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No evidence is false

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If evidence is propositional, is one's evidence limited to true propositions or might false propositions constitute evidence? In this paper, I consider three recent attempts to show that there can be 'false evidence' and argue that each of these attempts fails. The evidence for the thesis that evidence consists of truths is much stronger than the evidence offered in support of the theoretical assumptions that people have relied on to argue against this thesis. While I shall not defend the view that evidence is propositional, I shall defend the view that any propositional evidence must be true.

Keywords: Evidence; Justification; Reasons for Belief; Knowledge; Epistemic Rationality

0.   Introduction

According to the "truthers", evidence consists of facts or true propositions:

    ET: One's evidence includes *p* only if *p* is true.[1]

To defend this thesis, they have to fight a battle on two fronts. Some of their opponents defend the statist view that evidence consists of psychological states (e.g., beliefs, experiences, or intuitions) rather than propositions or facts.[2] Some of their opponents agree with the truthers that evidence is propositional but insist that falsehoods can constitute evidence.[3] In this paper, I shall focus on the arguments for the falsies' central thesis, which is that falsehoods can constitute evidence:

    FE: One's evidence can include *p* even if *p* is false.

The falsie view is not the uncontroversial view that we sometimes treat falsehoods as if they are evidence. The falsie view is the controversial view that falsehoods can constitute evidence. The recent arguments for FE, I shall argue, are unpersuasive.

Notice that ET is a thesis about what propositional evidence is, not what evidence one has. ET is consistent with a wide range of views about the evidence that one has. One might say that one's evidence includes just those true propositions that one has in mind when one forms a belief or has an experience. One might adopt a more restrictive view on which one's evidence includes all and only those true propositions one has in mind when one justifiably believes those propositions. One might adopt Williamson's view and say that one's evidence can only include those propositions one knows. The focus in this paper is on what evidence is, not on what it takes to have it and so I shall not defend any positive account of what it is to have evidence.

While my aim is to defend only a conditional thesis (i.e., that one's evidence includes *p* only if *p* is true), I think it's important to explain why I think that it is possible for evidence to be propositional. I do not want to enter into an extended discussion of the merits and demerits of

psychologized accounts of evidence, but to point to a dialectical difficulty that the falsies face.[4] The falsies have to fight a battle on two fronts. First, they have to defend the view that evidence consists of propositions, not just propositional attitudes or mental states. Second, they have to defend the possibility of 'false evidence'. It seems that the best arguments that anyone can offer in support of the view that evidence is propositional are arguments that support ET. These arguments for the propositionality of evidence tend to be linguistic in nature and we shall see that the linguistic evidence favors ET. When the falsies offer their purported counterexamples of ET, it is not at all obvious that the right response to these examples would be to embrace FE. If one is not impressed by the arguments for the propositional view of evidence, the right response might be to adopt some sort of statist view. If, however, one is impressed by the arguments for the propositional view of evidence, the right response will be to defend ET and to try to show that the purported counterexamples to ET are spurious.

Some have asked in conversation whether the arguments for ET undermine the distinction between good and bad reasons. They seem to think that one could say that falsehoods constitute *bad* evidence or *bad* reasons and that true propositions constitute *good* evidence or *good* reasons. I prefer to say that falsehoods do not constitute any sort of reason at all. Reasons are never good or bad on their own. Reasons are good or bad when taken as reasons for specific things. The fact that he has that itchy rash on his arm is a good reason for him to see a doctor and a bad reason to scratch. The fact that he has that itchy rash on his arm is a good reason to think that he should see a doctor and is a bad reason to think he should scratch. The falsies might agree to some of this, but they reject the idea that falsehoods are no reasons at all. They also would reject my friends' suggestion that falsehoods all fall on the side of bad reasons. They argue that ET is mistaken because falsehoods can make things rational, can justify, and can provide you with knowledge. It is because falsehoods can do what good reasons are supposed to do that my opponents think falsehoods can constitute reasons or pieces of evidence. The important point to remember is that this is not a fight between one side that thinks that falsehoods constitute bad reasons and another that thinks that they constitute no reason at all. This is a fight between one side that thinks that falsehoods constitute good reasons and one side that rejects this.

In evaluating these objections to ET, it is important to remember that none of these objections appeals to intuitions that directly disconfirm ET. My opponents object to ET on the grounds that ET is incompatible with combinations of intuitive claims about cases and some auxiliary assumptions about the relationship between evidence and rationality, justification, or knowledge. There is a Duhemian point that we need to bear in mind. If some intuition taken together with some auxiliary assumption implies that ET is mistaken, it is fair to ask whether the proper response is to reject ET or instead to reject the auxiliary assumption. If we had no good independent reason to accept ET or had good independent reason to accept these auxiliary assumptions, then there might be a good case against ET. This is not the situation that we face. There is a considerable body of evidence that supports ET. To reject ET in light of the objections considered here is to reject what is more certain in favor of what is less certain.

