Modality: Norms and Naturalism

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Abstract

A powerful strain of thinking in contemporary metaphysics—ontological naturalism, we might call it—maintains that the objects and properties of the kind cited in natural science are the only objects and properties that exist. This sort of naturalism is attractive on both metaphysical and epistemological grounds, insofar as it posits a parsimonious ontology and a familiar, empiricist, epistemology. That said, the very parsimony of its ontology raises the prospect of inconsistency with much of our ordinary thought. In particular, many have thought, not implausibly, that a naturalistic worldview has no room for the objects and properties that would have to exist for moral, or more generally normative, claims to be true. And similar worries, some have thought, arise regarding modal claims, claims about possibility and necessity.

These problems are, I submit, more closely related than they might appear. In particular, I argue, one of the more promising strategies for naturalizing the modal, modal expressivism, according to which one needn't posit any special objects or properties at all to understand the truth of modal claims, stands or falls with expressivism about the normative generally. This claim is supported by some observations about the normative import of modal truths; observations which, I suggest, also support a more general lesson about the relation between modal and normative concepts, according to which the concept of an impossible proposition just is the concept of a proposition which should not be supposed in the course of a certain kind of counterfactual/subjunctive reasoning. This lesson, if accepted, entails that the point about modal expressivism generalizes, entails, that is, that the prospects for a naturalistic metaphysics of modality depend on the prospects for a naturalistic metaphysics of normativity more generally.

Even under the assumption of a normative account of modal concepts, however, a question remains as to whether modal properties are themselves normative properties; or whether, instead, they are to be identified with the non-normative properties in virtue of which various norms on subjunctive reasoning apply. The fact that the impossibility of a proposition is a reason not to suppose it may seem to support the latter view; I argue, however, that some considerations which arise in a similar dispute regarding so-called 'buck-passing' accounts of value undermine this line of reasoning. Further, I argue, a normative account of the property of impossibility, as well as the concept, yields the promise of an attractive, plu-

ralistic view of impossibility, according to which all of the different kinds of impossibility—logical, nomological, metaphysical, etc...—are instances of a single, multiply realizable property of impossibility. I conclude, tentatively, that, granted a normative account of modal concepts, we should accept a normative account of modal properties, as well.

1 Modal Expressivism

Modal expressivism, as I will understand it, is the view that modal claims express some states other than straightforwardly representational beliefs; in the forms I'll consider here, these states include, following Simon Blackburn, a kind of felt inconceivability attaching to impossible propositions, or, following Crispin Wright, something along the lines of an intention not to take impossible propositions into account in reasoning.[1] These views are naturalistic insofar as the states they posit, and hence modal claims themselves, are correct in virtue of something other than their correct representation of an independent ontology of modal objects and properties. I treat each account in turn, beginning with Blackburn's:

According to Blackburn, claims of the form 'p is impossible' express something like the following mental state:

M: The sense that I cannot conceive of the truth of *p.*

So understood, the account raises an immediate worry, insofar as it seems to use the notion of impossibility itself in its explanation of the content of claims about impossibility. And indeed, were Blackburn's account an *analysis* of claims of impossibility, it would be an objectionably circular one. But given the fact that Blackburn's claim is not an analysis, he has a ready response. It just so happens, Blackburn could say, that we cannot characterize the content of the mental state expressed by modal claims without making a modal claim. And this, I take it, is not objectionable in the same way as a circular analysis is objectionable, even if it is objectionable for some other, less obvious, reason.[2]

There is, however, another very serious concern with Blackburn's expressivism so interpreted. To see it, think, for a moment, about the role of claims of necessity and impossibility in our cognitive lives. Suppose, for instance, that I'm attempting to decide where to eat dinner tonight, and decide that I want to dine with my friend Black but don't want to eat with my friend Gray. But suppose that my friend Blue believes that Black and Gray are the same person ('Gray', let's suppose, is Black's online alias). Suppose, further, that Blue want to go to dinner wherever I want to go to dinner (and knows about my

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[1]For which cf., respectively: "Morals and Modals" in *Essays in Quasi-Realism* (Oxford: Oxford University Press, 1993): 52-74; and "Inventing Logical Necessity" in *Language, Mind, and Logic* (Cambridge: Cambridge University Press, 1986): 187-209.

