Research Note

Three Modified Versions of Nozick's Theory of Knowledge

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1. Introduction

Since Edmund Gettier wrote his influential paper "Is Justified True Belief Knowledge?", many epistemologists have introduced different theories of knowledge to deal with a problem raised by Gettier. Thus Robert Nozick proposes one of the most elegant theories in *Philosophical Explanations*. But I notice that although Nozick's theory of knowledge fairly explains the cases which Gettier introduces, nonetheless it fails to explain some other cases. In this research note, I will propose three modified versions of Nozick's theory that explain the cases, considering further problems of the new versions at the same time.

Nozick proposes four conditions for S to know P:

(1)　P is true.

(2)　S believes, via method or way of coming to believe M, that p.

(3)　If p weren't true and S were to use M to arrive at a belief whether (or not) p, then S wouldn't believe, via M, that p.

(4)　If p were true and S were to use M to arrive at a belief whether (or not) p, then S would believe, via M, that p. (Nozick, 1981, p. 179)

Condition 1 and Condition 2 are related to the traditional view, originated from Plato's *Theaetetus*, that knowledge is a true and justified belief. If both are satisfied, then what S believes is actually the case, and S has her justification M for believing P. For Gettier, these two conditions are not sufficient, since in the following two cases S lacks knowledge despite that the two conditions are satisfied (Gettier 1963, p. 121).

2. Gettier's Two Cases

2.1 The First Case

Suppose that Smith and Jones have applied for a job. Now Smith believes (a): Jones is the man who will get the job, and Jones has ten coins in his pocket. Also, Smith believes (a) on the basis of the fact that the president of

the company assured him that Jones would be selected and the fact that Smith counted the coins in Jones's pocket ten minutes ago. Now (a) entails (b): The man who will get the job has ten coins in his pocket. Smith sees that (a) entails (b) and accepts (b) on the grounds (a), for which he has strong evidence. However, unknown to Smith, he himself, not Jones, will get the job. Also, unknown to Smith, he himself has ten coins in his pocket.

Gettier argues that Smith actually does not know (b), since he does not know how many coins are in Smith's pocket while "the man who will get the job" is Smith himself. On the other hand, (b) is true since the man who will get the job (that is, Smith) has ten coins in his pocket. Also, (b) is justified since Smith has good evidence for believing (a), which entails (b). So if we define knowledge as a true and justified belief, Smith certainly has knowledge that (b) is true. Since this result conflicts with the fact that Smith does not know (b), this definition of knowledge fails.

But according to Nozick, this case does not satisfy Condition 3. Suppose that (b) is not true. In other words, Smith does not have ten coins (for example, just nine coins) in his pocket. But also suppose that Smith is to use (a) to arrive at a belief that (b) is true as we supposed before. In this case, Smith still believes (b), since he found ten coins in Jones's pocket and he believes (b) on the basis of this evidence. So Condition 3 is not satisfied.

2.2 The Second Case

Suppose that Smith has strong evidence for believing (c): Jones owns a Ford. Also, Smith believes (c) on the basis of the fact that Smith remembers that Jones had a Ford and Jones has just offered Smith a ride while driving a Ford. Now (c) entails (d): Either Jones owns a Ford, or Brown is in Barcelona. Suppose that Smith has inferred (d) from (c), and yet that Jones does not own a Ford: He is just driving a rented car. Also, suppose that unknown to Smith, Brown is in Barcelona. Then although Smith does not know (d) is true, (d) is actually true. And Smith believes (d) is true since he believes that Jones owns a Ford. Hereby Smith has a true and justified belief, but he actually does not know (d).

Again, according to Nozick, this case does not satisfy Condition 3. Suppose (d) is not true. In other words, Jones does not own a Ford and Brown is not in Barcelona. Smith is to use (c) to arrive at a belief that (d) is true. Smith still believes that (d) is true, since he believes that Jones owns a Ford. Even if Jones actually does not own a Ford, Smith believes (c) on the basis of his own evidence:

The following subjunctive, which specifies condition 3 for this Gettier case, is not satisfied: if no one in my office owned a Ford car, I wouldn't believe that someone did. The situation that would obtain if no one in my office owned a Ford is one where the stranger does not (or where he is not in the office); and in that situation I still would believe, as before, that someone in my office does own a Ford, namely, the first person. So the subjunctive condition 3 excludes this Gettier case as a case of knowledge. (Nozick 1981, p. 173)

Thus both cases do not satisfy Condition 3, and as far as these two cases are concerned, Nozick's theory explains

why Smith does not know (b) or (d).

