Epistemic Value and the "Jamesian Goals"

Sophie Horowitz

William James famously argued that rational belief aims at two goals: *believing truth* and *avoiding error*.[1] What it takes to achieve one goal is different from what it takes to achieve the other. Believing *everything* secures the first goal but not the second; believing *nothing* secures the second but not the first. In the middle, we could plausibly favor one goal or the other in less-extreme ways, by drawing stronger or weaker conclusions on the basis of our evidence.

Is there more than one *rational* way to weight the relative importance of these two goals? If there is, James's observation seems to support an argument for epistemic permissivism. For our purposes, I'll define permissivism as follows:

> **Permissivism:** For at least some bodies of evidence, there are many different total credal states that different rational agents can have in response to that evidence.[2]

If there are different rationally permissible epistemic values or goals, then there should be different rationally permissible responses to a given body of evidence, corresponding to those values.

The Jamesian argument for permissivism will be my focus here.[3] Is this argument sound? And in particular, does Jamesian reasoning support permissivism about rational *credence*? Remarks from several contemporary epistemologists, as well as parallels between the epistemic and practical realms, suggest that the argument should work. And a popular branch of formal epistemology, which sees epistemic rationality as a matter of maximizing expected "epistemic utility", seems to provide the perfect setting for spelling out a degreed-belief version of James's thought in a Bayesian setting. However, I will argue, Jamesian Permissivism about rational credence is false.

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[1] (James 1897)

[2] There are many subtly different ways that one could define "permissivism". Often it is defined in the literature as the negation of another principle, "uniqueness", which can also be spelled out in a number of subtly different ways. See (Titelbaum and Kopec ms) and (Meacham ms) for further exploration of these issues. For my current purposes, I will stick to the principle above, but will note when these authors' further distinctions seem particularly relevant.

[3] The "Jamesian" argument rather than "James's" argument: the aim of this paper is not James scholarship. Instead, for better or worse, I will look at arguments inspired by his remarks, most of which cite "The Will to Believe" in passing just as I have. However, as I'll note along the way, the Jamesian argument may be more plausible if we accept it in the form in which James present it.

The rest of the paper will proceed as follows. In section 1, I will narrow down the particular form of the Jamesian argument that I'm interested in, and look at some of the motivations for that argument. In section 2, I will look at how we might try to use epistemic utility theory to spell out the Jamesian argument, and show why this strategy fails. In section 3, I will consider the possibility of revising epistemic utility theory so that the argument goes through; this strategy, I will suggest, incurs significant costs. Finally, in section 4, I will consider another interpretation of James's "goals", which associates them with aspects of our prior or initial credences. I will end by suggesting a couple of pessimistic conclusions for the would-be Jamesian Permissivist. First, there is likely no plausible, distinctively Jamesian argument for permissivism about rational credence. And second, a decision-theoretic understanding of epistemic rationality is likely misguided.

1. Motivating the Jamesian Argument

I'll begin by focusing on the central idea that is often attributed to James: we *want* to believe truth, and we *want* to avoid error. These are, quite literally, desires or goals, and they influence what is rational for us to believe.[4] The argument for permissivism comes in once we consider the possibility that there might be different rational ways to balance the two Jamesian goals. If permissivism about epistemic value is true, then permissivism about rational credence should follow. The Jamesian Argument, then, is distinctive in the following way: it is an argument *from* permissivism about epistemic value *to* permissivism about rational credence.

A major motivation for the Jamesian Argument is the fact that a similar line of thought seems to work in the practical realm. What we value or desire influences what it is practically rational for us to do. There are (plausibly) many different desires or practical values that one could have, compatible with practical rationality. As a result,

[4] Many epistemologists speak of epistemic rationality as goal-oriented in this manner. See (Berker 2013) for an extensive overview of "goal" talk in recent epistemology, and for an argument against this sort of "epistemic teleology." I will not try to argue, as Berker does, that everyone who appeals to the Jamesian goals really commits herself to the consequentialist project. However, this paper will be much in the spirit of Berker's, in that I will be discussing (and criticizing) the type of epistemic consequentialism that takes this talk of "goals" literally.

there are cases in which different practical values rationalize different choices: practical permissivism is true. For instance:

> **Snack**: You and I are at the diner, and there are two items on the menu: French fries or ice cream. You prefer salty snacks to sweet ones. I prefer sweet snacks to salty ones. What should we each order?

The answer in this case is obvious: I should order the ice cream (and not the fries), and you should order the fries (and not the ice cream). This is explained by our different values; if we somehow swapped values, we should swap snacks as well.[5] It's also clear that, in cases like this, we are justified in taking a certain liberal attitude towards one another's choices at the diner. While I would never want to order the fries for myself, I can understand why that's the right choice for you. And you can understand why ice cream is the right choice for me. Indeed, if you asked me what to order, I might reasonably recommend the fries – even while admitting that I like ice cream better.

If the Jamesian Argument is right, then there should be purely epistemic cases that work just like Snack. And in fact, in addition to James himself, many contemporary epistemologists have suggested that such cases exist. For instance, Kelly (2014) discusses a case along the following lines (my paraphrase):[6]

> **Election:** We both have the same evidence regarding the upcoming presidential election, and we agree that on balance it favors D: the hypothesis that the Democrat will win. But I weight believing truth more highly than you do, while you weight avoiding error more highly. As a result, my credence in D is .7, and yours is .6.

Kelly suggests that in cases like Election, different epistemic values might underwrite different rational responses to our evidence. Furthermore, he finds it plausible that a liberal attitude towards one another's credences, like the one we saw in Snack, might be justified here as well:

> [I]f I learned that we differed in our cognitive goals in this way, I would be disinclined to conclude that the manner in which you are responding to our shared

[5] Snack is in*ter*personally, but not in*tra*personally, permissive; there is only one rational option for each person. This is the kind of permissive case I am interested in. Of course, there are also practical cases that are in*tra*personally permissive: for instance, when two or more options are equally valuable or desirable for an agent. I will set those cases aside for now, and focus on the interpersonal ones. This restriction should be welcome to many epistemic permissivists. See, for instance, (Kelly 2014; Schoenfield 2013; Meacham 2013) for endorsements of interpersonal, but not intrapersonal, epistemic permissivism.

