

(Forthcoming in *Synthese*.)

The Nature of Doubt and a New Puzzle about Belief, Doubt, and Confidence

by Andrew Moon

[Word Count: 9148]

Abstract. In this paper, I present and defend a novel account of doubt. In §1, I make some preliminary observations about the nature of doubt. In §2, I introduce a new puzzle about the relationship between three psychological states: doubt, belief, and confidence. I present this puzzle because my account of doubt emerges as a possible solution to it. Lastly, in §3, I elaborate on and defend my account of doubt. Roughly, one has doubt if and only if one believes one might be wrong; I argue that this is superior to the account that says that one has doubt if and only if one has less than the highest degree of confidence. [Word Count: 115]

Keywords: Doubt, Confidence, Belief, Credence

Introduction

In this paper, I present and defend a novel account of doubt. My method will primarily contain two parts: 1) a careful consideration of how we use doubt ascriptions in ordinary language and 2) an appeal to intuitions about the presence or absence of doubt in various examples and counterexamples. As far as I am aware, no one has attempted to present and defend a rigorous account of doubt using these standard procedures in contemporary analytic philosophy.¹ Given the importance of doubt in philosophy, it is surprising that it has not received more attention by contemporary analytic philosophers.

In §1, I present linguistic data about ‘doubt’ to help block potential obfuscations, identify the type of doubt that will be the focus of the paper, and make some preliminary observations about the nature of doubt. In §2, I introduce a new

¹ This is not to say that no one has attempted to define ‘doubt’. For a helpful discussion and critique of the views of doubt of Russell, Pierce, and others, see Peels (ms). None of those philosophers employ the standard procedures in analytic philosophy that I mention above.

puzzle about belief, doubt, and confidence. My account of doubt emerges as a solution to this puzzle. Lastly, in §3, I explain and defend my account of doubt. Roughly, one has doubt if and only if one believes one might be wrong. I argue that this is superior to the account that says that one has doubt if and only if one has less than the highest degree of confidence.

1. Preliminary Remarks About Doubt

The word ‘doubt’ comes in different forms of speech.² First, ‘doubt’ can be used as a *count noun*. As such, an article can precede it or an ‘s’ can come at its end. For example,

- 1) “The incident raised many doubts about Fred’s integrity.”
- 2) “I have serious doubts about the value of this project.”
- 3) “I don’t have a doubt about it!”

Most of this paper will not directly be about doubts. However, I’ll explain three accounts of *doubts* to help narrow in on the sense of ‘doubt’ that will be my focus.

Here is the first account:

Doubts₁: *S* has doubts about whether *p* if and only if *S* has reasons to not believe *p*.

Someone who asserted (1) or (2) could be asked, “Well, what are they? Share with me your doubts.” The person would then be expected to share *her reasons* for being disinclined to believe that Fred has integrity or that the project lacks value. A

² Not all types of doubt ascriptions will be explored. I will focus on those doubt ascriptions that will be necessary for the reader to grasp the sense of ‘doubt’ in which I am interested. For an exploration of more doubt ascriptions, see Peels (ms).

natural way to counter (3) would be to say, “Well you should! What about X and Y?”
Such a person would be raising doubts, which would be reasons X and Y.

Second, Daniel Howard-Snyder (2013) identifies doubts with the *appearances of reasons*. He writes,

For one to *have doubts* about whether p —note the “s”—is for one to have what appear to one to be grounds to believe not- p and, as a result, for one to be at least somewhat inclined to disbelieve p (359).³

We can draw out the following account:

Doubts₂: S has doubts about whether p if and only if S has appearances of reasons to not believe p .

Suppose someone gives me considerations against believing p that are, in fact, not really reasons at all. However, they *appear* to me to be reasons. It seems that I would still have doubts about whether p . (Some might think that one has reasons if and only if one appears to have reasons.⁴ Then Doubts₁ and Doubts₂ are equivalent.)

The third account is

Doubts₃: S has doubts about whether p if and only if S has conscious occurrences of doubt about whether p .

Though Doubts₃ might appear circular, the ‘doubt’ in the right-hand side is a mass noun, which will be discussed shortly. (Unlike count nouns, an article cannot

³ A minor criticism of Howard-Snyder’s suggestion is that the doubt need not incline one to *disbelieve* p (i.e., believe $\sim p$); it need only incline the person to *not believe* p . For example, some doubts might come in the form of *undercutting defeaters*. To use Pollock’s well-known example, suppose some widgets look red and I come to believe they are. I then learn that they have red lights shining on them. Then I do not gain a reason to *disbelieve* that they are red, but only to not believe that they are red. I would then have a doubt about whether they are red. This correction is accounted for in Doubts₂.

⁴ Consider that internalists think that my demon world twin and I are evidentially identical; this supports the claim that the reasons one appears to have are the reasons one has, and vice versa.

precede a mass noun and an 's' cannot come at its end; typically, they can take a 'much' or 'little' in front of them.) For now, I will say that Doubts₃ comes closer to capturing what someone is expressing when she says,

4) "I've been having a lot of doubts lately."

The speaker is not necessarily saying that she has many reasons to not believe. She might only have one such reason, and it has been causing her to have many experiences of doubt throughout the week.⁵

From this discussion, I am inclined to think that there are two concepts of doubts. The first is closely tied to *reasons*, as suggested by Doubts₁ and Doubts₂, although the two accounts might differ as to exactly how. Settling such a dispute would require settling how reasons and the appearance of reasons relate, which is beyond the scope of this paper. However, note that either account will make natural a corresponding account of varying *strengths* of one's doubts. One can have very strong doubts about whether *p*, or just weak doubts about it. The strength of one's doubts will vary with the strength of one's reasons (if Doubts₁ is true) or with the appearance of the strength of one's reasons (if Doubts₂ is true).⁶

The second concept of doubts is expressed by Doubts₃ and is tied to the concept expressed by the mass noun form of 'doubt', which I turn to in the next paragraph. The strength of *these* doubts will vary with the strength of feeling associated with the conscious occurrences of doubt. Suppose the person who utters (4) is kept up at night because the conscious occurrences of doubt come with

⁵ Cf. Schellenberg (2005, p. 95).

⁶ I am thankful to a referee of this journal, whose comments led me to develop these points about how the strength of one's doubts could come in degrees.

intensely strong feelings. It would be natural to say that she has strong doubts, even if she only had very weak reason to have doubt. There is much more to explore about doubts, but I will say that the sense of ‘doubt’ I am concerned with is one that is not so closely tied to reasons.

Consider,

5) “Fred doubts that Sally will arrive on time.”

6) “Fred is in doubt about whether Sally will arrive on time.”⁷

7) “Fred has some doubt that Sally will arrive on time.”

(5) uses a verb form of ‘doubt’, and (6) and (7) both use a mass noun form.⁸ Each of these sentences attributes a mental state to Fred, but they do not ascribe a mental state that is closely tied to reasons.⁹ For example, Fred’s doubt that Sally will arrive on time might not be related to reasons at all; his doubt might be caused solely by his jealousy of her.

It is not obvious that (5)–(7) attribute a single mental state. Daniel Howard-Snyder (2013, 359) has noted that verb forms of ‘doubt’, like (5), indicate at least a strong inclination to disbelieve; and sentences like (6) indicate more on-the-fence suspension of judgment. If Fred suspends judgment about whether Sally will arrive on time, then saying, “I doubt that she will arrive on time,” would be false, but “I am in doubt about whether she will arrive on time” would be true. On the other hand, if Fred thinks that Sally will not arrive on time, it might be correct for him to say, “I

⁷ Thanks to John Schellenberg for drawing my attention to this sort of ascription. It is also Daniel Howard-Snyder’s (2013) focus.

⁸ Thanks to Brent Braga and Andrew Melnyk for helping me see the fruitfulness of distinguishing verb and noun doubt ascriptions.

