

COHERENCE AND KNOWABILITY

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Why should we avoid incoherence? An influential view tells us that incoherent combinations of attitudes are such that it is impossible for all of those attitudes to be simultaneously vindicated by the evidence. But it is not clear whether this view explains what is wrong with certain akratic doxastic states. In this paper, I flesh out an alternative response to that question, one according to which the problem with incoherent combinations of attitudes is that it is impossible for all of those attitudes to be simultaneously knowledgeable. This alternative response explains what is wrong with akratic combinations of attitudes using commonly accepted epistemological theses. The paper still shows how this proposal is able to explain the badness of incoherent combinations involving the absence of attitudes, suspended judgment, and credence. Finally, it is suggested that this picture can be generalized to the realm of practical rationality as well.

Keywords: coherence, rational requirements, knowability, position to know, rationality.

I. INTRODUCTION

What is wrong with incoherent combinations of doxastic attitudes? Can we explain what is bad about those combinations without putting the blame on incoherence itself? Consider a paradigmatic example of incoherence: the subject believes that p while at the same time believing that $\neg p$ (*not- p*). What is the problem with believing mutually contradictory propositions at the same time? It is impossible for both of those propositions to be true at the same time. Maybe that is the problem with incoherent combinations of beliefs. Incoherence guarantees inaccuracy, and accuracy is what believers are aiming for.¹

But that doesn't explain what is wrong with *all* incoherent combinations of doxastic attitudes. It doesn't even explain what is wrong with all incoherent

¹ The more general idea that considerations about accuracy can be used to justify coherence requirements is the one that drives accuracy-dominance arguments for probabilism; see Pettigrew (2016).

combinations of beliefs. Consider, for example, an akratic doxastic state where one believes that p while at the same time believing that *one's evidence doesn't support p* . These two propositions—that p and that *one's evidence doesn't support p* —can after all be true at the same time. If I believe that p and I believe that *my evidence doesn't support p* , I am not thereby guaranteed to hold a false belief (not unless one of those propositions is already a necessary falsehood).

Kolodny (2005, 2007) presents us with an alternative answer to the original question, and an influential one at that.² The idea here is that the problem with an incoherent combination of attitudes is that at least one of those attitudes is guaranteed not to be proportioned to the subject's evidence. Incoherence—or 'structural' irrationality—is like a red alarm signaling that something is wrong with the 'substantial' rationality of one's attitudes. Some of those attitudes must not be responding properly to the evidence. For example, no total body of evidence supports both, p and $\neg p$. So a subject who believes that p and believes at the same time that $\neg p$ is surely failing to proportion her opinions to her evidence.

Unfortunately, there are reasons to think that this strategy can't be generalized either. Consider again believing that p while at the same time believing that *one's evidence doesn't support p* . Many think that it is perfectly possible for a total body of evidence to support both of those propositions at the same time.³ It is incoherent for one to believe that p and believe at the same time that *one's evidence doesn't support p* —but if the latter belief can be false *and* supported by one's evidence (and it looks like it can), then both of those attitudes can simultaneously constitute proper responses to one's evidence. But then we lack a Kolodny-style explanation of the badness of akratic combinations of attitudes.

There are other things one might say about incoherent doxastic states still. For example, Horowitz (2014) points out that akratic combinations of attitudes license bad theoretical and practical reasoning/decision-making. And Worsnip (2018a) has a general account of incoherence in terms of dispositions to revise one's attitudes under conditions of full transparency about one's mental states. But I don't aim to be exhaustive here. My goal is rather to introduce an alternative view that hasn't been systematically explored yet. It is similar to the idea of explaining what is bad about incoherence by appealing to facts about proper responsiveness to the evidence—but it appeals instead to facts about *knowability*.

The proposal has its simplest formulation when it comes to explaining what is wrong with incoherent combinations of beliefs. It says: an incoherent combination of beliefs Bp_1, \dots, Bp_n is such that it is impossible for someone to

² See also Kiesewetter (2017: 236) and Lord (2018), who propose to make sense of coherence requirements through the notion of responding correctly to the reasons that one possesses or the reasons that are available to one.

³ See Williamson (2014), Worsnip (2018b), and Lasonen-Aarnio (2020).

know all of p_1, \dots, p_n at the same time. It is impossible for me to know both that *aliens exist* and that *aliens do not exist* at the same time—and that explains why it is wrong to believe both of those propositions at the same time (one of those beliefs is guaranteed not to be knowledge). Similarly, it is presumably impossible for me to know both that *aliens exist* and that *my evidence doesn't support the hypothesis that aliens exist* at the same time—and that explains why it is wrong to believe both of those propositions at the same time. Knowledge is belief at its epistemic best. Incoherence means that one's beliefs cannot be at their epistemic best. This looks like an advantage over Kolodny's proposal. For, again, the claim that no subject can have a total body of evidence that supports p while at the same time supporting the proposition that *her evidence doesn't support p* is controversial. But consider: can the subject know that p while at the same time knowing that *her evidence doesn't support p* ?

Here is one explanation why that is impossible: knowledge requires evidential support. One knows that p only if one's evidence supports p (where p itself is part of one's evidence, assume that this is trivially satisfied).⁴ Now suppose that one knows that p . So one's evidence supports p . Therefore, one cannot know that *one's evidence doesn't support p* , because one cannot know falsehoods. In no possible world does one know both of those propositions at the same time. Or consider believing that p while believing that *one's p -related thoughts are unreliable*.⁵ Arguably, knowledge requires reliability of the belief-forming or belief-maintaining process, so it is impossible for one to know both of those propositions at the same time as well.

But despite having this apparent advantage over Kolodny's way of explaining what is bad about incoherence, this proposal still faces a number of challenges. First, it is impossible for one to know all of p_1, \dots, p_n and $\neg(p_1 \wedge \dots \wedge p_n)$ at the same time—but we might doubt that it is always incoherent for one to believe all of p_1, \dots, p_n and $\neg(p_1 \wedge \dots \wedge p_n)$ at the same time.⁶ Many epistemologists now think that a combination of beliefs of the relevant sort doesn't guarantee that the subject has made a mistake of rationality.⁷ This is the topic of Section II.