[6] See especially pp. 9-11.

> evidence is unreasonable, even though it differs from my own. In fact, I might even think that if you were responding to the evidence in any other way than you are, then that would be unreasonable, given your cognitive goals. Moreover, notice that making such a judgment has no tendency to make me insecure in my conviction that I am also responding to the evidence in a reasonable way, given my cognitive goals. The upshot: subtly different ways of responding to the same body of evidence seem equally reasonable, given corresponding differences in the weights that we give to our shared cognitive goals.[7]

Kelly does not fully endorse the argument sketched above, but he puts it forward as a plausible route to epistemic permissivism, about both rational belief and rational credence.[8]

Others mention similar ideas in passing. For instance, Ben Levinstein writes that, "in a degree-of-belief model, agents can avoid massive inaccuracy by having credences close to .5, but they thereby sacrifice the potential epistemic good of being highly accurate. Plausibly, rationality permits a range of different attitudes toward epistemic risk. If Alice and Bob have different risk-profiles, then they can rationally maintain disagreement."[9] The suggestion here is, of course, that these "different risk-profiles" might justify Alice and Bob in having different credences.

A third instance of this idea comes from Jonathan Kvanvig, who cites an earlier paper of Kelly's. Kvanvig draws this lesson from Kelly:

> Some people find it easier to risk being wrong than others, while others reveal a deeper horror at the thought of making a mistake. At the extremes, each of these character traits can lead to irrational attitudes, but in between, Kelly suggests, is an area where the tolerance of differences should be shown by our theories of rationality.[10]

Kvanvig's idea is that different levels of risk tolerance might "lead to" different attitudes. Extreme risk-aversion or risk-seeking is irrational, and will "lead to irrational attitudes". But in the middle, where we should be "toler[ant] of differences", presumably that

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[7] Ibid., p. 302.

[8] There may be important differences between the full-belief setting and the credence setting. Kelly writes a few pages later that he used to find "the James point" plausible for full beliefs, but *not* for credences. But now, he says, he has come around to viewing the argument as compelling in both cases. "To the extent that it works at all," he writes, "the Jamesian route to vindicating a permissive epistemology sketched in this section works just as well in a framework that employs credences instead of all or nothing beliefs." (p. 303)

[9] (Levinstein 2015, 4)

[10] See (Kvanvig 2014, 140). Both Levinstein and Kvanvig cite Kelly on this point, though Kvanvig cites an older remark of Kelly's that isn't as explicitly tied to the Jamesian goals.

tolerance should extend both to differences in risk profiles, and differences in the credences that they rationalize.

> Finally, writing in somewhat different terms, here is Hartry Field:
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> > [W]e recognize that a slight modification of our goals – an increase in the relative value of reliability over power – would lead to a preference for [another] system, and we regard the alternative goals as well within the bounds of acceptability. Consequently we make no very strong claims for the preferability of our system over the alternative: the alternative is slightly less good than ours given our precise goals, but slightly better on alternative goals that are by no means beyond the pale.[11]

According to this line of thought, different epistemic goals justify different epistemic "systems", or ways of responding to our evidence. And Field seems to agree that the goal-relativity of rational belief justifies the liberal attitude toward one another's beliefs as well.[12]

None of these authors defends a Jamesian argument for permissivism in any kind of detail (or, necessarily, at all – Levinstein mentions the idea but does not endorse it, and Kelly presents the idea as plausible but does not endorse it either). But their remarks show that the Jamesian line of thought is interesting and at least prima facie plausible. To make things more precise, here is the argument that I am interested in, which I take to be a straightforward way of crystallizing the thought expressed in the passages above. I'll call this the "Jamesian Argument", and the kind of permissivism that it supports "Jamesian Permissivism".

> **The Jamesian Argument**
> **P1.** If there are many different rationally acceptable epistemic values, then, for at least some bodies of evidence, there are many different total credal states that different rational agents can have in response to that evidence.
> **P2.** There are many different rationally acceptable epistemic values.
> **C.** For at least some bodies of evidence, there are many different total credal states that different rational agents can have in response to that evidence.

Two quick clarifications. First, this argument is of course just one route to permissivism. There are other ways to defend the argument's conclusion, even if P1 and P2 turn out to

[11] (Field 2000, 141)
[12] Field writes about "reliability" and "power" rather than the Jamesian goals, but the upshot is similar. I will not get into the question of how reliability and power might *differ* from the Jamesian goals, but notice that there is a natural way of understanding them to be quite similar. A belief system is "reliable" insofar as it avoids accepting falsehoods, and "powerful" insofar as it attains truth.

be false; I won't discuss those here. This argument assumes a certain type of framework on which values are relevant to beliefs. Some permissivists might reject that entire framework, and consequentialism about rationality more generally; such permissivists are not "Jamesian permissivists" in my sense. (There may also be other ways to understand the Jamesian thought expressed by Kelly and others; I will generally not discuss those in this paper, either.)

Second, many permissivists hold that some bodies of evidence are *impermissive* with respect to some propositions. For instance, if evidence E entails P, then arguably it is not rational for someone with evidence E to have any credence in P other than 1. Or if you know that I am about to flip a fair coin, then arguably it is not rational for you to have any credence other than .5 that my coin will come up heads. The version of Jamesian Permissivism that I am interested in is compatible with this sort of restriction – hence the caveat, "for at least some bodies of evidence" – but it also takes value-based differences in rational credences to be a quite widespread phenomenon. Jamesian Permissivism, of the sort I am interested in, is not restricted to cases of entailment or known objective chances, "forced and momentous" choices, or to particular circumscribed domains. If Jamesian Permissivism is true, our values influence our reasoning in ordinary inductive cases, like Election, as well.