⁹ Consider also, “It is doubtful that Sally will arrive on time,” which uses an *adjectival* form of ‘doubt’. It seems to express that there are *reasons* to doubt that Sally will arrive on time. This is the sense of ‘doubt’ that I am putting aside for this paper. Thanks to Adam Auch for helpful discussion.

doubt that she will arrive on time” but incorrect to say, “I am in doubt about whether she will arrive on time.”¹⁰

Is there anything that unites (5)–(7)? Yes. Consider,

8) “Fred has much doubt that Sally will arrive on time.”

9) “Fred has little doubt that Sally will arrive on time.”

We see with (8) and (9) that *degrees* of doubt can be ascribed by a mass noun form of ‘doubt’.¹¹ What unites (5) and (6) is that they both attribute *some* doubt; (5) attributes a high degree of doubt,¹² and (6) attributes only a moderate degree of doubt. The mental state attributed by (7), *some* doubt, is what is common to all of these different doubt attributions, and so *it* is the mental state that will be the focus of this paper.¹³

Having clarified the type of doubt I am interested in, I will end this section by making two observations about the nature of doubt. The first is that *belief* is compatible with doubt.¹⁴ Someone might question this observation for two reasons. First, conjuncts in sentences of the form,

10) “Fred believes that it will rain tomorrow, and he doubts that it will rain tomorrow”

¹⁰ Thanks to Philip Swenson for helpful conversation about these examples.

¹¹ It is not *always* the case that if one can have much or little of X, then X comes in degrees. One can have much or little gold, but gold does not come in degrees. However, this inference is plausible in the case of *mental states*: if one can have much or little of *mental state* X, then X comes in degrees. For example, it is plausible to infer from the fact that we can have much or little desire, much or little hope, and much or little happiness, to the conclusion that these mental states come in degrees. So, this inference is plausible in the case of doubt.

¹² It is interesting that, even with modifiers, verb forms of ‘doubt’ resist expressing low degrees of doubt. One can say, “I highly doubt that *p*”, but it is very awkward to say, “I lowly doubt that *p*” and still at least a little awkward to say, “I doubt, a little bit, that *p*.”

¹³ Degree of doubt will be discussed more in §3.2 and should be distinguished from the degree of strength of one’s doubts, which I discussed earlier in this section.

¹⁴ *Contra* Schellenberg’s (2005, 96).

seem to clash, which indicates that they are inconsistent. Second, according to some dispositionalist accounts of belief, if one believes that p , then one has the tendency to consciously affirm that p when asked whether p .¹⁵ We could extend this point to doubt: if one doubts that p , then one does not have the tendency to consciously affirm p when asked whether p . Hence, the two states are incompatible.

My reply to these objections is to concede that belief is incompatible with the degree of doubt attributed by verb forms of ‘doubt’ (as in (10)), but then say that belief is still compatible with *some* doubt.¹⁶ Consider that

11) “Fred believes that it will rain tomorrow, although he has a little bit of doubt that it will.”

12) “Fred believes that it will rain tomorrow, although he has some doubt that it will.”

are consistent. Not only are they possibly true; it also seems that Fred could *rationally* believe and *rationally* have some (or a little) doubt.¹⁷

Regarding the second objection, I will grant that the verb form of ‘doubt’ expresses a high degree of doubt, which comes with a tendency that conflicts with a tendency of belief. But this is no reason to think that a very low degree of doubt that p comes with the tendency to not consciously affirm p when asked whether p . We learn from both arguments the value of noting when we are using verb or mass noun doubt ascriptions since they may attribute different degrees of doubt.¹⁸ (Note

¹⁵ Cf. Cohen (1992), Alston (1996), Schwitzgebel (2002), and Smithies (2012).

¹⁶ Thanks to Daniel Howard-Snyder and John Turri for helpful discussion here.

¹⁷ Hawthorne, John, et.al. (2016, 1395) provide a similar argument to show that belief is a *weak attitude* (that is, the norms of belief are weaker than the norms of assertion).

¹⁸ Note that the infinitive form also indicates a high degree of doubt. If I say, “Fred has reason to doubt that Sally will arrive on time” or “Fred is inclined to doubt that Sally will arrive on time,” I

that I could have run versions of both objections with “is in doubt about whether” rather than the verb form of ‘doubt’, and also replied to them in the same way.)

My second observation is that doubt, like belief, can be either conscious or unconscious. My belief that $2+2=4$ is currently conscious; but I continue to believe it unconsciously, even when I am asleep. This same distinction applies to doubt. A theist might consider some argument from evil and begin to have some doubt that God exists. At that moment, her doubt is conscious. Later throughout the day, the doubt might only be in the back of her mind, i.e., it might be unconscious. (Consider also that if the doubt has become conscious a few times throughout the day, she could correctly say, “I’ve been having some doubts about belief in God.” This is in accord with Doubts₃.)

Note also the distinction between *unconscious doubt* and the *disposition to doubt*. The former is doubt one actually has; the latter is just an inclination to doubt in certain circumstances. A theist who initially had no doubt about her theism might come to have a newly formed doubt when questioned. Such a theist might have a disposition to doubt but no unconscious doubt; she might have not had any doubt at all before she was questioned.¹⁹

2. The Puzzle

convey that Fred has reason to believe that Sally will not arrive on time, or that Fred is inclined to believe that Sally won’t arrive on time. Thanks to Matt Duncan and Hayoung Shin for helpful conversation.

¹⁹ This follows Audi’s (1994) distinction between dispositional beliefs and dispositions to believe.

In §2.1, I lay out my puzzle about belief, doubt, and confidence. In §2.2, I discuss four ways of responding to the puzzle. In §3, I present my account of doubt as a solution to the puzzle.

2.1. The Puzzle

My puzzle takes the form of three propositions that seem plausible but are jointly inconsistent. Here is the first:

A: Many ordinary, unreflective beliefs, such as those referred to in the classroom scenario, are held without accompanying doubt.

The classroom scenario is as follows:

Classroom Scenario: It is an ordinary day and you are going to teach your class. Unlike many epistemological scenarios, there are no bizarre twists in this one. As you walk into your classroom, you are unreflectively forming all sorts of ordinary beliefs, such as the beliefs that *my chair is tilted diagonally*, *attendance is pretty good today*, and *the class clown is here*.

Plausibly, these beliefs are formed and held without corresponding doubt. As we consider this ordinary scenario, it seems that you do not also have some doubt that *my chair is tilted diagonally* or some doubt that *attendance is good today* or some doubt that *the class clown is here*. You just form the beliefs without doubt, and that's it. In describing this scenario, I intend to describe what happens to most of us when we walk into a classroom.

Now, you *could* form some doubt about these propositions. The student who looks like the class clown could say with a serious look on his face, "I'm actually the

twin brother from out of town.” This might cause you to have a tiny bit of doubt that he is the class clown. But, in *my* scenario, no student says any such thing; as I said, the scenario is completely ordinary. And (A) is about whether there *is* doubt, not about whether there *could* be doubt. So, in these ordinary scenarios that we daily find ourselves in, many of our unreflective beliefs are formed without doubt.

Here is the second proposition:

B: *S* has some doubt that *p* if *S* has a doxastic attitude toward *p* and does not have the highest degree of confidence that *p* (i.e., does not have a degree of confidence that *p* that is 1).²⁰

(B) is a very natural way to view the relationship between confidence and doubt. Indeed, adding an ‘only if’ would make (B) a complete analysis of doubt, but I’ll stick with the weaker ‘if’, since that will be sufficient for my puzzle.

As I understand the term ‘doxastic attitude’, *S* has a doxastic attitude toward *p* if and only if *S* believes, withholds, disbelieves, or has some degree of confidence toward *p*. One way to not have the highest degree of confidence that *p* is to not have formed *any* doxastic attitude toward *p*. Most adults, even if educated, have never formed a doxastic attitude toward the proposition that *actualism is true*. They neither have the highest degree of confidence toward it, nor do they have any doubt about it. But if one *does* form a doxastic attitude toward *p*, and if one does not have a degree of confidence of 1 toward *p*, then it *seems* to follow that one has at least a little doubt that *p*. So, if I currently do not have a degree of confidence of 1 that

²⁰ It is part of standard probability theory to assign the number 1 to the highest degree of confidence that *p* (when one is certain that *p*) and the number 0 to the lowest degree of confidence that *p* (when one is certain that $\sim p$) and the numbers in between 0 and 1 to the varying degrees of confidence in between. I am assuming here that there *is* a highest degree of confidence.

actualism is true after forming a doxastic attitude toward that proposition, then it seems that I must have *some* doubt about it. These considerations support (B).

