

PUTTING THE HORSE BEFORE THE CART: A PRAGMATIST ANALYSIS OF KNOWLEDGE

*Luis M. Augusto*¹

ABSTRACT: The definition of knowledge as justified true belief is the best we presently have. However, the canonical tripartite analysis of knowledge does not do justice to it due to a Platonic conception of a priori truth that puts the cart before the horse. Within a pragmatic approach, I argue that by doing away with a priori truth, namely by submitting truth to justification, and by accordingly altering the canonical analysis of knowledge, this is a fruitful definition. So fruitful indeed that it renders the Gettier counterexamples vacuous, allowing positive work in epistemology and related disciplines.

KEYWORDS: Justified true belief. Epistemic justification. A priori truth. Justification *ad veritatem*. Non-contradiction. Pragmatism. Gettier counterexamples

Since Plato that a promising conception of knowledge is that of *justified true belief*.² I say it is promising, because it incorporates the necessary, as well as

¹ Instituto de Filosofia, Faculdade de Letras da Universidade do Porto, Via Panorâmica, s/n, 4150-564 Porto, Portugal. E-mail: luis.ml.augusto@gmail.com. Luís M. Augusto completed a Ph.D. in the history of philosophy at the Université Paris IV – Sorbonne (Paris, France) in 2006. He is a postdoctoral researcher at the Institute of Philosophy of the University of Porto and a postdoctoral fellow of the Foundation for Science and Technology of Portugal (FCT). His research focuses on human cognition, with emphases on unconscious cognition and abnormal mental processes (especially psychosis). In this context, he is also interested in the use of some “philosophical” concepts, such as knowledge and belief, in cognitive science and other scientific disciplines.

² As a matter of fact, in the Theaetetus, Plato does not argue in favour of what appears to be the final of a short list of candidates for knowledge, to wit, what we today call justified true belief (he called it “true belief with logos”), because in it he implicitly emphasized what in other places he vehemently defended: the claim that knowledge is solely of that which wholly transcends the physical world (cf. the analogy of the divided line in Rep. VI, 20, 510d – 21, 511e). This is the idea, or, in other words, the essence of each and every thing. To speak of the essence of a thing, because it is “that which each thing finds itself being” (cf. Phaedo 65d-e; all translations are mine), is the same as to speak of its truth, and to know a thing is thus only possible when one has captured its essence. The central thesis of the Theaetetus, a thesis lost in the dialectic that aims at reaching an aporia, is that there is knowledge when “the essence and the truth [of a process of reasoning on the impressions][...] can be attained” (Theaetetus 186d), which, of course, is never. The rationale of the Theaetetus is purely negative: no knowledge can come from sense data, because truth is prior to the material world. Thus, epistemic Platonism, grounded on a metaphysical Platonism that firmly establishes a priori the essence, or truth of the objects of the physical world, is the ambition that the human psychê can

the sufficient conditions of knowledge. That its promise has not yet been fulfilled is not due to the concept itself, but to a few, but serious, flaws in its tripartite analysis. Schematically, this analysis, in its now canonical form, is as follows:

- (i) p is true.
 - (ii) S believes that p .
 - (iii) S is justified in believing that p .
- S knows p .

The first problem with this analysis is the adherence to the Rylean distinction between knowledge-that and knowledge-how,³ and the restriction to the first kind, i.e. to knowledge of propositions, namely of propositions fitting into the structure “ S believes that ...,” where “...” can be filled in with a well-formed proposition p . Although this is to some extent the cause of the two major flaws discussed in this paper, I will not address it here; suffice it to say that I see the Rylean distinction as analytically artificial, depicting an unrealistically compartmented picture of human cognition.⁴ The two major flaws that shall take my attention have a common root: *a priori truth*. This is expressed in the independence of condition (i) from conditions (ii) and (iii) above. The first independence is a mistake, because it implies that propositions are a priori true in an absolute sense; the second, a consequence of the first, is the separation of justification and truth. These two flaws are actually Platonic aspects⁵ that, once removed or remediated, allow a positive definition of knowledge as justified true belief, rendering the Gettier counterexamples vacuous. These flaws are what I call putting the cart before the horse, and what follows is my elaboration on how to bring the horse and the cart to their appropriate positions.

I. *A PRIORI TRUTH: TRUTH BEFORE BELIEF*

Let us then start with the first flaw: firstly, is there actually anything like a priori truth? Tarski showed that the answer is affirmative, but he also showed

transcend this world in order to attain its truth. It is this transcending the physical world that Plato elsewhere, but, interestingly enough, not in the Theaetetus, saw as the required logos, or justification.

³ Cf. RYLE, G. *The Concept of Mind*. Chicago: Chicago University Press, 1949.