2. Epistemic Utility Theory and Jamesian Permissivism

We should by now have a handle on the general line of thought behind Jamesian Permissivism. But it would be helpful to give some more substance to the idea of epistemic value. As it happens, there is a well-developed account of epistemic value on offer, coming from a popular branch of formal epistemology: epistemic utility theory. Epistemic utility theory (EUT) treats epistemic rationality as analogous to practical rationality understood in decision-theoretic terms. Epistemically rational agents are taken to maximize expected accuracy in their credences just as practically rational agents maximize expected utility in their actions. If the Jamesian Argument works, EUT seems like a natural framework to use to fill in the details.

So let's turn now to EUT itself.[13] EUT gives a decision-theoretic understanding of rational credence, where what credence an agent ought to have is partly a matter of her "epistemic utility" function, or "scoring rule". Scoring rules are functions that take the distance between a degree of credence and a state of the world as input, and output a value. Scoring rules are often used to measure accuracy (and inaccuracy), and plausible accuracy scoring rules assign higher value to an agent's credence in a given proposition the closer that credence is to the proposition's truth-value. So, if the proposition is true, one's credence gets more and more valuable as it gets closer to 1; if the proposition is false, one's credence gets more and more valuable as it gets closer to 0. EUT therefore (canonically) uses scoring rules as measures of accuracy and understands accuracy as a *good* that we ought to pursue in our credences.

Different people might have different conceptions of this epistemic good, however, in just the way James described. One person might prioritize *believe truth* and have a scoring rule that rewards credences in larger increments as they get closer to the truth – so the difference between .8 and .9 credence in a true proposition, for instance, would count for more than the difference between .7 and .8. A scoring rule like this would, intuitively, reward a believer for having more opinionated or extreme credences. Another person might prioritize *avoid error*, and have a scoring rule that rewards credences in smaller increments as they become more extreme. This scoring rule would reward epistemic caution. A particular agent's scoring rule, then, encodes her own personal tradeoff between the two Jamesian goals.[14]

But not all such tradeoffs are rational, and an important project for EUT is to identify which are and which are not. As we have already noted, someone who *only* cared about believing truth would not be rational, and her lopsided weighting of the epistemic goals would not make it rational for her to assign credence 1 to everything. Part of the

[13] For a few canonical papers developing the approach I'm interested in here, see (Joyce 1998; Joyce 2009; Greaves and Wallace 2006; Leitgeb and Pettigrew 2010a; Leitgeb and Pettigrew 2010b). Not all epistemic utility theorists see themselves as engaged in the kind of decision-theoretic project I will be describing. However, since this is the most straightforward interpretation of their formalism – and since at least some people *do* see the project this way – I will focus on that understanding here. For simplicity, I will also talk about "accuracy measures" here, though in fact EUT more often discusses *in*accuracy measures, and the requirement to minimize expected inaccuracy.

[14] See (Joyce 2009, 281) for the thought that scoring rules encode the Jamesian goals in this way; see also (Pettigrew forthcoming) for explicit ties to the Jamesian goals, and an explicit endorsement of the consequentialist understanding of EUT.

problem with this epistemic extremist is that she violates a plausible coherence norm concerning which credences can be rational, or can be supported by a body of evidence. One way in which we can narrow down the range of acceptable scoring rules, then, is by looking at which structural constraints on credences are compatible with which scoring rules.

The scoring rules commonly accepted as rational, by EUT, form a narrow class: the "strictly proper" ones. An advantage of these rules is that they are compatible with three plausible rational coherence requirements: immodesty, probabilistic coherence, and conditionalization. The second two are familiar parts of the Bayesian framework, and give, respectively, synchronic and diachronic coherence constraints on an agent's credences.[15] Immodesty is a different kind of coherence, which holds between a rational agent's credences and her way of assessing accuracy (in this case, her scoring rule). The general idea is that, insofar as you are rational, you will adopt the credences that you take to be the most accurate response to your evidence. (It would be *irrational* to regard some other, particular credences in P as *more* accurate than your own credence in P, but hold onto your own anyway. Similarly, it would be irrational to have some credence in P while regarding another particular credence in P as *equally accurate*.) As understood by EUT, being immodest means having credences that uniquely maximize expected accuracy, by the lights of your scoring rule.

Let's call this popular, though not uncontroversial, view "Simple EUT". Simple EUT holds that rational agents have both credences and a scoring rule, or epistemic utility function, and that they are rationally required to maximize expected accuracy in their credences. The rationally acceptable scoring rules are just those that are strictly proper. And agents who maximize expected accuracy, according to those rationally acceptable scoring rules, will be probabilistically coherent, will update by conditionalization, and will be immodest.[16]

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[15] Whether requirements like conditionalization are best understood as truly diachronic is a matter of current debate. I will set that question aside for now, and go along with the simple view here that they are diachronic. See, for instance, (Hedden 2015; Moss 2015) for further discussion.

[16] The dialectical relationship between strictly proper scoring rules and these three coherence requirements is not always presented in the same way. Epistemic utility theorists often treat probabilism as the conclusion of their arguments, rather than a reason to hold strictly proper scoring rules; however, critics complain that the assumptions of those arguments come close to presupposing probabilism (see, for instance, (Maher 2003). Immodesty (and more generally, a prohibition on self-undermining) is more often

Simple EUT might seem like the perfect formal setting in which to spell out the Jamesian Argument. It says that rational agents should maximize expected accuracy, by the lights of their own scoring rules. And it says that there are many different scoring rules that one could rationally have. Sure, the acceptable scoring rules have been narrowed down somewhat, but only enough to vindicate a few structural requirements on rational credence. Imposing structural requirements on acceptable practical utility functions, such as transitivity and independence of irrelevant alternatives, is still compatible with a broadly Humean view of rational preference, and permissivism in cases like Snack. So it might seem as though Simple EUT should be compatible with Jamesian Permissivism, and should explain permissivism in cases like Election.

However, it is not; given Simple EUT, the Jamesian Argument fails. That's because, on Simple EUT, Premise 1 of the Jamesian Argument is false:

> **P1.** If there are many different rationally acceptable epistemic values, then, for at least some bodies of evidence, there are many different total credal states that different rational agents can have in response to that evidence.

Though there *are* many different permissible values, for Simple EUT, they *do not* make a difference to which credences we should have.

