**Gettier’s Problem: The importance of Consciousness and Confirmation/Refutation (C/R) Conditions**

**Abstract:** The paper puts forward arguments for modifying the traditional definition of propositional knowledge—justified true belief (JTB)—by considering the following two important factors. First, the consciousness condition: the protagonist of the case under discussion has to be conscious of the information which makes the belief true or false. Second, the confirmation/refutation (C/R) condition: since Gettier’s cases deal with possible empirical occurrences, it is suggested that the epistemological condition of truth/not-truth should be replaced by the methodological condition in which a belief is confirmed or refuted. Thus the modified limits of knowledge are given by: Justified Confirmed/Refuted Conscious Belief (JC/RCB).

The main goal of the present paper is to modify and improve the traditional definition of propositional knowledge—justified true belief (JTB). In order to achieve this aim, the paper will concentrate on Gettier’s counterexamples, which raise problems for JTB. The paper is organized in the following way. Firstly, Gettier’s most discussed counterexample to the JTB account, Case 1, will be described. Secondly, Rakover’s theory of understanding, in which consciousness plays a crucial role, will be presented briefly and then applied to Gettier’s Case 1. Finally, the concept of the confirmation/refutation (C/R) of a belief will be discussed and supported.

*Gettier’s Case 1*:

Gettier (1963) proposed that there are cases which on the one hand seem to satisfy the demands for propositional knowledge, but which on the other hand cannot be considered as knowledge. This undermines the traditionally accepted definition of knowledge, rendering a justified true belief (JTB) inappropriate for knowledge. Gettier’s paper aroused considerable criticism and at the same time prompted many attempts to correct and replace the JTB account of knowledge (e.g., Hetherington, 2020; Ichikawa & Steup, 2018). The present paper does not intend to address the wealth of literature responding to Gettier’s challenge within epistemology, but rather to propose a possible new solution to and explanation for the problem raised by Gettier.

Case 1 involves two persons, Smith (the protagonist) and Jones, who have applied for a certain job. Smith has evidence that Jones will get the job, and that Jones has ten coins in his pocket. Therefore, Smith forms the following justified belief (S-Belief), which Gettier called proposition (e): “The man who will get the job has ten coins in his pocket.” (p. 122). Unknown to Smith, what will really happen is that Smith (and not Jones) will get the job, and that he himself also has ten coins in his pocket (this may be called “the real information”). Thus, S-Belief is justified and true, because Smith, who has ten coins in his pocket, will get the job. However, since Smith was unaware of the real information, S-Belief cannot be considered as knowledge. As Gettier writes: “But it is equally clear that Smith does not *know* that (e) is true; for (e) is true in virtue of the number of coins in Smith’s pocket, while Smith does not know how many coins are in his pocket…” (p. 122).

*Rakover’s Dual Theory of Understanding (DTU) and its application to case 1*:

The DTU is based on two components: (a) consciousness is a necessary condition for understanding, i.e., a person cannot understand a particular piece of information (a description, argument, perception, etc.) without being conscious of it; (b) the concept of understanding is wider than the concept of scientific explanation, i.e., the latter is included in the former (for further discussion see Rakover, 2018). (Incidentally, although the DTU points out that consciousness is crucial for understanding and knowledge, it does not rule out the possibility of unconscious motivation.)

 Given Gettier’s explanation for why S-Belief cannot be considered as knowledge, the application of the DTU to Case 1 can be made under the assumption that understanding is a necessary condition for knowledge. If a person does not understand S-Belief, then the sentence ‘the man who will get the job has ten coins in his pocket’ has no meaning and cannot constitute knowledge. Given that consciousness is a necessary condition for understanding, it follows that it is also a necessary condition for knowledge, since without consciousness there is no understanding, and without understanding there is no knowledge. (This means that if we accept the opinion that a robot is devoid of consciousness, then we should also accept that it has no knowledge and does not understand what it is doing or saying. For further discussion, see Rakover, 2018.) Now, since Smith was not conscious of the “real information” (it is Smith himself who will get the job and he, too, has ten coins in his pocket), it follows that S-Belief is not knowledge–it is only a justified belief.

