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Permissivism and the Value of Rationality: A Challenge to the Uniqueness Thesis[1]

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In recent years, permissivism—the claim that a body of evidence can rationalize more than one response—has enjoyed somewhat of a revival. But it is once again being threatened, this time by a host of new and interesting arguments that, at their core, are challenging the permissivist to explain why rationality matters. A version of the challenge that I am especially interested in is this: if permissivism is true, why should we expect the rational credences to be more accurate than the irrational ones? My aim is to turn this challenge on its head and argue that, actually, those who deny permissivism will have a harder time responding to such a challenge than those who accept it.

1. Introduction

In our practical lives we frequently face situations in which more than one option is rational: I could choose cake or pie; dancing or singing. But some think that, in our epistemic lives, rationality makes more exacting demands. These people endorse:

> UNIQUENESS: For any body of evidence E, and proposition P, there is a unique doxastic attitude towards P that is consistent with being perfectly (epistemically) rational and having E as one's total evidence.

The inspiration for this paper came from a number of recent arguments for UNIQUENESS: arguments by Horowitz (2014), Dogramaci and Horowitz (2016), Greco and Hedden (2016) and Levinstein (2017). These arguments all take a somewhat different tack, but what they have in common is that they present permissivism— the denial of UNIQUENESS —with a challenge: roughly, how can the permissivist explain why, if you're aiming to be accurate, you'd want to be rational. I won't respond to these arguments directly. Instead, my aim is to turn the challenge on its head and argue that, in fact, it will be more difficult for the uniquer than for the permissivist to explain why, if your aim is accuracy, you'd want to be rational.

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Before presenting the argument, I'd like to flag two assumptions that I'll be making:

> INTERNALISM: What it is rational for an agent to believe supervenes on her non-factive mental states.
>
> HUMILITY: It is sometimes rational to be uncertain about which doxastic states are rational given a body of evidence.

I will not argue for these assumptions here: they each have a large following, though they are by no means uncontroversial. If it turns out that the only way for the uniquer to respond to the challenge is to reject one of these assumptions, then we will have learned something interesting about the commitments of UNIQUENESS.

2. Rotionality

Here is the strategy: I will introduce a made-up word that I will call "rotionality." I will argue that, whatever you think about *rationality*, you should agree with me that *rotionality* is permissive: the evidence doesn't determine a unique rotional attitude in response to any body of evidence. I'll then explain why, if you care about accuracy, you'd want to be rotional. Finally, I'll argue that if rationality is unique, rationality imposes requirements that go beyond rotionality, and that it will be difficult to explain why whatever it is that rationality adds to rotionality is something we should expect to conduce towards accuracy.

To help you grok on to the notion of rotionality, I'm going to tell you a just-so story about how the word was introduced into a linguistic community and tell you about the rules governing its use. I won't provide necessary and sufficient conditions for what it is for something to be rotional. Instead, I'll be assuming that understanding how to use a word is sufficient for understanding its meaning.[2]

The story begins in prehistoric times, before our ancestors had any sophisticated notions like "rational" or "supported by the evidence." They simply went about forming beliefs unreflectively.

One day, Thal tells his sister Nia that all of the blue berries are safe. Later that afternoon, Nia visits her friend Ander who offers to fetch them some berries. Nia knows that Ander is an expert on berry safety, and so she agrees. After Ander scampers off to get the berries, Nia forms the belief that the berries Ander will bring are blue on the basis of two other beliefs that she has: the belief that all blue berries are safe, and the belief that Ander will bring safe berries. But after forming this belief, she thinks: "Isn't it possible that all of the blue berries are safe, but not all of the safe berries are blue?" She then reflects on the fact that, of the bushes in the area, only about half have blue berries. At this point, she abandons her belief that the berries Ander will bring are blue.

