
JUSTIFIED BELIEF FROM UNJUSTIFIED BELIEF

BY

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Abstract: Under what conditions is a belief inferentially justified? A partial answer is found in *Justification from Justification* (JFJ): a belief is inferentially justified only if all of the beliefs from which it is essentially inferred are justified. After reviewing some important features of JFJ, I offer a counterexample to it. Then I outline a positive suggestion for how to think about inferentially justified beliefs while still retaining a basing condition. I end by concluding that epistemologists need a model of inferentially justified belief that is more permissive and more complex than JFJ.

This paper argues against a popular epistemic principle of inferential justification. The principle says that a belief is inferentially justified only if all of the beliefs from which it is essentially inferred are justified. I call this principle, *Justification from Justification*, or JFJ. In the first section, I discuss JFJ's importance. In the second, I explore its logical relations to some similar principles. In the third, I articulate the version of it that I will argue against. In the fourth, I present and defend a counterexample to that version. And in the fifth and sixth, I reply to two important objections and suggest how we can reject JFJ while still retaining the basing condition on justified belief.

1. *JFJ's importance*

JFJ is a principle about doxastic, as opposed to propositional, justification. Here I will follow current orthodoxy: a proposition is propositionally justified for a person if and only if that person possesses a justifier for it. And a person's belief is doxastically justified if and only if the believed proposition

is propositionally justified, and her belief is based on the relevant possessed justifiers. So JFJ says that a belief is inferentially and doxastically justified only if all of the beliefs from which it was actually and essentially inferred are doxastically justified. Hereafter I will drop the 'doxastic' qualifier, letting it be understood that our topic is doxastic justification.

Here are some common appeals to JFJ. One is in everyday argumentation, in particular when someone tries to show that a belief is *unjustified* by arguing that it was inferred from an unjustified belief. The simplest way to make this inference valid calls on JFJ. We often argue in this way without making it explicit that we are relying on JFJ, much less arguing for JFJ, something that indicates how obvious we take JFJ to be.

Second are appeals to JFJ that occur in the debate about the structure of justified beliefs. Here is a representative passage from Hillary Kornblith (1980, p. 603):

Consider some person's justified belief that *p*. What might make a person justified in having such a belief? Either that belief is not justified, even in part, by its dependence on other beliefs, or there is a set of beliefs *B* such that *p* is justified in virtue of its dependence on the members of *B*. We may now ask of each of the members of *B* whether that belief is justified in virtue of its dependence on other beliefs, and so on. A tree structure results.

Kornblith then appeals to JFJ:

Clearly, it is not possible, in tracing the source of a belief's justification in this way, that one should come across an unjustified belief; a belief cannot be justified in virtue of its dependence on another unjustified belief. There are then three possibilities.

Kornblith continues in a familiar way: do justified beliefs form a coherentist, foundationalist, or infinitist structure? Though Kornblith employs JFJ as a premise in his argument for this list of options, he offers no support for JFJ.¹

Third is the central role JFJ plays in some accounts of the epistemology of inference – specifically in accounts that say inference can transmit, but never generate, justification. According to such accounts, if one begins from one or more premise-beliefs that are unjustified, any belief that one goes on to infer will also be unjustified. Here is Robert Audi (2011, p.184):

... inference is not a basic source of justification or knowledge, but rather *transmits* and thereby *extends* them, in appropriate circumstances, from one or more premises to the conclusion inferred from them. We can extend our justification and knowledge by inference, but it appears that if we have none to start with, inference, unlike perception, can give us none. Even amply justified inferences – roughly, inferences we are amply justified in drawing *given* the assumption of true premise(s) – do not *create* justification or knowledge when, because we neither know nor have justification for our premise(s), there is none to start with.²

Audi, like Kornblith, provides no supporting reasons for JFJ. If Audi and Kornblith think that JFJ does not need to be supported, then they are not alone: arguments for JFJ are scarce.³

Fourth is the role that JFJ plays in some analyses of justification-defeaters. For example, Peter Klein (2008, p. 34) claims that a belief fails to be inferentially justified if it was inferred from a premise-belief whose justification is defeated. Strictly speaking, this claim does not entail JFJ since it only covers cases where a premise-belief is unjustified because of a justification-defeater. This allows for cases where a premise-belief is unjustified, but the belief inferred from it is inferentially justified – just as long as the premise-belief is unjustified due to something other than a justification-defeater. It would be odd though if all exceptions to JFJ ran along these lines. It is much more likely that Klein is assuming JFJ.