Linguistic evidence also supports (B).²¹ Suppose I said,

13) “I’m not completely confident that p , but I have no doubt that p .”²²

(13) seems inconsistent. This is evidence that the first conjunct entails the denial of the second, which would be expected if (B) were true. Or consider the following dialogue:

Victoria: Are you completely confident that p ?

Danny: No, I’m not completely confident that p .

Victoria: So you have some doubt that p ?

Danny: I didn’t say that. I also don’t have any doubt that p .

Victoria should be confused because the absence of complete confidence seems to entail the presence of doubt. These linguistic considerations also support (B).

Here is the third proposition:

C: Many ordinary, unreflective beliefs, such as those referred to in the classroom scenario, are not held with the highest degree of confidence (do not have degree of confidence 1).

Some philosophers think that we have a degree of confidence 1 toward only a small set of propositions – propositions such as *I exist* or *I am thinking* – a set that would exclude the ordinary, unreflective beliefs mentioned in (A). This is motivated by

²¹ Thanks to Jon Matheson for help in formulating the following considerations.

²² Earl Conee has objected that ‘complete confidence’ does not indicate the highest degree of confidence. I disagree. However, notice that we could replace (13) with “I have less than the highest degree of confidence that p , but I have no doubt that p .” This also seems inconsistent. However, since we are less likely to talk this way in ordinary language, I will stick to “complete confidence” talk. Thanks to Jeremy Fantl for this helpful suggestion for how to respond to Earl Conee

betting behavior tests for degrees of confidence. Consider the following quote by Richard Jeffrey:

how momentous it may be to assign probability 1 to a hypothesis. It means you'd stake your all on its truth, if it's the sort of hypothesis you can stake things on. To assign 100% probability to success of an undertaking is to think it advantageous to stake your life upon it in exchange for any petty benefit (1992: pp. 1–2).

I take it that many ordinary, unreflective beliefs do not meet this test.

Furthermore, even apart from betting behavior tests, it just seems possible that you could have a higher degree of confidence toward those propositions. For suppose I paused, took a more careful look at the class, and formed the belief, "Yes, this is *definitely* a good showing today." I then take roll and check my attendance sheet, noticing that this is the best attendance I've had all semester. It seems that, in this process, my degree of confidence that *attendance is good today* would have increased. So, (C) seems well supported.²³

Our puzzle is complete: (B) and (C) together entail the denial of (A). Each at least *seems* plausible. How should we respond?

2.2. Four Ways of Responding to the Puzzle

The first way is to say that the inconsistency is merely apparent. At least one of the terms – perhaps 'doubt' or 'confidence' – means different things in at least two of the

²³ Clarke (2013) and Greco (2015) have recently argued that, given some assumptions, belief just is credence 1 (in certain contexts). It is not obvious how relevant their work is to (C). Greco (2015, 180) says he is using 'belief' in a technically defined sense, and he seems to take Clarke to be doing the same. On the other hand, I intend to mean by 'belief' what it means in ordinary English. Furthermore, Clarke does not mean by "belief to degree 1" anything that entails certainty (2013, 11), whereas my discussion is about the highest degree of confidence (or certainty). Lastly, nothing they say counts against my argument that it seems that my degree of confidence *could* increase, and therefore, my initial confidence was not the highest degree of confidence.

sentences.²⁴ This response, what I call the ‘equivocation response’, is how we would respond to the following “puzzle”:

14) Aristotle went to the bank.

15) If Aristotle went to the bank, then he is beside water.

16) Aristotle is inside a building with no water nearby.

There is a plausible scenario where each of (14)–(16) seem true, and yet (14) and (15) seem to entail the denial of (16). The response is obvious: ‘bank’ is ambiguous, and its different meanings are expressed in at least two of the sentences. The equivocation response has also been used in more serious philosophical contexts. For example, Keith DeRose (1995) has famously argued that we mean different things by ‘knows’ in the sentences comprising the premises of a plausible skeptical argument and a sentence expressing an ordinary knowledge claim. So, one might claim that there is some ambiguity or context-sensitivity in (A)–(C).

The problem is that there is no good reason to think that ‘doubt,’ ‘belief,’ or ‘confidence’ have different meanings in (A)–(C).²⁵ It is *obvious* that ‘bank’ is ambiguous, and standard tests confirm it. For example, consider the *conjunction reduction test*.²⁶ Two sentences with the purportedly ambiguous term are conjoined, but also shortened, so that the term only appears once; if the sentences are zeugmatic (i.e., have a certain type of ridiculousness), then the term is ambiguous. For example, if we conjoin the sentences, “Bill waded in the bank” and “Bill

²⁴ Thanks to Neil Sinhababu and Matthew McGrath for pushing me to address this point.

²⁵ Thanks to a referee of this journal for encouraging me to discuss my reply to the equivocation response more thoroughly.

²⁶ For more discussion of this test, see §4.1 of Sennet (2016), as well as the rest of §4 and the references therein, for more ambiguity tests. Thanks to Peter van Elswyk and Daniel Rubio for discussion.

withdrew money from the bank,” the resulting sentence, “Bill waded in, and withdrew money from, the bank” is zeugmatic. Now, we already knew that ‘bank’ is ambiguous, but there does not seem to be any test, including the conjunction reduction test, that would show that any of ‘doubt,’ ‘belief,’ or ‘confidence,’ is ambiguous.

Perhaps they are merely context sensitive, like ‘I,’ or ‘you,’ or ‘tall.’ DeRose (2009) gives reasons for thinking that ‘knows’ is context sensitive. Very briefly, suppose there is much at stake for Fred regarding whether the bank is closed on Saturday; nothing is at stake for Sally. After hearing a bystander say, “The bank is closed on Saturday,” it seems that Sally could correctly say, “The bystander knows that the bank is closed on Saturday,” but also that Fred could correctly say, “The bystander doesn’t know that the bank is closed on Saturday.” This is evidence that ‘knows’ means different things in the different contexts. Now, notice that we have no similar reasons for thinking that ‘doubt’ or ‘confidence’ is context sensitive. Suppose S has much at stake regarding whether Sally will arrive on time, and T does not. It seems that this will make no difference to whether S or T correctly asserts that Fred has some doubt that Sally will arrive on time. Now, perhaps ‘doubt’ is sensitive to some other feature of the attributor’s context, but it is far from obvious what that might be.

Admittedly, my being unable to think of ways to vindicate the equivocation response does not prove that it has no vindication. However, at this point, I leave it up to an actual equivocation responder to come up with one. In the meantime, I am inclined to just think that (A)–(C) are more straightforwardly like

17) Socrates was a man

18) If Socrates was a man, then he was mortal

19) Socrates was not mortal

than like (14)–(16). And just as we should reject (19), we should reject one of (A)–(C). So, I now move on to finding the best candidate for rejection.²⁷

Consider (A), that many ordinary unreflective beliefs, such as those in the classroom scenario, are formed without doubt. Here are two possible objections to the claim that there is no doubt in the classroom scenario. First, one could claim that there *is* doubt, but it is unconscious. As such, it is not a salient feature of the scenario, and so our intuitions are not sensitive to it. Second, one could claim that there is doubt, but our intuitions are misled by imprecision in language. Suppose that after I have finished drinking a glass of lemonade, there are still little drops left at the bottom. You ask, “Is there any lemonade in the cup?” I say, “No, there is no lemonade.” This sentence seems correct to say. But of course, there might still be little drops of lemonade left. Similarly, although it seems correct to say about the classroom scenario, “There is no doubt toward those propositions,” perhaps this is compatible with there still being some doubt.²⁸

Neither objection is convincing. In the lemonade case, one can focus on the relevant proposition that *there is no lemonade left* by just focusing on the sentence, “There is *absolutely* and *literally*, not even a tiny bit, of lemonade left.” That sentence *does* clearly express the proposition *there is no lemonade left*, and that sentence

²⁷ I revisit the equivocation response near the end of §3.1.