The Jamesian Argument fails because of immodesty and conditionalization. Conditionalization ensures that the only factors that determine a rational agent's credences are her prior credences and her evidence, and that her posterior credences depend on those factors in a particular way. Strictly proper scoring rules all agree that this *particular* update procedure is rational. So no matter which permissible *scoring rule* a rational agent has, it will not make a difference to which *credence* are rational for her. Furthermore, because of immodesty, Simple EUT does not justify the liberal attitude that Field and Kelly's arguments suggest.

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taken as a starting point. (Greaves and Wallace 2006) argue that conditionalization maximizes expected accuracy, starting from the assumption that the Brier score is rational. (Their argument, however, doesn't rely on the particular features of the Brier score itself, other than strict propriety.) But while practitioners of EUT do not always argue for strict propriety with these coherence constraints as premises, some do; see, for instance, (Arntzenius 2008) (though Arntzenius argues against thinking of scoring rules as "purely epistemic") and (Swanson 2008) for arguments against improper scoring rules on the grounds that they encourage bad updating policies. A more neutral way to put it: vindicating these coherence constraints is certainly a *benefit* or *advantage* of strictly proper scoring rules, and makes EUT an overall more attractive picture.

To illustrate these points more concretely, think back to Election, where the Jamesian argument looked initially promising:

> **Election:** We both have the same evidence, E, regarding the upcoming presidential election, and we agree that on balance it favors D: the hypothesis that the Democrat will win. But I weight believing truth more highly than you do, while you weight avoiding error more highly. As a result, my credence in D is .7, and yours is .6.

Think back to earlier in this story, before the evidence comes in, and suppose that we have different strictly proper scoring rules. I have scoring rule S1, you have scoring rule S2. Now we see the evidence, and I accommodate it by maximizing expected epistemic utility according to S1. Because S1 is strictly proper, it recommends conditionalization. What if I had had S2 instead? Well, since S2 is also strictly proper, it will *also* recommend conditionalization. From my perspective, then, it does not matter whether I have S1 or S2. And the same, of course, is true from your perspective: your strictly proper scoring rule will recommend conditionalization. But mine would have, too.

This means that if we end up with different posterior credences in Election, it is *not* because of the difference in our epistemic values. Since we both conditionalize, the only factors that could make a difference are our prior credences and our evidence. By hypothesis, our evidence is shared. So our disagreement must be due to different priors. If our different credences are both rational, it is because we have different rational priors – not because we have different rational scoring rules.[17]

Furthermore, since both S1 and S2 respect immodesty, I will regard my credences as optimal, given *both* S1 and S2. And likewise, you will regard *your* credences as optimal. So we can't sensibly adopt the liberal attitude similar to the one in Snack; we won't say, "I see why you believe as you do: your epistemic values are different from mine." If any liberal attitude like this is justified, it is one based on priors. We *can* say, "I can see why you believe as you do: you regarded it as antecedently more (or less) likely that the Democrat would win, given this information." But this is different; rather than liberalism about credences based on liberalism about values, it is liberalism about credences based on liberalism about other, past credences.

[17] The fact that our priors do so much work here might make some people suspicious of the Bayesian framework more generally. See, for instance, (Marley-Payne ms). However, I won't pursue that line of thought here.

These observations show that Election – at least, as interpreted by Simple EUT – is very different from Snack. We can also see now that, given Simple EUT, value does not play a substantive role in determining our rational credences. That's because for any rational agent, acceptable scoring rules will always agree about what her credence should be. So given Simple EUT, there is not a sound, value-based argument for permissivism.

Before moving on, I would like to look at one possible objection, which looks at another place in the Simple EUT framework where value might play a substantive role. That objection says: "sure, *in cases like Election*, strictly proper scoring rules will all agree on which credences are rational for a given agent. That's because they all agree on which options *maximize* expected accuracy. But different strictly proper scoring rules *disagree* on something else, namely, how they rate those options that *do not* maximize expected accuracy. Won't there be cases where those disagreements make a difference?"

Note that in abandoning cases like Election, this objection gives up a lot of the original Jamesian view! But let's consider the more limited form of Jamesian Permissivism that the objection suggests. In order for this view to work, we need to find cases where different views about suboptimal, non-expected-accuracy-maximizing, options make a difference to which credence an agent should have. Sarah Moss suggests a few cases that fit this pattern.[18] Here is one example (my paraphrase):

> **Evil Scientist.** An evil scientist is going to change your credence in P. Currently, your credence is .7. The scientist will change it to either .6 or .8, and you can choose. Which should you choose?

In Evil Scientist, supposing you start off rational, any strictly proper scoring rule you have will agree that your current credence, .7, is the one that maximizes expected accuracy. (Notice that the evil scientist is just changing your credence, not providing you with new evidence.) But in your current situation, credence .7 is off the menu; your options are restricted, and you have to choose between the suboptimal options of

[18] (Moss 2011, 10-11), as well as earlier in the paper for similar examples. Alejandro Pérez Carballo considers a case similar to Evil Scientist (Pérez Carballo ms, 6). Though Moss's main goal is not to argue for Jamesian Permissivism, she does present Evil Scientist and others as cases where different strictly proper scoring rules will license different choices. I find it most natural to interpret these cases as practical choices (between various actions we could take in our conversation with the scientist; made on practical grounds). However, to adapt the cases to the Jamesian's purposes, we can consider them as "purely epistemic" choices.

credence .6 and .8. As it happens, different strictly proper scoring rules will disagree about which of .6 and .8 is better. So, the objection goes, maybe we could use Evil Scientist to construct a scenario like Snack. Suppose both of us are in the lab, facing the same decision, but we have different scoring rules; should we therefore make different choices between the two credences that the scientist is offering? And doesn't this therefore give us a (limited) illustration of Jamesian Permissivism?

