Classicism and Indeterminacy

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October 26, 2011

Classical treatments of indeterminacy are on the march. A growing number of authors argue that we can have an adequate theory of indeterminacy or vagueness that demands no revision of the classicism-presupposing theories throughout the sciences and elsewhere in philosophy. But they want to distinguish themselves from the alleged difficulties of epistemicism—indeterminacy is not a matter of sheer ignorance of sharp boundaries.[1] This paper argues for some distinctive cognitive and practical predictions of taking the position seriously and draws consequences for several debates.

*This work was supported by a British Academy Research Development Award (BARDA: 53286). Many, many people are owed thanks, but I'd particularly like to mention Andrew Bacon, Elizabeth Barnes, Ross Cameron, and Alistair Wilson.

[1] A recent survey article (Eklund, 2011) says "I see the attempts to defend bivalence in a non-Williamsonian way as constituting one major recent trend". A (no doubt incomplete) list of advocates includes (Fine, 1975) (in his discussion of the conceptual priority of penumbral truth); McGee & McLaughlin (1994) (though they regard it only as one disambiguation of 'truth' talk); Dorr (2003), Greenough (2008), Barnett (2009), Barnes (2006, 2010); Barnes & Cameron (2009); Barnes & Williams (2011) and Eklund (2010).

1 Sincere classicism

Classicism, of the non-epistemicist sort I will consider, holds that indeterminacy is manifest in there being multiple sharpenings of the interpretation of our language. One amongst the sharpenings gets things right, but it is indeterminate which this is. We have:

- A *single classical intended interpretation*, surrounded by a halo of *sharpenings*.
- Truth = truth on the intended interpretation. Definite truth = supertruth = truth on all sharpenings.
- Falsity = falsity on the intended interpretation. Definite falsity = superfalsity = falsity on all sharpenings.
- Validity = local validity = preservation of truth across all classical interpretation in all supervaluational models of the language.
- Indeterminacy is manifested as lack of definite truth-value.

Truth inherits the imprecision of the object-language. When a claim is indeterminate, it won't be settled whether the intended interpretation is one that makes it true or makes it false. It will neither be

definitely true, nor definitely false, but it will be either true or false—bivalence holds. The T-scheme holds good; and validity is classical without caveat. The theory is *fully* non-revisionary, as far as truth and logic go.

One of the distinctive things about indeterminacy, which any account needs to explain, is its distinctive *question-answer* relevance. Consider questions that do not invoke indeterminacy: 'is Patchy red?' 'will there be a sea battle next Tuesday?' 'is Alfie the same person as Betty?'. 'It's a borderline case', 'there's no fact of the matter', 'it's indeterminate' are *relevant* responses to such questions. In this, they are comparable to simple direct answers, 'yes' and 'no'; and relevant indirect answers like 'there's a 50/50 chance that Alfie is Betty'. They contrast with irrelevant responses such as 'if you had done the shopping last Tuesday, Patchy would have been red', 'it's contingent whether Patchy is red' or 'Patchy was red prior to repainting' which are not relevant outside of very special contexts.

An *insincere* classicist may explain the question-answer relevance of indeterminacy by revealing that 'truth' in their mouths no longer carries its usual theoretical role. Perhaps belief aims at supertruth, so any indefinite case of truth should be rejected just as much as a definite falsity (compare Field, 2000). But what can a *sincere* classicist say, who wants to remain *thoroughgoingly* non-revisionary on the theoretical role of truth?

The sincere classicist accepts standard external truth-norms on belief.[2] For a highly external sense of 'should', they endorse the following:

- If p is true, then one should believe p.
- If p is false, then one should not believe p.

[2]Thanks...

Suppose p is indeterminate. On a sharpening where p is true, one's aim is to believe p. On sharpenings where p is false, one's aim is to avoid doing so. The principles deliver indeterminacy in the *aim* of belief.

Suppose we have a pair of highly opinionated agents. John (determinately) believes exactly what is true on sharpening s_1, and Paul (determinately) believes exactly what is true on sharpening s_2. These are the only two sharpenings there are. Then it's indeterminate of each whether they are believing exactly correctly. It is determinately true that in our scenario there's some agent with Godlike beliefs. But there's no agent who determinately plays the God-role.

