



## Testimony and inferential justification

(*Testimonio y justificación inferencial*)

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**ABSTRACT:** Reductionists about testimony think that testimony is never a basic source of justification. By contrast, anti-reductionists claim that, at least in some paradigmatic cases, testimony is a basic and independent source of justification. In support of their position, anti-reductionists usually claim that paradigmatic testimony-based beliefs are *non-inferential* in that recipients of testimony usually don't reason their way from the fact that they were told that  $p$  to the belief that  $p$ —they simply come to believe that  $p$ . In this paper I explore in detail the idea that paradigmatic testimony-based beliefs are non-inferentially justified and conclude that it is grounded on an overly simplistic characterization of inferential relations. Then, and taking my cue from Malmgren's (2018) proposal about the varieties of inferential relations, I defend the view that paradigmatic testimony-based beliefs are inferentially justified after all.

**KEYWORDS:** testimony, inference, reductionism, anti-reductionism, credibility, justification.

**RESUMEN:** Los reduccionistas acerca del testimonio piensan que éste nunca es una fuente básica de justificación. Por el contrario, los antirreduccionistas afirman que, al menos en algunos casos paradigmáticos, el testimonio es una fuente básica e independiente de justificación. En apoyo de su posición, los antirreduccionistas suelen afirmar que las creencias basadas en testimonios no son inferenciales, en el sentido de que los oyentes normalmente no razonan desde el hecho de que se les dijo que  $p$  hasta la creencia de que  $p$ . En este artículo exploro en detalle la idea de que las creencias basadas en testimonios están justificadas de manera no inferencial y concluyo que se basa en una caracterización demasiado simplista de las relaciones inferenciales. Siguiendo el ejemplo de la propuesta de Malmgren (2018) sobre las variedades de relaciones inferenciales, defiendo la opinión de que, después de todo, las creencias basadas en testimonios sí están justificadas inferencialmente.

**PALABRAS CLAVE:** testimonio, inferencia, reduccionismo, antirreduccionismo, credibilidad, justificación.

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## 1. Introduction

Consider the following testimonial exchange:

Andrew is going to the dining hall when he encounters Sandra. Sandra says this: “Too late, Andrew, all the food is gone and the dining hall is closed.”

Provided that Andrew heard Sandra’s utterance correctly and that he is a competent English speaker, it is clear that Andrew is justified in believing *that Sandra asserted that all the food is gone and the dining hall is closed*. But is he equally justified in believing *that all the food is gone and the dining hall is closed* (henceforth, that *p*)? And if so, why? Is it equally just in virtue of being a competent English speaker or something else is needed? Does he need in addition *some* measure of justification for believing that Sandra is a sincere and reliable speaker or *some* additional reason (besides Sandra’s testimony) for thinking that what she asserted is likely to be true?

If you think that the mere fact that Andrew grasped both the content and force of Sandra’s utterance—in other words, Andrew’s mere linguistic competence—is enough for him to have at least some justification for believing that *p*, then you are likely to be an anti-reductionist about testimony. If, by contrast, you think that the transition from being justified in believing *that the speaker asserted that p* to being justified in believing *that p* requires additional support— a support that cannot be fully testimonial —then you are likely to be a reductionist. Anti-reductionists are committed to comprehension of the content and force (henceforth just “comprehension”) of an utterance being a fundamental source of justification (Graham 2006, p. 91), although there is room for disagreement about how much justification comprehension as such affords—only pro tanto or on balance justification. Reductionists, by contrast, deny that comprehension is a basic source of justification; in Audi’s words, reductionists think that testimony “contributes to that justification [of a testimony-based belief] as a datum supporting the inductive basis for holding the belief; but it has no independent justificatory role” (2004, p. 21-2).

A related contrast between the two camps, and the one I am interested in, is that anti-reductionists think that comprehension-based beliefs are—at least on some occasions and to a degree that may fall short of on balance justification— *non-inferentially* justified, whereas reductionists claim that the justification for comprehension-based beliefs is entirely *inferential*, that is, based on other beliefs (at least one of them is a non-comprehension based belief). In this paper I do not pick sides on this controversy as it stands; rather, I take steps towards the clarification of the dispute. More specifically, one of my objectives is to clarify the anti-reductionist idea that there is a basic, non-inferential testimonial justification or warrant at play in at least some testimonial exchanges. I will take as a case study Audi’s (2004, 2006, 2011) rich and complex conception of testimonial justification. As will emerge, this conception, although anti-reductionist in its main tenets, also has important reductionist-like features; this sort of hybrid view will prove extremely useful for my task of clarifying the idea of a non-inferential testimonial justification.<sup>1</sup> After present-

<sup>1</sup> A referee has objected that it is a mistake to take Audi’s view as representative of the anti-reductionism camp precisely because his is a hybrid view that many anti-reductionists would repudiate. In response, I want to clarify that the reason why I am engaging with Audi’s position is not because I think this is

ing and criticizing Audi's position, I proceed to my second objective: to sketch an alternative picture of the inferential features that, I claim, are shared by *every* testimony-based belief.

The inferentialist/non-inferentialist controversy is central to the epistemology of testimony for several reasons. I mention three. First, some reductionists, most notably Fricker (1994), Pritchard (2004), and Lackey (2008),<sup>2</sup> have claimed that positing an epistemic entitlement to take testimony at face value without appealing to supporting beliefs—which is another way of stating the thesis that comprehension is a basic source of justification—is a recipe, in Fricker's famous phrase, "for gullibility." In other words, they think that merely taking the speaker's words *as such* as a reason for belief amounts to bad epistemic practice. Second, the debate about whether comprehension is a basic source of justification is largely a debate about whether comprehension-based beliefs are inferential or not. Finally, a number of seemingly strange theses have been derived from the idea that comprehension-based beliefs are non-inferential, most notably Burge's thesis that there is a priori testimonial warrant (Burge 1993; for criticism see Malmgren 2013) and Moran's idea that testimonial-exchanges "provide a kind of reason for belief that is categorically different from that provided by evidence" (2006, p 275; for criticism see Lackey 2008, Ch. 8). Once more, my intention here is not to engage directly with these disputes, but rather to do some preparatory work by investigating the shared assumption behind all of them, namely, that there is a clear sense in which comprehension-based beliefs are (or could be) non-inferentially justified. (Although, as I mentioned above, I will also advance an alternative picture of the relation between testimony and inference.)