I am doubtful that cases like Evil Scientist can resurrect the Jamesian Argument. As we noted before, Jamesian Permissivism in this kind of case would not extend to ordinary disagreements like Election, which do not seem to involve restricted options.[19] Furthermore, notice that for Simple EUT, cases like Evil Scientist are epistemic dilemmas. Since we are prevented from maximizing expected accuracy (and prevented from conditionalizing), neither option is fully rational. (This is part of what makes the scientist so evil!) Cases like Evil Scientist are positioned to motivate a version of Jamesian Permissivism on which our "epistemic values" only make a difference under quite restricted circumstances.

As a final rejoinder, the objector might deny that cases like Evil Scientist are dilemmas. One way to do that is if we see epistemic rationality as a matter of maximizing expected accuracy *from among one's credal options.* Call this decision rule "Options-Sensitive." According to Options-Sensitive, conditionalization is only rationally required in the special case when your options are unlimited, and you have all of the possible credence functions to choose from. Under less-ideal circumstances, when your doxastic options are limited, you should just do the best you can. Options-Sensitive would make epistemic rationality much more similar to practical rationality, where having limited options does not automatically force us into a dilemma.

However, there is something odd about looking at epistemic rationality in an Options-Sensitive way. Doing so presupposes that our doxastic options are narrowed down in some non-arbitrary way. What would that be? In the practical realm, it's natural to understand our available options as just those that we are able to undertake

[19] The narrow Jamesian view, however, is arguably in line with what James himself defended, according to which our values only make a difference in cases where our choice is "forced".

voluntarily.[20] This goes along with the thought that for practical rationality, "ought" implies "can". But for epistemic rationality, "ought" does not imply "can", and the relevant "acts" are involuntary anyway.[21] It's often the case that we ought to adopt credences that aren't among our "available" actions. This makes it hard to see how Moss's cases are interestingly different from ordinary cases where we are unable to be rational, even without the interference of evil scientists. Without even a rough, non-arbitrary way of circumscribing options, Options-Sensitive is unmotivated. We should reject it, along with the circumscribed form of Jamesian Permissivism that it delivers.[22]

Let's sum up: Simple EUT fails to justify the Jamesian Argument. And the objection from cases of restricted options does not help. If we want to defend Jamesian Permissivism, we will need to give up at least some of Simple EUT.

3. Revising Simple EUT?

The two commitments that made the Jamesian Argument fail, for Simple EUT, were immodesty and conditionalization. In this section I will consider the possibility that those commitments themselves are the problem. (The assumptions are distinct, but related, and

[20] Of course, that's not to say that there is any agreed-upon, developed view of exactly what our practical options are. See (Hedden 2012) for further discussion.

[21] It's unsurprising that doxastic involuntarism should be incompatible with an argument inspired by "The Will to Believe"!

[22] There are other ways we might vindicate a restricted kind of Jamesian Permissivism by extending Simple EUT. One is by looking at cases of uncertain evidence, where we don't assign our evidence probability 1. (Leitgeb and Pettigrew 2010b; Levinstein 2012) show that different proper scoring rules will recommend different results in these cases (assuming we should maximize expected accuracy). Interestingly, these authors do not take this observation to support a Jamesian view. Levinstein, in particular, argues that we should prefer logarithmic scoring rules over quadratic ones like the Brier score, because only the former is consistent with Jeffrey conditionalization in these cases, and there are problems with the update procedure consistent with the latter. (Levinstein's argument, then, explicitly argues for and against certain accounts of epistemic value on the basis of the update rules that they sanctions.) However, it is controversial whether we should consider uncertain evidence in our overall theory. (Following (Williamson 2000), some may argue that our evidence must be known.) And a Jamesian view where differences in value *only* showed up when our evidence was uncertain would be quite limited.

A second place where different strictly proper might make a difference is in cases of "epistemic expansion", where we expand the domain of propositions to which we assign credences. See (Carr 2015; Pérez Carballo ms) for discussion of such cases, using the EUT framework. Again, extending EUT to such cases is a controversial move, and would vindicate Jamesian Permissivism only in a limited form.

I won't say more here about these extensions of EUT (and there may be others as well). It is enough to notice for now that such extensions do not explain ordinary cases like Election. So if Jamesian reasoning goes through only under these particular circumstances, the kind of Jamesian Permissivism we initially wanted to investigate is still false.

have related consequences.) Could we make room for Jamesian Permissivism by dropping one of these assumptions?

3.1 Giving up immodesty?

If we give up immodesty, then some *merely proper*, or even *improper* scoring rules might be rational. Unlike strictly proper scoring rules, merely proper or improper scoring rules will not recommend sticking with your own credences (in the presence of no new evidence), and they will not recommend conditionalization (in the presence of new evidence). And different improper scoring rules will not agree with one another. Some will recommend becoming more confident, and some less.

Allowing improper scoring rules would open the door to both Jamesian Permissivism, and to the Jamesian liberal attitude towards one another's credences. However, this move would also incur significant costs.

First, maximizing expected accuracy according to an improper scoring rule has some odd effects on how one learns over time. The linear scoring rule, for instance, recommends moving all of one's somewhat-opinionated credences to the extremes, so that the only permissible credences in any proposition are 0, 1, and .5. Frank Arntzenius argues that someone who is uncertain (with credence other than .5) about what the world is like, but who uses the linear scoring rule, should just take a guess and stick with it – even if, prior to taking that guess, she knows that she will learn some more in an hour.[23] This seems irrational. Similar problems would result from other improper scoring rules. Eric Swanson considers the possibility that such a person should just wait until all the evidence is in, and maximize expected accuracy once at the end. This would allow her to accommodate new evidence in a more reasonable way, but is obviously a strange thing to do and runs counter to the thought that our epistemic utilities should guide our doxastic behavior *throughout* our lives.[24]

As both Artnzenius and Swanson bring out, in order to learn over time in a reasonable way *and* maximize expected accuracy according to an improper scoring rule,

[23] See (Arntzenius 2008). Artnzenius's paper touches on many of the issues discussed here, though in a different setting.

