WHEN DOES FALSEHOOD PRECLUDE KNOWLEDGE?

BY

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Abstract: Falsehood can preclude knowledge in many ways. A false proposition cannot be known. A false ground can prevent knowledge of a truth, or so we argue, but not every false ground deprives its subject of knowledge. A falsehood that is not a ground for belief can also prevent knowledge of a truth. This paper provides a systematic account of just when falsehood precludes knowledge, and hence when it does not. We present the paper as an approach to the Gettier problem and arrive at a relatively simple theory with virtues linked to several issues at the heart of contemporary epistemology.

1. Introduction

Nobody knows anything that is false, but there are other ways in which falsehood precludes knowledge. It is quite plausible to think that in standard Gettier cases (cf. Gettier, 1963), for example, the subject’s false grounds help to explain why a justified, true belief does not count as knowledge. This ‘no false grounds’ approach to the analysis of knowledge provides a prima facie attractive account of why there is no knowledge in Gettier cases. In such examples, the subject infers a justified, true belief from something false. There are well known problems, however, for a simple no false grounds analysis of knowledge. In Section 2, we consider these problems and discuss what we take to be the best no false grounds theory that emerges from them. The resulting theory, however, has defects of its own, which we consider in Section 3. In Section 4, we present and discuss an improved theory that provides an attractive account of Gettier cases in the spirit of the no false grounds approach. In Section 5, we take a look at a few more troublesome cases, and (while exercising due caution) propose a new theory of knowledge that retains the basic insight of the no false grounds approach. While we expect genuine objections to surface, we...
think that the theory presented here reveals something new about the nature of knowledge, and in particular about the various ways in which falsehood defeats it. Finally, in Section 6, we respond to some anticipated objections to our account and discuss some of its virtues.

2. Two no false grounds theories of knowledge

On the no false grounds approach, solving the Gettier problem amounts to finding a fourth condition that, when added to the conditions about belief, truth, and justification, denies knowledge in Gettier cases. The basic idea is that one cannot have knowledge if her belief rests on a false proposition.

Let us say for now that a ground for a belief is a mental state on which the subject bases the belief. When a given belief is formed on the basis of other beliefs, these other belief states will be grounds. Other mental states (for example, sensations or seemings) might also serve as grounds, but here we will be particularly interested in grounds that are belief states. When a belief state is a ground, we will say that the content of the state – that is, the believed proposition – is a ground (this is similar to the way in which ‘belief’ sometimes picks out a token belief state and sometimes the proposition that is the content of the state). Here is the simple theory.

No False Grounds: S knows p if and only if (i) S believes p, (ii) p is true, (iii) S is justified in believing p, and (iv) none of S’s grounds for believing p is false.

With respect to this account of knowledge, and all of the accounts to be presented, we take the kind of justification referred to in condition (iii) to be doxastic justification (roughly, the subject must have good reasons to believe p, and believe p on the basis of those reasons). It might be helpful to apply this account quickly to a typical Gettier case. Consider the Nogot/Havit Case, quoted from our favorite epistemology textbook.

Smith knows that Nogot, who works in his office, is driving a Ford, has Ford ownership papers, is generally honest, etc. On this basis he believes:

1. Nogot, who works in Smith’s office, owns a Ford.

Smith hears on the radio that a local Ford dealership is having a contest. Anyone who works in the same office as a Ford owner is eligible to enter a lottery, the winner receiving a Ford. Smith decides to apply, thinking he is eligible. After all, he thinks that (1) is true, so he concludes that:

2. There is someone who works in (my) Smith’s office who owns a Ford.

It turns out that Nogot is a Ford faker and (1) is false. However, (2) is true because some other person unknown to Smith, Havit, works in his office and owns a Ford.\(^2\)
In this case, Smith does not know (2) despite the fact that he believes it, it is true, and he is justified in believing it. The no false grounds theory generates this result, since one of Smith’s grounds for believing (2) is (1), which is false. Condition (iv) is not satisfied.

The simple theory faces two big problems. There seem to be Gettier cases in which the subject has no false grounds, and there seem to be cases of knowledge in which the subject does have a false ground. So, lacking false grounds for a belief seems neither sufficient nor necessary for knowledge (given satisfaction of the other three conditions). Let’s examine these problems in turn. Consider the Alternate Route example from the same text, where the subject does not (explicitly) make an inference from a falsehood:

Smith notices that Nogot is driving a Ford, has a Ford ownership certificate, and so on. But instead of drawing a conclusion about Nogot, Smith draws the following conclusion:

3. There is someone who works in Smith’s office who drives a Ford, has Ford ownership papers, etc.

On the basis of (3), Smith draws the same final conclusion as before:

2. There is someone who works in Smith’s office who owns a Ford.

This is still a Gettier case – Smith does not know (2). However, in virtue of the alternate route to the same conclusion Smith takes here, it seems none of his grounds for believing (2) are false. After all, (3) is true and so is all of his (propositional) evidence for it.

One natural response to this problem is to refine or broaden the notion of a ground in such a way that a ground for a belief need not be a proposition the subject explicitly uses in the process of coming to believe it. We might include among the grounds for a given belief all of the propositions that the subject, on consideration, would admit to be relevant to the formation of the belief. For example, Lycan (2006) employs the notion of a tacit belief, or an assumption. On his view, in cases like the Alternate Route example, the subject ‘tacitly believes or assumes something false’ (2006, p. 156). Although Smith does not explicitly reason through the falsehood that Nogot owns a Ford, for example, he seems to assume or tacitly believe it. This false assumption is what prevents his belief from counting as knowledge.

The second problem for the simple theory is the fact that there are clear cases of knowledge in which the subject has a false ground for the target belief, whether or not the ground is an occurrent or explicit step in the subject’s reasoning. Consider yet another example from the same text, the Extra Reasons Case:

Smith has two independent sets of reasons for thinking that someone in his office owns a Ford. One set has to do with Nogot. Nogot says he owns a Ford, and so on. As usual, Nogot
is merely pretending. But Smith also has equally strong reasons having to do with Havit. And Havit is not pretending. Havit does own a Ford, and Smith knows that he owns a Ford (Feldman, 2003, p. 33).