Why did Nia abandon her belief? You may well have your own favorite explanation of Nia's psychology. But because this is my story, I can stipulate what happened: Nia, it

[2] I introduce the word "rotionality" to make the argument less cumbersome, but the argument against Uniqueness can be run without it. If you find it difficult to get a grip on the notion without an explicit definition, then, whenever I claim that, for example, *d* is rotional, instead of determining whether you agree with this judgment, simply reflect on whether your mental states are consistent with those I use to describe what the judgment that *d* is rotional amounts to.

turns out, regards certain ways of forming beliefs as more truth conducive than others. What happened on this occasion is that Nia formed a belief with a property that is inconsistent with the ways of forming beliefs she regards as truth conducive. She responded to the fact that the belief has the relevant property by abandoning it.[3]

Shortly, I will introduce some terminology and provide a more precise characterization of Nia's psychology, but first I'd like to sketch a picturesque way of thinking about the issue, which I hope will offer an intuitive understanding of what's going on.

Imagine that you're programming a robot that will respond to informational inputs by forming doxastic attitudes (e.g. beliefs, credences, imprecise credences, etc.), and your goal is to make the robot as accurate as possible. You can stipulate various properties that the robot's cognitive system will instantiate. However, (a) the properties have to be describable in non-normative language (you can't tell the robot: "be rational" or "have the beliefs that your evidence supports") and (b) the properties you program the robot with must be consistent with the fact that the beliefs of the robot will be fully determined by its input (you can't tell the robot: "believe all and only the truths"). We can consider which of these properties an agent would program her robot with if her goal were to make the robot accurate. The ways in which this robot would form beliefs are the ways of forming beliefs that this agent regards as accuracy-conducive.

Now for the more precise characterization: Let an agent's "cognitive system" be the system with which she responds to evidential inputs by forming doxastic attitudes. Let a "cognitive property" be a property of an agent's cognitive system—but, once again, not just any property. A cognitive property, in my sense, must be (a) a property that can be specifiable in purely descriptive language (being rational does not count) and (b) a property that supervenes on the agent's non-factive mental states (believing truths does not count). Some examples of cognitive properties are: believing that p if it perceptually appears to you that p, assigning a 0.5 credence to Heads if you believe a coin is fair, and believing everything that is logically entailed by your evidence. We'll say that an agent *endorses a set of cognitive properties*, *C*, if she prefers, *when her only goal is accuracy*, any cognitive system that instantiates all of the properties in *C*, to a cognitive system that lacks some of these properties.[4] (Throughout, I'll use the terminology: *the set of cognitive properties an agent endorses* and *the ways of forming beliefs she prefers* interchangeably). What happened to Nia, then, is this: she endorses some set of cognitive properties *C*, and she realized that she formed a belief in a way that is inconsistent with *C*. This realization leads her to abandon her belief.

Nia, having abandoned her belief that the berries will be blue, decides that, whenever something like this happens in the future, she will call the belief in question "irrotional."

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[3] The property might be, for example: being based on affirming the consequent, or being inconsistent with the frequency data.

[4] If we assume that the agent is representable by a probability function we can give an alternative description of what it is for an agent to endorse a set of cognitive properties *C* in terms of conditional expected accuracy: It is for her to be such that, for any cognitive system S, EA(S|S satisfies *C*) > EA(S|~(S satisfies *C*)).

Within a few years, a widespread practice of rotionality-talk has developed in the community. It works as follows:[5]

(1) To judge that responding to evidence E by adopting doxastic state *d* is irrotional is to endorse a set of cognitive properties *C*, and to think that adopting *d* in response to E is inconsistent with the instantiation of *C*.

(2) To judge that responding to evidence E by adopting doxastic state *d* is rotional is to endorse a set of cognitive properties *C*, and to think that adopting *d* in response to E is consistent with the instantiation of *C*.