²⁸ This second objection and my response are motivated by Peter Unger (1975, 63–87). The first objection arose in conversations about the puzzle.

seems false because there are the little drops left. On the other hand, the sentence, “When you walked into the classroom, you had absolutely and literally no doubt that *the class clown is here*” still seems true. You just believed that *the class clown is here*, but there really was no accompanying doubt that he was there.

What about the claim that you have unconscious doubt? The intuition that there is no doubt, whether conscious or unconscious, is made clearer if we consider what a bit of doubt *would have* been like. If someone told you that the class clown has a visiting twin in town, it seems that you might then *come to have* some doubt. It seems that your doubt would be newly formed, not an unconscious doubt rising to consciousness. These intuitions support the claim that you never had any doubt in the first place. So, upon examination, (A) still seems plausible.

Consider (C), that many ordinary unreflective beliefs, such as those referred to in the classroom scenario, are not held with the highest degree of confidence. Above, I considered two reasons for accepting (C). First, I appealed to a betting behavior test: I would not be willing to bet my life, for a petty benefit, on the truth of one of those propositions. One might point out that there are strong objections to betting behavior tests being accurate measures of our degrees of confidence.²⁹ That discussion would take us too far astray. I will just note that it is one way of attacking the first reason in favor of (C) that I find promising. My own reason for accepting (C) is the second one: plausibly, one’s degree of confidence in those propositions *could possibly* increase; therefore, the ordinary beliefs are not held with the highest confidence.

²⁹ See Plantinga (1993, 118–119), Foley (1993, 150–153), and especially Eriksson and Hajek (2007).

The fourth possible solution is to reject (B), that *S* has some doubt that *p* if *S* has a doxastic attitude toward *p* and does not have the highest degree of confidence that *p*. Here is one possible way to argue against (B). Suppose Danny considers the proposition that *someone will score a home run next season*. (Call this proposition 'H'.) He considers that in the history of baseball, there have always been *many* home runs each season. He says, "I have no doubt that someone will score a home run next season." It seems that Danny has no doubt that H. However, Danny then reflects on the fact that the objective probability of H is still less than 100%. If his degree of confidence matches the objective probability (following David Lewis' (1981) *principal principle*), then it will be slightly (very slightly) less than 1. In this case, one might argue, he has less than complete confidence in H, but he doesn't have any doubt that H.³⁰

Though I will ultimately argue that (B) is false, I do not think that this is a sufficient reason to reject (B). *At the beginning*, when Danny has no doubt and has not considered the objective probability, he also has 100% confidence. Again, to say that Danny has no doubt that H but confidence of less than 100% seems inconsistent. (Here I am appealing to the intuitions that supported the linguistic evidence that I initially used to support B.) Or consider the following dialogue:

Danny: "I have no doubt that someone will score a home run,"

Victoria: "So you are 100% confident that someone will score a home run?"

Danny: "No, I didn't say that. I am less than 100% confident."

³⁰ Thanks to Matthew McGrath for this sort of case. Scott Edgar has pointed out to me a similar case, according to which many scientists say that certain scientific theories – say, the theory of evolution – should be held without any doubt. However, they would not ascribe 100% confidence toward the theory. What I say about the baseball case will apply to these science cases.

The last statement sounds very much like a statement of doubt, and Danny's statements together seem inconsistent.

Now *at the later moment*, when Danny considers that the objective probability is less than 100%, his confidence might be slightly (very slightly) less than 1. But then he would come to have a tiny (very tiny) bit of doubt as well. If Danny said, "Yes, I have *almost* 100% confidence that H. I am 99.9999999% confident that H. But I am not 100% confident that H," then it seems to follow that he has at least a little bit of doubt that H.

An alternative possibility is that at the later moment, the objective probability of H is *so* high that Danny's degree of confidence is not actually less than 1 because his degree of confidence, given the limits of his human mind, is not sufficiently fine-grained to match it; he cannot have 99.9999999% confidence. But then it seems correct that he has no doubt. So, there is still no counterexample. In summary, the intuitions behind the earlier linguistic evidence I gave in *support* of (B) seem to neutralize the evidence this sort of potential counterexample could provide. So, this case against (B) is at best inconclusive.

3. Solution to the Puzzle and a New Account of Doubt

3.1 Solution to the Puzzle

My solution rejects (B) and appeals to my account of doubt. As a first approximation, it states,

Doubt₁: *S* has some doubt that *p* if and only if *S* believes that it's possible that

$\sim p$.

(Note that this is different from Doubts₁, from §1.) Although Doubt₁ will require a minor adjustment, it represents the core of my account of doubt and is why I believe (B) is false. It should be clear how Doubt₁ supports (A) by explaining the intuitions that there is no doubt in the classroom scenario: one has not come to believe that *my chair might not be tilted diagonally*, that *attendance might not be pretty good today*, and that *the class clown might not actually be here*. (You would believe that last proposition if you believed that the class clown has a twin brother in town.) So, Doubt₁ explains why the unreflective beliefs that *my chair is tilted diagonally*, *attendance is pretty good today*, and *the class clown is here* could be propositions that you have a doxastic attitude toward, but toward which you have no degree of doubt. Doubt₁ is also *compatible* with (C). Although Doubt₁ determines that the beliefs in the classroom scenario are without doubt, it does not determine that you have the highest degree of confidence.

Doubt₁ is incompatible with (B). As I just said in the discussion of (A), Doubt₁ determines that you do not have doubt in the classroom scenario. On the other hand, according to (B), *S* has some doubt that *p* if *S* has a doxastic attitude toward *p* and does not have the highest degree of confidence that *p*. In the classroom scenario, you do have a doxastic attitude toward the relevant propositions but do not have the highest degree of confidence toward them; you thereby instantiate the antecedent of (B). So, (B) determines that you *do* have doubt in the classroom scenario. Hence, Doubt₁ and (B) are incompatible; they conflict in their determination of whether you have doubt in the classroom scenario. And

intuitively, Doubt₁ has the correct verdict; hence, the classroom scenario is a direct counterexample to (B).³¹

But what about the linguistic evidence in *favor* of (B)? Recall the sentence,

13) “I’m not completely confident that *p*, but I have no doubt that *p*.”

and the earlier dialogue:

Victoria: Are you completely confident that *p*?

Danny: No, I’m not completely confident that *p*.

Victoria: So you have some doubt that *p*?

Danny: I didn’t say that. I also don’t have any doubt that *p*.

In cases in which one *makes a claim* about one’s degree of doubt or confidence, one’s belief is not unreflective. Since Danny is an ordinary human being, if he knowingly claims that he is not completely confident that *p*, then he has formed the belief that *p* might be false. According to Doubt₁, it follows that he *does* have doubt, which explains the seeming inconsistency in both (13) and also the sentences in the dialogue. (B) seems natural and plausible because we are not used to thinking about unreflective cases. So, Doubt₁ both explains the intuitions in my classroom scenario and also undercuts the evidence in favor of (B). The puzzle is solved.³²

Some have objected that there is still a *meaning* of ‘doubt’, according to which (B) is true. Such people embrace the *equivocation response* and say that on one meaning of ‘doubt’ – one which I favor – you don’t have doubt in the classroom

³¹ Thanks to Daniel Howard-Snyder for conversation that helped clarify the reasoning in this paragraph.

³² One might be concerned by my use of first person ascriptions instead of the third person. But note that it does not always seem inconsistent to say of the person in the classroom scenario, “S/he is not completely confident that the class clown is there, but s/he has no doubt that he’s there.” Cases of unreflectively formed belief, such as the classroom scenario, are just those cases where such statements can be true.

scenario; but on another meaning of 'doubt' – where 'doubt' means *has a doxastic attitude but not the highest degree of confidence* – you do have doubt. Then both (A) and (B) could come out true. Perhaps the puzzle can be solved this way.

