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A New Puzzle About Belief and Credence

[Word Count: 3000]

Abstract: I present a puzzle about belief and credence, which takes the form of three independently supported views that are mutually inconsistent. The first is the view that S has a modal belief that p (e.g., S believes that probably- p) if and only if S has a corresponding credence that p . The second is the view that S believes that p only if S has some credence that p . The third is the view that, possibly, S believes that p without a modal belief that p . [Word Count: 85]

Keywords: belief; credence; credal expressivism; epistemic modals

1. Introduction

My thesis is that there is an interesting, new puzzle about belief and credence. The puzzle takes the form of three independently supported views that are mutually inconsistent. The first is,

- S has a modal belief that p (e.g., S believes that probably- p) if and only if S has a corresponding credence that p (e.g., S has a moderately high credence that p).

This view is a component of *credal expressivism*, a popular view among philosophers working on epistemic modals.¹ The second is,

- S believes that p only if S has some credence that p .

This view is entailed by most theories about the relationship between belief and credence.

The third is,

- Possibly, S believes that p without a modal belief that p .

This view is supported by intuitive judgments about cases.

¹ For defenses, see Yalcin (2007, 2011, 2012), Swanson (2011), Rothschild (2012), and Moss (2013).

This puzzle connects three areas of philosophy: the semantics of epistemic modals,² the nature of belief,³ and the relationship between belief and credence.⁴ These connections are not easy to see, and it is valuable to see how views in one area have implications for views in another area.

2. First Proposition of the Puzzle

Credal expressivism is a view about epistemic modal sentences (in short, ‘epistemic modals’) in ordinary language. Epistemic modals include sentences of the form, ‘Probably, *p*,’ ‘Very probably, *p*,’ ‘It might be that *p*,’ ‘Definitely, *p*,’ and so on. The truth values of epistemic modals have traditionally been taken to be dependent on individuals’ information states. ‘The lights might still be on’ could be true when uttered by me, since I left the room, but false if uttered by Marie, who is still in the room. ‘Thirty-six is probably the answer to math problem A’ would be true if uttered by someone who just heard his reliable fellow student sincerely assert that the answer is thirty-six, but that sentence would be false if uttered by the teacher, who knows the answer is not thirty-six and is aware of a trick in the problem. These examples set apart epistemic modals from metaphysical modals and statistical probabilities, the truths of which are independent of knowers.

Traditionally, epistemic modals have been understood in terms of a base of evidence or knowledge.⁵ ‘It might be raining,’ for example, might be understood as ‘For

² See Schneider (2010), Crabill (2013), Dorr & Hawthorne (2013) and the references in footnote 1.

³ See Dretske (1988), Fodor (1987, 1990), Cohen (1992), Smithies (2012), and Schwitzgebel (2002, 2015).

⁴ See Patrick Maher (1993), Mark Kaplan (1996), Christensen (2004), Huber (2009), Fantl and McGrath (2009), Foley (1993, 2009), Wedgwood (2012), Buchak (2014), Ross & Schroeder (2014), Sturgeon (2008, 2010, 2015), Locke (2014), Tang (2015), Carter, et.al. (2016), Moss (2018), and Jackson (forthcoming, draft).

⁵ This largely due to Kratzer (1977).

all I know, it's raining,' or, appealing to evidence, 'Our evidence does not rule out that it is raining.' Similarly, 'It will probably rain' might be understood as 'What we know supports the proposition that it will rain' or 'Our evidence supports the proposition that it will rain.' As we will see below, credal expressivists do not understand epistemic modals in these ways, but these examples should get the relevant sort of probability and possibility on the table.

Following Seth Yalcin (2012, 133–134), I'll take credal expressivism to entail the following:

- A) *S* believes that probably-*p* if and only if *S* has a moderately high credence that *p*.
- B) In sentences of the form, '*S* believes that probably-*p*,' 'probably' does not contribute to determining the content of *S*'s belief but instead indicates *S*'s moderately high credence toward *p*; the content of *S*'s doxastic attitude is just *p*.

Although A and B do not amount to a complete definition of credal expressivism, they will help us to understand it. A is straightforward. If one has a moderately high credence that it will rain, then one believes that it will probably rain; if one believes it will probably rain, then one has a moderately high credence that it will rain.

B is a semantic thesis about epistemic modals. Consider,

- 1) 'Fred believes that Sally is probably happy.'

