Appendix: Additional Examples About the Conditions for Knowledge

Abstract: Twenty-three examples are provided to show that the predominately externalist (PE) definition of ‘knowledge’ is correct. These examples both reinforce the PE definition and defend it from counter-examples. These examples are divided into six sections. Section (A) illustrates how the PE definition responds to lottery examples, and includes examples from Harman (1973), Hawthorne (2004), and Bonjour (1980). Section (B) provides six cases where condition 4b is violated and includes examples from Harman (1973), Pollock (1986) and Dretske (2004). Section (C) provides two Gettier examples, including one from Russell (1948) where PE conditions 3 and 4b are violated. Section (D) examines seven examples involving condition 4a where the weighing of evidence, background knowledge, and psychological considerations are involved in evaluating cases of potential knowledge. Examples included are from Lehrer (2000), Bonjour (2002), Feldman (2003), Hetherington (1996), Harman (1973), and Warfield (2005). Section (E) has arguments from Harman (1973), Feldman (2003) and Turri (2012) that are thought to undermine the plausibility of the no-defeaters condition 4b.

A. Lottery Examples

(1) The Lottery Paradox- ‘This Lottery ticket will not be a winner’

The 'lottery paradox' has attracted a wide interest since the publication of Henry Kyburg's *Probability and the Logic of Rational Belief* (1961). Kyburg's paradox was concerned with fallibilist accounts of justification, but it is a concern for an account of knowledge too. The paradox is as follows. Suppose that there is a fair lottery where 100 tickets are issued (each having a unique number from 1 to 100). Sue purchases one
ticket and the lottery is to be held on the next day. Sue is well-aware of the statistical probability that her ticket will lose, and on this basis, dismisses the small probability of the ticket being a winner, stating $p$: 'My ticket #27 is a losing ticket.' Does Sue know $p$?

The widely-accepted response is that Sue does not know that her ticket is a loser. The PE definition explains why. The reason that Sue doesn't know $p$, despite the high probability that $p$ is true, is that Sue's evidence for believing $p$ isn't connected to any particular ticket (including her own). With a fair drawing $S$ can never be in a position to possess relevant premises for believing $p$ is true. Knowledge condition 3 is not satisfied.

Even after Sue examines the statistical evidence, and resolves and discards the small chance that the ticket may win, and has a personally justified belief, Sue cannot know $p$. Sue cannot have a justified (truth-connecting) belief that her ticket will lose.

This lottery example helps show that propositions about probabilistic future (or unobserved) empirical states-of-affairs are dissimilar to probabilistic lottery propositions that are based solely upon chance. Inductive inferences about future (or unobserved) events based upon prior empirical premises are knowable, if $S$ possesses truth-connecting evidence for why $p$ should be believed (and there are no defeaters). In contrast, lottery predictions having high probability (and no physical-causal evidence) are not potentially knowable because PE condition 3 cannot be satisfied.

(#2) Another Lottery Paradox: 'S knows she will never be a multimillionaire'

Besides this lottery paradox, there is a lottery paradox developed by Harman (1973) and John Hawthorne (2004) with a form described by Elke Brendel and Christoph Jager (2005, p. 6):
Let us assume S bought a ticket in a fair lottery and the chances of this ticket winning are very low-- 1: 10 million. If S is the lucky winner, she will get ten million dollars. Although there is overwhelming statistical evidence for the belief that S's ticket will lose, many people share the intuition that S nevertheless does not know that her ticket will lose. Let us assume furthermore that, given S's meager income and her lack of rich relatives, S claims to know that she will never be a multimillionaire. Now we have a problem: S's knowing that she will never be a multimillionaire seems to imply her knowing that she will not win the lottery-- which contradicts the intuition that S fails to know that she will lose.

One simple resolution to this paradox would be to maintain that S doesn't know \( p \) that 'she will never be a multimillionaire.' Because S has played the lottery, S may win the lottery, so S doesn't know \( p \). (This is one plausible response).

This conclusion doesn't seem entirely intuitive though. It might seem true that S can know \( p \) (i.e. 'she will never be a multimillionaire') based upon the following strong reasons: (1) I have a low-paying job with no hope or desire for advancement. (2) I have no rich relatives from which to expect inheritance, nor pending legal settlement case, nor any reason for expecting financial windfall. (3) I know that the chances of my winning the lottery are infinitesimal. (4) Therefore, I know I will never be a multimillionaire. These three reasons certainly constitute strong evidence to support S's claim that she will never be a multimillionaire. Condition 4a is satisfied. But are these reasons 'relevant' for S's claim to know that she won't be a multimillionaire after the drawing? Not with the strong sense of 'relevant.' As was shown in the previous example, S cannot know that
her lottery ticket will not win, because she cannot have a relevant (truth-connecting) belief that her ticket will lose; violating condition 3.

It can be acknowledged however, that given S's financial circumstance, S can have 'relevant' reasons (in the wider sense of an assessment of probabilistic significance) that she will not be a multimillionaire. With a wider sense of 'relevance' such as used by Stine (1976), the possibility of winning the lottery is relevant only if there is some reason to think that the possibility is (or could become) true. This wider sense of 'relevance' was already discussed in the house fire example (in the main text). At the start of an inquiry the investigators' attention was to consider all states-of-affairs that might have potential significance (or probability) to cause a fire. Similarly, in this alternative lottery case, S's concern is with the probability (and counter-possibilities) that contribute to her conclusion that she won't become a multimillionaire. With an infinitesimal probability of winning, S concedes that the potential to win the lottery is 'irrelevant' when considering all existing states-of-affairs, and eliminates it as having potential significance for becoming a millionaire. On this interpretation, S knows based upon her three premises that she will never be a multimillionaire since conditions 4a and 4b are satisfied and her empirical premises are (truth-connecting) relevant to satisfy PE condition 3.

Both of the above interpretations seem plausible. One interpretation uses a strong (truth-connecting) sense of 'relevant' that denies S knows she won't be a multimillionaire, and the other uses a wide (probabilistic) sense of 'relevant' (with respect to all states-of-affairs) that affirms that S knows she won't be a multimillionaire. The paradox is resolved by recognizing that there are these two ordinary language senses of 'relevant.'
(3) Does Agatha Know that 'She is Seeing a Cup'?

Let us consider another case from Bonjour (1980) that involves both a perceptual situation and a lottery proposition:

Agatha, seated at her desk, believes herself to be perceiving a cup on the desk. She also knows, however, that she is one of a group of 100 people who have been selected for a philosophical experiment by a Cartesian evil demon. The conditions have been so arranged that all 100 will at this particular time seem to themselves to be perceiving a cup upon their respective desks, with no significant differences in the subjective character of their respective experiences. But in fact, although 99 of the people will be perceiving a cup in the normal way, the last one will be caused by the demon to have a complete hallucination (including perceptual conditions, etc.) of a non-existent cup. Agatha knows all of this, but she does not have any further information as to whether she is the one who is hallucinating, though as it happens she is not (p. 29).

In this situation, it is true that Agatha is seeing a cup, Agatha has strong statistical reason (99% probability) for believing that she sees a cup, and her visual apparatus and the existence of the cup provides a truth-connecting reason for why she should believe that she sees a cup. Does Agatha know that she sees a cup?

The PE definition maintains that Agatha doesn't know that she sees a cup, because conditions 3 and 4b are not satisfied. Condition 1 is satisfied, since it is true that Agatha sees a cup. Conditions 4a and 2 are weakly satisfied, because Agatha has strong statistical evidence to believe that she sees a cup.
Why are conditions 3 and 4b not satisfied? The short answer is that Agatha's empirical evidence (although truth-connecting relevant) has been undermined by her knowledge that she is confronted with a lottery proposition. She understands that there exists an actual defeating possibility (a 1% chance) that her perception is not veridical. Although Agatha is in a material situation to possess relevant perceptual evidence for seeing a cup, she simultaneously is not in a perceptual position to possess relevant reasons for discounting the 1% lottery possibility of a complete hallucination. Agatha cannot have a justified (truth-connecting) belief she is not being deceived by hallucination and cannot acquire any evidence to resolve this counter-evidence. Agatha's true empirical belief is defeated by a lottery proposition. In this Cartesian evil demon lottery situation, Agatha's high probability premise by itself isn't sufficient to know that she is seeing a cup.

To emphasize why a high probability premise (by itself) isn't enough to yield knowledge in a particular situation, consider this example of a probabilistic inductive argument: (1) 99% of the people in Springfield own a dog. (2) Mr. X is a resident of Springfield. (3) Therefore, Mr. X owns a dog. The two premises strongly support this conclusion, but they are not strong enough to be truth-connecting for knowing that 'Mr. X owns a dog.' The probability premise functions as a lottery proposition. A person is personally justified in believing that Mr. X owns a dog on this information, but one does not know that Mr. X owns a dog. In the same way, Agatha is personally justified in believing that she sees a cup, but she doesn't know it.
The lesson of these examples is that although probabilistic premises (i.e. both lottery and empirical probabilities) with high probabilities can be strong evidence in an inductive argument for why a proposition should be believed, probabilistic premises are not by themselves sufficient (and relevant) to be truth-connecting to a particular state of affairs. A strong inductive argument that is substantially based upon a probabilistic premise (less than 100%) is not sufficient to yield knowledge about a particular case. In order to possibly know that Mr. X owns a dog, one would need additional fallible evidence, such as testimony from Mr. X stating that he owns a dog, or by seeking other evidence. Similarly, in the parked car case, in addition to believing that there is a 99% chance that one's car hasn't been stolen, one also needs to have strong empirical reasons, such as memory of where the car was parked, in order to know where a car is parked. In contrast, Agatha has no strong empirical reasons for believing 'she sees a cup' because her empirical evidence (the perceptual evidence of sight) is rendered trivial by the demon.

(#4) Window Facades: Do Undermining Possibilities Defeat Knowledge?

