

A Defense of Reductionism about Testimonial Justification of Beliefs

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Abstract

This paper defends reductionism about testimonial justification of beliefs against two influential arguments. One is the empirical argument to the effect that the reductionist justification of our trust in testimony is either circular since it relies on testimonial evidence or else there is scarce evidence in support of our trust in testimony. The other is the transcendental argument to the effect that trust in testimony is a prerequisite for the very existence of testimonial evidence since without the presumption of people's truthfulness we cannot interpret their utterances as testimony with propositional contents. This paper contends that the epistemic subject can interpret utterances as testimony with propositional contents without presupposing the credibility of testimony, and that evidence available to the normal epistemic subject can justify her trust in testimony.

1. Introduction

There has recently been a considerable interest in anti-reductionism about testimonial justification of beliefs, according to which we cannot justify our trust in testimony by perceptual and memorial evidence.¹ The reason for the interest is not the enticement of skepticism. Recent anti-reductionists hold that we are *prima facie* justified in trusting testimony simply because it is testimony. This means that there is a presumption in favor of testimony that it is credible unless contrary evidence is available. I will use the term “anti-reductionism” to refer to this non-skeptical version of anti-reductionism about testimonial justification.

The more traditional position is reductionism, of which the most prominent advocate is David Hume. Hume (1748, p. 113) states:

The reason why we place any credit in witnesses and historians, is not derived from any *connection*, which we perceive *a priori* between testimony and reality, but because we are accustomed to find a conformity between them.

If we assume that we can obtain knowledge of reality on the basis of non-testimonial evidence such as perception and memory, and conformity to the non-testimoniaally known reality is the reason for our trust in testimony, then our trust in testimony derives its justification from non-testimonial evidence. This is the traditional position of reductionism about testimonial justification of beliefs.

The traditional view is challenged in recent years by two forceful arguments. One of them is empirical and the other transcendental. The empirical argument charges that the reductionist justification of our trust in testimony is either circular since it relies on testimonial evidence whose credibility is at issue or else there is scarce evidence in support of the credibility of testimony. The transcendental argument, on the other hand, contends that trust in testimony is a prerequisite for the very existence of testimonial evidence since without the presumption of people's truthfulness we cannot interpret their utterances and inscriptions as testimony with propositional contents. In this paper I defend reductionism about testimonial justification of beliefs against these two arguments.

2. Preliminaries

This section delineates the framework of discussion. First, I want to make some assumptions explicit. In this paper I do not question the credibility of perceptual and memorial evidence.² I simply assume that they are credible. I also help myself freely to standard rules of inference, both deductive and probabilistic, assuming their correctness. My goal in this paper is to show that the belief in the credibility (*prima facie* credibility—I will not repeat this qualification) of testimony can be justified by standard rules of inference based on perceptual and memorial evidence.

There is an obvious constraint that I accept so that the issue will not become trivial; viz., I assume individualism with regard to non-testimonial evidence. This means that in justifying the epistemic subject's trust in testimony the reductionist cannot cite other people's perception and memory—for example, the reductionist cannot cite perception and memory of the person who *provides* the testimony. Only the epistemic subject's own perception and memory are relevant to the justification of her trust in testimony. I assume, however, that the subject's perceptual and memorial

evidence need not be in the form of her occurrent beliefs. It can be in the form of dispositional beliefs, and further dispositions to believe.³ I take reductionism about testimonial justification to be correct if the epistemic subject's trust in testimony can be justified on the basis of her own perceptual and memorial evidence in this broad sense. The inferential resource, on the other hand, will not be subject to the individualist constraint. In other words, I will help myself freely to standard rules of inference, both deductive and probabilistic, even if the epistemic subject is not capable of making the inference herself. Some people may insist that the epistemic subject is justified in holding a belief only if she can make the inference for herself that is needed for the justification. Those who hold this view can take my claim to be that the epistemic subject's trust in testimony is *justifiable* on the basis of her own perceptual and memorial evidence by standard rules of inference.

It may be suspected that the shift from justifiedness to justifiability may make the reductionist's task too easy and thus uninteresting, but the challenge is still formidable. For one thing, the framework proposed here is still internalist in the sense that the epistemic status of the subject's trust in testimony—whether it is justifiable or not—is supervenient on her own cognitive states.⁴ This is a strong restriction. As a result of this internalist restriction, the framework does not favor reductionism about testimonial justification to the extent that its defense becomes trivial. The two arguments I will address are not expected to lose their force by the shift of focus from justifiedness to justifiability. No part of either argument is taken by its proponents to be dependent on the distinction between justifiedness and justifiability. Thus I consider my responses to the two arguments successful if they show that the subject's trust in testimony is justifiable by her own perceptual and memorial evidence.