2. *Inferential pedigree principles*

JFJ belongs to a broader family of principles, the members of which assert that some positive inferential epistemic status (e.g. being inferentially known, being inferentially warranted, or being inferentially justified) belongs to a conclusion-belief only if that belief's inferential pedigree meets muster in some way. Call these *inferential pedigree principles*. In this section, I will clear the way for the rest of the paper by arguing that JFJ does not entail any of the inferential pedigree principles that have been recently criticized in the literature; nor, as we will see, is it entailed by any of those principles. Two things follow: the denial of one of those principles cannot be used to show that JFJ is false; and none of these principles, even if defended against recent attacks, can be used to establish JFJ. The upshot is that JFJ must be assessed on other grounds.

Let's first review those other principles. Ted Warfield (2005) and Peter Klein (2008) have argued against the principle that says S inferentially knows p only if S knows each premise-belief from which S essentially inferred p.⁴ Call this principle *Knowledge from Knowledge*, or KFK. Warfield and Klein both argue against KFK by providing counterexamples to another pedigree principle that KFK entails. They directly attack the principle that says S inferentially knows that p only if all of the premise-beliefs from which S essentially inferred p are true beliefs. Call this principle *Knowledge from Truth*, or KFT.⁵ Using this same general strategy, Federico Luzzi (2010) presents a case that can be used to motivate rejection of KFK. It consists in a possible counterexample to another pedigree principle that KFK entails. That principle says that S inferentially knows p only if all of the premise-beliefs from which S essentially inferred p are not Gettiered. Call this principle *Knowledge from non-Gettiered Belief*, or KFNG.

Next are the entailments. Here first is why JFJ does not imply either KFK, KFT, or KFNG, starting with why it does not imply KFK. Assume for conditional proof that S inferentially knows some conclusion, *c*. From this and the plausible principle that inferentially knowing entails having an inferentially justified belief, it follows that S has an inferentially justified belief that *c*. Then from the claim that S has an inferentially justified belief that *c* and JFJ, it follows that S has a justified belief in each premise from which S essentially deduced *c*. This however is much weaker than the needed claim that S *knows* those premises. That would follow if justified belief is sufficient for knowledge. But since it is not, we cannot derive KFK. A similar pattern shows up when we look at whether JFJ implies KFT. KFT follows from JFJ if each of S's premise-beliefs is true. However all that we can derive from JFJ and what is available for conditional proof (namely, that S inferentially knows *c*) is that S's premise-beliefs are justified. But since justified belief is not sufficient for true belief, we cannot derive KFT. And the same pattern occurs again when we consider whether JFJ implies KFNG. This implication holds if each of S's premise-beliefs is not Gettiered. However all we can derive from JFJ and what we are allowed to assume for conditional proof (again that S inferentially knows *c*) is that S's premise-beliefs are justified. But since justified belief is not sufficient for not being Gettiered, we cannot derive KFNG.

Going the other way, neither KFK, KFT, nor KFNG can be used to establish JFJ. To see that KFK cannot be used to establish JFJ, assume first that knowledge is analyzable. Assume, that is, that knowing *x* is equivalent to having a justified belief that *x*, and meeting some other (presumably conjunctive) condition – call it *C* – on *x*. So for a premise, *p*, and a conclusion, *c*, KFK is equivalent to this: If S has an inferentially justified belief that *c* and that belief meets all the other conditions on inferentially knowing *c*, then S has a relevant premise-belief that *p* which is justified and meets all the other conditions on knowledge; for short: $(Jc \ \& \ Cc) \rightarrow (Jp \ \& \ Cp)$. And JFJ is equivalent to this: If S has an inferentially justified belief that *c*, then S has a relevant premise-belief that *p* which is justified; for short: $(Jc \rightarrow Jp)$. The obvious way to try to derive the second of these from the first is via a conditional proof that employs $(Jc \rightarrow Cc)$ as a premise. $(Jc \rightarrow Cc)$ says that if S has an inferentially justified belief that *c*, then this belief meets all the other conditions on knowledge. But this is false since justification is independent of (at least) the truth condition on knowledge. The same pattern shows up with KFT. It is equivalent to $(Jc \ \& \ Cc) \rightarrow p$. The obvious way to reason from this claim to $(Jc \rightarrow Jp)$ uses $(Jc \rightarrow Cc)$ and $(p \rightarrow Jp)$ as premises; but both of the latter are false. KFNG faces the same fate. It is equivalent to $(Jc \ \& \ Cc) \rightarrow NGp$. And the obvious conditional proof from it to $(Jc \rightarrow Jp)$ uses $(Jc \rightarrow Cc)$ and $(NGp \rightarrow Jp)$ as premises. But, as we saw, the first of these, $(Jc \rightarrow Cc)$, is false.

