Collective virtue epistemology and the value of identity diversity

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Abstract. Discussions of diversity tend to paint a mixed picture of the practical and epistemic value of diversity. While there are expansive and detailed accounts of the value of cognitive diversity, explorations of identity diversity typically focus on its value as a source or cause of cognitive diversity. The resulting picture on which identity diversity only possesses a derivative practical and epistemic value is unsatisfactory and fails to account for some of its central epistemic benefits. In response, I propose that collective virtue epistemology offers theoretical models that can further our understanding of the benefits of diversity. And I offer a case study to illustrate how this approach could be used to explore the logic of the identity diversity bonus.

Philosophical discussions of diversity are often focused on ethical and political issues. After all, advocating for diversity is necessary to address social inequalities and inequities.[1] While acknowledging the importance of the ethical dimension to any comprehensive exploration of the value of diversity, my discussion will set these concerns aside. Instead, when I talk about the value of diversity, I will be referring to the practical and epistemic value of diversity with a particular focus on the latter. Thus, my interest is in how the diversity of groups, communities, and institutions could be valuable for achieving our practical and epistemic aims.[2]

Proponents of diversity have argued that given the right tasks and aims, diverse groups *can* be more capable than homogenous ones. In fact, some have further argued that diverse groups *can* perform better than groups of the most able individuals. According to this latter claim, group diversity can, in the right situation, be more valuable than the abilities of the group's members. While the empirical studies – some of which we will review – are complex and nuanced, the results offer support for these claims.[3]

In contrast, public discourse on the practical and epistemic value of diversity, especially as it pertains to identity diversity, assumes that the topic is highly controversial. The presumption is that diversity comes with practical costs which are then traded off against the moral gains. While this prevailing assumption is largely due to ignorance, I nevertheless think that there are legitimate doubts and questions that the current discussion has failed to adequately address.

There are, of course, a variety of skeptics. Some are not skeptical about both the value and promotion of diversity but rather believe that the promotion of the epistemic and practical value

[1] Crosby (2004) offers an excellent argument for this type of policy through a discussion of affirmative action.

[2] In much of what follows, I assume that there are practical benefits to epistemic virtues. This assumption is explicit in many accounts of practical rationality. For example, in classical decision theory, epistemic rationality is a necessary component of practical rationality.

[3] Page (2008) and Page (2019) offers a survey of these results. Phillips and O'Reilly (1998) surveys work on the effects of demographic diversity.

of diversity can and does detract from the more important ethical issues.[4] While these are valid concerns, I will focus on addressing those who are directly skeptical of the epistemic and practical value of identity diversity.

In what follows, I first precisify a version of the aforementioned skepticism by raising pragmatic and theoretical worries about the current widely accepted case for the value of identity diversity. To accomplish this, sections 1 and 2 summarize the state of the debate while section 3 raises some worries about the resulting picture. These worries raise a challenge to articulate the independent rather than derivative value of identity diversity. The primary aim of my discussion is to raise and address this challenge. And in section 4, I offer one way of meeting this challenge by appealing to collective virtue epistemology. Since my solution will be programmatic, I conclude the discussion with a more detailed case study. In this case study, we consider two empirical studies that compare the traits of homogeneous and identity diverse groups. Appealing to a simple model of collective epistemic virtue, I demonstrate how we can investigate the value of identity diversity by exploring the relationship between identity diversity and the epistemic virtues of groups.

1. The value of cognitive diversity

Ideally, any account of the value of diversity will appeal to clear theoretical models of the ramifications of diversity, thereby making clear the laws governing its benefits and costs. In addition, empirical evidence will support these theoretical claims. Scott Page's discussion in *The Difference* (Page 2008) and *The Diversity Bonus* (Page 2019) offers a paradigmatic example of such a systematic account. There are, of course, many subtleties and complexities to his arguments and claims. For our purposes, I want to focus on two aspects of his discussion.

First, Page is clear about the priority of the value of cognitive and identity diversity. He writes, "my primary focus will be on differences in how we think. Identity diversity will contribute to cognitive diversity but will not be the only cause." (Page 2019, 2) In fact, Page makes the stronger claim that "for identity diversity to be beneficial it must be linked to cognitive diversity." (Page 2008, 324) Thus, the typical case for the value of diversity begins with an argument in favor of cognitive diversity. I will follow Scott Page in using this phrase to refer to a diversity of cognitive repertoires. Cognitive repertoires help us navigate the world and solve problems. The information we possess, the ways we represent that information, and the tools we use to solve problems are all part of our cognitive repertoires.[5]

Second, Page stresses the importance of theoretical models. While his general claim is that cognitive diversity *can* produce benefits and bonuses, we also need to understand when cognitive

[4] As O'Connor and Rubin (2017) discuss, there are situations where the promotion of diversity for epistemic and practical reasons can create new moral risks and problems.

[5] Page (2008) offers a thorough discussion of cognitive diversity where he offers the following taxonomy of cognitive tools: perspectives, heuristics, interpretations, and predictive models. The phrase "cognitive diversity" is thereby meant to incorporate both functional and informational diversity. There are, of course, many ways of trying to categorize and describe someone's cognitive abilities from Jung's psychological types to Gardner's multiple intelligences to Robert Sternberg's multi-dimensional measures of intelligence. For our purposes, any view of cognitive repertoires will be suitable so long as there is no single dimension on which we can rank the cognitive ability of individuals.

diversity produces bonuses as well as the associated costs and risks. Thus, to fully understand the logic of this diversity bonus, we need models that help to clarify our understanding of the relevant phenomena.