[24] See (Swanson 2008). This is yet another conclusion that would not seem so odd to James himself, who argued that our values only make a difference when the choice is "momentous". Momentous choices are choices of great practical importance *that we only have one chance to make*.

one would somehow have to keep "double books" – either by having two sets of credences, or by having a very complicated update rule that "undoes" the effects of accuracy-maximization at every step. Swanson also points out that, in order to follow this second suggestion, an agent must also keep track of *how many separate times* she has updated, in order to prevent that factor from influencing her credences. None of these options is very attractive. These considerations show that it is hard to have an improper scoring rule as one's measure of accuracy if one wants to believe accurately across time, *and* one wants that scoring rule to play a substantive role in one's doxastic life.

There are also more general, intuitive reasons to hold Immodesty, motivated by looking at credences synchronically. David Lewis introduces the idea with the following example: *Consumer Reports* is rating consumer magazines, and picks one to recommend as the best. If it is to be trusted, Lewis argues, *Consumer Reports* has to recommend itself. Suppose it does not, and modestly recommends *Consumer Bulletin* – a magazine that makes different recommendations about other products – instead. You're in the market for a toaster, so you turn to *Consumer Reports* and see that it recommends the Toasty Plus. But on the next page you see that *Consumer Reports* recommends *Consumer Bulletin* as the best consumer magazine. *Consumer Bulletin*, in turn, recommends the Crispy Supreme. Which toaster should you buy? If you try to follow *Consumer Reports'* advice, you will be at a loss; the advice is inconsistent.[25]

Lewis's point about magazines has similar force when carried over to the case of full belief. Suppose someone believes it will rain, but also takes that belief to be *inaccurate* – in her view, believing that it *won't* rain would be more accurate. This sort of belief, "P, but believing ~P would be more accurate", seems straightforwardly inconsistent; it is hard to distinguish between modest belief and belief in a contradiction. (Compare modest belief to akratic belief: "P, but believing ~P would be more rational." Akratic belief certainly seems odd and irrational, but it doesn't lead to inconsistency as immediately as modest belief.)

Why is modest belief so problematic? Here is a controversial, but plausible, hypothesis: belief has a constitutive aim. It's not just that beliefs *should* aim at the truth, to be rational; it's that they must, to even count as beliefs. If this hypothesis is right, there

[25] (Lewis 1971)

is an important asymmetry between belief and action in this respect. Actions can succeed or fail at being properly motivated, or oriented at the right goals. They might be imprudent or immoral if they fail, but they will still be actions. Beliefs, on the other hand, can't fail to aim at the truth. This is also why it seems so odd to treat truth as a "value" that we should try to "maximize" in our beliefs. There is not enough space between *believing* and *regarding as true* to treat the two as separate moving parts in one's epistemic system. Our notion of belief and our notion of accuracy need to line up.[26]

Though it's harder to see intuitively, I think this same line of thought should carry over to credences as well. If credences are genuine doxastic states, aiming to represent the world as it is, they should aim at accuracy in the same way beliefs aim at truth. And whatever our notion of accuracy is, for credences, it should reflect that fact by vindicating immodesty. There is something incoherent about having credence .7 in a proposition, but regarding credence .9 as more accurate. Whatever the right notion of accuracy turns out to be – scoring rules or something else – it should explain that incoherence. Immodesty should be a *constraint* on our account of accuracy; we should not give it up to save the Jamesian Argument.

3.2. Giving up Conditionalization?

Conditionalization is the other reason that the Jamesian Argument failed, for Simple EUT. If rationality requires us to conditionalize, then the rational response to our evidence must depend on our prior credences in a particular way. There is no room for epistemic value to make a difference.

Notice that the real issue here is not conditionalization itself, but the more general fact that, for Simple EUT, there is only one rational way to update one's credences, and only one kind of diachronic coherence between one's past and present rational credences. (In this way, the argument here is not only relevant to Bayesianism, but also to any view on which there is a unique rational update rule.) If we gave up conditionalization but adopted a similar updating rule in its place, we would not have vindicated the Jamesian Argument.

[26] The question of whether belief has a constitutive aim has been thoroughly debated in the literature: the Internet Encyclopedia of Philosophy article on the subject (http://www.iep.utm.edu/beli-aim/) has well over a hundred references. I will not attempt to discuss the question in any kind of detail here.

To use this strategy to save the Jamesian Argument, then, we could give up conditionalization as a rational requirement, and instead adopt permissivism about *update rules*. We would need to defend a view on which different rules are rational for different people, and on which one's epistemic values determine which rule is rational for a given person. These different rules would then justify different credences in response to a body of evidence.[27]

One way to carry this project out is similar to the suggestion regarding improper scoring rules, discussed above. For instance, a reasoner with an improper scoring rule might update by "conditionalization+" or "conditionalization–", conditionalizing and then giving her credences a little nudge in one direction or another to add or subtract a bit of epistemic risk (with that nudge depending on the scoring rule). If this view were right, it might explain cases like Election. I might say, "Sure, I see why your having credence .6 is rational: our shared evidence alone supported credence .65, and you just gave your credence a nudge down. I gave mine a nudge up. We disagree, but we're both rational, and I see how our values led to our disagreement."

However, as we saw above, using an improper scoring rule, thus violating immodesty, leads to some serious problems. Moreover, the suggestion that it could be rational to update by "conditionalization+" or "conditionalization–" is fairly radical. The idea of giving one's credence a "nudge" after accommodating the evidence sounds a lot like going *beyond* the evidence. And while this might be just what James himself had in mind (in claiming that, contra Clifford, it is sometimes fine to believe on insufficient evidence), more moderate permissivists should be reluctant to go so far. The thought behind our Jamesian Argument is not that our values might make it rational to go beyond our evidence, but that they might influence what our evidence supports.

To make this more moderate Jamesian strategy work – and to say something systematic about *how* it works – we would need an argument where different, independently plausible measures of epistemic value justify different, independently plausible update rules, coherence relations, and notions of evidential support. The lesson I take from this is that it is hard to keep some parts of our theory of rationality fixed (for

[27] The dispute over uncertain evidence, mentioned above, illustrates this idea. See (Leitgeb and Pettigrew 2010b; Levinstein 2012).

instance, our notion of coherence and update rules) and make room for value to make a difference. The different overall epistemic systems, as a Jamesian Permissivist must defend them, will be different in *many* respects. This strikes me as a surprising and unwelcome conclusion for more conservative permissivists, who might have hoped to make the Jamesian argument without departing too much from orthodoxy elsewhere. However, it may be the most promising strategy for making sense of the Jamesian view.