Second, how are we to explain what is wrong with incoherent states where one holds certain beliefs but *does not* hold others? There are doxastic states where the *absence* of a doxastic attitude contributes to incoherence. Consider,

⁴ Assume, that is, that when p is part of one's evidence, it is true that one's evidence supports p . For those who want to explicate evidential support through conditional probabilities: the probability of p conditional on a conjunction one of whose conjuncts is p is 1, assuming of course that the conjunction has non-zero probability; see Williamson (2000, Ch. 9) for this point.

⁵ See Christensen's (2010) for the often mentioned sleep-deprivation and reason-distorting drug cases (among others).

⁶ The seed of this doubt has been planted by Makinson (1965).

⁷ See for example Foley (2009). See also Jackson (2020) for an overview of the literature on the relationship between credence and belief, where considerations about belief-closure and consistency play a major role.

for example, a subject who believes that *he is a sinner* and that *all sinners go to hell*, but refrains from believing that *he is going to hell* (if you want, add that the subject refrains from believing that while considering the question of whether *he is going to hell* and explicitly entertaining the two other believed propositions).⁸ Here, instead of satisfying a conjunction of belief-ascriptions ($Bp_1 \wedge \dots \wedge Bp_n$) such that it is incoherent for one to believe all of p_1, \dots, p_n at the same time, one satisfies a conjunction ($Bp_1 \wedge \dots \wedge \neg Bp_n$) such that it is incoherent for one to believe all p_1, \dots, p_{n-1} without also believing that p_n .⁹ Where it is incoherent for one to satisfy ($Bp_1 \wedge \dots \wedge Bp_n$), the suggested explanation from above was that it is impossible for one to satisfy ($Kp_1 \wedge \dots \wedge Kp_n$), where the Kp_i are knowledge-ascriptions. But what is the explanation for the incoherence of satisfying ($Bp_1 \wedge \dots \wedge \neg Bp_n$)? It better not be that it is impossible for one to satisfy ($Kp_1 \wedge \dots \wedge \neg Kp_n$), since it is perfectly possible for one to know the premises of a valid argument without knowing its conclusion. So some other explanation is required. This issue is addressed in Section III below.

Third, how are we to explain what is wrong with incoherent combinations involving suspended judgment? Consider, for example, a state where one believes that *Lucy is a feminist bank teller* while suspending judgment about whether *some bank tellers are feminists*. The incoherent combination here is a combination of an attitude of belief and an attitude of suspended judgment. But it seems that suspended judgment is not the kind of doxastic attitude that can ascend to knowledge. Section IV deals with this problem by building upon the ideas put forward in Section III.

Fourth, how are we to explain what is wrong with incoherent combinations involving credences or degrees of confidence? Consider, for example, a state where one invests higher credence in the proposition that *Lucy is a feminist bank teller* than in the proposition that *Lucy is a bank teller*.¹⁰ The most straightforward way for us to generalize the proposal sketched above here is to assume that credences themselves can constitute knowledge. Section V shows how two different views of this kind allow us to do so.

Finally, it is unclear whether the same explanation as the one sketched above can be expanded beyond the realm of theoretical rationality to the realm of practical rationality. What does it have to say, for example, about incoherent intentions? This is the topic of Section VI. So I will address each of these challenges now. Important details about the idea of making sense of the

⁸ I took this example from Way (2018).

⁹ Notice that, where it is incoherent for one satisfy ($Bp_1 \wedge \dots \wedge \neg Bp_n$), there are many ways of restoring coherence: cease to believe p_1 , cease to believe p_2, \dots , cease to believe p_{n-1} and, finally, believing p_n . And similarly for the case where it is incoherent for one to satisfy ($Bp_1 \wedge \dots \wedge Bp_n$). One can restore coherence here by ceasing to believe p_1 , by ceasing to believe p_2, \dots , by ceasing to believe p_n . Of course, in some cases ceasing to believe one of these propositions won't be enough to restore coherence, since the rest of the combination is still incoherent—but I will leave these details aside here.

¹⁰ Example from Kahneman and Tversky (1972).

badness of incoherence through facts about knowability will be made along the way.

II. THE ISSUE WITH BELIEF-CONSISTENCY

Christensen (2004) addresses the question of how logic puts constraints on belief-systems. A canonical answer that he discusses at length there is: our beliefs are rationally required to be mutually consistent and closed under logical entailment. Let's just focus on the consistency part now. As Christensen forcefully emphasizes, it doesn't *always* seem to be irrational for one to hold mutually inconsistent beliefs. I have many beliefs—but I still think that at least one of them is false. For how could I be getting it right all the time? This seems to make me inconsistent without making me irrational.

We don't need to agree with all that. There is room for misleading appearances all over the place in that line of thought. Maybe *I am* irrational, but I have good excuses for my irrationality, or maybe I just have high credence in mutually inconsistent propositions without believing all of them at the same time. Still, suppose that consistency is not a requirement of rationality. Since incoherence is supposed to entail irrationality, consistency is not required for coherence either. So there can be rational, coherent combinations of beliefs ($Bp_1 \wedge \dots \wedge Bp_n$) such that p_1, \dots, p_n are mutually inconsistent. Is this a problem for the idea that the badness of incoherent combination of beliefs is to be explained by the fact that they cannot all be knowledge at the same time? After all, we cannot upgrade all members of a set of mutually inconsistent beliefs to knowledge at the same time (at least one of those beliefs must be false).

But notice that the idea that I am exploring in this paper does not yet say: if it is impossible for one to know all of p_1, \dots, p_n at the same time, then it is incoherent for one to believe all of p_1, \dots, p_n at the same time. That conditional does indeed entail that it is always incoherent for one to be inconsistent—but it is not needed for the project of explaining the badness of incoherence through unknowability. The idea is rather to endorse the following: (i) if it is incoherent for one to believe all of p_1, \dots, p_n at the same time, then it is impossible for one to know all of p_1, \dots, p_n at the same time, and (ii) the fact that incoherence entails unknowability is what explains what is bad about an incoherent combination of beliefs (notice that what is explained here is the badness of the incoherence, not the incoherence itself). Let the pair of claims (i) and (ii) go under the heading 'Incoherence-Unknowability Thesis'. We can endorse the Incoherence-Unknowability Thesis without committing ourselves to the claim that mutually inconsistent beliefs are always incoherent.