 This analysis shows the importance of being conscious of the “real information” and suggests that the JTB definition of knowledge should be modified, in an attempt to solve the problem raised by Gettier’s Case 1. Accordingly, propositional knowledge should be delimited by the following necessary conditions: justified true and conscious belief (JTCB). Given this modified definition, it is clear that S-Belief cannot be considered as knowledge, since Smith was not conscious of the crucial, real information.

*Similarity between a belief and a scientific hypothesis*:

Case 1 is a description of a possible empirical episode. As such, Smith’s belief, S-Belief, can be supported, confirmed or refuted by empirical evidence. In this way, a belief is methodologically similar to an empirical hypothesis. According to Popper (1963), a hypothesis is corraborated until the prediction deduced from it is falsified. That is, a scientific hypothesis is accepted until the moment it is refuted by new observations. In effect, Popper (1972) suggested that a scientist who holds his/her theory to be true drops out of the game of science, because observations can only ever disprove a theory (not prove it to be true). In many respects, a regular person in everyday life behaves in a similar way to a scientist: by acting on the basis of uncertain beliefs. For example, a person goes to work in an office every day, believing that the said office continues to stand safely in its place. If information came to light that falsified this belief (e.g., the news that the office had burned down), the employee would react accordingly. This is in keeping with what the history of science teaches us: scientists continue to use a theory within certain limits even if it has been falsified. For example, Newton’s physics are still applied within the limits of earthly speed, even though this theory has been refuted and displaced by the theory of relativity. In short, scientists will use a falsified theory, or untrue knowledge, when they find it appropriate.

 To illustrate the similarity between a belief and an empirical hypothesis, let us revisit and modify Case 1 in the following way. Barry (the protagonist) is a banker who has been approached by Smith and Jones. Both customers have requested a substantial loan and Barry has to decide which one of the two requests he will grant. Barry has evidence that Smith and Jones have applied for a certain job, that Jones will get the job, and that Jones has a very high IQ. Therefore, Barry forms the following justified belief (B-Belief): the man who will get the job has a very high IQ. Based on this belief (substantiated by the previously mentioned evidence), Barry decides to approve Jones’ request for a loan (because he will be able to repay it with interest). Unknown to Barry, who has now made his decision, what really goes on to happen is that Smith (and not Jones) gets the job, and that Smith also has a very high IQ (this may be called “the actual information”). Thus, B-Belief turns out to be justified and true, because Smith, who has a very high IQ, will get the job.

 Given these considerations, let us analyze the Barry story from the perspective that propositional knowledge is Justified Confirmed/Refuted Conscious Belief (JC/RCB). (As will be seen below, the C/R indicates that there are cases in which a refuted belief is considered knowledge in a way that is similar to the case of Newton’s physics.) Four possible variations of Barry’s story can be considered:

1. When he makes his decision about the loan, Barry is *unaware* that Smith (and not Jones) has been given the job. According to the consciousness condition, since Barry is not aware of the ‘actual information’, he does not have conscious knowledge of it, only a justified belief (B-belief). According to the C/R condition, Barry is not aware that Smith has got the job and therefore he is not aware that his belief has been refuted. In this scenario, Barry decides to approve the loan for Jones.
2. When he makes his decision about the loan, Barry is *unaware* that Jones has been given the job. The analysis of this case is similar to the previous one, except for the fact that Jones is the man who has secured the job (not Smith) and Barry is not aware that B-belief has been confirmed. In this scenario, Barry decides to approve the loan for Jones.
3. When he makes his decision about the loan, Barry is *aware* that Smith (and not Jones) has been given the job. According to the consciousness condition, Barry has a new justified and confirmed belief: the man who will get the job has a very high IQ, and Smith is the man. According to the C/R condition, B-belief (the hypothesis about Jones) has been falsified. Based on these considerations, Barry decides to grant the loan to Smith.
4. When he makes his decision about the loan, Barry is *aware* that Jones has been given the job. According to the consciousness condition, in this scenario Barry does have knowledge. Based on this, Barry grants the loan to Jones. According to the C/R condition, since B-Belief (which is based on the evidence that Jones will get the job) has not been falsified (it has been confirmed) Barry decides to approve the loan for Jones.

The above analysis highlights four interesting conclusions.