In the United States there presently exist (scattered) instances of two-story buildings in urban areas that have 'false windows' on their second story. These 'window facades' are mere paintings, deliberately designed to appear as a window for aesthetic reasons and for novelty. One cannot see out of them because they are made of concrete and paint. There is no glass or transparent material in their construction. Unless it is brought to one's attention that these are fake windows, it is normal for people to (falsely) believe that they see a window. If I am walking down the street in an urban area that I am unfamiliar with, and it appears that I see a window on the second story of a building,
do I know 'I see a window on the second story of that building?' Does the remote possibility that I may be seeing a window facade defeat my visual evidence?

A critic of the no-defeaters condition (or a skeptic) might seize upon this example and argue that there always exists some undermining evidence for most of our beliefs and condition 4b is almost always violated, so knowledge rarely occurs. The experience of a window and a window facade are indistinguishable from the street level. If it is possible that I am seeing a window facade, then I cannot know that I am seeing a window!

The above objection assumes that 'If it is possible that \textit{~p}, then S cannot know \textit{p} since the reasons for believing \textit{p} do not rule-out the possibility of \textit{~p}. ' This is the principle of infallibilism. We have discussed (and dismissed) this principle in connection with examples of knowing where your car is parked in the main text, but a response to this objection is worth repeating. In order for the first sentence of condition 4b to be satisfied, there \textit{just needs to exist no facts} (i.e. the existence of nearby window facades) which would undermine S's set of reasons for believing that he sees a window. S can know \textit{p} (viz. 'I see a window') when S's belief \textit{p} is the product of a set of strong relevant premises for why \textit{p} should be believed (conditions 4a and 3 are satisfied), and the possible nearby existence of window facades when added to the stock of S's existing evidence doesn't lead S to doubt his affirmative evidence for \textit{p}, and there is (in fact) no nearby window facade. The first sentence of condition 4b is \textit{contingently satisfied} if S is not in close proximity to a window facade.\footnote{Among the tacit evidential propositions for believing that 'I see a window' in satisfying condition 4a are: a) I am having the visual experience of a window, b) I am in close proximity to a window, etc.}
This analysis of how one can know that one is seeing a window on the second story of a building in an urban area is analogous to how one can know where one's car is parked. The possibility that there may exist undermining (or defeating) evidence that would undermine S's strong evidence of believing p is not sufficient grounds for a condition 4b violation. Williams (2001) correctly contends that "A defeater does not come into play simply by virtue of being mentioned: there has to be some reason to think that it might obtain... If we insist on ruling out very remote error-possibilities, we are imposing severe standards for knowledge and justification" (p. 161).

Let us briefly reconsider the objection made by Pappas and Swain against a no-defeaters condition, namely that there always exists a true undermining proposition q such that if S learned that q, S would not be justified in believing p. This objection seems plainly false. In a vast number of everyday situations, persons have knowledge that there is a window on the second story of an observed building. The fact that there exist window facades does not defeat every instance of S's putative sighting of a second-floor window. There is not always a true proposition q (i.e. a fact) that will defeat or

spatial proximity to what appears to be a window, c) I have previous experience seeing and utilizing windows, d) it is normal for a window to be on the second story of a building, e) my vision is good, f) the lighting and environment appear to be normal, g) I am well-rested and alert, h) I have no evidence to suspect that the apparent window is actually a painting, i) I understand the concepts of 'window' and 'painting,' j) I am not under the influence of strong hallucinogenic or intoxicating drugs, k) there exists very few (maybe .0005%) instances of window facades in the United States.
undermine S's evidence for believing p, unless one is extremely normatively sensitive to remote-error possibilities. Although one can be extremely cautious and skeptical, this cautious standard should not prevent other persons from having knowledge on (less cautious standards).

(#5) Do I Know that 'I see Joe Klein'? (An Empirical Proposition)

Given that 'undermining evidence' in condition 4b is understood as an objective phenomenon based upon existing material conditions, and 'doubt' about the strength of evidence in condition 4a is understood as a normative and psychological matter, we can expect that there will be debatable cases of what counts as 'defeating evidence' in some situations. This problem is easily illustrated with an example involving identical twins. Suppose that two people look so much alike that they can't be distinguished except by verbal conversation. If I live in New York City and I am well-acquainted with my neighbor, Joe Klein, but I also know that Joe has an identical twin (Tom Klein) living in Australia, am I ever personally justified in looking out my home's third floor window, and knowing that I see neighbor Joe Klein on the front steps at the base of his house?

One cogent response is that I'm never justified and never know that I see Joe on his front steps from my window a distance away because identical twin Tom's existence is always 'unresolved undermining evidence.' Instead, I only have 'true beliefs' on the many occasions that I see Joe. These beliefs are typically based upon strong evidence (e.g. Joe appears to be on his front steps, Joe owns the house, Joe is often on his front steps, I talked to Joe casually this morning as he walked past my house). Someone who denies that I can know 'I see Joe' based upon long-range visual inspection, and admits
only a possibility of my having a true belief, imposes a high standard for personal justification. The existence of the twin Tom is thought to defeat any possibility of long-range visual knowledge (at any time) that I see neighbor Joe on the front steps of his house. After all, Joe and Tom look so much alike they can't be distinguished except by verbal conversation.

Another cogent response is that I frequently know that I see Joe Klein, because Tom Klein is a resident of Australia, and rarely visits Joe. I know that I see Joe on his front steps in the morning when he is picking up his newspaper. The fact of Tom's existence is certainly an undermining proposition, but Tom's far away existence doesn't defeat my knowing that 'I see Joe' based upon a long-range visual premise. The fact that Tom lives so far away, allows me to discard the (remote) possibility that I see Tom. My belief would be undermined, if for example, Tom was in town visiting Joe, but for the most part, this isn't the case.

Variations of this example are discussed by Nicholas Everitt and Alec Fisher (1995, pp. 26-28). These authors believe that the existence of the twin Tom, is not just 'undermining evidence,' but is always 'defeating evidence' against knowing that I see Joe from the distance of my window. I disagree. That 'Tom Klein exists' is an undermining proposition, but the undermining possibility that 'I see Tom' could be resolved or ruled-out because of its small probability. I would grant myself sufficiently strong perceptual evidence to know that I see Joe on most occasions, if there were no important practical consequences to my belief. But, if it was pragmatically very important that I know that 'I see Joe' when looking from my window, I would relent and agree that I just believe that I
see Joe, without knowing. After all, Joe and Tom look so much alike they can't be distinguished except by verbal conversation!

(6) Do I Know that 'I see Joe Klein'? (A Lottery Proposition)

The above 'empirical' example can be amended to be equivalent to Bonjour's Agatha and the cup 'lottery' example. Suppose that in this embellished example:

(1) I am told that in the upcoming calendar year Tom Klein will visit and reside in Joe's house on four days, during which time Joe will be out of town on business trip(s). Four days translates to 1% of a calendar year when Tom will reside in Joe's house and Joe lives there the other 99% of the days.

(2) I do not know the dates of the four days when Tom's visit(s) will be.

(3) I look out my window on a given day, without having any recent verbal or other communication with Joe, and I say, 'I see Joe on his front steps,' without having any other additional empirical evidence that it is Joe that I see.

Do I know that I see Joe? No, I don't. The reasoning is the same as in the Agatha example above. In this embellished case, my perceptual reason for believing that I see Joe is defeated by knowledge that I am participating in a lottery situation. I understand that there is an actual defeating possibility (a 1% chance) that I may be mistaken in my visual belief, and I have no additional empirical premises on which to base my belief. The 99% probability that I see Joe by itself isn't sufficient for having relevant reasons for knowing I see Joe in a particular situation.

The parameters of a lottery situation have the following contrast with the original empirical question of whether I can know that I see Joe in #5A (no matter whether we
grant ourselves knowledge or not). In the original example, it was assumed that I have additional empirical evidence for believing Joe is standing on his front porch (e.g. I talked to him this morning), in addition to a high probability that Joe is on his own front steps. In initial example #5A, the assertion that 'I see Joe' when based upon my visual perception can be a relevant (truth-connecting) reason for my belief that I see Joe, given that I have strong contextual reasons for believing that I see Joe. More generally it can be maintained that assertions about the status of present (or future) physical states with high probability premises are knowable, when one has empirical belief-forming processes, and strong reasons for why a probable state-of-affairs should be believed. The probabilistic inductive conclusions that 'my car is parked at the corner of Maple and Nelson' and that 'I see Joe Klein on his front steps' can be based upon strong probability, and strong and relevant empirical evidence, and can be known.

In contrast, an inductive argument in #6A that primarily uses high probability lottery premise(s) or empirical probability statistic(s) as substantial evidence in indicating a probable conclusion about a particular state of affairs is not potentially knowable. In a simple lottery example, Sue could not know that p: 'My ticket #27 is a losing ticket,' because her probabilistic evidence for believing p isn't connected to any ticket (including her own). In example #3A, it was shown that the inductive conclusion that 'Mr. X owns a dog,' based primarily upon the empirical probability premise that 99% of the people in Springfield own a dog, could not be known. Similarly, the lottery predicaments of Agatha who has a 99% favorable lottery probability that she sees a cup, and the present 99% lottery probability that 'I see Joe Klein' in example #6A are not knowable.
B. Harman Examples: Condition 4b is Violated.

(#7A) Jill and the Newspaper: A Leader is Assassinated

From Harman (1973, pp. 143-144): A political leader N is assassinated inside his palace in a foreign country. N is (in fact) dead. His political associates fearing a violent coup quickly decide to cover-up the successful assassination by planting a false news story. In a press conference from the leader's palace in front of cameras from the CNN global television network, the associates announce that the assassination plot has failed, and N is safely in protective seclusion. CNN reports on live television that N has survived the assassination attempt.

But, shortly before this false and misleading live television announcement is made, a nearby newspaper reporter in full-view of N's assassination emails his story to the New York Times newspaper, stating that N has been killed in his palace. The newspaper prints the (true) story of the successful assassination in its early edition.