⁴ For some remarks on this, see AUGUSTO, L. M. Unconscious knowledge: A survey. *Advances in Cognitive Psychology* 6, 116-141, 2010. For an elaboration on this rejection, see, for instance, STANLEY, J.; WILLIAMSON, T. Knowing How. *Journal of Philosophy* 98:8, 411-444, 2001.

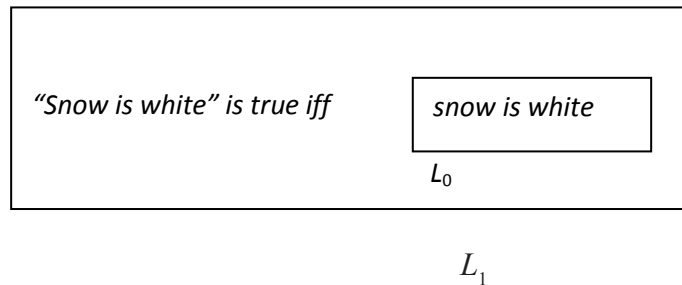
⁵ See note 2.

that the semantic conception of truth⁶ is literally of no interest to epistemology at large, contradicting the ambivalent fascinating effect it understandably has upon epistemologists of a Platonic vein. If epistemology is concerned with the conditions of knowledge of a subject interacting with the world of which s/he is a part, then a solely semantic approach to truth will simply not do.

Tarski called his definition of truth “semantic” precisely because it applies exclusively to sentences within a specified language: let p be any declarative sentence⁷ of a language L ; then the truth predicate for p is not “true” simpliciter, but “true-in- L .” This, L_s is a language whose structure has been exactly specified: broadly,⁸ it is a semantically non-closed language consisting of an object- and a metalanguage, the latter containing the former as a part (or the former allowing of being translated into the latter); the main role of the metalanguage (L_1) is that of allowing the construction of a *name* for every sentence of the object-language (L_0) so that truth, *in the metalanguage*, can be defined as what he termed Convention T:

$$(T) X \text{ is true } \langle \text{in } L_1 \rangle \text{ iff } p \langle \text{in } L_0 \rangle$$

where X is the name of the sentence p (e.g.: “snow is white” is the name of the sentence *snow is white*). Graphically,



⁶ Namely as expounded in TARSKI, A., The Semantic Conception of Truth, and the Foundations of Semantics, *Philosophy and Phenomenological Research* 4:3, 341-376, 1944. I do not directly discuss the 1933 paper in which Tarski originally, in Polish, elaborated on this semantic concept of truth; the 1944 paper not only clarifies this concept, but it also addresses criticisms from philosophical quarters, thus making it more appropriate for my purposes. A note on a priori truth is called for: There are, indeed, other more widely accepted examples of a priori truth (e.g.: “all bachelors are male,” “circles are round,” “2 + 3 = 5,” etc), but they necessarily refer to the world, cause of their disputed a priori character. Contrarily, Tarski’s semantic concept of truth is wholly a priori in that Convention T sentences refer to nothing at all in the world. As I see it, this, and this alone, is a priori truth.

⁷ Tarski uses “sentence” instead of “proposition,” a term that he finds too inexact; by “sentence,” he means a declarative sentence (cf. *op cit.*, p. 342), and throughout this text I use the term “proposition” with this meaning, too.

⁸ For the details of this specification, or formalization, see *ibid.*, p. 346.

The terms “true” and “iff” belong exclusively to the metalanguage, this being forcibly richer than the object-language if it is, among other important issues,⁹ to define truth as a purely deductive matter. Indeed: given that L_0 need not be a natural language, in which speakers form sentences about reality, the sentence “*snow is white*” has no relation whatsoever with the world at large. While semantic notions such as designation, satisfaction, and definition express relations between expressions and the objects referred to, the notion of truth is purely logical; it expresses a property of sentences, but because these involve semantic notions, as seen, truth is fruitfully treated as a concept of semantics. What are the gains of this? Material adequacy and formal correctness,¹⁰ and not a bit of anything else; in other words, no truth as we search for it in the world:

In fact, the semantic definition of truth implies nothing regarding the conditions under which a sentence like (1):

(1) *snow is white*

can be asserted. It implies only that, whenever we assert or reject this sentence, we must be ready to assert or reject the correlated sentence (2):

(2) *The sentence “snow is white” is true.*

And the coup de grâce follows:

Thus, we may accept the semantic conception of truth without giving up any epistemological attitude we may have had; we may remain naïve realists, critical realists or idealists, empiricists or metaphysicians—whatever we were before. The semantic conception is completely neutral toward all these issues.¹¹

Saying this less brutally, the semantic conception of truth has no bearing on reality as we perceive it; thus, Convention T sentences in the Tarskian conception yield no knowledge other than of L_0 .

⁹ E.g., the avoidance of paradoxes and antinomies such as the antinomy of the liar, which seemed to worry him the most.