First, B-Belief: ‘the man who will get the job has a very high IQ’ is phrased too generally. If Barry is not conscious of what actually happened, it does not matter who gets the job, Jones or Smith (see cases 1 & 2). In both cases, Jones will obtain the loan. If Barry is conscious of what actually happened, he must ask himself the question: who is ‘the man’, Jones or Smith? Otherwise, it is unclear which of the two is the subject of the proposition. Therefore, Barry cannot use this belief as a tool for making his decision about the loan. As things stand, it seems that this proposition by itself (without additional information) does not have a definite target and therefore cannot be confirmed or falsified. Hence, this analysis casts a shadow on Gettier’s Case 1, since (e) “the man who will get the job has ten coins in his pocket” is also phrased too generally.

Second, an analysis of case 3 illustrates that a falsified belief can establish grounds for a decision and action. In this scenario, Barry is conscious of the fact that Smith (and not Jones) has been given the job. This falsifies his belief, which is based on the previous information that suggested Jones would get the job. As a result, Barry grants the loan to Smith.

If it is accepted that a rational decision is made on the basis of justified belief or knowledge, the following question arises. How should the falsified B-Belief be conceived? It is not a justified belief, since it has been refuted (Smith and not Jones got the job). Nevertheless, it functions as a piece of knowledge, since on the basis of this Barry decides to approve the loan for Smith. Hence, it could be proposed that a refuted belief (like a refuted hypothesis) can be used as a piece of knowledge to make a decision or to choose a line of action. So, while in case 3 Barry decides to give Smith the loan on the basis of his refuted belief, in case 4 he decides to give Jones the loan on the basis of a confirmed and as yet unrefuted belief. (This is why I used C/R to signify these two possibilities.)

Third, in view of the above scenario, an ordinary person uses a belief in a similar way to the manner in which a scientist uses a hypothesis. (Of course there are differences, which mainly stem from the fact that a scientist adheres rigorously to scientific methodology whereas a person in everyday life does not.) To emphasize the similarity between a belief and a scientific hypothesis with regard to Gettiers Case 1, consider the following possible episode.

Imagine that a chemist in the mid-17th century, Dr. Flog, explains the process of burning to his students, a phenomenon which he believes is the result of a certain material interaction (call it “F-belief”), and he establishes this belief on the phlogiston theory. Although F-belief is justified, it is not true. Many years later, Lavoiser’s oxygen theory provides an accurate explanation of combustion. (However, in effect, this theory has since been developed and expanded to a great extent). Clearly, Flog could not have been aware of Lavoisier’s theory, although it may be suggested, based on knowledge of this theory and by analogy with Gettier’s Case 1, that F-belief is JTB. However, according to the proposed JC/RCB, in the absence of consciousness of the unrefuted information (Lavoisier’s theory), F-belief cannot be conceived as knowledge.

 Fourth, as mentioned above, Gettier’s problem ignited many reactions that I cannot address here. However, I would like to highlight one criticism–the ‘luck’ argument. Consider the belief held by Smith: ‘the man who will get the job has ten coins in his pocket’, and the following real information: it is Smith (not Jones) who will get the job, and Smith, as well as Jones, has ten coins in his pocket, although he does not realize this. It seems that the belief is validated by these facts. However, the fact that Smith also has ten coins in his pocket can be evaluated as sheer luck, and a belief based on luck cannot be considered as knowledge. (This argument has been disputed in the literature, see Hetherington, 2020; Ichikawa & Steup, 2018.)

How would the proposed JC/RCB account treat this argument? According to the consciousness condition, since Smith was not aware of the ‘real information’, luck did not play any role in his mind. Similarly, in Case 1 above, when Barry decided to approve the loan for Jones, he was unaware that Smith (and not Jones) had in fact got the job, and this lack of consciousness of the real information has nothing to do with luck (or ‘bad’ luck). According to the (C/R) condition, for a given belief, if the consciousness condition is satisfied, one may treat luck in the following ways: first, one may point out that S-Belief (or B-belief) is too general to be confirmed or refuted by the real/actual information; second, with the shift from the truth/not-truth epistemological approach to the C/R methodological approach, one would be advised to look for additional information so as to eliminate the possibility of a lucky observation. For example, out of fifty other men who applied for the same job as Smith and Jones, not one of them had ten coins in his/her pocket.

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