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[4] See Littlejohn (2012) for an extended discussion of statist views of reasons.

1.   Justification (I)

Fantl and McGrath defend the following principle:

> JJ: If you are justified in believing *p*, then *p* is warranted enough to justify you in performing an action or forming a belief based on *p* (2009: 99).[5]

They offer the subtraction argument in support of JJ:

> P1.   If you know that *p* then *p* is warranted enough to justify.
>
> P2.   Holding fixed knowledge-level justification while subtracting truth and being unGettiered makes no difference to whether *p* is warranted enough to justify.
>
> C.   Thus, if *p* is knowledge-level justified, *p* is warranted enough to justify.

To see how this is supposed to work suppose you are justified in believing that the stuff in the bottle is gin. Then that proposition is one that is warranted enough to justify you in believing that the stuff is gin or that the stuff is vodka. If you have a modicum of logical ability, you can justifiably infer that this disjunction is true (in part) because the proposition *that the stuff in the bottle is gin* is a reason that supports belief in that disjunction. Moreover, if you justifiably believe that the stuff in the bottle is gin and know that you ought to pour gin into your friend's glass, you can justifiably pour the stuff in the bottle into the glass (in part) because the proposition *that the stuff in the bottle is gin* is a reason for you to pour the stuff into the glass.

On their view, the conditions that distinguish justifiably believing *p* from knowing *p* matter to knowledge (obviously) but they do not have normative significance in the sense one is permitted to treat *p* as a reason for action and belief when one knows that *p* is relevant to these beliefs and these actions. They defend the orthodox view that justifiably believing *p* differs from knowing *p* in that justification does not require truth and it does not require unGettiered belief. Thus, on their view, *p* can be a reason that justifies you in believing and acting even if ~*p*. Since they think that *p* can justify one in performing certain actions even when ~*p*, they think that the proposition *that the stuff in the bottle is gin* can justify one acting as if there is gin in the bottle even when there is not. So, suppose that the bottle marked 'gin' if filled with petrol and the drink you pour your friend nearly kills her. Here is what they say about this sort of case:

> … It is highly plausible that if two subjects have all the same very strong evidence for *my glass contains gin*, believe that proposition on the basis of this evidence, and then act on the belief in reaching to take a drink, those two subjects are equally justified in their actions and equally justified in treating what they each did as a reason, even if one of them, the unlucky one, has cleverly disguised petrol in his glass rather than gin. Notice that if we asked the unlucky fellow why he did such a thing, he might reply with indignation: 'Well, it was the perfectly rational thing to do; I had every reason to think the glass contained gin;

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[5] This is subject to the proviso that *p* is indeed a reason for the relevant belief and relevant action.

> why in the world should I think that someone would be going around
> putting petrol in cocktail glasses!?' Here the unlucky subject … is not
> providing an excuse for his action or treating what he did as a reason; he
> is *defending it* as the action that made the most sense for him to do …
> He is providing a justification, not an excuse (Fantl and McGrath 125).

If they are right and the regrettable action of poisoning your friend is justified, perhaps they are right that the reasons that justify it include the false proposition that the glass contains gin. Without this reason, it is hard to see how true propositions in the neighborhood could do the justificatory work. None of these propositions count in favor of pouring the stuff in the bottle into a glass and serving it to a friend over ice.

Someone could argue that it was wrong to poison your friend and so wrong to pour your friend a petrol over ice. Because you did not have sufficient reason to poison your friend, your action is excusable at best. Because it seemed from your perspective that the right thing to do was to serve your friend the drink you made, perhaps your action is excusable. Why should we classify it as justified? They say that the action was justified because it was, as they put it, "the action that made the most sense for him to do". While I agree that this was the action that it made the most sense to do, the question is whether this is the mark of justification and permissibility. I shall argue that it is not. Before doing that, the important thing to note is this. There is a certain proposition that plays an important role in the agent's thought and in motivating the agent to act that is false and that seems to make a certain course of action and set of beliefs rational because the proposition is itself one that the agent rationally believes. If something plays this role and justifies both belief and action, it seems to play the role of a normative reason. If something plays the role of a normative reason, perhaps it is a normative reason. So, if falsehoods can play the role that Fantl and McGrath suggest (i.e., justifying what you do and what you believe), perhaps falsehoods can be normative reasons. I take it that this is their objection to ET.