Two notes: First, the set of cognitive properties you endorse need not be consciously accessible to you. Even if you never considered which cognitive properties you endorse, you are disposed to prefer certain ways of forming beliefs over others when aiming for accuracy. Second, nothing I've said implies that what it's rotional for an agent to believe depends on which cognitive properties she endorses. All that's been said is that what an agent *will judge* to be rotional depends on which cognitive properties she endorses. For a helpful comparison, consider moral expressivism. To judge that something is forbidden, says an expressivist, is to disapprove of it. But the expressivist is not a relativist: she does not think that what *it is* for it to be forbidden for S to ϕ is for S to disapprove of ϕ-ing.

Because you've only just learned the word "rotionality," I will, in what follows, sometimes argue that you should accept various claims about rotionality by inviting you to reflect on the cognitive properties you endorse. But it's important to realize that this is just a heuristic: a way to make sure that your judgments about rotionality satisfy the rules of use.

3. The Permissiveness of Rotionality

Let me begin by telling you what it is to judge that rotionality is permissive.

> To judge that rotionality is permissive is to endorse a set of cognitive properties *C* and to think that *C* doesn't determine a unique doxastic state given any body of evidence, E.

I judge that rotionality is permissive because the cognitive properties that I endorse don't pick out a unique state given any body of evidence. Consider, for example, the proposition that it will rain in Honolulu next New Year's Day (H). There is no single doxastic attitude towards H, I claim, that is uniquely picked out by the set of cognitive properties I endorse, *C*. I suspect that the set of cognitive properties you endorse also fails to pick out a unique doxastic attitude towards H (I'll say more about why in a moment). So I invite you to agree with me that rotionality is permissive. Note that it is perfectly consistent with judging that *rotionality* is permissive that you think that *rationality* is unique. You'll just think that your measly belief-forming preferences don't track what is perfectly rational.

Let me now consider some potential objections:

Objection 1: I like to measure accuracy using a strictly proper scoring rule: one according to which every probability function maximizes expected accuracy relative to itself. So whatever my credence is in H, I'll prefer, when the goal is accuracy, the

[5] This characterization is inspired by (but different from) accounts in a number of papers, notably: Gibbard (1986), Chrisman (2007), Ridge (2006, 2007) and Grajner (2015).

adoption of that credence to any other. Thus, the cognitive properties I endorse *do* pick out a unique attitude towards H: it's the credence that I in fact have.

Response: The problem with this proposal is that I suspect you (the reader) don't actually have a precise credence in H. (And even if you do, there is surely some proposition, perhaps one you've never considered, or that employs concepts that you don't possess, that you lack a precise credence in). If that's so, you can't claim that the cognitive properties you endorse privilege your unique credence in H, since such a credence doesn't exist. In other words, when I am inviting you to agree with me that rotionality is permissive, I am assuming that you are the sort of creature that lacks a complete credence function.[6]

Objection 2: Maybe I don't have a precise credence in H, but I do have some more coarse-grained doxastic attitude towards H. Perhaps it's an imprecise credence, or the attitude of suspension of judgment. So my belief-forming preferences *do* pick out a unique doxastic attitude towards this (or any) proposition: my actual one!

Response: In Schoenfield (forthcoming) I show that, given some plausible constraints on how we think about accuracy, a coarse-grained state, like an imprecise credence, can't be preferred on accuracy grounds to every alternative.[7] Briefly, the idea is that, whether some proposition P is true or false, there is no plausible way of making sense of "distance from the truth" according to which an imprecise credence towards P, like, say, (0,1), is closer to the truth than a sharp credence in P of 0.5.[8] Although those arguments focus on imprecise credences, the same considerations apply to states like suspension of judgment.[9] The upshot of these results is that the mere fact that you *have* some coarse-grained attitude towards P doesn't motivate a preference for maintaining that attitude when the aim is accuracy.[10]

Furthermore, even if we restricted our attention to a coarse grained set of alternatives, like belief/disbelief/suspension of judgment, it is implausible that the cognitive properties

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6 Would it help to propose that although I lack a complete and precise credence function, I endorse the cognitive property: *having a complete and precise credence function*? No. Even if you do endorse this cognitive property, as long you don't *actually* have such a function, it won't be true that the cognitive properties you endorse pick out a *unique* credence function, because there are many complete and precise credence functions that are consistent with the cognitive property "having a complete and precise credence function."