Jill buys the early edition of the New York Times on the way to work. Without access to television, she reads the newspaper story about the assassination. From the newspaper information, Jill believes \( p \): 'Leader N has been assassinated.' Here, \( p \) is true, and Jill's belief is based upon an important and relevant premise for why \( p \) should be believed: A usually-reliable newspaper states that N has been assassinated. Jill believes a true \( p \), based on a truth-connecting premise for why \( p \) should be believed. PE conditions 1, 2, 3, and 4a are satisfied.

But, because the world-wide CNN network simultaneously states a contradictory headline that N is safe, and CNN is similarly a reliable source of news, it is clear that Jill
does not know that N has been assassinated. The usually-reliable (but false) television reports not considered by Jill would weaken Jill's belief that N was assassinated, if Jill had access to this evidence. Jill possesses a justified belief p, and is personally justified (given her evidence) in believing p, but she doesn't know p. Condition 4b is violated. If Jill was aware that CNN television is reporting failure of the assassination attempt from official sources, it is unlikely that Jill would be able to dismiss this counter-evidence, and continue to retain a strong belief that N was dead. Conditions 4a and 2 are now undermined. In this case, Jill does not know 'Leader N has been assassinated' because there exists evidence q that would significantly weaken Jill's belief that p.

The pattern of the Jill and the newspaper case is the same as the Henry and the barn example (in the main text). In these cases, S believes a true p, based upon relevant premises (satisfying condition 3) and strong evidence (satisfying 4a), but because of the existence of undermining evidence (i.e. the existence of barn facades, contradictory media reports) neither Jill nor Henry knows p.

(#7B) Jill and the Failed Hoax: A Leader is Assassinated

Harman adds an alternative embellishment to the above example:

Suppose that as the leader's associates are about to make their announcement, a saboteur cuts the wire leading to the television transmitter. The announcement is therefore heard only in the studio, all of whom are parties to the deception (excluding the CNN television crew).

In this new situation, a reporter sends his story to the newspaper, and Jill again reads the early edition of the New York Times. But this time, the misleading studio announcement
fails to be transmitted because of the cut-wire and there is no television broadcast aired by CNN. It is Harman's intuition that because the television broadcast fails in this situation Jill will continue to have knowledge that N was assassinated because she holds a true belief based upon reliable and relevant newspaper information. Harman says that the fact of a cut wire makes a difference between broadcast evidence that undermines Jill's belief, and an inaccessible announcement that has no bearing on Jill's belief.

The implication of Harman's intuition is that any no-defeaters condition such as 4b cannot be correct, because in this embellished example case, the condition could allow an inaccessible misleading event (viz. the disconnected studio hoax) to undermine Jill's belief about the assassination and prevent Jill from having knowledge of the successful assassination. Condition 4b is deemed false because (in this case) it would allow the existence of the spurious and inaccessible studio announcement to undermine Jill's personal justification in 4a. Harman believes that true but inaccessible misleading evidence should not be allowed to undermine Jill's relevant evidence (and belief) about the assassination and prevent Jill from knowing that N was assassinated. Condition 4b is thought to be too strong, since it can deny this instance of putative knowledge.

I don't share Harman's intuitions. I contend that Jill doesn't have knowledge that 'N has been assassinated' in this alternative situation either. Condition 4b is likely still violated. If the announcement of N's survival was to be carried live by CNN global television network, the fact of an attempted televised studio announcement would count as undermining evidence that Jill would not be able to resolve. If Jill was aware of the attempted live television report from official government sources when reading the
newspaper, she wouldn't be able to dismiss this counter-evidence to her belief that \( N \) was killed. The inaccessible evidence (viz. an announcement not broadcast) undermines Jill's relevant evidence and prevents Jill from knowing that \( N \) was assassinated.

(#8) Does the Amateur Bird-Watcher Know that he Sees a Gadwall Duck?

Dretske (1981, 2000) presents the following example that illustrates a naturalist’s position that casts doubt upon the plausibility of a no-defeaters condition:

1) An amateur bird-watcher spots a duck on his favorite Wisconsin pond. He quickly notes its familiar silhouette and markings and makes a mental note to tell his friends that he saw a Gadwall, a rather unusual bird in that part of the Midwest. Since the Gadwall has a distinctive set of markings (black rump, white patch on the hind edge of the wing, etc.), markings that no other North American duck exhibits, and these markings are all perfectly visible, it seems reasonable enough to say that the bird-watcher knows that yonder bird is a Gadwall.

2) Nevertheless, a concerned ornithologist is poking around the vicinity, not far from where our bird-watcher spotted his Gadwall, looking for some trace of Siberian Grebes. Grebes are duck-like water birds, and the Siberian version of this creature is, when in water, very hard to distinguish from a Gadwall duck. Accurate identification requires seeing the birds in flight since the Gadwall has a white belly and the Grebe a red belly—features that are not visible when the birds are in water. The ornithologist has a hypothesis that some Siberian Grebes have been migrating to the Midwest from their home in Siberia, and he and his research assistants are combing the Midwest in search of confirmation.
Given that there are nearby professional bird-watchers seeking rare Siberian grebes in the area of the amateur, does the amateur bird-watcher know p: he saw a rare Gadwall duck?

Dretske says that most people would say that the amateur bird-watcher did not know that he saw a Gadwall if there actually were grebes in the vicinity. This makes sense. If there exist nearby grebes and they are perceptually indistinguishable from a Gadwall (from most vantage points), then one's perceptual belief that one saw a rare Gadwall is undermined by the existence of nearby rare grebes. Dretske says that if there are grebes in the area, "It certainly sounds strange to suppose that he could give assurances to the ornithologist that the bird he saw was not a Siberian grebe (since he knew it to be a Gadwall duck)." Dretske's intuitions are correct, as condition 4b is violated, even if the amateur did in fact see a Gadwall. Dretske continues:

But what if the ornithologist's suspicions are unfounded? None of the grebes have migrated. Does the bird-watcher still not know what he takes himself to know? Is then, the simple presence of an ornithologist, with his false hypothesis enough to rob the bird-watcher of his knowledge that the bird on the pond is a Gadwall duck?

Let us eliminate the terminology about being 'robbed' and state a more neutral question:

If a conscientious S were told that a respected academic team was visiting the area to determine whether rare grebes from Siberia have migrated to the vicinity, and that grebes and Gadwall ducks are very similar visually, would S have enough evidence to affirm a sighting of a rare Gadwall, and denial of seeing a rare grebe?
The answer to both versions of the same question, from the perspective I favor here, is an emphatic 'no.' If $S$ was aware of this information about the existence of an academic team and their mission, and $S$ dismissed his possible sighting of a rare grebe, then $S$ would be stubborn in retaining his belief or just disrespectful of academic hypotheses. In this situation, the PE definition suggests that existing misleading evidence that the amateur does (or doesn't) consider, would prevent $S$ from having a strong justification for having knowledge that a rare Gadwall was observed. Condition 4b is violated.

Dretske uses the word 'rob' in line with other naturalist philosophers who believe that an unperceived ornithologist with a false belief should not (and cannot) make $S$ doubt his own true perceptual belief. $S$ holds a belief based upon reliable perceptual processes that are relevant for why $p$ should be believed. Dretske’s naturalist intuition is that human perceptual knowledge is akin to animal knowledge and is a function of evolutionary discrimination mechanisms and surrounding material conditions. Animal knowledge is a function of how a belief arises and the surrounding material conditions.

While Dretske’s naturalistic intuitions may be true for human perceptual beliefs, most non-perceptual human beliefs are the product of the faculty of language acquisition. Human knowledge is not just animal knowledge. The PE definition allows that non-human animals can know $p$: if $p$ is true, $p$ is believed, $p$ is believed upon truth-connecting reasons for why $p$ should be believed, and if there are no undermining factors that would weaken a belief. For human knowledge, however, persons should additionally have premised reasons (or propositions) as part of a deductive, inductive, or abductive argument in order to defend a belief (or theory), especially if reasons are demanded by a
sincere objector who wants to critically investigate a belief. Conditions 4a and 4b are necessary for human knowledge. It indeed might seem 'unfair' that the epistemically inaccessible spurious fact of a failed academic expedition can lead S to not know p, but that is how it is. It is maintained here that if there exists a nearby academic team (with a scientific, but false counter-hypothesis), that this fact would (or should) lead S to admit that he might be wrong in his belief. S does not know that he sees a Gadwall duck.

(#9) Sam and the Failed Hoax: An Airplane Flight is Not Interrupted

Suppose that Sam has a scheduled plane flight to fly from Atlanta to Los Angeles at 11AM on a given day aboard a major commercial carrier. Sam wakes up at 7AM and thinks 'There will not be mass panic aboard my flight because of a bomb threat today.' He believes this because his airline is a reliable carrier, the security presence is strong, and it is unlikely that there would be a bomb threat or a hoax.

But suppose too, that on that morning, the crazy marketing department at radio station KRZ in Dallas has decided to implement the socially irresponsible decision to promote their new shock radio show, by employing a disc jockey to board the same flight in Atlanta, and loudly scream a false bomb threat while the plane is in flight. The plan is to divert the plane with an emergency landing to Dallas to promote the radio show with sensational media coverage. Given that the stunt will likely be successful, since security cannot detect a verbal hoax, Sam's belief that 'There will not be mass panic aboard my flight because of a bomb threat today' is clearly undermined and may be false. He does not know that he and others won't be fearful later in the day.
But what happens, if by chance, the disc jockey takes a taxi to the Atlanta airport, and on the way to the airport the taxi breaks down with a flat tire. As a result, the disc jockey is unable to board the plane on time and is left behind. In this situation, does the unexpected breakdown of the taxi, now give Sam knowledge in his motel room that he will not panic from a bomb threat? Although conditions 1, 2, 3, and 4a are all satisfied on Sam's successful and unimpeded flight to Los Angeles, Sam did not know that he wasn't going to be fearful. Condition 4b is violated. If Sam was to become aware of the planned KRZ radio stunt, either before (7AM) or after the flight (7PM), Sam would admit that his belief was not knowledge, but was a matter of luck. The existence of a planned hoax (even if it fails) prevents Sam from knowing that there would not be panic onboard. Unconsidered undermining evidence and inaccessible to S, can prevent S from knowing p (in some cases). This failed bomb hoax example is another ‘Harman case.’