Here, the simple no false grounds theory stated above entails that Smith does not know that someone in his office owns a Ford. This is because some of his Nogot-grounds are false (we might even stipulate that he explicitly reasons through the belief that Nogot owns a Ford), and so condition (iv) is not satisfied. But it is quite clear that in this case Smith’s Havit-grounds provide him with knowledge.

There seems to be a relatively straightforward solution to this problem. The idea is that although the false Nogot-grounds are present, they are not essential to Smith’s justification for believing that someone in his office owns a Ford. This is because of the presence of the true Havit-grounds, which would justify Smith’s belief even if the Nogot-grounds were absent. So, it seems plausible that knowledge requires no false grounds only insofar as those grounds are essential in the relevant way. And if we coupled this idea with the response to the first problem for the simple theory, we would appear to have a no false grounds theory that is immune to two important obstacles.5

What precisely does it mean to say that a ground for a belief is essential? This is a difficult question, and the extant accounts do not provide an answer. We might begin with a simple and straightforward counterfactual account of the relevant notion. That is, we might suppose that a ground is essential to a subject’s justification for a belief just in case she would be unjustified in holding the belief if her evidence did not contain that ground. This, however, will not work. Consider the famous Sheep in the Field case.6 The subject is justified in believing that there is a sheep in the field on the basis of, say, the (false but justified) belief that the animal over there is a sheep. This should be an essential ground. However, we might also stipulate that if the subject’s evidence had not contained this ground, then (due to the fact that the fake sheep would have been located in a slightly different position) it would have contained the different belief that the animal over here [another part of the field] is a sheep. In this case, the subject would have been justified even if her evidence had not contained the original ground. But again, we need to have an account according to which this ground is essential.

Another reason to avoid a counterfactual analysis of an essential ground has to do with the fact that one piece of evidence might depend counterfactually on an independent piece of evidence.7 In the Extra Reasons Case, for example, neither the Nogot-grounds nor the Havit-grounds are essential. And yet it might be the case that if Smith’s evidence had not contained the Nogot-grounds, it would not have contained the Havit-grounds either (imagine that Havit comes forward to Smith only because he sees Nogot
driving Smith around in a Ford). In such a case, Smith would be unjustified in holding the target belief if his evidence did not contain the Nogot-grounds, and so a counterfactual analysis would imply that they are essential. But they are not essential.

There seems to be a clear notion of an essential ground that is not counterfactual. Perhaps it is sufficiently clear that we may proceed without characterizing it precisely. However, we will try to isolate the notion, in two stages. The basic idea is simple and attractive. To say that a ground is essential is to say that it provides justification for the target proposition, and that no independent part of the subject’s evidence also provides such justification. Here is a first shot at identifying the relevant notion:

**Essential Grounds, First Shot:** Ground g is essential to S’s justification for \( p = \text{df.} \) (a) g at least partly justifies S in believing p, and (b) no part of S’s evidence that is independent of g fully justifies S in believing p.

A few things need to be said about this definition. First, it is not circular, since we are free to help ourselves to the notion of justification. Second, the relevant notion of justification, in both the definiendum and definiens, is propositional justification. Third, a fully justified belief is a belief that is justified to the extent required for knowledge. Fourth, the term ‘partly’ seems appropriate in condition (a). A fully justified belief might be justified partly by one ground and partly by another, in such a way that neither ground fully justifies the belief by itself. In such a case, it seems that each ground is essential. Fifth, two parts of one’s evidence are independent when neither provides justification for the other. This allows all the beliefs in a single evidential chain to be essential, which seems correct. For example, suppose that Smith justifiably believes that someone owns a Ford on the basis of his belief that Nogot owns a Ford, which he believes on the basis of his belief that Nogot drives a Ford. Here, we have a chain with two grounds, each of which (we may suppose) fully justifies the final belief. But the beliefs serving as grounds are not independent, and so the definition – correctly, it seems – counts them as essential.

The definition above is accessible and intuitively attractive. However, it seems to have problems with examples like the **Extra Reasons Case**. In this case, one of Smith’s grounds is this conjunction: Nogot, who works in Smith’s office, owns a Ford, and Havit, who works in Smith’s office, owns a Ford. (If you doubt this conjunction is a ground, remember that we are now working with a conception of grounds that does not require them to be occurrent beliefs. We might also suppose that the conjunction is in fact one of Smith’s occurrent beliefs. More generally, we see no good reason at all for a prohibition on conjunctive grounds.) For convenience, let’s call the conjunction ‘\( N \& H \).’ The definition above implies that \( N \& H \) is essential, since it satisfies both conditions: (a) it at least partly justifies
Smith in believing that someone in his office owns a Ford, and (b) no part of Smith’s evidence that is independent of N & H fully justifies him in believing this – N fully justifies the target belief, and so does H, but neither N nor H is independent of N & H. The trouble here is that the *Extra Reasons Case* is indeed a case of knowledge. If N & H is essential, however, then it is an essential false ground, since N is false.

The problem above is that N & H entails two independent pieces of evidence – namely, N and H – each of which fully justifies Smith in believing the target proposition. So, the problem can be solved by adding a condition that rules this out. This results in a definition that is somewhat less compelling intuitively, but not at all ad hoc:

**Essential Grounds:** Ground g is essential to S’s justification for p = df. (a) g at least partly justifies S in believing p, (b) no part of S’s evidence that is independent of g fully justifies S in believing p, and (c) g does not entail two or more independent pieces of evidence such that each one fully justifies S in believing p.

Let’s apply this to the *Extra Reasons Case*. One of Smith’s grounds, for example, is N. This (false) ground is not essential to Smith’s justification for the belief that someone in his office owns a Ford. This is because (b) is not satisfied – H is independent of N and it justifies Smith’s target belief. The same goes for the (true) ground H; it is not essential because N is independent and justifies the target belief. Finally, N & H is not essential in virtue of (c), since it entails both N and H. We are optimistic that the definition above identifies the relevant notion. But we also think the following sections have considerable interest even if the notion of an essential ground has to be taken as a primitive notion.