My reply is simply to emphasize that the classroom scenario is a *counterexample* to the claim that 'doubt' means *has a doxastic attitude but not the highest degree of confidence*. Imagine someone who resisted Gettier's (1963) cases by saying,

“Well, I admit that there is a meaning of 'knows' according to which Jones does not know that *the man who will get the job has ten coins in his pocket*.

Fortunately, there is another meaning of 'knows' – where 'knows' just means *justified, true belief* – according to which Jones *does* know that proposition.”

Gettier should reply by emphasizing that his scenario is a *counterexample* to that definition of knowledge; hence, 'knows' does *not* mean justified, true belief. So, just as this is not a good objection in the case of 'knows' and Gettier cases, it is not a good objection in the case of 'doubt' and my classroom scenario.³³

Before moving on to a more detailed explanation and defense of Doubt₁, I will emphasize that even if it is false, I have raised a novel puzzle about belief, confidence, and doubt. The remaining options are to find an alternative way of rejecting (B), to reject (A), to reject (C) or to take the equivocation response. In my presentations of the puzzle to various audiences, I have found a diversity of opinions on which is the best option. (Many of the suggested reasons for the different options

³³ One could *stipulatively define* 'doubt' to mean *has a doxastic attitude but not the highest confidence*, just as one could stipulatively define 'knows' to mean *justified true belief*. Then there *would* be a meaning of 'doubt' according to which (B) is true. But then we would no longer be talking about doubt, just as we would no longer be talking about knowledge.

have been explored above.) It is therefore at least not *obvious* what the best solution is, and exploration of the different options will likely lead to further insight into the nature of doubt. Hence, I believe that this puzzle is worthy of further consideration, even if my proposed solution to it is incorrect.

3.2 Explanation of *Doubt*₁ and Response to Objections

My preliminary account of doubt is

Doubt₁: *S* has some doubt that *p* if and only if *S* believes that $\sim p$ is possible.

The sense of ‘possible’ employed is *epistemic possibility*. It has been well-discussed in contemporary philosophy and we are quite familiar with it in ordinary life.³⁴ I am leaving my home when I am suddenly struck with the possibility that I left the stove on. I go back inside to check because I believe that it is *possible* that I left it on. This is obviously not *metaphysical* possibility; my believing that there is a possible world in which I left the stove on is no reason to worry. Note that which propositions are epistemically possible depend on individuals’ information states. It might still be possible *for me* that the stove is on, but *for Sean*, who is still at home, this is not a possibility. It is an open possibility for Fred that Sally still loves him, but not for Jenny, in whom Sally has confided. It is possible for Adam that $26 \times 23 \neq 598$, but not for Dainis, who has ruled out that option with a calculator.³⁵

³⁴ See, for example, DeRose (1991), Stanley (2005), Huemer (2007), Yalcin (2007), and Dougherty & Rysiew (2009); as well as the essays in Egan & Weatherson (2011).

³⁵ These examples should make clear that epistemic possibility is distinct from other types of possibility, according to which possibility (or possible truth) is a property of propositions and *not* dependent on individuals’ information states. Most accounts of metaphysical possibility are like this, as are accounts of possibility depending on statistical, frequentist, or logical accounts of probability. On these accounts, truths like $26 \times 23 = 598$ are all necessarily true, independent of any individual’s information state.

I intend for these examples to be the primary means of grasping the sense of 'possible' I intend to employ. Now, here are potential analyses of epistemic possibility:

(Possibility₁) *p* is *epistemically possible* for *S* if and only if what *S* knows does not, in a manner that is obvious to *S*, entail $\sim p$.³⁶

(Possibility₂) *p* is *epistemically possible* for *S* if and only if *S*'s evidence does not, in a manner that is obvious to *S*, entail $\sim p$.³⁷

I am not committed to either of these analyses of epistemic possibility; I state them to aid the reader in grasping the relevant concept of possibility that is expressed in ordinary English (as in my above examples), and that is employed in Doubt₁.

Someone might object that the above analyses of epistemic possibility are open to the following objection by Seth Yalcin (2011). Suppose Fido walks into the room and heels by Yalcin's chair.³⁸ Yalcin occasionally tosses Fido a bone at dinner, but not usually. When you ask Yalcin why Fido is sitting there, he responds, "Fido thinks I might give him a bone." Yalcin then writes,

Unless you have a particular theory of epistemic modals, I doubt you would flinch at this remark. But what exactly am I saying? Does my remark in part mean... that Fido believes that it is left open by what he knows that I will give him a bone? This is a bit much (308).

³⁶ This is derived from Stanley (2005, 128). For other knowledge-based accounts, see DeRose (1991) and Huemer (2007). Epistemic logicians also commonly define epistemic possibility in terms of knowledge. See also the influential Kratzer (1977).

³⁷ This evidence-based account is derived from Dougherty and Rysiew (2009, 127).

³⁸ Fido also appears in a similar example in Yalcin (2007, 997).

Similarly, it is implausible that Fido believes that what he knows does not, in a manner obvious to him, entail that he won't get food.

In reply, one need not explicitly *believe* that the components of the right side of an analysis obtains each time one believes the left side obtains. Suppose that *S* knows that *p* if and only if *S* has an ungettiered, justified, true belief that *p*. Still, Fred might believe that *S* knows that *p* without also believing that *S* has an ungettiered, justified, true belief that *p*; Fred might not have any grasp of what it is to be ungettiered. Similarly, someone might believe that $\sim p$ is epistemically possible without forming an explicit belief that the components of the analysis of Possibility₁ or Possibility₂ obtain.³⁹

There are many complicated issues that arise in discussions of epistemic possibility, issues that I cannot resolve in this paper. Yet, our intuitions about the cases are clear enough. In the classroom scenario, it seems that you do not form the belief that *attendance might not be good*. And in the above scenario, I do form the belief that *I might have left the stove on*. Doubt₁ entails that *this* belief is necessary and sufficient for me to have doubt that *I left the stove on*. This should be sufficient for understanding Doubt₁.

I will now list some of Doubt₁'s virtues. First, a natural extension of Doubt₁ explains how doubt comes in degrees. To have some doubt that *p simpliciter*, one needs only the belief that it is epistemically possible that $\sim p$. But sometimes, we *also* believe that $\sim p$ is very probable or that $\sim p$ is very improbable. The *degree* of

³⁹ Thanks to Hud Hudson and Daniel Howard-Snyder for helpful conversation. Nothing I say here requires that Yalcin's own view, *credal expressivism*, is false, but only that this particular criticism that Yalcin makes fails. For a brief discussion of credal expressivism and its application to this paper, see the next footnote.

one's doubt that p will just be the degree of epistemic probability one believes $\sim p$ to have. So, if one believes that there's a very small probability that one's lottery ticket will *not* lose, then one has only a very small degree of doubt that it will lose. If one thinks it's very likely that the Cubs will not win the World Series in the following year, then the person highly doubts (or has much doubt) that the Cubs will win.

Doubt₁ also explains why only more-complex beings have doubt. Consider that some simple-minded animals (and perhaps more-complex insects) might plausibly be said to be guided by simple beliefs and desires. Peter Carruthers (2006) has argued that *bees* have very simple beliefs which guide their behavior. Even if we do not go as far as Carruthers, there will be some degree of complexity in an organism at which we will be willing to ascribe belief and desire to it. Having such a minimally complex organism in mind, we can ask whether that organism is the sort of being that can doubt. Intuitively, doubt is the wrong sort of thing to ascribe to such a being. Suppose that a bee (or a slightly more complex organism) is guided by simple beliefs about its environment as it navigates itself through the air; intuitively, the bee will not also have doubt. My point here illustrates dramatically the point I was making with the classroom scenario. It is one thing to form simple, unreflective beliefs; doubt requires something more reflective. This "something more reflective" is revealed by Doubt₁: doubt requires belief about what's possible, and only more complex minds can have that.⁴⁰

⁴⁰ According to *credal expressivism*, to believe that $\sim p$ is possible is to have a nonzero credence that $\sim p$. If this is true, then the additional complexity that is missing in the classroom scenario is as follows. You do believe that attendance is good. But you have not formed any degree of credence toward the proposition that *attendance is not good*. In other words, you will have formed a doxastic attitude toward a proposition without having formed an attitude toward its negation. That additional complexity is required for you to have doubt that *attendance is good*.

