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Elżbieta Łukasiewicz
Kazimierz Wielki University
e-mail: el.lukasiewicz@gmail.com
ORCID: 0000–0002–9121–0016

EPISTEMIC JUSTIFICATION OF TESTIMONIAL BELIEFS AND THE CATEGORIES OF EGOPHORICITY AND EVIDENTIALITY IN NATURAL LANGUAGES: AN INSOLUBLE PARADOX OF THOMAS REID'S ANTI-REDUCTIONISM

Abstract. The paper is concerned with the epistemological status of testimony and the question of what may confer justification on true testimonial beliefs and enable us to call such beliefs *knowledge*. In particular, it addresses certain anti-reductionist arguments in the epistemology of testimony and their incompatibility with the grammatical categories of egophoricity (conjunct/disjunct marking) and evidentiality (information source marking) present in the architecture of natural languages. First, the tradition of epistemological individualism and its rationale are discussed, as well as certain attempts within this tradition to include testimony-based beliefs in the body of legitimate and rational beliefs. The next section is concerned with the anti-reductionist approach to testimonial beliefs and some arguments supporting 'the credulity principle' grounded in Thomas Reid's philosophy of common sense. The last two sections show how the anti-reductionist argumentation is threatened with an insoluble dilemma when considered in the context of languages with the grammatical categories of egophoricity (conjunct/disjunct marking) and evidentiality (information source marking). Special attention is paid to the justificatory role of egophoric and evidential marking; how these grammatical categories may influence the process of belief formation, and consequently, how this bears upon the nature of justification for testimonial beliefs. The final conclusion of the paper is that the anti-reductionist claim concerning the directness and non-inferential nature of testimonial knowledge is bound to meet objections grounded in the structure of many natural languages. This leads to a paradox: in discussion with reductionism, anti-reductionists do seek support for their arguments in common sense beliefs reflected in everyday language, and, on the other hand, their claims are incompatible with the linguistic data found in a number of natural languages.

Keywords: epistemology of testimony, justification, testimonial belief, Thomas Reid, reductionism, anti-reductionism, egophoricity, evidentiality.

1. Introduction

This paper is concerned with the epistemological status of *testimony* and the question of what may confer justification on true testimonial beliefs and enable us to name such beliefs *knowledge*. In particular, it addresses certain anti-reductionist arguments in the epistemology of testimony and their incompatibility with the grammatical categories of egophoricity (conjunct/disjunct marking) and evidentiality (information source marking) present in the architecture of many natural languages. According to the anti-reductionist stance propounded by Thomas Reid, testimonial beliefs are justified directly and non-inferentially – by the act of testimony itself. Our reliance on others' word is as fundamental and basic for cognition as our reliance on perception or memory, and we have a natural propensity to trust others. According to Reid's philosophy of common sense, the principles of veracity and credulity in humans, along with the veracity of sensory perception and reliability of memory, belong to the 'first principles' of cognition, and, as first principles, they do not require any proof or justification – their existence is self-evident. First principles are indispensable; they determine our cognitive and social functioning. Significantly, in Reid's epistemic framework, close ties are postulated between the principles of common sense (the principle of trust being one of them) and the language we use. It is claimed that natural languages in their grammatical and semantic structures reflect the content of common sense. However, the thesis of close connections between the principles of common sense and everyday language proves very problematic when applied to the epistemic status of testimony, and Reid's credulity principle. The claims about direct justification of testimonial beliefs and their epistemically basic status can be undermined by the existence of grammatical egophoricity and evidentiality, and the distinctions these two categories obligatorily encode in many natural languages. This is an insoluble problem for the anti-reductionist position which programmatically aims to draw support for its claims from common sense beliefs and ordinary language expressions.

The term *testimony* originates in forensic language, but in the present paper its usage is not restricted to legal and institutional contexts, such as when testimony is given in a court of law or before a commission of inquiry. In what follows, the term is used in a very broad sense; *testimony* denotes a speech act of asserting that p by a competent and sincere speaker, and the assertion is offered as evidence that p.[1] The speaker's claim is usually expressed in a declarative sentence, is meant to be understood literally, without any implications imposed by politeness rules or metaphorical speech, and it is directed to a hearer who is in need of information on the issue. Significantly, the hearer need not have access to any corroborative evidence or other testimony. Also, she[2] has no special insight into the speaker's *actual* competence, authority and good intentions; she has no reason to doubt them but knows that the speaker, as any other human, could lie or be mistaken. Thus understood testimony comprises innumerable speech acts occurring in everyday communication in which the speaker testifies to the truth of proposition p relevant to a matter that needs to be explained or reported, for example, giving someone directions in an unfamiliar locality, telling another person what happened during a meeting, etc.

With this broad definition of testimony, we can proceed to the fundamental question of whether in such circumstances the hearer has any good epistemological reason to believe in the speaker's competence and truthfulness and let herself rely on the speaker's word. The next question is whether testimony-based beliefs, if true, deserve to be called *knowledge*. If we assume that testimonial beliefs can be epistemically justified and they can transfer knowledge, the question arises whether we can learn from testimony just like we can learn from perception or inference (i.e. testimony is just one of many possible sources of evidence, on a par with others) or, due to its being mediated by other persons, testimony-based knowledge has a special epistemic status. These questions sum up the key problems of the justification of testimony-based beliefs; as shown below, they can be given different answers.

Section 2 discusses the tradition of epistemological individualism and its rationale; also, the section outlines certain attempts within this tradition to include testimony-based beliefs in the body of legitimate and rational beliefs. Section 3 is concerned with the anti-reductionist approach to testimonial beliefs and some arguments supporting 'the credulity principle' grounded in Thomas Reid's philosophy of common sense. Finally, sections 4 and 5 show how the anti-reductionist argumentation is threatened with an insoluble dilemma when considered in the context of languages with the grammatical categories of egophoricity and evidentiality. Since egophoricity (conjunct/disjunct marking) and evidentiality are absent from most familiar Indo-European languages, a brief account of these two categories will be provided in section 4. Special attention will be paid to the justificatory role of egophoric (conjunct/disjunct) and evidential marking – how these grammatical categories may influence the process of belief formation, and consequently, how this bears upon the nature of justification for testimonial beliefs (section 5). The final conclusion of the paper will be that testimony can transfer knowledge (i.e. it can provide justified beliefs), but the anti-reductionist claim that testimony-based knowledge is direct and non-inferential in nature is bound to meet objections grounded in the structure of many natural languages and everyday communication practices of their users. This leads to a paradox: in discussion with reductionism, anti-reductionists do seek support for their arguments in common sense beliefs reflected in everyday language, and, on the other hand, their claims are incompatible with the linguistic data found in a number of natural languages.

2. Knowledge, testimony and faith in epistemic individualism

The main problem with testimony as a source of knowledge concerns its reliability. We extensively rely on what others tell us when forming our beliefs, and these beliefs are mostly true; however, according to many philosophers, they do not seem to be justified well enough to deserve the name of *knowledge*.[3] This results from the obvious fact that we do not have an insight into the truth value of what is asserted by others which would be comparable to the privileged access to our own memory or perception, and to the truth value of our claims. Furthermore, we often accept testimony at face value, solely on the word of the testifier, but, clearly, that person need not be competent or sincere. Since relying on testimony is not an infallible epistemic strategy, according to many philosophers representing Cartesian-style individualism, testimony-based beliefs are not *epistemically* justified, and therefore, they do not constitute knowledge. Consequently, testimony was for long an underestimated and underexplored theme in epistemology, and few philosophers devoted their attention to the topic, despite the fact that our constant, extensive and unavoidable reliance on the word of others is unquestionable.[4]

Clearly, for Plato and other ancient thinkers, testimony was not an adequate source of knowledge. In *Theaetetus* (xxxviii), testimony in a law case is mentioned briefly to exemplify the point that knowledge cannot be defined as true belief. As the argument has it, one may acquire true beliefs about what happened by being informed or persuaded by eye-witnesses or other people, but one could never be said to *know* in that way what happened. A true belief formed on the basis of someone else's testimony is not knowledge; it is merely a true belief. The participants of the dialogue take it for granted that testimony has a lower epistemic status, and the argument does not require further explanation. For ancient Greeks, knowledge (*episteme*) had to be grounded in one's individual sound reasoning from first principles; only this epistemic ideal gives a complete, systematic and clear understanding that is required for knowledge.