Prospects are no better on Timothy Williamson's view that knowledge is unanalyzable. For brevity, I will just consider whether KFK can be used to establish JFJ. The most straightforward way to argue from KFK to JFJ, while assuming unanalyzability, uses $(Jc \rightarrow Kc)$ and $(Kp \rightarrow Jp)$ as premises. Both of these last claims are compatible with unanalyzability, since unanalyzability allows for necessary conditions on knowledge just as long as they do not culminate in an analysis of knowledge. However, the first, $(Jc \rightarrow Kc)$, is false: one can have an inferentially justified conclusion-belief but fall short of knowing that conclusion. Similar problems arise in attempts to argue from KFT to JFJ, and from KFNG to JFJ on the unanalyzability view.

Since these entailments do not hold, we must look elsewhere for reasons to accept or reject JFJ. But first we need a more precise formulation of JFJ.

3. *Single-premise JFJ*

The simplest application of JFJ's basic idea is to a conclusion-belief that is inferred from a single premise-belief. Proponents of JFJ have to say these cases are governed by:

Single-Premise JFJ: Where S's belief that p is inferred from one premise-belief and is not epistemically overdetermined, S's belief that p is inferentially justified only if that premise-belief is justified.

Four clarifications are important to keep in mind.

First, this principle does not imply anything about an order of priority among justified beliefs. It simply states a necessary condition on a belief's being inferentially justified. This distinguishes it from a stronger principle that says a conclusion-belief is justified only if the premise-belief that it was inferred from is justified independently of, and prior to, the justification of that conclusion-belief.⁶ Single-Premise JFJ is consistent with rejecting this stronger principle. This is important since it means that Single-Premise JFJ can be endorsed by coherentists and even some non-coherentists who hold that it is primarily *sets of beliefs*, not individual beliefs (which must then lie in some priority ordering), that are either justified or not.⁷

The second clarification concerns the exclusion of cases involving epistemic overdetermination. *Mixed-route overdetermination* occurs when a belief is inferred from one (or more) premise-beliefs, but is also immediately (i.e. non-inferentially) based on some non-doxastic state, like a sensory experience, when either one of these routes would have sufficed for the formation of the belief. *Two-inferential route overdetermination* occurs when a conclusion is inferred from two (or more) premise-beliefs, either one of which (or just a proper subset of which) would have sufficed for the

inference to that conclusion. We can evaluate the basic idea behind JFJ without having to determine whether beliefs that are overdetermined in these ways (especially in those instances where only one route is a justifying one) are justified by focusing on the simpler Single-Premise JFJ principle.

Third, Single-Premise JFJ is about being inferentially justified, which is importantly different from an inferred belief's being justified. An inferred belief can be justified even if it is not *inferentially* justified. For example, a belief can enjoy basic justification because it is based on a perceptual state that justifies it, while also being based on an obviously fallacious inference. This belief, despite having an inference in its pedigree, is not inferentially justified since it does not owe any of its justification to being inferred. To be inferentially justified, a belief must be justified *because of* the inferential reasoning that it is based on.

Fourth, Single-Premise JFJ requires *actual* premise-beliefs and *actual* inferences. A premise-belief that one could form, but does not form, cannot satisfy this principle. The same is true for an inference that one could make, but does not make. This demand for actual beliefs and actual inferences is supported by the same cases that are typically used to establish the basing condition on justified belief. For example:

BOB AND HIS SON: Bob believes that his son is innocent of the crime that the police charged his son with. The sole basis of Bob's belief is his inference from his belief that his son is perfectly moral. This last belief is unjustified because it is a product of wishful thinking and because Bob has plenty of evidence against it. Moreover the lead detective told Bob that the crime in question was committed at 10:00 PM on Monday, and Bob remembers that he was at home with his son at that time. But neither the detective's testimony nor Bob's memory play any role in the formation of Bob's belief that his son is innocent.

Even though Bob could have formed a justified belief that the crime was committed at 10:00 PM on Monday, and he could have formed a justified belief that his son was at home at that time, and he could have inferred from these beliefs to the belief that his son is innocent, his actual belief that his son is innocent is unjustified. All of those unactivated dispositions are no help. Only *actual* premise-beliefs and *actual* inferences can function as justifiers for beliefs.

4. *A counterexample to single-premise JFJ*

Here is my counterexample:

FRED: Fred is very busy. Each week, he has at least twenty scheduled meetings. Going only on his memory, he believes that he has a meeting with Mary next Wednesday at noon. However, Fred's memories about

the exact date and time of his meetings are often mistaken: when he has a meeting scheduled for a Tuesday, Wednesday, or Thursday, his memory is often off by a full day; and his memories about the exact time of his meetings are also frequently wrong. Fred knows these things about himself. But he also knows that he is very good at determining *what week* a scheduled meeting falls on when he infers this from one of his memory-based beliefs about that meeting's exact date and time. In the present case, Fred infers from his memory-based belief that he has a meeting with Mary at noon next Wednesday to the conclusion-belief that he has a meeting with Mary sometime next week.