7 The two relevant constraints are the following: probabilistic credences can't be accuracy dominated, and imprecise credences towards a proposition P that are centered at 0.5 are no more accurate when P is true than when P is false, or vice versa. These constraints are motivated in the paper. For related results see Seidenfeld et al. (2012) and Mayo-Wilson and Wheeler (forthcoming).

8 Konek (forthcoming) rejects the constraint that probabilistic credences can't be accuracy-dominated and offers an accuracy-based motivation for imprecise credences. However, even if one rejects the constraint in question, for Konek's strategy to result in a preference for a *unique* imprecise credal state, the agent has to have an extremely precise risk profile, which, in our case, is implausible.

9 Here's a quick argument: suspension of judgment is either a state that is evaluable for accuracy, or it isn't. If it is a state that's evaluable for accuracy, then the arguments mentioned above apply (see especially Schoenfield (forthcoming) §4 – all that's needed to supplement the argument is the assumption that suspension of judgment on P is no more accurate when P is true than when P is false or vice versa). If it isn't a state that is evaluable for accuracy, then one can't prefer, *for accuracy reasons*, to occupy that state.

10 But isn't what's relevant for rotionality judgments the preferences I *in fact* have? What if, not having considered these arguments, I *do* prefer specific coarse-grained states to all alternatives when aiming for accuracy? Response: First, the flying-frogs example that I will present in a moment provides independent reason for thinking that this is not so. Second, you now *do* know about these arguments. In telling you about them I'm hoping that if you *did* judge that a coarse-grained state is uniquely rotional, you'll change your mind by changing the set of cognitive properties you endorse. This will amount to abandoning (at least provisionally) any preference you had for a coarse-grained state over all fine-grained alternatives when the aim is accuracy.

we endorse determine a unique attitude towards every proposition. Suppose you observe a flying-frog for the first time, and you notice its yellow underbelly. You suspend judgment on the proposition that all flying-frogs have yellow underbellies. As you continue your exploration, you observe a number of other yellow-underbellied flying frogs. How many observations would it take for you to move from suspension of judgment to belief that all flying frogs have yellow underbellies? The cognitive properties you endorse don't, I imagine, pick out a unique number that is the threshold.[11]

In sum, there are two reasons you should judge that rotionality is permissive, even if we consider coarse-grained states: First, plausible constraints on comparative accuracy judgments don't allow a coarse-grained state to be more accurate than every precise alternative, and rotionality judgments track accuracy-based preferences. Second, even if we restrict our attention to particular set of coarse-grained states, the flying-frogs case shows that the cognitive properties we endorse fail to pick out a unique such state given any body of evidence. Since moving to coarse-grained states doesn't motivate the uniqueness of rotionality, I will, for the most part, assume that the doxastic states under discussion are credences. This is because one of the proposals that I will consider later on behalf of the uniquer *requires* that the doxastic states in question be credences.

Objection 3: I think that there is a unique credence in H that is *rational* and I regard being rational as a great means towards the end of accuracy. Thus, I endorse the cognitive property: *having the credences that are uniquely rational*.

Response: Recall that what you judge to be rotional will depend on which *cognitive properties* you endorse, and cognitive properties were stipulated to be specifiable in non-normative language. Since "rational" is a normative term, you can't endorse the cognitive property of having rational credences since this property isn't, in the relevant sense, a cognitive property at all.

Objection 4: True, "rational" is a normative term. But I can specify my preference for rational credences in non-normative language because I have views about what rationality requires. For example, I think that it's always rational to adopt the credence function that results from conditionalizing one's total evidence on the prior probability function that assigns credence uniformly to every possible world.

Response: One problem with this proposal is that the prospects for generating a unique probability function from the idea that we should distribute prior credences uniformly are bleak. Since there are uncountable possibilities, distributing credences uniformly requires a measure on the possibility space, and Bertrand's paradox (as exemplified by cases like van Fraassen's (1989) cube factory case) shows that there will frequently be no principled reason to choose one measure over another.