That absence of testimony from epistemological reflection continued for centuries. In philosophical writings, different sources of knowledge were in focus, for example, deductive reasoning, sensory perception, or illumination – much depending on the author's general philosophical commitments. However, the most basic and common source of knowledge, namely the testimony of other people, was nearly absent from philosophical consideration.

It should be noted at this point that this downgrading of testimony as a source of knowledge in Western philosophy did not mean lack of reliance on *authority*. Just the opposite, all fundamental questions concerning God, human and the natural world were answered by referring to the classical authoritative texts, such as the Bible, the writings of Church Fathers, Aristotle and others. Significantly, beliefs based on the authority of other people and their testimony were not regarded as irrational; they were legitimate beliefs, but they did not constitute *knowledge*. Such authority-based testimonial beliefs enjoyed their own category, and that category was *faith*, as in the famous saying of St. Augustine: 'What we know, we owe to reason, what we believe, to authority' (*Retractationes*, I. xiii. 3).[5] This division into beliefs based on our own clear and systematic reasoning, which constitute knowledge, and testimonial beliefs, which are based on authority and generate faith, was a commonly held view for many centuries; it is still found in the seventeenth-century treatise *Logic or the Art of Thinking* (*Port Royal Logic*) authored by Antoine Arnauld and Pierre Nicole (1662/1996, p. 260; cf. McMyler 2011, pp. 20–23).

At the beginning of the modern period, however, the notion of authority and the trust in someone else's authority, which was previously capable of justifying one's beliefs in matters one could not grasp by oneself, started to disappear from philosophical consideration. The modern mindset was born in the crisis of authority and in the critique of hitherto well-established views of the world, religion and science; in modern epistemological individualism, one needs to come to the truth by oneself, in one's own mind. But, significantly, the concept of knowledge did not change much regarding the requirements of clarity and certainty. Descartes's project of turning to the subject and the self in search of certainty, as in the *Cogito* argument, continued the long ancient tradition of understanding knowledge as *episteme* – what we call our knowledge has to be firm, unshakeable and accessible to thorough understanding. For Descartes, it is clear that reliance on the testimony of others, as exemplified in the process of education, is harmful to one's reason, and teachers' (mis)guidance weakens one's intellectual powers:

> hence I thought it virtually impossible that our judgements should be as unclouded and firm as they would have been if we had had the full use of our reason from the moment of our birth, and if we had always been guided by reason alone. ... a majority vote is worthless as a proof of truths that are at all difficult to discover; for a single man is much more likely to hit upon them than a group of people. (*Discourse on the Method*, 1637/1984, pp. 117, 119)

The epistemological individualism, so essential for the *Cogito* argument, naturally ruled out the possibility that testimony might play any significant role in philosophical reflection on knowledge. This, however, resulted in a theoretical problem: because authority was no longer a parallel source of legitimate and rational beliefs – next to reason – and the traditional connection between authority-based faith and testimonial beliefs was broken, the latter were left without their previous stronghold in the cognitive framework. Testimonial beliefs became a problematic issue because the actual role of testimony when forming beliefs in science, everyday life, religious matters, etc., was as important as ever, and one could not negate this fact. However, it was difficult to theoretically account for the justifiedness of such beliefs after the warrant of authority had been rejected (cf. McMyler, 2011, pp. 23–29).

Individualistic search for truth and one's autonomy therein were also very prominent features of John Locke's writings on the ethics of belief. He assumes that we have certain moral duties concerning the way our beliefs are formed; they must be rational and based on available evidence. We must assess which of our beliefs have the strongest evidence, which have weaker evidence, and the strength of belief must be proportioned to the strength of evidence. Significantly, we are to pursue this task individually. British empiricism, whose main interest was theory of knowledge, developed in opposition to the seventeenth-century rationalism and Descartes's views on how we come to indubitable knowledge, but it did share the epistemological individualism of the latter. Locke insists that we, as individuals, are responsible for distinguishing true beliefs from false ones; we will not achieve this goal by reverting to authorities, reading authoritative texts or believing what others tell us.

> ... we may as rationally hope to see with other Men's Eyes, as to know by other Men's Understandings. So much as we our selves consider and comprehend of Truth and Reason, so much we possess of real and true Knowledge. The floating of other Men's Opinions in our brains makes us not one jot the more

> knowing, though they happen to be true. What in them was Science, is in us but Opiniatry, whilst we give up our Assent only to reverend Names, and do not, as they did, employ our own Reason to understand those Truths which gave them reputation. (Locke, *An Essay Concerning Human Understanding*, Book I, 1690/1975, p. 58)

It was an important and novel idea that we as individuals are morally responsible for evaluating evidence for our beliefs. We are not allowed to believe something more strongly than the evidence allows us to believe, and we have no right to our beliefs if there is no evidence supporting them. In Locke's evidentialism, the questions of how we form our beliefs and which of them are justified are ethical issues, inherently connected with our responsibility as epistemic agents (cf. Wolterstorff, 1996, pp. 218–226).

Does that ambitious epistemological project offer any room for the testimony of others? Obviously not if testimonial beliefs are to be justified by the sheer *authority* of the testifier. It is noteworthy, however, that later in his *Essay*, Locke does acknowledge that, occasionally, we need to rely on others' testimony and this can be justified. But in such cases, the testimony must be sufficiently credible, and significantly, we should rely on the argument itself, not on the authority. Thus, others' testimony may generate a rational and 'probable' belief, as Locke calls it, but that belief will not constitute knowledge. What is also important, we must thoroughly examine the argument of the testifier, assess the evidence provided, and then judge the probability of the claim. In a testimony-based belief that *p*, one cannot rely on the testifier's authority only and, in the absence of defeaters, derive justification from that authority, or from the act of testimony itself. Testimony should be taken as any other inductive evidence in favour of *p*; it must be analysed, and one must come to one's own conclusions regarding the probability that *p*. The degree of one's belief that *p* is to be proportionate to the weight of the evidence possessed. Thus understood testimonial beliefs are compatible with epistemic individualism; however, they are no longer *sui generis* beliefs (i.e. beliefs based on authority), and their content is to be evaluated as probable or improbable like any other evidence (cf. McMyler, 2011, pp. 24–31).

In David Hume's *Enquiry*, the justification of testimonial beliefs is understood similarly; Hume is clear that such beliefs cannot be justified by the authority of the testifier and our trust in that authority. Though he is quite appreciative of the role that testimony plays in our reasoning,[6] his approving account thereof – surely more sympathetic than Locke's – does not imply that he understands justification of testimonial beliefs differently. Testimony-based belief is just a species of belief based on inference, in which we must judge, firstly, the probability of the fact testified, whether it corresponds to what we have learned or experienced so far, and secondly, we must assess the testifier's trustworthiness.[7] What justifies our testimonial belief that p is the strength of the inference from the fact of someone's testifying that p to our own conclusion that p; the degree of justification for our belief that p is proportionate to the strength of that inference. This constitutes the essence of the *reductionist* view in the epistemology of testimony: testimonial beliefs are legitimate, but they are justified through the individual's inferential reasoning, and the believer alone is responsible for the justification of her belief.

