ORIGINAL ARTICLE

Excessive Testimony: When Less Is More

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Abstract

This paper identifies two distinct dimensions of what might be called *testimonial strength*: first, in the case of testimony from more than one speaker, testimony can be said to be stronger to the extent that a greater proportion of the speakers give identical testimony; second, in both single-speaker and multi-speaker testimony, testimony can be said to the stronger to the extent that each speaker expresses greater conviction in the relevant proposition. These two notions of testimonial strength have received scant attention in the philosophical literature so far, presumably because it has been thought that whatever lessons we learn from thinking about testimony as a binary phenomenon will apply *mutatis mutandis* to varying strengths of testimony. This paper shows that this will not work for either of the two aforementioned dimensions of testimonial strength, roughly because *less* testimony can provide *more* justification in a way that can only be explained by appealing to the (non-binary) strength of the testimony itself. The paper also argues that this result undermines some influential versions of non-reductionism about testimonial justification.

KEYWORDS
agreement, confidence, justification, non-reductionism, testimony

1 | INTRODUCTION

A central question in social epistemology concerns what conditions, if any, a speaker's testimony that P must satisfy for it to give the hearer an epistemic reason, i.e. some justification, for believing that P.[1] Although most philosophers writing about testimony explicitly or implicitly treat it as binary phenomenon, there are at least two dimensions of what we may call *testimonial strength*. First, in the case of testimony regarding the same proposition from more than one speaker, testimony can be said to be stronger to the extent that it is more unanimous, i.e. to the extent that a greater proportion of the speakers give identical testimony. Second, in both single-speaker and multi-speaker testimony, testimony can be said to the stronger to the extent that each speaker expresses greater conviction in the relevant proposition, e.g. by prefacing their testimony in the appropriate way ('I am certain that...', 'I guarantee that...').

These two notions of testimonial strength have received scant attention in the philosophical literature on testimony so far, presumably because it has been thought that whatever lessons we learn from thinking about testimony as a binary phenomenon will apply *mutatis mutandis* to different strengths of testimony. Indeed, it seems plausible *prima facie* that any epistemological theory that treats testimony as a binary phenomenon can be straightforwardly extended into an equally plausible view about varying strengths of testimony. The idea would be that under the conditions that are sufficient for 'binary testimony' to provide a hearer with an epistemic reason to believe P, stronger testimony that P gives the hearer a correspondingly greater reason to believe P; weaker testimony that P gives the hearer a lesser epistemic reason to believe P; and generally that the strength of the testimony that P that a hearer receives under these conditions is proportional to the strength of the hearer's epistemic reason to believe that P.

This paper argues that this idea will not work for either of the two aforementioned dimensions of testimonial strength. Specifically, I argue that greater agreement in the testimony of multiple speakers does not necessarily give the hearer more justification for believing the relevant proposition P, even in conditions where the testimony of each individual speaker would provide the hearer with (some) justification for believing P. I also argue that the fact that a speaker expresses greater level of conviction in P does not necessarily give the hearer more justification for believing P, even in conditions where ordinary testimonial assertions by that speaker would give the hearer (some) justification for believing P. In both cases, the fact that *less* testimony provides *more* reason to believe can only be explained by appealing to the (non-binary) strength of the testimony itself. The paper concludes by discussing some upshots of this for the traditional debate between reductionism and non-reductionism about testimony, and suggests that it undermines some influential non-reductionist theories of testimonial justification.

2 | TWO PRINCIPLES OF TESTIMONIAL STRENGTH

Discussions in the epistemology of testimony often begin by noting that many, perhaps most, of our beliefs are based on the testimony of others. It is less often noted, however, that many of

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[1] As this indicates, I take an *epistemic reason* for P be be something that provides an agent with *some justification* for believing P; indeed, I use these terms interchangeably. I am also happy to identify an epistemic reason for P with something that makes it epistemically rational to raise one's degree of confidence in P.

our testimonial beliefs are based not on the testimony of any single speaker, but instead on the testimony of multiple distinct speakers.[2] For example, my justification for believing that climate change is largely caused by human activity is not based on the testimony of any single climate scientist, but on the collective testimony of an overwhelming majority of them (see, e.g., Joint Statement, 2001; Cook et al., 2016). Clearly, I would be less justified in my belief if only a handful of these climate scientists openly endorsed anthropogenic climate change. So how exactly does a hearer's testimony-based justification depend on the number or proportion of speakers that express the same opinion? So far, this question has received little attention in discussions of testimony as such, although it has been frequently brought up in the related literature on the epistemological significance of peer disagreement. In discussions of the latter, it seems to be generally assumed — albeit often implicitly — that more agreement in the testimony of multiple trustworthy peers provides the hearer with more justification to believe the majority-accepted proposition P (see, e.g., Elga 2007, 484-5; Lackey 2008b, 278-9; Carey and Matheson 2010, 140-144; Frances 2014, 199; Matheson 2015, 125-8).

The general idea seems to be that if *each* of the individual agents who qualify as one's own epistemic peer is such that their individual testimony would by itself provide the hearer with an epistemic reason to believe that P, then surely one would have a greater epistemic reason for believing P to the extent that more of these peers testify that P. Let us elevate this thought to the status of an epistemic 'bridge principle' connecting ordinary single-speaker testimony with multi-speaker testimony:

> **Monotonicity for Multiple Testifiers (MMT)**: Let speakers $S_1, \dots, S_n$ be such that, if each S_i was to individually testify that P in circumstances C, a hearer H would thereby come to have an epistemic reason to believe that P. Then, in the absence of H having any further information about $S_1, \dots, S_n$ or P, H would gain a greater (or at least no lesser) epistemic reason to believe that P in C to the extent that a greater proportion of $S_1, \dots, S_n$ testify that P in C.