One might still object to that thesis as follows. Since the impossibility of upgrading all members of a set of beliefs to knowledge is what is supposed to explain what is bad about an incoherent combination of beliefs, one would also

expect that to be a problem for combinations of beliefs that are *not* incoherent. And, again, it is impossible to upgrade every member of a set of mutually inconsistent beliefs to knowledge. So why wouldn't we also take every set of mutually inconsistent beliefs to be incoherent? After all, every such set has the same problematic feature that the Incoherence-Unknowability Thesis uses to explain what is bad about incoherent combinations of beliefs.

I see at least two ways for the defender of the Incoherence-Unknowability Thesis to address this worry. The first one is to strengthen that thesis with the other direction of the conditional indeed (from unknowability to incoherence) and classify all combinations of beliefs that cannot be simultaneously upgraded to knowledge as incoherent. One could then *either* embrace the idea that belief-consistency is required for coherence and rationality *or*, more radically, suggest that incoherence doesn't always make a combination of beliefs irrational. In taking the former course of action, one would be in fact challenging the kind of view that was sketched at the beginning of this section: in contrast to what that view says, we are rationally required not to hold mutually inconsistent beliefs.¹¹ In taking the second course of action, one would be granting that it is sometimes rational for us to hold mutually inconsistent beliefs, though this is always incoherent. The link between incoherence and irrationality would then be broken. I am not aware of anyone who defends the latter kind of view.

A second line of response starts off by pointing out that which combinations of beliefs count as coherent and which do not is somehow underdetermined by our use of the terms 'coherent' and 'incoherent' (which are technical terms in epistemology, though presumably they are supposed to preserve some of the extension of their ordinary counterparts). And so it shouldn't be a surprise that the core feature that a theory takes to be responsible for the badness of incoherence will overshoot according to some epistemologists, and undershoot according to others: in the former case, the core feature applies to combinations of beliefs that *do not* count as incoherent according to some epistemologists, in the latter case, the core feature does not apply to combinations of beliefs that *do* count as incoherent according to some epistemologists. In the case at hand, what the theory takes to be a bad thing about incoherence is also instantiated by some combinations of attitudes that are not taken to be incoherent by some epistemologists (where the very defender of the theory might belong to that group). But that is just to be expected.¹²

¹¹ Those who defend consistency norms/requirements for belief include Pollock (1983), Stalnaker (1984, Ch. 5), Ryan (1991), Nelkin (2000), and Ross and Schroeder (2014). Leitgeb (2017) shows how one can endorse the consistency requirement for belief without abandoning the view that belief and high credence are also rationally tied to each other.

¹² Of course, if the theory overshoots/undershoots according to all or almost all of the members of the target linguistic community, then that might be a problem. But I don't take that to be the case here (witness the previous footnote). It would be different, for example, if the theory were to undershoot by not classifying paradigmatic akratic states as incoherent since, at least as far as I know, no one in the literature thinks that those akratic states are *coherent*.

I will leave these options open here, because I want to explore the idea that there is a strong connection between incoherence and unknowability at its maximum level of generality. So, when it comes to combinations of beliefs, why be coherent? The response so far is: because if you are *incoherent* you make sure you don't know. (We can answer that question in this way regardless of whether we also think that if you make sure you don't know then you are incoherent).

III. THE PROBLEM OF ABSENCES

Not all principles of coherence are concerned with combinations of beliefs. In particular, some of them tell us not to believe certain things without also believing others. It is incoherent, for example, to believe that *Lucy is a feminist bank teller* without believing that *some bank tellers are feminists*.

The Incoherence-Unknowability Thesis says: whenever it is incoherent for a subject to have a certain combination of beliefs, it is impossible for all of those beliefs to constitute knowledge, and that is what accounts for the badness of an incoherent combination of beliefs. To cash out the first bit of that thesis in a more formal way: if by virtue of satisfying the conjunction of belief-ascriptions ($Bp_1 \wedge \dots \wedge Bp_n$) one becomes incoherent, then it is impossible for one to satisfy the conjunction of knowledge-ascriptions ($Kp_1 \wedge \dots \wedge Kp_n$), or $\neg \diamond (Bp_1 \wedge \dots \wedge Bp_n)$.¹³ But now we have to find a similar way of completing the following conditional: if by virtue of satisfying ($Bp_1 \wedge \dots \wedge \neg Bp_n$) one becomes incoherent, then... what? What proposition about knowledge/knowability is supposed to follow from that, in such a way as to explain what is bad about believing certain things but not others? As I already pointed out in the introduction, we cannot just complete that conditional with: it is impossible for one to satisfy ($Kp_1 \wedge \dots \wedge \neg Kp_n$). For example, it seems to be possible for me to know that *Lucy is a feminist bank teller* without yet knowing that *some bank tellers are feminists*, say, because I don't even believe that *some bank tellers are feminists*. So another explanation is needed.

I will now supply a consequent for that conditional. To do that, I will deploy not only the notion of *knowledge*, but also the notion of *being in a position to know*. Using just two propositions p and q for the sake of simplicity, the conditional goes as follows: if it is incoherent for one to believe that p without also believing that q , then it is impossible for one to know that p without being in a position to know that q . Let Pp be an ascription of position to know that p . The more general schema becomes, then, the following: if by virtue of satisfying ($Bp_1 \wedge \dots \wedge \neg Bp_n$) one is incoherent, then

¹³ \diamond is an alethic possibility operator. See below for the modal spaces it might be taken to be occupied with.

$\neg \diamond (Kp_1 \wedge \dots \wedge Kp_{n-1} \wedge \neg Pp_n)$. Continuing with the example from above, it would have to be impossible for one to know that *Lucy is a feminist bank teller* without being in a position to know that *some bank tellers are feminists*.

