**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 the Gettier’s cases deal with possible empirical occurrences, it is suggested to replace the epistemological condition of truth/not-truth by the methodological condition in which a belief is confirmed or refuted. Given these, the modified limits of knowledge is given by: Justified Confirmed/Refuted Conscious Belief (JC/RCB).

The present paper’s goal is to modify and improve the traditional definition of propositional knowledge - justified true belief (JTB). In order to carry out this aim, the paper will concentrate on the Gettier’s counterexamples, which raise a problem for JTB. Given this, 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 play a crucial role, will be presented briefly, and be applied to Gettier’s case 1. Finally, the idea regarding the confirmation/refutation (C/R) of a belief will be discussed and be supported.

*Gettier’s Case 1*:

Gettier (1963) proposed that there are cases which on the one hand 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 describes 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 has formed 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 really happened is that Smith (and not Jones) got 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, got 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…” (Italics are in the original. 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 (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 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 does not 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” (i.e. Smith himself got 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 in 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 and as such the belief of Smith, S-Belief, can either be supported or be refuted by empirical evidences. That is, a belief is methodologically similar to an empirical hypothesis: both can either be supported, confirmed or be refuted by empirical observations. According to Popper (1963) a confirmed hypothesis is considered as such until the prediction deduced from it is falsified. That is, one holds a scientific hypothesis as if it is true until the moment it is refuted by new observations. In effect, Popper (1972) suggested that anyone who believes that his/her theory is true drops out from the game of science. In many respects, a regular person behaves in a way similar to a scientist: one is acting on a basis of uncertain beliefs. For example, one goes every day to his/her office while believing that it is safe in its place. And if one got the information that falsifies his/her belief (e.g., the office burned down) one acts on this ground accordingly. This is in harmony with the following. History of science teaches us that scientists continue to use a theory within certain limits even if it has been falsified. For example, one uses Newton’s physics within the limits of earthly speed, even though this theory has been refuted and displaced by relativity theory. This means that scientists use a falsified theory, an untrue knowledge, when they find it appropriate.

 To illustrate the similarity between a belief and an empirical hypothesis, let us alter case 1 a little bit in the following way. Barry (the protagonist) is a banker who has to decide to whom to approve a big loan, either to Smith or Jones. Barry has evidences 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 has formed the following justified belief (B-Belief): the man who will get the job has a very high IQ. Based on this belief (which has been substantiated by the previous evidence) Barry decided to give Jones the loan (because he will be able to repay the loan including interest). Unknown to Barry, what really happened is that Smith (and not Jones) got the job, and that Smith also has a very high IQ (this may be called “the actual information”). Thus, B-Belief is justified and true, because Smith, who has a very high IQ, got the job.

 Given this, let us analyze the Barry story from the point of view that a propositional knowledge is Justified Confirmed/Refuted Conscious Belief (JC/RCB). (As will be seen below, the C/R means that there are cases in which a refuted belief is considered knowledge in a way similar to the case with Newton’s physics.) One may discuss four possible cases associated with Barry story.

1. Barry is *unaware* that Smith (and not Jones) got the job. According to the consciousness condition, since Barry is not aware of the ‘actual information’, he does not have knowledge, but only a justified belief. According to the C/R condition, Barry is not aware that Smith got the job and that his belief has been refuted. Hence, Barry decides to give the loan to Jones.
2. Barry is *unaware* that Jones got the job. The analysis of case 2 is similar to the previous one, except for the fact that Jones got the job and not Smith. Hence, Barry decides to give the loan to Jones.
3. Barry is *aware* that Smith (and not Jones) got 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. Based on this, Barry will give the loan to Smith. According to the C/R condition, since the belief (the hypothesis about Jones) has been falsified, Barry decides to give the loan to Smith.
4. Barry is *aware* that Jones got the job. According to the consciousness condition, Barry does have knowledge. Based on this, Barry gives 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 yet been falsified (it has been confirmed) Barry decides to give Jones the loan.

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 got the job, Jones or Smith (see cases 1 &2). In both cases Jones will get the loan. If Barry is conscious of what actually happened, he must answer in his mind the question: who is the man, Jones or Smith? Otherwise, he does not know to whom the proposition points, Smith or Jones, and therefore Barry does not know to whom to give the loan. As things stands, it seems that this proposition by itself (without additional information) has not a definite target and therefore it cannot be confirmed or be falsified. Hence, this analysis casts shadow on Gettier’s case 1, since (e) “the man who will get the job has ten coins in his pocket” is praised also too generally.

Second, analysis of case 3 illustrate that a falsified belief can establish a ground for a decision and action, Barry is conscious of the fact that Smith (and not Jones) got the job. This falsifies his belief, which is based on the previous information that Jones will get the job. As a result, Barry gives the loan to Smith.

If one accepts that a rational decision is made on the basis of justified belief or knowledge, the following question arises. How to conceive the falsified B-Belief? 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 it Barry decides to give Smith the loan. Hence, one may propose that a refuted belief (like a refuted hypothesis) can be used as a piece of knowledge to make a decision and to take a route of action. So, while in case 3 Barry decides to give Smith the loan on the basis of refuted belief, on case 4 he decides to give Jones the loan on the basis of a confirmed belief, a yet unrefuted belief. (This is why I used C/R to signify these two possibilities.)

Third, in view of the above, one may conceive a belief as similar to a scientific hypothesis. That is, a belief that an ordinary person uses daily may be conceived as similar to a hypothesis. Put it differently, a regular person uses a belief in a way similar to a scientist uses a hypothesis. (Of course there are differences, which mainly stems from the fact that a scientist adheres rigorously to scientific methodology and a common person does not.) To emphasize the similarity between a belief and a scientific hypothesis with regard to Gettier”s 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 (Lavoiser theory), F-belief cannot be conceived as knowledge.

 Fourth, as mentioned above, the Gettier’s problem ignited many reactions that I cannot address all of here. However, I would like to handle one criticism – the ‘luck’ argument. Consider the belief: ‘the man who will get the job has ten coins in his pocket’, and the following real information: Smith (and not Jones) got the job, and Smith himself also has ten coins in his pocket. It seems that this belief is validated by these facts. However, the fact that Smith has also ten coins 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 does the proposed JC/RCB treat this argument? According to the consciousness condition, since Smith was not aware of the ‘real information’, luck did not play any role in Smith’s mind. Similarly, since Barry was unaware that Smith (and not Jones) got the job, he decided to give the loan to Jones. According to the (C/R) condition, given that the consciousness condition is satified, one may treat luck in the following ways: first, one may point out that S-Belief (or B-belief) are too general to be confirmed or refuted by the real/actual information; second, since the viewpoint moved from the truth/not-truth epistemological approach to the C/R methodological approach, one may 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 to the same job of Smith and Jones, no one had ten coins in his/her pocket.

**References**

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