What if (unlike John and Paul) one is uncertain in the ordinary sense about what the world is like? The sincere classicist again endorses standard principles. They accept the definite truth of the following:

Rational credences are expectations of truth value

That is, suppose you divide your credence over a range of possible scenarios. Then the degree of belief you should invest in a given proposition matches its truth value at each such scenario, weighted by the credence therein invested. This principle can be argued for in a number of ways, and covers non-classically and well as classically valued truth values.

In the current setting, our credences in the possible scenarios can be perfectly precise and familiar—a definite credence that the bag in front of us contains a patch of each specific shade, for example. But the truth values that proposition *that the patch in the bag is red* take at a scenario may be relevant (when the scenario has the shade be borderline). Perhaps we have 0.5 credence in this scenario, and 0.5 credence in a scenario where the patch is a clearly red shade. We can extract predictions: on s_1 the borderline patch is red, and on s_2 it is

not red. On s_1 you ideally ought to believe the borderline patch red—and so on this sharpening, given your residual uncertainty, you ought to have degree of belief 1 that the patch in the bag is red. On s_2, you ideally ought to believe the borderline patch non-red—and so on this sharpening, factoring in your residual uncertainty, you ought to have degree of belief 0.5 that it is red. Both sharpenings agree you ought to have either full belief or 0.5 belief. A 'compromise' credence of 0.75 is definitely wrong, they will agree.

What goes for belief has consequences for action. If she is sympathetic to decision-theoretic accounts of rational action in general, the sincere classicist will not wanting to rock the classical boat, so endorses the definite truth of claims such as:

> Doing that which maximizes subjective expected utility is rationally required.

Each sharpening recommends a particular set of degrees of belief (relative to underlying credences in scenarios). Putting those beliefs together with desirabilities gives a ranking of possible acts by expected utility. So, relative to the underlying credences and desires, what act you ought to take is indeterminate.

Suppose George (definitely) has a full belief that the patch in the bag is red, and Ringo (definitely) has only 0.5 belief that this is so (they share the same underlying uncertainty about the shade of the patch in the bag). It's indeterminate who is acting rightly, relative to their shared uncertainty—George is siding with John, and Ringo with Paul, on the ideal credences to have in the key scenario in question. Both George and Ringo are prepared to act on these beliefs. If they share a basic desire to possess red things, then they'll be prepared to pay different amounts to by the patch in the bag—George thinks it a sure win, so is prepared to pay more than Ringo, who regards it is a risky purchase. One of George or Ringo is acting in the right way, relative to the shared credences and desires. But it's indeterminate who it is. (George, of course, claims it is him—after all, he believes the borderline patch counts as red, so he believes it true that the patch is red, so he thinks that believing red is the right thing to do and the ensuing acts justified. Ringo would give a parallel but opposite speech. Each is quite self-confident, despite the mutually acknowledged indeterminacies. And again: the sincere classicist is committed to saying that one or other is entirely correct).

2 Against indeterminate beliefs

One of John or Paul is believing ideally, but it's indeterminate which it is. Suppose we made the bold assumption that a definitely-ideal agent exist—an agent who is definitely such that they believe p iff p is true. Then we get a God-like agent of the kind discussed in (Hawthorne, 2005). Faced with a case of indeterminacy in p, it must be indeterminate whether they believe p, in a way penumbrally connected with p's truth value. If we take such an agent as our role model we would have a determinate aim for our attitude to p—to make it indeterminate whether we believe it. This is a position endorsed by Barnett (2009). There are numerous puzzles with the Barnett view:[3]

- Perhaps this is OK for God, but it's hard to know what it would be to be in such a state. Just to kick off discussion: what pattern of behaviour is characteristic of indeterminate belief?

[3]On terminology: Barnett distinguishes sharply between vagueness/clarity and indeterminacy/settledness. I do not, so some care will be needed in transliterating my discussion into his framework, even though the points carry over.