To avoid misunderstandings right from the start, it's crucial to emphasize that my goal is not to argue in favor of reductionism. Rather, my main objective is to convince you that, at least when it comes to the epistemology of testimony, the standard conception of inferential justification is overly simplistic. As hinted above, I will argue that every testimony-based belief exhibits inference-like relations to other beliefs and, more importantly, to other mental states that fall short of beliefs—relations that cannot be accounted for by the standard conception. It is beyond the scope of this paper to decide whether this fact—that testimony-based beliefs have inference-like features—implies that reductionism is correct. I will be content to establish that the reductionism/anti-reductionism dispute cannot be settled by appealing to the standard conception of inferential justification.

This is the plan of the paper. In section 2 I discuss and problematize the notion of an inferential justification, specifically in the context of testimonial exchanges. In section 3 I begin exploring the suggestion that testimony-based beliefs might in general exhibit inference-like relations to other beliefs and mental states of the person. In section 4 I further pursue this suggestion by focusing on credibility constraints regarding the source of testimony. Finally, in section 5 I offer some conclusions.

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the paradigm of anti-reductionism, but rather because he both recognizes the recipient's need for a measure of justification independent of the speaker's assertion *and* he denies that this fact entails an inferentialist view of testimony. On the contrary, I will claim that it does entail such a view, although a view that is radically at odds with the one provided by the standard conception of inferential justification.

<sup>2</sup> A referee has correctly reminded me that Lackey's view is a hybrid of reductionism and anti-reductionism.

## 2. *What is an inferential justification?*

Throughout the paper I will mostly rely on the conception of inference defended by Anna-Sara Malmgren in her paper “Varieties of inference?” (2018). I will also take some cues from Audi’s discussion of inferential relations (2011, Ch. 8). According to Malmgren’s rendering of the standard conception of inferential justification, a subject *S* has **propositional** inferential justification to believe that *p* only if *S*’s justification *to believe* that *p* rests (completely or partially) on *S*’s justification to believe at least one other proposition *q*. By contrast, *S* has **doxastic** inferential justification *in believing* that *p* not only if *S*’s justification to believe that *p* rests on *S*’s justification to believe *q*, but moreover *S*’s belief that *p* is actually *based* (in a causal-explanatory sense) in her belief that *q*.

A related though different distinction is Audi’s distinction between **episodically** inferential beliefs and **structurally** inferential beliefs (2011, p. 180). An episodically inferential belief is a belief formed through a process of reasoning from other beliefs, whereas a structurally inferential belief is a belief that, although arises “spontaneously” in the subject, is nonetheless based on at least one other belief of hers. We must be careful not to confuse both distinctions, specifically not to confuse a structurally inferential belief with a propositionally inferential belief: in the former case, but not in the latter, *S* does have the belief that *p*—with the peculiarity that the belief is based on other beliefs, even though, from *S*’s perspective, it arises without any conscious process of reasoning. The idea of a structurally inferential belief will be important in evaluating Audi’s conception of testimony later on.

What Malmgren’s rendering of the standard conception and Audi’s conception have in common is the characterization of an inferential relation as that in which a belief (and the justification thereof) rests or is based on at least one other justified belief. This characterization leads Malmgren (2018, p. 226) to propose a “dual asymmetric dependence test” (DADT) for inferential justification: “If *S* weren’t justified in believing that *q*, *S* wouldn’t be justified in believing that *p*—but not vice versa”. This test *prima facie* indicates that *S*’s justification in believing *p* is inferentially based on her justification for believing *q*. The relevance of the test is this: there are certain beliefs of *S*’s that pass the test but that, on the standard conception of inferential justification, would not count—or not straightforwardly—as inferential.

Of particular importance for my purposes here are testimonial- (or comprehension-) based beliefs. Malmgren has called attention to the fact that at least some of *S*’s comprehension-based beliefs exhibit the inferential pattern codified in DADT and so would count as *prima facie* inferential, even though they conspicuously lack other central elements of an inferentially justified belief as traditionally understood by the standard conception. Some such beliefs lack, for instance, a neat argumentative structure such that their supporting beliefs, in their role as premises, entail (deductively or inductively or abductively) the conclusion. In addition, they violate the “standard availability constraint” (Malmgren 2018, p. 224), that is, the constraint that the supporting beliefs of an inferentially justified belief of *S*’s must be such that *S* is antecedently justified in believing (or at least has a justification *to believe*) each one of them.

To make things less abstract, consider the following variation of the initial example (henceforth, “the second variant”). Andrew is going to the dining hall when he encounters Sandra. But this time Sandra says only this: “Too late, Andrew.” After hearing what she says, Andrew immediately comes to believe that all the food is gone and the dining hall

is closed. For the sake of argument, let us assume that Andrew is justified in believing this; now the key question is whether Andrew's belief is inferentially justified. Notice, first, that such belief passes DADT: if Andrew were not justified in believing that Sandra just said "Too late, Andrew," he would not be justified in believing that all the food is gone and the dining hall is closed, but not vice versa. This defeasible indicates that Andrew's belief is inferentially justified or inferentially grounded on his belief that Sandra said "Too late, Andrew." But also notice how implausible would be to say that Andrew's belief exhibit an argumentative structure such that, taking Sandra's utterance as one of her premises plus appropriate background beliefs (be it about Sandra as a testifier or about conversational implicatures), the belief in question is entailed by it.