[2]It may, for instance, call into question the expressivist status of Blackburn's proposal; cf. Jamie Dreier "Meta-Ethics and the Problem of Creeping Minimalism" *Philosophical Perspectives* 18: 23-44.

preference), and says to herself 'But I can't go to dinner where Sean wants to go!'. On Blackburn's account on the modal interpretation, what Blue is doing here is expressing a state of finding herself to be unable to do anything with the thought of my going to dinner with Black but not Gray. Intuitively, Blue should conclude from this impossibility that there's no point in trying to go to dinner where I want to go to dinner. But on Blackburn's account, it's not clear why it would make sense to do so: after all, if convinced by that account, Blue might say, 'what does the fact that I can't seem to imagine doing what Sean wants to do have to do with whether or not I'd be successful if I tried?'

The concern, then, is that it's not clear why the felt inconceivability of a proposition should have the kind of normative upshot that seems to be entailed by the truth of certain claims of impossibility.[3] And this is not just because, as Blackburn recognizes, there may be a specific debunking explanation in any one case of why a subject cannot conceive a particular proposition. Rather, it's because the account as it stands is silent on the *correctness-conditions* of states of felt inconceivability; that is, silent on just what would constitute a *non-debunking* explanation of the states in question. What the case of Blue shows is that, if anything in the neighborhood of felt inconceivability is expressed by impossibility-claims, it's a kind of *confident* felt inconceivability: that is, a sense that one, *quite correctly*, cannot make use of the relevant proposition in thought, or put another way, a sense that one can't make use of the relevant proposition in thought because one *shouldn't* make such use of it.

Blackburn's account, then, can't seem to capture the normative import of the modal unless it maintains that normative judgments are involved in what's expressed by modal claims. A similar conclusion also holds for another expressivist view, due to Crispin Wright, according to which the claim that p is impossible expresses an intention not to make use of p in reasoning. To see this, consider how Wright's account would handle the case of Blue. Blue, this account might say, shouldn't try to do what she takes to be impossible because to do so would be enkratically irrational; since she'd be deliberating against the deliberative intention expressed by her judgment of impossibility. But because this irrationality stems from a kind of inconsistency between intentions, it looks like it could be resolved *either by* giving up the intention to meet me for dinner *or* by giving up her conviction that doing so impossible. This, however, seems wrong: giving up her impossibility-judgment on the grounds of her desire or intention to act contrary to it seems itself to be a form of irrational wishful thinking. If claims of impossibility express intentions, then, they can't express the simple intention not to make use of a proposition in reasoning. Rather, they have to express something like a *confident* intention not to do so: an intention not to do so *because one shouldn't* do so.[4]

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[3]Blackburn might respond here that Blue could use the widely accepted principles 'ought implies can' to infer that she doesn't have reason to go to dinner where I'd like to, if she can't do so. This, I think, would be question-begging, since what's at issue here is precisely whether Blackburn's account of modality explicates 'can' in a way that makes it true that 'ought' implies it.

[4]Such a state might, of course, come down to nothing more than a structured set of

In order to account for the normative import of modal judgments, then, it looks as if modal expressivisms must maintain that the states expressed by modal claims include normative judgments. But these judgments themselves will receive either an expressivist or a non-expressivist explication. If they are explicated in a non-expressivist manner, it looks as if there's a sense in which modal expressivism isn't fully expressivist after all, and thus a sense in which it fails to provide a complete naturalization of modality. Insofar as modal expressivism purports to do accomplish this, then, it had better maintain that the normative judgments expressed by claims of possibility and necessity can be explicated in an expressivist way as well. The prospects for modal expressivism as a naturalizing account of modality depend, then, on the prospects of normative expressivism more generally.