3. Two Arguments against Reductionism

This section describes in some detail the empirical and the transcendental arguments against reductionism about testimonial justification of beliefs. I want to begin with a stock case that ostensibly supports anti-reductionism. An epistemic subject is lost in an unfamiliar city and asks a total stranger for directions, which she receives immediately, and there is no further communication that allows her to appraise the nature of the stranger. Even though no evidence is available to her in this situation that the stranger is reliable, she will still follow the directions. This indicates that she has the *presumption* that testimony is generally credible and there seems to be nothing wrong with it. We need not—and we often cannot—justify our trust in testimony by perceptual and memorial evidence.

The reductionist has an obvious reply to this argument. Namely, our trust in testimony in such a case is not based on knowledge of the particular witness; it is based more broadly on similar experiences we had in the past

with other witnesses. In other words, our past experiences tell us that testimony conforms to reality most of the time, and this is a good reason to trust testimony even if a total stranger offers it. This response points us in the direction of global reductionism about testimonial justification, as opposed to local reductionism. The global reductionist does not try to establish the credibility of testimony one witness at a time. It is more promising, given our trust in a total stranger's testimony, to try to establish the credibility of testimony in general from similar experiences in the past.⁵

The global reductionist claims that the epistemic subject has a good reason to trust testimony in general because she observed in the past that testimony conformed to reality most of the time. It is at this point that the proponents of the empirical argument against reductionism introduce the circular-or-scarce objection. The challenge takes the form of a dilemma. The past "observation" of reality that is found to conform to testimony most of the time is either in part dependent on some testimony or it consists solely of the epistemic subject's own experience. If the past "observation" was in part dependent on some testimony, the alleged justification of our trust in testimony is circular—we cannot rely on testimony before we establish the general credibility of testimony. If, on the other hand, the past observation is strictly limited to the subject's own experience, the problem arises about the amount of evidence the subject has in support of the general credibility of testimony. C. A. J. Coady (1992, p. 82) puts the point as follows:

[. . .] it seems absurd to suggest that, individually, we have done anything like the amount of field-work that RT' [non-circular reduction of testimonial justification] requires. [. . .] many of us have never seen a baby born, nor have most of us examined the circulation of the blood nor the actual geography of the world nor any fair sample of the laws of the land, nor have we made the observations that lie behind our knowledge that the lights in the sky are heavenly bodies immensely distant nor a vast number of other observations that RT' requires.

Coady's point is that we do not have sufficient *non-testimonial* evidence to support the general credibility of testimony.

Faced with this challenge some reductionists have suggested that we trust testimony not because we confirmed its truth many times in the past, but because we have the general knowledge of human nature and society.⁶ For example, we have the general knowledge that people who make false statements tend to damage their reputation and receive social sanctions, which most people, other things being equal, wish to avoid. This type of knowledge allows us to trust testimony in general even if we have not personally confirmed the truth of testimony many times in the past. The reasoning from human nature and society is particularly compelling in the case of expert testimony, where there are high penalties for making false statements.

Unfortunately for its advocates, the reasoning from human nature and society is still subject to the circular-or-scarce challenge, i.e., the challenge applies to the acquisition of the general knowledge of human nature and society as well. The epistemic subject's knowledge of human nature and society is either based in part on testimony, or the basis of the knowledge is strictly her own experience. If her knowledge of human nature and society is based in part on testimony, then the justification of her trust in testimony by this knowledge is circular. If, on the other hand, the basis of the knowledge is strictly limited to the subject's own experience, she does not seem to have sufficient evidence for her view of human nature and society—much of our view of human nature and society seems to derive from testimony. This means that the empirical argument is still a serious threat to reductionism.

We now turn our attention to the transcendental argument. It has been taken for granted so far that testimony has certain propositional contents. Although the empirical argument challenges reductionism about testimonial justification, it does not question the propositional contents of testimony or the process of assigning propositional contents to utterances (or inscriptions—I will only mention utterances). The issue of content ascription becomes central in the transcendental argument against reductionism. When we obtain testimony, what we actually perceive is an utterance, which is a pattern of sounds. In order for an epistemic subject to use the pattern of sounds as testimonial evidence, she must understand its meaning. This means that she must have assigned some meaning to the pattern of sounds. But how did she accomplish this? Presumably the task of assigning meaning to utterances requires something resembling what Davidson (1973) calls radical interpretation, where the interpreter assigns truth conditions to the speaker's utterances solely on the basis of observable evidence.