In addition to being widely (albeit often implicitly) accepted in discussions of peer disagreement, such a bridge principle is required for it to be possible to straightforwardly apply epistemological theories about single-speaker testimony to the common case of multi-speaker testimony. For example, there would be no obvious way, without a principle of this sort, to use a given epistemological theory of (single-speaker) testimony to explain why one is justified in believing a scientific theory on the basis of its widespread acceptance in the relevant scientific community.[3]

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[2] Although see, e.g., Tollefsen 2007, Fricker 2012, Lackey 2014, and Faulkner 2018 for discussions of *group testimony*. These discussions, however, do not address the question of how the strength of a hearer's testimony-based justification varies with the number or proportion of the relevant speakers who testify that P.

[3] Goldman (2001, 99-102) may be interpreted as arguing against a version of something like MMT in his discussion of totally non-independent experts (as when one expert is a blind follower of another). However, Goldman's argument only establishes that testimony that P from additional experts would *not provide a greater* epistemic reason for believing P in the cases he envisages. By contrast, I argue below for the considerably stronger conclusion that testimony that P from additional agents *provides a lesser* epistemic reason for believing P. In addition, my argument below does not assume anything about whether the agents that provide the testimony are, or are believed by the hearer to be, non-independent of one another.

Another under-recognized fact about testimony is that when a speaker provides testimony that *P*, they may communicate *P* with different levels of conviction.[4] This is so for two reasons. First, although testimony that *P* normally comes in the form of the speaker's assertion that *P*, assertions are not the only kind of speech act through which testimony can be provided. Indeed, there is a whole class of distinct types of speech acts, which Turri (2010) helpfully labels *alethic speech acts*, that resemble assertion in that they can be said to aim at, or be governed by, the truth. Put differently, these speech acts have a word-to-world direction of fit (Green, 2017, §3.1 & §5.3).[5] For example, *guaranteeing* that *P*, *conjecturing* that *P*, and *guessing* that *P* are all distinct from the speech act of *asserting* that *P*, even though there is a clear sense in which all of these aim at, or are governed by, the truth about *P* (Turri, 2010, 84). I submit that all these speech acts, along with any other kind of alethic speech act, should under appropriate conditions[6] qualify as 'testimony' in the sense relevant to epistemology. That is, our epistemological theories of testimony ought not treat the way in which epistemic reasons gained from one type of alethic speech acts as fundamentally different from the way in which it is gained from another.[7]

In any case, a speaker may express herself with more and less conviction even with an ordinary assertion. In particular, a speaker may preface her claim with common phrases like 'I am sure that...', 'I suspect that...', and 'it's 90% likely that...'. Again, I submit that qualified assertions of this kind should under appropriate conditions constitute 'testimony' for the purposes of epistemological theorizing. (It might be objected that qualified assertions of this kind would only provide testimony about the speaker's mental state, e.g. their degree of confidence in *P*, as opposed to providing testimony about the relevant proposition *P* itself. This objection rests on a false dichotomy: There is nothing to prevent a given piece of testimony from simultaneously being about the speaker's mental state and about the proposition *P*. Furthermore, if this objection is correct, then by parity of reasoning assertions of the form 'I believe that *P*' and 'I know that *P*' do not provide testimony about *P* — but instead merely testimony about what the speaker believes and knows, respectively — which would artificially exclude a large class of what seem to be paradigmatic instances of testimony. Third and finally, the objection is irrelevant since speakers can express themselves with more and less conviction using qualified assertions without referring to their own mental states, e.g. with phrases like 'There is no question that...', 'It's clear that...', and 'Undeniably...'.)

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[4] I use 'conviction' here, rather than say 'confidence', in order to avoid confusing levels of conviction, which I take to be features of speech acts, with degrees of confidence (i.e., credences), which I take to be doxastic attitudes. Thus a speaker may express a level of conviction in *P* that does not correspond to her actual degree of confidence in *P*.

[5] An alternative, broadly Gricean (1957; see also Schiffer 1972), way to delineate the class of speech acts that resemble assertion in this way would be in terms of what the hearer *intends* for the speaker, viz. to form or adjust a doxastic attitude (e.g. belief or degree of confidence). This distinguishes the speech acts in question from various speech acts that are usually not thought to constitute testimony, e.g. requests and promises, where the speaker's intentions for the hearer are not purely doxastic.

[6] I.e., the conditions under which an assertion that *P* would qualify as testimony that *P*. That said, I do not have fully general theory of testimony to offer; I am merely making the conditional claim that if assertions qualify as testimony under some conditions *C* (whatever they are), then other alethic speech acts should also qualify as testimony under *C*.

[7] In this regard, I take myself to be following E. Fricker's "basic methodological precept [...] not to define our topic ['testimony'] in a way which begs or obscures epistemic questions" (Fricker, 2002, 376). Indeed, as far as I can tell, any type of alethic speech act could easily fall under what Fricker refers to as the "paradigm case" of testimony, viz. "when two individuals fluent in a shared language attend to each other in personal face-to-face communication, and a speech act of intentional communication aimed at the conveying of information is made and understood" (Fricker, 2002, 375).