Now, one does not need a *very* complex mind to have doubt. If *S* can competently say something like, “Oh, I might be wrong about that,” then this sentence would express *S*’s belief that $\sim p$ is possible. Insofar as small children can have such beliefs, they can have doubt. And to the extent to which it seems that more-complex animals could have such beliefs, it seems that they can also have doubt. Suppose it looks like a chimpanzee is tentatively approaching another creature. Insofar as it seems that the chimpanzee believes that *this creature might not be a friend*, it also seems she has doubt that *this creature is a friend*.⁴¹

But could a very small child have varying *degrees* of doubt? Plausibly, it takes less sophistication to believe *might-p* than, for example, to believe *it’s very likely-p*. Suppose a child believes that *mommy might be home* but doesn’t believe that *she’s very likely home* or that *she’s very unlikely home* and so on. It seems that, on my view, such a child could have an all-or-nothing doubt that *p* but no *degree* of doubt. But isn’t it implausible that such a child wouldn’t have varying degrees of doubt?⁴²

Admittedly, my view does imply that this child doesn’t have degrees of doubt. However, I distinguish between doubt’s coming in degrees, and the *strength* of the doubt coming in degrees. The degree of doubt that *p* is the degree of epistemic probability that $\sim p$ is believed to have. In accord with what I said about Doubts₃ in §1, the degree of the strength of doubt is the degree of the strength of feeling associated with conscious occurrences of the doubt. I believe that our inclination to

⁴¹ Note that Doubt₁ does not require that for one to have doubt that *p*, one must believe that it is possible that *p* is *false*. The concepts of falsity and truth do seem to be a bit more difficult to grasp, and I do not want to say that a grasp of either of those concepts is required for doubt. Thanks to Chris Tweedt for the objection that led to this clarification.

⁴² Thanks to a referee of this journal for pressing this objection, which helped me to think more clearly about my account of degrees of doubt.

think that the small child's doubt comes in degrees can be explained by our thinking that the strength of the feeling of the doubt comes in degrees.

But let us now consider whether the child's doubt itself might come in degrees. I might attribute a high degree of doubt to Sally with the following sentences, "Sally highly doubts that p " or "Sally has much doubt that p ," or a low degree of doubt with this sentence, "Sally has little doubt that p ." When we move away from talking about the degree of strength of the feeling of the doubt, to the degree of the doubt itself, it does seem to be something a little more sophisticated. If Sally highly doubts that p , then it seems she thinks it's very likely that $\sim p$, and if Sally has little doubt that p , then it seems she thinks it's very unlikely that $\sim p$. So, I believe it is plausible that the small child does not have varying degrees of doubt, so long as we can still say that the strengths of the feeling of her doubt comes in degrees.⁴³

3.3 Responses to Even More Objections

⁴³ A referee has offered the following challenging objection. There are various properties associated with doubt: "hesitancy, inhibition, anxiety, curiosity, unwillingness to assert, unwillingness to stake values upon, and perhaps a handful of other phenomenal/dispositional properties." Couldn't a child exhibit varying degrees of these properties, and hence, have varying degrees of doubt, *even if* she doesn't believe *it's likely that $\sim p$, it's very likely that $\sim p$* , and so on? In response, I say 'no'. If the degree of the property is not had *in virtue* of believing something like *it's very likely that $\sim p$* , then it is implausible that the child has a degree of doubt. For example, suppose a child is very unwilling to assert that p , but not in virtue of believing *it's very unlikely that $\sim p$* ; it is because the child simply doesn't like asserting things. Then it is implausible that the child has a high degree of doubt that p , despite being very unwilling to assert that p . I would say similar things about the other properties in the referee's list of properties.

But perhaps the referee holds to a dispositionalist account of doubt, according to which having a high degree of doubt *just is* having a high degree of *enough* of the properties in that list. Perhaps such an account could be developed along the lines of the dispositionalist account of belief held by Schwitzgebel (2002). But if the referee says *that*, then it would also be natural for the referee to accept a dispositionalist account of belief, where *believing that it's very likely that $\sim p$* is also identical to having a high degree of *enough* of the properties in the list. Then it is still impossible to have a high degree of doubt that p without believing it's very likely that $\sim p$. Thanks to Liz Jackson for helpful discussion about these points.

I now respond to two more potential counterexamples that require very detailed responses. Those who are not interested in these objections can skip to the next section, §3.4, with little interruption in the overall dialectic.

One might object to Doubt₁ with the following counterexample. Suppose an atheist is *certain* that God does not exist; she believes there is a 100% probability that God does not exist. In virtue of this belief, this atheist will naturally also believe that it's possible that God does not exist. But it seems inappropriate to attribute *doubt* that God exists to her, since she's *certain* that God does not exist. Certainty that $\sim p$ seems to entail the lack of doubt that p . Hence, Doubt₁ is false.

In reply, I agree that it is inappropriate to *attribute* doubt to her. But it also seems inappropriate to attribute to her the belief that it's *possible* that God does not exist. Why? In discussion of a similar topic, Keith DeRose (2009, 87) has pointed out that there is a conversational rule that we should *assert the stronger*, that "when you're in a position to assert either of two things, then, other things being equal, if you assert either of them, you should assert the stronger of them." This is why it seems inappropriate to say, of a strong atheist who believes there's a 100% probability that God does not exist, that she believes that it's possible that God does not exist. Similarly, of a strong atheist who is certain that God does not exist, it will also seem inappropriate to assert that she has doubt that God exists. So, it might seem inappropriate to attribute doubt not because there is no doubt, but because of the violation of the conversational rule. Hence, this is not strong evidence that there is no doubt.

Is there evidence that doubt *is* present?⁴⁴ Yes. Notice that it does seem right to say of her: “She doesn’t *just doubt* that God exists; she’s *certain* that God does not exist.” The seeming truth of the sentence is evidence that she can have both certainty that *God doesn’t exist* and doubt that *God does exist*. This reply is similar to the one given to those who think knowledge does not require belief because it seems right to say, “She doesn’t believe that Fred will be late; she knows he will be late.” The reply is that that sentence is really just shorthand for, “She doesn’t *merely* believe that Fred will be late; she *knows* he will be late,” which is evidence that she both believes and knows in that case.

Here is the second potential counterexample. Suppose someone believes that $\sim p$ but has not formed the more complex belief that $\sim p$ is possible. Doesn’t such a person have doubt that p ?⁴⁵ Answering this question requires care. For ordinary humans, in many cases that one believes $\sim p$, the person has also believed that it’s possible that $\sim p$. To construct the relevant case, we must make it unreflective and simple.

Suppose Adam, while walking by a window, glances outside and nonchalantly says, “Oh, the sun isn’t out,” expressing his unreflective belief that *the sun is not out*. He also has not formed the more-complex belief that *it’s possible that the sun isn’t out*. After making his remark, he walks on to think about other things. Does Adam

⁴⁴ Following DeRose (2009, 112) again, perhaps we should “check the negations” of the relevant doubt ascription. While it seems inappropriate to attribute doubt to the strong atheist, it seems *worse* to say of her, “She lacks doubt that God exists,” “She doesn’t doubt that God exists,” and especially, “She has no doubt that God exists.” Is this good evidence that there is doubt? No. These sentences *also* have a false implicature; they imply that she believes that God *does* exist, which is certainly false! Therefore, the intuition of the falsity or inappropriateness of those negations might not be because doubt *is* present, but because they falsely imply that belief is present.