More generally, the literature on UNIQUENESS suggests that its defenders are not resting their case on the thought that the kind of project that Carnap (1950) and Hempel (1945) were attempting—deriving unique credences from plausible general principles—will succeed. Rather, UNIQUENESS defenders are generally willing to grant that there may be no explanation available as to why, say, a .232 credence in H is rational rather than .233 (or why belief that all flying-frogs have yellow underbellies is rational upon observing

[11] The same holds if we restrict our attention to states like comparative confidence judgments. The cognitive properties you endorse don't, I imagine, pick out a minimum number of frogs such that only upon seeing that number of yellow-bellied frogs you become more confident that all flying-frogs have yellow underbellies than in the proposition that a coin weighted 0.73 towards Heads will land Heads.

seventeen frogs, but not sixteen). And they are right to proceed in this way, since there is widely shared and justified pessimism about the prospects of the Carnap/Hempel project.[12]

At this point, you may have the following thought: If the UNIQUENESS defender has to accept the existence of these brute facts about which credences are rational, isn't that enough of a problem for UNIQUENESS? The existence of such credences (or belief thresholds) is highly unintuitive. Why would anybody accept such a view? And so it's worth noting that uniquers aren't motivated by the thought that its *intuitively* plausible that there is what's sometimes called "the magic prior probability function in the sky." Rather, UNIQUENESS is defended on the grounds that there are serious problems plaguing permissivism. The existence of these brute facts about which credences are rational is a bullet that the uniquers think needs to be bitten. I will not attempt to summarize the problems that uniquers think permissivists face, and the ways permissivists have responded. My point is just that the uniquer that I'm addressing has already bitten that bullet, so I don't want my challenge to UNIQUENESS to amount merely to the incredulous stare that is sometimes elicited when unique priors are appealed to.

Let's recap. My suggestion is that, whatever you think about uniqueness concerning *rationality*, you should agree with me that the cognitive properties you endorse don't pick out a unique doxastic state given any body of evidence. They don't make distinctions between, say, a .632 and a .633 credence in H. They don't distinguish between belief and suspension of judgment when it comes to the proposition that all flying-frogs have yellow underbellies upon observing, say, seventeen such frogs. Since to judge that rotionality is permissive is just to endorse a set of cognitive properties, *C*, and to think that *C* doesn't pick out a unique doxastic state given any body of evidence, whatever it is you think about *rationality*, you should judge that *rotionality* is permissive.

4. Why You'd Want to Be Rotional

It's no mystery why you'd want to be rotional. For being rotional, you'll think, involves forming beliefs in ways consistent with *C*: the cognitive properties you endorse—and these ways of forming beliefs you regard as accuracy-conducive.[13] (If you didn't, you wouldn't judge them to be rotional!) So there is no puzzle about why an inquirer who cares about being accurate would want to be rotional.

5. Should you Want to be Rational?

Suppose rationality is unique. If you were guaranteed to form beliefs rotionally, is there any reason why, if your aim is accuracy, you should want to form beliefs rationally? To get a feel for the question let's return to Nia's village.

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12 See, e.g. Earman (1992).

13 As I mentioned earlier, it's not important that you be able to articulate *C*. Michael Ridge thinks we refer to conditions like *C* anaphorically. He writes: "The speaker's appreciation of these conditions [*C*] may be vague and indeterminate. . .To emphasize how relaxed this constraint is, note that one could be competent with a predicate on this account simply by supposing that a predicate applies to something just in case it is sufficiently similar to a particular paradigm, where "sufficient similarity" is left completely vague and open-ended" (314-315). So even if you can't *articulate* the cognitive properties *C*, you can still *refer* to the set of cognitive properties, and since you regard this set of cognitive properties as accuracy-conducive, you'll regard being rotional as accuracy-conducive. (See Ridge note 32 for elaboration on this point).