So there are at least two distinct ways in which a speaker's testimony about P can express more and less conviction regarding P. Surprisingly, however, there has been very little discussion in the testimony literature about how precisely a hearer should fix or adjust her degree of confidence in light of a speaker's expressed level of conviction. A notable exception is Owens (2000), whose non-reductionist view holds that testimony transmits the reasons the speaker has for believing a proposition P to the hearer, such that the hearer's attitude towards P is partly justified by the speaker's reasons for believing P.[8] Owens rightly recognizes that testimony can differ in the speaker's expressed level of conviction, and thus quickly generalizes his view:

> Other things being equal, I am inclined to believe what others believe, and the firmer they seem in their convictions the stronger the belief I acquire from them. Where the norms of theoretical reason hold sway, the strength of my informant's conviction and thus the tenacity of the belief I inherit from them will reflect the strength of their reasons for holding it (Owens, 2000, 172-3).

The ease with which Owens moves to generalize his view in this way suggests that he is implicitly assuming that under the conditions that must be satisfied for 'ordinary' cases of testimony (i.e., cases in which the speaker asserts P without qualifications) to provide epistemic reasons for belief, a speaker' expressing greater conviction in P gives the hearer a stronger epistemic reason to believe that P.

Let us again elevate this assumption to the status of an epistemic 'bridge principle' connecting ordinary testimony in the form of unqualified assertions with testimony consisting of any other level of expressed conviction:

> **Monotonicity for Expressed Conviction (MEC)**: Let a speaker S be such that, if S were to testify that P in circumstances C by unqualifiedly asserting P, H would thereby come to have an epistemic reason to believe P. Then, in the absence of H having any further information about S or P, H would gain a greater (or at least no lesser) epistemic reason to believe P in C to the extent that S's testimony in C expresses a greater level of conviction in P.

As before, if this bridge principle is rejected, it is not clear how to apply the lessons from familiar discussions in the epistemology of testimony to cases of qualified assertions, or to alethic speech acts other than assertions. For example, such theories would not apply to cases in which I assert 'I am certain that P' or 'it might be that P'. Thus, without a principle of this sort, theories of testimonial justification would be woefully incomplete.

So far I have sought to make explicit two bridge principles, MMT and MEC, which concern two distinct dimensions of testimonial strength, viz. (i) the extent to which the testimony of multiple agents agree regarding the same proposition, and (ii) the extent to which each agents conveys their testimony with a greater level of conviction. Interestingly, some epistemologists have proposed or discussed rules for updating on the other agents' degrees of confidence that seem to entail both of these principles.[9] Consider, for example, what Jehle and Fitelson (2009, 284 refer to as 'Straight Averaging', which recommends that agents simply adopt the *average* degree of confidence among

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[8] In fact, Owens's brief discussion of the issue is the only one of which I am aware.

[9] I say 'seem to entail' because it isn't always clear whether agents are meant to be updating on what other agents *express*, i.e. their levels of conviction, or instead on their *actual* degrees of confidence (see footnote 4). A charitable interpretation

the relevant group of epistemic peers $S_1, \ldots, S_n$ (including the agent herself).[10] Straight Averaging is a special case of a general rule that Easwaran, Fenton-Glynn, Hitchcock and Velasco (a.k.a. EaGlHiVe) refer to as 'Weighted Averaging' (Easwaran et al., 2016, 7). This more general rule says that agents should adopt a degree of confidence equal to the weighted sum of each of the relevant agents' degrees of confidence, where the weights in question depend on the extent to which one takes each agent to be reliable.[11] It's easy to see that even this rule entails both MMT and MEC provided that the agents in question are all assigned a positive weight — an assumption that is effectively stipulated into both MMT and MEC by the supposition that each speakers' testimony would individually provide an epistemic reason to believe that P.

So there are theories in social epistemology that entail both MMT and MEC. However, since there are many ways in which MMT and MEC could manifest themselves in an overall theory of testimonial justification — and since some epistemologists may reject one of these bridge principles but not the other — I will treat them separately below. Accordingly, when testing each of the two principles, I will keep fixed the testimonial strength along the other dimension: when testing MMT, I will assume that all testimony is delivered in the form of unqualified assertions; and when testing MEC, I will consider the simplest case of single-speaker testimony. By adopting this approach, I hope to be closing off both the possibility of trying to save one of the two bridge principles by rejecting the other, and of trying to save both principles by adopting a different theory of how they should be combined. If my arguments below are sound, any account of testimonial justification that validates either of the two principles is *ipso facto* defective.

3 | COUNTEREXAMPLES AT THE EXTREMES

This section argues that MMT and MEC are both false. The most straightforward way to do this is to consider cases in which each kind of testimonial strength, viz. extent of agreement and level of conviction, is taken to its limits. In cases where a hearer would normally gain an epistemic reason to believe a speaker's testimony, MMT and MEC imply that greater testimonial strength across each dimension will result in greater epistemic reason to believe the relevant proposition. These implications, I suggest, are both false. Moreover, as we shall see, there are plausible explanations of *why* they are false.

I propose to test MMT by comparing a case in which a multitude of testifiers all give the exact same testimony regarding a non-obvious proposition, with an otherwise identical case in which there are some dissenting voice(s) among the testifiers. So consider:

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suggests that they are meant to be updating on the former, since levels of conviction will be more directly available than degrees of confide (in so far as the two come apart at all).

[10] Formally, Straight Averaging holds that upon learning what confidence the other agents invest in P, the agent should adopt a degree of confidence equal to:

$$\frac{S_1(P) + \cdots + S_n(P)}{n}$$

where $S_i(P)$ represents S_i's degree of confidence in P.

[11] Formally, one's degree of confidence is set to:

$$\sum_{i=1}^{n} w_i S_i(P)$$

where w_i is a weight associated with each agent S_i (including oneself). Weighted Averaging reduces to Straight Averaging when $w_i = 1/n$ for all w_i. To be clear, EaGlHiVe do not endorse Weighted Averaging, not even as a heuristic updating rule.