Given that the definition above captures what it is supposed to capture, we are now in a position to consider the revised theory:

**No Essential False Grounds:** S knows p if and only if (i) S believes p, (ii) p is true, (iii) S is justified in believing p, and (iv) no ground that is essential to S’s justification for p is false.

We need to keep in mind that the term ‘ground’ here is used to cover not only the beliefs that belong to the explicit process of reasoning in which the subject has engaged, but also the relevant background assumptions made or tacit beliefs held by the subject.

Let’s finish this section by considering how the no essential false grounds theory handles the cases discussed so far. In the original *Nogot/Havit Case*, there is a false ground that is essential to Smith’s justification for the belief that someone in his office owns a Ford, viz., (1), the belief that Nogot, who works in Smith’s office, owns a Ford. (1) justifies Smith in believing the
target proposition, there is no independent evidence available to Smith that justifies this belief, and (1) does not entail independent pieces of evidence that justify the target belief individually. So, the theory correctly implies that this is not a case of knowledge. The *Alternate Route* example is treated in exactly the same way – although Smith does not explicitly reason through (1) in this case, it is a relevant assumption that he makes and so it counts as a ground.

In the *Extra Reasons Case*, condition (iv) of the no essential false grounds theory is satisfied, and so the theory implies that this is a case of knowledge. We have already seen that the false grounds here – the Nogot-grounds, and the conjunction of the Nogot- and Havit-grounds – are not essential. (We might ask if any grounds are essential in this case. The answer is yes. The disjunction of Smith’s Nogot- and Havit-grounds, which we might label ‘N ∨ H’, satisfies the definition: N ∨ H justifies Smith’s target belief, no independent evidence fully justifies it (neither N nor H is independent of N ∨ H, since each one justifies N ∨ H), and N ∨ H does not entail independent pieces of evidence that justify it. But of course N ∨ H is true, not false, and so condition (iv) is satisfied.)

### 3. Against the no essential false grounds theory

In Gettier cases, there always seems to be a false proposition lurking around that robs the subject of knowledge. This apparent fact makes the general no false grounds approach, and the no essential false grounds theory, quite attractive. However, there are several problems for the no essential false grounds theory. We consider some of them here.

First, in contrast with the notion of a ground as an occurrent belief that a subject actually uses to infer the target proposition, the broader notion of a ground seems to be infected by a troubling vagueness. It might be difficult to identify clearly the conditions under which a given proposition is tacitly believed or ‘assumed.’ Second, even if we can identify all of a subject’s tacit beliefs, a non-explicit ground is not just any proposition that she tacitly believes or assumes – it must be relevant to her reasoning for the target belief. Given that the subject does not actually employ such a ground in her reasoning for the target belief, it might not be clear how to spell this out. Suppose, for example, that one of the subject’s tacit beliefs provides no objective epistemic support for the target belief (or for its denial), but that she would take it to provide support. Does it count as a ground or not? Perhaps the two problems just sketched can be overcome, but there is more trouble for the no essential false grounds theory. Third, there are Gettier cases in which it is not at all clear that the subject has a ground that is both false and essential to his justification for the target belief. Consider this case, *Uncle George*:
It is common knowledge in Smith’s office that George is a wise and honest man. George has told Smith that he, George, is an uncle. He has a ‘World’s Greatest Uncle’ mug on his desk, and so on. On the basis of all of this evidence, Smith believes that George is an uncle. In this particular instance, however, George has been pretending to be an uncle. The twist is that George now really is an uncle, unbeknownst to him. His estranged sister just had a baby boy.

In this case, Smith has a lot of true beliefs – that George is generally honest, that George has told him that he is an uncle, that George has a ‘World’s Greatest Uncle’ mug on his desk, and so on – from which he makes an inference to the best explanation. The best explanation (that George really is an uncle) is true, but by accident. The important point is that there does not seem to be a false proposition that could plausibly be said to be a ground for Smith’s belief that George is an uncle, even if a ground is a mere tacit belief or background assumption. But this is a Gettier case. Smith does not know that George is an uncle. So, the no essential false grounds theory seems to be in trouble.

One might object that this is too quick. Perhaps Smith must have made a false assumption of some sort. Which proposition might serve as an essential false ground in this case? The best candidate is the proposition that George believes that he is an uncle (or, the proposition that he believes what he said, when he said that he was an uncle). If we allow that this proposition is one of Smith’s grounds, it does seem to be essential to his justification (given the definition of an essential ground presented earlier). So, the objection goes, there is an essential false ground after all.

It is not clear to us, however, that Smith must assume that George believes he is an uncle, in order to be justified in believing that he is in fact an uncle. A bigger problem with this account of the Uncle George case is that we can modify the example in such a way that it is stipulated to be true that George believes he is an uncle. For example, we can imagine that in virtue of pretending vigorously to be an uncle, George has somehow convinced himself that he is an uncle. In fact, we can even imagine that George has a justified, true belief that he is an uncle, but is himself the subject of a Gettier case. Either way, we still have a Gettier case with respect to Smith’s belief that George is an uncle, in which the best candidates for essential false grounds in the previous case are now true.

The proponent of the no essential false grounds theory might try looking for some other falsehoods that Smith must tacitly believe or assume – for example, that George is justified in believing that he is an uncle. However, as we just noticed, we could revise the case so that this is true, not false. The same goes for many other possible candidates, such as the proposition that George has met his niece or nephew. More important, this maneuvering seems to get the epistemic order reversed. That is, these
propositions do not seem to ground Smith’s belief that George is an uncle, instead they seem to be grounded by it. (Contrast this with the Alternate Route case. Smith does not occurrently believe that Nogot owns a Ford, but this would clearly ground the belief that someone in his office owns a Ford.) We ought to conclude that the no essential false grounds theory is less than fully adequate. We cannot think of a way to define the relevant notion of an essential ground so that at least some of the problematic consequences can be avoided. Perhaps someone will do this, but until then we should resist the temptation to accept the theory. On the bright side, however, a close relative of the theory is available.