⁴⁵ Thanks to Brad Rettler for this objection.

have doubt that *the sun is out*? Suppose you are checking the refrigerator to see what food you have. You observe that there is no hummus, form the spontaneous and unreflective belief that *there's no hummus*, and quickly go on to other food options. At no point do you also believe that it's possible that there is no hummus. Do you have doubt that there is hummus?

Before sharing my take on whether there's doubt, I want to emphasize just how easy it is to believe *it's possible that ~p*. For example, if you had been checking for hummus, you likely would have had the belief that *it's possible that there's no hummus*; that's why you were checking for it. If Adam had thought even a little about the weather before checking, it would have been very easy to form the belief that the sun might not be out. So, in both cases, we must clear from our minds that any such belief is present.

With the clarifications made, it at least does not clearly seem that there is doubt present. So, at the very least, I do not take this to be a clear counterexample. Furthermore, it seems that there is no doubt present, although I admit that this intuition is not very strong. Since the intuitions about the case are unclear, I am moved to engage in reflective equilibrium and let my theory sway what I think about the case. As mentioned before, doubt requires something *more reflective*; this is why simple-minded animals do not have doubt. And in this situation, the "something more reflective" is the more-complex belief that *it's possible that the sun is not out* or that *it's possible that there's no hummus*. Such beliefs have not been formed. I conclude, on the basis of my theory, that there is no doubt present in the cases.

Just to be clear, I am not flat-footedly saying that there is no doubt just because my theory says so. I am saying that *because* the intuitions about the cases are unclear, they fail as clear counterexamples; it is thereby rationally permissible to use my otherwise well-supported theory – Doubt₁ – to determine my judgment about the unclear cases. I conclude that there is no doubt in the scenario, and furthermore, that mere belief that $\sim p$ is insufficient for doubt that p ; belief in the possibility that $\sim p$ is required.⁴⁶

3.4 Fine-tuning

Doubt₁ predicts the right intuitions in most cases. However, it requires some fine-tuning. Consider that some epistemologists do not take skepticism seriously in the slightest bit. They might say, “Well, it’s *possible* that I’m beguiled by an evil demon, and so I don’t have hands, but I don’t have the slightest bit of doubt that I have hands. I just can’t take that possibility seriously.” There seems to be no inconsistency in this speech. As such, I think that it provides us with a counterexample to Doubt₁.⁴⁷

Here is another example. Suppose that all of the mathematicians in the world have come to agree that theorem T, which you haven’t seen the proof for, is true. You turn to your spouse and say, “There’s no doubt about it. T is true.” Your spouse points out that if a group of aliens injected a virus in these mathematicians that made them form only false beliefs about T, then T is false. Your spouse says, “You

⁴⁶ Thanks to Kenny Boyce and Daniel Howard-Snyder for helpful conversation about the previous objections and how to respond to them.

⁴⁷ Thanks to Matt Duncan for helpful conversation.

believe in the *possibility* of aliens and the *possibility* of an odd virus, right? And there's a *possibility* that they'd do this to the mathematicians, right? So, it's possible that T is false. Doesn't that make you have some doubt that T is true?" Incredulous, you say, "Well, that's *possible*, but no, that possibility's *so* ridiculous that it doesn't make me have even a bit of doubt about T." It seems that if a possibility is taken to be sufficiently ridiculous, then you could believe in the possibility that you are wrong without having a corresponding doubt.

I therefore propose the following revision:

Doubt₂: *S* has some doubt that *p* if and only if *S* believes that $\sim p$ is possible, and it's not the case that *S* believes that the possibility that $\sim p$ is insignificant.

Doubt₂ both blocks the above counterexample and also has all of the earlier advantages of Doubt₁. Originally, I formulated Doubt₂ so that the analysans more simply said that *S* believes there's a significant possibility that $\sim p$. However, I believe that this overintellectualizes doubt.⁴⁸ It would require the small child who has doubt that mom is home to believe that there's a *significant* possibility that mom is not home. I believe that this requires too much. The current version of Doubt₂ only requires the absence of belief that there is an insignificant possibility.

But what is it to believe that a possibility is insignificant? We can answer this question by considering examples. The possibility that one has been beguiled by a demon, and the possibility that aliens have injected the mathematicians, were both believed to be insignificant in my earlier examples. Those possibilities were not taken seriously. However, Fred does not believe that the possibility that Sally will

⁴⁸ I am thankful to a referee of this journal for the objection to that analysis of doubt, which in turn led to the current formulation of Doubt₂ here.

not arrive on time is insignificant. To be clear, one can believe that the probability of p is extremely low but also still not believe that the possibility of p is insignificant. For example, we do not think that the possibility that our lottery tickets will win is insignificant, which is why we do not discard them, even though we believe that the probability of winning is extremely low.

One might object that it seems that our determination of whether someone believes that the possibility that $\sim p$ is insignificant is determined by whether we think the person has some doubt that p . If this is true, then we can only understand the *analyses* of Doubt₂ only insofar as we already understand what doubt is; hence, it is circular. In response, suppose Doubt₂ did contain some circularity. This would not be a good reason to reject it. Doubt₂ could be an analysis according to Peter Strawson's (1992, 21) *connective* model of analysis, i.e., an illuminating set of necessary and sufficient conditions. Some circular biconditionals are unilluminating, like S knows that p if and only if S knows that p . However, Doubt₂ illuminates the concept of doubt by connecting it with concepts such as belief and possibility. Accomplishing this much is philosophically valuable.⁴⁹

My second response is to provide an account of significant possibility. Fantl and McGrath (2009, 20–23) hold the view that a chance that $\sim p$ is significant if it is sufficiently high to rule out *knowing* that p .⁵⁰ Consider now,

Significance: the possibility that $\sim p$ is significant for S if and only if the possibility or probability that $\sim p$ for S precludes S 's knowing p .

⁴⁹ For more defense of the value and philosophical respectability of this sort of analysis, see chapter 2 of Strawson (1992), especially pp. 18–20.

⁵⁰ They are building on the work of Dougherty and Rysiew (2009, 130), who also endorse this claim, though more hesitantly.

Let *infallibilism* be the view that *S* knows that *p* only if it is impossible for *S* that $\sim p$. *Fallibilists* deny this but will still hold that there are cases where the possibility that $\sim p$ rules out knowing that *p*. (Alternatively, they will think that there is some degree of probability that $\sim p$ that is high enough to preclude knowing that *p*.)⁵¹ So, following Significance, infallibilists will think that the cases in which there is *some* possibility that $\sim p$ (or a non-zero probability that $\sim p$) and the cases in which there is a *significant* possibility that $\sim p$, are coextensive. They will think that *any* possibility or non-zero probability that $\sim p$ is significant and can destroy knowledge. Fallibilists, on the other hand, will likely think that the mere possibility that $\sim p$ and a *significant* possibility that $\sim p$ do not completely overlap. They will likely say that it is possible that an evil demon is beguiling them, but it's not a significant possibility. With the majority of epistemologists, I will assume that fallibilism is true. However, even those who accept infallibilism should still know the general *types* of probability or possibility that fallibilists think is compatible with knowledge (e.g., our being beguiled by a demon).

The plausibility of Doubt₂ and Significance can be seen by introspection. Suppose you see a weather forecast that predicts a high likelihood of rain tomorrow. You will probably still have some doubt that it will rain. Furthermore, in accord with Doubt₂, you will find that you believe that it might not rain. And with further reflection, you will find that you don't believe that the probability that it will not

⁵¹ For reasons to define fallibilism and infallibilism in something like this way, see Fantl and McGrath (2009, 7–15). Fallibilists will differ on when the degree of probability is high enough to preclude knowledge. Proponents of pragmatic encroachment, like Fantl and McGrath (2009, 25–26), think that the threshold is determined at least in part by pragmatic factors.

rain is insignificant; in accord with Significance, you won't believe that that probability is low enough to be compatible with knowing that it will rain.⁵²

The reflection can go in the opposite direction. Suppose you lack the belief that the probability that it will not rain is compatible with knowing that it will rain. Then, in accord with Significance, you will not believe it to be an insignificant possibility. If you also believe that it might not rain, then, in accord with Doubt₂, you will find that you have some doubt that it will rain.