Case 1a: Ahmed finds himself in a large room with 10 other people about which he has no specific information of any kind. Bored, Ahmed decides to ask everyone in the room the same random question about which he is himself ambivalent and ignorant: 'Would a protectionist economic policy benefit the U.S. automobile industry?' All 10 of them give the same answer, 'yes'.

Case 1b: Brianna finds herself in a large room with 10 other people about which she has no specific information of any kind. Bored, Brianna decides to ask everyone in the room the same random question about which she is herself ambivalent and ignorant: 'Would a protectionist economic policy benefit the U.S. automobile industry?' 9 out of 10 answer 'yes'; the remaining person answers 'no'.[12]

These cases constitute a counterexample to MMT if Brianna ends up with a greater epistemic reason than Ahmed to believe that protectionism would benefit the U.S. automobile industry.[13] I think so; don't you?

If you don't already agree, I would invite you to consider other cases with the same structure but other values to the quantitative parameters of the original cases, viz. the number of people providing testimony and the proportion of them who assert that the proposition is true in Brianna's case. So, if you like, you may suppose that Ahmed and Brianna received testimony from 20, 50, or 100 people (rather than just 10); and that 85%, 95%, or 99% of these answered 'yes' in Brianna's case (while 100% of them still answered 'yes' in Ahmed's). Surely there is *some* combination of values for these parameters for which you would agree that the complete unanimity faced by Ahmed provides less of an epistemic reason to believe that protectionism would benefit the U.S. automobile industry than the overwhelming majority faced by Brianna. If so, you have found yourself a counterexample to MMT.

Moving on to the other bridge principle, MEC, we can now construct an analogous pair of cases as a counterexample:

Case 2a: Casey finds themself placed in front of a random stranger about which they have no specific information of any kind. Bored, Casey decides to ask the stranger a random question about which they are themself ambivalent and ignorant: 'Would a protectionist economic policy benefit the U.S. automobile industry?' He answers, 'Yes, I guarantee it.' Casey probes further: 'How sure are you exactly?' 'I am absolutely certain,' he says.

Case 2b: Da-xia finds herself placed in front of a random stranger about which she has no specific information of any kind. Bored, Da-xia decides to ask the stranger a random question about which she is herself ambivalent and ignorant: 'Would a protectionist economic policy benefit the U.S. automobile industry?' He answers, 'Yes, I believe so.' Da-xia probes further: 'How sure are you exactly?' 'I am pretty confident,' he says.

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[12] Note that we can imagine that Ahmed and Brianna question their interlocutors one after another, or all at the same time (e.g. by asking for a show of hands). You might be inclined to think that only the latter variation on the case is an example of genuine multi-speaker testimony (as opposed to multiple cases of single-speaker testimony). If so, I invite you to think of these cases as involving simultaneous testimony from now on.

[13] I assume here that had any single one of the Ahmed's and Brianna's interlocutors told them that protectionism would benefit the U.S. automobile industry, then they would have have gained an epistemic reason to believe it. That epistemic reason would hardly suffice by itself for making one justified in outright believing this proposition, but it would provide *some justification* for believing it (see footnote 1).

This pair of cases constitutes a counterexample to MEC if Da-xia ends up with a greater epistemic reason than Casey to believe that a protectionism would benefit the U.S. automobile industry.[14] Again, I think so; don't you agree?

If not, we can again change the values of relevant parameters to ensure that you agree that the hearer obtains a greater epistemic reason in Da-xia's case than in Casey's. In particular, we can make Casey's interlocutor's expressed level of conviction even more extreme by imagining that he professes to be so confident that protectionism would benefit the U.S. automobile industry that he would bet his life on it. While we're at it, we can make Da-xia's interlocutor's expressed level of conviction so as to precisely match what you would expect an expert on international automobile trading to express in the circumstances. Surely there is some combination of expressed levels of conviction faced by Casey and Da-xia such that you'll agree that Da-xia ends up with a greater epistemic reason than Casey to believe the relevant proposition. That's your counterexample to MEC.

Now, having argued that the MMT and MEC fail in certain 'extreme' cases, I turn to explaining *why* they fail in these cases. Consider first Case 1a, where 10 out of 10 of Ahmed's interlocutors testify that protectionism would benefit the U.S. automobile industry. This should be surprising, because regardless of whether the claim is indeed true, one would not normally expect 10 distinct testifiers to agree on a non-obvious proposition of this sort. Note, however, that there are some circumstances that would explain why such an agreement might arise. For example, if Ahmed had unknowingly stumbled into the meeting room of the Society for Automobile Protectionism, then this is the sort of agreement his interlocutors would be likely to provide. More generally, if the testifiers in question are collectively *biased* in favor of some proposition *P*, in the sense that they are for non-epistemic reasons collectively more likely than they would otherwise be to testify that *P*, then they are more likely to testify unanimously that *P*. It follows that testifiers who do provide unanimous testimony that *P* are more likely to be collectively biased, in this sense, regarding *P*.[15] And since testifiers who are biased regarding *P* would be less likely to provide accurate testimony on *P*, this in turn undermines the justification provided by their testimony that *P*.[16]

This is not to deny that the unanimous testimony received by Ahmed would provide ample epistemic reason to believe that protectionism would benefit the U.S. automobile industry. After all, it is still much likelier to receive such unanimous testimony if the claim is true than if it is false — in part because it might still not be very *likely*, in an absolute sense, that the testifiers are collectively biased (although it would certainly be much *likelier* than before). However, the relevant comparison is between the epistemic reason provided by the unanimous testimony in Case 1a and the otherwise identical Case 1b, where only 9 out of 10 of Brianna's interlocutors

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[14] One might object that there is something about the way in which Casey's and Da-xia's interlocutors express themselves differently, e.g. their specific choice of words, that accounts for why Casey ends up with more testimonial justification than Da-xia. However, this objection can be circumvented by modifying the case such that Casey's and Da-xia's interlocutors simply express their respective degrees of conviction on a numerical scale in an otherwise neutral way, e.g. 'I'm 100% certain' versus 'I'm 90% certain'. I have chosen to present cases in which the speakers express themselves non-numerically only to make the case less artificial.