The problem is that radical interpretation—or anything similar to it that accomplishes the task—seems to require the assumption that the speaker's utterances are mostly true, which amounts to assuming the general credibility of testimony. We can see the point in a concrete example:

How could our lone enquirer know that someone means 'That is bitter' by a pattern of sounds they sometimes emit? Only, surely, by finding that that noise is (fairly reliably) made only when tasting samples which the enquirer himself recognizes as bitter. Thus one cannot justify interpreting certain performances as observation-statements, i.e., as testimony about what someone perceives, without already committing oneself to the assumption that such statements are reliable, likely to be true. (Stevenson 1993, p. 442)

It is difficult to see how one can interpret an utterance solely on the basis of observable evidence if no assumption is made that the testimony is credible. But if we must make the assumption that the testimony is credible in order

to assign meaning to an utterance, then trust in testimony is a prerequisite for the very existence of testimonial evidence. There is, therefore, no hope—according to the transcendental argument—of supporting the general credibility of testimony by perceptual and memorial evidence. For, unless we assume the general credibility of testimony at the outset, we only have a pattern of sounds with no meaning assigned to it. According to the transcendental argument, the reductionist is making the preposterous claim that our trust in testimony can be justified by perceptual and memorial evidence *before* we even assign meaning to utterances. How can we justify our trust in testimony—support the assumption that testimony is generally credible—without even knowing the propositional contents of the utterances?

I want to note one further complication the reductionist needs to be aware of. In the example above the transcendental argument is a challenge to reductionism with regard to a single speaker's utterances, but the reductionist had better respond to the transcendental argument in the context of global reduction. Recall the case of trusting a stranger's directions where the subject has no other interactions with the speaker. If the subject must interpret one speaker's utterances at a time, there is nothing for her to go on in such a case for interpreting the stranger's utterances.⁷ It does not help that the stranger's utterances conform to the syntax (vocabulary and grammar) of the epistemic subject's own language, for the challenge here is semantic—the subject must assign *meaning* to the utterances. Given that the subject has no other interactions with the speaker, the only plausible reductionist explanation of the interpretation of the stranger's utterances is that the subject assigns meaning to the stranger's utterances based on her prior experiences with *other* speakers.

Essentially the same challenge of the transcendental argument applies to this global form of reductionism; namely, in interpreting these other speakers' utterances the subject must assume that their testimony is generally credible, but how can we justify this assumption before we assign meaning to their utterances? Note, however, that this formulation of the transcendental argument in the context of global reduction reveals a further problem for the reductionist. Namely, it appears the reductionist needs to assume not only that the other speakers' testimony is generally credible, but also that the stranger assigns the same meaning to the pattern of sounds as the other speakers do. The fact that both the stranger's and the other speakers' utterances conform to the same rules of syntax does not solve the problem by itself since the challenge here is semantic. It appears that in interpreting the stranger's utterances, the subject needs to assume that utterances sharing certain rules of syntax also share their semantics at least in most cases. But how can this assumption be justified *prior to* the interpretation of the stranger's utterances? The reductionist needs to address this variation of the transcendental argument as well.

4. Response to the Transcendental Argument

I want to respond to the transcendental argument first. In my view the transcendental argument owes its apparent strength to an ambiguity of the term “assumption” and loses its appeal when the ambiguity is removed.

An assumption can be a presupposition, a presumption, or a hypothesis. It is sometimes a presupposition we take for granted in the given context of inquiry. It is sometimes a presumption we consider true unless contrary evidence emerges. It is clear that we cannot assume the truth of a proposition we want to establish in either of these two senses of assumption. However, an assumption can also be a hypothesis, which we do not necessarily take to be true. For example, in the reasoning of *reductio ad absurdum* we start with the “assumption” that not- P , only to derive a contradiction from it so as to establish the truth of P . There is no presupposition or presumption here that the proposition that not- P , which we assume at the outset, is true. It is only a hypothesis. Similarly in hypothetico-deductive confirmation we “assume” hypothesis H to derive an observable consequence O from it. If we observe O under appropriate conditions, H is confirmed; otherwise H is disconfirmed. Again there is no presupposition or presumption in favor of the initial assumption.

Our concern here is not the inquirer’s psychology but the logical status of the assumption. Before making observation, some inquirers may speculate that the hypothesis will be confirmed while others may think it will be disconfirmed, but that does not affect the logical status of the hypothesis. Whether the hypothesis will be confirmed or not is logically an open question. Otherwise there is no need for observation.