A natural proposal at this point is that there *is* an argumentative form that accounts for Andrew's belief, namely, inference to the best explanation (IBE). In effect, the proposal goes, Andrew may have arrived at his belief by reasoning that the best explanation of Sandra's utterance is that she was trying to convey the information that all the food is gone and the dining hall is closed. This proposal may sound initially plausible, but consider the following. First, even conceding the point that something like IBE is what accounts for Andrew's belief, the argument as it stands is obviously incomplete. It is not enough to say that the best explanation of Sandra's utterance is that she is trying to convey the belief in question; a complete abductive argument would have to specify, at the very least, some premises concerning the speaker (or the kind of speaker she is), the kind of conversational setting, the relevant conversational implicatures, and so forth, for the conclusion to have some plausibility. But now notice, second, that the more details we try to fill in for the argument to be complete, the less likely it is that Andrew satisfies the standard availability constraint for all of them: in effect, it is highly implausible that he is antecedently justified *in believing* the kind of premises just sketched. Finally, even if we conceded that, although Andrew lacks doxastic justification for such premises, he may have propositional justification to believe them, the putative (epistemic and psychological) grounds for his belief that the all the food is gone and the dining hall is closed are, to a very large extent, consciously unreachable or "subjectively opaque" (Malmgren 2018, p. 228). If asked why he holds the belief in question, Andrew would, at most, be able to offer as his reason the fact that Sandra uttered "Too late, Andrew." But, as I have argued, this is hardly the complete story and, unless he is a philosophy student (and even in that case!), it is unlikely that he would have the conceptual resources to construct an acceptable abductive argument supporting his belief.

Do the previous considerations show that Andrew's belief is non-inferential? After all, you may say, DADT is a defeasible test, so the mere fact that a belief passes the test does not show that it is inferentially justified. According to the standard conception, the dichotomy inferential/non-inferential is exhaustive: every belief is either inferentially or non-inferentially justified. So if, following the considerations adduced above, we conclude that Andrew's belief does not fit with the traditional characterization of an inferential belief, we are pushed (if we stick to the standard conception) to the implausible conclusion that Andrew's belief is non-inferentially justified. This is implausible because, on the face of it, the belief in question is quite unlike prototypically non-inferential or basic beliefs—for instance, perceptual beliefs. The justification a person can offer for her perceptual beliefs is, in normal cases, restricted to pointing to the source of the belief (e.g., "How do you know that there is an apple on the table?" "I just saw it!"). By contrast, it seems that in the second variant Andrew cannot simply appeal to Sandra's utterance as the (sole) justificatory reason

for his belief that all the food is gone and the dining hall is closed, since the utterance does not have this proposition as its content —it is limited to a concise “Too late, Andrew.”<sup>3</sup> More would have to be said by Andrew for his belief to count as justified, and this extra would plausibly appeal to other beliefs held by him—an observation that takes us back to the original presumption that Andrew’s belief is inferentially justified.<sup>4</sup>

In order to solve impasses of this sort, Malmgren (2018) advances a new conception of inferential relations that goes beyond the traditional dichotomy mentioned above. According to her proposal, certain beliefs are based on other beliefs or on other mental states with propositional content that are not beliefs properly speaking,<sup>5</sup> and so exhibit inference-like relations, even though they do not fit with the standard conception of an inferential relation—the supporting mental states are not premises of a good argument (traditionally conceived); the subject often lacks justification for them; they can be subjectively opaque, etc. The proposal nicely accommodates cases like Andrew’s (in the second variant of the example), in which the subject forms a belief about what is implicitly communicated by a speaker; what I want to do in the next couple of sections is to pursue the following hypothesis: what if testimonial beliefs *in general* exhibited a sort of inference-like structure of the sort described in Malmgren’s picture of inferential relations? Let’s see if this hypothesis can shed new light on the anti-reductionist contention that comprehension-based beliefs are

<sup>3</sup> A referee has objected that I seem to be assuming an overly-simplistic picture of what a testimonial exchange is, according to which paradigmatic instances of testimony are those in which the speaker’s assertion exactly matches the recipient’s belief thus formed (as in the first variant of the example above). I am not assuming this, however. My point in bringing in the second variant of the example—in which the speaker’s assertion clearly underdetermines the recipient’s belief—is precisely to serve as an intuition-pump for the idea that this is clearly an instance of testimony in which the recipient’s belief must be partly based on other beliefs (and mental states) of hers, precisely because there is such a wide gap between the content of the speaker’s assertion and the recipient’s belief formed on the basis of it. Later on (section 3), I will generalize this thesis and argue that, in every case, testimony-based beliefs exhibit inference-like relations to other beliefs and mental states of the recipient. This, of course, is meant to include cases in which the offering of testimony is limited to, for instance, nodding to a proposition (Lackey 2008, p. 26, fn. 18) or is based on “semantic presuppositions” (Keller 2022). For the purposes of this paper, then, “testimony” is meant to include every instance in which a person conveys (by whatever linguistic and non-linguistic means are available) information and other person, by picking up that “conveyance”, comes to believe its content (where “content”, of course, has to be understood very broadly).

<sup>4</sup> A referee has objected that, in assuming that Andrew’s belief need some warrant besides the speaker’s utterance, I am already assuming that anti-reductionism is false. This is not so, because I am not assuming that the warrant in question must be a non-testimonial belief the person consciously entertains and from which she reasons her way to arrive at the target belief (see section 4 below). It is precisely one of my chief aims in this paper to show that anti-reductionism could and should be divorced from anti-inferentialism, when “inference” is understood along the lines given by the standard conception. If I am right, even paradigmatic basic beliefs—perceptual beliefs—could turn out to exhibit inference-like relations as well. For support of this idea, see McGrath (2017).

<sup>5</sup> The disjunction is introduced to allow for sub-personal mental states that, in Malmgren’s proposal, play a fundamental role in the explanation of the kind of inference-like relations exhibited by the beliefs under scrutiny—beliefs of the kind illustrated by the second variant of the Andrew-Sandra exchange.

not inferentially justified and on the opposite reductionist picture of how inference is necessary for this kind of beliefs.