[15] It is a theorem of the probability calculus that $Pr(A|B) > Pr(A)$ implies $Pr(B|A) > Pr(B)$ whenever $Pr(A|B)$ and $Pr(B|A)$ are defined. The implication in the main text thus follows immediately by letting A stand for complete *A*greement on *P* and *B* stand for the speakers' collective *B*ias regarding *P*.

[16] Arguments similar to the explanation offered in this paragraph for the failure of MMT have recently been put forward in the field of statistics (Gunn et al., 2016) and in the philosophy of science (Dellsén, 2021). Naturally, however, these discussions do not draw the types of lessons for the epistemology of testimony that I do here, nor do they discuss how this explanation generalizes to explain the failure of MEC.

testify that the relevant claim is true. In this latter case, there is little — or, at least, *less* — reason to think that the testifiers are collectively biased in favor of the claim, so the credibility of the testimony Brianna receives is less undermined by the possibility of such bias. It is the fact that the credibility of testimony can be undermined in this way by 'too much' agreement that explains why the epistemic reason provided by testimony is stronger in Case 1b than 1a.

An analogous explanation applies to Cases 2a and 2b. The testimony that Casey receives in Case 2a is surprising in that one would not normally expect someone to express absolute certainty about something as complex an issue as whether economic protectionism would benefit the U.S. automobile industry. But again there are salient circumstances that would explain why such an otherwise surprising testimony might be given. For example, if Casey's interlocutor is not sincerely conveying his actual level of conviction, but instead trying to convert Casey to automobile protectionism for non-epistemic reasons (e.g. as propaganda for a political candidate), one might expect him to testify in the categorical manner that he does in Case 2a. More generally, if one's interlocutor is individually *biased* in favor of *P*, in the sense that they are for non-epistemic reasons individually more likely than they would otherwise be to testify that *P*, then they are more likely to testify so categorically that *P*. It follows that Casey's interlocutor is more likely to be biased regarding automobile protectionism than Da-xia's interlocutor, whose testimony regarding it is more qualified.[17] And since testifiers who are biased regarding automobile protectionism would be less likely to provide accurate testimony on it, this in turn undermines the likelihood that the overly-categorical testimony regarding it is accurate.[18]

In both pairs of cases, we thus have not only decisive pre-theoretical 'intuitions' that testimony that is weaker along either dimension nevertheless provides a stronger epistemic reason for believing the relevant claim, but also an explanation of why this is so. Taken together, this constitutes my argument against the two bridge principles, MMT and MEC, that would allow one to straightforwardly apply epistemological theories in which testimony is treated as a binary phenomenon to cases in which testimony is clearly a matter of degree. More generally, these considerations also strongly suggest that there is no way to fully account for how testimony provides epistemic reasons for belief within a framework in which testimony, perhaps as a simplification, is treated as a binary phenomenon. After all, ultimately the only difference between Cases 1a and 1b, on the one hand, and Cases 2a and 2b, on the other hand, concerns the respective dimension of testimonial strength. As the cases are set up, there is simply nothing besides testimonial strength that could serve as the difference that ultimately makes the epistemic difference.

Let me end this section by considering three objections. First, one might object that there is an important difference in these cases besides testimonial strength after all. For haven't I just said that the testimony received in Cases 1a and 2a — i.e. in cases of 'too much' agreement and conviction respectively — would be *surprising*? So why not say that it is the surprisingness of the testimonies received, rather than their excessive testimonial strength, that explains why our hearers are provided with less of an epistemic reason in Cases 1a and 2a as compared to Cases 1b and 2b? I reply that this is like arguing that it was the glass hitting the floor, rather than someone dropping it a moment earlier, that explains why it broke. The surprisingness of the testimony is not an *alternative* explanation to excessive testimonial strength; rather, both facts are part of the same explanation. Indeed, the surprisingness of the testimony is itself explained by its excessive

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[17] See footnote 15.

[18] To be clear, this is again not to say that the categorical testimony received by Casey in Case 2a provides no epistemic reason to believe that protectionism would benefit the U.S. automobile industry; only that it provides *less* of an epistemic reason to believe it than the more qualified testimony received by Da-xia in Case 2b.

testimonial strength — after all, otherwise identical examples of testimony that differ only with regard to testimonial strength are clearly not equally surprising. So, in the final analysis, appealing to the surprisingness of the testimony in Cases 1a and 2a reinforces rather than eliminates the need for the epistemology of testimony to take testimonial strength into account.

Another potential objection to the argument of this section is that there is something about the proposition on which our agents receive testimony (i.e., that a protectionist economic policy would benefit the U.S. automobile industry) that makes it unsuitable in counterexamples to MMT and MEC. In particular, one might think that the fact that this proposition is *contentious* — in that it concerns a highly complex issue on which one might expect there to be different opinions — means that one should not expect standard theories of testimonial justification (and knowledge) to apply in the first place. In reply, I (happily) concede that this proposition is contentious. (Indeed, I effectively *appeal* to the contentious nature of this proposition in my explanations above of why MMT and MEC fail.)[19] However, this does not imply that these propositions cannot be used in counterexamples to MMT and MEC. After all, these principles (and the various considerations motivating them, surveyed in section 2) are not restricted to non-contentious propositions. If they *were* restricted to non-contentious propositions, this would immediately raise the issue of how testimonial justification works for contentious propositions. Given that I have effectively argued above that we would need to appeal to strengths of testimony when accounting for the latter, this would again reinforce rather than undermine the central thesis of this paper, viz. that testimony cannot in general be treated as a binary phenomenon for the purposes of epistemological theorizing.