Let us note at this point that Locke's and Hume's epistemic individualism imposes very high standards; normally, we do not have much evidence for most things we believe on the basis of testimony, nor can we evaluate another's argument and judge its soundness. In most everyday communication, we simply take the word of others as warrant, so we rely on their authority. This is how we form our beliefs; most of them are based on testimony and are taken as *prima facie* justified. We trust the word of others in a vast range of topics, from the details of our personal history to most beliefs we hold about the past and present of the external world. It would be folly, someone might say, to hold that we do not *know* countless more and less important things that we actually know simply because we choose to interpret the notion of knowledge as narrowly as in the above-presented individualist framework. Such epistemic caution leads to absurdity; it is against common sense to claim that we cannot know the date of our birth because we learned about it from others (and therefore, it is a matter of faith) or that we cannot know it unless we thoroughly examined the relevant proofs and reasoning providing justification for that belief, as in the reductionist view.

3. Thomas Reid's philosophy of common sense and the anti-reductionist approach to testimony-based beliefs

Another approach to the problem of justification of testimonial beliefs that emerged, *anti-reductionism*, was meant to overcome the above dilemma. Anti-reductionists claim that testimony as a source of knowledge does not need to be justified by appeal to inference, memory or (the original testifier's) perception, as in the aforesaid reductionist view, because testimony is a source of justification in itself. Our reliance on testimony is fundamental for cognition and cannot be reduced to other sources of justification. It is justified *a priori* by our human constitution and our membership in an epistemic community which shares a language and a number of beliefs.

This anti-reductionist view is explicitly formulated in Thomas Reid's epistemology. He writes that it is a futile task to try to justify the immense body of true beliefs that we owe to others and their reports by consulting our own intellectual resources only; if we insisted on such standards of justification, we would be left with very little knowledge (1764/2002a, p. 194). To illustrate the epistemic importance of others' testimony, Reid gives an example of a mathematician who, having made a discovery, naturally seeks the opinion of other mathematicians, and according to their verdict, he either becomes more confident about his discovery or must reexamine his reasoning if the verdict is unfavourable.[8] This is understandable since our peers' judgment provides us with the most important test of the objectivity and truthfulness of our views.

Unlike Hume, Reid claims that our capacity to acquire knowledge from the testimony of others cannot be reduced to the operation of our capacity for inferential thinking; the former is as essential for our cognition as the latter. In communication with other people, we are naturally guided by the principles of *veracity* and *credulity*.[9] The former principle is 'a propensity to speak truth, and to use the signs of language so as to convey our real sentiments'. As argued by Reid, truth is 'the natural issue of the mind'; to speak truth one does not need any training or encouragement, but it is enough to follow one's natural impulse. It is so even in the case of liars; the proportion of true testimony they give far outweighs the occurrences of lying. The principle of credulity, in turn, says that humans quite naturally tend to believe what they are told. The operation of this principle is most visible in young children; their normal attitude is to believe what others say and this allows them to learn their first language and a multitude of other useful things. If they adopted the method of Cartesian-style universal doubt, or even a neutral attitude to what they are told, it would be detrimental to their proper development and well-being. In the mental development of children, the capacities of doubt and disbelief are acquired much later and are deemed more complex than acceptance and trust, which are ontogenetically prior. As Reid argues,[10] if credulity were not a primary gift of nature, but was developed by children on a par with reasoning and other mental capacities, the attitude of trust should be greater in adolescents and adults than it is in children. Very young children should reveal the most neutral attitude to what they are told compared to other age groups. Since it is exactly the opposite – credulity is strongest in young children and lessens with age and experience – it follows that trust must be our natural endowment. This natural disposition to believe others is later in life lessened and qualified by the experience of unreliability and deceit; our reason 'learns to suspect testimony in some cases, and to disbelieve it in others; and sets bounds to that authority to which she was at first entirely subject' (Reid, 1764/2002a, p. 197). However, even in adults, the occasionally critical opinions and negative feelings about others' testimony are founded upon the dominant attitude of trust.[11]

That trust in the veracity of others' claims works analogously to the trust in our memory; we may be aware that, occasionally, our memory fails us, but this does not call into question our general and mostly unreflective reliance on it. Similarly, the awareness that others' testimony may sometimes be fallible or deceitful does not undermine the direct and immediate operation of the credulity principle.[12]

Certainly, it would be impracticable, or even impossible, to count whether the number of testimony-based beliefs which proved true is greater than the number of testimony-based beliefs that proved false. As Henry H. Price argues in his *Belief*, our capacity to test and verify testimony is too limited when compared with the overall number of testimonial beliefs we hold to justify any inductive claim, positive or negative, as to the reliability of testimony (1969, p. 119). Hence, the question arises: what supports Reid's veracity principle if verifiable numbers cannot reveal the predominance of true over false testimony.

In answer to the above problem, one could argue that we would not believe any testimony if our past experience of it did not inform us that testimony is largely true; thus, we keep a sort of mental record of its reliability. Price is right that we are unable to count and compare the actual number of true and false testimonial beliefs, but it is possible to claim that testimony is *predominantly* true. This claim is justified because if testimony were not more often true than not, we would not accept it, and in consequence, we would become deep skeptics, without any testimonial beliefs. Since this is not the case, and we have a lot of testimonial beliefs, testimony must be predominantly true.

It is noteworthy, however, that the above argument is not quite in line with Reid's stance. It explains why we tend to believe testimony, but it is an *a posteriori* justification, corresponding to Hume's argumentation from his famous passage about the testimony of miracles (1748/1999, pp. 74–75). However, what anti-reductionists like Reid really aim to do is to show that testimony is justified *a priori*.[13]

As claimed by Reid, our reliance on testimony is as fundamental and basic as our reliance on perception. It is so because, due to our human constitution, we tend to accept the testimony of others readily, naturally and directly – similarly to the testimony of our senses or memory.[14] To illustrate the point: I am entitled to claim access to direct knowledge when, in normal daylight, I see a book on the table before me, and analogously, I can say that I *know directly* that there is a book on the table in the next room if I am informed so by a normally sighted, sincere person who is in that room at the moment. As the argument has it, to have a justified belief that there is a book on the table before me, it is enough that my visual system *is* working properly and the physical circumstances *are* normal (proper lighting, etc.). But, importantly, I do not need to check all this before I am entitled to claim that I *know* that there is a book before me. Similarly, I have a right to say that I know directly that there is a book on the table in the next room on the basis of someone's telling me so, without prior checking the reliability of my informant, the circumstances of her testimonial act, or whether she might have a reason for lying, etc. It is enough if the circumstances of testimony are normal.