### 3. *Testimony and justification(s)*

A natural objection that the anti-reductionist could make concerning my treatment of Andrew's belief in the second variant of the example is that it is not a paradigmatic case of what the anti-reductionist calls a testimony-based belief. For example, Audi (2006, p. 27) writes that "testimony-based belief, as I construe it, and as I think it is normally understood, is never inferential." A little later he adds that if background elements bolster a putative testimony-based belief, the implication is that "it is at most in part testimony-based and hence not what normally counts as a testimony-based belief" (p. 29). Since the considerations made above suggest that the justification of Andrew's belief rests in part on background elements that help him retrieve what is implicitly communicated by Sandra, the anti-reductionist could argue that his belief is "not what normally counts as a testimony-based belief."<sup>6</sup>

The anti-reductionist complaint is based on the fact that Andrew's belief was formed on the basis of a concise statement whose propositional content does not match the propositional content of his belief. But I think that this may well be a distracting feature due to the specifics of the example (a belief based on an interpretation of what is implicitly conveyed) and that it is possible that, contrary to the anti-reductionist creed manifested in Audi's quotation, testimony-based beliefs *in general* share some important structural features with Andrew's belief in the second variant of the example. To pursue this hypothesis, we have to return to the first variant of the example: Andrew forms the same belief but, this time, it is based on an utterance ("Too late, Andrew, all the food is gone and the dining hall is closed") whose propositional content exactly match the propositional content of the belief thus formed. This is, from the anti-reductionist's perspective, a paradigmatic testimony-based belief. So now let us ask: Is it possible that under normal conditions —conditions in which it takes no conscious reasoning process for Andrew to form his belief based on Sandra's utterance— the justification of this paradigmatic testimony-based belief exhibits inference-like relations to other mental states of the person?

An immediate response available to the anti-reductionist is that in the first variant of the example, unlike in the second, Andrew can justify his belief just by pointing to the source ("How do you know that the dining hall is closed?" "Sandra just told me so!"). This is a feature —I claimed above— of prototypical non-inferentially justified beliefs, e.g., perceptual beliefs. Does the possibility of Andrew's justifying his belief by appealing to its source prove conclusively that it is non-inferential? As a working hypothesis I will answer negatively and pursue the suggestion that comprehension-based beliefs exhibit, quite generally, inference-like justificatory relations to other mental states of the person—relations quite unlike those considered by the standard conception of inferential justification.

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<sup>6</sup> Here I'm not myself claiming that the second variant of the example doesn't illustrate a paradigmatic instance of testimony. Rather, I'm just entertaining a possible objection based on Audi's position. See footnote 3 for the operative definition of "testimony" I'm employing in this paper.

I start by considering a remark by Audi himself: “[I]n order to obtain testimony-based justification for  $p$  one needs a measure of justification” (2006, p. 37). By itself the quotation is not entirely clear, but taken in context it is apparent that what Audi has in mind is that a person must have some measure of justification of her own for her uptake of a source’s testimony to be epistemically sound. Audi proposes three kinds of justifications: a *perceptually-based* justification that the source said something; a *semantic* justification that what the source said was  $p$ ; a *credibility* justification to the effect that the source is both competent and sincere regarding  $p$  (2006, pp. 32, 37).<sup>7</sup> Interestingly, Audi claims that the need for this triplet of justifications does not render testimony-based beliefs inferential. I will argue below that in making this claim he is unduly mixing epistemic and psychological considerations; I will also argue that the need for such justifications supports the idea that comprehension-based beliefs exhibit inference-like relations of the sort explored in Malmgren’s proposal. (Keep in mind, however, that in Malmgren’s picture the grounding mental states need not be justified beliefs; they may be sub-personal mental states.)

Let us reflect first on the role of Audi’s triplet of justifications in the uptake of testimony. To return to Andrew’s example (in the first variant): his belief that all the food is gone and the dining hall is closed is based on Sandra’s saying so. So if John asked Andrew why he believes that, Andrew’s natural response will be: “Sandra just told me so.” My working hypothesis (following Audi here) is that behind this response we can discern three kinds of presuppositions that make Andrew’s response a sensible one: first, that Sandra said something; second, that what she said is that all the food was gone and the dining hall was closed; third, that Sandra is a credible (or trustworthy) testifier concerning this proposition (or this kind of propositions). The crucial point is that at least part of the justification of Andrew’s belief rests on his justification to believe each of these presuppositions. And we can, I think, generalize this conclusion to every testimony- or comprehension-based belief, since there is nothing in Andrew’s example (in its first variant) that could make it suspect of not conforming to the paradigm of such beliefs (assuming, as Audi does [2006, p. 27], that we have a clear notion of that paradigm).

The perceptual justification that the source said something seems innocuous, in the sense that the recipient can easily identify the basis for it, namely that she heard the source utter a sentence. The semantic and credibility justifications are more complex; exploring this complexity will serve to clarify the inference-like structure of comprehension-based beliefs. In the remainder of this section I focus on the semantic justification and in the next one on the credibility justification.

One may think that semantic justification — justification that the source said that  $p$  — is just like perceptual justification, in the sense that a recipient competent in the language in which the proposition is expressed perceives not only *that* the source said something but also (and without transition) perceives *what* she has said. So if one thinks that perceptual beliefs are non-inferential, one will likely conclude that beliefs about what other peo-

<sup>7</sup> Thus, Audi denies that testimony (or, in the terms employed here, comprehension) is a basic source of justification; still, he claims (in a different paper) that it is a *conditionally* basic source of justification, by which he means “a source that is basic with respect to some degree of justification for believing a proposition *given* an appropriate degree *independently* possessed by the subject” (2004, p. 19, second emphasis added). In footnote 11 below I say more about how this conception of testimony can be reconciled with my classification of Audi as belonging to the anti-reductionist camp.



ple say are non-inferential as well. Although this characterization may be phenomenologically correct, there are arguments suggesting that it is epistemically inaccurate. The reason is that there are sub-personal mental states that are responsible for *conferring* warrant to the subject's semantic interpretation of what she hears or reads, despite not being themselves "warrant apt" (Pettit 2010, p. 9).<sup>8</sup> The content of these mental states can be characterized as tacit knowledge of a grammar (Rattan 2002): it is tacit because it lacks both conscious accessibility (a person cannot bring this knowledge to consciousness) and conceptual content (a person does not need to be able to spell the rules of, say, English in order to count as a competent English speaker).<sup>9</sup>