Call a subject's absence of belief in p *knowledgeable* when the subject is not in a position to know that p . Knowledgeability is used here as a success term for an absence of belief. It constitutes a success of sorts *not* to believe that p when one is *not* in a position to know that p , and a failure of sorts *not* to believe that p when one *is* in a position to know that p . In order for a belief to be at its epistemic best, it has to be knowledge, and in order for an absence of belief to be at its epistemic best, it has to be knowledgeable. So the conditional from the previous paragraph would then tell us that when a combination of belief in p and absence of belief in q together make for an incoherent doxastic state, it is impossible for both the belief in p and the absence of belief in q to be at their epistemic bests (at no possible world is it the case that both one's belief and one's absence of belief are knowledgeable). Let this explanation of the badness of incoherence due to a combination of beliefs and the absence of a belief also be part of the Incoherence-Unknowability Thesis.

The notion of being in a position to know plays a crucial role in that explanation, so someone who wants to endorse it better be mindful of how different notions of being in a position to know will have an impact on which doxastic states count as incoherent and which don't. One of the dangers here is that of making it *too hard* for one to be in a position to know something, in the sense that too many conditions need to be satisfied in order for one to count as being in a position to know it. The harder it is for one to be in a position to know that something is the case, the easier it is for one *not* to be in a position to know it and, therefore, the easier it is for one's absence of belief to count as knowledgeable. For example, suppose that q follows from p and that S knows that p , but S doesn't know how to deduce q from p , or she doesn't have the reasoning skills to do that.¹⁴ It is harder for one to count as being in a position to know that q if being in that position requires having the reasoning skills that will enable one to competently deduce q from p , as compared to a notion of being in a position to know that does not impose that requirement.

Now suppose that we agree that it is incoherent for one to believe that p without believing that q . According to the Incoherence-Unknowability Thesis, it must be impossible for one to know that p without being in a position to know that q . But if S is not in a position to know that q in the scenario described above (because she does not have the cognitive skills that would allow her to competently deduce q from p) then, given that S knows that p , it follows that

¹⁴ Whether the inference from p to q is itself hard (whatever more precisely one means by that) is not important here. For present purposes, there is little difference between (a) assuming that the average human being isn't able to deduce q from p , and (b) assuming that S in particular isn't able to deduce q from p , even though the average human being is.

it is possible for one to know that p without being in a position to know that q . The Incoherence-Unknowability Thesis would entail by *modus tollens*, then, that it is not incoherent for one to believe that p without believing that q , contrary to our initial assumption. This sounds like bad news for the defender of the Incoherence-Unknowability Thesis: it seems like she cannot join us in the assumption that it is incoherent for one to believe that p without believing that q .

The defender of the Incoherence-Unknowability Thesis can still hold on to that shared assumption; however, by using some weaker notion of being in a position to know (or, if you want, a weaker notion than the notion of being in a position to know). There are options here. Consider, for example, the notion of being in a position to know that Chalmers (2012: 49) uses to explicate the idea that some truths are inferentially scrutable from a given knowledge-base: a subject can be in a position to know that q in a possible world w at a certain time t even though she does not have the cognitive skills or reasoning capacities in w at t that would allow her to know that q . What is needed is that there is a possible future—conceived as a later time t' at possible world w' with the same history as that of w up to time t —where the subject knows that q , thus manifesting those cognitive skills that were absent in w at t (in w' , the subject has acquired those skills between t and t'). Here we are essentially talking about a cognitively improved version of the actual subject: one who is better at doing inferences or information-processing in general than the actual subject.

That notion of being in a position to know would suit the goals of the defender of the Incoherence-Unknowability Thesis. For it is then going to be impossible for the subject S described above to know that p without being in a position to know that q : if she knows that p , and it is possible to deduce that q from p , then there will be a possible future featuring a cognitively improved version of S who is indeed able to make that deduction.

That is not the *only* way for the defender of the Incoherence-Unknowability Thesis to go about the worry concerning the strength of the notion of being in a position to know. In fact, she can deploy a notion of position to know that does require having the skill to deduce q from p in order for one to count as being in a position to know that q in the case described above. Consider the conditionals that are part of the Incoherence-Unknowability Thesis so far:

- (1) if it is incoherent for one to $(Bp_1 \wedge \dots \wedge Bp_n)$ then $\neg \diamond (Kp_1 \wedge \dots \wedge Kp_n)$,
and
- (2) if it is incoherent for one to $(Bp_1 \wedge \dots \wedge \neg Bp_n)$ then $\neg \diamond (Kp_1 \wedge \dots \wedge \neg Kp_n)$,¹⁵

¹⁵ I am shortening things up here: 'it is incoherent for one to $(Bp_1 \wedge \dots \wedge Bp_n)$ ' is an abbreviation of 'it is incoherent for one to satisfy $(Bp_1 \wedge \dots \wedge Bp_n)$ ', which is in turn a paraphrase of 'it is incoherent for one to believe that p_1 and believe that p_2 and . . . and believe that p_n at the same time' (similarly for the case involving the negation of a belief-ascription).

where P is again the operator of being in a position to know. I haven't yet said anything about the scope of quantification of the possibility operator \diamond . Presumably, the defender of the Incoherence-Unknowability Thesis will want it to quantify over *some* set of metaphysically possible worlds.¹⁶ But there are several sub-regions of that space that she might appropriate. In particular, she might use a set of possible worlds featuring cognitively improved counterparts of us—agents without our usual cognitive limitations, with unlimited powers of reasoning. So, for example, given that p entails q , it won't be possible for any of those idealized cognizers to know that p without being in a position to know that q , that is $\neg\diamond(Kp \wedge \neg Pq)$. (2) is safe from counterexamples involving cognitively limited cognizers, and that is because the modal space that \diamond is occupied with does not include such cognitively limited cognizers. Furthermore, the phrase 'is in a position to know that q ' can here mean exactly the same thing as it does when we use that phrase to talk about lesser creatures like you and I. Other idealizations than the one about reasoning skills are still possible—see the next section for more on this.

So there are at least two ways for the defender of the Unknowability-Incoherence Thesis to address the initial concern about it being too easy for one not to be in a position to know something (therefore too easy for an absence of belief to count as knowledgeable).

