvious;

just read some philosophy in any language). However, I think it implies enough shared concepts to make progress. If we shared no concepts, then communication would ultimately be impossible.

If there is no overlap between concepts and each worldview has entirely different hinge commitments, then any two people with entirely different worldviews are at a standstill. Yet in such a case it's difficult to see how they could even recognize that they disagree in the first place. Putting this worry aside, their disagreement is intractable. But this isn't very often the case. One might object that I lack enough shared concepts with a terrorist to successfully show them why the suicide bombing is immoral. Yet, if I'm able to communicate with the terrorist then there are at least some shared concepts between us. Whether there is enough to ever make progress I leave as an open question. The pressure here is, of course, that I want to say that suicide bombing is wrong. I want to say it's wrong not just from 'my own perspective' (i.e. based on my own set of hinge commitments), but that it's universally wrong. I hope there is an answer here. I don't want this type of deep relativism to be true. I want to say terrorism is universally wrong. Yet I don't know how to convince someone of this who rejects all of the assumptions I would use to make the case against terrorism. My hope is that even by understanding my assumptions, I have something in common with my opponent (namely, shared concepts).

9. A Pyrrhic Victory?¹⁹

As I come to a close, a lingering worry might remain. Suppose the reader has been sympathetic with my argument to this point. They may worry that I have sacrificed too much. The conditions I lay out for the Benefits of Worldview Disagreement Argument to succeed

¹⁹ I owe an anonymous referee for the title and objections addressed in this section.

are overly narrow such that (i) they aren't representative of the worldview disagreements that most tend to arise in real-life; and (ii) they don't represent the most challenging type of worldview disagreements, and as such the argument isn't as helpful as I assume.

(i) is simply an empirical question. Whether worldview disagreements tend to be ones where there is basic agreement on evaluative criteria, enough shared assumptions to dialogue effectively, etc., is something that we could go out into the world and check. So, in order to say my argument doesn't apply to enough (or any) case of real-life worldview disagreements, the objector needs to present quantitative data. However, I would like to emphasize that some of the criteria I discuss comes in degrees. Disputants will have more or less in common with each other, and I don't pretend to give precise guidelines about how to recognize whether there is enough agreement on, say, evaluative criteria to proceed. As I suggest in the section above, the ability to communicate is indicative of at least some shared concepts. Attempting an open dialogue with one's opponent is the next step to discovering how much commonality there is between the two views in question.

(ii) is a more substantive worry for the argument I've advanced in this paper. Suppose that two opponents disagree about which objective criteria to use when evaluating their respective worldviews (or even that one denies there is objective criteria at all). Maybe one opponent holds hinge propositions are epistemic while the other denies that this is the case. An objector might claim that it is these more intractable worldview disagreements that are the really interesting cases and my argument doesn't have much to offer them.

My reply is twofold. First, I think that this is just a feature of my argument, not a bug. I never claim my argument can apply to all types of worldview disagreements between all types of people. Given the complexity of such disagreements it seems unlikely that there will

be any single argument or method that shows how *all* such disagreements can be resolved. I've merely offered an argument that applies to at least some cases of worldview disagreements. Second, to reiterate what I've already said here, shared language (and hence some shared concepts) does seem to leave the door open for meaningful dialogue even in cases where the disagreement seems really deep. It leaves open the possibility that the Benefits to Worldview Disagreement Argument will be able to apply to the disagreement. Furthermore, there are many instances of individuals drastically changing their worldviews for what appears to be (at least partly) epistemic reasons. Detailing how and why individuals drastically change worldviews could help further show the ways in which my argument can and cannot apply to various cases of real-life worldview disagreement. But that's a topic for another day.

10. Conclusion

In *The Epistemic Benefits of Disagreement* I argue that within the context of inquiry a researcher is rationally permitted to remain steadfast in the face of disagreement (2020). She can do so if she is in a like case to past cases where remaining steadfast yielded positive veritistic results. Likewise, cognitive diversity is generally a good methodological approach to inquiry. I wanted to discover whether my argument could be expanded beyond research contexts to broader worldview disagreements. I've argued that, at least in certain scenarios, a similar argument does apply to worldview disagreements. It applies easily enough when researchers discover they disagree over a specific proposition because they disagree about many other propositions. It also applies too, in cases that aren't initially research contexts. However, once the worldview

disagreement is discovered, the parties need to be willing to investigate their worldview. I've further argued that a set of criteria by which to evaluate worldviews is easier to come by than one for evaluating individual propositions. This implies, however, that the inquiry requirement never really goes away.

There are two remaining issues which I have gestured at but clearly still warrant further consideration. The first is that if there are genuinely incommensurate worldviews because of different hinge commitments, then my argument cannot be used to settle disputes between such worldviews. It also leaves open the possibility for an unpalatable (at least for me) type of relativism. I've expressed optimism that this type of relativism is false, but more remains to be said. The second is that even granting that my original argument along with my expansion of it are successful, it only offers a response to strong conciliationism in the context of inquiry. For disagreements between epistemic peers surely occur outside of inquiry, and this is so even in the rough sense in which I've used inquiry throughout this article. Thus, other arguments are required to respond to strong conciliationism outside of research contexts.²⁰ I leave that task to others.²¹

²⁰ Of course, some such arguments have been offered in the literature, but I leave the assessment of them to others.

²¹ Thanks to Nicholas Griffin, Mark Johnstone, Graham Oppy, Robert Mark Simpson, and two anonymous referees. This research was made possible, in part, by funding from the Social Sciences and Humanities Research Council of Canada.

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