2 Necessity: A Normative Explication

Thus far, I've argued that modal expressivism can't capture the *normative import* of modal claims unless it maintains that the states these claims express are or involve judgments regarding how one ought to think in certain contexts. In this section, I'll briefly sketch such an account, both for the sake of its own intrinsic interest and in order to suggest the basis for a novel account of possibility and necessity.

The discussion in the last section may leave the impression of having claimed that, if I judge that p is impossible, then I am committed to thinking that I shouldn't make use of p in thought. But this is too strong, since it is perfectly legitimate, even if one believes that p is impossible, to think of p in order to evaluate the correctness of that belief. Insofar as a judgment of impossibility entails a commitment to avoid a proposition in thought, then, it must be a commitment which holds only for certain kinds of reasoning; kinds which don't include all reasoning about what to believe. Loosely speaking, it seems more plausible to think that the norms in question concern not how to form *beliefs* about how things are but rather what to *suppose* about how things could or would be.

This suggestion can be clarified by considering a recent proposal for analyzing claims of possibility and necessity in terms of subjunctive conditionals, due to Timothy Williamson.[5] For the case of impossibility, this would yield:

(1) $\Box \neg p \equiv \forall q (q \Rightarrow \neg p)$

Which says that a proposition p is impossible when and only when, for any proposition q, were q true, p would be false.

Now consider the normative upshot of (1); that is, the difference its truth makes to how we ought to think. To see this, consider how, in general, sub-

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intentions, if Gibbard-syle expressivism offers the correct account of the relevant 'should'. Cf. his *Thinking How to Live* (Cambridge: Harvard University Press, 2003).

[5]At, among other places, "Philosophical Knowledge and Knowledge of Counterfactuals", 2007 Manuscript.

junctive conditionals constrain our thinking. Very roughly, they seem to do so by enjoining us to suppose their consequents whenever we suppose their antecedents in the course of the kind of reasoning—'subjunctive reasoning', we might as well call it—in which they characteristically appear. So construed, (1) tells us that a proposition is impossible just when one shouldn't suppose anything without supposing its negation; that is, that:

(2) $\Box \neg p \equiv \forall q(q \Rightarrow \neg p) \equiv$ If one supposes anything at all, one ought to suppose that $\neg p$.

Which, together with the obvious claim that one should never suppose a contradiction, comes to much the same thing as the claim that a proposition is impossible just when one should never suppose it. Such an account would, of course, require a number of refinements. It would, for instance, have to clarify the relevant senses of 'ought' and 'suppose' so as to avoid certain concerns that arise regarding the obviously permissible supposition of impossible propositions for reductio as well as the apparent permissibility of supposing against *a posteriori* impossibilities of which one is not aware. I leave the details of these worries to an appendix; what results from considering them more carefully is the following:

(3) $\Box \neg p \equiv$ One ought, in the objective sense of 'ought', never to suppose in the course of subjunctive reasoning, or accept under any such supposition, that p;

Where the objective sense of 'ought' is—to borrow a famous example—the sense in which I shouldn't drink gasoline even if I think it's gin, and subjunctive reasoning is the kind of reasoning to which subjunctive conditionals are relevant.

Suppose that something like this was right—suppose, that is, that there is some true, or even necessarily biconditional (whether (2*) or some refined version thereof) linking claims about impossibility with claims about norms on subjunctive reasoning. It wouldn't follow from this, straight away, that there's nothing more to the impossibility of a proposition than the impermissibility of supposing its negation. But it would leave the question as to whether there is more to impossibility than suppositional impermissibility, and if so, what that is. Put another way, we might, ask, granted the normative biconditional (2*), what would stand in the way of positing suppositional impermissibility as an *analysis* of the concept of impossibility, or even as a constitutive account of the property of impossibility itself? What would stand in the way, that is, of accepting the conceptual claim:

(4) To think that a proposition p is impossible is to think that p is always suppositionally impermissible;

Or the metaphysical claim:

(5) For a proposition p to be impossible just is for it p to be suppositionally impermissible.