Imagine that a missionary comes to visit from 2017. This missionary isn't there to sell God—she's there to sell rationality. She has brought with her a stash of rationality pills that cause those who take them to form the uniquely rational credences given their evidence forevermore. Like any good missionary, before making her sell, she spends some time in the village, immersing herself in the culture and learning the local language. The missionary becomes competent in using the word "rotionality," and at one point she thinks: "My job here will be easy. "Rotionality" it seems, is a synonym of "rationality." In other villages I've visited, I've spent a great deal of time convincing people that rationality is valuable, but the people here seem to greatly value being rotional. So they will surely be delighted when I offer them these pills." But then the missionary realizes that rotionality is permissive, while rationality, she believes, is unique. So, she thinks, there is still work to be done.

One evening she gathers the villagers around the campfire to advertise her pills. "You all will just love rationality!" she begins. "Being rational involves forming beliefs in certain ways rather than others. For example: rational people never believe contradictions, they are usually more confident in simpler hypotheses than complex ones, they match their credences to what they believe the chances to be, they perform induction on green but not on grue, they trust the testimony of experts. . ." The chief of the village interrupts: "Let me stop you right there. It is extremely kind of you to come all this way to deliver your gift, but we already have what you're describing—we just call it 'rotionality.'" The missionary protests: "No, no! I thought so too at first. But here's the thing: *rotionality* is permissive, whereas *rationality* is unique." She goes on to explain: "Consider some proposition P that you don't yet have a credence in. For some such P, there will be multiple credences you could adopt in P that are consistent with being rotional. And since you're very wise, let's suppose that if you form a credence on your own, you'll adopt a rotional one. However, if you take one of my pills, you'll adopt a specific one of these credences: the one that's uniquely *rational*."

The chief is intrigued: rationality, it seems, does add something to rotionality. The chief, who values accuracy tremendously, asks with excitement: "In virtue of what will one of these credences be the uniquely rational one? Is it perhaps that the uniquely rational credence is the credence, of the rotional ones, that is most accurate?" "Most certainly not!" says the missionary. "Indeed, sometimes, rational credences are terribly inaccurate. Which credences are rational, after all, depends only on the agent's *nonfactive mental states*. Which credences are accurate, however, depends on facts about the world. So no—there's no guarantee that the rational credences will be more accurate than the rotional credences you'd form your own."

The chief is disappointed, but he doesn't give up yet: "Well," he says "can you tell me something about what rationality is to help me understand why I'd want to have the credences with this special property that you call "rationality" rather than some rotional credence I'd form on my own?"

"I was just getting to that," says the missionary. "You see, rationality is a normative notion. The uniquely rational credences are those you *ought* to have." The villagers were familiar with the thought that there were norms governing how to act, but it hadn't occurred to them that normative reality made demands on their belief states. The chief says: "Well, that is quite fascinating, and I'd like to hear about these doxastic obligations —I'm a normativity abiding citizen after all. But, I must admit, I'm a bit disheartened. You see, I really care about having credences that are accurate. I know I must do what

normative reality demands (that's a tautology after all). Maybe I'd even be willing to take pills that will guarantee that I satisfy these demands. But I was hoping that you were offering something that I could expect to result in more *accuracy* than I would have if I formed beliefs on my own. Now I see little reason for such hope. For all I know, normative reality demands that I have credences that make the world a better place, or credences that correspond to the gods' favorite numbers. And I don't think that those credences will be more accurate than the credences I'd form on my own."