¹⁰ These are explained by the medieval logic terminology of the *suppositio*. As briefly as possible, the sentence “*snow is white*”, or the sentence constituted by three words, the first of which consists of the 19th, 14th, 15th, and 23rd letters, the second of the 9th and 19th letters, and the third of the 23rd, 8th, 9th, 20th, and 5th letters of the English alphabet (“*snow is white*” occurs here in a *suppositio materialis*) is true iff *snow is white* (“*snow is white*” occurs here in a *suppositio formalis*). Let any arbitrary sentence be replaced by the letter “*p*” and let the name of this sentence be represented by the letter “*X*”; let us call this *equivalence of the form* (I). Then, a sentence is *materially* true if it can be asserted as an equivalence of the form (I), and any such assertion is *formally* correct; cf. op. cit., p. 343-4.

¹¹ Ibid., p. 361-2.

Despite Tarski's reluctance,¹² sentences like (1) can undoubtedly be valued within a Convention T perspective of truth in a natural language like English or Portuguese, in which cases the sentence "*snow is white*" is true-in-English but not-true-in-Portuguese, and the sentence "*a neve é branca*" is true-in-Portuguese, whereas it is not-true-in-English. It is easy to see that we say nothing whatsoever about snow/neve in the world, but merely about the adequacy and correctness of the sentences (1) and (2) in English and in Portuguese *taken qua specified languages*.¹³ But our subject, interacting with the world, needs a language that *speaks reality*,¹⁴ i.e. a language in which his/her main concern is to express (define, designate, symbolize, mimic, etc) reality of which, as a speaker, s/he is an unalienable part; as such, *S* cannot take a single step without forming beliefs about the world, but *S* does not, to that end, go about collecting *p*'s that are a priori true; outside a specified language, sentences are not true or false independently of their being believed, for the simple reason that there might be numberless sentences *about the world* that may come out true (or false) once believed. The sentences <stating the facts> "Arfhs live in Orion," "7~y|*2," or "Quarks don't like anti-quarks" might all be true for aught we know; they might well be part of the vast number of facts of the universe,¹⁵ but this is wholly irrelevant until someone, say *S*, believes that Arfhs live in Orion, that 7~y|*2, and that quarks don't like anti-quarks. And the same is valid even for those propositions seen as a priori, or analytically true; for instance, and against platonism, "2 + 3 = 5" is a true proposition once it is believed by a subject who is in possession of a certain mathematical system; it is within this system that is in itself a set of beliefs that this proposition is true and a priori so, a priori meaning simply that the system of beliefs makes it that it is true in it.

Summing up: sentences are a priori true (here a priori in the Platonic sense of intellectual entities existing per se) within what Tarski called specified languages; when it comes to the world at large, sentences can no longer be true, let alone a priori true, outside the beliefs that contain or express them. In this scenario, and taking it that necessarily some subject *S* holds the belief *p* that snow is white/a neve é branca, this belief can only be valuated as true if in the actual world where *S* lives there is such a thing as snow/neve, which s/he calls

¹² Cf. *ibid.*, p. 347.

¹³ By proceeding as suggested by Tarski, *ibid.*, p. 347, i.e. by replacing a portion of the natural languages English and Portuguese by languages whose structure is exactly specified.

¹⁴ I am here taking liberties with the transitivity of the verb "to speak" in the belief that speaking a language is a means of speaking reality in that language is precisely the attempt to create a one-to-one mapping between words/sounds and reality. To be more precise, when speaking a word, one speaks its reference.

¹⁵ I am using "universe," "world," "external world," and "reality" as synonyms.

“snow”/“neve”, and if it is white/branca. In *this* world, namely on planet earth, snow/neve actually is white/branca,¹⁶ and so anyone believing that *p* can be said to hold a true belief.

Note that so far the following alterations have been made in the tripartite analysis of knowledge:

- (i) *S* believes that snow is white.
- (ii) The belief that snow is white is true.
- [...]

But beliefs are psychological phenomena, mental attitudes regarding the world. This poses a major problem concerning the question of truth that does not exist in the semantic approach. In fact, in the latter all it takes to assert that “*X* is true” is to be able to assert “*p*,” *X* being the name of *p*, an arbitrary sentence, and one can assert “*p*” if it is either an axiom, or a theorem of the formal language in question. Truth is thus a logical relation between two sentences in which the sentence “*X* is true” is *equivalent* to the sentence “*p*”; this is what Tarski calls “equivalence of the form (I).”¹⁷ Nothing in the world gives us such assurance regarding the truth of our beliefs, *unless we are actually justified in holding them as true*. Let us now turn our attention to the second flaw in the canonical analysis, the separation of condition (i) from condition (iii).