IV. THE PROBLEM OF INCOHERENT STATES INVOLVING SUSPENSION

But what about incoherent states that involve suspended judgment? Consider, for example, someone who believes that *Ana is in the office*, believes that *Berta is not in the office*, but suspends judgment about the conditional *if Ana is in the office then Berta is in the office*. These attitudes are mutually incoherent. How can the defender of the Incoherence-Unknowability Thesis make sense of the wrongness of combinations of attitudes such as this one? Which ascriptions of knowledge/being in a position to know are supposed to be impossible here?

We can borrow the ideas from the previous section to work out an answer. Say that a subject's attitude of suspended judgment about whether p is knowledgeable when that subject is neither in a position to know that p nor in a position to know that $\neg p$. Knowledgeability is used here as a success term for an attitude of suspended judgment as well. It constitutes a success of sorts to suspend judgment about whether p when one is neither in a position to know

¹⁶ I am thinking of the truth-conditions for formulas involving the possibility operator in the standard way of modal logics with a possible-worlds semantics. $\diamond p$ is true in a possible world w according to a model, then, when there is at least one possible world v accessible from w such that p is true in v according to that model.

that p nor in a position to know that $\neg p$. Accordingly, suspending judgment about p when one is in a position to know that p is a kind of error—and so is suspending judgment about p when one is in a position to know that $\neg p$. In order for a belief to be at its epistemic best it has to constitute knowledge, and in order for an attitude of suspended judgment to be at its epistemic best it has to be knowledgeable.

So the idea here is that incoherent combinations of beliefs and attitudes of suspended judgment are such that it is impossible for both the belief and the suspension attitudes to be at their epistemic bests at the same time. The Incoherence-Unknowability thesis will thus incorporate the following conditional:

- (3) if it is incoherent for one to $(Bp_1 \wedge \dots \wedge Bp_n \wedge Sq)$ then $\neg \diamond (Kp_1 \wedge \dots \wedge Kp_n \wedge \neg Pp \wedge \neg P\neg p)$,

where S is the suspended judgment operator.

With just two propositions p and q : if it is incoherent for one to believe that p while suspending judgment about q , then it is impossible for one to know that p without either being in a position to know that q or being in a position to know that $\neg q$. For example, suppose I believe that *Ruth is an atheist philosopher*, though I suspend judgment about whether *all philosophers are theists*. I am obviously incoherent here. Accordingly, it is impossible for one to know that *Ruth is an atheist philosopher* without being in a position to know that *not all philosophers are theists*—ergo impossible for one to know that *Ruth is an atheist philosopher* without either being in a position to know that *all philosophers are theists* or being in a position to know that *not all philosophers are theists*.

And similarly for the case where I believe that *Ruth is an atheist philosopher*, though I suspend judgment about whether *some philosophers are atheists*. Here I am incoherent again. Accordingly, it is impossible for one to know that *Ruth is an atheist philosopher* without being in a position to know that *some philosophers are atheists*—ergo impossible for one to know that *Ruth is an atheist philosopher* without either being in a position to know that *some philosophers are atheists* or being in a position to know that *no philosophers are atheists*. So sometimes $\neg \diamond (Kp_1 \wedge \dots \wedge Kp_n \wedge \neg Pp \wedge \neg P\neg p)$ is the case because $\neg \diamond (Kp_1 \wedge \dots \wedge Kp_n \wedge \neg Pp)$ is the case, whereas other times it is the case because $\neg \diamond (Kp_1 \wedge \dots \wedge Kp_n \wedge \neg P\neg p)$ is the case (this ultimately has to do with the fact that suspending judgment about whether p consists in being agnostic about both p and $\neg p$ at the same time).¹⁷

The worry that suspension might too easily count as knowledgeable will creep in here as well, in much the same way as it did regarding the absence of belief. And here the defender of the Incoherence-Unknowability Thesis

¹⁷ See Friedman (2013: 166) for the same observation.

can make the same moves as the ones I sketched in the previous section: she can either make it easier for someone to count as being in a position to know something (in virtue of possible future selves with better cognitive skills, say) or she can have the possibility operator \diamond be occupied with possible worlds containing cognitively improved counterparts of us (so that ‘one’ in ‘it is not possible for one to...’ is a placeholder for such cognitively improved counterparts).

Suspended judgment also features in akratic doxastic states,¹⁸ and one might worry that (3) doesn’t hold true for those incoherent combinations. Consider a state where I believe that p while at the same time suspending judgment about whether *I know that p*. Admittedly, this does not look as bad as believing that p while at the same time believing that *I don’t know that p*—but it still sounds incoherent.¹⁹ And it seems to be possible for *me* to know that p without being in a position to know that I do. Furthermore, I am not in a position to know that *I don’t know that p* in this case either, because that’s just false and no one can be in a position to know falsehoods. So here I satisfy $(Bp \wedge S(Kp))$ and that is incoherent, even though I also satisfy $(Kp \wedge \neg PKp \wedge \neg P\neg Kp)$. Does that constitute a counterexample to (3)?

As we just saw, in her attempt to explain the badness of incoherence through the notions of knowledge and being in a position to know, the defender of the Incoherence-Unknowability Thesis has already made the move of talking about scenarios with cognitively improved versions of ourselves. And now she can point out that these cognitively improved versions are supposed to be better than us not only reasoning-wise, but also introspection-wise, in such a way that they will be in a position to know that *they know that p* when they know that p . In general, their epistemic situation will be transparent to them in ways that ours arguably aren’t.²⁰ These cognitively improved subjects might either be conceived as possible future selves, so that the actual, cognitively limited selves count as being in a position to know things about their own epistemic position (the option of weakening the meaning of ‘is in a position to know’), or they are the inhabitants of the possible worlds that make up the modal space that \diamond quantifies over in (1)–(3). Even though I satisfy $(Kp \wedge \neg PKp \wedge \neg P\neg Kp)$, then, no such cognitively improved subjects do. In other words, the doxastic state $(Bp \wedge S(Kp))$ *does* count as incoherent but, accordingly, it is also true that $\neg \diamond(Kp \wedge \neg PKp \wedge \neg P\neg Kp)$. So there would be no counterexample to (3) here after all.