4. Maintaining the spirit of the no false grounds approach

The no false grounds approach starts with the idea that if your evidence contains a false ground, then you do not know. We suggest that we can make progress toward solving the Gettier Problem with a move inspired by Chisholm (1977). The strategy is to withdraw the claim that knowledge requires evidence that does not contain a falsehood, and replace it with the claim that knowledge requires evidence that does not justify a falsehood. We will introduce an account that makes use of the definition of an essential ground from Section 2 above. But we will have no need for the controversial claim that one’s grounds can include propositions that she merely assumes or tacitly believes. We will take propositional grounds to be occurrent beliefs, conjunctions of occurrent beliefs, and disjunctions of occurrent beliefs. (More on conjunctions and disjunctions later.)

The new theory given in this section is really an amalgamation of existing views. It results from replacing condition (iv) of the no essential false grounds theory – that no ground essential to S’s justification for p is false – with a subtly different one. Here it is:

No Essential Falsehood-Justifying Grounds: S knows p if and only if (i) S believes p, (ii) p is true, (iii) S is justified in believing p, and (iv) no ground that is essential to S’s justification for p justifies S in believing a falsehood.

In the rest of this section, we will apply this view (hereafter, the new theory) to the cases already considered and to some new ones, and we will show that it is superior to the no essential false grounds theory. But first we will briefly discuss the new fourth condition.

In addition to the notion of a ground being essential to someone’s justification for a belief, which was defined earlier, the new condition (iv) makes use of the notion of a ground justifying someone in believing something. The relevant sort of justification here is propositional
justification. We want to emphasize that the new theory subsumes the no essential false grounds theory – whenever one has a false ground, one will also have grounds that justify a falsehood. In particular, if one has an essential false ground, one will have other essential grounds that justify it. For example, in the Nogot/Havit Case, the proposition that Nogot owns a Ford is an essential false ground, which is justified by other essential propositional grounds (Nogot drives a Ford, has Ford ownership papers, etc.), which themselves are ultimately justified by essential experi-ential grounds. Even those who doubt this must agree that an essential false ground, F, will propositionally justify the subject in believing a falsehood – just consider the disjunction of F with any necessarily false proposition.

So let’s consider the Nogot/Havit Case. Here, Smith has a false essential ground, i.e. the belief that Nogot owns a Ford, and he thereby has essential grounds that justify him in believing a falsehood. As discussed above, the falsehood is the very proposition that Nogot owns a Ford (or, the disjunction of this with any necessary falsehood). Condition (iv) is not satisfied and this is not a case of knowledge. So, the new theory treats this case in very much the same way as the two no false grounds theories.

Let’s consider the Alternate Route example. Here, Smith does not (occurrently) believe that Nogot owns a Ford. But Smith’s more basic evidence about Nogot is there, and so among his grounds there is something like the belief that Nogot drives a Ford, has Ford ownership papers, etc. This ground is essential to Smith’s justification for the target belief, and while true, it justifies him in believing the false proposition that Nogot owns a Ford (a proposition that he does not in fact believe). Condition (iv) of the new theory is again not satisfied, and so this too is not a case of knowledge. The new theory does not need the claim that Smith actually has a false ground in this case (e.g., the tacit belief that Nogot owns a Ford). This seems to be an advantage for the new theory over the no essential false grounds theory discussed earlier.

Let’s consider the Extra Reasons Case. Just as in the other two examples, Smith has a ground having to do with Nogot that justifies him in believing a falsehood. In this case, however, Smith has independent grounds having to do with Havit. This implies that his Nogot grounds are not essential to his justification for believing that someone in his office owns a Ford. So, condition (iv) seems to be satisfied and this seems to be a case of knowledge. (Let’s use ‘N’ for the relevant Nogot-ground and ‘H’ for the relevant Havit-ground. We might ask about the conjunction of N and H. The answer is that this is not essential, since it entails two independent pieces of evidence each of which fully justifies the target belief. We might also ask about the disjunction of N and H. As we have seen, this is indeed essential, but it does not justify a falsehood. That Nogot owns a Ford is not justified by the mere disjunction N or H.)
Let’s consider *Uncle George*. Here Smith has a justified, true belief that George is an uncle, but he does not know it. Let’s assume that the essential ground in this case is something like the belief that George is generally honest, he says that he is an uncle, he has a ‘World’s Greatest Uncle’ mug on his desk, etc. If the new theory is to generate the intuitively correct result that Smith lacks knowledge here, this ground must justify Smith in believing a false proposition. But which one? It seems clear that however the details of the *Uncle George* example are filled in, so long as it remains a Gettier case we should be able to find such a proposition. For example, consider the proposition that George knows that he is an uncle. This proposition is false, but it seems that Smith’s essential ground justifies him in believing it. So, it seems clear that condition (iv) is not satisfied – some ground that is essential to Smith’s justification for believing that George is an uncle justifies him in believing a falsehood. The falsehood need not be a ground itself, which favors the new theory over the no essential false grounds theory.

We will conclude this section by considering a familiar example that does not seem to be a Gettier case but is an alleged counterexample to the sufficiency of justified, true belief for knowledge. Consider the following version of *Fake Barn Country*.¹¹

Smith is looking at a barn, a real barn, under good conditions. He has excellent evidence that it is a barn. In the vicinity, however, there are numerous non-barns, i.e. papier-mâché barn facades. Had Smith been looking at any one of these, he would also have believed that he was looking at a barn.

The new theory (as well as the no essential false grounds theory) implies that this is indeed a case of knowledge. No ground that is essential to Smith’s justification here justifies him in believing a falsehood. This seems right.¹² Many philosophers claim that Smith does not know he is looking at a barn, but we have never had intuitions to that effect.¹³ In a way, Smith is lucky. But our knowledge is almost always lucky insofar as the world provides for the truth of our beliefs. Perceiving a real barn in the presence of nearby fakes is a case of the sort of luck we typically require in order to know.