II. *A PRIORI* TRUTH: TRUTH BEFORE JUSTIFICATION

It is very well to state that *S*'s belief that snow is white is true when referring to the world, but how can *S* be assured of the truth of her/his beliefs about the world? Seemingly, the first step for *S* to truth-valuate conclusively these beliefs that s/he begins by holding <as true> is to go out in the world and check, i.e. empirically test (see, taste, touch, etc), and verify, given the conditions of the world, and perhaps with assistance from other already valuated beliefs, that they are indeed true beliefs. However, the world (which includes *S*) is such that *S* will not always, only rarely, or even not at all be able to prove that his/her beliefs are true; this is to say that there is no verification method to compare one's beliefs about the world with the world itself.

¹⁶ Let us just accept this without further ado for the sake of the argument.

¹⁷ See note 10 above.

Nevertheless, the world justifies, or not, S's beliefs: if they are justified, then they are true.

Before clarifying this statement in all due detail, let us see how this is a better view than that which makes truth a priori, and independent from justification. Given that I simply cannot state the truth or falsity of the proposition "Arfhs live in Orion," I shall opt for it being true; because truth precedes justification, this could well be so, without my bothering to verify whether it is the case or not; for the sake of the argument, let us agree that it is so:

- (i) "Arfhs live in Orion" is true.
- (ii) John believes that Arfhs live in Orion.
- (iii) John is justified in believing that it is so.

John knows that Arfhs live in Orion.

How is John justified in his belief that Arfhs live in Orion? The best justification seems to be that it is so because the proposition "Arfhs live in Orion" is true. But this is the Achilles' heel of this analysis in that, *in it*, justification may have nothing, or very little to do with truth itself, as the Gettier counterexamples are believed to show: easily, one can believe in a true proposition and, alas, not be justified in doing so. If John's justification is considered invalid (he read about Arfhs living in Orion in a science fiction book; he dreamt it; a shaman told him so; he was under the effect of hallucinogenic drugs when he formed this belief; etc), then, amazingly, the fact that the belief that Arfhs live in Orion is true does not yield knowledge. We then have the paradox that Arfhs actually live in Orion, John truly believes that they do, but he does not know that.

Let us leave this unfamiliar example of the Arfhs for a better known one; Henry and the barns illusion¹⁸ will do perfectly: Driving along a country road and, seeing façades of barns (only he does not know that they are mere façades), Henry truly believes that there are barns in that region; seeing a particular façade of a barn that actually is a barn, he believes that he sees a barn, that it is a barn that he is seeing, just another among all the others he has been seeing in the last few miles. Yet, according to the canonical analysis, he does *not* know that it is a barn, because then he just got epistemically lucky: he did not have a good or valid justification. But it is a barn, and he believes it is a barn.

¹⁸ Cf. GOLDMAN, A. Discrimination and Perceptual Knowledge. *The Journal of Philosophy* 73:20, 771-791, 1976.

Henry's belief, though true, has no *positive epistemic status*, as Chisholm would put it.¹⁹ Now, one can legitimately ask if there is actually any instance in which one's beliefs have positive epistemic status; after all, it appears to be the case that one is justified in holding beliefs that are a priori true by mere chance, given that one's perceptive and reasoning apparatus is simply not designed for such an accomplishment (after all, contrarily to Plato's belief,²⁰ it is very likely that we were not made acquainted with a priori truths in the *hyperouranos*, aka world of ideas). If it were, then, given a normally functioning cognitive apparatus, we would always, or most of the time, be justified in holding beliefs simply because they are true. But neither our perceptive nor our reasoning faculties are designed for a priori truth: for instance, we still see a stick partially submerged in a more or less transparent liquid as "broken" *even* when we are aware of physical reasons explaining that the stick is not actually broken, and by the sole use of reason, without recourse to empirical verification, we very likely would never have an explanation that appears to be good for this phenomenon. In other words: both internalism and externalism are wrong theories of justification, or of knowledge simpliciter, if they stick to the faulty tripartite analysis of knowledge. And a superficial survey of the literature will show that they do.

The fact is that this notion of justification, in the face of a priori truth, falls prey to all demons and tricks. The internalists, so blaringly Platonic that they require that their subjects be at any time aware (or capable of becoming aware) of the internal justifications for their beliefs, see their core assumption thrown to the bin by such playful characters as the Cartesian demons: how can we ever be sure that they are not tricking us into believing that false propositions are true? If you are a Christian, God may enter the scene and save you from a failure in justifying your belief that " $2 + 3 = 5$ " is a true proposition, just because he is too good to want to trick anyone (otherwise, as Descartes claimed, he would not be God), but if God has no part to play in your philosophy, then you are not to be rescued,

¹⁹ Cf. CHISHOLM, R. *Theory of Knowledge*. Englewood Cliffs, NJ: Prentice Hall, 1966. It is perhaps important to note that, in Chisholm's eyes, the case is that Henry did not fulfil his *epistemic duty* of warranting that his justification is waterproof. This is so because Platonism does not end at an ontological transcendence of truth: that Truth is, because it must necessarily be the case that such a *thing* be in the universe, and that it is fixed before this world where living organisms strive for knowledge as a means to survival, makes of knowledge, in the case of rational beings, not merely a good possession, but an *obligatory* one. Plato's analogy of the divided line is, again, the most direct source for this perspective, in that whereas the sun is the means by which the physical things are made visible, it is through the attainment of the <Idea of> Good alone that the purely intellectual forms yield knowledge in human reason. According to this view, it is the moral duty of a rational being to attain knowledge, which s/he can do only by attaining truth—if not truth itself, then true things—let them be true propositions for lack of better truths.