The standard conception of inferential justification denies that sub-personal mental states can enter into inferential relations, since their being consciously inaccessible and their lack of conceptual content mean that they cannot be justified and, as we saw, one of the basic tenets of the standard conception is that for a mental state to be able to confer inferential justification on another mental state the former must be previously justified. It is here that Malmgren's proposal proves useful. She suggests that inferential integration—the property of mental states that tend “to enter into inference-like proximate causal transitions with a variety of beliefs and/or other attitudes of the agent” (Malmgren 2018, p. 244)—and conscious accessibility (and presumably conceptual contentfulness as well) can come apart; that is, a mental state can exhibit the former despite lacking the latter. If this is indeed a live possibility,<sup>10</sup> then at least some sub-personal mental states—like those that constitute tacit knowledge of a grammar—can confer justification despite not being justifiable themselves. On Malmgren's picture, then, semantic justification exhibit inference-like properties, and so can be said to be inferential, although not in the sense in which the standard conception has understood the term.

#### 4. *Credibility and inference*

What I want to do now (and this is the paper's main contribution) is to extrapolate Malmgren's picture of semantic justification to the credibility justification regarding the trustworthiness of a testimonial source. In order to do so, I will concentrate on an uncontroversial paradigmatic case of a testimony-based belief—Andrew's example in its first variant. I begin by criticizing Audi's account and then show how a Malmgren-like proposal emerges as a better contender for understanding the role played by credibility considerations in conferring warrant to testimony-based beliefs.

An initial question about the example that opened the paper was whether Andrew's linguistic competence is enough to justify not only his belief *that Sandra asserted that all the food is gone and the dining hall is closed* but also his belief *that all the food is gone and the*

<sup>8</sup> I leave open the question of whether something similar can be said about perceptual beliefs.

<sup>9</sup> Stanley (2005) claims that contextual knowledge is normally required to grasp whether a sentence is being used literally or not. As a referee has usefully suggested, this thesis can be employed here to argue that a recipient of testimony needs background (tacit) knowledge to be able to effect the transition from the speaker's utterance that *p* to the belief that *p*.

<sup>10</sup> I assume that it is for the sake of exploring its consequences for the epistemology of testimony. I lack space here to enter into a detailed discussion of Malmgren's arguments in support of her position.

*dining hall is closed*. Given our previous discussion about the recipient's need for Audi's triplet of justifications and, especially, for the third one —about the source's credibility— we can now advance a negative answer: the recipient of testimony needs something beyond her mere linguistic competence in order to effect the transition from the belief *that the source said that p* to the belief *that p*. Interestingly, an anti-reductionist (or perhaps it is better to call him an anti-inferentialist about testimony) like Audi explicitly mentions the need for this extra: “[W]e apparently cannot acquire justified testimony-based belief that *p* without having any justification concerning that credibility [of the attester]” (2006, p. 32). But, even more interestingly, he explicitly denies that the need for such justification renders testimony-based belief inferential (p. 35).

How does he argue for this apparently incompatible couple of claims —that some justification about the source's credibility is needed for acquiring a justified testimony-based belief but that the need for such justification does not render the belief based on it inferential? He does so by introducing the distinction between *having* a justification for a proposition and *believing* a proposition based on that justification: “[H]aving justification for a proposition does not entail believing it; hence, having justification for presupposing the attester's credibility does not entail the psychologically implausible requirement that the recipient must have *beliefs* about that credibility” (p. 32). In this passage Audi appeals, in effect, to the propositional/doxastic justification distinction to make the following point: the recipient of testimony needs propositional justification to believe that the attester is credible for her testimony-based belief to be justified, but that does not imply that she actually has the belief that the attester is credible. And since she does not need to believe the latter in order to believe what the attester says, her testimony-based belief is *not* inferentially based on her justification to believe that the attester is credible. This last point is not expressed in the passage quoted, but it is clearly Audi's position. Consider this couple of passages:

I cannot acquire justification for believing something on the basis of testimony unless I have justification for believing that the testifier is credible. This justification cannot come entirely from testimony ... This role need not, however, be inferential: they [the non-testimonial grounds of justification] need not produce in me beliefs of premises from which I infer that he is credible; they simply give me a justification that I can appeal to in framing such premises if I need them. (2011, p. 161)

If, as it seems to be the case, testimony-based knowledge and justification do not depend on premises that support the testimony-based belief—say, premises confirming the credibility of the attester—this explains how such a belief can be basic. (2011, p. 160)<sup>11</sup>

These passages —coupled with the one quoted before them— make it clear that the reason why Audi thinks that testimony-based beliefs are non-inferential is that the recipient does

<sup>11</sup> In these passages we clearly see Audi's peculiar anti-reductionist position: it can be called anti-reductionist since he insists that testimony-based belief is basic; and it is peculiar because he also insists that the recipient of testimony must have some justification of her own concerning the credibility of the speaker and, moreover, this justification “cannot come entirely from testimony.” This last remark is a typical *reductionist* one; however, notice that Audi immediately adds the caveat that non-testimonial grounds do not play an inferential role. This is why I said above that perhaps Audi's position is better characterized not as anti-reductionist but as anti-inferentialist.

not need to consciously appeal to the grounds of her belief—one of them being that the attester is credible. And, conversely, he claims that when a recipient of testimony *does* appeal to the fact that the source is credible, the recipient's belief is *not* wholly (or paradigmatically) a testimony-based belief (2006, p. 26). So here at last we have a clear idea of what an anti-reductionist (or anti-inferentialist) like Audi has in mind when he claims that testimony-based belief is non-inferential: it is non-inferential because the subject does not need to reason from the grounds that justify it (i.e., the perceptual, semantic, and credibility justifications) to the conclusion that *p*.