If this is their argument against ET, then it seems to matter whether they are right about the mark of justification or permissibility. Are they right that an agent acts permissibly and with justification if the action they perform is "the action that made the most sense for him to do" if we assume that the agent's aims were themselves aims the agent would be justified in having? I think not. It is important to distinguish cases involving factual mistakes and cases involving normative mistakes. Their case is a case of factual mistake. What if the agent makes a normative mistake? They might mistakenly think that something that is not a reason to perform a certain type of act is a reason to perform an act of that type (e.g., they might think that the fact that something is living is a reason not to destroy it even in the case of non-sentient life). They might mistakenly think that something that is a reason to perform a certain type of action is not a reason that bears on what to do (e.g., they might think that the fact that something is sentient is not itself a reason not to step on it). They might mistakenly think that when certain kinds of reasons come into conflict, one sort of reason defeats the other when in fact the opposite is the case. Given that the subject's normative mistakes can be reasonable, certain actions that the agent might have overall reason not to perform might also be the only action that makes sense for the agent to perform when the agent is trying to do what morality requires. These actions

make sense given the agent's noble aim, but if the agent acts on the weaker reason and acts against the stronger reason, the agent does not act permissibly.

At this point, Fantl and McGrath face an awkward question. Take the proposition that one has overall reason to φ. Suppose that one reasonably believes that one has overall reason to φ in a case where one has overall reason to ψ rather than to φ. While φ-ing is the action that it makes sense to perform in light of what you reasonably believe, ψ-ing is the only thing one might permissibly do. So, the false normative proposition cannot be justifiably treated as a reason.

Is this not a counterexample to the general principle they use to argue that falsehoods can justify? Their principle states that if you justifiably believe *p*, then *p* is warranted enough to justify you in performing an action or forming a belief based on *p*. This cannot be right when *p* is a normative proposition that represents what the agent has overall reason to do. Suppose Matt and Jeremy are in two situations where these situations do not differ in terms of their morally relevant features. Both Matt and Jeremy are morally conscientious and fully informed about the facts at hand, but Matt believes justifiably that he has overall reason to φ rather than ψ and Jeremy justifiably believes that he has overall reason to ψ rather than φ. It seems consistent with all of this that Matt is right and Jeremy is mistaken. If so, it seems we can say that while Matt is permitted to act in the way that he thinks he ought to act, Jeremy is obligated not to act on his reasonable but mistaken normative belief. Unless one is a skeptic about normative judgment or a relativist about morality, it seems we have a counterexample to their suggestion that if it makes most sense for an agent to do something, the agent is justified in doing it. We have a counterexample to JJ.

Fantl and McGrath say that if their original principle is mistaken, there is a revised principle in the offing that allows them to say most of what they want to say.[6] Rather than say that *p* is a normative reason that can justify your beliefs and actions whenever you justifiably believe *p*, they say that if you justifiably believe *p*, *p* will not fail to justify you in what you believe or do simply because you do not have sufficient epistemic justification to believe *p*. This allows that other factors can have some bearing on the permissibility of performing those actions that seem to be right given that you believe *p* without saying that those actions can be justified even if *p* turns out to be false (2009: 104). I think it is wise for them to modify their view in just the way they suggest they would consider doing. With the view modified in this way, however, the subtraction argument is no longer a threat to ET.

2.   Justification (II)

A number of recent authors have objected to ET on the grounds that ET conflicts with intuitively plausible principles about justification and evidence. Here, I shall focus on Rizzieri's (2011) objection to ET.[7] Rizzieri's argument against ET is case driven. He asks us to consider this example:

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[6] In conversation, Fantl and McGrath confirmed that they are happy with the weaker principle that does not support the argument against ET since their weaker principle supports their arguments against purism about justification. They said that while mistaken factual beliefs can justify actions like serving your friends poisoned cocktails, mistaken normative beliefs cannot justify actions and agreed that there can be reasonably held mistaken normative beliefs. So, I think that they would be happy to concede that their argument against ET is unsound.

[7] Similar objections are found in Comesaña and Kantin 2010 and Goldman 2009.

I believe that nobody can enter my office (O for now) because I
believe that I have just locked the door (LD for now). Let us
stipulate that I have inferred (O) from (LD). I pushed the lock in
and gave it a quick twist to the left, which usually does the trick;
however, my lock is damaged and does not work. Hence, (LD) is
false.[8]

Here he explains why it would be plausible to take a false proposition to constitute evidence:

[If ET] is correct then (LD) cannot serve as an evidential ground
for (O) … The first difficulty is that it is very plausible that (LD)
does partially constitute my evidence for (O). After all, I am
justified in believing (LD), (LD) supports (O), and an explicit
inference from (LD) is my most immediate basis or ground for
(O).[9]

He adds that it is difficult to deny that LD is evidence for O because LD renders O more probable than
it would have been otherwise.[10]

His objection assumes that what one justifiably believes is a justifying reason and that an
orthodox account of justification on which there can be false, justified beliefs is correct:

JJ2:   If you justifiably believe *p*, *p* is a piece of evidence of yours that
        can justify further beliefs.