Some may be willing to accept the costs of giving up either immodesty or conditionalization (or both). I will leave this open as a possibility for would-be Jamesians to explore. However, to endorse it, we have to give up plausible assumptions about how we should regard our own doxastic states, how we should respond to evidence, or both. That this balance is hard to strike may be surprising, but perhaps it should not be. After all, whether it can be rational to go beyond one's evidence was the subject of Clifford and James's original debate. We have seen here that Clifford and James's disagreement is deep, and compromise is not easy to find. It is hard to do justice to evidentialism without making epistemic value irrelevant to rational credence; similarly, it is hard to do justice to the Jamesian thought without giving up plausible tenets of evidentialism. For those with mainstream evidentialist leanings, the Jamesian Argument for permissivism does not come for free.[28]

4. Reinterpreting "Epistemic Value"

We can draw some lessons from the previous section. The Jamesian view that we started with aimed to make room for value-based, rational disagreements without departing too drastically from mainstream, plausible views about rational credence. The thought was that our epistemic values should make a difference to how we should interpret our evidence. But Simple EUT was unable to make sense of that argument. This is because once Simple EUT is constrained so as to be consistent with various structural

[28] This might seem obvious; on a strict form of evidentialism, justification supervenes (only) on evidence, so of course there is no room for things other than evidence to influence what one should believe. See (Titelbaum and Kopec ms, 7-8; Kopec and Titelbaum 2016, 193). However, I think it is still surprising that even a looser form of evidentialism, on which there are "a few different ways of interpreting one's evidence", also can't easily make sense of the Jamesian argument. Thanks to Matt Kopec for helpful comments here.

requirements on rational credence, value has no more work to do. So Simple EUT (and more generally, any view that endorses immodesty and conditionalization) does not vindicate Jamesian Permissivism. And giving up those structural requirements would be costly – or at least, it would represent a quite substantial departure from the mainstream!

In conversation I have often encountered the following: the fact that EUT doesn't vindicate the Jamesian Argument shows that its conception of epistemic value is not right. Epistemic value is not embodied in *scoring rules*, objectors argue, but in our *priors*. Epistemic value (in the Jamesian Argument) is supposed to be something that makes a difference to what we should believe, and that can underwrite rational disagreements. Priors, unlike scoring rules, might plausibly fill that role. So we should think of our priors, not scoring rules, as embodying our epistemic values.[29]

The main advantage of this view is that could make the Jamesian Argument work in cases like Election. Let's return to that story and fill in some details. Suppose that before arriving at our posterior credences in D (.7 for me, .6 for you), we both look at some polls. I think something like: "trends are sticky. If the Democrat is ahead now, she'll be ahead six months from now too." You think something like: "things can change. I see that she's ahead now, but a lot can happen in six months; I'm not quite so confident that she'll win." Suppose, plausibly, that those prior attitudes – "trends are sticky" versus "things can change" – show up in our conditional credences, Pr(D|E), such that for me, Pr(D|E) = .7, and for you, Pr(D|E) = .6. If those prior conditional credences are both rational, our posterior credences in D – .7 for me, and .6 for you – are both rational too.[30]

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[29] A closely related view is that our scoring rules help us *choose* our priors. This is an interesting suggestion, which deserves further discussion, though I won't pursue it fully here. See (Pettigrew 2014; Pettigrew forthcoming) for implementation of a view like this. An interesting consequence of this strategy is that it requires agents to use different decision rules at different stages of their "epistemic lives". Simple EUT says we should maximize expected accuracy; but that is not something one can do without priors. So one would have to use another decision rule to pick one's priors, and then maximize expected accuracy afterwards. This type of view would, therefore, still be significantly different from practical views on which one's values influence one's choices in a consistent way *throughout* one's existence as a rational agent.

[30] Without committing ourselves to Bayesianism, we could make a similar argument regarding "standards", "background assumptions", or "inductive policies". (Titelbaum and Kopec ms), for instance, call our priors or initial credences "standards". (Schoenfield 2013) also writes in terms of "standards"; though she does not commit herself to a Bayesian framework in that paper, her notion of standards would be equivalent to initial credences or priors. In this paper I will not pursue non-Bayesian views, and how they might handle these arguments, and it may turn out that this choice makes a difference to my argument. I am sticking with Bayesianism in this paper because it is a popular and well-developed view of rational credence. I leave it open to others to explore non-Bayesian options.

The disadvantage of this view is that it is hard to make this an argument for *Jamesian* Permissivism in particular. The distinctive feature of the Jamesian Argument is supposed to be that it uses permissivism in one domain (epistemic value) to argue for permissivism in another domain (rational credence). If priors *are* values, the argument has some potential force. But if priors are just more credences, the argument becomes much less interesting. Instead of offering a new, distinctive reason for permissivism, it would simply say that there are different rational credences at one time, and that those justify different rational credences later on.

In evaluating this response, then, a lot hangs on how we should understand priors. Perhaps in a very loose sense, we could describe someone as "valuing truth" in cases like Election if she draws a stronger conclusion on the basis of the evidence. Someone might "value" simplicity or explanatory power, in the same way, if she tends to favor simpler or more explanatory hypotheses. But talk of value seems to be more of a stretch in describing other aspects of an agent's inductive policy; do we really "value green" rather than grue? And in general, value talk does not go well with most plausible interpretations of what priors are. For instance, the most literal, flat-footed understanding of priors says that they just *are* credences – credences that we used to have. More neutrally, we might also think of them as representing the "inherent plausibility" of various hypotheses.[31] We might also think of them as hypothetical credences, ones that would be rational to have on the basis of no evidence, even if we recognize that there was no moment when we actually had those credences. None of these views, it seems to me, would be enough to let us make the Jamesian Argument in a non-question-begging way. The thesis that there are many permissible credences to start off with, or many different permissible inherent levels of plausibility, may well be true – but in this context, it is too close to what the Jamesian Permissivist is trying to prove.