Granted (3), if there's a problem with (4) and/or (5), it can't be that a proposition can be impossible without being suppositionally impermissible, or vice versa. Rather, it must be that something is true of impossibility which is not true of suppositional impermissibility (to falsify (4)); or that there's something that it makes sense to say about impossibility but not about suppositional impermissibility (to falsify (5)).

I suspect that there is no such thing, and hence that thoughts about impossibility are, in both a *de re* and a *de dicto* sense, nothing more than thoughts about suppositional impermissibility. But I cannot, of course, make good on that here; instead, I'll consider, and tentatively reject, just one proposal as to why impossibility and suppositional impermissibility don't come to the same thing. This stems from the following worry: doesn't it make sense to answer the question 'Why not suppose that p?' with 'Because p is impossible'; while it doesn't make sense to answer that same question with 'Because one should not suppose that p'?[6]

My response, in brief, will be that there is a sense of 'ought' on which it does indeed make sense to the answer the question: 'why not ϕ' with the reply: 'because one ought not to ϕ', and that this it's in the corresponding sense of 'impermissibly' that impossibility is identical to suppositional impermissibility. Before I turn to the argument for this, however, I'd point out that, even if this objection is granted, the considerations sketched here would still support the following, highly interesting conceptual claim about the relation between impossibility and suppositional impermissibility:

(6) To think that a proposition p is impossible just is to think that p has the property N in virtue of which impossible propositions are suppositionally impermissible;

(6) is considerably weaker than (4), in the sense that it's quite consistent with the denial of (5); and indeed, quite consistent with more conventional views in modal metaphysics. So, for instance, one might maintain (6), but think that N is something like 'falsehood in all spatiotemporal systems'; or 'falsehood in all maximally consistent sets of propositions'; or even 'falsehood according to prevailing modal conventions'.

Indeed, we might contrast (6) with the following claim, which follows from (4) on plausible assumptions:[7]

(7) To think that a proposition p is impossible just is to think that p has the property of having some property or other in virtue of which impossible propositions are suppositionally impermissible;

The difference being that, on (4), attributions of impossibility attribute the lower-order property, N, while, on (7), they attribute instead the higher-order property of having N.

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[6]I owe this worry to [redacted].

[7]Roughly, that there's always an explanation for the suppositional impermissibility of a proposition.

So understood, the dispute here bears an interesting relationship to the apparently completely distinct debate over what are sometimes called *buck-passing* accounts of normative concepts.[8] These accounts maintain that, e.g., goodness is a higher-order property; roughly, the property of having some property or other which gives agents various reasons for actions and attitudes. What's interesting for our purposes here is that one might deny such accounts, that is, deny:

(8) To think that an object x is good is to think that it has the higher-order property of having some property or other in virtue of which it there is reason to take various attitudes towards it.

without denying:

(9) To think that an object x is good is to think that it has some property, G, in virtue of which there is reason to take various attitudes towards it.

Where G might be pleasure, or divine approval, or something much more disjunctive. Someone who maintained (9), we might say, would endorse a buck-passing theory of the *concept* of goodness but a *buck-keeping* theory of the property.[9]

Similarly, returning to the modal case, we might sum up what's been said so far with the claim that everyone, even the traditional modal realist, might as well accept a buck-passing view of the concept of impossibility, even if they insist on a buck-keeping view of the property of impossibility itself. The remaining dispute, then, is over whether we ought to follow the buck-keeper in insisting on identifying impossibility with the lower-order property in virtue of which we shouldn't suppose impossible propositions, rather than the higher-order property of being such that, for whatever reason, we shouldn't suppose it.