Notice that JJ2 is weaker than JJ in one important respect. JJ said that one would be justified in *acting*
on *p* if one justifiably believed *p*. The counterexample to JJ involved an example in which someone
justifiably believed that they ought to do something that in fact they ought not do. Since JJ2 says
nothing about the justification of action, it is not threatened by my counterexample to JJ2. While JJ2 is
weaker than JJ, it is not weak enough. Rather than argue from JJ2 against ET, we should argue from ET
against JJ2 and modify JJ2 in just the sort of way that Fantl and McGrath recommended. Rather than
say that what one justifiably believes is a reason, one should say that what one justifiably believes is
justifiably treated as if it is a reason for belief. If one can justifiably treat counterfeit money as if it is
money and decoy ducks as if they are ducks, perhaps one can justifiably treat non-reasons as if they
were genuine reasons.

This example poses no threat to ET. The case could only be a counterexample to ET if (1) is
true:

1.   That I have just locked my door is evidence that nobody can enter
        my office.

If *p* is evidence for *q* only if the probability of *q* has to be higher when *p* is part of your evidence than it
would have been otherwise, (1) entails:

[8] 2011, pp. 236. O and LD are *propositions believed*, not *beliefs*. The objection is directed against ET,
not the thesis that evidence is propositional.
[9] 2011, pp. 237. His target is Williamson's thesis that your evidence consists of all and only what you
know. He objects to E=K because it implies ET as do the other authors discussed in this section, so I
have modified their remarks to highlight this fact.
[10] 2011, pp. 237.

> 2.   Because I just locked my door, it is more probable than it would
>
>   have been otherwise that nobody could get into my office.

The problem is that (2) entails:

> 3.   I just locked my door.

The case is a potential counterexample to ET only if (1) is true and (3) is false, but the argument just sketched shows that (1) entails (3). The objection to ET fails.

In stating his objection to ET, Rizzieri assumed that evidence for q raises q's evidential probability. I used this assumption to show that his objection fails. Even if we drop this assumption, objections that appeal to JJ2 are bound to fail. Let's suppose that while evidence for q would typically raise q's evidential probability, this is not invariably be the case. Even if it is not, there has to be some necessary condition on evidential support for p to be evidence for q, otherwise everything and anything would be evidence for q. This condition might be highly disjunctive, but whatever that condition is, let us say that C is that condition. Thus, unless 'p is evidence for q' entails 'q satisfies C', p is not evidence for q. If the example discussed is a counterexample to ET we have to assume that for the relevant p and q:

> (i) p is evidence for q.

We saw that (i) entails (ii) and (iii):

> (ii)   Because of p, q satisfies C.
>
> (iii) p is true.

If (iii) is true, the example is not a potential counterexample to ET because the counterexample needs to be one in which a falsehood is evidence for q.

In response to my response to Rizzieri's objection, an anonymous referee has suggested that the conditional probability constraint might be captured as follows:

> 2*.   Because I am justified in believing that I just locked the door and
>
>   because this proposition supports the hypothesis that nobody can enter
>
>   my office, the hypothesis that nobody can enter my office is
>
>   epistemically more probable than it was before.

Since (2*) does not entail (3), it might seem that the objection to ET does not fail for the reasons I have suggested.

I do not think that this response saves Rizzieri's objection to ET. The example could only be a counterexample to ET if we assume (1). Whether (2*) supports the entailment from (1) to (3) is irrelevant because (1) entails (2) and (2) entails (3). The crucial question is this: if we suppose that (3) is false, might (1) nevertheless be true? I think not. To see why, consider:

> 4.   I have just locked the door. That is my reason/my evidence for
>
>   thinking that nobody can enter my office.[11]

It seems that (1) entails (4). Indeed, they seem logically equivalent. To test for entailment, we might consider whether anyone can sensibly assert (1) while denying (4). It seems that they cannot. We might also ask whether asserting (4) having asserted (1) generates a redundant conjunction. It seems that it does. This is to be expected if (1) entails (4), but not if there is some relation between (1) and

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[11] It seems that 'that' in the second sentence refers to the fact that I have just locked the door.