The fact that testimony-based belief is sometimes supported – even remarkably so – by other epistemic capacities, like memory or inference, does not weaken the point that testimonial belief is justified directly, by testimony itself, and thus it is epistemically basic. Reid assigns the operation of veracity and credulity principles not to their sheer usefulness in our everyday practice but to our natural constitution; they cannot work differently from the way they work.[15]

This claim is woven into Reid's larger epistemological framework of his philosophy of common sense, where the two principles, along with veracity of sensory perception and reliability of memory, belong to the 'first principles' of cognition. Importantly, first principles in Reid's epistemology do not require any proof, support or justification, but they are self-evident justified beliefs. As Reid's argument has it, it would be a vain attempt to try to justify first principles since any justification takes these principles for granted.[16]

Why should we believe that there are such principles in the mind? Firstly, they are indispensable premises of any thinking about the world; without them our thinking about the external reality would be impossible, but we do observe such activity in humans. Secondly, argues Reid, all of us have an internal and irresistible conviction that certain propositions are simply true. This constitutes 'common sense' knowledge – common to all human beings – and this common sense should be relied on whenever we formulate propositions referring to objects, states of affairs or events in the external world.[17]

Significantly for our further consideration, Reid assumes that there are close ties between the principles of common sense and the structure of ordinary language; particularly important are those features that are found in all languages:

> The structure and grammar of all actual languages are based on certain common opinions of mankind. For as long as these opinions are common to all men, there will be a great similarity in all languages on our planet. And there *is* such similarity; for we find in all languages the same parts of speech, the distinction between adjectives and nouns, the distinction between both of those and verbs, the distinction between active and passive verbs, the uses of verbs with different tenses, moods, persons and numbers. And there are general rules of grammar, the same in all languages. This similarity of structure in all languages shows that people all hold the opinions on which the structure of language is based. (*Essays on the Intellectual Powers of Man*, 1785/2002b, I. i)

> Men's language expresses their thoughts and the various operations of their minds. The various operations of the understanding, will, and passions, which are common to mankind, have in all languages corresponding forms of speech, which are the signs of them and by which they are expressed. By paying due attention to these signs we may in many cases get considerable light on the things signified by them. All languages have modes of speech by which men say what they think, give their testimony, accept or refuse, ask for information or advice, command, threaten or implore, give their word in promises and contracts. If such operations were not common to all mankind we wouldn't find in all languages forms of speech by which they are expressed. (*Essays on the Intellectual Powers of Man*, 1785/2002b, I. v)

Thus, the structures of everyday language reflect, as in a mirror, the content of common sense and they are, next to introspection, a reliable source of knowledge about the operations of the mind (though, naturally, it does not follow that every single utterance in ordinary language is a reflection of common sense). From the perspective of contemporary comparative linguistics, we may certainly reject some of Reid's candidates for universal features to be found in all languages, but the very idea of the existence of universals, i.e. common abstract structures underlying utterances in any natural language, as well as the assumption of a close correspondence between the semantic structure of language and conceptual representations in the mind are hypotheses which are accepted by many researchers.

However, the above assumption of a close correspondence between the principles of common sense and the structures of natural languages may prove extremely problematic for the claims of anti-reductionism, and in particular for Reid's analogy between the veracity of perception and the credit given to testimony. If we consider grammars of many natural languages, especially certain 'epistemological' categories marking the speaker's access to information (see below), it will prove that the analogy between believing on perception and believing on testimony cannot be defended; grammars of many languages sharply differentiate these two sources of knowledge. In the next section, the categories of egophoricity (conjunct/disjunct marking) and evidentiality (information source marking) will be introduced to show that perception and testimony cannot be placed on a par as two equal sources of justified beliefs, and a defender of Reid's anti-reductionism would be ill-advised to seek support for the epistemically basic status of testimonial beliefs in the forms of speech found in natural languages.

4. Egophoricity and evidentiality in the grammar of natural languages

Since the grammatical categories of egophoricity and evidentiality are rather exotic from the Indo-European perspective, in this section some basic information about egophoric and evidential systems will be provided and illustrated with necessary language data. The following accounts (sections 4.1 and 4.2) are based on data from two languages, Newari[18] and Quechua[19], where markers of the two categories are fully grammaticalized and obligatory in a sentence. Newari has both egophoricity and evidentiality in its grammar, whereas Quechua has evidentials only, without egophoric markers; the language has been chosen to illustrate evidentiality as Quechua evidentials constitute a fairly transparent system and cover what is called three basic domains of evidentiality: direct, reported and inferred evidence (cf. Willett, 1988, p. 57).

4.1. Egophoricity: an overview of the category

What is *egophoricity*, or, in other words, conjunct/disjunct opposition? Greatly simplifying the matter, one could say that egophoricity depends on a kind of binary morphological marking, usually on verbs, that distinguishes first person actor (egophoric) from second and third person actors (non-egophoric) in declarative clauses, and second person (egophoric) from first and third persons (non-egophoric) in questions. From the perspective of speech act roles, the egophoric marks the person who makes an assertion based on internal experiential knowledge, i.e. the speaker-actor in first person statements, or the person who is able to make such an assertion when answering a question, i.e. the second person addressee in questions.

The category is still little known, but cross-linguistically, the occurrence and geographic distribution of egophoric marking does not appear to be widespread. It can be found in some languages of the Tibeto-Burman family, although not in all branches; also, it has been recognized and described in several Northeast Caucasian languages,[20] and in the Barbacoan family[21] in Colombia and Ecuador. A system of egophoric marking was first accounted for by Austin Hale in his groundbreaking article (1980) on conjunct and disjunct verb forms in Newari (Newar), a Tibeto-Burman language of Nepal. In order to label that binary distinction, Hale used the terms *conjunct/disjunct*; in this he was followed by many other researchers (to the motivation for this terminology we will return).

To illustrate briefly how the system of egophoric (conjunct/disjunct) marking works, let us consider a simple example from Newari, as presented in Hale's (1980) and Hargreaves's (2005) accounts. The Newari verb *wane* ('to go') has a conjunct and a disjunct form in the past tense paradigm; consider (1.a-c) below.

(1) Newari conjunct/disjunct paradigm (egophoric/non-egophoric) in past tense declaratives; based on Hale (1980, p. 95) and Hargreaves (2005, p. 12)

(a) *ji* *wan-**ā***
1.ABSOLUTIVE go-PAST.**CONJUNCT**
'I went' (CONJUNCT)

(b) *cha* *wan-**a***
2.ABSOLUTIVE go-PAST.**DISJUNCT**
'You went' (DISJUNCT)

(c) *wa* *wan-**a***
3.ABSOLUTIVE go-PAST.**DISJUNCT**
'He went' (DISJUNCT)

The same opposition exists in the non-past. It is important not to interpret the conjunct/disjunct distinction as merely first vs. non-first person marking on verbs, as the above pattern might suggest. While the disjunct form is used in second person declaratives, in second person questions, the conjunct will be used, as in (2) below.

(2) Newari conjunct (egophoric) in 2nd person question; based on Hale (1980, p. 95) and Hargreaves (2005, pp. 15–16)

cha *ana* *wan-**ā*** *lā?*
2.ABSOLUTIVE there go-PAST.**CONJUNCT** QUESTION
'Did you go there?' (CONJUNCT)

Furthermore, though in third person simple declaratives and in third person questions we have disjunct forms only, in certain embedded clauses, it is the conjunct that is the appropriate third person form and will be chosen, as in (3.a). If the disjunct form is used in the same context, the meaning changes significantly; see (3.b) below.

(3) Newari (Hale, 1980, p. 95)

(a) *Wã: wa ana **wanā*** (go-PAST.CONJUNCT) *dhakāā dhāla*
'He said that he $\text{went}_{\text{conjunct}}$ there (himself)'

(b) *Wã: wa ana **wana*** (go-PAST.DISJUNCT) *dhakāā dhāla*
'He said that he (someone else) $\text{went}_{\text{disjunct}}$ there'

Importantly, the conjunct/disjunct (egophoric/non-egophoric) pattern is used with only some of Newari verbs – the so-called 'personal' verbs, to use Hale's terminology. These are verbs whose subject-actor 'is portrayed as a true instigator, one responsible for an intentional act' (1980, p. 96); only personal verbs may have conjunct forms. Hargreaves (2005, pp. 4, 22–30) calls this group of Newari verbs 'control verbs', which highlights the subject's intention to act and her control over the action described by the verb. This aspect distinguishes 'control' verbs from 'non-control' verbs ('impersonal' in Hale, 1980), which make a much larger class, 'describe events incompatible with self-initiated behavior', and have disjunct forms only, regardless of person (Hale, 1980, p. 96; Hargreaves, 2005, pp. 13–14). Apart from these two classes, a third is distinguished in Hargreaves (2005), the so-called 'fluid' verbs, which allow for both interpretations concerning volition and control on the subject's part. Therefore, fluid verbs occur in either conjunct/disjunct or disjunct-only forms. The importance of the control component is visible in pairs of utterances like (4.a-b) below, in which the use of a conjunct or disjunct form with a fluid verb indicates where the actor is a true instigator.