According to B, the epistemic modal operator 'probably' in (1) does not contribute to determining the content of Fred's belief and only indicates that Fred has a moderately high credence with the content *Sally is happy*. So, the object of Fred's attitude, according to B, is not *Sally is probably happy*, but merely *Sally is happy*. On credal expressivism,

there is no proposition that *Sally is probably happy* that can be believed or be true or false.

In contrast, the traditional *descriptivist view* says that ‘probably’ *does* contribute to determining the content of Fred’s belief. (1) should be interpreted straightforwardly as saying that Fred has a belief with the content *Sally is probably happy*, which, as mentioned above, might be understood as *my evidence supports the proposition that Sally is happy*. On descriptivism, ‘Sally is probably happy’ does express a proposition that can be believed and be true or false.⁶

Other propositions that credal expressivism entails can be determined by replacing ‘probably’ in A and B with epistemic modal operators like ‘very probably’, ‘it might be that’, and ‘definitely’, and then providing corresponding replacements of ‘a moderately high credence’ (with, respectively, ‘a high credence’, ‘a non-zero credence’, and ‘a credence of 1’).⁷ I can now formulate a more complete definition of credal expressivism. Let ‘M’ be a variable ranging over epistemic modal operators and ‘X’ be a variable ranging over numbers and intervals between 0 and 1 inclusive. Credal expressivism has two main components:

A*) *S* believes that Mp if and only if *S* has X credence that p (where M and X correspond to each other).

⁶ See Yalcin (2011, 296–300; 2012, 134) for more explanation of descriptivism. I follow Yalcin (2012, 133–134) in formulating this semantic component of credal expressivism as B; some credal expressivists might formulate it differently. Fortunately, it is the biconditional component of credal expressivism, A (or A*, to be presented), which is part of the puzzle, not the semantic component, so it does not matter that they would state it differently. Thanks to Bob Beddor and Simon Goldstein for helpful discussion.

⁷ It is standard to assign the number 1 to the highest credence that p (when one is certain that p) and the number 0 to the lowest credence that p (when one is certain that $\sim p$) and the numbers in between 0 and 1 to the varying credences in between. There are potential issues with this (specifically, the identification of credence 1 with certainty), but they are orthogonal to this paper. See Moss (2018, p. 57).

B*) In sentences of the form, ‘*S* believes that Mp ’, ‘*M*’ does not contribute to determining the content of *S*’s belief but instead indicates the corresponding *X* credence toward *p*; the content of *S*’s doxastic attitude is just *p*.⁸

A* is the first proposition of the puzzle.

It is beyond the scope of this paper to engage with the many sophisticated arguments for credal expressivism.⁹ What *is* important is that it has been supported, and hence, A* has been supported. Furthermore, notice that one need not be a credal expressivist to accept A*; one could deny B*, accept descriptivism, and still accept A*. Hence, A* is logically weaker, and thereby more plausible, than credal expressivism.¹⁰ So, A* has a decent amount of support in its favor. When I later show that A* conflicts with two other independently supported views, we will see that there is a genuine puzzle.

3. Second Proposition of the Puzzle

The second proposition of the puzzle is

BEC) If *S* believes that *p*, then *S* has some credence that *p*.

In slogan form, ‘Belief entails credence.’ In this section, I do three things. First, I explain how I will use the terms ‘believes’ and ‘credence’. Second, I present my method for

⁸ This isn’t all that credal expressivists hold. Central to credal expressivism will be not just a theory of ‘*S* believes Mp ’, but also ‘ Mp ’. They will think that an utterance of ‘ Mp ’ does not express the proposition that Mp , but instead expresses, for example, the advice, *have such-and-such credence that p* (e.g., see Moss (2013, 4)). This is similar to the more well-known moral expressivism, which holds that ‘*X* is wrong’ does not express the proposition that *X is wrong*, but instead expresses, for example, *boo X* or *don’t do X*.

⁹ See footnotes 1 and 2 for discussions of credal expressivism.

¹⁰ Of note, Sarah Moss (2018) would likely accept something close to (A*) (once we correct for the issue I mentioned in footnote 7). However, she rejects both credal expressivism (as I’ve formulated it, following Yalcin) and descriptivism. Both views accept that the content of a modal belief is a proposition. For the expressivist, it’s *p*; for the descriptivist, it’s Mp . On Moss’ view, the content of a modal belief is Mp , *but* Mp is not a proposition; it’s a set of probability spaces. The point is that despite what one holds about the semantics of the modals, (A*) can be accepted.

determining whether someone believes or has a credence in a particular case. Third, I explain why many are inclined to hold BEC.