I will argue that Fred's conclusion-belief is inferentially justified even though it is based on a premise-belief that is not justified.

This is not an esoteric case; it follows a common recipe. First someone forms a belief that is unjustified because it is over-precise, and they do so when they have plenty of evidence that this belief is over-precise. They then reason from this to another less precise claim with much looser truth-conditions. The person does all of this consistently across many similar cases, with the result that the inferred beliefs are very often true.⁸ Take another example. I regularly accept what the speedometer in my car says at face value. My present belief, so formed, is that I am driving 78 miles per hour. But this belief is unjustified since I have plenty of undefeated evidence that my speedometer is fifteen years old and that it has never been recalibrated. Still I go on to infer that I am driving above the posted speed limit of 65 miles per hour. Cases of this kind, I will argue, disprove JFJ.

The FRED case, which will be my focus, is a successful counterexample to Single-Premise JFJ if (1) Fred's conclusion-belief that he has a meeting with Mary sometime next week is not epistemically overdetermined, (2) his premise-belief that he has a meeting with Mary next Wednesday at noon is unjustified, and (3) his conclusion-belief that he has a meeting with Mary next week is inferentially justified.

(1) is built into the case. There are four important points to notice here. First, applying an earlier point, even *if* Fred were to abandon his premise-belief and instead believed on some other basis that he is scheduled to meet Mary next week, this mere disposition does not change the fact that Fred's actual belief that he has a meeting with Mary next week is inferentially based on his actual premise-belief. Second, because the simple inference that Fred makes from *I have a meeting with Mary at noon next Wednesday* to *I have a meeting with Mary sometime next week* is valid, another belief that plays an important role in the case need not function as a premise-belief. This is Fred's background belief that in a high percentage of instances in which he infers the week of a meeting from a memory-based belief about that meeting's exact date and time, the conclusion-beliefs that he arrives at are correct. Third, this background belief does not make Fred's conclusion-belief epistemically

overdetermined since the background belief on its own, without the premise-belief, would not result in Fred believing that he has a meeting with Mary next week. To arrive at a belief that identifies the week of the meeting by the process identified in the background belief, an additional belief about the meeting's exact date and time is needed. These last two points yield the fourth point: since this background belief does not function as a premise-belief and it does not make the case one of overdetermination, the case is subsumed under Single-Premise JFJ.

(2) says that Fred's premise-belief that he has a meeting with Mary at noon next Wednesday is unjustified. This is intuitive and it is supported by an impressive range of theories of justified belief. On Alvin Goldman's process reliabilism, Fred's premise-belief is unjustified because the belief-forming process that produced it, a form of memory that yields beliefs about the exact date and time of future meetings, is unreliable. On the internalist evidentialism defended by Earl Conee and Richard Feldman, Fred's premise-belief is unjustified because it fails to respect his total evidence. Specifically it fails to respect his memorial evidence for having a poor track record in forming such beliefs this way. On the view that justified belief is a matter of fulfilling one's epistemic duties, Fred's premise-belief is unjustified because it was formed despite that same memorial evidence, something that surely violates an epistemic duty. And on theories that incorporate a no-defeater condition, his premise-belief is unjustified because any *prima facie* justification it might enjoy is defeated by his memorial evidence.

Last is (3), the claim that Fred's conclusion-belief is inferentially justified. Since this claim does not seem to be either obviously true or obviously false, I will proceed with explicit arguments. In the remainder of this section, I will argue that Fred's conclusion-belief is inferentially justified modulo the basing condition. To support this, I offer an induction across leading theories of justification, arguing that each theory delivers the verdict that Fred's conclusion-belief is justified. In the next section, I will argue that it also meets the basing condition.