1.1 Theoretical models. To help us understand the value of these models, let us first consider the very simple toolbox model that Page uses to introduce the logic of diversity bonuses. He proposes to represent individual ability in terms of the set of cognitive tools that an individual possesses and then models a group's ability as the union of the group members' toolsets. One upshot of this model is that when a problem requires a large set of cognitive tools that no single person possesses, selecting the group of individuals who each have the most tools might not produce the most able group. After all, the most able members might all have the same tools. Thus, it may be best to select a diverse group of individuals that together possess a wide array of tools.

This type of model obviously simplifies and idealizes both individual and group ability in extreme ways. For example, cognitive ability cannot always be distilled into a set of cognitive tools. We do not have an exhaustive list of such tools and even if we did, one's abilities are not accurately captured by binary measures of tool possession. Furthermore, tools can both enhance and detract from each other depending upon the task. Thus, an individual's cognitive repertoire is not well represented by the set of tools that he or she possesses. For similar reasons, a group's ability is not accurately represented by the union of its members' toolsets.

The simplicity of this model undermines its practical use in predicting and understanding the behavior of groups. Nevertheless, it does offer a nice starting point to our discussion. By showing how a focus on diversity can maximize group ability, we can clearly see how cognitive diversity can produce benefits. And we can also see the logic of the diversity bonus at work.

There are a variety of models that have been used to further our understanding of the cognitive diversity bonus. So, it may be enlightening to briefly consider a few more realistic models. For example, genetic algorithms are inspired by the modern synthesis and mimic evolutionary processes to produce "individuals" (i.e. potential solutions) that are the most fit. And for our discussion, we can highlight just one aspect of these algorithms. Genetic algorithms search through a population of solutions selecting a subset of them for further propagation. If these processes merely selected for fitness, then they would often get stuck producing good but not optimal solutions.[6] Alternatively, algorithms that select for both fitness and diversity are better at avoiding the local optimum problem and finding the best solutions. Thus, this theoretical model introduces a somewhat different aspect of the logic of diversity and shows how ability and diversity work together. These genetic models are more realistic and practical. And along with other statistical models, they can help us see that having group members with a diverse range of opinions and judgments can be beneficial in the long run. Research on the wisdom of crowds offers a paradigmatic use of such models.[7]

Formal models have also been used in the philosophy of science to explore the relationship between the structure of scientific communities and their epistemic character. For example,

[6] Mitchell (1998) offers a thorough introduction to genetic algorithms.

[7] Many of these benefits are surveyed in Surowiecki (2005).

Zollman (2010) uses Bayesian models to explore how cognitive diversity, understood in terms of varying access to information and strength of beliefs, can aid scientific communities to converge on the truth. Weatherall and O'Connor (2020, 19) use a network epistemology model to show how "conformity generally impairs a community's ability to develop successful beliefs."

When it comes to the logic of cognitive diversity, a multitude of theoretical models help us understand the logic of the diversity bonus. The toolbox model showed us that for complex decision problems requiring a wide array of tools, diverse groups are sometimes more able than the groups of the most able individuals. The evolutionary models showed us that cognitive diversity can matter just as much as ability and can help us avoid getting stuck in local optimums. Models of scientific communities show that cognitive diversity can help communities seek the truth.

1.2 Evidence. Of course, these theoretical claims about the value of diversity need to be supported by evidence. And since it would go beyond our discussion to look at the empirical literature in any detail, we shall only briefly and superficially survey a few findings that are relevant to the upshots of our models.

The models used in genetic algorithms suggested that diversity can be just as important as ability. And surveys of empirical findings have found that cognitive diversity can positively affect the accuracy of group predictions (Jackson, Joshi, and Erhardt 2003). Models of epistemic communities showed how cognitive diversity can improve epistemic outcomes in the search for the truth. While these models are meant to explore how communities inquire over long periods of time, there is related evidence that cognitively diverse teams often search for more information, consider more alternatives, and engage in more debate (Jackson and Joshi 2011). There is also evidence that cognitively diverse teams solve problems faster (Reynolds and Lewis 2017). Finally, there is evidence that prediction markets, which include a wide variety of participants, are fairly accurate when given a sufficient amount of time (Berg, Nelson, and Rietz 2008).

2. The standard case for the value of identity diversity

The case for the value of cognitive diversity is admirably clear. Our theoretical models help us understand the logic of cognitive diversity bonuses, and the empirical evidence provides support for the proposed generalizations. So let us turn to the case for the value of identity diversity. I shall use the phrase "identity diversity" to refer to a diversity of social identity categories such as age, gender, race, and ethnicity. And to begin our discussion, let us briefly survey some of the empirical evidence that identity diversity can produce bonuses.

One widely researched benefit is that ethnic diversity in research teams correlates with greater impact when measured by impact factors and citations (Freeman and Huang 2014). On murder mystery tasks, groups with racial diversity significantly outperformed groups with no racial diversity (Phillips, Northcraft, and Neale 2006). And female representation in top levels of management correlates with more innovation (Dezsö and Ross 2012).