²⁰ Cf. *Phaedrus* 245c-250a; *ibid.* 253c-e.

and your internal justifications are prey to all kinds of predators. The externalists should not rejoice, however; their notion of justification is just as fragile when faced with a priori truth. Let us visit one contemporarily prominent faction of externalism, reliabilism, the view according to which one, say *S*, is justified in holding the beliefs that are “produced in *S* by his epistemic faculties working properly,” as Plantinga phrases it.²¹ Let us take the same true proposition, “ $2 + 3 = 5$.” When dreaming, one apparently has beliefs, beliefs that are produced by one’s “epistemic faculties” (I infer that this means faculties capable of conducting or contributing to knowledge): dreaming is a well-documented phenomenon that appears to be essential for unknown reasons; it is most puzzling precisely because it seems to trick us into all sorts of wrong beliefs, but there is abundant evidence that “epistemic faculties” are often involved (for instance, there have been many reports of solutions of mathematical problems being found in dreams). Because it is a phenomenon brought about by one’s “epistemic faculties” working just fine, then one is justified in holding the beliefs one holds when dreaming. Nevertheless, the following scenario looks rather unlikely:

- (i) “ $2 + 3 = 5$ ” is a true proposition.
- (ii) *S* believes that “ $2 + 3 = 5$ ” is true.
- (iii) *S* is justified in this belief because s/he got it in a dream.

S knows that “ $2 + 3 = 5$.”

The problem, both for internalism and externalism, is the separation of truth from justification. Simply, this notion of justification, which I propose to call *justification post veritatem*, does not do justice to the basically serviceable definition of knowledge as justified true belief. What follows is my attempt to replace this notion of justification with one that is inseparable from that of truth itself, thus eliminating the cause of the apparent success of the Gettier counterexamples.

Going back to Henry and the barn scenario, let us now change the order of the conditions in the canonical tripartite analysis, inserting, in italics, new elements conducing to the elimination of the Platonic aspects above:

²¹ PLANTINGA, A. Positive Epistemic Status and Proper Function. In: TOMBERLIN, J. E. (Ed.). *Philosophical Perspectives* 2, Atascadero, CA: Ridgeview Publishing Company, 1988, p. 46.

- (i) Henry believes that the building whose façade he sees is a barn.
- (ii) He is justified in believing that it is a barn (*because it actually is a barn*).
- (iii) The belief that the building whose façade he sees is a barn is, thus, true.

John knows that the building whose façade he sees is a barn.

It is Henry's being justified in believing that he is looking at a barn that makes the proposition/belief "this is a barn" true. Let us call this kind of justification, to oppose it to the one above, *justification ad veritatem*. The basically far-fetched thought experiments that make Henry fail to be justified lose their science fiction appeal, and we are back to the serious domain of rigorous analysis.

What is the pay-off of this notion of *justification ad veritatem*? Actually, there are at least three things to be gained: firstly, we get rid of the embarrassing need to *prove true* propositions regarding the world at large, and I say embarrassing, because the notions of provability and truth simply do not coincide, not even in mathematics, which means that we always end up with more true propositions than we can prove;²² secondly, and particularly when actual propositions are concerned, we actually show that we care for their truth value, contrarily to the canonical analysis that contemplates no such problem (precisely because it considers propositions that are a priori true): in our case, in the very analysis of knowledge a "proof" of the "truth" of beliefs is required. Nevertheless, and thirdly, we do not fall into endless debates around truth that, though intricate enough, have brought no progress to philosophy; truth as coherence, correspondence, or even identity, to name but the most querulous stands with regard to truth, cease to interfere with progress in epistemological matters.

This said, let us then see how this concept of *justification ad veritatem* fulfils the promise of the concept of knowledge as true belief. First of all, it is interesting to remark that I partially borrowed it from a logical conception meant to be of use in an *epistemic logic with justification*,²³ the major difference being that while its conceptors aim at using it *together* with the modal conception of truth, I see it as capable of, if not altogether replacing truth, at least submitting it to the required justification in the concept of knowledge at issue. This concept of justification can be summarized in the following three main points:

²² TARSKI, A., op. cit., p. 372, n. 17.

²³ ARTEMOV, S.; NOGINA, E. On Epistemic Logic with Justification. In: PROCEEDINGS OF THE 10th CONFERENCE ON TARK, 2005, p. 279-294.