3.   A Case against Nozick's Theory

However, Nozick's theory has some difficulties in the following case. As before, suppose that Smith and Jones have applied for a job. Smith believes (a): Jones is the man who will get the job, and Jones has ten coins in his pocket. For Smith, there are two pieces of evidence for his believing (a): First, Smith remembers that the president of the company assured him that Jones would be selected. Second, ten minutes ago, Smith counted the coins in the pocket of a pair of jeans at his office room of the company. Smith believes that Jones owns the jeans, since Smith saw Jones wearing the same type of jeans three days ago. Also, Smith sees the entailment from (a) to (b): The man who will get the job has ten coins in his pocket. Smith accepts (b) on the ground of (a).

However, suppose that unknown to Smith, he himself, not Jones, will get the job. Also, suppose that the jeans which Smith found at the office room of the company actually belong to Smith: He bought the jeans one year ago. Six months ago, Smith had to change his clothes immediately. As a result, Smith wore his suits and threw out his jeans at the office room, since no one was there at that time and he thought he could change his clothes there. Meanwhile, Smith had ten coins in the pocket of the jeans. When Smith changed his clothes, he did not take these coins out of the pocket. Smith put his jeans in the closet, which people seldom see inside. After that, Smith worked hard and forgot about his jeans. Later, Smith saw Jones wearing the same type of jeans. But Smith totally forgot about his jeans and did not think that he once had had the same type of jeans. Besides, this type of jeans was popular and there were many people wearing this type of jeans. Then, ten minutes ago, Smith found a pair of jeans at the closet of his office room. Smith usually did not see the inside of the closet, and Smith and Jones worked usually together at that room. So Smith thought that Jones had put these jeans there when Jones had changed his clothes. Smith happened to check the pocket of the jeans, and there were ten coins inside. Of course, Smith forgot that he once had put his own jeans in the closet. In fact, even though Smith believes that Jones owns the jeans, Smith himself owns them. Also, these ten coins belong to Smith, not Jones.

Now we shall see if Smith satisfies Nozick's four conditions. According to Condition 1, if Smith knows the proposition (b), then (b) must be true. This is the case, since Smith or the man who will get the job has ten coins in his pocket. According to Condition 2, if Smith knows the proposition (b), then Smith must believe that (b). This is also the case, since Smith believes (a) and he is also conscious that (a) entails (b) and hence he believes (b).

According to Condition 3, if Smith knows the proposition (b), then if (b) is not true, the proposition that Smith believes that (b) must not be true. Once again, to be sure, (b) is true in this case. Since Smith or the man who will get the job has ten coins in his pocket, the antecedent is not satisfied. Since the antecedent is false, the conditional statement is always true. However, we have to consider another case in which (b) is false. Suppose that Smith found nine coins in the pocket of the Jeans at the office room. And, suppose that Smith had only eight coins in the pocket of the trousers which he is now wearing. In addition, Smith had no other trousers that contain ten coins in the pocket. In this case, the proposition that the man who will get the job has ten coins in his pocket is

false, and Smith would not believe (b). Indeed, Smith believes that Jones will get the job. But Smith believes that Jones has nine coins in his pocket, not ten, and hence Condition 3 is also satisfied.

On the other hand, Smith does not know (b), since Smith does not know that he himself will have the job, and he is not conscious of the fact the he himself has ten coins in his pocket. Now we could see that according to Nozick's theory, Smith knows (b) since Conditions 1, 2 and 3 are satisfied, and we do not have to see if the case satisfies Condition 4 given that p is originally true. This result, however, is not consistent with the fact that Smith actually does not know (b).

4. Alternative Theory A

"The man" causes the main problem in the previous case. Since "the man" refers to either Smith or Jones or some other person, Smith does not really know that the man who will get the job has ten coins in his pocket. More generally, "the man" may refer to different individuals in accordance with the context. Hereby I propose to distinguish two cases: The first case is that there is no denoting phrase with a definite article in the proposition which a subject is supposed to know to be true. The second case is that there is a denoting phrase with a definite article in the proposition which a subject is supposed to know to be true. Thus we have the following set of conditions that distinguishes the two cases:

1) If there is no denoting phrase with a definite article in the proposition which a subject is supposed to know to be true, then S knows P iff:

(1) P is true.
(2) S believes that p.
(3) If p weren't true, S wouldn't believe that p.