(#10) Does S Know that the Ball is Red?
A Harman-style example is illustrated by John Pollock (1986, p. 181):

Suppose S sees a ball that looks red to him, and on that basis, he correctly judges that it is red. But unbeknownst to S, the ball is illuminated by red lights and would look red to him even if it were not red. Then S does not know that the ball is red despite his having a justified true belief to that effect.

The reason why S doesn't know that p: 'The ball is red' is that while conditions 1, 2, 3, and 4a are all satisfied, condition 4b is not.

(#11) Does Clyde Know that He is Seeing Chocolate Chip Cookies?

Consider another example from Dretske (2004):
Clyde has a new college roommate, John. Unknown to Clyde, John is an amateur magician. John keeps a cookie jar in the kitchen, sometimes filled with real chocolate chip cookies, and other times filled with wax cookies. He occasionally puts wax cookies in the jar to make sure Clyde isn't stealing the cookies. John thinks of it as both a deterrent and a punishment; if Clyde bites into a wax object and breaks his tooth, he won't try to steal a cookie again. Clyde, however, is very respectful of John's property, and often looks into the jar as a matter of curiosity. Sometimes he observes real chocolate chip cookies and at other times he observes wax replica cookies. But since Clyde has no reason to suspect that he is sometimes observing fake cookies, he always believes that he sees real cookies.

The question is, does Clyde ever know that he is seeing chocolate chip cookies? This is a standard 'Harman case.' Clyde does not know that he is (ever) seeing chocolate cookies. When Clyde is observing real chocolate chip cookies, knowledge conditions 1, 2, 3, and 4a are all satisfied, but condition 4b is unsatisfied. Alternatively, when Clyde is observing fake cookies, conditions 1, 3, and 4b are all violated. In neither circumstance does Clyde know that he is seeing chocolate chip cookies.

C. Gettier Example: Conditions 3 and 4b Are Violated

(#12) Does John Know that it is 12:00 Noon?

The PE definition makes short work of explaining Gettier problems that have puzzled philosophers since 1963. The following example is adopted from Bertrand Russell (1948, p. 154) that went unnoticed until Gettier's examination of the problem.
Suppose that John is an ordinary college student walking on campus around noon on an ordinary school day. John looks up at the clock on the College Square as he has done many times before and reads the clock at 12:00 noon (both hands are on the 12). Because John knows that it is around noontime and given his daily class schedule and position of the sun, and the usual precise reliability of the clock, John believes that 'it is exactly 12 noon.' Suppose however, that the clock was hit by a bolt of lightning at exactly 12:00 midnight the previous night, and immediately stopped functioning. Unknown to John, the clock hasn't been operating for around twelve hours. Suppose too, that coincidentally it is exactly 12:00 noon when John looks at the clock. In this case, it is true that it is 12:00 noon, John believes that it is 12:00 noon, and John has strong reasons (i.e. personal justification) for believing that it is exactly 12:00 noon. But, most persons intuitively believe that John does not know that it is exactly 12:00 noon.

The explanation of why John's 'justified true belief' is not an instance of knowledge is easily diagnosed by the PE definition. It is clear that John has strong evidence (i.e. reasons, implicit premises) for believing that it is 12 noon, so condition 4a is satisfied. Likewise, John believes it is noon and it is true that it is noon, so 2 and 1 are satisfied.

But as the case with all Gettier cases, it is clear that conditions 4b and 3 are not satisfied. Condition 4b is violated, because if John was aware that the clock was not operating, John would be unable to dismiss the proposition that the time might be 12:05PM (i.e. implying $\neg p$). Condition 3 is also violated because John's immediate visual evidence that the clock reads 12:00 is objectively irrelevant for why it should be
believed that it is 12 noon. John's visual evidence and the usual reliability of the clock, in this case, are not truth-connecting reasons for why it should be believed that it is 12 noon. These two strong reasons are not substantially relevant for John's true belief, even if his background beliefs about the position of the sun and the approximate time of day given his class schedule are relevant for believing it is noon.²

(#13) Does Professor S know that Professor Brown is in Room 222 at 4PM?

Professor S is a philosophy professor at a major university. He works in the department with his close friend and colleague, Professor Brown. Professor S believes that Professor B will present a reading and lecturing on his recently completed journal essay at a meeting of ten graduate students and visiting professor at 4PM on a Friday afternoon in room 222. This is a major presentation and Professor B is excited about the

² Notice that according to the PE definition, if John were to simultaneously look at his well-functioning wristwatch which also says that it is 12:00, in this same situation, then John would know that it is 12PM. With the added evidence of the time stated on his wristwatch, John would have stronger evidence for believing p, and he would possess a substantially relevant (truth-connecting) reason for why p should be believed. Not all of John's reasons for believing p need to be relevant for believing p in order for condition 3 to be satisfied: (in fact) John has a substantially relevant reason for believing p. Condition 4b would be satisfied too because: If John was aware that just one of the two clocks had stopped, this wouldn't weaken John's belief and justification that it was 12 noon, given the usual reliability of the two time pieces. In this alternative situation, John would possess a true belief, based upon strong and (mostly) relevant evidence.
scheduled paper reading. There is a website and hallway posters advertising the event which is open to anyone who interested. The ten graduate students have mentioned to S their enthusiasm about attending the lecture. At 10AM on the same Friday morning, S briefly chats with B, and B is prepared and eager to present his paper. S knows that B is dedicated, reliable, enthusiastic, punctual, and is a great speaker. Because of prior commitments, S cannot attend B's reading, but strongly believes (upon strong evidence) that 'B will be in room 222 at 4PM on Friday.'

However, at 11AM, the anticipated paper reading runs into problems. Several graduate students have unexpected circumstances that will prevent their attendance. The visiting professor cannot attend because of an airline delay. These parties communicate this to Professor B by phone or e-mail by 1PM on Friday. Around the same time, Professor B begins to feel slightly ill with a sore throat. He decides to postpone the presentation and phones the remaining students announcing the cancellation with the promise to reschedule in the future. The department staff is notified, the website is updated, and a sign is placed on the door of room 222 announcing the cancellation.

As it so happens, Professor B lives near campus, and it is a fifteen-minute walk to campus. At 3:45PM on that Friday, B remembers that he left his reading glasses in room 222 on campus, while inspecting the room earlier in the day. He walks to campus to pick up his eye glasses and is in room 222 at 4PM. At this same time, Professor S thinks about his colleague, Brown, and says to himself, I know that 'B is now in room 222.'

As a matter of fact, it is true that B is in room 222, S believes that B is in room 222, and S has strong evidence and is justified in believing that B is in room 222. All
three conditions of the traditional definition of knowledge are satisfied. But, in this situation, does S really know that B is in room 222 at 4PM? Most persons agree that Professor S does not know that 'B is in room 222 at 4PM.' Having knowledge is thought to be stronger than just having a lucky, coincidental, true belief. To know p, a person should have the right reasons (or a true account) for why one believes p. S's true belief that B is in room 222 is a matter of luck (or coincidence). In this case, S possesses a belief p and has strong justification (i.e. strong evidence, strong reasons) for believing p, and p is true, but S doesn't know p. 'Knowledge' cannot be defined as 'justified true belief' since this is an example case where Professor S has a justified true belief that 'Brown is in room 222 at 4PM,' but S doesn't know that Brown is in room 222 at 4PM.

Gettier (1963) in his original two examples, made use of deductive entailments to present his argument. However, deductive entailments aren’t needed to explain Gettier situations. In any Gettier situation, S lacks knowledge because the reasons held in a strongly justified personal belief that p are unrelated, or at least ‘not substantially relevant’ to the facts that make p true. PE knowledge conditions #3 and 4b are violated.

(D) Condition 4a: The Weight of Evidence, Background Knowledge, and Psychology

(#14) Does Sally see a Mazda RX7? Or a Toyota MR2 or Porsche 944?

Let us consider a modified example from Keith Lehrer (2000, p. 181). This example is a good illustration of the role of a perceiver's background knowledge and the contextual material contingencies involved in a perceptual situation. Sally asserts that she knows p: 'I am seeing a Mazda RX7 automobile right now' on a Washington, D.C.
street parked a few hundred feet from her. In order to know \( p \), does Sally need to rule-out that the car is not a similar-looking Toyota MR2 or Porsche 944, that are in fact equally common in the surrounding area, in order to satisfy conditions 4a and 4b?

Yes, of course she does. In order to know to know \( p \), Sally would need to be able to rule-out the existing (and potentially defeating) premises that a Toyota MR2 or Porsche 944 is being observed (no matter whether Sally explicitly considers them or not). If Sally doesn't have the background knowledge to distinguish a Mazda RX7 from a Toyota MR2 or Porsche 944, and if this evidence hasn't been considered by Sally, then Sally would not know \( p \), because condition 4b is violated. The existence of undermining evidence that Sally cannot rule-out, prevents Sally from knowing \( p \).

Whether Sally knows \( p \), in part, depends on Sally's expertise on car types. Does Sally have the background knowledge to identify the car's exact make and model? If Sally was an expert authority at identifying car types, the fact that the car could be another type could easily be dismissed by Sally and she could know \( p \). For instance, if Sally was a long-time employee at a Mazda dealership where she was a full-time salesperson of these cars, she could immediately perceive and know that the car was a Mazda, without explicitly considering any other possibilities. The question of whether conditions 4a and 4b are satisfied is contingent upon whether \( S \) has the ability to resolve any counter-evidence that actually exists against belief \( p \).³

³ It is clear that \( S \) does not need to rule-out all undermining possibilities that may make her belief false. For example, \( S \) doesn't need to rule-out the possibility that some wealthy Mazda enthusiast may have had a replica RX7 built and that this replica may be parked
(15) Does Samantha Know that She Sees a Goldfinch?