Given the ambiguity of the term “assumption” it is necessary to be clear about the nature of the assumption that testimony is generally credible, which the epistemic subject needs to make in order to interpret utterances. The advocates of the transcendental argument take this assumption to be a presumption on the part of the epistemic subject. In other words, the epistemic subject interpreting utterances needs to regard testimony as generally credible in the absence of contrary evidence. This presumption makes one’s position anti-reductionist. The reductionist cannot make such a presumption while claiming that the general credibility of testimony can be justified by perceptual and memorial evidence. An implicit but crucial premise in the transcendental argument is that the assumption of the general credibility of testimony the epistemic subject needs to make for interpreting utterances is an assumption in the sense of a presumption. This may be correct psychologically, but there is no logical reason that the subject must make this presumption. In order to interpret utterances, the subject only needs the *hypothesis* that testimony is generally credible. If the hypothesis is true, there is a good chance that she can assign meaning to the utterances.

Of course, the subject must also confirm the hypothesis that a certain utterance is to be interpreted in a particular way, but she can do so by taking the *conjunction* of the interpretation and the general credibility of testimony as her hypothesis. Take, for example, the interpretation that “amer” means bitter. If this interpretation is correct *and* the testimony is credible, then the subject should observe among other things that the speaker uses this word when tasting a sample the interpreter herself finds bitter. Thus, when the interpreter does obtain such observation, the hypothesis—and hence the interpretation, which is part of the hypothesis—is confirmed. Obviously, there is room for an error in the confirmation, but as we accumulate similar observations, the probability that the interpretation is correct rises incrementally together with the probability that testimony is generally credible. On the other hand, if the hypothesis of the general credibility of testimony is false, the subject will fail to interpret the utterances, as the proponents of the transcendental argument assert. This does not mean that the subject must presume the truth of the hypothesis. There is no need, logically speaking, for the subject to anticipate the result of the empirical test of the hypothesis in one way or the other. It is only when she successfully interprets the utterances that she should accept the hypothesis that testimony is generally credible.

The same point applies to the assumption that utterances sharing certain rules of syntax also share their semantics in most cases. This assumption allows the epistemic subject to take many utterances by different speakers to belong to the same language semantically, provided they share certain rules of syntax, but we need not take this assumption to be a presumption on the part of the subject. All one needs is a hypothesis. When the hypothesis is true, there is a good chance that the subject can give a coherent interpretation to these utterances; if the hypothesis is false, she will fail to do so.⁸ It is only when the subject can give a coherent interpretation to many utterances by different speakers sharing the same syntax that she should accept that utterances sharing that syntax also share their semantics in most cases. The successful confirmation of the hypothesis then allows the subject to assign meaning to a stranger’s utterances provided they share the syntax with the other speaker’s utterances she has already interpreted.

In short the transcendental argument, as well as its variation about shared semantics, takes the assumption the subject needs to make to be a presumption, but there is no need for that. The reductionist can regard the subject’s assumption as a hypothesis, and this re-classification foils the transcendental argument. We can express the point in formal terms of the probability calculus as well.⁹ The transcendental argument challenges the naïve view of interpretation as follows. The naïve view of interpretation—to express it in probabilistic terms—is that the subject can confirm interpretation *I* of utterances by observation *O* because *I* raises the probability of *O*—i.e., $P(I|O) > P(I)$ because $P(O|I) > P(O)$. For example, *I* may

be the interpretation that “amer” means bitter while O is the observation that the speaker utters the word “amer” when she tastes a sample the interpreter recognizes as bitter. The problem, according to the transcendental argument, is that this procedure of interpretation is predicated on the assumption, C_{TES} , that testimony is generally credible. For, unless we assume that the speaker tells the truth most of the time, the hypothesis I does not raise the probability of O . Thus, the real form of inference for the interpretation is not “ $P(I|O) > P(I)$ because $P(O|I) > P(O)$ ” but “ $P(I|O \& B) > P(I|B)$ because $P(O|I \& B) > P(O|B)$,” where “ B ” represents the background beliefs that contain C_{TES} . This means that the assumption, C_{TES} , of the general credibility of testimony is a prerequisite for interpreting utterances and hence for the very existence of testimonial evidence before the truth and falsity of the testimony becomes an issue.