Finally, consider a related objection that also appeals to the contentiousness of the proposition on which the agents receive testimony. Suppose, as seems plausible, that the receivers of testimony in Cases 1a and 2a know that the proposition in question is contentious, and that when it comes to contentious issues they are extremely unlikely to encounter either unanimity or certainty.[20] This knowledge, so the objection goes, acts as a *defeater* for the justification that the hearers would otherwise receive in Cases 1a and 2a. And, the objection continues, since MMT and MEC should be understood as 'prima facie principles', which fail to be affected by cases of defeat, Cases 1a and 2a do not constitute genuine counterexamples to these principles.[21]

In reply, let me grant for the sake of the argument that MMT and MEC should be construed as mere *prima facie* principles and that the knowledge that unanimity/certainty on contentious

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[19] I also (happily) concede that, in general, testimony about contentious propositions provide *less* justification, i.e. a weaker epistemic reason, (and thus less commonly leads to knowledge) than does testimony about non-contentious propositions. But that is not to say, of course, that testimony provides *no* justification, i.e. no epistemic reason whatsoever, for contentious propositions, which is all that is required for MMT and MEC to be applicable.

[20] What if they do *not* know this? I.e., what if they fail to realize that the proposition in question is contentious, or that unanimity/certainty on contentious propositions is unlikely to arise? In that case, it may seem plausible the receivers of testimony in Cases 1a and 2a are no less justified than their counterparts in Cases 1b and 2b. (At least this will seem plausible to those with 'internalist' intuitions, i.e. those who take epistemic justification to supervene on agents' mental states, or on factors to which agents have internal access.) So if the agents in the cases above are unaware of the contentiousness of the proposition in question, or the connection between contentiousness and likelihood of unanimity/certainty, then it may seem that these cases cease to be counterexamples to MMT and MEC, respectively. In order to circumvent this worry, I am happy to simply stipulate that all the agents in the cases described above *are* aware of the contentiousness of the proposition in question and the connection between contentiousness and likelihood of unanimity/certainty. Such a stipulation is by no means illegitimate, since MMT and MEC are not restricted to agents that lack awareness of facts of this sort.

[21] Many thanks to an anonymous reviewer for encouraging me to consider this objection.

issues is extremely improbable acts as a defeater in Cases 1a and 2a.[22] If so, then of course the cases described above do not count as counterexamples to MMT and MEC. However, saving MMT and MEC by this maneuver would constitute a Pyrrhic victory for their proponents — a way of winning the battle over these principles while losing the war over the underlying issue. For note that those seeking to defend MMT and MEC as *prima facie* principles of the sort described above would owe us an account of *how and why* the knowledge that unanimity/certainty on contentious issues is improbable functions as a defeater for the testimonial justification the hearers would otherwise obtain. Such an account would, among other things, have to tell us what levels of agreement and conviction, respectively, are required for this type of defeater to arise — and indeed for it to have a greater and lesser level of effectiveness in undermining testimonial justification (after all, such defeaters clearly does not arise in all cases of testimony on contentious propositions, as Cases 1b and 2b illustrate). But to do all that is already to concede that epistemological theorizing about testimony cannot simply extrapolate from the simple case of single-speaker testimony through unqualified assertions either to multi-speaker testimony or to testimony expressed with different levels of conviction — which, of course, is the central thesis of this paper. Although one would technically get to keep MMT and MEC on the books as *prima facie* principles, one would not be able to move freely from theorizing about testimony conceived of as a binary phenomenon to cases of different levels of testimonial strength along the two dimensions outlines in section 2. Thus, the idea behind the current objection, even if successful, would once again reinforce rather than undermine the central thesis of this paper, which is (to repeat) that testimony cannot in general be treated as a binary phenomenon for the purposes of epistemological theorizing.

4 | UPSHOTS FOR NON-REDUCTIONISM

In this final section, I will suggest that the preceding argument against MMT and MEC is particularly problematic for influential versions of non-reductionism about testimonial justification. To foreshadow, the problem for these non-reductionist views is to explain how it could be that receiving *more* of the thing that they take to be a fundamental source of justification could in some cases provide *less* justification for the relevant proposition.

As with most deep and interesting philosophical disputes, there are several ways of characterizing what is at stake in the debate between reductionists and non-reductionists about testimonial justification; I will consider two.[23] On the one hand, non-reductionism is sometimes characterized as the view that testimony is analogous to perception (and perhaps memory and a priori reflection), in that it is a *fundamental* source of epistemic justification.[24] This kind of non-reductionist

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[22] For the record, I am skeptical of attempts to do epistemology in terms of '*prima face* principles', but I will not argue for that meta-epistemological position here. I also do not see why the improbability of receiving a certain type of testimony would necessarily act as a defeater for testimonial justification, but I won't press that point here either.

[23] I think it's fair to say that these are the most prominent conceptions of non-reductionism in the literature. For example, Fricker (1994, 2017), Graham (2006), Lackey (2006, 2008a, 2010), Faulkner (2011, 79), Gelfert (2014), and Goldberg (2018, 663-664) all describe non-reductionism in one or both of these ways. Especially influential proponents of non-reductionism of these kinds include Reid (1975), Coady (1992), and Burge (1993, 1997); these views have been influentially criticized by, among others, Fricker (1994, 1995), Malmgren (2006), and Shogenji (2006).