- (1) every belief²⁴ is amenable, in principle, to justification;
- (2) any justification of a belief is compatible with any other justification of the same belief;
- (3) justification of a belief entails its truth, and, thus, it implies knowledge.

Elaborating:

(1) Our beliefs concern the world, and they cannot go beyond it. Thus, the world justifies, or not, our beliefs; the world at large is the theatre of the justification of our beliefs. If S holds the belief that snow is white, then S is either justified in holding this belief because in the world snow is actually white, or S is not justified because snow is of some other colour. Subsystems of the world (e.g.: mathematics, the self, etc) are still part of the world, and thus there is no justification outside the world.

Fundamental for issues in the philosophy of science, (2) simply states that a justification for a belief is compatible with all other justifications for the same belief. For instance, “ $2 + 3 = 5$ ” is a justified belief given the entire edifice of mathematics, but it is also justified by the world at large in that if to two oranges one adds three more, then one has five oranges. This at the same time emphasizes the fact that the world is the theatre of the justification of our beliefs, as well as the fact that in order to be justified our overlapping systems of beliefs have to “match”: if relativistic physics actually is justified, and so is classical physics, then the justifications for these systems of beliefs (theories, if you will) have to be compatible. But this also means that no subsystem of beliefs exhausts the explanation and/or the description of the world. As a matter of fact, compatibility of justifications can be such as to be simply identity, i.e. two apparently diverse justifications for the same belief might actually be one and the same justification (e.g.: “ $2 + 3 = 5$ ” appears to be differently justified in case the belief is purely mathematical or if one is referring to oranges, but, are there really two different justifications, or only one?).

²⁴ I am here getting rid once and for all of the distinction between belief and proposition paraded by the canonical analysis of knowledge: p and the belief that p are one and the same thing. Take, for instance, the proposition “Henry VIII married six times”; taking it that beliefs are verbal in essence, in normal circumstances one will express the belief that Henry VIII married six times simply as “Henry VIII married six times.” Expressions such as “I believe that,” “I think that,” etc, are used when stressing one’s beliefs, not when normally holding them. By this, I am not excluding “ p ” from epistemological discourse; it is a highly useful symbol, namely for formal manipulation.

Assumption (3) yields that any justified belief should be true, and that it should therefore yield knowledge. Clearly, more needs still to be said about both justification and truth, and it would perhaps be advisable to begin by carefully distinguishing the new *epistemological* notion of truth in play here from the old metaphysical one: while this tries to establish the connection between the mind and the world (correspondence and identity theories of truth) or the internal coherence of the body of beliefs about the world (coherentism theory of truth), the former simply reposes on one's beliefs being justified by the world. We saw above that every belief is amenable to justification in that it necessarily is about the world and must be justified by it; however, we are not endowed with the faculty of being capable of verifying that our beliefs actually correspond, or are identical to the world, or that they cohere in such a way as to make them true. What we can nevertheless claim is that we have strong reasons to consider true a belief that is justified in that it *does not contradict the world*.

But we need to refine this concept of non-contradiction as the very heart of *epistemic justification*: although it is inspired in the mathematical concept, we have already put aside proof as an unfruitful requirement with respect to justification; having distanced ourselves from any restricted notion of non-contradiction, we can simply state that a belief does not contradict the world when *it works*.²⁵ It is wholly irrelevant whether beliefs work because they correspond to the facts in the world, or because they cohere with our web of beliefs, or even because they are identical to the very facts of the world themselves. They might, or they might not. What is of import is that our beliefs do not contradict the world in that they actually promote fruitful relations with and in it. For instance, farmers plant vegetables at specified times of the year they believe they should be planted at because this belief works, i.e. they actually succeed in securing crops by acting on this belief. Therefore, this belief does not contradict the world, namely that part of it that has to do with vegetables. Do they for this *know* that those are the correct times to plant the different vegetables? In that they are justified in believing this, their beliefs are true, and they *know* something about vegetables and their cultivation.

²⁵ This is my main point of contact with pragmatism. I am not here saying what pragmatism is; I am solely arguing for my analysis of knowledge, which is avowedly inspired by pragmatism to the point of being a pragmatist theory. However, for those less familiar with pragmatism, some bibliographical indications are in order. As for the seminal texts, the following are, in my view, indispensable readings: PEIRCE, C. S. Some Consequences of Four Incapacities. *Journal of Speculative Philosophy* 2, 140-157, 1868; JAMES, W. Humanism and Truth. *Mind* 13:52, 457-475, 1904; JAMES, W. Pragmatism's Conception of Truth. *The Journal of Philosophy, Psychology, and Scientific Methods* IV:6, 141-155, 1907; DEWEY, J. Valuation and Experimental Knowledge. *The Philosophical Review*, 31:4, 325-351, 1922. For a synthesis of pragmatism, begin with HAACK, S. The Pragmatist Theory of Truth. *British Journal for the Philosophy of Science* 27, 231-249, 1976.