2) If there is no denoting phrase with a definite article in the proposition which a subject is supposed to know to be true, then S knows P iff:

(4) P is true.
(5) S believes that p'.
(6) If p weren't true, S wouldn't believe that p'.
(7) If p' is not true, S will not believe that p'.

Note: P' is the proposition that is generated by replacing denoting phrases with definite articles in p with proper names. In this substitution, we should follow the belief of S. As for the proposition that the man who will get the job has ten coins in his pocket, p' is that Jones has ten coins in his pocket.

Now we shall see if Smith satisfies these three conditions when Smith found ten coins in the trousers at the office room and confused his own trousers with Jones's. According to (4), if Smith knows the proposition (b), that is, the man who will get the job has ten coins in his pocket, then (b) must be true. This is the case, since Smith or the man who will get the job has ten coins in his pocket. According to (5), if Smith knows the proposition (b), then Smith must believe that (b'), that is, Jones has ten coins in his pocket. This is also the case, since Smith believes (a), and he also believes that (a) entails (b'). Of course, actually (a) does not entail (b'), since Jones *is not* the man who will get the job. In fact, Smith is the only man who will get the job. According to (6), if Smith knows the proposition (b), then if (b) were not true, the proposition that Smith believes that (b') would not be true. Once again, to be sure, (b) is true in this case. However, we have to consider another case in which (b) is false. Suppose that Smith found nine coins in the pocket of the Jeans at the office room. In addition, suppose that Smith does not have any trousers that have ten coins in the pocket. Then Smith would not believe (b'), that is, Jones has ten coins in his pocket. Indeed, in that case, Smith believes that Jones will get the job. But Smith believes that Jones has nine coins in his pocket, not ten. Smith believes that the Jeans belongs to Jones, and Smith found just nine coins. Therefore, Smith would believe that Jones has nine coins in his pocket. So we may be able to conclude that if (b) were not true, the proposition that Smith believes that (b') is false and hence Condition 6 is also satisfied.

But Condition 7 is not satisfied. According to (7), if Smith knows the proposition (b), then if (b') is not true, Smith will not believe (b'). However, suppose that Smith found ten coins in the pocket of the Jeans at the office room. Also, suppose that Jones just has eight coins in his pocket. In addition, suppose that Jones does not have any trousers that contain ten coins in the pocket. Now (b') is actually not true, since Jones does not have ten coins in his pocket. But Smith still believes that Jones has ten coins in his pocket, since Smith found ten coins at the office room. Thus Condition 7 is not satisfied. Since one of the four necessary conditions is not satisfied, according to our alternative theory, Smith is not supposed to know (b).

Of course, it is reasonable to suppose that Smith does not know (b). Smith does not know that he himself will get the job. Also, he is not conscious about the fact the he himself has ten coins in his pocket. This alternative theory, therefore, seems to fit with the fact that Smith does not know (b). According to this theory, Smith does not know (b) since Condition 7 is not satisfied. However, one might think that this new theory is ad hoc, since the theory just distinguishes two cases and gives explanations for each of them.

5. Alternative Theory B

Another theory utilizes the framework proposed by Fred Dretske, according to which even if S knows P and S knows that P entails Q (or P→Q), it is not necessarily the case that S knows Q. The verb V is said to "penetrate" when the proposition that Smith Vs P entails the proposition Smith Vs Q (Dretske 1970, p. 1011). According to Dretske, the verb (or epistemic operator) "know" does not penetrate.

If the verb "believe" does not penetrate, then even if S believes P and S believes that P entails Q (or P→Q), it is not necessarily the case that S believes Q. For example, suppose that Smith believes that Jones will get the job

and Jones has ten coins in his pocket. Also, Smith believes that the proposition that Jones will get the job and Jones has ten coins in his pocket entails that the man who will get the job has ten coins in his pocket. According to this scheme, Smith nonetheless does not necessarily believe that the man who will get the job has ten coins in his pocket.