[24] Of course, this characterization is not congenial to those who reject the very notion of fundamental sources of justification (i.e., coherentists such as BonJour 1985); for them, non-reductionism can instead be described as the view that testimonial justification is analogous to what their opponents (i.e., foundationalists such as Pryor 2000) take perceptual justification to be like.

holds that testimony does not get its epistemic potency via some form of inference from any other source, such as perception and memory; rather, testimony is its own *sui generis* source of epistemic justification. On the other hand, non-reductionism is sometimes described as the view that hearers are at least somewhat justified (warranted, entitled, etc.) in believing what a speaker says merely on the basis of the speaker's testimony — provided that there are no special reasons for the hearer either to distrust the speaker or to disbelieve the relevant proposition. This kind of non-reductionist holds that testimony provides a kind of *prima facie* justification that is defeated only when there are special reasons to distrust the speaker or disbelieve what is said.

I will now argue that the failure of MMT and MEC undermines non-reductionism on both of these conceptions.[25] Consider first the conception of non-reductionism on which testimony is taken to be a fundamental source of epistemic justification, analogous to perception. Is this view compatible with the failure of MMT and MEC? Well, note first that the epistemic impact of perception is not inverted 'at the extremes' in the way I have argued that it is for testimony in the cases in which MMT and MEC fail. When we repeatedly have perceptual experiences with identical content, then (all other things being equal) this does not in any way undermine the justification we have for taking those experiences to be veridical. For example, repeatedly seeing my daughter's drawing on the wall besides my computer screen does not somehow undermine my justification for believing that the drawing is really there.[26] So the analogue of MMT for perception is true, not false. Similarly, there is no point at which an especially clear or vivid perceptual experience gives us less of an epistemic reason to take the experience to be veridical than a somewhat murkier but otherwise similar experience with the same content. For example, seeing my daughter's drawing on the wall in the broadest light of day, when I am most awake in the morning (and so on), does not somehow undermine my justification for believing it's really there. So, again, the analogue of MEC for perception is not false but true.

At least in these respects, then, the failure of MMT and MEC show that testimony is not epistemically analogous to perception, contrary to the conception of non-reductionism we are currently considering. But could the non-reductionist respond by setting aside the testimony-perception analogy, and argue that testimonial justification is still *fundamental* in some other epistemically relevant sense? I doubt it. The entire picture of epistemic justification according to which some sources are 'fundamental', while others are 'inferential', is based on the idea that epistemic justification originates in fundamental sources, e.g. perceptual experiences, and flows from there to our various non-fundamental beliefs through a network of logical, probabilistic, or explanatory relations. On this kind of broadly foundationalist picture of epistemic justification, it is hard to see how *strengthening* some of the fundamental sources of one's epistemic justification could undermine the justification we have for the beliefs that are immediately justified by these sources. Since that is what happens in our two counterexamples to MMT and MEC, they would seem to undermine non-reductionism on any 'fundamental source'-conception thereof.

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[25] I say 'undermines' rather than 'refutes' or 'falsifies' because I acknowledge that there are ways for the non-reductionist to make her position compatible with the falsity of MMT and MEC (see below). However, since these responses are themselves highly problematic (as we shall see), the upshot is still a threat to non-reductionism.

[26] *Objection*: But what if you keep seeing your daughter's drawing wherever you look? Wouldn't that give you reason to think you are hallucinating, which in turn would undermine your justification for believing that the drawing is really there? (Thanks to Ólafur Páll Jónsson for this objection.) *Reply*: In this modified case, I am not having experiences with the same content over and over, since perceiving the drawing as being in one place (e.g. on the wall besides my computer screen) clearly differs in content from perceiving it elsewhere (e.g. floating outside my office window). Thus this case is not analogous to Case 1a, where Ahmed repeatedly receives testimony with the same content.

What then if we characterize non-reductionism instead as the view that a speaker is *prima facie* justified in believing what a speaker says, i.e. justified as long as there are no 'special reasons' to do otherwise? The idea behind this type of non-reductionism is that testimonial justification does not require the hearer to have any positive reasons to trust the speaker or to believe what the speaker tells her. Instead, all that's required for a speaker's testimony to justify the corresponding belief in the hearer is that the hearer does not have any special negative reasons to distrust the speaker or to disbelieve the proposition communicated by the speaker. This thesis is sometimes formulated by appealing to the notion of *defeaters*, in which case the idea is that a hearer is justified in believing a speaker's testimony as long as the hearer does not have any undefeated defeaters for her testimonial justification (see, e.g., Lackey 2006, 434).[27]

When characterized this way, it might seem as if the non-reductionist has available to her an obvious way to handle the counterexamples against MMT and MEC. That is, the non-reductionist might argue that the fact that the speakers in our examples express 'too much' agreement and conviction respectively is itself a 'special reason' against — i.e., an undefeated defeater for — the testimonial justification one would otherwise have. The idea, then, is that the non-reductionist can continue to say that each 'yes'-testifier in Cases 1a and 1b does provide the hearer with a kind of presumptive justification for believing that protectionism would benefit the U.S. automobile industry, and similarly that each increase in the single speaker's expressed level of conviction in Cases 2a and 2b does strengthen the hearer's presumptive justification for this claim; but that in Cases 1a and 2a this justification is defeated by 'too much' agreement and conviction, respectively, which serve as 'special reasons' that defeat this presumptive testimonial justification.