¹⁸ See Smithies (2012: Section III).

¹⁹ See also Huemer (2011: 1). If the reader doesn’t think that there is any incoherence in the doxastic states just mentioned, then (if the reader were right) that would only simplify the account of incoherence that is being offered here, in that there would be *nothing* for it to explain in these cases. For those who do think that those states are incoherent, however, something needs to be said—hence the rest of this section.

²⁰ See Williamson (2000), especially chapters 4 and 8, and also Schwitzgebel (2008).

The strategy of quantifying over ideal cognizers (or simply better versions of real cognizers) can be used to make sense of the incoherence of a number of other akratic states. Those cognizers' cognitive processes are much better than ours—they reason better than us, and their introspective powers are much more revealing of their epistemic situations than ours are. Resourcing an epistemological theory of coherence with such idealizations shouldn't come out as a surprise, seeing as coherence itself is an ideal of rationality that we can only approximate.²¹

V. THE PROBLEM OF INCOHERENT CREDENCES

We also have incoherent combinations of *credences*. For example, where p logically entails that q , it is incoherent for one to satisfy $(Cr(p) = 0.8 \wedge Cr(q) = 0.7)$, where $Cr() = x$ is the credence operator (the values of x lie always within the unit interval $[0, 1]$).²² It is incoherent for one to invest more credence in the entailing premise than in the entailed conclusion.

There is much discussion about the nature of credence in recent literature. Crucially, we might disagree about what the difference is between your 0.7 credence that p and my 0.6 credence that p —are these two *different attitudes* toward the *same content*, or are they the *same attitude* toward *different contents*? Myriad arguments can be/have been given for either position. But assessing those arguments extrapolates the bounds of this paper, so let me cut it short: the most straightforward way for the defender of the Incoherence-Unknowability Thesis to generalize the picture I've been sketching above is to take the target difference to be in the content of the attitude, rather than in the attitude itself.

There are two options here: (a) credences amount to beliefs toward propositions *about* some kind of probability,²³ and (b) credences amount to beliefs toward probabilistic contents, understood as sets of probability spaces (a probability space is a triple with a set of possible worlds, an algebra on that set and a probability function over that set). The latter is a recent proposal by Sarah Moss (2018).

In either of these ways, credences will possibly amount to knowledge, in such a way that the Incoherence-Unknowability thesis can deal with incoherent

²¹ Coherence is an ideal that humans like you and I regularly fall short of, as suggested by much research in the field of psychology of reasoning/thinking. See Wason (1968) and Kahneman and Tversky (1972) for some influential seminal studies. But see also Cohen (1981) for a critical assessment of the experimental data that is used to demonstrate systematic irrationality in humans.

²² As should be clear from the text, I am using $Cr() = x$ as a sheer measurement device here. In particular, it is not assumed that Cr stands for a probability function (there *isn't* a probability function Pr such that $Pr(p) = 0.8$ and $Pr(q) = 0.7$ when its algebra is such that $p \subseteq q$).

²³ See Christensen (2004: Ch. 2) for criticism of this view, and Moon and Jackson (2020) for a recent defense of it.

combinations involving credences in the same way it dealt with incoherent combinations involving beliefs. Where p logically entails that q , it is incoherent for one to satisfy $(Cr(p) = 0.8 \wedge Cr(q) = 0.7)$. Accordingly, it is impossible for one to know that *it is 80% probable that p* and know that *it is 70% probable that q* at the same time (option (a)). And it is also impossible for the contents of one's knowledge to be constituted by both, probability spaces that assign probability 0.8 to p and probability spaces that assign probability 0.7 to q (option (b)—the intersection of these two probability spaces is *empty*). It is bad to have incoherent credences because that guarantees that they cannot simultaneously constitute knowledge.

How about the following combination: credence r in p and a belief to the effect that *one's evidence doesn't vindicate credence r in p* ? The story will be, again, that it is impossible for both of those attitudes to simultaneously constitute knowledge. Suppose one knows that one's evidence doesn't vindicate credence r in p . So one's evidence doesn't vindicate credence r in p . Assuming again that knowledge requires evidential support, it follows that one's credence r in p is not knowledge: if one of the attitudes in that state is knowledge, the other one isn't. To deal with other akratic-like combinations involving credence, the defender can still use the same kinds of resources as the ones from the two previous sections. There won't be, for example, an ideal cognizer who knows that p but has low credence that *she knows that p* —so that we may take a state where one believes that p while having high credence that *one doesn't know that p* to be incoherent. If we let our possibility operator quantify over possibilities that feature only such ideal cognizers, then, the link between incoherence and impossibility of knowledge will continue to hold.

That is one way, then, for defenders of the Incoherence-Unknowability Thesis to make sense of incoherent combinations of credences: by endorsing the view that credences themselves can also ascend to knowledge (either because they are beliefs about probabilities or because they are beliefs toward probabilistic contents).

Maybe that is not the only way. Perhaps one could grant that credences are not *reducible* to beliefs about probabilities/beliefs toward probabilistic contents and still think of the knowledgeability of credences as a matter of whether it is possible for the corresponding beliefs about probabilities/beliefs toward probabilistic contents to constitute knowledge. The very creature who has credences need not be capable of having the target beliefs about probabilities/beliefs toward probabilistic contents. Regardless of whether the creature we ascribe the credences to is capable of having such beliefs, her credences will count as coherent just in case it is possible for the corresponding beliefs to constitute knowledge at the same time, as held by *some* cognizer. This would allow the defender of the Incoherence-Unknowability Thesis not to worry much about the possibility of cognizers who have credences or degrees of confidence but

are not themselves capable of having beliefs about probabilities/beliefs toward probabilistic contents.²⁴

VI. THE PROBLEM OF PRACTICAL IRRATIONALITY

Lastly, I want to discuss a challenge that I'm not sure would be terribly worrisome to those who want to endorse the Incoherence-Unknowability Thesis. So far I have only been talking about incoherent combinations of doxastic attitudes. This falls within the realm of epistemic rationality. But of course there is also a realm of practical rationality, and coherence requirements will surely play an important part in it.