If we accept this scheme, Condition 2 in Nozick's theory is not satisfied in the case of Smith and Jones. Since this condition is not satisfied, Smith is not supposed to know that the man who will get the job has ten coins in his pocket. Thus we seem to have solved the problem. Once we accept that the verb "believe" does not penetrate, we can understand that Smith does not necessarily believe that the man who will get the job has ten coins in his pocket.

On the other hand, this scheme seems to have a problem: It is natural to suppose that if S believes P and S believes that P entails Q (or P→Q), then S believes Q. Especially, when S is clearly conscious of Q, it seems to be wrong to suppose that S does not believe Q.

6.　Alternative Theory C

Smith believes that the man who will get the job has ten coins in his pocket on the basis of his believing that Jones will get the job and Jones has ten coins in his pocket. One problem is that, even though the man will get the job (or Smith) has ten coins in his pocket (that is, (b) is true), nonetheless Jones will not get the job, and does not have ten coins in his pocket, either. Therefore, even though (b) is true, another belief on which Smith's believing (b) depends is not true. So if we add another condition that requires that Smith's belief that Jones will get the job and Jones has ten coins in his pocket is true, then this condition is not satisfied, and Smith is not supposed to "know" that the man who will get the job has ten coins in his pocket. In brief, according to our third alternative theory, S knows p iff:

(1) P is true.
(2) S believes, via method or way of coming to believe M, that p.
(3) M is true.
(4) If p weren't true and S were to use M to arrive at a belief whether (or not) p, then S wouldn't believe, via M, that p.

According to (1), if Smith knows the proposition (b), then (b) must be true. This is the case, since Smith or the man who will get the job has ten coins in his pocket. According to (2), if Smith knows the proposition (b), then Smith must believe that (b) via method or way of coming to believe (a). This is also the case, since Smith believes (a) and he is also conscious that (a) entails (b). Thus Smith believes (b), too. But as we have seen, Condition 3 is not satisfied. Smith believes (b) via method or way of coming to believe (a). So according to (3), (a) must be true. But Jones actually will not get the job, and Jones does not have ten coins, either.

Theory C seems to work pretty well. First, the third theory is not so ad hoc as the first one. It does not

arbitrary distinguish two cases on the basis of "a denoting phrase with a definite article." Second, the third theory seems to be more natural than the second theory in the sense that it admits that Smith believes both (a) and (b). According to the second theory, Smith may not believe (b), which may be against our intuition.

However, Theory C requires the truth of both (a) and (b). This raises another problem. Suppose that James and Simmons have applied for a job. Now James believes (c): Simmons is the woman who will get the job, and Simmons has ten coins in her pocket. Also, James believes (c) on the basis of the belief that the president of the company assured him that Simmons would be selected and the belief that James counted the coins in Simmons's pocket ten minutes ago. Now (c) entails (d): The woman who will get the job has ten coins in her pocket. James sees that (c) entails (d) and accepts (d) on the grounds (c), for which he has strong evidence. Suppose, unlike the case of Smith and Jones, both (c) and (d) are true.

Now James is supposed to know (d), since all the four conditions are satisfied. The propositions (c) and (d) are true. James believes (d) via way of coming to believe (c). If (d) were not true, James would not believe (d). For example, suppose that James found seven coins in Simmons's pocket. Then James would not believe (d). Does James know (c)? First, (c) is true. Second, James believes (c) via way of coming to believe that the president of the company assured him that Simmons would be selected (call this statement (e)), and that James counted the coins in Simmons's pocket ten minutes ago (call this statement (f)). Thus two conditions are satisfied.

But suppose that James actually counted the coins in Williams's pocket ten minutes ago. Williams is a friend of Simmons. She visited the office room of Simmons yesterday. Simmons once asked Williams to let her use a nice jacket. So Williams brought her best jacket to the office room yesterday. Williams put this jacket on the chair of Simmons. But Williams forgot to pick up ten coins in the pocket of the jacket. Since James found the jacket on the chair of Simmons, James thought that Simmons owns the jacket. Also, suppose that, just by a coincidence, Simmons has ten coins in her pocket right now.

In this case, even though (c) is true, (f) is not true since James actually counted the coins in Williams's pocket. So Condition 3 is not satisfied. James believes (c) via way of coming to believe (e) and (f). Therefore, according to the condition (3), if James knows (c), both (e) and (f) must be true. Since (f) is false, James does not know (c) in the framework of the third theory. This result may look odd.

Bibliography

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