Suppose that Samantha is an ordinary observer looking at a prairie near her home in North America. Samantha says to her daughter that she sees a goldfinch, and points to it from a distance of fifteen yards away. A 'goldfinch' is a small yellow bird that is native and common to the area. Samantha asserts that she knows that she sees a goldfinch.

But, when questioned by her teenage daughter, who asks with all seriousness, about how assured she is of her belief, and whether the bird could be a canary, Samantha candidly responds, that from her vantage point, she is not able to distinguish the sighted bird as being different from what could be a canary, which is non-native to North America, and could appear in the prairie as a lost pet. With this admission, does Samantha still know that she is seeing a goldfinch?

on a nearby street (or in front of her). Even if S routinely sold these autos as an occupation, S would admit that a detailed replica would be indistinguishable from the genuine item. The PE definition allows that in a seemingly normal situation, S may implicitly rule-out the bizarre possibility of seeing a replicated Mazda RX7, and assume that this undermining proposition is false. Although S would not be able to discriminate between a Mazda RX7 and a replica, S can make a tacit fallible assumption that the car isn't a replica (in partial satisfaction of 4a). Condition 4a doesn't require S to have evidence that all bizarre possibilities are false as a condition for having knowledge. Such a requirement would lead to few instances of knowledge, if not an outright acceptance of skepticism. Michael Williams (2001) discusses this same sports car replica possibility and makes this same conclusion (pp. 162-164).
One scenario is that since Samantha cannot rule-out the unlikely possibility that
the bird is a canary, then Samantha just admits to not knowing that she sees a goldfinch.
If Samantha acknowledges that with her visual and background evidence that she is
unable to discard this potentially defeating possibility, then PE conditions 4a and 4b are
violated. S would concede that she does not know that she is seeing a goldfinch and
would continue to have a strong belief that she is seeing a goldfinch, without knowing it.

But alternatively, what if Samantha dismisses the remote possibility that she is
seeing a canary, and steadfastly claims that she knows that she is seeing a goldfinch? For
example, if Samantha believes that the possibility of seeing something other than a
goldfinch is so small, and that her visual vantage point is 'adequate enough' to strongly
believe that she is seeing a goldfinch does she now know that she is seeing a goldfinch?

In this situation of 'critical doubt' it might seem that the normative dimension of
4a and the subjunctive conditional 4b leave us at an impasse as to whether Samantha
knows that she sees a goldfinch. But according to the PE definition, whether S knows
that she is seeing a goldfinch is partially contingent upon her material surroundings. If S
claims to know that she is seeing a goldfinch, the question of whether she really knows,
depends partially upon the fact of whether there exists something nearby that is not a
goldfinch, but resembles a goldfinch (or whether there is some other undermining fact not
accessible as in the case of Susan and the canary, above). Whether the first sentence of
condition 4b (i.e. that there is no undermining evidence that would weaken S's belief) is
in part, satisfied contingent upon whether there is an entity, in direct view or in the
vicinity that would undermine Samantha's strong belief that she sees a goldfinch. For
instance, if someone's pet canary had escaped and actually flown into the air space only thirty feet from where S now stands, this fact would be undermining to S's belief, no matter whether S was aware of it or not. S would likely concede that she does not know that she was seeing a goldfinch if there actually exists a canary in the vicinity of where S gazes, and if S was not in a visual position to distinguish a goldfinch from a canary.

In sum, if S believes she sees a goldfinch, and if it is true that she is seeing a goldfinch, and if S's belief that she is seeing a goldfinch is from evidence that is relevant for why it should be believed that she sees a goldfinch, and if S's visual faculties and background beliefs are 'adequate' for her to rule-out the canary and other conflicting hypotheses, and if there are no nearby yellow birds (or goldfinch resembling objects) that could be mistakenly identified as a goldfinch; then S knows that she sees a goldfinch. The PE definition states that if these material conditions are obtained, then 'S knows p' is true. Although spatial considerations and characteristics of resembling objects, and other potential undermining facts are left very imprecise, the PE definition brings into account all of the factors for the possibility that Samantha knows that she sees a goldfinch, as well as the alternative possibility that she does not know that the is seeing a goldfinch.

With respect to this example, a strong advocate of epistemic closure will maintain that when Samantha knows that she is seeing a goldfinch, she also knows that she is not seeing a canary. But is this correct? Is it true that if S knows p, then she must know that any and all undermining evidence (and potential defeaters) are false (or irrelevant) to the truth of p? We answer 'no' to this question and appeal to the principle of fallibilism and
condition 4a. With 4a, it is stated that S must 'rule-out' possibilities (in a pragmatic and normative context) that imply \(\neg p\), as a necessary condition for knowing.

The reason why knowledge condition 4a is endorsed, and epistemic closure is rejected is that condition 4a allows S to fallibly rule-out and resolve actual and logical possibilities that would undermine (or defeat) S's premises for believing \(p\). With condition 4a, S may tacitly or explicitly discard improbable undermining possibilities, and assume them false, without knowing them false. The acceptance of fallibilism where 'S can know \(p\) upon strong reasons, but S's reasons for believing \(p\) do not guarantee the truth of \(p\)' describes the status of our ordinary inferences. Two common statements of fallibilism in terms of 'justification' and 'evidence' are as follows:

a) For some \(p\), it is possible for S to know that \(p\) even if S could have exactly the same personal justification for believing \(p\) when \(p\) is false.

b) For some \(p\), it is possible for S to know that \(p\) even if one's evidence for \(p\) does not make certain the truth of \(p\).

By accepting condition 4a and the principle(s) of fallibilism, it is affirmed that S can know \(p\), based in part upon ruling-out potential defeating propositions that cannot be known to be false. Sherman and Harman (2011) similarly endorse this principle.

(#16) Norman Believes 'The President is in New York City'

This example is from Laurence Bonjour (2002, p. 230). Norman is a genuine clairvoyant. N has a natural ability (by a mysterious physical-causal mechanism) to consistently form true beliefs about distant events on select topics. Although N possesses clairvoyant beliefs, he doesn't believe himself to be a clairvoyant. N has no belief or
opinion whether clairvoyance is possible, and thus has no belief for or against his having a clairvoyant ability. As a matter of fact, N often forms reliable (and true) beliefs about the geographical whereabouts of the president of the United States. At time t, N's clairvoyance causes him to form a belief p that 'The President is now in New York City.' At time t, it is true that the president is in New York City. Does Norman know p?

Norman does not have knowledge that p. Conditions 1, 2, and 3 are fulfilled, since he possesses a truth-connecting causally reliable belief mechanism for having a true belief. But if the instinctual grounds for his beliefs are questioned by an observer, N's lack of reasons leaves condition 4a unsatisfied. Bonjour agrees that Norman does not have human knowledge and argues against reliabilism in part based upon this objection.4

(#16) The Poison Overdose: Does S Know that 'Mr. Dunfor is Dead?'

This example is similar to that of Robert Shope (1983, p. 152), adopted from Marshall Swain (1978, p. 243) and discussed by Richard Feldman (2003, p. 85). This example is directed toward causal theories of knowledge, but it could be used as an objection to knowledge condition 3 in the PE definition. It can be argued that S can know p, despite not possessing relevant reasons for why p is true:

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4 This example is analogous to the Mr. Truetemp example from Lehrer (2000, p. 187) where unknown to T, a tempucomp is secretly implanted in his head by an experimental surgeon allowing T to always have a true belief about what the temperature is. But, because T isn't aware of the reliability and truth of his beliefs, he doesn't possess defensible human knowledge. If a surgeon's work is unknown to T, he only has animal knowledge, since the four primary PE conditions of knowledge are satisfied.
S observes Mr. Dunfor taking a clearly fatal dose of poison, and S is a doctor, well-acquainted with the poison's properties, and believing that Dunfor is not going to receive an extremely rare antidote, comes to believe \( p \): 'Mr. Dunfor will die within two hours.' As it turns out, an hour before the poison would have killed him, Dunfor is struck and killed by a speeding truck. The pedestrian-truck accident and Mr. Dunfor's death are not at all a consequence of the poisoning.

Given that S believes that Dunfor will be dead within two hours after the poisoning, does S who doesn't observe the whereabouts of Dunfor after the poisoning know \( q \): 'Dunfor is dead,' two hours after the poisoning? There are two responses:

(a) S \textit{doesn't know} that Dunfor is dead. S has a personally justified true belief but doesn't know \( p \) because of an apparent violation of condition 3 (the fatal dose of poisoning is not why \( p \) should be believed). Also, if S knew \( q \): 'Dunfor didn't die from poison' (unconsidered undermining evidence; a condition 4b violation) this might lead to condition 4a and condition 2 violations.

(b) S \textit{knows} that Dunfor is dead. Because S has evidence that Dunfor ingested a clearly lethal dose of poison, it is implied that Dunfor will be dead within two hours, no matter whatever else happens (e.g. house fire, earthquake, sniper attack, heart attack, motor vehicle accident, etc.). The ingestion of poison is relevant (truth-connecting) for why Dunfor will be dead, no matter what else happens.

The reasoning behind each of these contradictory responses is extremely plausible!
The first response denying S's knowledge could be true if S became aware that q: 'Dunfor did not die from a poison overdose.' Given this fact, S could have a serious doubt about whether S was dead at all, despite what seemed to be extremely strong evidence. Dunfor's ingestion of a fatal dose of poison is strong evidence (satisfying 4a) and normally would be truth-connecting evidence for believing that 'Dunfor is dead' two hours later. But with evidence q, this strong evidence is not (in fact) a relevant truth-connecting reason for why p should be believed. This is a Gettier case where knowledge conditions 3 and 4b are violated. On this interpretation, S has a true belief based upon strong evidence, but doesn't know p.