The new theory in this section gives results in accord with our intuitions about *Fake Barn Country*. We cannot put much weight on this, since so many philosophers reject these intuitions. Neither can we take this result to tell against the theory. We do hope to have shown that the new theory discussed in this section is at least as plausible overall as the no essential false grounds theory, is more plausible in several respects, and retains the initial appeal of the no false grounds approach.
5. Troublesome cases and a modified new theory

It seems that the no essential falsehood-justifying grounds theory, despite its clumsy name, helps to illuminate the concept of knowledge. But we are quite confident that this new theory is far from fully adequate. In fact, there seem to be relatively clear counterexamples. In this section, we will consider three such examples and propose a modification to the new theory that seems to get the right results.

Warfield (2005) provides some extremely interesting cases of what he calls ‘knowledge from falsehood.’ Consider the two cases below:

Counting with some care the number of people present at my talk, I reason: ‘There are 53 people at my talk; therefore my 100 handout copies are sufficient’. My premise is false. There are 52 people in attendance – I double counted one person who changed seats during the count. And yet I know my conclusion (2005, pp. 407–408).

I have a 7pm meeting and extreme confidence in the accuracy of my fancy watch. Having lost track of the time and wanting to arrive on time for the meeting, I look carefully at my watch. I reason: ‘It is exactly 2:58pm; therefore I am not late for my 7pm meeting’. Again I know my conclusion, but as it happens it’s exactly 2:56pm, not 2:58pm (2005, p. 408).

Both examples seem clearly to be cases of knowledge. However, in both it seems that along with a justified true belief, the subject has an essential ground that justifies him in believing a falsehood. In the first case the ground has to do with the exact number of people at the talk, and in the second it has to do with the exact time.

Here is another example that makes trouble for the new theory, Smith’s Smock:

In the office, Smith wears a smock to protect his clothes. A few moments before 5pm, Smith leaves the office after draping the smock over the back of his chair, as he has done for years. After locking his door and walking out of the office, he believes at 5pm that his smock is then draped over his chair. The smock is just where Smith believes it to be at this time. However, a few seconds before 6pm, thieves break into the office and steal Smith’s smock.

While he is walking out of the office, at 5pm, Smith knows that his smock is draped over his chair. It seems clear that there is some ground that is essential to his justification for this belief. However, it also seems clear that this ground justifies him in believing that his smock will be draped over his chair at 6pm, which is false. Since an essential ground justifies Smith in believing a falsehood, the new theory implies that at 5pm, Smith does not know that his smock is draped over his chair. This is bad news for the new theory. (One might think that the no essential false
grounds theory escapes this objection, but that is not clear. Smith assumes his smock will be on the chair at 6pm, and this is arguably essential given the account of an essential ground. So at the very least we need a clear account of the relevant notions. See also the criticisms in Section 3 above.

We will try to offer (in a tentative way and with a dim hope of exhaustiveness) an account of the troublesome cases that generates intuitively correct results and retains the spirit of the no essential falsehood-justifying grounds theory. Let’s start by considering Warfield’s first case, in which he has counted the people present at his talk. In this example, Warfield knows his conclusion, viz., that his 100 handout copies are sufficient. But there is some ground that is essential to his justification for believing that his 100 handouts are sufficient, which justifies Warfield in believing the falsehood that there are 53 people at his talk (in fact there are 52). What is important here, we suggest, is the following. If the true proposition that there are not 53 people at the talk were added to Warfield’s evidence, this would not rob him of justification for his conclusion. His evidence would still contain all of the grounds associated with his careful count of the people in attendance, and so he would remain justified in believing that the number of people present is approximately 53, quite a lot fewer than the number of handouts.

In this example, an essential ground justifies belief in a falsehood (that there are 53 people at the talk), but the denial of this falsehood does not function as a defeater – it would not rob the subject of justification if it were added to his evidence. We suggest that this is why the example is a case of knowledge. We also conjecture that examples in which the denial of the justified falsehood does serve as a defeater fail to be cases of knowledge (some of these will be discussed later). For concreteness, let’s make use of the following definition of a defeater:

\[ d \text{ is a defeater (with respect to evidence } e \text{ for } p) = df. \ d \text{ is a true proposition such that } e \text{ justifies } p \text{ but the evidence set that results from adding } d \text{ to } e \text{ does not justify } p. \]

The modified new theory can now be formulated as follows:

**The ‘Doesn’t Justify the Denial of a Defeater’ View:** S knows p if and only if (i) S believes p, (ii) p is true, (iii) S is justified in believing p, and (iv) no ground that is essential to S’s justification for p justifies S in believing the negation of a defeater.

Let’s apply this modified new theory (hereafter, DJDD) to the troublesome cases of knowledge described at the beginning of this section. In Warfield’s cases, the subject (Warfield himself) has a justified true belief and an essential ground that justifies him in believing a falsehood.
However, in both cases, condition (iv) of DJDD seems to be satisfied. Let’s reconsider the first case. Warfield knows that his 100 handout copies are sufficient in virtue of grounds associated with his careful count of the people attending his talk, despite the fact that he double counted one attendee. Now, if the true proposition that there are not 53 people present were added to Warfield’s evidence, he would still be justified in believing that his 100 handouts are sufficient. Since his evidence contains all of the grounds associated with the count, he would still be justified in believing the number of people at the talk to be not far from 53. So, the falsehood justified by his essential grounds (that is, the proposition that there are 53 people at his talk) is not the negation of a defeater. Condition (iv) is satisfied and this is a case of knowledge.

Let’s consider the second case. Here, Warfield knows that he is not late for his 7pm meeting in virtue of grounds associated with his looking carefully at his fancy watch and taking the time to be exactly 2:58pm, despite the fact that it is only 2:56pm. If the true proposition that it is not exactly 2:58pm were added to Warfield’s evidence, he would still be justified in believing that he is not late for his 7pm meeting. Since his evidence contains all of the grounds associated with the accuracy of the watch and the careful looking, he would still be justified in believing the time to be well before 7pm. So, the falsehood justified by his essential grounds (in this case, the proposition that it is exactly 2:58pm) is not the negation of a defeater. Again, condition (iv) of DJDD is satisfied and the theory correctly classifies the second case as a case of knowledge.