But given that knowledge depends on justification, and given that this is the non-contradiction of the world, knowledge can be revisable, just because justification is: in other words, the external world is in constant change. Given certain climatic changes, the beliefs above may have to be revised once they are verified to contradict the world. There will be a period of trial and error until one gets the right beliefs again, and this is so because new beliefs are undergoing the process of justification.²⁶ This scenario is in nothing different from that of science: natural philosophers ceased to believe in the phlogiston when the belief that there was such an element in the world appeared to be unjustified because the caloric theory seemed to work better, and this was dethroned by contemporary thermodynamics because this, as a belief, works even better. Here “works better” is simply “does not appear to contradict the world,” or “does not contradict the world to such an obvious extent.” The fact that phlogiston was thought to be an element in combustible bodies justified the belief that, once burned up, they would have lost mass; the Russian 18th-century “scientist” Mikhail Lomonosov showed that this belief was not justified in that it contradicted the world (it was not the case that the mass of the burnt metals he experimented with decreased).

There is then no room for wild scenarios where *S* is not justified in believing in propositions that are true and thus fails to have knowledge. I am, among others, referring to the already mentioned Gettier counterexamples, to which I am now, finally, ready to pay due attention.

III. AWAY WITH *A PRIORI* TRUTH: BYE BYE GETTIER

E. Gettier’s counterexamples, published in 1963,²⁷ sparked abundant work in epistemology aimed at rescuing the canonical analysis of knowledge from what has become known as “gettierization,” the lack of coordination between conditions (i) and (iii); most of this work concentrated on condition (iii), to a great extent neglecting the other two conditions. No one – that I know of – realized that while one accepts a priori truth in an absolute sense, there will *always* be cases in which subjects fail to have knowledge in spite of holding “true” <propositions in their> beliefs. This means the collapse of the tripartite analysis of knowledge,

²⁶ Note that it will not do to argue that the beliefs have to change because the truth conditions of the world (“*p* is true” as in condition (i) of the wrong analysis of knowledge) themselves changed: the world is not in itself true or false, truth being a predicate of beliefs, and not of the ingredients of those beliefs. Suppose that, faced with the fact that their beliefs seem no longer to be justified, farmers simply become too perplexed to be able to form new beliefs; then, there will be no question of truth at all. This was perhaps an unnecessary reminder, but it is a reminder nevertheless.

²⁷ GETTIER, E. L. Is Justified True Belief Knowledge? *Analysis* 23, 121-3, 1963.

and the dismissal of the definition of knowledge as justified true belief, which, as I claim, is unfounded.

At first sight, Gettier's counterexamples work by showing that one can hold a "true" belief and yet fail to have knowledge because of failure in justification, but actually they "work" because the notion of a priori truth in an absolute sense allows him to play at will with radically different notions of truth and justification. I next explain this assertion. Let us see the so-called counterexamples:

Gettier Case I.

In the first counterexample, Smith, an applicant for a job, holds a true belief that, alas, he *inferred* from a false one, which, as Gettier rightly sees it, makes him unjustified in holding this belief *in a logical context*. In detail, Smith believes that another applicant for the same job, Jones, will get the job, because he has strong evidence for the following conjunctive proposition:

- (1) Jones is the man who will get the job, and Jones has ten coins in his pocket.

Naturally, Smith infers from (1) that

- (2) The man who will get the job has ten coins in his pocket.

It so happens that, unbeknownst to himself, he, too, has ten coins in his pocket, and he, Smith, and not Jones, actually gets the job. This means, according to Gettier, that while his belief (2) is true, he is not justified in holding it, and thus ends up without knowledge. But this "works" precisely because Gettier mixes a merely *logical* notion of justification (if, of course, there is such a notion in logic) as correct inference with a non-logical, *factual* notion of justification, i.e. Smith is *factually* justified in believing (2) because it so happens that in the real world the man who gets the job has ten coins in his pocket, while he is not *logically* justified in believing it because he inferred it from (1), which is a false proposition. Moreover, Gettier appeals to two notions of truth that we can see as also *factual* and *logical* truth: (2) is *factually* true, while (1) is *logically* not-true, or false (the conjunction of a false *P* and a true *Q* is a false proposition). This is a mess, for, regarding proposition (2), the situation is as follows:

- (i) “The man who will get the job has ten coins in his pocket” is *factually* true.
- (ii) Smith believes that the man who will get the job has ten coins in his pocket.

(iii) Smith is <i>factually</i> justified in his belief.	(iii) Smith is <i>logically</i> not justified in his belief.
Smith knows that the man who...	Smith does not know that the man who...

∴ Smith does not know that the man who ...

Gettier Case II.

Again, Gettier appeals to logical as well as to factual notions of justification and truth. Now, Smith appears to be justified (he is said to have strong evidence) in believing that

- (3) Jones owns a Ford.