Let's start with process reliabilism. Suppose we follow Fred for a year, studying his beliefs about the weeks that his meetings fall on. We notice that some of these beliefs are caused by Fred looking at his calendar, others by his personal assistant's testimony, etc. Clearly these processes differ from the ones operating in the FRED case. Suppose though that we identify instances in which Fred forms such beliefs by inferring them from beliefs about the exact dates and times of his meetings. We then notice that these cases divide into subcases depending on the genealogy of the latter beliefs. Some of these beliefs result from guesses, some from the testimony of his personal assistant, etc. Since these subcases do not involve the same processes that are at work in the FRED case, we set them aside. We are interested in the set of subcases in which Fred's beliefs about the exact date and time of his meetings are produced by his own memory. Suppose finally that when we isolate and study the

relevant instances, we discover that the conclusion-beliefs that Fred ends up forming about the weeks of his meetings are very often correct. This, I submit, is good reason to think Fred's conclusion-belief is reliably produced. And for reliabilists, this is reason to think they are justified.⁹

Admittedly this is at odds with Goldman's (1979) formulation of process reliabilism. His recursive and closure clauses entail that, as a belief-dependent process, inference yields justified beliefs only if the premise-beliefs that it operates on are themselves justified. Goldman however offers no argument for this, which is tantamount to assuming JFJ. Moreover, the story sketched in the last paragraph suggests that an inferential process can be reliable, even if the process that supplies its input premise-beliefs is unreliable.

A further supporting consideration comes from cases that involve a process that is initially thought to be a belief-independent process. Suppose such a process is known to be reliable via the usual empirical means; for this reason, reliabilists hold that it sometimes produces justified beliefs. But suppose it is later discovered to actually be a belief-dependent process. Suppose further that, at the later time, it is also discovered that only one process delivers its input premise-beliefs, and that that this latter belief-independent process is *unreliable* because it is overly precise in just the way Fred's memory is. The foregoing is epistemically possible with many reliable processes that we currently take to be belief-independent. If this series of discoveries is made, will we not be even more impressed with the process that we initially thought was a belief-independent process? Reliabilists who are convinced can emphasize that the *compound process* consisting in the belief-independent process combined with the belief-dependent process is reliable. That compound process operates just in case its component processes operate in tandem. And that process yields a ratio of true to false conclusion-beliefs that is impressively high. All of this strongly suggests that process reliabilists have ample resources to count the final outputted beliefs as reliably produced and thus strong candidates for being justified beliefs.

Fred's conclusion-belief also comes out justified on theories that closely tie justified belief to epistemically responsible belief formation. Recall that Fred has a responsibly-formed belief that his present method of arriving at his conclusion-belief, where this is a compound process consisting of an inferential (or belief-dependent) process and a non-inferential (or belief-independent) process, results in a high ratio of true to false conclusion-beliefs. Since it is epistemically responsible to believe the outputs of methods that one believes to be reliable, at least when one arrives at this belief about reliability in a responsible way (which we can easily imagine Fred does), Fred's conclusion-belief is justified by the lights of this kind of view.¹⁰

On Conee and Feldman's internalist evidentialism, Fred's conclusion-belief is justified if it fits his total evidence and it meets the basing condition. Setting aside the basing condition until the next section, what should we say about the fit condition? Fred's conclusion-belief fits his total evidence if its

content figures into the best explanation of his total mental states.¹¹ This condition is met since his total mental states include both the specific memory that he bases his premise-belief on, and the set of memories that justify him in believing that his track-record is excellent when he forms beliefs about the weeks of his meetings in just the way that he does in the case at hand. Part of the best explanation of the first memory is that Fred really does have a meeting with Mary sometime next week; in addition, the latter set of memories are internalist-certified justifiers that Fred has for believing in this explanatory relation.

Last let's consider views of justified belief that include a no-defeater clause. The only strong candidate for being a defeater for Fred's conclusion-belief is the earlier justification-defeater for his premise-belief. This justifier, available to introspection, justifies him in believing his memory-based beliefs about the exact date and time of his scheduled meetings are usually false. Do these justifiers defeat any *prima facie* justification that belongs to Fred's conclusion-belief? One might say they do because they defeat the premise-belief and JFJ ensures that this renders the conclusion-belief unjustified. But that obviously begs our main question. Against this, even if those justifiers do defeat the *prima facie* justification that belongs to Fred's conclusion-belief, the latter will nonetheless ultimately come out justified if on some further expansion of Fred's body of evidence, justification for his conclusion-belief is reinstated.¹² Consider then the further expansion that incorporates Fred's justified background track-record belief that the route by which he arrived at his conclusion-belief is likely to yield true beliefs about the weeks of his meetings. On this expanded body of evidence, Fred's belief that he is scheduled to meet Mary next week *is* justified. So Fred's conclusion-belief meets the no-defeater condition on justified belief after all. In this way, theories of justified belief which incorporate a no-defeater clause deem Fred's conclusion-belief justified.

So there are reasons for externalists and internalists alike to think that Fred's conclusion-belief is justified. Externalists should be impressed by the fact that this belief is connected to the truth in important ways: for example, it is produced by processes that together function reliably to produce true beliefs about the weeks that meetings fall on. It is also worth noting that Fred's conclusion-belief is both sensitive and safe. And internalists should be impressed by the fact that Fred is aware, and has supporting evidence from his memory, of his excellent track-record in arriving at true beliefs about the weeks of his meetings when he takes the same route that he does in the FRED case. This impressive ecumenical convergence supports (3).