A cursory survey suggests that identity diversity can also be practically and epistemically beneficial. But what is the logic of the identity diversity bonus? Most advocates appeal to the

relationship between identity diversity and cognitive diversity (see, e.g., chapter 4 of Page [2019]). Scott Page (2019, 133) writes, "to the extent that [identity differences contribute to relevant cognitive diversity] identity differences contribute to cognitive diversity bonuses."[8] Thus, there appears to be a simple logic to the identity diversity bonus. When identity diversity is a source of cognitive diversity, then identity diversity produces the same benefits as cognitive diversity.

3. A worry and a challenge

Given the admirably clear case for the value of both cognitive and identity diversity, why might there be any opposition to the promotion of identity diversity? The presented case for diversity addresses the ideological critic who is skeptical of non-moral reasons in favor of identity diversity. This is an important point since it changes the starting point for debates about diversity. Instead of debating whether the moral benefits outweigh the costs, we should be asking whether the situation is one in which a certain type of diversity can produce the desired benefits.

While these are clear advances, I nevertheless believe that we lack a satisfactory understanding of the value of identity diversity. To explain why, I'd like to raise questions and worries from two different perspectives. I'll begin with a pragmatic worry. The pragmatist has no ideological axe to grind and is only interested in adopting the most effective means to his ends. Suppose that we are setting aside issues of justice or equity, focusing instead on achieving our practical and epistemic goals. We want to gain knowledge and understanding. We want to make good decisions and solve problems. The pragmatist worries that, whether the reasons are valid, the very topic of identity diversity is controversial. Why not simply bypass any concern for social identities and focus directly on cognitive differences? We would reap the benefits without any additional costs.

The pragmatist is also concerned with implementation costs. As we noted, the case for the value of identity diversity depended upon the causal connection between our social identities and cognitive repertoires. So, if we focus on identity diversity, we will need to answer two questions rather than one. First, we will need to know what type of cognitive diversity would be useful. Second, we will need to know which social identities correspond with the relevant cognitive repertoires. We would thereby simplify the problem by focusing on cognitive diversity. Thus, if the pragmatist is correct, then insofar as we are only concerned with our practical and epistemic goals, we have good practical reasons to focus solely on cognitive diversity.

One initial response to the pragmatist is that our epistemic and practical concerns are not easily separable from our moral concerns. After all, moral problems can undermine the pursuit of one's practical and epistemic goals.[9] Another response is to turn the implementation worry on its head. After all, in many situations, it is difficult and costly to discover what cognitive repertories people

[8] Lawrence (1987), in surveying the congruence assumption, proposes that one popular view is that demographic variables (e.g. race, age, education, etc.) are indicators of subjective variables (e.g. differences in attitudes, values, etc.).

[9] For example, consider the serious epistemic and practical problems raised by the morally problematic leadership at Theranos, detailed in Carreyrou (2018). And it is sadly quite easy to find other egregious examples (e.g. Blizzard, Uber, WeWork, etc.).

have. In contrast, we often have demographic information ready at hand. So, it might be less costly to use identity diversity to access the diversity bonus.

There may also be some other interesting ways to respond to this pragmatic worry. For example, there may be cases where, due to the complexity of the task, we do not know beforehand what type of cognitive diversity would be either useful or required. Scott Page (2019, 144) tells the story of a problem when Google acquired YouTube. They found that 10 percent of uploaded videos were upside down. When a left-handed person heard of the problem, they noted that left-handed people tip their phone to the right while right-handed people tip their phone to the left. Identity diversity can deliver an unexpected and fortuitous diversity of cognitive repertoires.[10]

While these are good pragmatic responses to a pragmatic worry, the discussion also points to a more principled theoretical challenge. On the current view, the value of identity diversity is both derivative of and contingent on its relationship to cognitive diversity. Thus, identify diversity is only epistemically valuable because it brings about cognitive diversity. And if, in any instance, identity diversity did not bring about any cognitive diversity, it would be devoid of epistemic value. But does identity diversity have any independent epistemic value? Independent of its relationship to cognitive diversity, can identity diversity be epistemically valuable in and of itself?

This brings us to a very different question and inquiry. There are those who do not think that the value of identity diversity is derivative of its relationship to cognitive diversity. For example, Marxist and feminist standpoint theorists argue that the epistemic powers of individuals can be intimately connected to one's social identity.[11] Unfortunately, the current case for diversity relies upon a causal relationship between social identities and cognitive repertoires. Can a case be made that identity diversity is of independent epistemic value? And what models can help us explore the logic of this identity diversity bonus. Let's call this our *challenge*.

4. The independent value of identity diversity

To address this challenge, I will consider some pertinent empirical research into the value of identity diversity. I will then introduce collective virtue epistemology and use this approach to engage in a speculative exploration of the independent value of identity diversity.

4.1 Evidence for an identity diversity bonus. Katherine Phillips' work on the effects of diversity offers a paradigmatic example of how we can tease out the contribution of identity diversity above and beyond its role as a source of cognitive identity.[12] In summarizing this work, she concludes that "the mere presence of identity diversity can alter how hard people work, how people think, and how teams perform." (Page 2019, 235) Let's consider her argument for this claim.

[10] While being left- or right-handed isn't clearly a social identity, the story still illustrates the point that certain social categories may come with unexpected and serendipitous cognitive tools.

[11] Marx (1964), Luckacs (1971), and Harding (2004).

[12] Phillips focuses on the interaction between surface-level and deep-level diversity but that distinction maps respectively onto our distinction between identity and cognitive diversity.