I intend for ‘believes’ in BEC to mean what it means in ordinary English. Hence, unlike some philosophers, I do not use ‘believes’ in a technical way.¹¹ Belief is probably picked out more naturally by the word ‘thinks’. For example, it is more natural to say of a man who is fumbling in his pocket, ‘He thinks that the keys are in his pocket,’ than, ‘He believes that the keys are in his pocket.’¹² I will take ‘believes’ and ‘thinks’ to be synonymous.¹³

We often form plausible, intuitive judgments about the presence or absence of belief.¹⁴ Suppose a student pulls out a chair and sits on it. We can form the plausible judgments that the student believed that she pulled out a chair, and that she didn’t believe it was a dangerous wolf. In this paper, I will assume that such intuitive folk psychological judgments, though fallible, are for the most part true.

Let us now discuss ‘credence’. Philosophers often use the word in a nonstandard way. In ordinary English, ‘credence’ picks out *evidential support*, e.g., ‘The new video tape lends credence to Fred’s claim about the witness’; it is thereby picking out something *normative*. Also, ‘credence’ is nearly always preceded by words such as ‘lends’, ‘provides’, and ‘gives’. *Philosophers*, on the other hand, often use sentences of the form, ‘S has high/low/X credence that *p*,’ but such expressions are seldom used in

¹¹ For philosophers who do not use the ordinary meaning of ‘belief’, see the citations in Greco (2015, 180).

¹² This example comes from Malcolm (1973, 14), although he uses it for a different purpose.

¹³ For a defense of this synonymy, see Hawthorne, Rothschild, and Spectre (2016), as well as Myers-Schulz & Schwitzgebel (2013, 377) and footnote 1 of Weisberg (forthcoming).

¹⁴ Exactly *how* we make such judgments is a complex issue researched by those studying the *theory of mind*. See Goldman (2012) for an overview.

ordinary English.¹⁵ And, as we shall see, philosophers often use ‘credence’ to pick out something *nonnormative*.

Consider how Matthew McGrath introduces credence into his discussion:

Some of the things we believe, we believe with more confidence than others. A person might suspend judgment on two different propositions but be more confident of the truth of one of the propositions than the other... What does it take for such confidences (or “credences” in the lingo) to be epistemically appropriate? As we’ll see, many philosophers think that to be *rational*, our credences as a whole must obey the axioms of probability (Goldman and McGrath 2015, 251).

McGrath uses ‘credence’ and ‘confidence’ interchangeably throughout his article. In the longer version of the paper, I cite Jackson (forthcoming), Lennertz (2015, 1), and Yalcin (2007, 1020; 2012, 125) as doing the same. It appears that some recent philosophers are dropping the ordinary meaning of a word (‘credence’) and then replacing it by using the ordinary meaning of another word (‘confidence’).

I think this is more complicated than necessary. Why do philosophers use ‘credence’ in this way? Why not just stick to ‘confidence’ talk and let ‘credence’ keep its ordinary meaning? The first question is difficult. The use of ‘credence’ in something like the above way has a history, going back at least to Russell (1948, 248), Carnap (1962, 305), and Lewis (1980).¹⁶ Explaining why these philosophers used ‘credence’ in this way, and why it caught on, is beyond the scope of this paper.¹⁷ Regarding the second question, I think it *would* be preferable to just stick to ‘confidence’ talk. However, as

¹⁵ My Google search found only 577 hits for ‘has credence that’, with many of the results either being references to sentences in philosophy papers or references to ordinary English sentences that were clearly not picking out propositional attitudes. Compare that with 361,000 hits for ‘lends credence to,’ with many of the results including sentences that picked out evidential support.

¹⁶ I thank Branden Fitelson for the first two references and a referee for the third reference. Carnap and Lewis define ‘credence’ in terms of ‘degree of belief’. This is problematic since beliefs do not come in degrees, as I argue in Moon (2017). Furthermore, those who use ‘degrees of belief’ talk are often mixing up degrees of belief with degrees of confidence (p. 762), which, in the end, brings us back to confidence. So, the current move to understand ‘credence’ directly in terms of degree of confidence is an improvement to understanding it in terms of degree of belief (since belief doesn’t come in degrees).

¹⁷ For more on the history of ‘credence’, see Jackson (draft).