My response to this argument is to re-classify C_{TES} as part of the hypothesis to test, and not part of the background beliefs. We subtract C_{TES} from B and take the remaining part, B^* , to be the proper background beliefs. This is reasonable since the epistemic status of C_{TES} is in dispute. The real hypothesis H to test is then the conjunction, $I \& C_{TES}$. As a result of this re-classification, the confirmation of interpretation I by observation O takes the following form: $P(I \& C_{TES} | O \& B^*) > P(I \& C_{TES} | B^*)$ because $P(O|I \& C_{TES} \& B^*) > P(O|B^*)$. This line of reasoning is formally indisputable in the probability calculus,¹⁰ which I assume to be correct in this paper, and there is no *presumption* here that testimony is generally credible. Thus, the justification is non-circular. To express it informally, if the word “amer” means bitter (I) and testimony is generally credible (C_{TES}), then given the background beliefs (B^*), we are more likely to observe that the speaker utters the word “amer” when she tastes a sample the interpreter recognizes as bitter (O). Thus, when we do have this observation (O), we are more confident that “amer” means bitter (I) and the testimony is generally credible (C_{TES}).

This response to the transcendental argument implies that by the time the epistemic subject is in possession of testimonial evidence by interpreting people’s utterances, her belief in the general credibility of their testimony is well supported. For, unless the hypothesis that testimony is generally credible is true, the epistemic subject is unable to interpret utterances and hence has no testimonial evidence. Consequently, the idea that testimony exists but without general credibility is unintelligible.¹¹ But this is only because the same observation confirms both the existence of testimony and the general credibility of testimony. If observation does not confirm the general credibility of testimony, there is no testimony at all since utterances will have no meaning assigned to them. The unintelligibility of testimony without general credibility is, therefore, not an objection to reductionism about testimonial justification, but a consequence of the dual role of the observation used for interpretation—the observation confirms the interpretation of utterances and the credibility of testimony at the same time.

This connection between the interpretation of utterances and the credibility of testimony also implies that even a young child's trust in testimony can be justified by her own perception and memory. In order for people's utterances to be testimonial evidence for her, the child must have interpreted the utterances, but the kind of experience that allows her to interpret the utterances is also the kind of experience that supports the general credibility of testimony. Thus, by the time the child can interpret people's utterances as testimony with certain propositional contents, she must have had enough experiences that justify her trust in the testimony.¹² In the case of a young child, the dual process of the interpretation of utterances and the confirmation of the credibility hypothesis is facilitated by the fact that the teachers (the parents) deliberately provide opportunities for the learner to have both utterances and personal observations to compare. Of course, it is unlikely that a young child makes an explicit inference from her perception and memory to the credibility of testimony. Her trust in testimony is presumably spontaneous in most cases, but my concern here is not psychology. The point is that a young child capable of interpreting utterances has already enough perceptual and memorial evidence to justify her trust in testimony, and thus her trust in testimony is justifiable in the sense explained in Section 2.

A related implication of this analysis is that a causal relation exists between a belief justified by testimonial evidence, and perceptual and memorial evidence for its credibility.¹³ It is commonly held among contemporary epistemologists that even when appropriate evidence for a belief is available, the epistemic subject is not justified in holding the belief unless she holds it *because of* the appropriate evidence. This appears to mean that unless we renounce reductionism we are not justified in holding most beliefs that are based on testimonial evidence because in most cases we trust testimony simply because it is testimony without considering perceptual and memorial evidence for its credibility. However, the analysis above reveals that perceptual and memorial evidence for the credibility of testimony is causally relevant after all to our holding testimony-based beliefs. This is because we hold testimony-based beliefs only if we can interpret the utterances, and we can interpret the utterances only if perceptual and memorial evidence is available for the interpretation, while it is the very same perceptual and memorial evidence that establishes the credibility of testimony. Thus, perceptual and memorial evidence for the credibility of testimony is part of the causal basis of our holding testimony-based beliefs.

5. Response to the Empirical Argument

Having dealt with the transcendental argument against reductionism, I now respond to the empirical argument. The point of the empirical argument is that most evidence the typical epistemic subject has for confirming the general credibility of testimony is partly dependent on testimony.¹⁴ My

response to the empirical argument is twofold. The first part has already been presented in Section 4 in my response to the transcendental argument—namely, the general credibility of testimony is well supported by perceptual and memorial evidence by the time the epistemic subject can interpret utterances. This is because unless the hypothesis of the general credibility of testimony is true, the subject will be unable to interpret utterances. In this section I strengthen the case for reductionism further by arguing that when necessary—e.g., when our confidence in the credibility of testimony is shaken for some reason—we can make use of *testimonial* evidence to confirm or disconfirm the general credibility of testimony without circularity.