(4) weaker than entailment. Since (4) clearly entails (3), (1) must entail (3) if, as it seems, (1) entails (4). While the referee might be right that (2*) is also true, its truth is immaterial for the point that I wished to make, which is that Rizzieri's example is not a threat to ET unless (1) is true and (3) is false. Since (1) entails (3), it is not a threat to ET.

Taking the hard line and defending ET does not mean severing entirely the connection between justification and evidence. As we saw in the previous section, one can argue that if one justifiably believes *p*, one is as justified as one needs to be to treat *p* as if it is evidence or as if it is a reason. If one can justifiably treat something as a reason if it is not a reason, we can reject JJ2. Can one justifiably treat something as a reason if it is not a reason? Given some orthodox assumptions about justification, it seems so. Most epistemologists agree that one can justifiably believe something if one has strong evidence in its favor and no evidence against. Some of that evidence might be testimonial. Suppose that all the experts testify that *p* is true and that *p* is a reason that they have to believe something further. If their testimony is sufficient to justify believing *p*, why wouldn't it be sufficient to justify believing *p* to be a reason? Why would it fail to be sufficient if, say, it turned out that they were mistaken?

3.   Knowledge

Arnold (forthcoming) argues that cases of knowledge from falsehood cause trouble for ET. In the cases of knowledge from falsehood that are supposed to cause trouble for ET, some subject is supposed to come to know *p* inferentially where the subject's belief that *p* is true is based her further belief that *q*. This subject's further belief is mistaken. Here is one such example:

> Meeting Time: I have a 7 pm meeting, and extreme (and justified) confidence in my fancy watch's perfect accuracy. I make inferences from what my watch says only if I have extreme confidence that it is perfectly accurate (perhaps I have exacting standards for what constitutes a good watch). Having lost track of the time and wanting to arrive on time for the meeting, I look carefully at my watch. Because I have such extreme confidence in my watch's accuracy, I reason: 'It's exactly 2:58 pm; therefore I am not late for my 7 pm meeting'. Again I know my conclusion, but as it happens it's exactly 2:56pm, not 2:58 pm (Warfield 2005: 408; Arnold forthcoming: 2).

If this is a case where the subject, Tom, knows that he is not late for his meeting this might indeed be a counterexample to something, but why think that it is an example to ET? First, this is supposed to be a case of inferential knowledge. Second, this is supposed to be a case where Tom's belief that he is not late for his meeting is based on the proposition that it is exactly 2:58. Third, that proposition is false. Fourth, Arnold suggests that this principle about the evidential basis of inference is true:

> EBI-E: If S knows *p* epistemically based on inference from x, then
>   S's evidence includes x.

EBI-E is supposed to be part of his evidentialist account of knowledge. The evidentialist account he offers does not offer sufficient conditions for inferential knowledge, only the necessary condition that

says that such knowledge is based on evidence.

With these assumptions in place, it seems we have an argument against ET:

P1. In Meeting Time, Tom knows inferentially that he is not late for the meeting.

P2. If Tom knows inferentially that he is not late for the meeting, he knows this based on an inference from the false proposition that it is exactly 2:58.

C1. Thus, Tom knows based on an inference from a false proposition that it is exactly 2:58.

P3. If Tom knows this based on an inference from the false proposition that it is exactly 2:58, Tom's evidence includes the false proposition that it is exactly 2:58.

C2. Thus, Tom's evidence includes the false proposition that it is exactly 2:58.

Obviously, (C2) is incompatible with ET. Does this show that the truther view is mistaken?

The truthers can say a number of things in response. First, they might remind us that the crucial thought experiment is a myth. When someone claims that one of our pet theories has been falsified by experience, we can always claim that the fault lies not with the theory but with the ancillary assumptions needed to determine what our theories observational consequences are. The intuitions that seem to support (P1) might be correct. If we accept (P1) on the basis of our intuitions and reject ET on the basis of the argument sketched above, we have to assume that (P2) and (P3) are correct. These claims are not supported by the intuitions we have about Meeting Time, but by further assumptions such as EBI-E. The truther might concede that while intuition is incompatible with the conjunction of (P1)-(P3) and ET that the way to avoid contradiction is to reject EBI-E rather than ET. If the evidence provides stronger support for ET than EBI-E, this would seem to be the proper response.