McGrath says, it is the ‘lingo’ in current philosophy and of those I am engaging with, so, for this paper, I will follow that convention.¹⁸

BEC is a metaphysical thesis, not an epistemological one; it makes a modal claim about how two mental states are related. I note this because much of the literature on belief and credence quickly shifts to discussions about how the *epistemic norms* of belief and credence relate.¹⁹ Those discussions often focus on lotteries and closure principles, sometimes with technically formulated axioms and theorems applying only to ideally rational agents. I think that this is because it has normally been *decision theorists* or *formal epistemologists* who have explored the nature of credence and its relation to belief. Philosophers of mind, who have tended to be more interested in metaphysics questions and less in normative questions, have tended to only explore the nature of belief and not the nature of credence and its relation of belief. Although discussions about normative issues are valuable and often relevant to BEC, I will take a *metaphysics-first* approach. I believe there is value to discussing BEC directly, not just indirectly via the epistemic norms of credence and belief.

Why would someone believe BEC? Since BEC is an entailment, sufficient support for it will not come from showing, using empirical psychology, that every actual person who believes *p* also has some credence that *p*. (Every human has been born near the surface of the earth, but *being human* does not entail *being born near the surface of the earth*.) It must be that, for any *possible* case in which *S* believes that *p*, *S* has some

¹⁸ This leaves open the hard question of what credences (or confidences) *are*. Some might define it in terms of betting behavior; this has received strong criticisms by Plantinga (1993, 118–119), Foley (1993, 150–153), and especially Eriksson & Hajek (2007, 187–194). Others might define it by use of representation theorems; for discussion, see Eriksson & Hajek (2007, 196–197), Dogramaci (2016, 271), and especially Meachem & Weisberg (2011).

¹⁹ See, for example, Patrick Maher (1993), Foley (1993, 2009), Kaplan (1996, 91), Sturgeon (2008, 2010), Wedgwood (2012), Locke (2014), Buchak (2014, 289–293), and Carter, et.al. (2016).

credence that p . So, a better argument will go like this. It is plausible that every considered possible case of belief that p is accompanied by credence that p ; therefore, it is plausible that belief entails credence.²⁰

BEC is also entailed by the well-known *threshold view*. It states that belief that p *just is* a sufficiently high credence that p , believing that $\sim p$ *just is* a sufficiently low credence that p , and withholding belief that p *just is* a credence that p that is in between the previous two thresholds.²¹ It is left open exactly how the threshold should be set, but however it is set, BEC will follow from the threshold view.²²

Lastly, even those who reject the threshold view will likely still accept a view that entails BEC. In fact, I am aware of no philosopher who has explicitly argued against BEC!²³ So, many will be inclined to accept BEC.

4. The Third Proposition of the Puzzle

4.1 The Puzzle Stated

Let ‘modal belief’ denote whatever doxastic attitude one has when one believes that probably- p , might- p , definitely- p , and so on. Here is the third proposition, alongside the other two propositions in the puzzle:

²⁰ Thanks to Liz Jackson for helpful discussion.

²¹ The threshold view is discussed and evaluated in many places, e.g., Patrick Maher (1993), Foley (1993, 2009), Kaplan (1996, 91), Sturgeon (2008, 2010, 2015), Buchak (2014, 289–293), Carter, et.al. (2016) and Weisberg (forthcoming), as well as in the references in the next footnote.

²² One way to set the threshold is pragmatically, as discussed in Weatherston (2005, 422), Ganson (2008, 451), Fantl & McGrath (2009, 160), Ross & Schroeder (2014), and Locke (2014).

²³ This isn’t to say that BEC is universally endorsed. Buchak (2014), Ross & Schroeder (2014), Holton (2014), Carter, et.al. (2016), and Weisberg (forthcoming) argue for claims that are friendly to the denial of BEC, even if they don’t entail it. For example, on Ross & Schroeder’s view, belief and credence have distinct functional profiles, and as far as I can see, there is nothing that rules out a creature’s having the functional profile of belief while failing to have the functional profile of credence. Thanks to Jonathan Weisberg for helpful discussion.

A*) S believes that Mp if and only if S has X credence that p (where M and X correspond to each other).

BEC) If S believes that p , then S has some credence that p .

~BEM) Possibly, S believes that p and S has no modal belief that p .

In slogan form, ~BEM says, 'Belief doesn't entail modal belief.' (Correspondingly, 'BEM' says 'Belief entails modal belief.')