For the sake of the argument, we are asked to accept that, having no idea where his other friend Brown is, Smith forms the following beliefs:

- (4) Either Jones owns a Ford, or Brown is in Boston.
- (5) Either Jones owns a Ford, or Brown is in Barcelona.
- (6) Either Jones owns a Ford, or Brown is in Brest-Litovsk.

Smith is said to realize that (4) to (6) are entailed by (3) as $P \rightarrow (P \vee Q)$.²⁸ It so happens that Jones does not own a Ford but Brown actually is in Barcelona, or, formally, $\sim P \rightarrow (P \vee Q)$, which, just like the above, is a true conditional, in case both P and Q are not false. Thus, (5) is *logically* true, and *logically* nothing hinders Smith from making this entailment, but Gettier claims that he is *factually* not justified in holding this belief because (3) does not correspond to the facts: Jones does not own a Ford. This means that while in counterexample I logical justification was the strongest, in counterexample II factual justification takes the lead. This puzzling state of affairs is only possible, as said above, because if

²⁸ I am here making entailment correspond to material implication, as I believe Gettier wanted Cases I and II to be different; if in Case II all we have is, as in Case I, an invalid entailment or deductive inference from a false premise to a true conclusion (i.e., and tentatively, $\perp \not\vdash \top$), then I do not see the point of providing two cases. The absence of formalism in Gettier’s paper allows multiple readings; this is another serious problem in it.

conditions (i) and (iii) are independent, then one can play with them, namely by varying the criteria for justification and truth at will, as the following additions (in italics) to his original text (cf. op. cit. p. 121) show that Gettier does:

First, in that sense of “justified” in which S’s being justified in believing P is a necessary condition of S’s knowing that P, it is possible for a person to be *factually* justified in believing a proposition that is in fact *logically* false. Secondly, for any proposition P, if S is *factually* justified in believing P, and P entails Q, and S deduces Q from P and accepts Q as a result of this deduction, then S is *logically* justified in believing Q.

In the view defended in this text, however, there is nothing in Case I that makes Smith fail to have knowledge: Smith believes (2) and this is a true belief because he is justified in holding it. Regarding proposition (1), it is a logical construct (a complex proposition) that rarely, if ever, corresponds to real beliefs; that is to say that Smith would almost certainly separate (1) into two independent propositions, or beliefs. Does Smith know, in Case II, that Brown is in Barcelona? If he actually *believes* it, and not merely *guesses* it, then, again, he has knowledge in that his belief is true because justified. But what is to be done of the disjunctive belief contemplated by Gettier? As in the case of proposition (1), nothing; that is, nothing outside a logical context, for, again, it seems far-fetched to pretend that Smith is incapable of unmaking the disjunction (if, of course, he would ever make it, to begin with).

The Gettier “counterexamples” are so only within an analysis of knowledge that puts the cart before the horse, i.e. makes truth precede justification. With these cases, he only revealed what the flaw of this Platonic analysis is: one can have unjustified “true” beliefs. He showed thus that this analysis is irredeemable,²⁹ but he actually gave no alternative to that unfortunate state of affairs, succeeding in keeping generations of epistemic Platonists occupied with trying to rescue their sine qua non condition (iii). Unless he himself was a Platonist in this sense, one fails to see why he should have kept them toiling in vain.³⁰

²⁹ For an ardent confirmation, see FLORIDI, L. On the Logical Unsolvability of the Gettier Problem. *Synthese* 142, 61-79, 2004.

³⁰ In AUGUSTO, L. M. Do unconscious beliefs yield knowledge. *Revista Filosófica de Coimbra* 35, 161-184, 2009, I address many of the points discussed in this paper from the viewpoint of unconscious knowledge.

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AUGUSTO, L. M. Colocando o cavalo antes da carroça: uma análise pragmática do conhecimento. *Trans/Form/Ação*, Marília, v. 34, n.2, p. 133-152, 2011.

RESUMO: a definição de conhecimento como crença verdadeira justificada é a melhor que possuímos actualmente. Contudo, a análise tripartida do conhecimento que podemos dizer canónica não é a mais apropriada para a sua defesa, devido a uma concepção platónica de verdade *a priori* que põe a carroça à frente dos bois. Dentro de uma abordagem pragmática, defendo que esta definição é de facto frutuosa, se (1) eliminarmos a verdade *a priori*, nomeadamente pela subordinação da verdade à justificação, e (2) procedermos às alterações consequentes nesta análise canónica. Com efeito, esta definição passa a ser tão frutuosa que torna irrelevantes os contraexemplos de Gettier, permitindo, assim, um trabalho positivo em filosofia do conhecimento e nas disciplinas com ela relacionadas.

PALAVRAS-CHAVE: Crença verdadeira justificada. Justificação epistémica. Verdade *a priori*. Justificação *ad veritatem*. Não-contradição. Pragmatismo. Contraexemplos de Gettier.

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