(4) Newari, intentional and non-intentional interpretations encoded by the conjunct/disjunct opposition (egophoric/non-egophoric); based on Hargreaves (2005, p. 14)

(a) *jĩ:* *mānaj* *nāpalān-**ā***
1.ERGATIVE Manoj.ABSOLUTIVE meet-PAST.**CONJUNCT**
'I met Manoj' (intentional)

(b) *jĩ:* *mānaj* *nāpalān-**a***
1.ERGATIVE Manoj.ABSOLUTIVE meet-PAST.**DISJUNCT**
'I met/ran into Manoj' (non-intentional)

This shows clearly that the egophoric, or the conjunct, is not simply a person marker (i.e. of first person in statements and second person in questions). What governs the distribution of conjunct/disjunct forms is an interaction of pragmatic, semantic and morphosyntactic factors. The following two questions are essential in applying the conjunct form in Newari. Firstly, does the event described by the verb involve an intentional act? Only those Newari verbs whose meaning entails the actor's intention to act and her control have conjunct forms; non-control (impersonal) verbs are always disjunct. The second question is more general and applies to egophoricity systems in other languages as well; it concerns the epistemic authority for the proposition asserted: who has a privileged access to internal experiential knowledge concerning the truth of the proposition? In declarative clauses, it is the speaker (first person), and therefore, the conjunct form is used.

Regarding the use of conjunct/disjunct forms in questions, the conjunct is used in second person questions (with personal/control verbs) of the type *Did you go there?* It is the addressee who is the 'primary knower' and will be marked as the person able to make an assertion based on internal experiential knowledge; therefore, the conjunct is employed. One could say that the form used in the question anticipates the form provided in the answer. In the case of questions cast in first person and rhetorical questions, the distribution of the conjunct is different (Hale, 1980, pp. 99–100). The speaker who does not remember her own actions (provided the question in first person is a true question) or did something unwittingly cannot be treated as a true instigator who is in control of her activity. Therefore, in 'true' first person questions (e.g. *Did I go there at that time (I don't recall)?*) the disjunct form is used. The situation is different in rhetorical questions. They may have various pragmatic functions: emphasis, denial, accusation, etc., but the addressee is not the 'primary knower' and is not asked for any information. Since rhetorical questions are not true questions, the declarative pattern is used there, i.e. the conjunct in first person and the disjunct in second person (Hale, 1980, pp. 99–100); see (5.a-b) below.

(5) Newari reversed conjunct/disjunct marking (egophoric/non-egophoric) in first and second person rhetorical questions; Hale (1980, p. 100)

(a) *ji* *ana* *wan-**ā*** *lā?*
1.ABSOLUTIVE there go-PAST.CONJUNCT QUESTION
'Did I go there? (I most certainly did not!)' (CONJUNCT)

(b) *cha* *wal-**a*** *lā?*
2.ABSOLUTIVE come-PAST.DISJUNCT QUESTION
'Did you come? (Most certainly not!)' (DISJUNCT)

Since Hale's 1980 publication on Newari verb forms, various other terms have been used to name systems of such binary marking in different languages: *first/non-first person* (Woodbury, 1986), *self/other person* (Sun, 1993), *congruent/non-congruent* (Dickinson, 1999), *assertor's involvement marking* (Creissels, 2008), *egophoric/neutral* (*alterphoric*) (Tournadre, 2008; Post, 2013). For the purposes of the present paper, I prefer to use the terms *egophoric/non-egophoric*, as they are semantically more transparent than *conjunct/disjunct*, and they highlight the role of *ego* as the epistemic authority for the utterance. Hale's terminology (1980) was originally prompted by the occurrence of two different verb forms in complement clauses of verbs of saying – depending on the co-reference of the subject of the main clause and the subject of the complement clause, or lack of such co-reference, as illustrated by the pattern below:

CONJUNCT:	$\boldsymbol{He_x}$ *said that* $\boldsymbol{he_x}$ *went*$_{conjunct}$ *there*
DISJUNCT:	$\boldsymbol{He_x}$ *said that* $\boldsymbol{he_y}$ *went*$_{disjunct}$ *there*

In order to account for the use of conjunct/disjunct forms in *unembedded* clauses (i.e. in simple declaratives) and create a unified account of the phenomenon, Hale advocated treating such unembedded clauses as 'quotes' in an abstract 'quote frame', understood as an implicit main clause of the type: *I say to you* (1980, p. 97). The quote frame has an implicit performative verb with the speaker as the implicit subject (see below). This can explain the use of conjunct forms in first person unembedded declarative sentences analogically to their use in embedded clauses; the conjunct form is used only if the subject of the 'quote' is co-referential with the subject of the implicit 'quote frame' (i.e. with the speaker), as below.

QUOTE FRAME	QUOTE (a declarative sentence)
[***I*** *say to you*]	***I*** *went*$_{conjunct}$ *there.*

Further studies on egophoricity in other languages[22] have shown that the picture can be more complex than in the Newari system. The main organizational principle is generally the same, but there are differences revealed in:

– the semantic type of verbs which are marked for egophoricity;
– the interactions of the egophoric with other categories like tense, aspect, mood, evidentiality, or mirativity;

– the morphological type of markers;
– the argument role of the egophoric person (i.e. whether it is limited to a conjunct grammatical subject or more loosely defined);
– possible subdivisions in the conjunct (active and passive participation);
– occurrence of the conjunct/disjunct markers with syntactic elements other than finite verbs.

Taking into account the differences in egophoric systems, a broader view might look as follows. The conjunct (egophoric) form is used in statements when the speaker is involved in the activity described by the verb, and in questions when the addressee is thus involved; it marks the person who is the epistemic authority to express a given proposition. The disjunct (non-egophoric) form is used in all other cases, i.e. in statements or in questions where the speaker or the addressee, respectively, are not involved in the activity referred to by the verb.

4.2. Evidentiality: information source marking

Another grammatical category, distinct from egophoricity, which should be mentioned in the context of belief's justification is evidentiality, i.e. marking of the information source on which the speaker's utterance is based. Like egophoricity, evidentiality was long an overlooked category in linguistics; it is only in recent three decades that it has become a more fashionable topic of investigation and the literature on it has grown considerably.[23] An in-depth account of the subject is beyond the scope of a single paper; this section addresses the problem of evidential marking only to the extent it pertains to the anti-reductionist arguments discussed in the paper.