5. *Liberalizing the basing condition*

Fred's conclusion-belief must also meet the basing condition on justified belief. In this section, I show that it does this by responding to an important

argument for the contrary view that it fails to meet the basing condition. That argument runs as follows: since Fred's conclusion-belief is inferred from, and thus based on, an unjustified belief, it is not based on a good reason; therefore it does not meet the basing condition. I reply by first sketching an alternative, more liberal version of the basing condition and contrasting it with the strict version that underlies this argument. Then I argue that the usual reason for introducing the basing condition does not favor the strict version over the liberal version. It follows that the argument to the contrary presupposes a version of the basing condition that is not supported by the usual reason for introducing the basing condition.

Two ideas are central to the liberal version of the basing condition. The first is that a belief can be based on a reason in a mediated way. For example, when one belief is inferred from a prior belief, and that prior belief is based on a non-doxastic state, the first of these beliefs counts as being based on that non-doxastic state. So if the memory that Fred begins from is a recalled image, then his conclusion-belief counts as mediately based on that image by being (immediately) based on his premise-belief, which is in turn (immediately) based on that image. In this way, the recalled image can serve as a basis for Fred's conclusion-belief.

The second idea is the novel epistemic status of being *a justification conduit*. This status belongs to some *unjustified beliefs* relative to some beliefs that are validly and competently inferred from them. In particular, it belongs to beliefs that are themselves unjustified but nonetheless allow justification to pass through to some beliefs that are validly and competently deduced from them. Using this, we can think of Fred's premise-belief that he is scheduled to meet Mary next Wednesday at noon as a justification conduit for his conclusion-belief that he is scheduled to meet Mary next week.

Of course it is far too permissive to allow any unjustified belief to be a justification conduit for any belief that is validly and competently deduced from it. If Fred had the same recalled image and the same premise-belief that he is scheduled to meet with Mary next Wednesday at noon, but inferred from this that he is scheduled to meet Mary next Wednesday sometime between 11:45 AM and 12:15 PM, this last belief would *not* be justified. In this case, his premise-belief would not be a justification conduit for that conclusion-belief. Unfortunately, I do not have a full theory of justification conduits. But on its own this is not a problem since we don't have to possess a worked-out theory of a notion before we can legitimately apply it to some cases. And it is reasonable to think that such a theory is available (even if we haven't worked it out) if the liberal condition that it is embedded in is viable.

Is it viable? It is, I suggest, if it is at least as well supported as the competing strict version of the basing condition. To determine whether this is so, we need to see whether the standard argument for introducing the basing

condition favors the strict condition over the liberal condition. That argument works from cases where someone has a justifier for believing p , believes p , but this belief is intuitively unjustified because it is not based on that justifier. An example is the earlier BOB AND HIS SON case. The basing condition earns its keep by explaining why beliefs like Bob's belief that his son is innocent are unjustified. As we saw, that belief is unjustified because it is not based on the justifiers that Bob has for it.

Though the liberal version of the basing condition certifies more justifying routes to conclusion-beliefs than the strict version of the basing condition does, it is not so permissive that it does not require any justifiers at all in the pedigree of a belief. Notice that there is no justifier in the pedigree of Bob's belief that his son is innocent. Remember Bob inferred that belief from his belief that his son is perfectly moral, which was in turn produced by wishful thinking. Since wishful thinking is not a good reason for thinking that someone is innocent, Bob's belief that his son is innocent is not based, even in a mediated way, on a good reason for it. Thus, the liberal condition is not met. This suggests that the alternative liberal condition can deliver the right result in the familiar kinds of cases that support the introduction of the basing condition.

One more issue needs to be addressed in this section. If the justifier for Fred's belief that he has a meeting next week with Mary is (via a mediated basing relation) his recalled image, is that belief still *inferentially* justified? Recall that to be inferentially justified, a belief must be justified *because of* the inferential reasoning that it is based on. This is so with Fred's conclusion-belief since its justification is partly owed to two facts about the way that Fred reasoned to it: he reasoned to it via a valid inference form, and he did so competently. The second goes beyond the first. Someone could make the same valid inference but do so merely because the premise-belief mentions Mary. Think of someone who, when they have *any* belief whatsoever about Mary, infers that they have a meeting with Mary next week. The conclusion-beliefs that they arrive at in this way, even when they do happen to validly follow from their premises, are not justified. Fred is not like this. He reasons competently via a valid inference form. So his conclusion-belief counts as *inferentially* justified.