Here is the argument that the three theses are inconsistent. Suppose ~BEM is true. Then there is some possible being, call it 'Fred', who believes that p but has no modal belief that p . It follows from BEC that Fred has some credence that p . It then follows from A* that Fred has a modal belief that p . This contradicts the earlier point that Fred has no modal belief that p .

4.2 First Argument for ~BEM

Although arguments for A* and BEC exist in the literature, ~BEM has never even been considered. I will thereby provide two arguments for it. Consider,

Thirst Scenario: Bleary-eyed, you wake up in the middle of the night needing a drink. You get up, stumble around the cat, and walk to the bathroom. In the process, you unreflectively form beliefs in propositions such as *I need a drink*, *there's the cat*, and *the bathroom's right over there*.

It seems that you believe *I need a drink*, *there's the cat*, and *the bathroom's over there*. It does *not* seem that you believe *I probably need a drink*, *there's probably the cat*, and *the bathroom's probably over there*. In fact, it seems that you have no such modal beliefs. These intuitive judgments support ~BEM.

Admittedly, the Thirst Scenario will not convince everyone of ~BEM; there are a lot of complications, which I explain in the longer version of the paper. However, it will

convince some. It will seem to many that you do not form a modal belief in the Thirst Scenario.²⁴ This category of philosophers, which includes myself, will regard the Thirst Scenario as disproving BEM.

4.3 The Second Argument for ~BEM

This section's argument is plausible only if it is also plausible that nonhuman animals believe things. Fortunately, this is plausible. Consider the following example, adapted from Norman Malcolm (1973, 13):

A dog is chasing a cat. The latter runs toward a tree but suddenly swerves and disappears behind the corner of the house. The dog doesn't see this maneuver and arrives at the tree, rearing up on his hind legs, pawing the trunk as if trying to scale it, and barking excitedly into the branches above.

The judgment that the dog thinks that the cat went up the tree seems correct.²⁵

Now consider,

Organism Case: The simplest creatures with beliefs will lie somewhere between bacteria, which do not have beliefs, and higher mammals, which do. Creatures that are not complex enough to have beliefs might still have mental states that are indicative of states of the world; they might have a kind of *indicator content*.²⁶ Imagine an organism, call it 'Organism', that not only has mental states with content *but also* the minimal level of complexity required for belief.²⁷ It will likely be very simple, say, the belief that *there is something*. It will also likely be accompanied by other beliefs, such as that *there is something here* and *there is something there*, which Organism uses to maneuver through its environment.

²⁴ On Robert Audi's (2011, 69–70) view, you might be merely *disposed to* believe that there's probably the cat, without *actually* believing it. Similarly, on his view, you can have an *implicit* belief that there's probably the cat, without actually believing it.

²⁵ For more discussion of this case, see Davidson's (1985) criticisms of Malcolm's paper, Jeffrey's (1985) reply to Davidson, and §4 of Schwitzgebel (2015). One of those criticisms applies to Malcolm's specific example and not to my adaptation. Malcolm has his observers ascribing to the dog the belief that the cat went up an *oak tree*, which requires that the dog has the concept of an oak tree, which is implausible. Jeffrey notes that this is not essential to Malcolm's case, so I left it out accordingly. Thanks to Blake Roeber and Kevin McCain for helpful discussion.

²⁶ Consider the example of a frog's exhibiting a specific neural pattern when seeing a fly zoom by; the neural pattern might not exemplify *belief*, but it does indicate the presence of the fly. See other interesting examples of indicator content in chapter 3 of Dretske (1988).

²⁷ For classic representationalist accounts of how this might happen, see chapters 3 and 4 of Dretske (1988) and chapter 4 of Fodor (1990).

It is unimportant that the belief has the specific content *there is something*; it could be *there is food*.

People will disagree about what type of animal Organism is (A bee? A deer?).²⁸ However, *when* it seems correct that Organism has the minimal complexity required for believing that *there is something* (we can imagine Organism moving about and avoiding knocking into objects), there is no intuition that Organism believes there is *probably* something. In fact, it will seem that Organism lacks that modal belief. Suppose that Organism is a deer. When a deer sees some alfalfa, calmly walks over, and chews it, the deer believes that *there is food*. It does not believe *there is probably food*, or *there definitely is food*. It just believes that there is food, without any modal belief.²⁹

Notice that to affirm BEM – that *belief entails modal belief* – leads to *modal belief explosion*. There is not only the implausibility that Organism believes that *there is probably food*. Organism must have a modal belief for *every* ordinary belief it forms about its environment. In addition to believing that *there is food*, the deer also believes *there is my offspring*, *there is a leaf*, and so on. If belief entails modal belief, then the deer must also have a corresponding modal belief for each of these beliefs. This is implausible.