The primary advantage of the buck-keeping view, I take it, is that it can make sense of the claim that we ought not to suppose impossible propositions precisely because they are impossible. It does so, even if it passes the buck at the conceptual level, because it maintains that impossibility just is, as a conceptual matter, the property in virtue of which we ought not to suppose certain propositions. The buck-passing view, on the other hand, seems to be stuck saying either that propositions are not suppositionally impermissible because they are impossible, or that we shouldn't suppose impossible propositions because we shouldn't suppose them.

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[8]For the buck-passing theory of value, cf. T.M. Scanlon, *What We Owe To Each Other* (Cambridge, Harvard University Press: 1998); for one version of the objection in question, cf. Roger Crisp "Values, Reasons and the Structure of Justification" *Analysis* 65.1: 80-85. As I'll discuss, briefly, below, both disputes are also analogous in interesting ways to the debate between *role-* and *realizer-* functionalism in the philosophy of mind; for which cf., among many other places, David Lewis "Mad Pain and Martian Pain" *Philosophical Papers* (Oxford, Oxford University Press: 1983): 122-130.

[9]Or, alternatively, a *functional* theory of the concept of goodness along with a *realizer-functionalist* theory of the property.

It's interesting to note that the situation here again parallels the situation with regards to debates over buck-passing in the theory of value, where the dominant, and to the minds of many, decisive, objection to the buck-passing account of goodness is the sense that we have reason to promote, respect, etc... good things precisely because they are good. Put another way, the thought is that goodness itself is a reason to take certain attitudes towards good objects. But, so the objection goes, on the buck-passing view goodness is the property of there being some reason or other to take these attitudes; and surely the mere existence of reasons cannot, on pain of double-counting, be an additional reason itself.

Prominent as this objection is, it is not convincing. For, as Mark Schroeder has recently pointed out, there seems to be a sense of 'reason' on which there's little cause to doubt that the existence of reasons for or against an action can itself be a reason to so act.[10] This only follows, Schroeder points out, if we accept a kind of 'additivity' principle for reasons, which says that, if two facts A and B are reasons to ϕ then the conjunctive fact A & B must be a better reason to ϕ than either A or B alone. But it's far from obvious that this is true; it seems plausible, for instance, to think that there's a sense of 'reason' in which, having been told that there's a reason to do something, I act on that testimony: that is, do some thing, ϕ, precisely because there is a reason to ϕ. That there is reason to ϕ, it seems plausible to say here, was my reason for ϕ-ing, and not merely my motivating reason, insofar as it plays a critical role in rationalizing my action. Or at least, this seems to be so on a sense of 'reason' in which it denotes, very roughly, 'a fact which has appropriate deliberative salience, given my epistemic limitations'.

While I suspect (contra Schroeder) that this may not be the only, or indeed even the most important, sense of 'reason'—another important sense abstracts away from epistemic limitations—it does seem to be the sense in which the fact that an object is good is a reason to take various attitudes towards it. Very roughly, the idea here is that, when I think that, say, a rock album is good, I'm thinking that there are reasons to take a highly complex set of attitudes towards it; attitudes which also have complex implications for my attitudes towards other albums and artists. Suppose now that I buy the album because I've heard from a reliable source that it's good. Insofar as I think it's good; I think there are reasons to take various attitudes towards it (including, presumably, the attitude of intending to buy it), even if, not having heard it, I couldn't really say what those reasons are. It's only because of my epistemic limitations, then, that the fact that the album is good has deliberative salience. To borrow a term from another, closely related debate, we might say that the fact that the album is good 'programs for', that is, ensures, the existence of reasons to buy it.[11] More generally, it appears that the fact that an object is good is deliberately salient, and in that sense a reason for action and attitudes, precisely because it is the

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[10]"The Buck-Passer's Negative Thesis", 2008 Manuscript.

[11]For the notion of a program explanation, cf: Frank Jackson and Phillip Pettit, "Program Explanation: A General Perspective", *Mind, Morality, and Explanation*, ed. Jackson, Pettit, and Michael Smith (Oxford, Oxford University Press: 2004): 129–30.

fact that some other facts provide such reasons.