At this point the charge I want to make against Audi is that he is unduly appealing to psychological considerations in order to reach epistemological conclusions. If, as Audi thinks, part of the justification for a testimony-based belief comes from the recipient's justification that the attester is credible, we need to ask: Does the psychological fact that the recipient does not consciously entertain thoughts about credibility support the epistemological claim that the recipient's belief is non-inferential? From the perspective of the standard conception of inferential justification perhaps it does, but I think that the considerations we have been exploring—that testimony-based beliefs must be grounded on a triplet of justifications (or presuppositions) held by the recipient—suggest that the standard conception is overly simplistic: if, according to the latter, a belief that *p* counts as inferentially justified only if its owner antecedently and justifiably believes a set of premises from where an argument can be constructed whose conclusion is *p*; and if every belief that lacks these properties is *eo ipso* non-inferential; we are then forced to the conclusion that testimony-based beliefs belong to the latter category. But this conclusion flies in the face of the perceptual, semantic and credibility justifications that underpin this kind of beliefs. In other words, the standard conception seems inadequate to capture the complexities of the epistemology of testimony.

It is here that I want to draw on Malmgren's conception of inferential relations in order to accommodate both the psychology of testimony (i.e., in many cases a recipient does not draw a conscious inference from, say, the credibility of the speaker to the conclusion that what the latter says is true) and its epistemology (i.e., since testimony-based beliefs are grounded in perceptual, semantic and credibility presuppositions, they should not—at least not unqualifiedly—be classified as non-inferential). Let me sketch how this proposal would look like concerning the semantic and credibility justifications.

I start with the thought that, for the transition from the belief *that the source said that p* to the belief *that p* to be justified, the recipient of testimony needs some measure of justification to believe that what the source said is likely to be true. A natural objection would be that, in endorsing this thought, I am already joining the reductionist camp; this, however, is not the case, because I am not assuming anything specific about this justification.<sup>12</sup> I am not assuming, for instance, that at least part of that justification has to come from a non-testimonial source. Neither am I assuming that the recipient has to consciously entertain beliefs about the source's credibility nor draw any conscious inference from them. All that I am assuming is that, for the recipient to effect a justified transition from the belief *that the source said that p* to the belief *that p*, a mental state (perhaps not a belief) whose

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<sup>12</sup> Goldberg and Henderson (2006) also argue that the recipient's monitoring the speaker's credibility is compatible with anti-reductionism.

function is to track the source's credibility has to be incorporated into the picture.<sup>13</sup> I am also claiming that, since the recipient's testimony-based belief that  $p$  must have, if justified, some kind of inference-like relation to the mental state tracking the source's credibility, the former is not appropriately categorized as non-inferential.

One way to capture the credibility justification is by way of what Malmgren calls "r-commitments." An r-commitment is "the defeasible rational commitment that a particular reason-based judgment (or action) incurs, to upholding a certain wider pattern —viz. *to responding in the same way, in all relevantly similar circumstances*" (2018, p. 236), which is itself a manifestation of the built-in generality that reasons (practical and epistemic) exhibit. When a subject articulates her r-commitments for a particular judgment or belief, Malmgren thinks, she is articulating some of her operative reasons; and, given that the latter are themselves causes for her beliefs and actions, she is also articulating part of their proximate causal explanations. The methodological upshot is that if the subject (or the theorist) wants to unearth the causal-explanatory reasons for a judgment or belief of hers —the grounds of which are not evident— she can do so by trying to reconstruct the rationale behind them, i.e., the features of the case that led her to judge or believe that  $p$  on this occasion. And this rationale amount to a (defeasible) commitment to judge or believe that  $p$  on similar circumstances.

I propose to model the semantic and credibility justifications for testimony-based beliefs as part of the r-commitments incurred by a successful (i.e., justified) recipient of testimony. Notice one crucial point: in articulating (in our role as theorists) the r-commitments incurred by, say, Andrew in believing Sandra's testimony, there is neither a presumption that Andrew's is consciously entertaining all such commitments and has justifications for all of them (given that some may operate at the sub-personal level or may exceed the subject's conceptual sophistication), nor is there a presumption that they amount to a familiar and/or complete argument form. Recall that both features—the violation of the standard availability constraint and the lack of a neat argumentative structure—were already identified in discussing the second variant of the example; the crucial point is that we will now see that they may also be present in the *first* variant as well, which involves (according to Audi) the formation of a paradigmatic testimony-based belief. This is why I claimed above that my analysis of a justified belief about what is implicitly communicated in cases like the second variant of the example can be extended to testimony-based beliefs in general.

Consider first the following (partial) reconstruction of Andrew's r-commitment in the second variant of the example, when he formed the belief that the dining hall was closed based on what was implicitly communicated by Sandra's utterance "Too late, Andrew":

If a (normal, human) subject  $x$ , competent with language  $L$ , utters a declarative sentence in  $L$  that, in context  $C$ , means that  $p$ , then  $x$  is, by making that utterance, saying that  $p$ ; and if, in  $C$ , the most relevant, accessible speech act that  $x$  would be performing by saying that  $p$ , is an assertion that  $q$ , then  $x$  is, by saying that  $p$ , asserting that  $q$ .<sup>14</sup>

<sup>13</sup> In adding the caveat that the credibility-tracking mental state might not be a belief I am allowing for the possibility that the relevant mental state might turn out to operate (at least on some occasions) at the sub-personal level. As I mentioned above, one of the central tenets of Malmgren's proposal is that some sub-personal mental states are inferentially integrated, that is, they tend to enter into inference-like transitions with beliefs and other propositional attitudes.

<sup>14</sup> This is based on Malmgren's (2018, p. 239) elaboration of r-commitments in cases of implicit requests.

Here ‘*p*’ stands for Sandra’s utterance “Too late, Andrew” and ‘*q*’ stands for Andrew’s interpretation of that utterance as an assertion of the proposition *all the food is gone and the dining hall is closed*. Notice three interesting features of this proposal: first, if something like this captures Andrew’s r-commitment, it is clear that a good deal of his rationale for forming the belief that the dining hall is closed violates the standard availability constraint: not only is it implausible that an average competent English speaker like Andrew has the resources to articulate this rationale but, more importantly, even if he did it is not clear that he has antecedent justification for it. Second, this reconstruction of the r-commitment clearly falls short of a complete argument, so we face again the problem discussed in section II: either we accept that Andrew’s belief is based on a highly incomplete argument or we try to fill in more details with the hope of arriving at a complete argument form, but at the cost of making it less plausible that the subject has justification for all the added elements. Either way, the standard conception of inferential justification is inadequate. Third, the proposal captures the “implicit generality” (Malmgren 2018, p. 239) of Andrew’s belief: if Andrew is justified (and *a fortiori* rational) in forming this belief, then he is committed to forming a similar belief in relevantly similar circumstances—for instance, if the next day it is *Sabina* who says “Too late, Andrew” when he is heading to the dining hall.