Arnold does not discuss the evidence that the truthers have offered in support of ET. While I share some of his intuitions about Meeting Time, I have to say that my confidence that Meeting Time is a case of knowledge from falsehood is much higher than my confidence in the conjunctive proposition that this is a case of knowledge from falsehood and could only be such if (P3) is true. If Arnold's description of the case is correct, we have to assume that:

1.   Tom's evidence includes the proposition that it is exactly 2:58.

We also have to assume that because it is not 2:58 in Meeting Time that:

2.   Tom does not know that it is 2:58 because it is not true that it is 2:58.

Suppose Tom discovers that his watch is off by a few minutes. Earlier he had said, "My evidence for believing that I will not be late for the meeting is that it is exactly 2:58". It seems Tom speaks falsely if he says:

3.   When I spoke earlier, I spoke the truth because I never claimed that it was 2:58, only that my evidence was that it was 2:58.

The only plausible explanation as to why (3) is false is that ET is true and (1) is false. If (1) is false, intuitions about Meeting Time lend no support whatever to the thesis that there can be false evidence. Consider some remarks that *we* might make about Tom's evidence if (1) and (2) are correct:

4.   Tom has a reason to believe that he will not be late, which is that it is 2:58. But, he doesn't know that it's 2:58 because it's not true that it's 2:58.

5.   I know that it's not 2:58, but Tom has a reason to believe that he will not be late, which is that it is 2:58.

If the evidence you have is also evidence there is, we would also have to say things like this:

6.   There is indeed a reason for Tom to believe that he's not late, which is that it is 2:58. Of course, it's not 2:58. He only thinks that because his watch is mistaken.

If (1) and (2) were both correct, (4)-(6) should be true. It seems, however, that each of these claims is false. Indeed, each is a contradiction.[12] Since they are contradictions, (1) is incompatible with (2) and Meeting Time poses no threat whatever to ET.

Someone might offer a response on Arnold's behalf.[13] Consider the first sentence in (6). In saying "There is indeed a reason for Tom to believe that he's not late, which is that it is 2:58", the speaker might assert that Tom's reason is a proposition or assert that Tom's reason is a fact. The contradiction, someone might say, only arises if we assume the latter, but Arnold must be assuming the former. And so, someone might say, the objection fails.

I think that this misses the force of the objection. When we consider (6), it quite clearly seems contradictory. *That* is the evidence that when we assert "There is indeed a reason for Tom to believe that he's not late, which is that it is 2:58", the speaker is committed to the truth of the proposition "It is 2:58". Since we have stipulated that it is not 2:58 at the relevant time, that is precisely why we think (6) must be false. The falsies cannot explain why (6) seems contradictory because they have tried to use this case as a counterexample to ET. All the linguistic evidence suggests that the language does not work they way they need it to in order to state their counterexamples. It suggests that evidence ascriptions are factive in the way that knowledge ascriptions are and belief ascriptions are not.

We find further support for ET when we think about the link between evidence and reasons for action. Often the reasons we have for our beliefs are also reasons we have to act in various ways. If ET is false, the false proposition that, say, the stuff in the glass is gin might not just justify a belief (e.g., the belief that if the stuff in this bottle is tonic, combining this stuff and that stuff would result in a gin and tonic), it might also provide the agent with a reason to mix some of the stuff from this bottle with the stuff from that bottle. Supposing that the stuff in the bottle is actually petrol and supposing further whatever we must to suppose that the false proposition that the stuff is gin is part of Tom's evidence, we could say this:

7.   There is a reason for Tom to believe that he can mix a gin and tonic, which is that the stuff in this bottle is gin.

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[12] As observed by Unger (1975).

[13] This was suggested by an anonymous referee for this journal.

Because Tom wants a gin and tonic so badly, he forms the belief that he should mix the stuff in the bottle with the tonic and drink down the mixture. If this is just the sort of occasion where a reason for belief does double duty as a reason for action, we get:

8.   There is a reason for Tom to mix the stuff in this bottle with the

        tonic and drink down the mixture, which is that the stuff in this

        bottle is gin.

For something that is a reason to be a reason to perform some type of action, the reason has to stand in some relation to the prospective course of action to be a reason to perform an act of that type rather than some other type. Typically, reasons are reasons for the options that they are reasons for because they count in favor of performing an act of a type. If so, then it seems natural to suppose that:

9.   Something counts in favor of mixing the stuff with tonic and

        drinking the mixture, which is that the stuff in the bottle is gin.

That seems false. Not only does (9) seems quite obviously false, it also seems that (9) entails:

10.   Because the stuff in the bottle is gin, something counts in favor of

        mixing the stuff with tonic and drinking the mixture.

Owing to the factivity of 'because', 'Because p, q' are true only if both p and q are true. If the propositions that constitute reasons to believe constitute reasons to act (e.g., when the beliefs in question rationalize the actions in question), then because reasons for action are favorers and only facts favor, it seems that only facts are fit to be reasons to believe. If false propositions were reasons to believe or reasons to act, they could not figure in explanatory claims like (10). If they could not figure in such explanatory claims, it does not seem they could explain how anything counted in favor of an action or how anything supported a belief. If reasons have to explain how there is something good or attractive about what the reasons are reasons *for*, reasons have to be facts. False propositions are not facts.