My hunch is that the same will turn out to be true of many non-Bayesian articulations of similar ideas. Priors, standards, or inductive policies should themselves aim at truth, just like beliefs or credences; it does not make sense to reason inductively if you don't expect the future to be like the past, or to take appearances at face value if you don't expect your eyes to work. If that's right, differences in priors are best understood as

[31] (Williamson 2000) characterizes his notion of "evidential probability" along these lines.

disagreements about *what* is true or accurate rather than about what is epistemically valuable, or about the nature of truth or accuracy itself. I won't try to argue for this stronger view here, but will leave it as a challenge for Jamesian Permissivism: if priors, standards, or inductive policies themselves are the basis for the Jamesian Argument, we need a plausible way to understand them as non-doxastic entities.

Conclusion

Given certain plausible formal constraints on rational credence, different rational epistemic values do not justify different credences. This means that defending the Jamesian Argument comes at a high cost: in order to make room for value to make a difference, we have to give up some of these plausible constraints.

The failure of the Jamesian Argument should serve as a cautionary note for those who are attracted to the formal tools offered by EUT. We have seen here that scoring rules are very different from the practical utility functions used by decision theory. Though the formalism is similar, the two notions play very different roles. More generally, the failure of the Jamesian Argument illustrates the fact that, although we can represent epistemic rationality and practical rationality in formally analogous ways, conclusions from one realm may not carry over to the other. The disanalogies between epistemic value and practical value do not show that EUT is wrong or should be abandoned, but they do pose a challenge for EUT. If we are going to use this formal system, we need to know how to understand it. And we can't rely on a straightforward decision-theoretic reading.[32]

Without the straightforward decision-theoretic understanding of EUT, we need a new way to interpret the formalism. To that end, it may be helpful to think about a new practical analogy: "consequentialized" Kantian views in ethics. Many have argued that so-called "non-consequentialist" views of moral action can be accurately represented in consequentialist terms.[33] Suppose these people are right, and we develop the formal

[32] This observation is in line with some other recent work, arguing (for independent reasons) that EUT is importantly different from practical decision theory, and should not be interpreted as "epistemic decision theory". See (Carr ms; Konek and Levinstein forthcoming).

[33] There is a large literature on this. See (Portmore 2009) for an overview.

details of such a view; following Douglas Portmore, let's call it "Kantsequentialism".[34] Kantsequentialism will have a moral utility function (or maybe more than one) and a decision rule, designed together to always recommend doing what one ought to do, by the lights of Kantian morality. Kantsequentialism will, for instance, always recommend acts that respect others, or that are motivated by universalizable maxims, by (roughly) assigning those acts the highest utility. Kantsequentialism will be extensionally equivalent to its non-consequentialist counterpart, but will represent morality as a matter of (for example) maximizing expected utility.

Some claim that the difference between Kantian and Kantsequentialist views is not significant. James Dreier, for instance, argues that consequentialized and non-consequentialized (extensionally equivalent) theories are mere "notational variants", and that defenders of each view are "not really disagreeing" with one another.[35] However, a Kantian could complain (it seems to me, legitimately) that the consequentialist version of her theory, while not wrong, is nevertheless *not as explanatory* as the non-consequentialist version. The consequentialized version might tell us which actions are right, and when, but would not explain why they are right – at least not as well as the original, non-consequentialized version does.[36]

A certain kind of Kantian might also complain that putting the theory in consequentialist terms is misleading: it suggests that there is an independence between actions and values which does not exist. The Kantian I am imagining here is one who takes action to have constitutive conditions: acting in a way that disrespects another person's good will, or under a maxim that is not universalizable, does not count as an action at all. (It's "mere behavior", maybe.) Because action, for this view, has certain *constitutive* conditions, it is strange to think of it as also aiming towards a separate *goal.*[37]

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[34] (Portmore 2009)
[35] (Dreier 2011)
[36] See (Portmore 2009, section 6). Portmore makes a stronger claim: that the two theories would *disagree about* why the actions are right. (Dreier 2011) disputes this, arguing that consequentializers can agree (for example) that an action is wrong because it is a lie, and labeling lying as a particular kind of bad consequence. But it is plausible, to me, that two theories could be "mere notational variants" and yet one be more explanatory than the other. This weaker claim of explanatory asymmetry is the one I am suggesting here.
[37] See (Dreier 2010) for a similar argument, in defense of moral expressivism. Dreier argues that sometimes, even though a set of norms *in fact* furthers some goal, the goal nevertheless does not explain those norms. His example involves cases where the norms are constitutive of the activity in question.

Again, the consequentialized view wouldn't get the wrong answers about what's moral; it would just be an unnatural and roundabout way of getting to those answers.

Perhaps EUT should be understood along these same lines, as an epistemic version of Kantsequentialism. Though it might not get the wrong answers, we might nevertheless have the same complaints that the Kantian has about Kantsequentialism. EUT may be simply less explanatory, and more misleading, than a non-consequentialized view would be. We should therefore be careful when using EUT. It should not lead us to think of epistemic rationality as decision-theoretic or consequentialist in any deep or informative sense.

If we give up the straightforward understanding of EUT, we are free to interpret James's insight in other ways, and find other places where differences in "epistemic values" might have interesting upshots. A plausible option is to take the Jamesian goals to be part of our *practical* values, showing up in rational action – especially action related to inquiry. Choosing whether and how to gather evidence is a natural candidate; this interpretation would make James's observation highly relevant to scientific practice, even if not to epistemic rationality itself.[38] The Jamesian goals may also make a difference to rational *belief*, on certain views that employ both beliefs and credences. If belief itself is action-like, and rationally responsive to both evidence and practical goals, perhaps it is sensitive to differences in "epistemic values" even if credence is not. We can pursue either of these understandings of the Jamesian goals without thinking of rational credence in a decision-theoretic way, and without understanding accuracy as a special kind of utility. Speaking of rational credence as "aiming" at these "twin goals", or any goals at all, is perhaps best understood as metaphorical.[39]

[38] See (Fallis 2007) for an example of an application of this approach.

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