Consider now the r-commitments incurred by Andrew in the first variant of the example—a paradigmatic case of testimony-based belief according to Audi. In this case we can amend the proposal to run as follows:

If a (normal, human) subject *x*, competent with language *L*, utters a declarative sentence in *L* that, in context *C*, means that *p*, then *x* is, by making that utterance, saying that *p*; and if, in *C*, the most relevant, accessible speech act that *x* would be performing by saying that *p*, is an assertion that *p*, then *x* is, by saying that *p*, asserting that *p*.

The key modification is that, in this case, what the source says and what the recipient takes the source to be asserting are the same, i.e., “all the food is gone and the dining hall is closed.” (I assume without further argument that the same three features noted above are found on this version of the r-commitment as well.) In the terms employed above, we can say that this r-commitment amounts to Andrew’s *semantic* justification; we can now call it Andrew’s “semantic r-commitment.” Now, what about Andrew’s *credibility* justification? What are Andrew’s r-commitments concerning the credibility he must—I claim—attribute to Sandra in order for his belief to be justified? I suggest the following schema:

If a seemingly normal subject *x* asserts that *p*, where *p* concerns a topic about which normal subjects tend to have true beliefs, and there is nothing in the (immediate) context that suggests that *x* may be lying, then (there is a good chance that) *p* is true.<sup>15</sup>

<sup>15</sup> A referee has reasonably asked which topics “seemingly normal subjects” have true beliefs about. Since my aim in this paper is to defend an inferentialist view of testimonial justification rather than a specific proposal about the precise shape that credibility r-commitments must take, I won’t delve in much detail about the latter’s nitty-gritty. The crucial point is that, under some form or another, credibility r-commitments seem to be indispensable for testimonial justification. However, in response to the referee’s worry, I can say the following: which topics a given speaker is competent about is a highly con-

Let us call this schema Andrew's "credibility r-commitment." I prefer this formulation to the one I have been employing up to now, because talking about a "credibility *justification*" suggests that he is justified in believing (or has justification to believe) something like this schema, which, as I have emphasized throughout, may not be the case.<sup>16</sup> In fact, I think that the credibility r-commitment —like the semantic r-commitment— violates the standard availability constraint (it also lacks a neat/complete argument form). On the positive side, the credibility r-commitment also exhibits the implicit generality characteristic of reason-based judgments: if Andrew takes Sandra to be a credible source regarding the fact that the dining hall is closed, other things being equal (Sabina being a seemingly similar speaker, the circumstances being approximately the same) he is committed to take Sabina to be a credible source regarding the same (or a similar) fact.

I want to emphasize two central points about this proposal. First, the sketch of a credibility r-commitment presented here is meant to accommodate the idea that sub-personal mental states can be involved in the justification of beliefs —beliefs exhibiting inference-like relations to other beliefs and mental states, although not as traditionally conceived by the standard conception. I have claimed that testimony-based beliefs may well belong to this category, since (I suggested) they are grounded on, and exhibit inference-like relations to, perceptual, semantic and credibility considerations that may not amount to justified beliefs. Thus, my proposal of the shape credibility r-commitments might take is compatible with the possibility that sub-personal mechanisms are (partially) in charge of monitoring the source's credibility.<sup>17</sup> Second, my main claim is that something like my schema of a credibility r-commitment is a necessary element of the recipient's *justified* transition from her belief *that the source said that p* to her belief *that p*. Hence, the recipient's testimony based-belief exhibits an inference-like relation not only to perceptual (that the source said something) and semantic considerations (that the

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textual matter. For example, we take most people to be competent regarding reports of their immediate surroundings (e.g., whether or not the dining hall is still open), whereas regarding more complex and technical matters we tend to be more cautious (e.g., whether a certain medicine is effective against Covid). Of course, there is also enormous variability among recipients in this respect too, i.e., about how "credulous" they are. For instance, many people are willing to believe almost anybody when they voice views that accord with their own antecedent beliefs (e.g., people who immediately believe anyone who claims that vaccines are dangerous). Thus, there is ample room for disagreement about which topics a given speaker is competent about, which entails that we can disagree about whether a specific testimony-based belief is justified or not. These are very relevant questions that must be addressed in future work, but for present purposes they can be safely sidelined.

<sup>16</sup> The same point applies to semantic r-commitments.

<sup>17</sup> Given that both Fricker (1994) and Goldberg and Henderson (2006) have offered similar views, a referee has asked what is original in the present proposal. In response, recall that my main goal in this paper is not to offer a new conception of testimonial justification, but rather to investigate the inferentialist/anti-inferentialist dispute that stands behind the reductionism/anti-reductionism debate. The paper's main contribution is to show that the standard conception of inferential justification is of little use for the epistemology of testimony, given that testimony-based beliefs clearly exhibit inference-like relations that cannot be properly understood from the standard conception's perspective. Thus, while it's true that the view I advance about the role of credibility in testimonial justification has resemblances to other views, the goal for the sake of which I invoke credibility r-commitments is distinctive.

source said that  $p$ ), but also to credibility considerations (again, not necessary beliefs) as articulated in the schema.

Finally, I want to consider an important objection that Malmgren (2018, p. 233) herself anticipates to this kind of picture of inferential relations. The objection is that this picture is a non-starter because sub-personal phenomena can't do the requisite justificatory work, given that (according to the objection) they are at most among the *enabling* conditions for  $S$ 's believing/being justified in believing that  $p$ . Applied to my proposal, the objection can be read in either of two ways: first, as questioning the justificatory value of something like my schema of a credibility r-commitment *given* that I have allowed for the possibility that part of the work is done by sub-personal credibility-monitoring mental states. Second, as questioning my whole story of the warrant-conferring role of credibility-monitoring considerations (regardless of whether they operate at the personal or sub-personal levels) by suggesting that these considerations are instead, and at most, warrant-enablers. I will take these possible readings in turn and offer a brief reply to each.