In summary, my first reply to the question, "What is it to believe that there is an insignificant possibility that $\sim p$?" is to give examples. One might charge that our intuitions about those cases depend on our intuitions about whether doubt is present; this makes my analysis circular. I'd reply, "Yes, it is circular; but we still have an illuminating, connective analysis of doubt." If someone continues to press me for a definition of significance, I will point to Significance. It is beyond the scope of this paper to explore in detail the success of Significance, but I believe that it is worth exploring for further research.

Conclusion

Given the many ingenious, counterexample-making philosophers in our profession, I suspect that Doubt₂ will not be immune to strong objections. Hence, I hold to Doubt₂ with some doubt; I believe it might be false. (I also don't believe that the probability that it is false is compatible with my *knowing* Doubt₂.) However, in

⁵² To repeat, this process requires reflection. Consider my earlier example. It might be that *S* knows that *p* if and only if *S* has ungettiered, justified, true belief that *p*. It does not follow that if you believe an instance of the analysandum, you will automatically believe the relevant instance of the analysans. That would take reflection.

addition to my goal of presenting a counterexample-free account of doubt, I have also aimed to 1) present an interesting, new puzzle; 2) illuminate our understanding of doubt; and 3) get the issue of what doubt *is* on the table. Despite the prominence of *doubt* in the history of philosophy – back to Descartes and further – it is surprising that so little time has been spent on it by analytic philosophers. I believe that Doubt₂ is a step in the right direction, and I welcome further counterexamples or alternatives to it to further our understanding of doubt.⁵³

Works Cited

- Alston, William 1996: "Belief, Acceptance, and Religious Faith," in *Faith, Freedom, and Rationality*, ed. Jeff Jordan and Daniel Howard-Snyder (Lanham, MD: Rowman & Littlefield, 1996)
- Audi, Robert 1994: 'Dispositional Beliefs and Dispositions to Belief'. *Nous*, 28, pp. 419-34.
- Carruthers, Peter 2006: *The Architecture of the Mind*. Oxford: Clarendon Press.

⁵³ I am thankful for helpful feedback from the audience at Dalhousie University's philosophy colloquium (10/2013), the philosophy faculty of Western Washington University (12/2013), the audience at the Central APA (2/2014) (especially my commentator, Earl Conee), the participants of the Notre Dame *Belief and Credence* reading group (9/2016) (including Hugh Burling, Brian Cutter, Liz Jackson, Ross Jensen, Ting Cho Lau, and James Nguyen), and the audience at a Saint Louis epistemology brown bag session (9/2016) (especially Jonathan Nebel, Jonathan Reibseman, and Julia Staffel). Thanks to Jon Kvanvig, Daniel Howard-Snyder, and Trent Dougherty, for allowing me to participate in the Summer Seminar on the Nature of Faith (6/2014–7/2014). The paper benefitted from discussions with the following participants of that seminar: Kenny Boyce, Daniel McKaughan, Rik Peels, and especially Daniel Howard-Snyder. Thanks to the Center for Philosophy of Religion at Rutgers University and the Center for Philosophy of Religion at University of Notre Dame for research time and funding for this project. Thanks to Peter Markie, Jon Matheson, Kevin McCain, Matthew McGrath, and Paul Weirich for helpful written comments on §2. In addition to those mentioned in the footnotes throughout the paper, I am also thankful for helpful conversations with Bob Beddor, Chris Gadsden, Richard Fumerton, Simon Goldstein, Peter Markie, Kevin McCain, Matthew McGrath, Andrew Melnyk, J.L. Schellenberg, Hayoung Shin, John Turri, Peter van Elswyk, Jonathan Vertanen, Paul Weirich, and Julie Zykan. Lastly, I am thankful to Ting Cho Lau for helpful editing that led to clarifications and improvements in the paper.

- Clarke, Roger 2013: 'Belief is Credence One (in Context)'. *Philosopher's Imprint*, 13, pp. 1–18.
- Cohen, L. Jonathan 1992: *An Essay on Belief and Acceptance*. Oxford: Clarendon Press.
- DeRose, Keith 1991: 'Epistemic Possibilities'. *The Philosophical Review*, 100, pp. 581–605.
- DeRose, Keith 1995: 'Solving the Skeptical Problem'. *The Philosophical Review*, 104, pp. 1–52.
- DeRose, Keith 2009: *The Case for Contextualism*, Oxford: Oxford University Press.
- Dougherty, Trent and Patrick Rysiew 2009: 'Fallibilism and Concessive Knowledge Attributions'. *Philosophy and Phenomenological Research*, 78, pp. 123–132.
- Egan, Andy and Brian Weatherson 2011: *Epistemic Modality*. Oxford: Oxford University Press.
- Erikkson, Lina and Alan Hajek 2007: 'What Are Degrees of Belief?' *Studia Logica*, 86, pp. 183–213.
- Fantl, Jeremy, and Matthew McGrath 2009: *Knowledge in an Uncertain World*, Oxford: Oxford University Press.
- Foley, Richard 1993: *Working Without a Net: A Study of Egocentric Epistemology*, New York: Oxford University Press.
- Gettier, Edmund 1963: 'Is Justified True Belief Knowledge?'. *Analysis*, 23, pp. 121–23.
- Greco, Daniel 2015: 'How I Learned to Stop Worrying and Love Probability 1'. *Philosophical Perspectives*, 29, pp. 179–201.

- Hawthorne, John; Rothschild, Daniel; Spectre, Levi 2016: "Belief is Weak"
Philosophical Studies, 173, pp. 1393–1404.
- Howard-Snyder, Daniel 2013: 'Propositional Faith: What it is and what it is not'.
American Philosophical Quarterly, 50, pp. 357–372.
- Huemer, Michael 2007: 'Epistemic Possibility,' *Synthese*, 156, pp. 119-42.
- Jeffrey, Richard 1992: *Probability and the Art of Judgment*. Cambridge: Cambridge University Press.
- Kratzer, Angelika 1977: "What 'Must' and 'Can' Must and Can Mean". *Linguistics and Philosophy*, 1, pp. 337–355.
- Lewis, David 1981: 'A Subjectivist's Guide to Objective Chance'. In *Ifs*. Harper, W, R. Stalnaker, and G. Pearce (ed) Dordrecht: D. Reidel.
- Peels, Rik (ms): 'Doubt'. Currently unpublished.
- Plantinga, Alvin 1993: *Warrant: The Current Debate*. New York: Oxford University Press.
- Schellenberg, John 2005: *Prolegomena to a Philosophy of Religion*. Ithaca: Cornell University Press.
- Schwitzgebel, Eric 2002: 'A Phenomenal Dispositional Account of Belief'. *Nous*, 36, pp. 249–275.
- Sennet, Adam 2016: 'Ambiguity'. In Stanford Encyclopedia of Philosophy, <http://plato.stanford.edu/entries/ambiguity/#DeteAmbi>, February 8, 2016 version.
- Smithies, Declan 2012: 'The Mental Lives of Zombies'. *Philosophical Perspectives*, 26, pp. 343–372.

Stanley, Jason 2005: 'Fallibilism and Concessive Knowledge Attributions,' *Analysis*, 65, pp. 126-31.

Strawson, Peter 1992: *Analysis and Metaphysics: An Introduction to Philosophy*. Oxford: Oxford University Press.

Unger, Peter 1975: *Ignorance: A Case for Skepticism*. Oxford: Oxford University Press.

Yalcin, Seth 2007: 'Epistemic Modals'. *Mind*, 116, pp. 983-1026.

Yalcin, Seth 2011: 'Nonfactualism About Epistemic Modality'. In *Epistemic Modality*. Andy Egan and Brian Weatherson (ed) Oxford: Oxford University Press, pp. 295–332.