Philips observes that we typically expect similar individuals to agree with us and dissimilar individuals to disagree.[13] And these expectations can alter how we behave in groups. Phillips and Loyd (2006) found that since identity diverse groups expect disagreements, this can lead to more tolerance and more discussion. In contrast, since homogenous groups expect agreement, they are generally more surprised and irritated when there is disagreement. Sommers (2006) found that individuals in identity diverse groups can be more diligent, make less errors, and overall be more conscientious of evidence and alternatives. And Loyd (2013) found that individuals who knew that they would be discussing within an identity diverse group prepared more thoroughly than if they knew that they would be in a homogenous group.

Our social identities can also affect how we feel about disagreement. Philips notes that we prefer for our beliefs and opinions to be similar to those who have the same identity. And Philips (2003) found that minority members are more willing to have dissenting opinions. So identity diverse groups may be better at taking advantage of their cognitive diversity than homogenous ones. We are also motivated to have harmonious social relationships with those of the same identity. One interesting implication of this is that when a member of a social majority agrees with a minority member, this may threaten their ties with those of the same identity (Phillips, Liljenquist, and Neale 2009). In response, there can be an extra motivation to reconcile these differences. Therefore, the mere presence of identity diverse members can lead others to engage in more discussion.

4.2 A collective virtue epistemology of diversity. The empirical research suggests that identity diversity not only brings about bonuses on its own but can also amplify the benefits and reduce the costs of cognitive diversity. Thus, we can dismiss the worry that identity diversity does not possess any independent value. These observations are, however, only the beginning of a response to the main challenge. As we saw in our exploration of the value of cognitive identity, we want to develop a variety of models that can help us understand when and why identity diversity can be epistemically valuable.[14] To this end, I believe that we can explore these questions from the perspective of collective virtue epistemology as this field offers a variety of theoretical models that are worth exploring. I shall first describe the collective virtue-theoretic approach in a brief and programmatic way. We will then survey some of the theoretical models that can be used for our inquiry. Since our initial discussion will be at a high level of generality, I will turn, in the next section, to engage an illustrative case study where we use a simple model to explore the upshots of two empirical studies.

Collective virtue epistemology brings together the distinctive features of collective epistemology and virtue epistemology. Collective epistemology expands the scope of epistemological inquiry

[13] Philips and Loyd (2006) found that these expectations were persistent even when the identity was obviously irrelevant to the task at hand.

[14] The social science research typically takes on a different tack. For example, Kathleen Phillips appeals to certain psychological processes that help to explain the effects of social categorical diversity on our behavior in groups. I think that this approach is needed and useful. However, I also believe that the virtue-theoretic approach offers a unique approach with its own insights.

from individuals to collective agents and their cognitive states.[15] For example, we often ascribe beliefs and knowledge to groups and institutions. We might claim that Facebook knew about Cambridge Analytica's illicit collection of user data, and such attributions of knowledge may affect our judgments of Facebook's culpability.

Virtue epistemology employs a two-part shift by first changing the locus of evaluation from particular beliefs to the whole agent and then by shifting the analysis from justification and knowledge to an agent's epistemic or intellectual virtues and vices.[16] There are, of course, some important differences in the way that various virtue-theorists think about epistemic virtues. Virtue reliabilists think of intellectual virtues as truth-conducive cognitive faculties, such as vision and memory, while virtue responsibilists think of intellectual virtues as good character traits, such as intellectual courage and open-mindedness.[17] Applying this general approach to collectives, instead of asking, for example, whether an admission committee's belief was justified and counts as knowledge, we might ask whether the committee was epistemically conscientious and open-minded. Alternatively, we might ask whether the source of a committee's belief was due to some reliable faculty. For example, their understanding of some unwritten procedural rule may be due to reliable institutional memory. So, as Lahroodi (2018, 408) summarizes it, the aim of collective virtue epistemology is "to understand [the] epistemic virtues of social groups and collectives."

Applying this approach to our inquiry, we can explore how the diversity or lack thereof in a collective might have ramifications on the epistemic virtues and vices of collectives. For example, we might ask whether a racially diverse school board is more epistemically thorough than a homogenous one. Or we might ask whether a gender diverse corporate board possesses a more comprehensive memory. To develop a collective virtue epistemology of identity diversity, there are a couple of issues, which lay at the heart of such an account, that must be addressed. And we will use the following three sets of issues to guide our exploration of the virtues of identity diverse groups in our case study.[18]

First, collective epistemologists must develop an understanding of the metaphysical and psychological nature of groups. What type of groups are there and how should we categorize them? Second, given the nature of various groups, we must understand our epistemic evaluation of them. What are epistemic virtues and how do they apply to groups? Furthermore, which groups are capable of possessing knowledge and capable of being epistemically virtuous? Finally, supposing that some collective entities can, in fact, be virtuous, we must understand the relationship between a group's virtues and its members' virtues. And here, we must adjudicate

[15] See Gilbert (1987), Tollesfsen (2002), Gilbert (2004), Schmid, Sirtes, & Weber (2011), Lackey (2014), and Lackey (2021).

[16] There are differing views about the role that an account of epistemic virtues plays in epistemology. And an understanding of epistemic virtues can help us answer many traditional epistemology concerns about knowledge and justification. Section 4 of Turri, Alfano, and Greco (2011) offers an overview of various approaches.

[17] See Axtell (1997) for a discussion of this taxonomy. For broader overviews of virtue epistemology, see Baehr (2004), Battaly (2008), and Turri, Alfano, and Greco (2011).