Evidentiality is a category whose primary function is to mark the source of information on which a statement is based: whether the propositional content of the utterance is based on the speaker's direct observation, past experience, inference from observable data, someone else's report, or other types of evidence. In the literature on evidentiality, it is assumed that all natural languages have linguistic means and strategies which allow their users to express how they came to know something and what justification is available to them to support their claims. However, only some languages have fully grammaticalized evidentials, or, as they are sometimes called, 'evidentials proper', which constitute a specific grammatical category whose primary function is to mark the type of access to information available to the speaker. Significantly, in many evidential languages, such grammatical markers of information source are obligatory within a clause (they are most often verbal affixes), and a sentence without an evidential marker is deemed grammatically and semantically unacceptable.[24]

Grammaticalized evidentiality is not a widespread category. Our knowledge of evidentiality systems is still far from exhaustive, but given current research, it is estimated that grammatical evidentials are found in no more than about 25% of the world's languages (Aikhenvald, 2004, p. 17; 2014, p. 3). They can be found on all continents; however, they are relatively infrequent in Africa and Australia, where occurrences are isolated. Also in Europe, with the exception of the Balkan Slavic and the Baltic region languages (Estonian, Latvian and Lithuanian), grammatical evidentials do not occur. In contrast, North and South American languages reveal exceptionally rich and elaborate systems of information source markers. Systems of grammatical evidentials occur also in many languages in Asia, though they are different from those in Native American languages and usually less elaborate. In particular, evidentials are found in Turkic, Caucasian and some other languages of the 'Great Evidentiality Belt' ranging from the Balkan peninsula, through Asia Minor, the Caucasus, to the central Asia and further to the Far East. Another large evidential family in Asia is the numerous group of Tibeto-Burman languages, where evidentiality is often interconnected with the marking of egophoricity (e.g. in Newari).[25]

Languages with grammaticalized evidentiality have different requirements as to the frequency of evidential marking; in some languages, information-source markers occur in every declarative sentence, in others, they are optional. In those languages which have obligatory evidentials, one cannot formulate a sentence equivalent to English: *John is repairing his car* without providing the information source in the same sentence. Therefore, the above declarative sentence will have to include in its structure an evidentiality marker, for example:

John is repairing his car (+ *reported evidential: I have been told so*)

John is repairing his car (+ *direct evidential: I have seen it*)

John is repairing his car (+ *inferred evidential: I believe so on the basis of some observable evidence*)

Giving the source of information whenever one makes an assertion is a prerequisite of successful communication in evidential languages. Moreover, evidentiality is often fused with other grammatical categories (e.g., tense, person) in portmanteau morphs; therefore, omission of evidentials is inconceivable from the viewpoint of sentence structure and would produce grammatically unacceptable and semantically flawed sentences.

Evidentials may develop various semantic extensions, for example epistemic or mirative overtones. Then, apart from the primary job of pointing to the information source, they also indicate, or imply, a degree of reliability of the information provided (epistemic extension) or its novelty and unexpectedness (mirativity). For example, a sentence with the reported evidential, equivalent to English: *Mr Jones has moved to London* (+ *reported evidential: I have been told so*) will imply that the information is not as reliable as it would have been if the visual marker had been included.[26]

Languages with grammatical evidentiality vary widely in how large their evidential systems are, that is, how many information sources they specify and mark in grammar, whether all information sources are overtly marked, and whether a given system allows for evidentially neutral statements or not. There are languages with small systems, where only one type of information source is formally marked with an evidential, while other information sources go unmarked. For example, only the reported, or, in other languages, the non-firsthand evidence will be marked, and thus opposed to unmarked 'others'. In contrast, there are languages with systems consisting of as many as five (or more) evidentials for different information sources, all formally marked, and an evidential marker is obligatory in a clause – there are no evidentially neutral assertions in such languages.[27]

To illustrate in brief how grammatical evidentiality works, examples from Quechua will be quoted.[28] Evidentials in this language (suffixes *-mi*, *-si* and *-chá*) make a fairly transparent system covering what is called three basic domains of evidentiality: direct, reported and inferred evidence. Quechua evidential markers are not fused with markers of other categories; they constitute a separate subsystem of independent suffixes/enclitics[29] which occupy their slot in a sentence regardless of other grammatical suffixes, e.g. markers of tense or aspect. These evidential suffixes can be agglutinated to any syntactic category, not necessarily to a verb; they are typically attached last to the first available syntactic element of a sentence. The Quechua evidentiality system can be exemplified with three simple sentences from Cuzco Quechua (Faller, 2002, p. 3), as in (5.a-c).

(5) Cuzco Quechua (Faller, 2002, p. 3)

(a) *Para-sha-n-**mi***
rain-PROGRESSIVE-3.PERSON-**DIRECT**
'It is raining' (the speaker sees that *p*)

(b) *Para-sha-n-**si***
rain-PROGRESSIVE-3.PERSON-**REPORTED**
'It is raining' (the speaker was told that *p*)

(c) *Para-sha-n-**chá***
Rain-PROGRESSIVE-3.PERSON-**CONJECTURE**
'It might/must be raining' (the speaker conjectures that *p*)

The suffix *-mi* (allomorphs: *-mi*, *-n*, *-m*) means 'learned by direct experience'; *-si* (allomorphs: *-si*, *-shi*, *-s*, *-sh*) encodes 'learned indirectly, from someone's report, secondhand, hearsay'; and *-chá* (allomorphs: *-chá*, *-chi*, *-ch*) indicates 'conjecture based on the speaker's reasoning' (cf. Weber, 1986, pp. 139–140; 1989, pp. 419–439; Adelaar, 2007, pp. 210–211). Significantly, evidentiality in a Quechua sentence may be formally unmarked; if a declarative sentence does not have any of the three suffixes, it is interpreted as covertly marked for direct experience (Faller, 2002, p. 14).

As in many other evidentiality systems, Quechua evidentials may also, in certain contexts, indicate the speaker's attitude to the veracity of the statement. This epistemic extension considerably overlaps with their evidential function; interestingly, Quechua evidentials have been regarded as *validationals* by some researchers. For example, in his analysis of Tarma Quechua, Willem F. H. Adelaar (1977, p. 79) claims that the three suffixes 'indicate the validity of the information supplied by the speaker'. He further writes:

> *-mi* indicates that the speaker is convinced about what he is saying,
>
> *-shi* indicates that the speaker has obtained the information that he is supplying through hearsay,
>
> *-chi* indicates that the speaker's statement is a conjecture. (1977, p. 79)

In (2007, p. 210), Adelaar calls the three suffixes *validators*, translating them into English as 'I know', 'I heard', and 'I guess', respectively. Hence, only *-shi* is truly evidential, whereas the meaning of the other two suffixes is, in Adelaar's interpretation, rather epistemic; they indicate the speaker's commitment to the truth of the statement. Also, with *-mi* the speaker shows readiness to assume responsibility for the information content, with *-si* (*-shi*) the speaker defers it, and *-chá* means that no one should be held responsible for the truth of the proposition because it is a conjecture.[30]

In evidential languages, like Quechua, one has to be precise about one's information source. Obviously, it is possible to lie and provide a false source of information, but the marker of information source must be included in a clause. Speakers of languages whose grammars have obligatory evidentiality may find utterances in other languages (i.e. without obligatory evidential markers, like English) imprecise and inadequate in semantic content. The linguists who describe evidentiality systems, e.g. in native American languages, often point to the speakers' remarkable metalinguistic awareness of how important it is to provide the information source. For example, appreciation of one's competence in using evidential markers is observable in the way children are corrected when they confuse evidentials, or in the attitude to people who cannot use them properly. 'Those who cannot get their evidentials right may be branded as crazy, unreliable, and generally not worth talking to', writes Aikhenvald (2004, pp. 9–10).

Summing up, those who speak languages with obligatory grammatical evidentiality cannot omit evidential markers in their utterances; they must be precise about where the information comes from. It is unavoidable for both grammatical and socio-pragmatic reasons; evidentials are regarded as essential for adequate communication. Also, they are highly valued meta-textual expressions, and trustworthy speakers are expected to use them properly. Their primary function is to mark the source of information; however, in many languages grammaticalized evidentials develop epistemic extensions, and, apart from the source, they indicate the reliability of the evidence on which a statement is based.