²⁸ Charles Gallistel (1990, 1) argues that the Tunisian desert ant *Cataglyphis bicolor* uses knowledge of where its nest is to find its way back to its nest, and Peter Carruthers (2006) argues that bees have very simple beliefs that guide their flying patterns back to their hive. I am more skeptical that these creatures have beliefs than I am, say, that Malcolm's dog does, because I think that consciousness is required for belief, and I am skeptical that ants and bees are conscious. For discussion of whether consciousness is required for belief, see Smithies (2012) and the essays in Kriegel (2013).

²⁹ Clarke (2013) and Greco (2015) have argued for views that could determine Organism to have credence 1. By A*, it would follow that Organism believes *there definitely is food* (or *there surely is food* or *there necessarily is food*). But intuitively, Organism has no such modal belief; Organism does not believe that *there definitely is food*. One must thereby reject either \sim BEM, A*, or that Organism has credence 1. I would deny the last option. Thanks to Julia Staffel for helpful discussion.

To sum up, I have provided two cases, the Thirst Scenario and Organism Case, against BEM.³⁰ In conclusion, A*, BEC, and ~BEM each have significant support.

Since they cannot all be true, we have a genuine puzzle.

5. Conclusion

I will end by stating my response to the puzzle. I think BEC is false.³¹ It seems that the Thirst Scenario and Organism Case exhibit cases of belief without credence. We would naturally say that the deer thinks that there's food. But is it *confident* that there is food? Is confidence the sort of thing we should attribute to a deer? I think not, and this leads me to reject BEC. Furthermore, note that A* and ~BEM could serve as premises in an argument *for* BEC. Unfortunately, these brief remarks do not constitute a full defense of the denial of BEC, which must wait for another time.³²

³⁰ Sarah Moss (2018) presents interesting arguments, especially in sections 3.5 and 3.6, that we do not ever believe propositions; rather we *only* believe probabilistic contents (or *only* have modal beliefs, using the terminology of this paper). The Thirst Scenario and Organism Case provide intuitive reason to reject her claim. When you recall your walk to the bathroom, it seems that you just believed that *there's the cat*, not that you believed there's definitely or probably the cat. Similarly, it really seems that Organism just believes the simple content *there is food*. (However, Moss might say that her view is only supposed to apply to more sophisticated believers (see pp. 27–28).) Of course, the intuitions about these cases must be weighed against Moss' formidable arguments *for* her view, which I do not have space here to do justice.

³¹ As Jackson (forthcoming) mentions, if BEC is true, then we also have an answer to the Bayesian Challenge, which asks whether beliefs are explanatorily superfluous if everything can be explained by credences. In the Organism Case and Thirst Scenario, creatures are guided only by beliefs and not by credences; hence, beliefs are not explanatorily superfluous.

³² Thanks to Bob Beddor, Simon Goldstein, and Philip Swenson for many helpful conversations. For helpful written comments on earlier drafts, thanks to Bob Beddor, Kenny Boyce, Matthew Lee, Dustin Locke, and Paul Weirich. (Thanks especially to Liz Jackson for helpful comments on multiple drafts.) This paper is a descendent of a dissertation chapter, and I am thankful for comments from my dissertation committee on that chapter: Peter Markie, Matthew McGrath, Andrew Melnyk, Paul Weirich, John Greco, and Todd Schachtman. Thanks to my audiences at the Central States Philosophical Association (especially my commentator, Joshua Smart) (11/7/15) and an audience at a University of Missouri colloquium (10/7/16). Thanks to participants of the University of Michigan *Mind and Moral Psychology Working Group* (9/12/16), especially Sara Aronowitz, Kevin Blackwell, Daniel Drucker, Eric Lormand, Peter Railton, and Patrick Shirref. Thanks to the *Belief-Credence Reading Group* at Notre Dame (10/18/16) for helpful discussion, specifically, John Keller, Ting Cho Lau, Liz Jackson, Brian Cutter, and Jeff Tolly. Thanks to those who attended Northwestern University's Epistemology Brownbag Group (11/9/16), specifically, Sandy Goldberg, Baron Reed, Nathan Weston, and Zachary

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