[18] I take these concerns from Lahroodi (2018) who surveys a few different approaches.

between the following two views. Summativism claims that a group's virtues can be entirely understood in terms of its members' traits while non-summativism rejects this claim.

My response to the challenge has been programmatic, arguing that identity diversity can possess independent epistemic value and that this value can be fruitfully explored from the perspective of collective virtue epistemology. Given the generality of my response thus far, I will, in the next section, offer a case study of how we might use collective virtue epistemology to explore the value of identity diversity. Since this case study is primarily meant to serve an illustrative purpose, I will appeal to a somewhat simple model of collective epistemic virtues. So, before we turn to that discussion, it is worth noting that that one of the benefits of the virtue-theoretic approach is that there are numerous theoretical models to explore. And if our aim is to further understand the independent value of identity diversity, then given the relative lack of models available (compared to study of cognitive diversity), it would be useful to explore and evaluate them all. Of course, it would go beyond the scope of our current discussion to apply and compare these models. But it will be useful to mention a few.

Ernest Sosa is the progenitor of contemporary virtue epistemology. At the core of Sosa's virtue reliabilism is the notion of an epistemic competence.[19] This is relevant for our inquiry since possessing a competence is to possess a virtue. And Sosa has offered a triple-S analysis of competence, which can be summarized using his illustrative example of possessing a competence to drive (emphasis is mine):

> With regard to one's competence in driving, for example, we can distinguish between (a) the innermost driving competence that is *seated* in one's brain, nervous system, and body, which one retains even while asleep or drunk; (b) a fuller inner competence, which requires also that one be in proper *shape*, that is, awake, sober, alert, and so on; and (c) complete competence or ability to drive well and safely (on a given road or in a certain area), which requires also that one be well *situated*, with appropriate road conditions pertaining to the surface, the lighting, etc. The complete competence is thus an SSS (or an SeShSi) competence. (Sosa 2017, 191-192,)

Applying this to our inquiry, we might explore whether the competencies of identity diverse groups differ wholesale or in terms of their seats, shapes, or situations. Of course, Sosa focuses on individual competence and while there are difficulties extending this model to groups, Kallestrup (2020) and Carter (forthcoming) have explored ways of doing so.

Palermos (2020) offers an alternative virtue responsibilist model that can be used to account for a group's distinctive intellectual virtues. Focusing on cases of epistemic collaborations, Palermos argues that members' interactions can give rise to collective cognitive properties that influence the group's intellectual virtues. His discussion offers a useful model that explicate the relationship between a group's interactions, its collective cognitive properties, and its epistemic standing. And we can use these models, to explore the epistemic value of identity diversity by considering how

[19] In more recent years (e.g. Sosa 2015), Sosa has described his account as a reliabilist, competence-based virtue epistemology.

diversity might affect the group's interactions and then asking whether it does so in a way that gives rise to collective cognitive properties that affect its epistemic standing.

Finally, we can turn to virtue responsibilists' models of epistemic virtue.[20] In the case study below, I will appeal to a simplified version. However, Baehr (2015) offers a much richer and more general model that is meant to capture the central dimensions of intellectual virtues understood, from the responsibilist perspective, as character traits. He proposes that intellectual virtues have a motivational, affective, competence, and judgment dimension.[21] The first two account for the idea that intellectually virtuous agents are typically motivated by epistemic ends or goods such as truth or understanding. They also have the appropriate affections towards activities that pursue these goods. The latter two account for the idea that virtuous agents are not only competent at these activities but also recognize when to engage in them.[22] Applying this to our inquiry, we can investigate the logic of the identity diversity bonus by exploring whether identity diverse groups differ from their homogenous counterparts along any of these four dimensions.

5. Case study: Diversity, Expectations, and Epistemic virtues

The aims of my case study are two-fold. First, I want to show in more detail how we might explore the independent epistemic value of identity diversity using one model of collective epistemic virtues. Second, I want to highlight some of the ways in which this exploration can raise some interesting questions that might help us to further understand the value of identity diversity. So we will be left with a general outline of a law governing the identity diversity bonus from one virtue-theoretic perspective. Given these aims, I am not proposing that the proffered responsibilist model best captures either the nature of epistemic virtues or the value of identity diversity. I am also not arguing that this approach can adequately meet and answer the internal theoretical challenges that arise. That would require a much longer and different discussion. Rather, I am simply using this type of account because I think it serves the illustrative purpose of demonstrating the promise of this type of exploration.

5.1 Two empirical studies. Sommers (2006) compared the deliberations of all-white and racially diverse mock juries. The racially diverse mock juries consisted of 4 white and 2 black participants. In their study, each group was shown a video summary of a trial involving a black defendant, who was charged with sexual assault of a white victim. Coders watched video of the mock jury deliberations and made various observations. For example, they identified the number of case facts discussed, the number of factual inaccuracies asserted, and the number of uncorrected inaccuracies.

[20] There are, of course, hybrid models. Zagzebski (1996) is a prominent example.

[21] Baehr (2015, 87) notes that he is not claiming that these are either sufficient or necessary conditions for an intellectual virtue, but rather that this is "a theoretical model that covers enough of the relevant cases to be explanatorily illuminating and useful."

[22] Baehr, along with others who adopt an internalist virtue responsibilism, argue that these dimensions do not entail success or achievement. See Baehr (2007) for discussion.