The missionary responds: "Cheer up! In fact, you *do* have good reason to expect that the rational credences will be more accurate than the credences you'd form on your own. Here's why: If you were perfectly rational, you would have the uniquely rational credences given your evidence, call them *c*. Now, because (I presume we agree on this) the rational agent will measure accuracy using a rule that is strictly proper, we know that the rational agent will regard *c* as more expectedly accurate than any other credence function. Thus, the rational agent will regard the *rational* credences as more expectedly accurate than any other credences. And recall that what a rational agent thinks *just is* what we ought to think. Since we know that a perfectly rational agent would regard the rational credences as most expectedly accurate, even if we ourselves lack those credences, we can infer that we *ought* to regard the rational credences as more expectedly accurate than the possibly irrational credences we'd form on our own."[14]

The chief thinks about this. Not only does normative reality demand that he *have* certain credences, it also demands that he expect that satisfying these demands will make him accurate?! But the missionary has a point. If he were to adopt the credences that he ought to have, then he would, of course, regard those credences as most expectedly accurate. So, he thinks, whether it seems plausible or not that satisfying these requirements will lead to accuracy, he *ought* to expect that those credences that normative reality demands that he have will be more accurate than the credences he'd form on his own. But then he remembers something that he learned from another time-travelling missionary–something about Superman and Clark Kent, the morning star and the evening star.

"Wait," he replies. "I'm convinced that if the perfectly rational credence function is *c,* then a perfectly rational agent will have *c* and regard *c* as more expectedly accurate than any alternative credence function *c'*. But it only follows from this that she will regard the *rational* credence function as more expectedly accurate than every alternative, if she is certain that the rational credence function is *c*. Compare: It doesn't follow from the fact that it's rational to be certain that Superman can fly that it's rational to be certain that Clark Kent can fly, unless it is also rational to be certain that Superman is Clark Kent. Similarly, it doesn't follow from the fact that it's rational to regard *c* as most expectedly accurate, that it's rational to regard *the rational credence function* as most expectedly accurate, unless it's also rational to be certain that *c* is the rational credence function. You seem to know much more about these obligations than I do, so perhaps you can enlighten me. Is it a rational requirement that agents be certain about which credences are rational?"

"Most certainly not!" says the missionary. "Even a perfectly rational agent may receive misleading evidence suggesting that she isn't perfectly rational. Perhaps, for example, she is told by a reliable source that she's always within .1 of the uniquely rational credence, but she only adopts the rational credence 1/3 of the time. In this case,

[14] See Horowitz (2014) and Schoenfield (2015) for elaborations on this line of argument.

if her credence is 0.6, she should assign *some* probability to the rational credence being, say, .65 or 0.55."

If rational agents aren't always certain about what's rational, thinks the chief, then it doesn't follow from the fact that rational agents regard their own credences as most expectedly accurate, that they regard the rational credences as most expectedly accurate. So if rational agents, who are uncertain about which credences are rational, do expect the rational credences to be most accurate, this must be a substantive fact about rationality—not one that falls out of the usage of certain scoring rules. The chief wants to ask the missionary why she thinks that normative reality demands that we regard satisfying our doxastic obligations to be an especially promising route towards accuracy. The chief also wonders whether normative reality demands that we regard having the required credences as an especially promising route towards other ends: happiness, love, health. He suspects not, but wonders what the difference is. The missionary, though, tired from the vigorous debate, has dozed off, her head resting on the sack of pills.

6. Conclusion

Throughout the story, I described a number of ways that rationality and accuracy might be connected.

One strategy for bridging rationality and accuracy is to make some substantive claims about what rationality requires, and then claim that those very ways of forming beliefs are accuracy-conducive. The problem with this proposal is that it won't distinguish rationality from rotionality. For if one regards forming beliefs in ways X, Y, Z as accuracy-conducive, one will also regard forming beliefs in these ways as *rotional*. And rotionality, you will recall, is permissive.

Rather than making substantive claims about what rationality requires, one might try to say something about the *nature* of rationality that explains why we should expect it to lead to accuracy. I considered two strategies along these lines. The first, according to which the rational credences *just are* the accurate ones, violates INTERNALISM.[15] The second strategy involved claiming that the rational credences *just are* the credences that we ought to have, and that if we ought to have certain credences, then we ought to regard those credences as maximizing expected accuracy. However, it only follows from this that we should expect the rational credences to be more accurate than irrational (but rotional) credences if rationality requires certainty about what's rational. This violates HUMILITY.