Let’s return to Smith’s Smock. In this example, Smith’s evidence at 5pm justifies him in believing the falsehood that his smock will be draped over his chair at 6pm. But if the true proposition that the smock will not be there at 6pm were added to his evidence, this would not rob him of justification for his belief, at 5pm, that the smock is draped over his chair. If the proposition that his smock will not be over his chair at 6pm were added to Smith’s evidence at 5pm, he would still be justified in believing that his smock is then draped over his chair. So, the falsehood justified by his essential grounds (the proposition that the smock is there at 6pm) is not the negation of a defeater, and again we have a case of knowledge according to DJDD. (We might contrast this with a modified version of the example, which is more like a Gettier case. Let Smith believe, at 5pm, that his smock will be on the chair at 5:59pm. This is a justified true belief, but given that the smock will be gone a minute later, here it seems much more of an accident that Smith is right. And in this case, the truth that his smock will not be there at 6pm would seem to rob him of justification for the belief that it will be there at 5:59. So, DJDD seems to treat correctly this modified version of the case as well.)

We will conclude this section with a sketch of how DJDD applies to the examples considered in the previous sections. Let’s consider the three
Gettier cases from Section 2. In the *Nogot/Havit Case*, there is an essential ground that justifies Smith in believing a falsehood (the proposition that Nogot owns a Ford). If the true proposition that Nogot does *not* own a Ford were added to his evidence, Smith would not be justified in believing that someone in his office owns a Ford. So, the falsehood justified by an essential ground is here the negation of a defeater. Condition (iv) is not satisfied, and DJDD correctly implies that Smith does not know. The *Alternate Route* example is handled in a similar way. The essential ground is something like the proposition that Nogot drives a Ford, and has Ford ownership papers, etc. This justifies Smith in believing the falsehood that Nogot owns a Ford, which is the negation of a defeater. In the *Extra Reasons Case*, the Nogot-grounds are not essential to Smith’s justification for the target belief, and so condition (iv) of DJDD is satisfied (in much the same way that condition (iv) of the no essential falsehood-justifying grounds view was satisfied).

Now let’s take a quick look at *Uncle George* and *Fake Barn Country*. In the *Uncle George* case, condition (iv) of DJDD seems not to be satisfied. For example, suppose that the falsehood justified by Smith’s essential grounds is the proposition that George knows that he is an uncle. If the negation of this proposition were added to Smith’s evidence, it seems clear that he would no longer be justified in believing that George is an uncle. Since the relevant falsehood is the denial of a defeater, DJDD yields the intuitively correct result that this is not a case of knowledge. Finally, *Fake Barn Country* is still considered a case of knowledge, since no ground essential to Smith’s justification for believing that he is looking at a barn justifies him in believing a falsehood.17 (Again, we are supposing that even if Smith has a meta-belief to the effect that his belief that he sees a barn could not easily have been false, this does not ground his justification for the target belief; those who reject this kind of supposition are welcome to use DJDD to generate the conclusion that they intuit in this case.)

In spite of these happy results, we are not confident that DJDD will survive scrutiny. However, we are optimistic that some close relative of it will. For now, we hope to have shown in this section that a view very much in the spirit of the no false grounds approach can help us travel a bit further along on the path to knowledge.

### 6. Objections, replies, and concluding discussion

In this section, we anticipate some possible objections to DJDD and offer replies. The fact that DJDD provides the resources for plausible responses to these objections, as we shall see, is a virtue of the theory. We also discuss a few other virtues, concerning several issues at the heart of contemporary epistemology, toward the end of the section.
The first objection has to do with infallibilism, the claim that warrant entails truth. Warrant consists of whatever is needed for knowledge over and above true belief. DJDD implies that warrant consists of justification, along with the absence of essential grounds that justify a falsehood the denial of which would defeat justification for the target belief. As formulated, DJDD is committed to infallibilism, and some might take this to be an objection to the theory. Having acknowledged this, we should also note that some epistemologists think that any satisfactory solution to the Gettier problem requires infallibilism – if they are right, the commitment to infallibilism is a virtue instead of a vice. Before taking a look at the case against infallibilism, we should get clear on why DJDD is committed to the idea that warrant entails truth.

We can show this with a quick reductio. Let’s suppose that a subject, S, has a warranted but false belief, p. DJDD thus implies that its conditions (iii) and (iv) are satisfied: (iii) S is justified in believing p, and (iv) no essential ground justifies S in believing the negation of a defeater. From this, it follows that p itself is not the negation of a defeater. (This requires the claim that if S is justified in believing p, then some essential ground justifies S in believing p. We accept this claim and will say a little bit more about it in the next two paragraphs.) Now, if p is not the negation of a defeater, then ~p is not a defeater, which means that it is not the case that if ~p were added to S’s evidence, then S would not be justified in believing p. But surely it is the case that if ~p were added to S’s evidence, then S would not be justified in believing p. So, assuming DJDD to be a correct theory of knowledge, S cannot have a warranted false belief.

A defender of DJDD might reply to this argument by claiming that it is possible for S to be justified in believing p while no ground is essential to S’s justification for p. If no ground is essential to S’s justification, then condition (iv) of DJDD is automatically satisfied. Let us try to set up a case to illuminate this reply. Consider a modified version of the Extra Reasons case, in which there are two Ford fakers instead of one – let’s call them ‘Nogot’ and ‘Aintgot’ – and there is no Ford owner who works in Smith’s office. In this case, Smith has Nogot-grounds for believing p (the false proposition that someone who works in Smith’s office owns a Ford) and independent Aintgot-grounds for believing p. The Nogot-grounds are not essential, the Aintgot-grounds are not essential, and the conjunction of Nogot- and Aintgot-grounds is not essential. Now, we said earlier that disjunctions of occurrent propositional grounds are themselves grounds, and this would indeed make some disjunction of Nogot- and Aintgot-grounds essential to Smith’s justification. But if we were to reject this claim (and assume Smith does not occurrently believe any disjunction of Nogot- and Aintgot-grounds), then none of Smith’s grounds for believing p would be essential to his justification for it. Hence, no essential ground would justify the denial of a defeater. Conditions (iii) and (iv) of DJDD would be
satisfied, and Smith would have a warranted but false belief in the proposition that someone who works in his office owns a Ford.