The study found that diverse juries deliberated longer, considered a wider array of information, and entertained less inaccuracies than all-white juries. Of particular interest is that these differences were not merely the result of the cognitive diversity introduced by black jurors, who did in fact perform better than their white counterparts who were in all-white juries. Rather, white participants in diverse groups behaved differently than white participants in homogenous groups. When in diverse groups, white participants raised more novel facts, asserted less factual inaccuracies, and considered more race-relevant issues.

Of course, it is widely acknowledged that identity diversity can lead to communication problems, a decrease in group cohesion, and an increase in turnover.[23] However, Phillips and Loyd (2008) found that diversity can also reduce the costs of a different source of conflict. Their study explored the interactions of cognitive and identity diversity by considering their effects in incongruent groups. Incongruent groups are ones where groups members who share surface-level characteristics (i.e. same social identities) possess different deep-level characteristics (e.g. different information and attitudes). In one of their experiments, students who lived in the north and south side of campus first took twenty minutes to read instructions and company information in an ACME Investments tasks. The north and south side distinction was particularly salient for students at the university and was highlighted throughout the study. Participants were then asked to rank three companies for possible acquisition prior to group discussion where they would come to a collective decision about the ranking.

Phillips and Loyd found that members of the social majority generally expressed surprise and irritation with dissenting majority members. For example, in a group of mostly north campus students, if one of the north campus students disagreed with the others, this student would be a dissenting majority member. However, they found that dissenting social majority members reported less surprise and irritation and had a more positive and accepting experience when in a diverse group rather than in homogeneous groups. In addition, dissenting social majority members spoke with more persistence and greater confidence in identity diverse groups. As a result, diverse groups spent a longer time discussing the task and, in those groups, the minority opinion holder was more involved.[24] Thus, the study suggests that identity diversity can lead to environments that are more accepting of differences, especially when incongruence exists.

5.2. Exploring the logic of the identity diversity bonus. To explore how we can capture the upshots of these studies and explore the logic of the identity diversity bonus, I will use the aforementioned issues that lie at the heart of collective virtue epistemology to guide our inquiry by taking the following steps (which correspond to the following sub-sections).

1. Provide an account of epistemic virtue and explore the virtues of identity diverse groups

[23] Leonard and Levine (2006) explore the effects of diversity on turnover. Mannix and Neale (2005) offer a survey the effects of social category diversity. Some of negative effects include communication problems and increased conflict.

[24] In this study, these behavioral changes did not influence the group decision. I point this out since the results were quite different from the previous study of diverse mock juries. While my discussion of the epistemic character of groups does not address these complexities, I acknowledge that the benefits of diversity will often depend upon the various rules and norms that govern a group's behavior and decision making.

2. Clarify the scope of the relationship between the constitution of a group and its virtues by demarcating the types of groups under consideration
3. Analyze what it means to possess these virtues by identifying the attitudes and traits required to possess epistemic virtues and explore what types of groups might be able to possess them.
4. Further explore group virtues by considering the debate between summativism and non-summativism

Of course, the aim is not to resolve every issue that arises but to highlight the promise of this approach.

5.2.1 A simple model of collective epistemic virtue. To consider the relationship between diversity and epistemic virtue, we need to have some account of an epistemic virtue. For our purposes, I'd like to work with a simplified version of an internalist, virtue responsibilist account of epistemic virtue inspired by the work of James Montmarquet.[25]

Montmarquet claims that virtues are character traits that include some motivational component.[26] To illustrate, we can consider his useful categorization of epistemic virtues. He proposes that the chief intellectual virtue is epistemic conscientiousness. This virtue involves the trait of desiring the truth and avoiding falsehoods. Conscientiousness is, however, not enough to be a fully responsible epistemic agent. After all, one can seek the truth by being confident that one already knows and thereby be dogmatic. To deal with such deviations, there are other epistemic virtues that can play the role of regulating this chief virtue. The regulative virtues include intellectual impartiality, sobriety, and courage. Impartiality includes "such particular qualities as an openness to the ideas of others, the willingness to exchange ideas with and learn from them, the lack of jealousy and personal bias directed at their ideas, and the lively sense of one's own fallibility." (Montmarquet 1993, 23) Sobriety refers to the traits of a sober-minded inquirer. And intellectual courage involves "the willingness to conceive and examine alternatives to popularly held beliefs, perseverance in the face of opposition from others (until one is convinced one is mistaken), and the determination required to see such a project through to completion." (Montmarquet 1993, 23)

Given this characterization of epistemic virtue, there is an initial plausibility to the claim that diverse groups are more likely to possess the character traits of epistemically virtuous agents. For example, Sommers' study found that racially diverse juries considered more evidence, eliminated more inaccuracies, and deliberated for a longer time. These behaviors are hallmarks of an intellectually sober agent who thoughtfully engages in deliberation. In Philips and Loyd's study, we found that diverse groups could create a more welcoming environment for disagreements than

[25] In this case study, I'll focus on a few components of Montmarquet's internalist account of virtue because that will give us plenty to work with. However, this is meant to be a simplified model of epistemic virtue rather than an accurate or comprehensive portrayal of Montmarquet's view.

[26] "The epistemic virtues [are] traits of epistemic character which, if they are not epistemic conscientiousness itself, are desired by the epistemically conscientious person in virtue of their apparent truth-conduciveness under a wide variety of ordinary, uncontrived circumstances." (Montmarquet 1987, 488)

their homogenous counterparts when incongruence exists. Thus, diversity might lead to more impartiality and open-mindedness as well.[27]

Of course, there other accounts of epistemic virtue to consider. In addition, we have not yet explored in any detail which concepts of epistemic virtue best capture the traits that identity diverse groups tend to possess. For example, is it more accurate to say that diverse groups are more open-minded to a variety of ideas, more epistemically responsible, or both? And do they possess other traits associated with other epistemic virtues?