- The norm that is motivated is stronger and stranger than indeterminately believing. One must believe p exactly on the precisifications where p is true. But how do we pull off the trick of achieving correlations between the state of our head and the redness of objects, the baldness of men, the heapiness of agglomerations of sand, and the rest?

- Even if you are believing exactly as you (determinately) should, you're going to face problems transferring that to action. You want to possess red things, and want not to possess non-red things. There is a borderline red thing available. Should you take it? If the standard connections are definitely in place, on those sharpenings on which you believe it red, you should take it, on the others you shouldn't. So it's indeterminate whether you take it. But indeterminately taking the patch in front of you is not a real option—either of the real options leaves you not determinately achieving the idea.

- These situations should count as dilemmas for the indeterminate believer. Though they involve only indeterminate failings of rationality, they are determinate failings of ideality. For if you perform an act, you ideally should be willing to self-affirm—to flat out judge that you are rational in so acting. But since the matter is indeterminate, the norm we are considering says it would be wrong to flat-out judge.

Fortunately, all this trouble arises from the deniable assumption of *de re* determinate omnscience, and with the more directly motivated principles above we don't get into such tangles).

Barnett (2009) endorses the indeterminate belief norm. His argument is that we should aim to clearly (determinately) satisfy the following *if it seems that p, believe that p*—plus the assumption that in borderline cases of redness, say, it is unclear (indeterminate) whether it seems to us that the patch is red. We could equally appeal (in more externalist mode) to the truth norm via the same gloss: that we should aim to clearly (determinately) satisfy the following: *if it is true that p, believe that p*. Either way, Barnett is endorsing norms featuring special-purpose vagueness/indeterminacy related vocabulary embedded in the content laying out our aim (Barnett has us aiming to be such as to satisfy something of the form $D(\phi x)$). That there are such norms takes special argument (my argument *against* them is the difficulties they bring, laid out above). In any case, I insist that they are no part of the *sincere classicist* position, which takes standard norms whose content is indeterminacy-free, and then simply endorses their determinate truth. This gives rise to the indeterminacy in aims for belief and action outlined in the previous section, and not to the Barnett/Hawthorne position.

3 Sincere classicism recommends we not be uncertain

The epistemicist may wonder whether the sincere classicist says anything that they need to disagree with. When the sincere classicist claims that it's indeterminate whether it is John or Paul who believes all and only the truths, the epistemicist may quietly note that this may well come out true under their favoured epistemic gloss: it is in principle unknowable whether John or Paul was the one who believed all and only the truths.[4] Differences between the epistemicist and the sincere classicist emerge with George and Ringo. For the interaction between indeterminacy and uncertainty described above

[4]Barnett has a more straightforward line here—as he notes, the epistemicist certainly doesn't want to recommend vague belief in borderline cases.

is distinct from the way that a double helping of uncertainty would behave. Consider again the case of the hidden patch in the bag. If we had subjective probabilities over the 'sharpenings'—say fifty-fifty over whether a patch of the borderline shade counted as red—then on a standard story we should mix this with our uncertainty over the exact shade of the patch in the bag. We'd assign 0.5 credence to it being red in virtue of being a clear case of red, 0.25 to it being red though a borderline case, and 0.25 to it being non-red though a borderline case, and the overall tally would be a 0.75 confidence in it being red. As noted earlier, this kind of compromise belief is determinately wrong, according to the story we've given. And this is manifest in action. You can either adopt a pattern of action appropriate to the 50/50 credence in the redness of a ball in the bag (e.g. given a desire for a red ball, being willing to exchange the ball in the bag for a gamble which will give you a determinately red ball iff a fair coin lands heads); or a pattern of action appropriate to full credence (e.g. not being willing to exchange the ball in the bag for any gamble that risks you losing the ball)—one or the other is the thing to do. But it is flat-out wrong and inappropriate to adopt the intermediate pattern of action associated with the compromise credence of 0.75.