At this point one could ask about the relations between the two categories; whether egophoricity and evidentiality are, cross-linguistically, distinct categories, or perhaps the conjunct/disjunct marking might be regarded as part of evidentiality.

What makes egophoricity similar to evidentials is the key role of the criterion of access to (in)direct knowledge, but this criterion is used in a different way. While evidentials mark the source of information for the statement from the point of view of the speaker – be it any direct or indirect source – egophoricity marks whether the person who has access to direct, first-person knowledge regarding the truth of the information is present in the utterance or not. Therefore, these two categories are semantically related, but their focal points are different.

The semantic criteria aside, there are also certain structural features connected with the two categories which point to their cross-linguistically independent status. First, some obvious syntactic differences can be observed in the distribution of the two types of markers. Conjunct/disjunct markers are used in the main and subordinate clauses; in fact, the terminology is strictly connected with their occurrence in both types of clauses (see Hale, 1980 and above). Evidentials, however, are usually placed in main clauses only; in some languages, one evidential is enough to mark information source for a whole piece of discourse. Also, the occurrence of conjunct/disjunct opposition in questions is a constitutive feature of the category, whereas evidentials used in questions are very rare, if permitted at all. Furthermore, those languages which have been described in the literature as possessing the conjunct/disjunct opposition also tend to have separate evidential markers.[31] Formally different markers co-occurring in one sentence do not provide conclusive evidence for the existence of two independent categories in grammar; nevertheless, separate markers may suggest such a divide, especially if the two types of markers interact (as, for example, in Newari, where the presence of the reported or inferred evidentials in a clause changes the distribution of the egophoric marking; cf. Hargreaves, 2005, pp. 16–30). Therefore, the egophoric cannot be treated as a subdomain of evidentiality. However, in applying both types of markers the speaker's state of knowledge is the focus of attention, and this is where the two categories meet.

5. Conclusion

Let us return now to the anti-reductionist claim that testimony by itself is a source of basically justified beliefs, without appeal to other sources. This view is very difficult to defend in the light of epistemic implications of reported evidentials in various languages (see above). In many evidentiality systems, the reported marker, apart from encoding that the information was obtained from someone else, also implies that the speaker has a mental distance to the information content and its truth value. The strength of such implications ranges from neutral, signalling that the speaker is not ready to confirm the truth of the information provided, to positive implicating that the information is unreliable because it is based on mere hearsay and no better evidence is available. The low position of the reported in the hierarchy of evidentials raises considerable doubts if indeed someone else's testimony (which may be based on reasoning or still another testimony) can provide the audience with *a priori* direct justification for a belief. It is debatable whether firsthand testimony can do the job, i.e. whether it can provide justification in cases where the assertion that p is based on the testifier's firsthand knowledge. (In contrast to the reported, visual/direct evidential markers occupy the top position in evidential hierarchies and imply the speaker's certainty.) However, it is incomparably more problematic if the testimonial chain is longer. The trouble for the anti-reductionist is that, in many evidentiality systems, information marked as coming from someone else's report, especially secondhand or thirdhand report, is unlikely to generate a state of belief in the audience, that is, a mental state of *accepting* a given proposition as true.

In fact, statements marked with the reported can hardly be called assertions, because in a speech act of assertion the speaker takes responsibility for the truth value of what she is saying. Asserting that p cannot be construed as merely saying that *p*; it requires from the speaker her intentional and explicit presenting of *p* as true (cf. Alston, 2000, p. 72). Thus understood assertion is constitutive for testimony; the speaker's asserting that *p* is offered to the audience as evidence that *p*, and the speaker has relevant authority and credentials to state truly that *p*. Otherwise, someone's saying that *p* is not an act of testimony. In evidential languages, statements marked with the reported are explicitly tagged as secondhand knowledge, i.e. mediated by another person. Thus, it is clear that the epistemic position of the knower is inferior when compared with knowing at firsthand, and it is marked as such. This need not be understood as necessarily implicating the unreliability of the information content, but the reported does indicate the inferiority of the speaker's epistemic position, i.e. lack of higher, direct evidence. It is doubtful then that statements with reported evidentials could be interpreted as assertions and could transfer knowledge in acts of testimony. In testimony the speaker must have competence and authority to properly testify that *p*, and this requirement is difficult to reconcile with the secondhandness (i.e. inferiority) of reported knowledge.

Also, egophoric marking, which clearly differentiates and encodes in grammar who is and who is not the epistemic authority to make an assertion or to answer a question (see above), appears to be irreconcilable with anti-reductionism. Egophoricity does not allow us to place perceptual belief and testimony-based belief on a par, as generated by two epistemic capacities operating analogically and giving rise to equally well-justified beliefs. The way anti-reductionists, following Thomas Reid, compare the directness of testimonial beliefs to the directness of perceptual beliefs defies the whole concept of egophoricity, whose function is to morphologically distinguish the person/actor who has access to direct experiential knowledge from others, who do not have such privileged access. If we were to adopt the view that testimony generates basically justified beliefs analogically to perception, the sense of egophoric (conjunct/disjunct) marking would be undermined.

To conclude, the architecture of natural languages places the anti-reductionist in an awkward position. On the one hand, to defend the epistemologically basic status of testimony, she must argue against certain commonsensical beliefs reflected in the grammatical structure and pragmatics of many natural languages, as exemplified above. On the other hand, she needs to appeal to common sense principles when arguing against epistemic individualism or reductionism, and then she cannot downgrade the data from natural languages.

A reductionist, in turn, who is ready to believe on testimony but only if the testifier's expertise and reliability are subject to positive evaluation, appears to be well provided for by natural languages to conduct her critical appraisals. In fact, considering the abundance of linguistic means (grammatical, lexical and prosodic) encoding epistemic information in an utterance, the reductionist stance appears inescapable: inference must play a significant role in the assessment and justification of testimonial beliefs. The question remains whether, in everyday practice, a reductionist can succeed in providing justification for all her testimony-based beliefs. Rather not. We are better equipped to assess the reliability of what we are told than anti-reductionists usually claim; nevertheless, the extent to which we rely on testimony is too overwhelming to consciously and successfully engage our critical appraisals whenever we are told something. In many cases it is rational to accept testimony as true at face value, simply on hearing it. It would be irrational to reject all those beliefs whose epistemic justifiedness we are unable to judge ourselves, because we would become severely intellectually and socially deprived. Furthermore, considering how much our categorizing and cognitive schemes depend on what others have taught us through testimony, it is far from obvious that, in the first place, we would ever be able to select all those insufficiently justified testimonial beliefs to be rejected. However, the fact that a given belief is psychologically immediate and advantageous from a practical point of view does not make it *epistemically* justified. A reductionist needs to be aware that epistemic justification is a rare privilege and a considerable number of our testimony-based beliefs simply lack *epistemic* justification; they are justified only pragmatically or psychologically.

NOTES

[1] See 'natural testimony' in Coady (1992) or 'core cases testimony' in Adler (2012). In the literature on the subject, testifying is distinguished from other speech acts, such as objecting or arguing; all three are aimed at informing the hearer that *p*, but their illocutionary force (i.e. the speaker's intention in producing the utterance) is different. In testifying, the speaker gives evidence that *p* from the position of someone having the relevant competence and authority to speak on the issue where evidence is needed (Coady, 1992, p. 43; Moran, 2006).

[2] Throughout the paper, feminine pronouns are used to refer to speakers/hearers of both genders.

[3] In the present paper, knowledge is defined traditionally as a justified true belief (JTB) without considering the Gettier problem (1963); for a discussion of the problems concerning JTB theories of knowledge, see Zagzebski (1996, pp. 283–292; 1999).