My own view is that, rather than making a claim about what rationality *is* that will explain why we should expect it to lead to accuracy, we should talk about what it is to *judge* that some belief state is rational. I haven't argued for this here, but just to lay my cards on the table: I think that at least one version of our practice of making rationality judgments works in a very similar way to the way I described rotionality judgments as working. Since rotionality is permissive, I offer, for your contemplation, the proposal that

[15] You might wonder about the following variant: "The rational credences *just are* those *most likely* to be accurate." Response: If "likely" is interpreted objectively, we violate INTERNALISM. If it is interpreted subjectively, we should be permissivists: the ways of thinking *we* regard as accuracy-conducive don't pick out a unique credence given any body of evidence. Interpretations in terms of what the evidence supports (evidentially likely) don't help either. For the entire discussion about the value of *rationality* pills could have been about the value of *evidential-support* pills. Indeed, every instance of "rational" in this paper could be substituted with "evidentially-supported." If these notions are distinct, this paper is equally a challenge for uniqueness about evidential support.

we should regard *rationality* as permissive for the same reason. This kind of permissivist will have no trouble making sense of the connection between rationality and accuracy.[16]

I don't take these considerations to be a knock-down argument against UNIQUENESS. There may be strategies for explaining why we should expect rationality to conduce to accuracy that I haven't thought of. And the uniquer might insist that it is simply a brute fact that rationality requires us to expect rational credences to be more accurate than irrational ones. The uniquer is already committed to plenty of brute facts about rationality, so what's one more? My interest, though, isn't in whether the principle is brute or not. I am genuinely curious about *why* the uniquer holds such high accuracy-based hopes from rationality. We don't think that rationality will deliver good weather, so why think it will deliver accuracy? If we ought to regard the rational credence function as especially accurate, I have argued, this is a substantive claim, like the claim that we ought to regard the chance function as especially accurate. It doesn't follow from any analytic truth about the nature of rationality, or from the choice of a scoring rule. Much ink has been spilled defending the claim that we should have high accuracy hopes from the chance function. What I am calling for is similar ink-spillage in defense of the claim that, supposing the truth of UNIQUENESS, we should regard the rational credences as more expectedly accurate than irrational credences. The permissivist, whose rationality talk resembles rotionality-talk, has a clear answer: the credences she regards as rational *just are* those that are warranted by epistemic standards that she regards as accuracy-conducive. But the uniquer thinks that the demands of rationality far outstrip the ways of thinking that she regards as conducive to accuracy, and this is the reason that explaining the rationality/accuracy connection will pose a special challenge to the defender of UNIQUENESS.

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[16] The permissivist I am describing, in endorsing permissivism, expresses a state in which she endorses a set of cognitive properties *C* and judges that *C* doesn't pick out a unique state given any body of evidence. Some permissivists have wanted to say something stronger: that *with respect to some proposition* P *that they have formed a credence in,* some other credence is rational. But if I have credence c, I'll regard c as maximizing expected accuracy, and so I will endorse the cognitive property: *having credence c in* P. Adopting $c' \neq c$ is inconsistent with this cognitive property, and so, it seems, I won't be able to regard *c'* as rational. Response: We know that, sometimes, *prior* to forming a credence in P, Nia might say: "there is more than one rotional attitude to adopt towards P given my evidence." What to say after adopting a credence? The community faces a choice point. The language could develop in such a way that, once you form a credence, you can no longer claim that any other credence is rotional. Alternatively, the language could develop in such a way that, upon forming a credence, you can say that an alternative is rotional in virtue of the fact that *setting aside your credence in P*, the cognitive properties you endorse permit c'. How a community's language will develop will likely depend on which ways of talking are useful. I think that, given some of the purposes in which we're interested in talking about rationality, it makes sense to regard credences that differ from our own as rational. So my preferred account of rationality judgments would add this modification. But not all permissivists think that we should be able to make such claims (e.g., Cohen (2013)). So, for the purposes of this paper, I will remain neutral on this point.

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