There is, indeed, a deep structural disanalogy here between the attitudes produced by indeterminacy and ordinary uncertainty. Some background: positive dominance is a familiar enough principle of practical reasoning. If an action is what you ought to do, given X, for each element X of an appropriate partition, then that action is *unconditionally* the thing to do. The restriction to an 'appropriate' partition is notoriously important—it should be independent of the decision being made. But most accept the reasoning given this caveat. What is in general *invalid* is the version of this principle that substitutes 'ought not' (or a disjunction of oughts) for the simple 'ought' featuring in positive dominance. This would allow you to move from an action's being something you *ought not to do*, given X, for each element X, to that action being something you *ought not to do* simpliciter. Call this principle negative dominance.

To see the problem with negative dominance in a context of ordinary uncertainty, consider the following variant on the example of Unfortunate Miners.[5] You know that either ten miners will (tomorrow) be put in shaft A, or into shaft B. A flood is coming. The situation is such that (determinately): If you do nothing, one miner will drown, whatever shaft they are in. If you pull a lever, then shaft A is blocked and anyone inside will live, and all the water runs into shaft B, killing everyone there. If you push a button, shaft is B is blocked with dual results. You can't both pull the lever and push the button. You must choose between lever, button, and idleness. On the first possibility (where they are put in A) then the lever is best, followed by idleness. The button is a disaster: killing everyone. On the second possibility (where they are put in B) the button is best, idleness a close second, and the lever is a disaster. There's an obvious verdict about what the responsible act is in the state of information—one should

[5]My immediate source for this formulation is Kolodny & MacFarlane (2010), but the example is a familiar one (the authors credit Parfit and Regain). But the *kind* of problematic practical reasoning and interplay between suppositions, ifs, and oughts goes back to the lazy argument for fatalism. Kolodny and Macfarlane deploy the miner case as an argument that modus ponens is invalid—an alternative reaction, as applicable to this case as to the fatalistic argument (with an embedded modal in place of the embedded conditional), appears in (Stalnaker, 1975). On this view, modus ponens is valid, but the deontic conditionals are false (though the move from antecedent to consequence would be a 'reasonable inference'). A third diagnosis would be context-sensitivity in what 'ought' expresses, leading to equivocation. This is an alternative way of packaging the treatment of conditionals that Kolodny and Macfarlane draw from Kratzer—a lot depends on what gets called 'validity'. But what is relevant here is not the diagnosis of what goes wrong with the paradoxical arguments in question, but with what overall patterns of practical reasoning end up valid or invalid.

remain idle.[6] But idleness is not what you ought to do given that they're in shaft A (pulling the lever is better), and neither is it what you ought to do given they're in B (pushing the button is the thing to do under that assumption). Negative dominance would instruct you to infer that it is not what you ought to do overall—exactly the wrong result.

Strikingly, the sincere classicist endorses sharpening-by-sharpening dominance reasoning in both varieties. When the belief-desire state appropriate to every sharpening recommends the same act, it'll be definitely true that that act is optimal (positive dominance). When every sharpening declares a given act suboptimal, it'll definitely be wrong to do it (negative dominance).

There's a precise sense in which the failure of negative dominance (on any partition) is a characteristic of ordinary uncertainty, and so serves as the touchstone of the differences between indeterminacy-licensed attitudes and ordinary uncertainty. In a standard probabilistic setting, and given any partition, we can show that utilities can always be assigned so that an act that is suboptimal on each element of the partition has the highest overall expected utility.[7] Unsurprising, other models of decision making under uncertainty steer well clear of endorsing negative dominance too.[8] This difference between action under ordinary uncertainty and indeterminacy matters a lot. We'll spend the next section giving examples and drawing consequences.

What *does* the sincere classicist recommend we do when we are faced with a decision situation that turns on some claim we know to be indeterminate? They say it is indeterminate whether we should act as-if p or act as-if $\neg p$. But what's the practical upshot? Will they be angry with us if we take the p option? Or is it ok to choose either at whim? The sincere classicist can't *quite* say that both George and Ringo's differing beliefs (and consequent differing actions) are permissible—after all, classicists are committed to the view that one or other is believing something false. But they can say something nearby. Call an agent 'neutral' if they have opinions only in determinate matters, i.e. they fail to take a view on indeterminate questions. It's natural to think of the theorist as trying to maintain a neutral position—not arbitrarily siding with one or other side of the debate between John and Paul, for example. Say that an agent's beliefs (and actions) are weakly permissible if a neutral audience isn't in a position to classify them as wrong, impose sanctions, etc. On the current view, the belief states of both Ringo and George will be weakly

[6] If you don't agree (maybe because accepting the loss of life of one individual is incompatible with his Endyness), consider the case where staying idle will only cause mild discomfort to the miners, equivalent to some nettle stings. The overall verdicts would be the same.