Consider, for example, a case where one intends to ϕ , believes that *in order to ϕ one must ψ* , but intends not to ψ . That is a means-ends incoherent state. Arguably one is rationally required not to be means-ends incoherent. Or take the case where one prefers A to B , B to C , and C to A (the capital letters stand for options of a certain sort). Arguably one is also rationally required not to have preferences with that structure. But preferences and intentions don't seem to be doxastic attitudes. It would be trivial to say that it is impossible for certain preferences and intentions to constitute knowledge together, for these mental states are not candidate cases of knowledge to begin with. Such a trivial claim wouldn't give the defender of the Incoherence-Unknowability Thesis the explanatory power that she expects to have by connecting incoherence to unknowability.

Why think this is not a terribly worrisome contention? Exactly because, as I already pointed out, there is epistemic rationality and then there is practical rationality. It is not absurd to expect different kinds of explanations for the badness of epistemic and practical irrationality, respectively. For these two realms of rationality already come apart in all sorts of ways.

Still, let me at least hint at a way of incorporating an explanation of the badness of practical incoherence that fits into the broader picture of the Incoherence-Unknowability Thesis. The crucial step here is to find some success condition for intentions/preferences that are analogous to what knowledge is to belief. If belief at its epistemic best is knowledge, then what is an intention at its practical best? Whatever that is, let it constitutively involve the satisfaction of some kind of factive condition E , in the sense that whenever one's intention to ϕ is at its practical best, it follows that one subsequently succeeds at ϕ -ing. Now consider again the means-ends incoherent state where one satisfies $(I\phi \wedge B\Box(\phi \supset \psi) \wedge I\neg\psi)$. I is the intention operator and $B\Box(\phi \supset \psi)$ is a formal rendering of the belief-ascription: one believes that *in order to ϕ one must ψ* . The box \Box is a necessity operator, and \supset is the material conditional.

²⁴ I thank an anonymous referee for *The Philosophical Quarterly* for pressing me on this point.

Now assuming that the possible worlds that F quantifies over constitute a subset of the possible worlds that \square quantifies over, it will be impossible for the following to be the case: $(F\phi \wedge \square(\phi \supset \psi) \wedge F\neg\psi)$.²⁵ So it is impossible for $(F\phi \wedge K\square(\phi \supset \psi) \wedge F\neg\psi)$ to be the case, which in turn means that an intention to ϕ , a belief that *in order to ϕ one must ψ* and an intention not to ψ cannot simultaneously be at their bests. More generally, the idea would be that incoherent combinations of intentions and beliefs are such that it is impossible for them to be at their practical/epistemic bests at the same time. The issue of incoherent states involving absences could then be dealt with in a similar way as the one we find in Section III above: we could talk about being in a position to successfully intend, or something along these lines, instead of intentions at their practical best (just like we talked about being in a position to know, instead of knowledge, to make sense of incoherent doxastic states involving absences).

And similarly for preferences: there will be some success condition for preferring A to B —say, that A is in some sense better than B —such that it will be impossible for incoherent combinations of preferences to be such that those preferences simultaneously satisfy that success condition. These are all tentative suggestions, of course, but my point is that a defender of the Incoherence-Unknowability Thesis doesn't seem to be forced to restrict her explanation of the badness of incoherence to the realm of epistemic rationality, as it seems that she can generalize her broad picture to the realm of practical rationality as well.

VII. CONCLUDING REMARKS

Epistemologists have been debating the issue of whether coherence or structural rationality is a dimension of epistemological evaluation in its own right or whether it ultimately reduces to facts about substantial rationality. Some have thought that the truth of rational requirements forbidding certain combinations of attitudes depends on truths about which attitudes can be jointly vindicated by the evidence, or jointly justified by the reasons available to the subject,²⁶ whereas others thought that this is not the case. The former ones are motivated by the impression that incoherence *per se* is not the problem. Answering the question 'Why should we avoid incoherence?' with something like 'Because doing otherwise would be incoherent' leaves us with the impression that the reply is driven by a fetish for psychic tidiness, to use a term deployed by Kolodny (2007: 241).

²⁵ Let W be the set of worlds within the domain of \diamond , U the set of worlds within the domain of \square . So we make $W \subseteq U$. Now assume that there is a $w \in W$ such that $\diamond\phi$ is true in w , and assume also that $\square(\phi \supset \psi)$. It follows that $\neg\diamond(\phi \wedge \neg\psi)$ in w —so it can't be that $\diamond\neg\psi$ in w .

²⁶ See again Kolodny (2005, 2007), Kiesewetter (2017), and Lord (2018).

Crucial to the view that structural rationality is an independent dimension of evaluation is the observation that, even though akratic states are irrational, the attitudes that make up those states might be simultaneously vindicated by the evidence.²⁷ But here I have fleshed out a possible explanation of the badness of incoherence that covers the incoherence of akrasia as well. The proposal makes use of the notion of knowability, instead of the notion of substantial rationality or responsiveness to the evidence. Again, while we might disagree about whether one's total evidence can support both propositions, that p and that *one's evidence doesn't support p* , it should be much less controversial that it is not possible for one to know that p while knowing at the same time that *one's evidence doesn't support p* . And so even if the badness of structural irrationality is not to be explained through facts about substantial rationality, maybe it can still be explained through facts about knowability.

I didn't flesh out all the details of this project here. But my main goal was rather to make the Incoherence-Unknowability Thesis a contender worth taking seriously in this debate. It can now be assessed and compared to other accounts or explanations about the badness of incoherence in a more exhaustive manner.

Lastly, as pointed out by a referee for this journal, one might have the following suspicion about the Incoherence-Unknowability Thesis. The worry is that, when it comes to explaining why it is bad to be in the relevant kinds of doxastic states (namely, the incoherent ones) the impossibility of mutual knowability is perhaps not a better stopping point than the very charge of incoherence. Why is it bad to be in some doxastic state, for example, such that not all the beliefs that make up that state can constitute knowledge at the same time? Perhaps the impossibility of knowledge isn't as bad as the incoherence itself, and there is more to the badness of incoherence than the impossibility of knowledge.