6. *Fred's background belief*

To help support the claim that Fred's conclusion-belief is justified, I appealed at various points to his background justified belief that he is good at determining the weeks of meetings when he infers this from his often inaccurate memory-based beliefs about their exact dates and times. I contended that this background justified belief, plus his memorial image and the way he

reasons, justifies his conclusion-belief. To this one might object that since Fred's conclusion-belief is *not inferred* from this background belief, his conclusion-belief is not *exclusively* inferentially justified.¹³ I end by replying to this important objection.

Indeed Fred's conclusion-belief is not exclusively inferentially justified. Nonetheless the case disproves Single-Premise JFJ. Here again is what that principle says:

Single-Premise JFJ: Where S's belief that p is inferred from one premise-belief and is not epistemically overdetermined, S's belief that p is inferentially justified only if that premise-belief is justified.

A different principle is:

Single-Premise JFJ*: Where S's belief that p is inferred from one premise-belief and is not epistemically overdetermined, S's belief that p is *exclusively* inferentially justified only if that premise-belief is justified.

Single-Premise JFJ covers beliefs that are just partly inferentially justified, while Single-Premise JFJ* does not. To fall under Single-Premise JFJ, it is enough that Fred's conclusion-belief is at least partly inferentially justified. So if Fred's background justified belief about his track record also plays a partial role in justifying his conclusion-belief, the case is still subsumed under Single-Premise JFJ.¹⁴

I have focused on Single-Premise JFJ rather than Single Premise JFJ* because Single-Premise JFJ* is independently problematic. To see this, consider first what access internalists about justification will say about Single-Premise JFJ*. These epistemologists impose an introspective access requirement on justifiers. So on their view, the mere fact that a conclusion-belief validly follows from (or is inductively well supported by) a premise-belief is not enough for that conclusion-belief to be justified. They require, in addition, that all of this be within the introspective ken of the subject. It follows that justified conclusion-beliefs are never *exclusively* inferentially justified; they are always justified, in part, because of this introspective availability. Consequently, this view rejects Single-Premise JFJ*.¹⁵

What about justification externalists? They reject the introspective access requirement on justifiers. On their view, there are straightforward counter-examples to Single-Premise JFJ*. Take a variant on our original FRED case in which everything is the same except Fred lacks the background justified belief that he is good at determining the weeks of meetings when he infers this from his often inaccurate memory-based beliefs about their exact dates and times. One way to do this is to focus on the initial run of instances in which Fred infers the weeks of various meetings from his inaccurate beliefs

about their specific dates and times. During the initial run, Fred has not yet made a sufficient number of inferences of this sort to have a justified background belief that he is good at determining the weeks of his meetings when he arrives at them in this way. We might even suppose that Fred has not yet formed any background belief about whether he is good at this. Call this case, EARLY FRED. Justification externalists will not shy away from saying that despite the absence of this background belief, Fred's conclusion-beliefs in EARLY FRED are justified. This is because on their view no background beliefs about the credentials of one's inferences are required to have justified conclusion-beliefs. So on their assessment, Fred's conclusion-beliefs in EARLY FRED are exclusively inferentially justified even though his premise-beliefs are not justified. They are therefore counter-examples to Single-Premise JFJ*.

Since Single-Premise JFJ* is rejected by both access internalists and access externalists, I have focused on Single-Premises JFJ. The FRED case that I offered is subsumed under Single-Premise JFJ as long as Fred's conclusion-belief is inferentially justified. It is thus subsumed even if it is just partly inferentially justified and partly justified by a background belief. It is not plausible though to say that the background belief is doing all the justifying work. Earlier we saw why this is not plausible: without the premise-belief and going only on this background belief, Fred would not form the same conclusion-belief. The premise-belief is needed to supply information about a particular meeting's exact date and time. Moreover, the inferential pedigree of Fred's conclusion-belief confers something normative. Recall also that Fred's conclusion-belief is *inferentially* justified because Fred reasoned to it via a valid inference form, and he did so competently. So the case involves bona fide inferential justification.¹⁶

Conclusion

Once we reject JFJ, a positive project lies ahead. Though I have gestured at what that project might look like (especially in Section 5), more work needs to be done to formulate an epistemology of inference that is both more complex and more permissive than the model built around JFJ.¹⁷

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NOTES

¹ See also Bonjour, 1985, p. 18.

² Audi qualifies the quoted passage by saying that this is how things appear, though later (2011, pp. 214) he seems to endorse the view that at most a premise-belief might be slightly less justified than the conclusion-belief inferred from it.