The problem with this reply is that p does not seem to be warranted for Smith in this example. Warrant is supposed to be that which yields knowledge when added to true belief. However, we can easily revise this example to make p true, but accidentally so for Smith – for example, we can simply add that some other person unknown to Smith, Havit, works in his office and owns a Ford. This would make p true, but Smith would not know p. So, the modified Extra Reasons case discussed in the preceding paragraph is not a case of a false belief being warranted, and it provides a compelling reason to adopt the claim that disjunctions of occurrent grounds are also grounds. If some disjunction of Nogot- and Havit-grounds is essential to Smith’s justification for p, then some essential ground justifies the denial of a defeater (for example, the proposition that either Nogot or Aintgot owns a Ford). In this way condition (iv) of DJDD fails to be satisfied.

So, DJDD is committed to the idea that warrant entails truth. Why might one think that warrant does not entail truth? There are probably many reasons, but we will focus on three. First, one might think that infallibilism sets the bar for warrant so high that precious few of our beliefs are warranted. However, the way in which DJDD affirms infallibilism allows it to avoid these skeptical consequences. Second, one might think that knowledge has an important component (over and above belief) that doesn’t have much to do with truth, or at least must not entail truth. DJDD is consistent with this view, since justification does not entail truth – and on DJDD, justification is an essential component of knowledge. Third (and related), one might think the commitment to infallibilism cedes too much ground to externalists. After all, the most prominent defenders of the idea that warrant entails truth are in the externalist camp. But DJDD is not a very externalist view. It is consistent with a purely internalist account of epistemic justification, and in this very important way it is not externalist at all. With respect to warrant, according to DJDD it entails truth in virtue of certain logical or quasi-logical relations between sets of propositions. This is not a classical externalist perspective. Warrant entails truth, but not because the exercise of intellectual virtues will guarantee truth, not because of causal connections between facts and beliefs, not because of proper function, and not because of strong safety principles. One who is inclined to reject infallibilism on the basis of an opposition to externalist theories of knowledge might be tempted to embrace it on the basis of a view like DJDD.

It might also be interesting to note that a small change to DJDD seems to result in a fallibilist view. The change is to require a denial of a defeater to be something other than the target belief, p. Here is the modified view, with the changes to DJDD in italics:
Fallibilist DJDD: S knows p if and only if (i) S believes p, (ii) p is true, (iii) S is justified in believing p, and (iv) no ground that is essential to S’s justification for p justifies S in believing some f such that f ≠ p and f is the negation of a defater.

This view does not imply that if S’s belief in p is warranted, then p itself is not the denial of a defeater, and so it blocks the reductio argument for infallibilism given above. The fact that DJDD is so ‘close’ to a fallibilist view provides another reason to think that the worries about infallibilism are not troubling. We are happy to stick with DJDD, largely because the fallibilist version seems ad hoc and we have not explored its consequences thoroughly. But readers may choose between two paths: rest content with condition (iv) of DJDD and embrace the kind of infallibilism that results, or modify it as in Fallibilist DJDD and maintain that this does not make the view significantly ad hoc or unnatural.

We will conclude with a brief discussion of a few other objections and replies. Williamson (2000) attacks the general project of analyzing knowledge in terms of more basic concepts, and part of his attack might serve as the basis for an objection to DJDD. Consider the following passage:

... the difference between knowing and not knowing is very important to us. Even unsophisticated curiosity is a desire to know. This importance would be hard to understand if the concept knows were the more or less ad hoc sprawl that analyses have had to become; why should we care so much about that? (2000, p. 31).

The four conditions of DJDD do not strike us as an ad hoc sprawl. They are not nearly as unwieldy as typical post-Gettier theories of knowledge. More important, DJDD provides a quick and straightforward answer to Williamson’s question. We should care (about the difference between knowing and not knowing) because we care about being in a rational state that does not point us to falsehoods that would undermine its rationality.

Williamson’s argument against certain analyses of knowledge is closely related to what Kvanvig (2003) calls ‘the Meno Problem.’ Kvanvig observes that knowledge appears to be more valuable than mere true belief, and uses this claim to argue against reliabilism. The idea is that reliably formed true belief does not seem more valuable than mere true belief (we take no position on this claim here). This suggests a more general challenge, which some contemporary epistemologists take seriously, namely that any satisfactory analysis of knowledge should at the very least be consistent with the idea that knowledge is more valuable than true belief. If we allow ourselves to engage with the idea of epistemic value, we can use DJDD to address the Meno Problem in a satisfying way. Justified true belief that is itself justified by evidence that does not support a certain kind of false belief is more valuable than mere true belief (and for
that matter more valuable than mere justified true belief). We think that these claims have considerable intuitive appeal, but cannot argue for them here.

Let’s consider another sort of objection based on some considerations from Weatherson (2003), which support the claim that subjects in Gettier cases really know, and hence support the justified true belief (JTB) analysis of knowledge. Weatherson criticizes the extant responses to the Gettier problem because they make knowledge unnatural: that is, either they employ theoretically insignificant terms, or they make knowledge into an unnecessarily complicated property. Weatherson admits that counterexamples plague the JTB theory, but he argues that when all of the relevant criteria are taken into account, the alternatives perform worse than JTB does.

DJDD avoids this criticism. We agree that apparent counterexamples should not always make us jump ship, but DJDD doesn’t have the clear counterexamples that plague JTB.23 DJDD analyzes knowledge in theoretically significant terms. In fact, given the definitions of an essential ground and a defeater, DJDD introduces no concepts that are not already employed or implied by JTB. Of course, DJDD is not as simple as JTB, but it is not an ad hoc sprawl. Naturalness, moreover, is not an all or nothing affair, it comes in degrees. The property identified by the conditions of DJDD seems appropriately natural. If we assume with Weatherson that the property identified by JTB is natural enough for knowledge, then there is good reason to think the property identified by DJDD is as well. Again, DJDD uses all and only the theoretical terms in JTB, and there is good reason to think its condition (iv) is itself significant. It departs from JTB only with respect to the sort of complexity that is needed in any case for freedom from counterexamples.