I think this is a fair but inconclusive point. Knowledge is some kind of ideal for beliefs. Incoherence among one's beliefs prevents one from achieving that ideal, which is a bad thing indeed—though surely not the worst thing that could happen. And to at least some of us that will sound as bad as, or as serious a problem as, the fact that one's beliefs are incoherent. Granted, sometimes it doesn't look like the impossibility of simultaneous knowledge is such a big deal, especially when we consider very complex/very inclusive systems of beliefs. But the charge of incoherence may not strike us as a big problem in those cases either (it's not exactly a *surprise* that such a big combination of beliefs turns out to be incoherent, almost to be expected). Be that as it may, my goal here was

²⁷ This line of reasoning is found in Worsnip (2018b). Relatedly, Fogal (2020) argues that there are different kinds of pressure on our attitudes, corresponding to the requirements of structural and substantial rationality respectively. For a more recent defense of the independence of structural rationality from substantial rationality, see Lee (2021).

to introduce a candidate explanation of the badness of incoherence and flesh it out in some detail. For the reasons given above, I think it has advantages over the Kolodny-style explanation in terms of substantial rationality. But the jury is now out.

ACKNOWLEDGEMENT

Previous versions of this paper were presented at our Brown Bag Seminar at CONCEPT, University of Cologne, and at the Principia Symposium, hosted by the Philosophy Department of the Federal University of Santa Catarina. I thank the audiences on both occasions for their valuable feedback. I would also like to thank Wes Siscoe and an anonymous referee for *The Philosophical Quarterly* for their detailed comments and suggestions on how to improve this paper. Finally, I would like to thank the Alexander von Humboldt Foundation and the German Federal Ministry of Education and Research for funding this research.

REFERENCES

- Chalmers, D. (2012) *Constructing the World*. New York: OUP.
- Christensen, D. (2004) *Putting Logic in its Place*. New York: OUP.
- . (2010) ‘Higher Order Evidence’, *Philosophy and Phenomenological Research*, 81: 185–215.
- Cohen, L. J. (1981) ‘Can Human Irrationality Be Experimentally Demonstrated?’, *Behavioral and Brain Sciences*, 4: 317–31.
- Fogal, D. (2020) ‘Rational Requirements and the Primacy of Pressure’, *Mind*, 129: 1033–70.
- Foley, R. (2009) ‘Beliefs, Degrees of Belief, and the Lockean Thesis’, in F. Huber and C. Schmidt-Petri (eds) *Degrees of Belief: Synthese Library*, vol. 342, 37–47. Berlin: Springer.
- Friedman, J. (2013) ‘Suspended Judgment’, *Philosophical Studies*, 162: 165–81.
- Horowitz, S. (2014) ‘Epistemic Akrasia’, *Nos*, 48: 718–44.
- Huemer, M. (2011) ‘The Puzzle of Metacoherence’, *Philosophy and Phenomenological Research*, 28: 1–21.
- Jackson, E. (2020) ‘The Relationship between Belief and Credence’, *Philosophy Compass*, 15: 1–13.
- Kahneman, D. and Tversky, A. (1972) ‘Subjective Probability: A Judgment of Representativeness’, *Cognitive Psychology*, 3: 430–54.
- Kiesewetter, B. (2017) *The Normativity of Rationality*. Oxford: OUP.
- Kolodny, N. (2005) ‘Why Be Rational?’, *Mind*, 114: 509–63.
- . (2007) ‘How Does Coherence Matter?’, *Proceedings of the Aristotelian Society*, 107: 229–63.
- Lasonen-Aarnio, M. (2020) ‘Enkrasia or Evidentialism? Learning to Love Mismatch’, *Philosophical Studies*, 177: 597–632.
- Lee, W. (2021) ‘The Independence of (in)Coherence’, *Synthese*, 199: 6563–84.
- Leitgeb, H. (2017) *The Stability of Belief: How Rational Belief Coheres with Probability*. Oxford: OUP.
- Lord, E. (2018) *The Importance of Being Rational*. Oxford: OUP.
- Makinson, D. C. (1965) ‘The Paradox of the Preface’, *Analysis*, 25: 205–7.
- Moon, A. and Jackson, E. (2020) ‘Credence: A Belief-First Approach’, *Canadian Journal of Philosophy*, 50: 652–69.
- Moss, S. (2018) *Probabilistic Knowledge*. Oxford: OUP.
- Nelkin, D. K. (2000) ‘The Lottery Paradox, Knowledge, and Rationality’, *The Philosophical Review*, 109: 373–409.
- Pettigrew, R. (2016) *Accuracy and the Laws of Credence*. Oxford: OUP.

- Pollock, J. (1983) 'Epistemology and Probability', *Synthese*, 55: 231–52.
- Ryan, S. (1991) 'The Preface Paradox', *Philosophical Studies*, 64: 293–307.
- Ross, J. and Schroeder, M. (2014) 'Belief, Credence, and Pragmatic Encroachment', *Philosophy and Phenomenological Research*, 88: 259–88.
- Stalnaker, R. (1984) *Inquiry*. Cambridge, MA: MIT Press.
- Schwitzgebel, E. (2008) 'The Unreliability of Naive Introspection', *The Philosophical Review*, 117: 245–73.
- Smithies, D. (2012) 'Moores Paradox and the Accessibility of Justification', *Philosophy and Phenomenological Research*, 85: 273–300.
- Way, J. (2018) 'Reasons and Rationality', in D. Star (ed.) *The Oxford Handbook of Reasons and Normativity*, vol. 1. Oxford: OUP.
- Wason, P. C. (1968) 'Reasoning About A Rule', *Quarterly Journal of Experimental Psychology*, 20: 273–81.
- Williamson, T. (2000) *Knowledge and its Limits*. Oxford: OUP.
- . (2014) 'Very Improbable Knowing', *Erkenntnis*, 79: 971–99.
- Worsnip, A. (2018a) 'What is (In)Coherence?', in R. Shafer-Landau (ed.) *Oxford Studies in Metaethics* 13, 184–206. Oxford: OUP.
- . (2018b) 'The Conict of Evidence and Coherence', *Philosophy and Phenomenological Research*, 96: 3–44.

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