The second response maintains that S knows 'Dunfor is dead.' This response is correct if it is assumed that S's given evidence for Dunfor's death is both (1) Dunfor has ingested sufficient poison that will be fatal within two hours, and (2) Nothing else can save Dunfor from dying within two hours. If S accepted both of these premises as reasons for believing that Dunfor is dead, then this second premise is in fact relevant, and PE knowledge conditions 1, 2, 3, and 4a would all satisfied. What is crucial in determining whether S knows p, would be S's response to the existing undermining fact q: 'Dunfor did not die from a poison overdose.' If S were to learn of this fact, and if S were to dismiss this counter-evidence by resolving that S must still be dead (no matter what), condition 4b would be satisfied, and S knows that 'Dunfor is dead.'

What are we to make of these two persuasive arguments that yield conflicting conclusions as a solution to this example? Does this show that the PE definition yields a contradiction, and is inconsistent? I certainly hope not.
Instead of viewing these results as contradictory, these possibilities illustrate that whether 'S knows p' can be dependent upon S's reaction to an undermining proposition q. In the first case, S reacts with a defensive posture to q, becoming skeptical about the strength of his evidence. Although S has implicit relevant reasons (not immediately forthcoming) for believing 'Dunfor is dead,' S's conscious inability to resolve q, leads to a failure of knowledge. In the second case, S is more confident of his evidence, and with clearly-stated premises that are strong and relevant for why p should be believed, and a discard of q, S knows p. The subjunctive conditional of 4b respects the reasonable and variable reactions to counter-evidence, as a contextual element to whether S knows p.

(#18) Does Marcia Know that Her Husband, Jim, is having an Affair?

With several example cases in the main text, we have illustrated how there can exist conflicting and misleading evidence that S is unaware of, that results in condition 4b not being satisfied and thus obstructing S's ability to have knowledge. For example, Steve doesn't know that Jim bought a Ford truck from the local dealer because of the unconsidered errant testimony from a dealership salesman. Similarly, Jill does not know that a political leader has been assassinated, when at the same time an elaborate hoax attempted by the leader's associates fails. These examples show that in some cases there exists unconsidered misleading undermining evidence that S would not be able to discard, and this prevents S from having knowledge in otherwise normal situations. With an example from Hetherington (1996) it is apparent that there are other cases where the existence of unconsidered misleading evidence would not (or should not) defeat S's true belief based on strong evidence. This is consistent with the wording of condition 4b:
There cannot exist undermining evidence (no matter whether $S$ is aware of it or not) that would significantly weaken $S$'s belief that $p$. If there exists evidence $q$ that strongly suggests $\text{not-}p$, and if $S$ was to be aware of this evidence, then $S$ must have (or acquire) evidence to dismiss (or resolve) counter-evidence $q$.

Hetherington's example is as follows:

Marcia has good evidence for her husband Jim's infidelity. He has been acting furtively, staying away from home; a strange perfume clings to his clothes; and most of her friends tell her that he has been unfaithful, although they do not claim to know who the other person is. On the basis of this evidence, Marcia believes that Jim is being unfaithful. Unfortunately, her belief is true. Still, she has not asked her best (and most trusted) friend, Kim. But, were she to do so, Kim would tell Marcia that the stories are false. Does Marcia therefore no know that Jim is cheating on her? What if-- though Marcia is unaware of it-- Kim is the person whom Jim is having an affair? (p. 51).

In this case Marcia knows that Jim is having an affair, given her strong evidence, and the stipulations of this story. The unconsidered undermining evidence $q$ (viz. that her best friend Kim's testimony would deny Jim's affair) should not significantly weaken Marcia's belief. Unless Marcia was in a very deep state of psychological denial, the potential of Kim's false testimony would not be enough to make condition 4b unsatisfied. Of course, if Marcia were to solicit Kim's opinion, Marcia may have a temporary doubt, and
reconsider existing evidence, but Kim's undermining testimony alone would not (or should not) defeat her strong belief and putative knowledge that Jim was having an affair.

(**19) Does Simon Know that 'It will Rain?'**

An example adopted and modified from Harman (1973, p. 173):

Simon believes that barometer readings fall before a rainstorm because there is an increase in the force of gravity. He believes that gravity initially pulls mercury down the tube (making the barometer reading fall) and when the force is great enough, gravity pulls rain out of the sky.

Let us assume for simplicity that Simon has observed that it rains 100% of the time in a 24-hour period after the barometer reading falls. Given that Simon is aware of this strong statistical evidence, but is unaware that it is actually a change of air pressure that causes the barometer to fall (and that there are other atmospheric factors that cause it to rain) is Simon justified in believing that it will rain whenever the barometer reading falls? Does Simon know that 'it will rain' whenever the barometer reading falls?

This example challenges the adequacy of PE condition 3, that states in order to have knowledge, S must have reasons that are substantially relevant for why p should be believed. As discussed, this condition doesn't mandate that all of S's reasons for believing p are relevant or true, but just states that 'substantial relevancy' is required.

Are Simon's two primary reasons;

1. Whenever the barometer falls, it rains. (A statistical premise assuming this is a case of physical causation).

2. Increased gravity will cause the barometer to fall and rain to fall from the sky. (A physical-causal hypothesis is inferred).
for believing 'it will rain' when the barometer falls, *relevant* for why he should believe that it will rain? I believe that these reasons (as a whole) are substantially relevant, and that PE condition 3 is satisfied, and that Simon knows that it will rain when the barometer falls. Harman agrees that Simon has knowledge in this case, saying that there are two explanations for why Simon believes that it will rain. One is the reason involving increased gravity, and the second explanation is an assumption that the barometer behaves in a way dependent upon environmental issues, and that there is a strong causal-statistical correlation between barometer readings and impending rainfall. Although Simon knows that it will rain (based on the first relevant reason), he clearly doesn't have scientifically relevant reasons for *why* it will rain.

A person can have a set of substantially relevant reasons for believing p even though not all of those reasons are true or relevant for why p should be believed. Similar to this example, it can be maintained that the ancients knew that the sun would rise in the eastern sky each day, even if they believed that the earth was at the center of the universe and had false causal explanations for why the sun appears as it does.

(#20) Is it Possible to Possess Knowledge from a Single False Premise?

Ted Warfield (2005) and Klein (2008) have recently asked whether there are situations where S believes an evidential proposition e, but e is false, and e is the single premise for why an inferred belief p is believed true, and the inferred p is (intuitively) an instance of knowledge. Is it possible for S to gain inferential knowledge from a single 'relevant' false premise? Their answer is yes. Are they correct? I don’t believe so.

Let us consider examples from Warfield (pp. 407-408) and from Klein (p. 36):
(1) Counting with some care the number of people present at my talk, I reason: There are 53 people at my talk, therefore my 100 handout copies are sufficient. My premise is false. There are 52 people in attendance— I double-counted one person who changed seats during the count. And yet I know my conclusion: My 100 copies are sufficient.

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

(3) On the basis of my apparent memory, I believe that my secretary told me on Friday that I have an appointment on Monday with a student. From that belief, I infer that I do have an appointment on Monday. Suppose, further, that I do have an appointment on Monday, and that my secretary told me so. But she told me that on Thursday, not Friday. I know that I have such an appointment even though I inferred my belief from the false proposition that my secretary told me on Friday that I have an appointment on Monday.

The insight, according to Warfield is that in each example, S knows p, but this knowledge is based on a single relevant false premise. Traditionally, it has been believed that knowledge can't be based upon as set of (essentially) false premise(s). It has been held that inferential knowledge of a conclusion always requires some set of true relevant
premise(s). For example, Gettier examples aren't cases of knowledge because S has a personally justified true belief based upon false premises (i.e. irrelevant propositions).

But, the impact of these examples (and others like them) is intended to provide counter-examples to the necessity of true relevant premises, as a condition for knowledge, by showing how cases of knowledge can be generated from a single false premise. Warfield claims that we can have "knowledge from falsehood" and Klein suggests that "useful false beliefs" can allow a person to have knowledge. Warfield claims that there needs to be a reconsideration of the role(s) that false beliefs may play in attaining knowledge. He states (p. 408):

...the falsity of the premise in each case is properly stipulated in each example and the 'relevance' of that false premise is suggested by the fact that the premise is the sole material premise in the inferential episode leading to the conclusion. If the sole substantive premise isn't relevant, then someone has some explaining to do about the notion of 'relevance' involved in the widely-held claim that:

"Inferential knowledge of a conclusion requires true relevant premises."

Since we now have counterexamples, Warfield states that "these are cases of knowledge from falsehood" and so we must integrate this fact carefully no doubt, into our overall epistemological thinking" (p. 408).

When considering a situation where knowledge is based upon a single (essential) false premise, Warfield wishes to restrict our attention to cases in which a person has exactly one inferential argument for one's conclusion and the inferential argument consists of a single material premise and a suppressed conditional linking the premise to
the conclusion via *modus ponens*. He says that in simplifying this way, we attend to (deductive) inferences where the surface form of reasoning is perspicuous. He says that this simplification does not require taking a stand on the question of whether coherentist or other 'holistic' features play a justificatory role, nor does the simplification involve taking a stand on the epistemic role of 'the background' or anything else (p. 406).

In critical response we must ask, do these examples really illustrate instances of knowledge from a single false premise? Does S really *infer* (or *reason*) that \( p \): (1) ‘he has enough copies,’ (2) ‘she won’t be late for a meeting,’ and (3) ‘he has an appointment on Monday’ from a *single* evidential premise via a *modus ponens* inference in context? Even if the *modus ponens* mode of deductive reasoning is the cognizant process for why S infers \( p \), does S’s belief \( p \) (in a context) emerge from just this single premise? I’m inclined to say no, since the single premise \( e \) is false (and irrelevant) for why \( p \) should be believed. This single premise cannot be the source of S's putative knowledge that \( p \).