[7] We'll show this in the two-cell case (generalizing is straightforward). Suppose you are probabilistically uncertain over whether H or $\bar{H}$ is the case. Then for a partition of three actions A,B,C, independent of $H/\bar{H}$, there will be an assignment of utilities to the six act-state pairs $AH,BH,CH,A\bar{H},B\bar{H},C\bar{H}$ which is a counterexample to negative dominance on the $H/\bar{H}$ partition. Let the utility of AH and $C\bar{H}$ be 1, and CH and $A\bar{H}$ be 0. So long as BH and $B\bar{H}$ are each between 1 and 0, this ensures that the conditions of negative dominance are met—for the choiceworthy action given H will be A (so B is suboptimal), and the choiceworthy action given $\bar{H}$ will be C (so B is again suboptimal). We are supposed to be uncertain between H and $\bar{H}$, with non-extreme probabilities p and $\bar{p}$, say. So we know that for some $\varepsilon > 0$, $1-\varepsilon = \max p, \bar{p}$. Now set the utilities BH and $B\bar{H}$ equal to $1-2\varepsilon$ (meeting the condition above). It is easy to see that by construction the expected utility of A will be p, the expected utility of B will be $\bar{p}$, and the expected utility of B will be greater than either. So B is overall more choiceworthy.

[8] One popular treatment of Knightian uncertainty is by representing belief states via sets of probabilities. Levi's first constraint on permissible action is that it maximize expected utility by some element of the representor. This would open the position up to negative dominance reasoning—an unattractive result!—except that Levi imposes a convexity requirement on the sets of probabilities in the representor. It is exactly the absence of any analogue of convexity in the sincere classicist setting which supports dominance.

permissible. Even though the neutral audience appreciates that one of them is in the wrong, they are not in a position to pick out who this is, and so won't be in a position to impose sanctions, etc, without abandoning their neutrality. Weak permissibility is an important notion, from a practical point of view. For, though we surely care about believing rightly, we also care about avoiding the negative consequences of believing wrongly. If you're forced to adopt an opinion on indeterminate matter at all, you won't be able to avoid blame from those who break the symmetry in a different way (just as in ordinary cases you can't avoid criticism from those with false beliefs). But what you can make sure of, and care about, is avoiding criticism from a neutral point of view. And weak permissibility records this kind of immunity. It stands to all-things-considered permissibility somewhat as complete decriminalization stands to legalisation. To one who has to make up their mind on an indeterminate matter because they're faced with a decision situation, our practical advice is that both polar verdicts are decriminalized in this way—in this sense, we tell them they are free to (groundlessly) judge and act either way.

4 Consequences

Williamson (1994, ch.5) appears to argue that (a) supervaluationist treatments of indeterminacy are unstable, and should shift to a classicist position (with determinacy, but not truth, understood via quantifying over sharpenings); but (b) the classicist position then collapses into his own epistemicist position. The intuitive thought behind (b) is that the key claims that the classical determinacy theorist makes come out true if we read them in epistemic terms—as expressing uncertainty over which sharpening is intended, rather than some supposed non-epistemic indeterminacy. The Williamson challenge is part of the (Field, 2000) argument for what I have here called an 'insincere' classicism, on which definite truth, rather than truth, norms belief. Greenough (2008) uses it to argue against primitivist conceptions of classical indeterminacy, and to motivate his interesting but controversial account of truthmaking. Barnett (2009) appeals to strange indeterminate beliefs to respond to the concerns. But I have argued that a thoroughgoing non-revisionism with respect to norms on truth and action, generates a position on which our attitude to sharpenings cannot be one of uncertainty. Rather, we must judge one or other sharpening to be intended, but any of the polar judgements are weakly permitted.[9] Negative dominance reasoning, argued for above, is a touchstone of the differences—being entailed by sincere classicism, but incompatible with ordinary uncertainty. Perhaps sincere classicism is objectionable, but it won't be because it is somehow indistinguishable from an epistemicist position.