In what follows I distinguish testimonial evidence, non-testimonial evidence, and the propositions they directly support with the following notation. T_i is the proposition that certain testimonial evidence exists, while P_{Ti} is the proposition the testimonial evidence in question supports directly, where $i = 1, 2, \dots$. For example, if T_1 is the proposition that the testimonial evidence exists that it is snowing in Maine, then P_{T1} is the proposition that it is snowing in Maine. NT_i , meanwhile, is the proposition that certain non-testimonial evidence exists, and P_{NTi} is the proposition the non-testimonial evidence in question supports directly. Thus, if NT_1 is the proposition that the non-testimonial evidence exists that it is snowing, then P_{NT1} is the proposition that it is snowing. As in Section 4 C_{TES} is the proposition that testimonial evidence is generally credible. This is our hypothesis to confirm. C_{NTES} , meanwhile, is the proposition that non-testimonial evidence is generally credible. I am assuming in this paper that C_{NTES} is true, so propositions directly supported by non-testimonial evidence are considered true. In other words, we can infer P_{NTi} from NT_i .

A simple version of reductionism proposes that the hypothesis C_{TES} of the general credibility of testimony is confirmed in the following way. Given the testimonial evidence T_i whose content is P_{Ti} , the subject looks for non-testimonial evidence NT_i whose content P_{NTi} is identical to P_{Ti} . When there is such non-testimonial evidence, the hypothesis C_{TES} that testimony is generally credible is confirmed (its probability is raised). The problem with this simple account is that we do not have such non-testimonial evidence very often whose content is *identical* to the content of the testimony.

Fortunately for the reductionist, there is an indirect way of confirming the general credibility of testimony. Namely, given the testimonial evidence T_i , the credibility hypothesis C_{TES} raises the probabilities of many other propositions than P_{Ti} . For example, given the report of a heavy rain, the truth of the credibility hypothesis C_{TES} makes it more likely that travelers arrive late, no baseball game is played, etc. In other words, when we obtain testimony and we regard it as credible (when we accept the hypothesis that the testimony is credible), we consider it more likely than otherwise that

certain other propositions are true and some of those propositions can be confirmed by non-testimonial evidence. To express the idea in formal terms of the probability calculus, there are many NT_j 's such that $P(NT_j|C_{TES} \& T_I) > P(NT_j|T_I)$. Meanwhile, the probability calculus tells us that if C_{TES} raises the probability of NT_j given T_I , then NT_j raises the probability of C_{TES} given T_I —i.e., if $P(NT_j|C_{TES} \& T_I) > P(NT_j|T_I)$, then $P(C_{TES}|NT_j \& T_I) > P(C_{TES}|T_I)$. What this means is that in order to confirm the hypothesis C_{TES} in the sense of raising its probability, it is not necessary to personally observe the truth of the testimony itself. Ascertaining many expectations that the testimony and the hypothesis of its credibility generate can raise the probability of C_{TES} incrementally to a high degree.

There is an obvious objection to this idea of indirect confirmation. Namely, most such indirect confirmation depends on certain background beliefs, and many of the background beliefs are based on testimonial evidence. In other words, although we form many expectations when we consider the testimony credible, we do so in most cases by combining the testimony in question with some background beliefs that are themselves based on testimonial evidence. If this is the case, the indirect confirmation of the hypothesis C_{TES} is circular—or so it seems. The objection can be expressed formally as follows. The idea of indirect confirmation is that if the credibility hypothesis C_{TES} raises the probability of NT_j given T_I , then NT_j raises the probability of C_{TES} given T_I —i.e., if $P(NT_j|C_{TES} \& T_I) > P(NT_j|T_I)$, then $P(C_{TES}|NT_j \& T_I) > P(C_{TES}|T_I)$. The problem is that in order to form expectation NT_j , we need background beliefs B in addition to C_{TES} and T_I . Consequently, NT_j confirms C_{TES} not just given T_I but given T_I and B —i.e., the proper reasoning is that if $P(NT_j|C_{TES} \& T_I \& B) > P(NT_j|T_I \& B)$ then $P(C_{TES}|NT_j \& T_I \& B) > P(C_{TES}|T_I \& B)$. However, part of the background beliefs B is based on testimonial evidence, which makes the confirmation circular since we must assume in advance the credibility of the testimony that supports some of the background beliefs.