Warfield issues an explicit challenge (in the quote above) that if the sole substantive premise isn't 'relevant,' then someone has some explaining to do about the notion of 'relevance.' We have analyzed *two* senses of 'relevant' in the main text of "A Predominately Externalist Definition of Knowledge." In the case of determining the cause of a house fire, we distinguished a *'wide sense' of relevant evidence (or premises)* that *might* be related to, or *might* have some significance, or are *worthy* of attention' in the *initial investigation* of the origin of the fire (e.g. an electrical problem, lightning, or fallen lit candle). We also noticed a *second 'narrow truth-connecting sense' of 'relevant'* when *after* an investigation, experts determine (from available evidence) that *the*
'relevant' (truth-connecting) cause of a fire was a fallen candle. Once the cause of the fire is determined to be a lit candle, other possible causes are deemed irrelevant, in the truth-connecting sense.

With respect to the paper miscount case, it is acknowledged that the false premise 'there are 53 people at my talk' is relevant to S's true belief, in the wide sense, in that it is among the premises that could be (and is in fact) used to justify S's true belief. But since the premise e is false, it is irrelevant, in the narrow sense to the truth of p, since it is not truth-connecting for why p should be believed. We argue that there are other tacit background beliefs held by S that form the implicit set of premises that are relevant for believing p in question, and this is the explanation for why p is known in each case. This kind of explanation is called the 'standard response' by Branden Fitelson (2018). 5

With PE condition #3 it is a necessary condition of knowledge that S's justificatory reason(s) for believing p must be substantially relevant (i.e. truth-connecting) for why p should be believed. In the examples above, the falsity of the single premise used by S when inferring p would be understood as 'undermining evidence' that if made available to S, could weaken S's belief that p. The crucial question, on the PE account, is that if S was to be made aware that the single premise is in fact false, how would S react to this counter-fact? In each epistemic context, it can be assumed that S believes p among set of implicit reasons e1, e2, and so on, even though they are not the direct cognizant (or causal) reasons for why p is believed. In the above examples, these implicit (proxy) reasons would include that, for example: (a) the

5 He notes Klein (2008), Martin Montminy (2014), and Ian Schnee (2014) as advocates.
headcount of 53 persons is well short of the 100 copies available, (b) at mid-afternoon I have plenty of time for an early evening meeting, and (c) my secretary told me (at some time) that I have a meeting on Monday, and I know the student needs my attention. As argued earlier, persons may (unintentionally) have false beliefs as 'evidence' (or reasons) for believing \( p \) where some stated reason(s) are false, but in cases of knowledge, **one’s overall evidential beliefs must be substantially relevant** (i.e. truth-connecting) for why a true \( p \) is believed.

To be specific, on the PE theory, the second sentence of condition 4b states that "If there does exist evidence \( q \) that suggests not-\( p \), and if \( S \) was to be aware of this evidence, then \( S \) must have (or acquire) evidence to dismiss (or resolve) counter-evidence \( q \)." Presumably, in each case, \( S \) already possesses additional evidence, to immediately resolve the falsity of the single premise that was used in reasoning to a true \( p \). If challenged with the falsity of the single premise, \( S \) typically possesses additional beliefs, besides the motivating false belief, to retain the inferred belief \( p \) (as known).

Warfield is aware of the kind of 'resistance strategy' and argues against it, saying "mere dispositions to believe cannot play an epistemizing role in an inferential argument; allowing them to do so grossly over-ascribes inferential knowledge" (p. 410). But this intuition about inferential beliefs seems false. We do not typically make inferences, and knowledge claims, with a single premise and suppressed conditional *modus ponens* reasoning. Warfield's arguments against the resistance strategy aren't convincing.

Contrary to Warfield, the PE account of knowledge doesn't challenge the long-accepted principle that "Inferential knowledge of a conclusion requires true relevant
premises” (p. 405). As stated, the false premise 'there are 53 people at my talk' is relevant to S's true belief, in the wide sense, in that it is among the premises that could be (and is in fact) used to justify S's true belief. But the false premise is irrelevant, in the narrow sense, in that it is not truth-connecting for why p should be believed. Fortunately, for S, if confronted with not-53, she will normally be able to immediately resolve this irrelevancy, with other (relevant) truth-connecting premises, if needed.

Knowledge cannot be generated from a single (or essential) falsehood, even if the falsehood is the initial causal source of one's true belief. These new examples are cases of knowledge despite falsehood, and not cases of knowledge from falsehood. Persons can have false beliefs (as evidence) on the way to possessing knowledge, but knowledge requires the possession of relevant (truth-connecting) beliefs.

E. Arguments against a No-Defeater Condition

(#21) Harman’s Logical Objection to Condition #4b

Harman (1973) asserts: “We can know that p, even though there is evidence e that we do not know about such that, if we did know about e, we would not be justified in believing p” (p. 147). He then proposes a normative rule of inference that is designed to prevent Gettier cases (p. 151):

Q: One may infer a conclusion only if one also infers that there is no undermining evidence one does not possess.

He says that this principle reflects good scientific practice. A good scientist will not accept a conclusion unless he has some reason to think that there is no as yet undiscovered evidence which would undermine his conclusion.
In contrast the scientist cannot accept the following principle (p. 152):

**N**: One may infer a conclusion only if one also infers that there is no evidence at all such that if he knew that evidence he could not accept his conclusion.

Harman believes that **N** is too restrictive. He believes that **N** as a norm for good scientific practice would require the researcher to seek out all and any evidence that might conflict with a theory. But, Harman maintains that the physical scientist isn’t required to infer that there is *no evidence at all* that might undermine a given theory. There is no mandate that scientists *must access (and remedy)* any and all undermining evidence in the universe in order to possess knowledge (as we agreed above).

He then presents an argument that compares an ordinary instance of putative knowledge **p** with a true proposition **k** that isn’t reasonable to believe: He insists that there will always exist a true proposition such as **k** that is unreasonable for us to believe, when paired with what seems to be a case of knowledge, that will undermine that belief:

There will always be a true proposition such that if S learned that the proposition was true (and learned nothing else) he would not be warranted in accepting his conclusion. If **p** is his conclusion, and if **k** is a true proposition saying what ticket will win the grand prize in the next New Jersey State lottery, then ‘either **k** or **not-p**’ is such a proposition. If he were to learn that it is true that ‘either **k** or **not-p**’ (and learned nothing else), **not-p** would become probable since (given what he knows) **k** is antecedently very improbable. So, he could no longer reasonably infer that **p** is true (p. 152).
The lesson of this logical argument is that only propositions that S is very certain of, would qualify as warranted belief under principle N or PE condition 4b. This is because for many of us there are some (or many) true proposition(s) such as k (e.g. the winning lottery number is 6289067539, there is no God, my beloved brother is an unsuspected serial killer, the law of identity isn't an a priori necessary truth) that are personally unreasonable to believe, but could be introduced (as true) in disjunction with a case of putative knowledge p (e.g. ‘My birthdate is March 11, 1974’) by means of disjunction introduction. If S were to learn that ‘either k or not-p’ is a true proposition, this would become a defeater of S’s justification for believing p (one’s date of birth). For many of us, it would be more likely that k is false, and not-p is true, so that this true proposition d (i.e. ‘either k or not-p’) defeats S’s belief that p. This proposition exists as counter-evidence to proposition p that S could not dismiss if S should become aware of it.

What are we to make out of this respected logical argument? Does the ‘learning’ of an arbitrary disjunction (i.e. ‘either k or not-p’) undermine belief p? Does the fact that such an isolated undermining proposition may ‘exist’ (or be constructed), lend to the reasonable rejection of principle N and PE condition 4b? I don’t believe so. It doesn’t seem that an arbitrary disjunction where the first disjunct seems improbable should lead to the defeat of an unrelated true belief. In ordinary situations, when S responds to allegedly undermining evidence to a p, those evidential propositions must somehow be related (or widely-relevant) to the proposition being evaluated. Ad hoc disjunctive logical possibilities as d (even when true) are irrelevant to whether p is true and whether S is warranted in believing p, and thus don’t really count as undermining propositions.
(#22A) Feldman's 'Radio Case' Argument

Richard Feldman (2003, p. 34) offers the following rather bizarre argument which purports to show that a no-defeaters condition cannot be correct. Feldman considers the following internalist formulation of a no-defeaters condition:

There is no true proposition \( q \) such that if \( S \) were justified in believing \( q \), then \( S \) would not be justified in believing \( p \). (No truth defeats \( S \)'s justification for \( p \)).

Feldman considers the following situation, where it is assumed that four material conditions are true, and the only way that \( S \) could know \( q \) was if \( S \) was hearing the Neil Diamond song "Girl, You'll Be a Woman Soon" now playing on Radio Station 101:

**Material Conditions:**

1) \( S \) is sitting in his study with the radio off.

\( p \)= 2) \( S \) knows the radio is off.

\( q \)= 3) Radio Station 101 is playing Diamond's "Girl, You'll Be a Woman Soon"

4) If \( S \) had the radio on, \( S \) would know \( q \).

From this situation, which includes a counterfactual conditional in 4, Feldman provides the argument below (where \( p \) designates statement 2, and \( q \) designates statement 3 above) that concludes with proposition 5, that there always exists a true \( q \) such that if \( S \) is justified in believing \( q \), then \( S \) is not justified in believing \( p \):

**Feldman's Argument:**

1) If \( S \) is justified believing \( p \), then \( S \) is not justified in believing \( q \).

2) If \( S \) is justified believing \( q \), then \( S \) is not justified in believing \( p \).

3) \( q \) is true.
4) Suppose that S is justified in believing q.