There is a further reason to think that evidence consists of true propositions only. Let us consider a variant on Meeting Time, one in keeping with the holidays:

> Santa: Virginia's parents tell her that Santa will put presents under the
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> tree for her. Believing what her parents tell her, she infers that there
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> will be presents waiting for her tomorrow under the tree. She knows
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> that there will be presents.

We might suppose that Virginia's belief that there will be presents under the tree is based on her belief that Santa will bring her presents, not some true belief such as the belief that her trustworthy parents told her that somebody would put presents under the tree. Because visions of sugarplums were dancing in her head, Virginia did not consider other things she believed on the word of her parents. Among the things that she believes on her parents say so are the following propositions: that Santa is a person, that neither her mother nor father is Santa, that no good person would try to enter somebody's home without first asking her parents whether they could enter, that Santa sneaks in when nobody is awake without ever asking her parents for permission to enter, and that Santa is a good person. If each of the propositions her parents told her were part of her evidence, her evidence would consist of an inconsistent set of propositions. I take it that most kids believe propositions like this when they believe

they will get a visit from Santa. While Virginia believes an inconsistent set of propositions, I take it that she still knows that there will be presents.

It seems that the grounds we have for stating that Tom's evidence includes the false proposition that it is exactly 2:58 we have for stating that Virginia's evidence includes the false proposition that Santa will bring her presents. Remember that the motivation for saying that Tom's evidence included the false proposition that it is exactly 2:58 was that Tom knew that he was not late for his meeting and his belief that he was not late for the meeting was based on his belief that it was exactly 2:58. Because this seems to be a case of inferential knowledge, EBI-E tells us that the false proposition that it is exactly 2:58 is part of Tom's evidence. Santa has the same structure as Meeting Time. Virginia knows that she will have presents and her belief that she will have presents is based on the prior belief that Santa will bring them. If she knows inferentially that she will have presents, EBI-E tells us that the false proposition that Santa will bring her presents will be part of her evidence. The main difference between the cases is that the propositions that Tom treats as his evidence form a consistent set and the propositions that Virginia accepts form an inconsistent set. I submit that the grounds we have for saying that Tom's evidence includes falsehoods are grounds for saying that Virginia's evidence consists of an inconsistent set of propositions. Given EBI-E and our intuitions about knowledge from falsehood cases, I cannot think of any way that is not *ad hoc* for ruling out the possibility of someone like Virginia having a body of evidence consisting of an inconsistent set of propositions.

What would be wrong with saying that Virginia's evidence consists of an inconsistent set of propositions? The evidential probability of h for S is typically taken to be the conditional probability of h on S's on e (where e is S's total evidence). Remember that $P(h|e) = [P(e|h) \times P(h)]/P(e)$ provided that $P(e) > 0$ and that if $P(e) = 0$, both $P(h|e)$ and $[P(e|h) \times P(h)]/P(e)$ are undefined.[14] If the propositions that constitute Virginia's evidence are inconsistent, $P(e) = 0$. One problem with describing Virginia's evidence as consisting of an inconsistent set of propositions is that the evidential probability of the hypothesis that there will be presents waiting for her under the tree will be undefined. You might think that the intuition that she has knowledge in this case reflects the further intuition that she has good evidence in this case. It is hard to see how this intuition could be correct if the evidential probability for the hypotheses she considers and that we think she has good evidence for is undefined.

Things go from bad to worse when you remember that the standard approach to evidential confirmation is one on which a body of evidence is evidence for a hypothesis h iff $P(h|e) > P(h)$. If $P(h|e)$ is undefined, we cannot say that $P(h|e) > P(h)$. I suppose that Arnold would say that Virginia knows that she will have presents only if her belief that she will have presents is based on evidence. (Why? Because, presumably, Santa is a case of inferential knowledge if it a case of knowledge and Virginia's belief is arrived at via inference. These seem to be the grounds we have for describing Meeting Time as a case of inferential knowledge. Once we identify the case as a case of inferential knowledge, EBI-E tells us that the subject's belief *must* be based on evidence (and not just what the subject *takes* to be evidence). At that point, we can stipulate that the subject's belief is based on a false proposition.) Question. For Virginia to know p inferentially, EBI-E says that her belief that p is true

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[14] Williamson (2009: 310).

must be based on some evidence *q*. Can someone know *p* inferentially and have her belief based on the evidence that *q* where *q* is *not* evidence for *p*?