To illustrate the point by an example, given the report of a snowfall in Maine, we may try to confirm the credibility hypothesis C_{TES} by taking a look at the rooftop of a train from Maine instead of visiting Maine to see the snowfall there for ourselves. However, this indirect confirmation relies on the background belief that the train came from Maine, which is likely to be dependent at least in part on some testimonial evidence. For example, we may believe that the train came from Maine because it runs toward the south, and we know that trains running toward the south usually come from Maine, where the latter is based on some testimonial evidence. Indirect confirmation of the credibility hypothesis C_{TES} here seems to hinge on the truth of the very hypothesis C_{TES} that is to be confirmed. The reasoning appears circular.

It looks as though nothing is gained by the idea of indirect confirmation, but the reductionist can disarm the circularity objection by an analysis

similar to the one used in response to the transcendental argument in Section 4. Here is my reply to the circularity objection.¹⁵ The background beliefs B consist of beliefs based in part on testimonial evidence and beliefs based solely on non-testimonial evidence. Let T_{B1}, T_{B2}, \dots be testimonial pieces of evidence and NT_{B1}, NT_{B2}, \dots be non-testimonial pieces of evidence for the background beliefs. The problem for the reductionist is that in order for these pieces of evidence to support background beliefs B , the assumption is needed that both testimonial and non-testimonial evidence are credible—i.e., C_{TES} and C_{NTES} are true. This means that the background support B_S for B consists of $T_{B1}, T_{B2}, \dots, NT_{B1}, NT_{B2}, \dots, C_{TES}$ and C_{NTES} . Of the last two, C_{NTES} is unproblematic since it is assumed in this paper that non-testimonial evidence is credible, but C_{TES} is the hypothesis to confirm. In order to avoid the circularity I propose to remove C_{TES} from the background support B_S and consider $B_S^* = \{T_{B1}, T_{B2}, \dots, NT_{B1}, NT_{B2}, \dots, C_{NTES}\}$ to be the proper background support. This makes no part of the curtailed background support B_S^* problematic.

The key point in my proposal is that given T_I and the curtailed background support B_S^* , C_{TES} can still raise the probability of many NT_j 's. This is clear from the comparison of the following two conditional probabilities. First, given T_I and B_S^* , C_{TES} provides a good reason for expecting many NT_j 's. For example, given the report of a snowfall in Maine and the background testimony that trains running toward the south usually come from Maine, the hypothesis that testimony is generally credible provides a good reason to expect that the rooftop of a train running toward the south will be covered with snow.¹⁶ Meanwhile, given the same report and the background testimony, but without the credibility hypothesis C_{TES} , we do not have a good reason to expect that the rooftop of a train running toward the south will be covered with snow. In other words, given T_I and B_S^* , but without C_{TES} , the probability of NT_j remains low. This means that $P(NT_j|C_{TES} \& T_I \& B_S^*) > P(NT_j|T_I \& B_S^*)$ and the difference is often substantial. It follows from this by the probability calculus that $P(C_{TES}|NT_j \& T_I \& B_S^*) > P(C_{TES}|T_I \& B_S^*)$. In other words, given the existence of the report and the curtailed background support, the personal observation confirms the hypothesis C_{TES} . The elimination of C_{TES} from the background support makes the confirmation of C_{TES} non-circular; the confirmation of C_{TES} no longer relies on the presumption of the credibility of testimony in the background support.

I want to note also that the removal of C_{TES} from the background support not only makes the indirect confirmation of C_{TES} non-circular, but it also reveals the full extent of indirect confirmation. Beliefs based on testimony are part of the web of beliefs we regularly rely on when we form a variety of expectations. This means that the hypothesis that testimony is credible plays a crucial role when we form these expectations. As a result, even if we do not deliberately seek confirmation of the credibility

hypothesis, it receives tacit confirmation whenever observation matches the expectations that are in part based on the credibility hypothesis.¹⁷ Even if the degree of tacit confirmation by a single observation is small, there are plenty of such observations. Their cumulative effect is substantial and should be sufficient for justifying our trust in testimony.

6. Summary

In this paper I responded to two influential arguments against reductionism about testimonial justification of beliefs. The key point in my response to the transcendental argument is that the term “assumption” is ambiguous. Once we recognize its ambiguity and regard the seemingly question-begging assumption that testimony is generally credible as part of the hypothesis to test, and not part of the background beliefs presumed to be true, we can overcome the transcendental argument. This response to the transcendental argument has the additional virtue of helping the reductionist respond to the empirical argument in two ways. First, it reveals that the general credibility of testimony is already well supported by perceptual and memorial evidence by the time the epistemic subject can interpret utterances. Secondly, the idea of re-classifying the assumption of the general credibility of testimony is also effective in response to the empirical argument. Once we regard the assumption of the general credibility of testimony as the hypothesis to test, and not part of the background support, the epistemic subject can make use of the testimonial evidence to confirm the general credibility of testimony without circularity. To conclude, the two influential arguments against reductionism fail to show that reductionism about testimonial justification is untenable.¹⁸

Notes

¹ Advocates of anti-reductionism about testimonial justification include Coady (1992), Dummett (1993), Hardwig (1985), Stevenson (1993), and Webb (1993). There is also a rich and long tradition of anti-reductionism about testimonial justification in Indian epistemology—see contributions from the Indian side to Matilal and Chakrabarti (1994).