I finish by sketching three instances where the fact that the sincere classicist endorses negative dominance makes a real difference.

4.1 Classical open future

Barnes & Cameron (2009) argue that the proper characterization of any openness in future contingents is metaphysical indeterminacy: perhaps that it is metaphysically indeterminate what 4D-block exists; or perhaps metaphysically indeterminate what total temporal distributional property the present state of the world instantiates. The indeterminacy in question is supposed to be thoroughly classical.

The trouble is that the action-guiding principles of sincere classicism are incompatible with a sensible treatment of the indeterminate

[9] This situation is interestingly reminscient of the 'quandary' characterisation of our attitude to borderline cases argued for in (Wright, 2001), but I will not pursue the analogies and disanalogies here.

future. For we saw earlier that the kind of norms on belief (and consequent recommendations for action) that flow from the sincere classicist position just deliver implausible recommendations—-banning us from taking the responsible act of idleness in Jackson's miners case, for example. All we need to do is shift the temporal locus of the action—-rather than involving miners who are already in the mine, consider a case where we know that in half an hour they will be entering shaft *A* or shaft *B*, but that we need to push buttons, pull levers, etc now in order to affect the flood that is heading their way. This means that on the Barnes-Cameron view, it is indeterminate what consequences each action would have. But on the shaft-*A* sharpening of the indeterminacy, lever beats idleness and button, and the shaft-*B* sharpening, button beats idleness and lever. By the dominance reasoning of the sincere classicist, idleness is wrong on each sharpening and so definitely wrong, and one must either press the button or pull the lever (it is indeterminate which—John and Paul are arguing over it). But surely this result is unsustainable—it bans action-guiding uncertainty in the usual sense about the future, and recommends paradigmatically irresponsible courses of action. This isn't a general problem with the sincere classicist view—it's a special problem with this putative application of it.[10]

It's of course open to Barnes and Cameron to distinguish their classicism from sincere classicism. *Insincere* classicism remains open to them (and despite the name, I think this could be an attractive position). However, this isn't cost free: it involves them in revisionism about the ordinary norms of belief and action, since it's only the definite truth of these that was assumed in arguing for the problematic results.[11]

4.2 Indeterminacy and accuracy

As a second application, I cite 'Bronfman's objection' to Joyce's non-pragmatic argument for probabilism (Joyce, 1998, 2009). Joyce's argument is that, given certain axiomatic constraints on how we measure the 'inaccuracy' of partial belief states against the actual truth values, we can show that if one's belief state fails to be probabilistic, there will be a specific probabilistic belief state that is guaranteed to

[10]Before leaving this, I want to comment on one line of argument BC endorse that seems incompatible with sincere classicism. On each sharpening, the *current chances* of the miners being in shaft *A* rather than *B* is the same—say, 0.5. So it's *definitely true* that this is what the chances are. Since you should match your credences to the chances, you should have an 0.5 credence in the miners being in shaft *A*. Working this through, this will give the sensible recommendations for action. The definite truth of the principal principle thus appears to conflict with what I've said flows from sincere classicism (one could equally run this line with 'weight of evidence' replacing 'chances'). However, according to standard formulations, the principal principle is inapplicable if you have inadmissible information—and for all we've said, learning that the future is indeterminate may be inadmissible information about the future. Likewise, the pro tanto 'evidence' about the future that's available to us might be overridden by the evidence we allegedly have that the future is indeterminate. Of course, this makes the principle principal looks like it's completely inapplicable—but from my point of view, that's a reflection of the problems with the open future thesis, not with the arguments around. And I think it at least shows that there's no compelling argument against the indeterminate-aim view merely from the wide acceptance of standard formulations of the principal principle—the two are not in conflict.