If our intuitions about Santa and Meeting Time are to be taken at face value, I think there are cases of knowledge from falsehood. I do not think that that the possibility of such cases depends upon whether there can be false evidence. Not only do we have good independent evidence against the possibility of false evidence, the Santa case shows that the crucial assumption in Arnold's argument against ET is *highly* contentious. If Meeting Time and Santa are cases in which we have inferential knowledge from false evidence, these cases show that our evidence can support hypotheses even when the evidential probability of these hypotheses is undefined. If, however, evidence can only justify when it raises the probability of that the propositions we believe are correct, EBI-E is mistaken.

If this is correct and Tom's evidence does not include the proposition that it is exactly 2:58 why do we think Tom has knowledge in Meeting Time? Arnold's evidentialist view states that one can have inferential knowledge only based on evidence. We have already seen that there is some reason to distinguish justifiably responding to something that is evidence from justifiably treating something that is not evidence as if it is. It is a surprising fact that you can sometimes treat something that is not evidence as if it is evidence for what you believe and thereby acquire knowledge. It is surprising that knowledge from falsehood is possible. Surprising facts call out for explanation. Here is a suggestion. Sometimes, treating *q* as if it is evidence in coming to believe *p* is way of safely believing *p* even if *q* is false (i.e., there are no nearby worlds in which you treat *q* as if it is a reason to believe *p* in which you thereby come to falsely believe *p*). Sometimes when you come to safely believe *p* by treating *q* as if it is evidence, *q* is not actually evidence. If treating something as if it is evidence in coming to believe *p* will be a way of safely believing *p*, perhaps treating something as if it is evidence is a way of acquiring knowledge even if what we treat as evidence is not evidence.[15]

In the cases considered here, it does seem that Tom and Virginia treat things as evidence for believing certain propositions and there are no nearby worlds in which Tom and Virginia believe these propositions falsely when they form their beliefs they way that they actually do. If safe methods generate knowledge, treating non-evidence as if it is evidence might be a way of generating knowledge. It is interesting (to me, at least) that we are not inclined to attribute knowledge to Tom when he infers (correctly) some of the obvious consequences of his (purported) evidence. For example, it is obvious to us and to Tom that if it is exactly 2:58, it is not 2:59. Tom might form the true belief that it is not 2:59 but Tom does not know that it is not 2:59. Why not?

If Tom's evidence really included the proposition that it is 2:58 and he knew that this was part of his evidence, we might expect that he would be able to knowingly deduce that it is not 2:59. Surely in worlds where Tom knows that it is exactly 2:58 and this proposition is part of Tom's evidence, Tom can come to know that it is not 2:59 by means of competent deduction. Why would competent deduction of a true proposition from Tom's evidence generate knowledge in one case but not another? I do not think the evidentialist account that Arnold provides can provide us with any answer to this question. Additional resources are needed to explain why sometimes deducing a true proposition from one's evidence generates knowledge and sometimes it does not. Here is a suggestion that the

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[15] For a defense of the safety requirement on knowledge, see Williamson (2000).

evidentialist could use, but it is a suggestion that I think shows that EBI-E does no explanatory work whatever. My hypothesis is that Tom cannot knowingly deduce that it is not 2:59 because while Tom's belief that it is 2:59 is true it easily could have been mistaken. One advantage of ET is that it does a better job explaining why competent deduction from the propositions known to belong to your evidence generates knowledge than alternative view does. The alternative view that allows for false evidence has to try to explain the acquisition of inferential knowledge without letting evidence do much of the explanatory work.

If the hypothesis that treating non-evidence as evidence can generate knowledge when it does because it is a safe way of forming beliefs, then I have failed to explain how knowledge from falsehood is possible. Even if my conjecture is incorrect, I have demonstrated that the possibility of knowledge from falsehood gives us no real reason to think that falsehoods ever constitute evidence.

4.   Conclusion

We have considered three objections to ET and seen that none of them present a serious challenge to the view that says that one's evidence consists of facts or true propositions. The first two objections assumed that what one justifiably believes must belong to one's evidence, but we have seen no reason to prefer this view that says that what one justifiably believes may be treated *as if* it is a genuine reason or a piece of evidence. In light of the evidence for ET, I think we should not assume that it is impossible to have sufficient evidence to believe falsely that *p* is a genuine reason for belief. The third objection assumed that knowledge from falsehood is possible only if there is false evidence. In the cases thought to threaten ET, I think we should say that the subject acquires knowledge because treating something *as if* it is evidence is a safe way of forming beliefs. I conclude that none of the recent objections to ET gives us any serious reason to doubt that any propositional evidence must be true.

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