Concerning the putative epistemic irrelevance of sub-personal mental states, I return to Malmgren's suggestion that inferential integration is not an exclusive feature of personal level mental states. There are sub-personal mental states that exhibit a non-negligible degree of top-down inferential integration, which means that they can enter into transitions with other mental states and issue in revision at the sub-personal level (Malmgren 2018, p. 246). The epistemic significance of this is that top-down integrated sub-personal mental states—unlike top-down *insulated* ones—increase the efficiency of the epistemic agent's "deliberate efforts to get things right" (p. 247) precisely because they can be revised (albeit not by the person herself) and, as a consequence, they *can* confer justification. This is, of course, a controversial thesis that needs further defense; for present purposes, however, I want to claim that credibility-monitoring sub-personal mental states can plausibly be speculated to be top-down integrated, since we have evidence that recipients of testimony exhibit a (fallible) capacity —not necessarily operative at the conscious level— to discriminate between different types of testimonial *topics* and testimonial *sources* and to respond accordingly by forming all-out beliefs, assigning different levels of credence to different propositions or rejecting certain testimonies altogether.<sup>18</sup> Hence, since this capacity exhibits a degree of sensitivity to different kinds of testi-

<sup>18</sup> A referee has pointed out that there is a host of empirical studies suggesting that the individual capacity for detecting false testimony is negligible, since it is only slightly better than chance (see Grodniewicz 2024 for references). If this is so, the referee concludes, then the sub-personal monitoring mechanisms I invoke cannot do much justificatory work after all. In response, and as Grodniewicz (2024, p. 298) —who defends the philosophical relevance of these results— himself concedes, it is still the case that people exhibit a capacity to reject testimony that is flatly incompatible with their most conspicuous factual beliefs or that exhibits internal inconsistency —a capacity labeled "validation". Moreover, Grodniewicz also accepts that people do possess a "filtering mechanism" for evaluating source credibility, which does not necessarily prevent the initial formation of a false belief but may issue in its subsequent rejection (p. 299). For present purposes, this is all I need to defend the claim that there are sub-personal mechanisms that provide *some* assistance to recipients of testimony when they form (usually in a wholly automatic fashion) beliefs based on what they have been told.

monies and, moreover, can be improved over time,<sup>19</sup> it performs valuable epistemic work by warranting the subject's (usually automatic) transition from her belief *that the source said that p* to her belief *that p*.

Concerning the objection that credibility considerations are warrant-enablers regarding testimony-based beliefs rather than warrant-conferrers as my account suggests, my answer is as follows: credibility considerations would be just warrant-enablers if their only function were to enable the recipient to obtain whatever justification the source had for the proposition she asserted. However, in the account I have presented (following Audi's suggestion in this), for the recipient's testimony-based belief to be justified she must have some measure of justification of her own, part of which concerns the credibility of the source. The reason for this is that the recipient *does* have some positive epistemic work to do when forming a testimony-based belief, namely to effect the transition from the belief *that the source said that p* to the belief *that p*. And this transition requires justification—justification that, as I have suggested, is conferred by the appropriate credibility-monitoring mental states. Thus, credibility considerations do confer justification/warrant for a subject's testimony-based beliefs.

## 5. Conclusion

In this paper I have pursued two main goals: on the one hand, to clarify the anti-reductionist claim that paradigmatic testimony-based beliefs are non-inferential; on the other, to adapt Malmgren's (2018) conception of inferential relations to offer a new way to understand the reductionist claim that testimony-based beliefs are based on other beliefs and (possibly) on other mental states that are not beliefs. The connecting element between the two goals was Audi's peculiar anti-reductionist/anti-inferentialist conception of testimony. He recognizes (correctly, in my view) that for a subject's testimony-based beliefs to be justified she must possess some proprietary justification; we saw that the need for this justification arises given the perceptual, semantic and credibility presuppositions that accompany every testimony-based belief. However, Audi insists that the need for such justification does not render testimony-based beliefs inferential, since the subject need not consciously appeal to the grounds of her belief for it to be justified. I criticized Audi on this score, accusing him of employing psychological (better said, phenomenological) considerations to arrive at epistemological conclusions about testimony. I then turned to Malmgren's conception of inferential relations in order to try to accommodate both an important psychological (or phenomenological) aspect of testimony-based beliefs—i.e., their immediateness—and a key epistemological aspect of them—i.e., the fact that their justificatory status depends on the warrant-conferring properties of other mental states.

<sup>19</sup> Grodniewicz (2024) claims that the same empirical results mentioned in the previous footnote demonstrate that the capacity to monitor false testimony cannot significantly be improved. Even though I lack the space to discuss this point, I think it's clear that, taken literally, this claim is false, as anyone who has interacted with children for some time (months, years) can attest: children, in effect, become progressively harder to deceive with all sorts of "white" lies, from the existence of Santa Claus to the origin of newborns.



The two main results of the paper are the following. First, that there are good reasons for thinking that the standard conception of inferential justification is inadequate for the epistemology of testimony, because testimony-based beliefs do not seem to fit the crude inferential/non-inferential dichotomy as construed by such conception. Second, that the problems with the standard conception pave the way for a Malmgren-style picture of inferential justification which can be fruitfully employed to develop a novel inferentialist account of testimony-based beliefs.

Finally, it is worth asking: what does this result entail for the reductionist/anti-reductionist debate? I think the paper's main lesson is that the issue whether testimony-based beliefs are basic or not cannot be settled by showing that they exhibit inference-like relations. Here I have defended the idea that every such belief exhibits such relations, but not as construed by the standard conception of inferential justification. Therefore, we cannot straightforwardly deduce from my arguments that reductionism about testimony is correct. Rather, the proper conclusion is that anti-reductionism should not be equated with anti-inferentialism.

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