² When I refer to memory or memorial evidence in this paper, I do not include in it memory or memorial evidence whose contents are originally provided by testimony.

³ See Audi (1994) for the distinction between dispositional beliefs and dispositions to believe, and for the role the latter plays in epistemic justification.

⁴ See Conee and Feldman (2001) for a characterization of internalism in terms of supervenience.

⁵ See Fricker (1994) for the distinction between global and local reduction of testimonial justification. Fricker herself considers the project of global reduction hopeless and favors local reduction. In her view our trust in a stranger’s testimony can be justified even if no local evidence of reliability is available, because with respect to a certain range of subject matters the hypothesis that testimony is trustworthy is “the default position” (pp. 144, 151). Taking trustworthiness to be the default position (for some testimony) makes her view hard to distinguish from anti-reductionism. Fricker maintains that her view is still reductionist since it requires that the hearer recognize the type of testimony and monitor the speaker critically for

signs of untrustworthiness (p. 143). In my classification taking trustworthiness to be the default position—even if it is qualified in various ways—amounts to accepting anti-reductionism, but labeling is unimportant. My disagreement with Fricker on substance is that global reductionism, which she considers hopeless, is defensible and that no *presumption* of trustworthiness is necessary with respect to any testimony.

⁶ See Blais (1987) for this line of defense of reductionism. Faulkner (1998) argues that Hume's defense of reductionism is also of this kind.

⁷ Goldberg (2004) makes this point in his argument against radical interpretation.

⁸ Coherence of interpretation is a matter of degree. There may be cases where some individuals use certain terms—e.g., “arthritis”—in different ways than others do (Burge 1979; see also Ebb 2002), but occasional anomalies do not disprove the hypothesis that syntax-sharing utterances also share their semantics *in most cases*.

⁹ The following analysis focuses on the assumption of the general credibility of testimony; the analysis applies *mutatis mutandis* to the assumption of shared semantics as well.

¹⁰ By the definition of conditional probability, $P(O|H \& B^*) = P(O \& H \& B^*)/P(H \& B^*)$ and $P(O|B^*) = P(O \& B^*)/P(B^*)$. So, $P(O|H \& B^*) > P(O|B^*)$ if and only if $P(O \& H \& B^*)/P(H \& B^*) > P(O \& B^*)/P(B^*)$, which is equivalent to $P(O \& H \& B^*)/P(O \& B^*) > P(H \& B^*)/P(B^*)$. But the last formula is $P(H|O \& B^*) > P(H|B^*)$ by the definition of conditional probability. We are assuming here that $P(H \& B^*) \neq 0$ and $P(O \& B^*) \neq 0$. In case some people worry about the so-called tacking problem of confirmation (Glymour 1980, pp. 30–39), C_{TES} is not a superfluous proposition “tacked” onto the proper hypothesis I . It plays an essential role in raising the probability of O —i.e., as the supporters of the transcendental argument point out, we do not have a good reason to expect O from I alone without C_{TES} .

¹¹ Coady (1992, Ch. 4) stresses this point in his objection to Hume's reductionism.

¹² The same point applies to alien witnesses. By the time we can interpret Martian utterances as testimony with certain propositional contents, we must have had enough experiences that justify our trust in their testimony.

¹³ See Pollock (1986, Chapter 3, Section 3.2) on the causal relation (“the basing relation”) between a belief and evidence in more general terms.

¹⁴ I suspect there is some exaggeration on the part of the anti-reductionist about the scarcity of purely non-testimonial evidence, but I do not press the point here.

¹⁵ Shogenji (2000) uses essentially the same reasoning as described here to show that the reliability of perception can be confirmed by the use of perception without circularity.

¹⁶ We can make use of additional testimony if necessary since the *hypothesis* of the general credibility of testimony allows us to make use of any testimony in the background support without circularity.

¹⁷ See Adler (1990) for the notion of tacit confirmation.

¹⁸ I would like to thank Albert Chan, Chang-Seong Hong, Sheri Smith, and two anonymous referees for this journal for their helpful comments on earlier versions of this paper.

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