5) Therefore, there always exists a true q such that if S is justified in believing q, then S would not be justified in believing p.

Feldman claims that this argument proves that the no-defeaters condition is too restrictive since it will in effect, allow few instances of knowledge.

Does Feldman's argument really prove that there always exists true propositions such as q (i.e. Radio Station 101 is playing Neil Diamond) such that if S were justified in believing q, then S would no longer be justified in believing p (that the radio is off).

What is the source of S's personal justification for believing q in premise 4? Does this argument simply assume the truth of a counterfactual in premise 4, and then exploit the counterfactual clause "...that if S were justified in believing q..." in this peculiar formulation of a no-defeaters condition?

Feldman's argument fails because premise 4 ('Suppose that S is justified in believing q') is counterfactual to the initial material situation described. As a result, it certainly follows that if S was in a material environment (where S could hear the tune playing) S would no longer be justified in believing p (the radio is off) and wouldn't know p. For example, if S's roommate walks into the room and turns on the radio, S would no longer be justified in believing p (i.e. the radio is off) because the sound of the Neil Diamond song is undermining evidence that the radio is turned off. Feldman's assumption of a counterfactual premise 4 does nothing to harm the no-defeaters condition, because if it is true (or supposed true) that S is in a different material situation
where \( S \) is justified in believing that he hears a Neil Diamond tune, then \( S \) is not justified in believing that the radio is off.

**(#22B) The Grandmother Argument; Analogous to Feldman's That Also Fails**

Perhaps we are paying attention to an odd argument that obviously fails but let us look at an analogous argument that again shows where Feldman goes wrong. Consider the following example, where it is assumed that all four material conditions are true:

**Material Conditions:**

1) \( S \) is a 92-year-old grandmother with a Ph.D. in History living in the United States, and she has never accessed the internet, and never intends to, and vows to never have knowledge about any of its content.

2) \( S \)'s grandson gives grandma \( S \) a personal computer as a birthday present and pre-sets the internet start page to the Smithsonian Institution, which is a scholarly history institute.

3) \( S \) knows that the computer is turned off as she sits alone in her home, and she has no intention of ever turning it on, nor accessing the internet, nor having any information about its contents.

4) The Smithsonian Institution has a sunshine logo on its website homepage.

5) If \( S \) accessed the internet, \( S \) would know that the Smithsonian Institution has a sunshine logo on its homepage.

From the above situation, which includes a counterfactual conditional in 5, it can be argued below (where \( p \) designates \( S \) knows that 'she will never access the internet' and \( q \) designates 'the Smithsonian Institution has a sunshine logo on its homepage') that there
always exists a true \( q \) such that if \( S \) is justified in believing \( q \), then \( S \) is not justified in believing \( p \):

**(#22C) An Argument Analogous to Feldman's:**

1) If \( S \) is justified believing \( p \) (i.e. that she never has and never will view the internet or be aware of its contents), then \( S \) is not justified in believing \( q \) (i.e. the Smithsonian website homepage has a sunshine logo).

2) If \( S \) is justified in believing \( q \), then \( S \) is not justified in believing \( p \).

3) \( q \) is true.

4) Suppose that \( S \) is justified in believing \( q \).

5) Therefore, there always exists a true \( q \) such that if \( S \) is justified in believing \( q \), then \( S \) would not be justified in believing \( p \).

Does this argument prove that there always exists a true proposition such as \( q \) (i.e. the Smithsonian website has a sunshine logo) such that *if* \( S \) were justified in believing \( q \), then \( S \) would no longer be justified in believing \( p \) (that she has never viewed any internet site and has no beliefs about its content)\)? It seems this argument shows no more than this:

If \( S \) were justified in believing \( q \) (i.e. that the Smithsonian website has a sunshine logo), and \( q \) was true, then \( S \) would not be justified in believing \( p \) (i.e. that she had never viewed any internet website nor had any beliefs about its content).

This argument (which mirrors Feldman's argument) fails to show that a no-defeaters condition is too restrictive, because premise 4 is (again) a counterfactual to the initial material situation described. As a result, it certainly follows that *if* \( S \) was justified in believing that the Smithsonian had a sunshine logo, then \( S \) would no longer be justified in
believing \( p \) (that she had never accessed the internet nor had beliefs about its content). The assumption of a counterfactual premise 4 does nothing to harm the no-defeaters condition, because everyone would agree that if it were true that \( S \) is justified in believing that the Smithsonian has a sunshine logo (as assumed in premise 4), then \( S \) is not justified in believing that she has never viewed, nor has information, about any site on the internet. Neither Feldman's 'radio example' nor the 'grandmother website example' argument give us reason to believe that there is a problem with a no-defeaters clause.

**(#22) Turri's 'Dr. Lamb Case' Argument against a No-Defeater Condition**

John Turri (2012) provides a Gettier example to allegedly show that a modified defeasibility theory fails to account for the intuition that Dr. Lamb doesn’t know that ‘At least one of my students own a Lamborghini.’ It is modeled after Lehrer 1965, 169-170:

One of Dr. Lamb’s students, Linus, tells her that he owns a Lamborghini. Linus has a title in hand. Dr. Lamb saw Linus arrive on campus in the Lamborghini each day this week. Linus even gave Dr. Lamb the keys and let her take it for a drive. Dr. Lamb believes that Linus owns a Lamborghini, and as a result concludes ‘At least one of my students owns a Lamborghini.’ As it turns out, Linus doesn’t own a Lamborghini. He is borrowing it from his cousin, who happens to have the same name and birthday. Dr. Lamb has no evidence of any of this deception, though. And yet it’s still true that at least one of her students owns a Lamborghini: a modest young woman who sits in the back row owns one. She doesn’t like to boast, though, so she doesn’t call attention to the fact that she owns a Lamborghini.
Turri states that most philosophers who consider this case say that (a) Dr. Lamb does not know that at least one of her students owns a Lamborghini, even though (b) she has a (personally) justified true belief that at least one of her students owns a Lamborghini. This is clearly what philosophers would refer to as a Gettier example.

Turri first considers the simple no-defeater theories of Lehrer and Paxson (1969) and Klein (1976). The simple defeasibility theory of knowledge (STD) says that: S knows that p, just in case (i) p is true, (ii) S believes p, and (iii) S’s belief that p is justified, and (iv) S’s justification for believing p is undefeated. Some fact F defeats S’s justification for believing p just in case (i) S believes p based on evidence E, (ii) E justifies belief in p, but (iii) the combination of E + F fails to justify belief in p. This simple no-defeater formula satisfactorily explains why Dr. Lamb doesn’t know that ‘at least one of my students owns a Lamborghini.’ In the above case, the defeater F is the fact that Linus is deceiving Dr. Lamb about owning a Lamborghini. If Dr. Lamb was aware that Linus was deceiving her, then Lamb wouldn’t be justified in having this belief.

Because of the problem that there can be misleading defeaters (e.g. the testimony from a demented mother in the Tom Grabit case) that could defeat personally justified true beliefs based upon relevant evidence (e.g. perceiving Tom stealing a book), Turri says that the modified defeasibility theory (MDT) was developed: S knows that p just in case (i) p is true, (ii) S believes p on evidence E, (iii) E justifies belief in p, and (iv) E is ultimately undefeated. E is ultimately undefeated just in case there is no fact F such that E + F fails to justify belief in p; or if there is such a fact, then there is some further fact F* such that E + F + F* does justify belief in p. In such a case F* is a defeater-defeater.
But Turri says that the problem with conditions specified by MDT is that it deprives it of being able to handle the original Gettier cases. Consider Dr. Lamb:

The fact that Linus is deceiving Dr. Lamb is a defeater (F). But the fact that the modest female student does own a Lamborghini is a defeater-defeater (F*). This last fact is a defeater-defeater because this combination:

E: My student Linus has possession of this Lamborghini, drives it frequently, and has a title to the Lamborghini with his name and birthdate on it.

F: My student Linus does not own this Lamborghini.

F*: That young female student of mine owns a Lamborghini.

justifies Dr. Lamb’s belief that at least one of her students owns a Lamborghini. It does this because F* obviously entails that at least one her students own a Lamborghini. And it would do so, no matter how many of Dr. Lamb’s other students don’t own a Lamborghini.

Is Turri’s explanation correct? Does the unknown fact F* (i.e. the female student owns a Lamborghini) that is not a premise for Lamb’s belief that ‘At least one of my students owns a Lamborghini’ become a defeater-defeater that allows Lamb to know a student owns a Lamborghini? Of course, this is unintuitive and objectionable to everyone: Lamb doesn’t know ‘At least one of my students owns a Lamborghini’ even if her misleading evidence E and false belief (i.e. that Linus is an owner) are mitigated by a true fact F*. But according to Turri, the modified defeasibility account as stated, allows that the unrelated fact that ‘the young female student owns a Lamborghini’ to be a defeater-
defeater of the false belief ‘Linus owns a Lamborghini,’ and so it allows for Lamb to know, where clearly, she doesn’t. This is a counter-example to defeasibility theories.

But the no-defeaters condition in the PE definition doesn’t imply that Lamb automatically has knowledge if there is a defeater-defeater. This is because of a condition 3 violation as well as a continued condition 4b violation. Specifically, with the condition 3 violation Lamb does not know because Lamb does not possess belief \( p \) (i.e. one of my students owns a Lamborghini) based upon a set of explicitly held reasons that are substantially relevant (or truth-connecting) for why \( p \) should be believed. The evidence (E) held by Lamb that generates the belief \( p \) is not why \( p \) should be believed (even if \( p \) is true). With respect to condition 4b, given the evidence E that was used to justify Lamb’s belief; if Lamb were to find out that the assumed sincerity of Linus was false (implicit in E), then Lamb would admit not having knowledge. Lamb’s case continues to be an example of a Gettier case because PE conditions 3 and 4b are violated. Turri’s objection to the viability of epistemic defeasibility theories is thus refuted.
References


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