5.2.2 Which groups are more virtuous? We also should not conclude from these studies that all diverse groups are more epistemically conscientious and responsible than homogenous ones. The reason for this is that the psychological and epistemic character of a group is closely connected to the nature of the studied groups. We need to be careful with the scope of our claims. The empirical studies of the costs and benefits of diversity make it clear that the effects of diversity greatly depend upon the nature of the group and the task at hand. For example, in an exploration of the relationship between diversity and creativity, researchers found that while identity diverse groups could be more creative, this depended upon how clearly defined the tasks and goals were (Dayan, Ozer, and Almazrouei 2017). And for groups whose tasks and goals were open-ended, increasing the identity diversity of a group resulted in less creative outcomes.

To accurately capture the results of our studies, we need to identity the types of groups that we have in mind. Lickel, Hamilton, and Sherman (2001) offer a lay theory of groups that could prove useful for our exploration.[28] They found that people tend to cluster groups into four different types. "These clusters consisted of intimacy groups (e.g., family, friends, romantic partners), task groups (e.g., a work team, a jury), social categories (e.g., women, Blacks), and loose associations (e.g., people who like classical music, people in line at a bank)." (Lickel, Hamilton, and Sherman 2001, 131) And these clusters each shared certain properties that included "group member similarity, the amount of interaction among group members, the extent to which members shared common goals and outcomes, the importance of the group to its members, group size, the duration of the group's existence, and group permeability (i.e., the ease of entry and exit from the group)." (Lickel, Hamilton, and Sherman 2001, 130-131)

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[27] In what follows, all my generalizations about the comparative virtue of diverse groups should be read as including a ceteris paribus clause. However, I will not make it explicit for stylistic purposes. In addition, this claim does not entail that diversity cannot be associated with any epistemic vices. For example, there appear to be cases where homogeneity is epistemically beneficial. Suppose that a company has had a difficult time retaining the working mothers in their workforce. To develop new policies that address this problem, they organize a focus group of working mothers at the company. In this case, it may be epistemically problematic to include a more diverse group of individuals. While this may increase the group's open-mindedness and concern for others' opinions, this attitude may detract from the goal at hand. By having similar individuals share their experiences, this homogenous group may be more likely to identify some common problems that the company might be able to address. Thanks to Katie Gasdaglis for bringing this to my attention.

[28] While Lickel, Hamilton, and Sherman's discussion offers an account of how lay people categorize groups, I nevertheless think that this account is useful for our discussion. After all, the lay understanding of groups influence our judgments of them. And just as virtue theorists have been guided by our lay judgments and emotions, we can extend this by thinking about our intuitive theories of groups and how such perspectives map onto the way that we epistemically evaluate them.

One general way to order these groups is by their level of cohesion. On one end of the spectrum are loose associations, which are groups of individuals that share some common characteristics. For example, populations such as women, the middle-class, and toddlers are all loose associations. On the other end are established or chartered groups such as the U.S. Supreme Court or a corporate executive board.

Our two studies restricted their findings to task groups so we could restrict our generalization by focusing on groups that belong in this cluster. Below, we will ask ourselves whether additional restrictions should be made. But for now, we can work with the proposal that all else being equal, diverse task groups tend to be more epistemically virtuous than their homogenous counterparts.

For illustrative purposes, I've borrowed an intuitive taxonomy of groups to specify the scope of our claims. However, a satisfactory epistemology of diversity will require a much more comprehensive taxonomy of groups. As we'll see in the next section, if this taxonomy is to be used in conjunction with the virtue-theoretic approach, it must account for the psychological nature of groups in addition to their levels of cohesion.[29]

5.2.3 Which groups can possess virtuous attitudes and traits? While the diverse groups in our studies behaved *as if* they were more virtuous, it is worth asking whether they are, in fact, more virtuous. Can these groups truly be virtuous, or do they merely act as if they are? These questions will allow us to consider the scope of our claims in further detail.

On our model, epistemic virtues require certain motivations. So, to be virtuous, groups must be able to possess desires, aims or some suitable conative attitudes. This clearly limits the types of groups that can be virtuous. Groups that meet these requirements would appear to be those that can form beliefs, desires, and intentions and moreover, be responsible and praiseworthy for them. While it's not obvious how to demarcate the types of groups that meet the criteria, the type of group that is best suited to meet this requirement are those that qualify as agents. And Pettit (2014) argues that the only groups that we count as agents are those that we have some interpersonal interaction with and as such, all group agents are personal agents who can be held responsible (and thereby be praised) for their attitudes. Pettit (2014, 116) further argues that groups that meet the agency requirements are those that are conversable bodies such as "churches, political parties, and commercial firms."

If we adopt Pettit's agency requirement, then we should rule out loose associations from possessing virtues. After all, it is hard to think of these populations as having any collective desires or agency whatsoever. Furthermore, loose associations are certainly not conversable bodies. And these features of loose associations cohere with the fact that it would be odd to assert, on the collective reading, that tennis players are closed-minded or that physicists are intellectually sober. Alternatively, it is unclear whether all task groups count as group agents. While a jury clearly meets the conversability requirement, some newly and briefly formed groups such as market research groups do not obviously meet this strict requirement. We can note, however, that all group agents are tasks groups. After all, since they can form goals and pursue them, they possess all the

[29] For virtue reliabilist approaches, this taxonomy must also be sensitive to the cognitive abilities of groups.

properties of a task group and more. So the virtue responsibilist approach will require that we investigate both the types of motivational attitudes that are required to possess virtue and the types of groups that can possess these motivational attitudes.