Finally, DJDD helps to extend an attractive account of the truth connection.24 The truth connection has to do with the relation between epistemic justification and truth. Conee (1992) defends an evidentialist account of the truth connection, according to which justifying features are evidence for truth. DJDD can subsume such an account by illuminating the connection between warrant and truth. DJDD appeals to (essential) justifying features that weed out falsehood as they point to the truth. To have knowledge, on this view, is to have justification that does not point to falsehood of a particularly bad sort. More precisely, in cases where there are truths that would undermine a subject’s justification – defeaters – her essential grounds don’t justify disbelieving those truths. So, the connection between warrant and truth is explained by the fact that warranting features are evidence for truth and also not evidence for a pernicious sort of falsehood.

Falsehood can preclude knowledge in many ways. A false proposition cannot be known. A false ground can prevent knowledge of a true
A falsehood that is not a ground for belief can nevertheless prevent knowledge of a true proposition, when it is justified by an essential ground. But not every falsehood of this sort robs the subject of knowledge. If DJDD is correct, all and only falsehoods the denials of which are defeaters preclude knowledge in this way. We are hopeful that DJDD, even if it ultimately fails as a theory of knowledge, can help to provide an attractive explanation of the several ways in which falsehood precludes knowledge.

NOTES

1 An account along these lines was first proposed by Clark (1963).
2 Feldman, 2003, p. 26. We have changed the numbers and omitted an explanatory sentence at the end of (2). This example is derived from Lehrer, 1970.
3 Some might argue that it is possible to have knowledge without any grounds at all, and object on this basis to the no false grounds approach. We think that justification and knowledge require grounds, and that apparent cases of groundless knowledge turn out either to be cases where the subject has grounds, or lacks knowledge. A full discussion of this issue, however, is beyond the scope of this paper.
4 Feldman, 2003, p. 31. Again, we have changed the numbers. See also Feldman, 1974.
5 Despite some important differences, Harman (1973), Feldman (2003), and Lycan (2006) have all suggested accounts of knowledge along these general lines. As Lycan puts it, ‘we move from no-false-assumptions to no-essential-false-assumptions’ (2006, p. 157). What follows is an attempt to make this sort of view as clear as possible.
7 We would like to thank an anonymous referee for pressing this kind of concern, and for giving advice that led to the definition of an essential ground given in the text below.
8 It might be interesting to note that (1) itself is a conjunction, which satisfies the definition of an essential ground. We take no position here on whether each conjunct is also an essential ground, and this will not matter for our purposes.
9 See pp. 109–111 especially. See also Chisholm, 1982, pp. 45–47.
10 We might imagine that although Smith believes that Nogot drives a Ford, and also that Nogot has Ford ownership papers, etc., he never occurrently believes the conjunction of these propositions. This is one reason for taking conjunctions of propositional grounds to count as grounds, as we are doing here. But this is largely for the sake of convenience.
12 Since we intuit knowledge here, we see this as a virtue of the new theory. We realize that countless epistemologists have the intuition that Smith fails to know in Fake Barn Country. It is worth noting that the new theory can accommodate this intuition, since it is neutral on the kinds of grounds knowledge requires. For example, one might think that Smith’s grounds must include some meta-belief to the effect that his barn-belief could not easily have been false, or to the effect that his belief-forming process is locally reliable. Since these are false, one could claim that an essential ground justifies a falsehood here, and hence that the new theory implies that Smith does not know that he is looking at a barn. The new theory would require an essential false ground, which might not be the way most theorists would go here.
but the point is that denying knowledge in *Fake Barn Country* need not lead one to reject the new theory. Again, though, we intuit knowledge here, and we do not think that anything like the meta-beliefs above is an essential ground.

13 Here we are in agreement with Lycan (2006, pp. 157–158). See also Hetherington, 1999.

14 Warfield discusses several examples in which a subject seems to acquire inferential knowledge from a falsehood. He does not frame them as counterexamples to the no false grounds approach, but they present a formidable challenge to it. The account that we will defend in this section is probably best viewed as a compromise between what Warfield calls the ‘resistance strategy,’ in which the falsehood is claimed to be irrelevant and some truth is claimed to provide justification, and the account that Warfield sketches.

15 Klein (2008) discusses several interesting examples involving what he calls ‘useful false beliefs.’ We think the Warfield and Klein examples pose the same challenge and are amenable to the same sort of account. Klein himself uses a defeasibility theory of knowledge to help account for the fact that we can arrive at knowledge through false belief. We do not find this perspective attractive but cannot explore the issue here.

16 While defeasibility or ‘no defeaters’ accounts of knowledge also make use of this notion (or something like it), it will become clear on reflection that the theory to be proposed in the text is not a version of such an account.

17 One might worry about the relevant difference between *Fake Barn Country* and the modified *Smith’s Smock* cases. Why does the accident (or luck) in the second case rob the subject of knowledge, while in the first case it does not? We think this results from an evidential difference in the two cases. In *Fake Barn Country*, there is a defeater (e.g. there are many fake barns and few real ones in the vicinity), but Smith’s essential grounds for believing that he is looking at a barn do not justify him in disbelieving this truth. In the modified *Smith’s Smock* case, however, the defeater (the smock will not be there at 6pm) is such that Smith’s essential grounds for believing that the smock will be there at 5:59 do tell against its truth. This is why condition (iv) is satisfied in one of the cases but not the other. We are grateful to an anonymous referee for urging us to take this concern into account.

18 See, for example, Zagzebski, 1994, 1996.

19 See, for example, Goldman, 1967.

20 See, for example, Plantinga, 1993.

21 See, for example, Pritchard, 2005.

22 See Kvavng, 2003, pp. 3–6 especially.

23 In fact, for those inclined to take *Fake Barn Country* to be a counterexample to DJDD, we offer Weatherson’s advice. If a promising theory conflicts with just a few intuitions, especially ones about which there is division, it may be best to stick with the theory.

24 See Cohen, 1984 and Conee, 1992 for some discussion of this notion.

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