[11]If they are not sincere classicists in my sense, they obviously can't appeal to the line sketched above in reply to Williamson (and indeed, the challenge is particularly pressing for friends of the open-future). Now, Barnes & Williams (2011) respond to one reading of Williamsons' challenge—that somehow non-epistemic theories of indeterminacy face a standing challenge to explain how the meaning, sense or understanding they attach to 'determinacy' differs from the epistemicist's. I doubt this is a good *general* challenge. But there's a second way of construing the point, which asks about the *point* of including claims about indeterminacy in one's total theory of the world in the first place—I think this is a much more serious worry.

be more accurate than your starting point. Joyce wants us to conclude that the original belief state had an epistemic flaw, since it is accuracy-dominated in this way.

Bronfman's objection is that there is no guarantee that the different potential accuracy-measures meeting Joyce's axiomatic constraints deliver the same results. Relative to each, there will be some specific belief state that accuracy-dominates the original, but they may differ. Moreover, a belief state that accuracy-dominates the original on one legitimate accuracy measure may be less accurate than the original on another. Given the conflicting recommendations, who's to say that sticking with the initial improbabilistic belief state isn't the best thing to do?

In the case of the open future, the dominance reasoning licensed by the sincere classicist/indeterminate aim position was a problem. Here it provides a solution. Think of the different candidate accuracy measures as precisifications of a concept of accuracy (as Joyce and Bronfman were assuming at this stage of the debate). Then we've a case where it's indeterminate whether probabilistic belief state b or c accuracy-dominate p, but determinate that one or other does. But the sincere classicist should accept the following line of reasoning: on the sharpening on which b dominates, p is epistemically flawed and one shouldn't stick with it (one should move to b in preference). On the alternative, p is again epistemically flawed and one shouldn't stick with it (rather, one should move to c in preference). By dominance reasoning (legitimate in this application, though illegitimate if one were merely uncertain about which accuracy measure was right) one should shift one's belief state away from p, either to the probabilistic b or to the probabilistic c. So Joyce's original argument goes through—so long as we are sincere classicists about the indeterminacy involved.

4.3 Moral indeterminacy

So we have two cases—one positive, one negative—where the predictions of sincere classicism interact interestingly with the literature. But the difference between indeterminacy and ordinary uncertainty doesn't matter only to high theory—it has practical significance for us all.

For example, it matters a great deal whether in a given scenario there is indeterminacy or instead uncertainty over the moral status of those involved. Consider the case where doctors and relatives must decide whether to switch off life-support of someone who is in a particular low-functioning state following an accident. If they are already dead, then this would be the thing to do. If they are still alive, it would be a very bad thing to cause their death by removing life-support. If we are simply uncertain which is the correct description of the case, then there is a real epistemic possibility that in switching off we would be causing death. Most likely this would make maintaining life-support the responsible course of action. Standard principles for decision making under uncertainty support this natural precautionary thought (in overall expected value, the badness of possibly killing the person outweighs the benefits of saving expenditure on needless life-support). If we were epistemicists, then the same reasoning would go through in the case of indeterminacy.

But things are quite different if we agree that this is indeterminate whether the patient is alive or dead where this is understood in the sincere classical (non-epistemic) way. For the position we have been developing here will allow that *both* courses of action described are (weakly) permissible—no neutral third party criticism would be available whichever was taken. That the uncertainty/indeterminacy distinction alters the permissibility of courses of action suggests that attention needs to be given to indeterminacy as a classification of such cases.

In the case just given, the option recommended by uncertainty-based reasoning would be a (weakly) permissible thing to do. But this is not a universal characteristic of these cases. Take a case where the best life-supporting techniques are vastly expensive, so that the opportunity costs of continuing to provide them in the case at hand would be unjustifiable unless one was highly confident they make a difference. A cheap, less effective set of tools are available. In a case of uncertainty, the right thing to do would be to use the cheaper set of techniques. But this is not the prediction of the sincere classicist. One's options are either full confidence that the person is still alive, or zero confidence that they are—the first recommends full intervention, the latter no intervention, and the compromise option is ruled out either way. So by negative dominance, acting as if we were in a situation of ordinary uncertainty leads to the determinately wrong intervention.

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