There are at least two serious problems with this reply.[28] First, counting 'too much' agreement or conviction as a 'special reasons' in the requisite sense, i.e. as potential defeaters of presumptive testimonial justification, arguably goes against a central motivation behind non-reductionism. Non-reductionism is supposed to make sense of the thought that testimonial justification comes easy. As Simion (2020, 2) nicely puts it: "We don't need to check on the facts ourselves; nor is elaborated detective work needed to verify the credentials of the testifier. We can just go ahead and believe on mere say-so: it's fine." Of course, testimonial justification cannot be taken to come *too* easy, since one shouldn't trust infamous liars or believe known falsehoods. So this type of non-reductionism comes with an escape clause requiring that one doesn't have any special reasons beforehand to distrust the speaker or disbelieve the proposition. That's it, though: In the absence of such negative reasons about the speaker or the relevant proposition, testimony automatically provides justification according to the version of non-reductionism we are now considering.

However, note that in our cases of 'too much' agreement or conviction, neither type of negative reason is present. After all, it is *stipulated* in these cases that the hearers start out with no information whatsoever about the speaker(s) and no opinion or evidence about the relevant proposition. Moreover, we may further stipulate that whatever relevant information about the speakers and the proposition that Ahmed has in Case 1a is shared by Brianna in Case 1b, and vice versa, and that the same goes for Casey and Da-xia in Cases 2a and 2b. Given this, the only piece of informa-

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[27] Roughly speaking, an epistemic defeater is something that can serve to prevent a piece of information from justifying a proposition or belief. An *undefeated defeater* is an epistemic defeater that is not itself subject to an epistemic defeater, i.e. a defeater that is not itself prevented from doing its job as a justification-defeater by yet another defeater.

[28] A potential third problem is that the testimonial justification is not in fact *defeated* in Cases 1a and 2a; rather it is merely *lessened*. I'll set this problem aside since it seems to me that a non-reductionist could plausibly respond by simply re-characterizing their 'special reasons' not as defeaters of testimonial justification but as epistemic reasons against the relevant proposition.

tion that could serve as a potential defeater in Cases 1a and 2a — and thus distinguish them from Cases 1b and 2b — concerns the character of the testimony itself, viz. how much agreement or conviction it expresses. So, in order for there to be a 'special reason' here that defeats the testimonial justification, a *new* type of defeater would have to be invoked, one that does not supervene on information that the hearer possesses beforehand about either the speaker or the proposition. Of course, the non-reductionist could respond to this by simply expanding the class of potential defeaters to include this new type of information about whether there is 'too much' agreement or conviction. But this is itself problematic from a non-reductionist point of view because it would make testimonial justification harder — less easy or automatic — than the central motivation claims for it. After all, hearers would now be required to keep track of whether the testimony is expressed with 'too much' agreement or conviction; moreover, they would have to have formed beliefs — which themselves would presumably have to be justified — about how much agreement or conviction is 'too much' in a given case.[29] While reductionists will be happy to acknowledge that epistemic agents should take factors of this kind into consideration in evaluating testimony, this seems to be precisely the type of elaborate epistemic work that non-reductionists claim to be unnecessary.

Suppose, however, that the non-reductionist bites this bullet and nonetheless expands their class of potential defeaters for testimonial justification. This brings us to the second problem with our non-reductionist's reply, viz. that expanding the set of special reasons in this way would be entirely ad hoc. After all, it is hard to see any motivation for counting 'too much' testimonial strength as the kind of special reason that undermines testimonial justification except to avoid counterexamples of the kind discussed above. The non-reductionist's situation here would be analogous to that of a scientist who protects her theory from refutation only by artificially restricting their scope to a range of phenomena that the theory is able to deal with adequately. One could argue that the type of non-reductionism currently under discussion is already somewhat ad hoc, in that it appeals to a notion of 'special reasons' that could defeat testimonial justification in some yet-to-be-specified sets of cases. But the required expansion of the non-reductionist's 'special reasons' would introduce an especially problematic form of *ad hocery* in that these 'special reasons' do not concern the speaker S (or speakers $S_1, \ldots, S_n$), nor do they concern the proposition P. Rather, these 'special reasons' concern the character of the *testimony itself* — that is, the very thing that non-reductionists claim to be capable of justifying beliefs in a direct or unmediated way. So, while the non-reductionist on the second characterization might be able to avoid refutation by expanding her notion of 'special reasons' to include 'too much' agreement and conviction, that such an ad hoc maneuver is needed should at the very least count as a strike against the view.

5 | CONCLUSION

We started out by observing that, like many other epistemically relevant phenomena, testimony comes in degrees. Indeed, what I have called *testimonial strength* differs along two dimensions depending on the number of speakers that provide identical testimony, and the conviction with

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[29] Or indeed whether any amount of agreement or conviction is 'too much' in a given case. Note that this clearly depends to the content of the testimony itself, among other things. For example, if Cases 1a, 1b, 2a and 2b had all concerned the proposition that the toilets are lo down the hall to the left, then presumably no amount of agreement and conviction would have been 'too much'. This is straightforwardly explained by the considerations adduced in section 3, since maximal agreement and conviction *about this proposition* would not be surprising in the way it would be about a proposition like whether protectionism would benefit the U.S. automobile industry.

which speakers express themselves. Treating testimony as if it were a binary phenomenon would be an innocuous simplification if there was a straightforward monotonic relationship between different strengths of testimony that *P* and how strong an epistemic reason a hearer has to believe *P* on the basis of that testimony. As we have seen, however, this is not generally so. Thus one upshot of this paper is that epistemological theorizing about testimony can no longer ignore the fact that testimony comes in degrees. Another, admittedly speculative, upshot is that influential non-reductionist views of testimonial justification face an unexpected problem, in that they are arguably unable to account for the epistemic status of testimony in extreme cases of testimonial strength.[30]

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