[4] Cf. Coady (1992, pp. 5–24); David Hume (1748/1999) and Thomas Reid (1764/2002a; 1785/2002b) were notable exceptions as they did address the problem of testimony.

In the last twenty years, testimony has become a more fashionable topic in epistemology, and the literature on it has grown considerably; see Audi (1997, 2006); Kusch (2002a, 2002b); Pritchard (2004); Lackey, Sosa, Eds. (2006); Fricker (2006); Moran (2005/2006); Lackey (2008); Goldberg (2010); Faulkner (2011); McMyler (2011); Adler (2012); Greco (2012, 2015); Zagzebski (2012).

[5] Cf. Thomas Aquinas, *Commentary on Boethius's De Trinitate* (qu. III, art. i. 3); see also Coady (1992, pp. 16–19).

[6] It should be noted, however, that reasoning based on testimony is not exempt from Hume's more general refutation of the relation of cause and effect. Therefore, the trustworthiness of testimonial beliefs amounts to the mere *regularity of the conjunction* between people's reports and relevant facts (Hume, 1748/1999, pp. 111–112).

[7] Cf. Hume's reasoning concerning the improbability of miracles in 'Of Miracles' (1748/1999).

[8] Cf. Reid, *Essays on the Intellectual Powers of Man*, VI. v (1785/2002b, p. 440); see also *An Inquiry into the Human Mind*, VI. xxiv (1764/2002a, pp. 193–194).

[9] Cf. Reid, *An Inquiry into the Human Mind*, VI. xxiv (1764/2002a, pp. 193–194).

[10] Cf. Reid, *An Inquiry into the Human Mind*, VI. xxiv (1764/2002a, p. 197).

[11] Cf. the discussion of Davidson's *principle of charity* (when interpreting other people, we assume that they are rational and possess a set of beliefs similar to our own) in relation to credibility of testimony in Adler (2012).

[12] The credulity principle is supported by psychological experiments with adults placed in the conditions of 'depleted resources'. In such experiments, a person is required to perform simultaneously two or more tasks and, at the same time, is exposed to improbable propositions which she ought to disbelieve. When faced with shortage of time, stress, disrupting tasks, etc., the subjects of such experiments typically do not suspend their judgment, nor do they show a balanced account of acceptance and rejection. Instead, they tend to believe propositions they have no reasons to believe, which shows that credulity and acceptance are prior to rational assessment (Gilbert, 1991, pp. 111–116; see also Lechniak, 2011, pp. 73–77).

[13] The reductionist (D. Hume) and anti-reductionist (T. Reid) approaches to the justification of testimony-based beliefs are usually presented as opposite viewpoints; according to the former, a testimony-based belief is justified if evidence for its reliability is provided, whereas, according to the latter, a testimony-based belief is justified until proved otherwise. However, *a posteriori* and *a priori* types of justification for testimony need not be irreconcilable (cf. Graham, 2006); we may be entitled to accept someone's testimony *a priori* because of the working of the veracity and credulity principles, and, apart from that source of justification, our testimony-based belief may be justified *a posteriori*. For a discussion of Reid's views on the epistemically basic status of testimonial beliefs, see also Van Cleve (2006, pp. 59–67).

[14] Cf. Reid, *An Inquiry into the Human Mind* (1764/2002a, VI. xxiv).

[15] Cf. Reid, *An Inquiry into the Human Mind* (1764/2002a, II, v–vi).

[16] Cf. Reid, *Essays on the Intellectual Powers of Man*, VI. v. (1785/2002b, pp. 440, 487); *An Inquiry into the Human Mind*, VI. xxiv (1764/2002a, pp. 193–194); see also the discussion of Reid's common sense principles in Wolterstorff (2004).

[17] This assumption goes back to Aristotle's understanding of common sense. In contrast to many philosophers who regarded 'sense' as the power by which we receive certain ideas, without including any kind of judgment, Reid stresses that "in common language 'sense' always implies judgment. A man of sense is a man of judgment. ... Common sense is the degree of judgment that is common to men with whom we can converse and transact

business. Philosophers call seeing and hearing 'senses' because we have ideas by them; the vulgar call them 'senses' because we judge by them" (*Essays on the Intellectual Powers of Man*, 1785/2002b, VI. ii).

[18] Based on Hale (1980) and Hargreaves (2005).

[19] Based on Adelaar (1977, 2007), Weber (1986, 1989) and Faller (2002).

[20] For example, in Akhvakh (Creissels, 2008) and Dargwa (Magometov, 1982).

[21] For example, in Awa Pit (Curnow, 2002) and Tsafiki (Dickinson, 2000).

[22] Cf. Dickinson (2000); Curnow (2002); Creissels (2008); Post (2013).

[23] The first monograph devoted wholly to evidentiality, *Evidentiality: The Linguistic Coding of Epistemology*, edited by Wallace Chafe and Johanna Nichols, was published in 1986. For more on the topic of evidential marking, see Willett (1988); De Haan (1999, 2005); Johanson, Utas, Eds. (2000); Aikhenvald, Dixon, Eds. (2003, 2014); Aikhenvald (2004); Plungian (2010); see also Łukasiewicz (2014, 2018), where evidentiality is discussed in the context of epistemic justification of beliefs.

[24] See Willett (1988); De Haan (1999, 2005); Aikhenvald (2003, 2004, 2014).

[25] See Guentchéva, Ed. (1996); Johanson, Utas, Eds. (2000); Aikhenvald, Dixon, Eds. (2003, 2014).

[26] The relation between the categories of evidentiality and epistemic modality is a controversial issue which is much discussed in the growing evidential literature, next to the problem of the strictly grammatical nature of evidentials; for different views on the topic, see Chafe (1986), Willett (1988), De Haan (1999), Aikhenvald (2004), Plungian (2010); see also the overview of the problem in Łukasiewicz (2018, pp. 109–136).

[27] For example, in Tariana (Aikhenvald, 2003) and Tuyuca (Barnes, 1984), both spoken on the border between Brazil and Colombia, which have five-option systems (VISUAL, NON-VISUAL SENSORY, INFERRED, ASSUMED, REPORTED).

[28] Quechua (8.5–10 million speakers, mainly in Peru, Bolivia, Ecuador, north Chile and Argentina) has several different dialects, or Quechua languages, as some linguists prefer to call them; cf. Adelaar (2007, p. 168). The following varieties of Quechua are most frequently quoted in the literature on evidentiality: Tarma Quechua (Adelaar, 1977, 2007), Huallaga (Huánuco) Quechua (Weber, 1986, 1989), and Cuzco Quechua (Faller, 2002); the present account is based on these works.

[29] Enclitics (also called 'sentential suffixes' or 'class-free suffixes') make 'a special set of affixes that can be attached to verbal, as well as to nominal expressions. They also occur with expressions which are neither verbal nor nominal' (Adelaar, 2007, p. 209).

[30] However, David J. Weber (1986, pp. 139–145; 1989, pp. 419–438) opts for an evidential interpretation of the three suffixes. In his account of evidentiality in Huallaga (Huánuco) Quechua, he writes that 'what is at issue is not whether the author [speaker] is convinced that what he is communicating is true or not, but whether or not he learned it by direct or indirect experience' (1986, p. 142). The problem of diverse interpretations of Quechua evidentials is discussed in more detail in Łukasiewicz (2018, pp. 423–437).

[31] But evidentiality and egophoricity are not always marked separately. In Akhvakh (Northeast Caucasian; Creissels, 2008), the egophoric necessarily co-occurs with evidentiality (but not *vice versa*) because the conjunct/disjunct opposition is found only in the positive form of one of four past tenses (the perfective positive), and this past tense implies direct access to information.

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