The other component of the virtue responsibilist account that we will consider is that epistemic virtues are acquired. Virtues must be traits that one acquires over the course of time and this trait must be part of the group's character. One of the reasons to impose this condition on virtues is to capture the type of emotional response (e.g. admiration) that we have to virtuous agents.[30]

What types of groups can possess these acquired excellences? And how might diversity play a role in the possession, acquisition, or development of these traits? There are clearly groups that do meet these requirements. For example, the 442nd Infantry Regiment, which was composed of Japanese Americans fighting during WWII, was one of the most decorated military units in US history. Clearly, it makes sense to say that this regiment was courageous and that their actions elicit admiration. In addition, one might propose that certain long-standing institutions, such as the United Nations, can through their history acquire deep and enduring traits that make them virtuous. Furthermore, one might hypothesize that diversity can play a role in the acquisition of these traits. For example, the commitment to diversity in a group or institution can ensure the types of traits that the groups in our studies exhibit. The diversity of these group can help to ensure that a group remains open-minded and sober in its deliberation and decision-making. Thus, another avenue of inquiry is the exploration of how identity diversity affects the development or acquisition of a group's traits.

Of course, it is still unclear whether some tasks groups, particularly newly formed task groups like juries, could possess acquired traits at all. One source of confusion is whether a group could possess an acquired trait in virtue of all its members possessing this trait. This takes us to the final issue in our case study: the debate between summativism vs non-summativism.

5.2.4 Summativism vs non-summativism. Our two studies may have interesting ramifications for the debate between summativism and non-summativism. While we found that diverse groups performed better and were more welcoming of difference than homogenous ones, one of the most interesting lessons of both studies was the source of these differences. The studies suggest that one of the distinctive benefits of identity diversity is that individuals tend to behave in more epistemically conscientious and responsible ways when placed in diverse groups.

There are, of course, different ways of interpreting these results. On the one hand, one might take these studies as evidence for situationism and against deep character traits all together. However, since that would take us too far astray, let us set this interpretation aside. Alternatively, one might interpret the results as arguing for an important context-sensitivity to more locally defined traits. We behave differently in different situations, and the expectations of difference brought about by

[30] For example, Zagzebski (2018) argues that the admiration we have for acquired excellences is distinct from the admiration we have for natural excellences. She notes that one difference is that the former elicits in us a desire to emulate and imitate while the latter does not.

the perception of identity diversity can trigger these behavioral changes. How might this observation contribute to the debate?

Lackey (2014, 3) summarizes the summativist view as one where "collective phenomena can be understood entirely in terms of individual phenomena." If understood in this way, then these studies offer reasons to reject summativism in favor of non-summativism about epistemic virtues.[31] After all, these studies suggest that we cannot explain or understand collective epistemic virtue without reference to the group in which individuals are acting. Thus, to understand the collective phenomena (i.e. the epistemic virtues and vices of groups), we need to appeal to more than just individual phenomena. We need to appeal to features of the groups that the individuals are a part of.

In the studies we considered, identity diversity had an interesting effect. The visible presence of difference altered how individuals behaved. Of course, this does not exhaust the effects of diversity. And there are many more questions to explore about the relationship between a group's traits and its' members traits. Perhaps diversity can affect a group's dynamic properties such as how they organize (i.e. divide labor) and make decisions (i.e. deliberative processes). And these results would certainly have import for the debate between summativism and non-summativism in collective epistemology.

6. Conclusion

We began by summarizing the standard case for the value of diversity. There were a variety of models that we could use to help us understand the logic of the cognitive diversity bonus, and we were able to extract some of the laws that govern this bonus. In turn, identity diversity was thought to possess a value that was dependent upon its role as a source of cognitive diversity. This led to our main worry that we did not fully understand the value of identity diversity, and we were left with the challenge of developing an account of the independent value of identity diversity.

In response, we surveyed evidence that identity diversity could, on its own, be epistemically valuable. I then proposed that we could use collective virtue epistemology as a framework to explore the logic of the identity diversity bonus. While this field offered a variety of models, we selected a simple internalist model to illustrate how collective virtue epistemology could help us explore the value of identity diversity. The result was that identity diversity could alter the way members of certain groups behave in a such a way as to alter the group's epistemic character. Of course, given the limits of our discussion, we were only left with a general framework for explicating some generalizations about the identity diversity bonus exhibited in the studies. And we surveyed some ways in which we might explicate these laws by identifying the relevant epistemic character traits (e.g. epistemic conscientiousness and open-mindedness), specifying the relevant types of groups (e.g. task groups and group agents), and adjudicating whether these collective traits could be understood without reference to the collective.

We have thereby met the challenge. We were able to show that certain groups could, solely in virtue of their constitution, be more epistemically virtuous. Thus, the epistemic value of identity

[31] See Lahroodi (2007) for other arguments against non-summativism.

diversity can be independent of its connection to cognitive diversity. Furthermore, we showed how models of collective epistemic virtue could be used to explore the laws governing the identity diversity bonus.

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