³ For other assertions of JFJ, see Bergmann, 2006, p. 185 and p. 228; Goldman, 1986, p. 78; 2008, p. 64; and 2012, p. 12; and Quinton, 1973, p. 119). Luzzi (2014) reviews two ‘motivations for a similar principle about knowledge (namely the KFK principle that I discuss in the next section). But when construed as arguments for that principle, they beg the question.

⁴ Klein and Warfield’s result is strengthened in Fitelson, 2010.

⁵ For criticisms of Warfield and Klein, see Ball and Blome-Tillmann, 2014; Montminy, 2014; and Schnee, 2015.

⁶ The inheritance principle Klein (2008, pp. 31–32, fn. 16) rejects is an example of a stronger principle of this kind.

⁷ Peter Klein’s infiniest view is such a form of non-coherentism.

⁸ This makes Fred’s reasoning very different from the following four-step reasoning process. Step one: a person begins (as Fred does) with the belief that she has a meeting with Mary at noon next Wednesday, where this belief has the same source as the premise-belief in the FRED case. Step two: but now (unlike Fred) she forms the second-order belief that she believes that she has a meeting with Mary at noon next Wednesday (or she forms this second-order belief and the belief that her first-order belief was delivered by memory). Step three: she also believes that if she believes she has a meeting with Mary at noon next Wednesday (or that she believes this and that this belief was delivered by memory), then she has a meeting with Mary sometime next week. Step four: from the beliefs at steps two and three, she infers (by *modus ponens*) that she has a meeting with Mary sometime next week. I offer no pronouncement about whether the final belief in this case is justified.

⁹ It does not automatically follow that they are justified on forms of reliabilism that impose other necessary conditions on justified belief. Goldman (1986, p. 63), for example, also imposes a no-underminer condition on justified belief.

¹⁰ The argument in this paragraph is consistent with the principle that Luzzi (2014, p. 269) calls ‘Epistemic Responsibility Counter-Closure’: ‘necessarily, if (i) S comes to believe q solely on the basis of competent deduction from her belief that p, and (ii) S’s belief that q is responsibly held, then S’s belief that p is responsibly held.’ Later in Section 6, particularly endnote 15, I will argue that Luzzi’s principle is importantly different from Single-Premise JFJ, and therefore no threat to the argument I give in this paragraph.

¹¹ See Conee and Feldman, 2008, pp. 97–98, for the central role that they assign to inference to the best explanation.

¹² This is oversimplified. In addition, there must not be any further expansion of his body of evidence on which this conclusion-belief would revert to being unjustified and would stay unjustified upon all further expansions of his body of evidence. This condition is met in what follows.

¹³ I will assume that the conclusion-belief, if it is to be justified, must also be based on that background justified belief. Conee and Feldman’s official WF (1985, p. 24) entails that it is not necessary for a belief to meet the basing condition and thus be justified that it be based on all of the evidence one possesses that stands in the required fit relation to the believed proposition. Instead it is enough that the belief be based on some subset of that evidence, as long as that subset is a justifying reason whose justification is not ultimately defeated (though, interestingly and perhaps implausibly, it might be defeated in a non-ultimate way).

¹⁴ Recall the point made at the beginning of Section 4 that Fred’s background belief does not make this a case of epistemic overdetermination.

¹⁵ Consider again Luzzi’s (2014, p. 269) principle, ‘Epistemic Responsibility Counter-Closure’: ‘necessarily, if (i) S comes to believe q solely on the basis of competent deduction from her belief that p, and (ii) S’s belief that q is responsibly held, then S’s belief that p is responsibly held.’ This principle is more akin to Single-Premise JFJ* than Single-Premise JFJ since (i) has *only* inference conferring the status *being responsibly held* on S’s conclusion belief that p, thus excluding any supplementary role that might need to be played by reflection, introspection, etc.

It is worth noting a difficulty for this principle. The species of epistemic responsibility that Luzzi has in mind appears to be internalist in character since it is a condition on a belief’s being

held in an epistemically responsible way that this status be ascertainable by the subject (2014, p. 270). Moreover, if a belief is irresponsibly held, then the subject ‘should have done epistemically better in some respect or other’ (2014, p. 272). But take the basic internalist worry: when one reasons validly, but does not know she reasons validly (though she can ascertain this), she has failed to do her epistemic best. This suggests that ‘solely’ in (i) is not strong enough to serve Luzzi’s internalist purposes.

¹⁶ If Fred knows he is scheduled to meet Mary next week, then the FRED case is also a counterexample to Single-Premise KFK. I leave the task of showing that Fred’s conclusion-belief is not Gettiered to the reader.

¹⁷ Thanks to Sandy Goldberg, Ian Schnee, and an anonymous referee for helpful comments.

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