And indeed something like this seems to be true of buck-passing properties in general; it seems to be true, that is, that the fact that a higher-order, buck-passing property P is instantiated ensures that some lower-order property P^* is instantiated. But it appears, then, as if there are contexts—whether deliberative, as in the last case, or explanatory—in which we might cite P^* by way of citing P. And this, I submit, is precisely what is going on when we cite the impossibility of a proposition as a reason not to suppose it: by citing the fact that there is some reason or other not to suppose that p, we're thereby obliquely citing, or 'programming for' that reason itself, whatever it might be.

So there seems to be a sense of 'because' in which the buck-passing view of impossibility can say that we shouldn't suppose impossible propositions precisely because they are impossible; this, roughly, is the same, 'programming' sense in which a buck-passing view of goodness can say that we should promote/respect/admire good things because they are good. It's thus not at all clear that, granted a buck-passing view of the concept of impossibility (that is, granted (6), above), that there's any good reason to resist a buck-passing view of the property of impossibility ((7), above).

But of course this merely leaves an impasse between buck-passing and traditional, buck-keeping views of impossibility. Let me conclude, then, by very briefly sketching a consideration which seem to me to press in favor of the buck-passing view:

Such a view holds the promise of a plausibly *pluralistic* account of impossibility, in the sense of an account according to which propositions which are, say, nomologically impossible share the property of impossibility with propositions which are, say, logically or metaphysically impossible. All such propositions, the view would say, are impermissible in some suppositional practice or other; though the explanation of that impermissibility might vary from practice to practice. The buck-keeping view, on the other hand, seems stuck saying that the concept of impossibility applies in all these cases in virtue of something other than the fact that all of these propositions share the property of impossibility. Interestingly, the situation here parallels a debate in the philosophy of mind, where role-functionalists maintain that mental properties are higher-order properties on the grounds that they are *multiply realizable*, that is, that they are instantiated in different systems in virtue of different lower-order properties; realizer-functionalists, on the other hand, seem to be committed to the prima facie implausible claim that, though it's true that both octopi and human beings can be in pain, that's not because a pained octupus and a pained human being share the property of being in pain.

A second advantage of the buck-passing view also parallels a point that seems to count in favor of role-functionalism in the philosophy of mind. This, roughly, is the observation that, even for a single kind of impossibility—metaphysical impossibility, say, that is, possibly in 'the broadest sense'—some propositions may be suppositionally impermissible in the relevant sense for one reason, while others are suppositionally impermissible for another reason, just as, say, my belief that the sky is blue, may be realized by a significantly different neurological

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property than someone elses's belief with the same content. So, for instance, we might be inclined to think that logical and conceptual falsehoods shouldn't be supposed for one reason, while more substantive, a posteriori impossibilities shouldn't be supposed for for quite another reason. And this kind of pluralism, pluralism within a given type of subjunctive reasoning, eases the burden on the proponent of the normative account of providing an acceptable metaphysics for the properties that constitute reasons not to suppose impossible propositions, at least insofar as it relieves a certain pressure felt by the buck-keeping account to give a highly general characterization of a single property (falsehood in all possible worlds, say) under which all of those other properties must be gathered.

There seems to be, then, some real costs in the neighborhood for the buck-keeping view of impossibility, just as there are some real similar costs for realizer-functionalism vis-a-vis multiple realizability. And, indeed these costs are, I'd argue, given the apparent absence of considerations on the other side, sufficient to warrant a tentative verdict in favor of the identification of impossibility with the higher-order property of having some property or other in virtue of which one should not suppose a proposition in the course of subjunctive reasoning.

My sense, then, is that, granted an account of the concept of impossibility according to which a proposition is impossible just when, and because, there is some decisive reason not to suppose it, it is more plausible to identify the property of impossibility with the higher-order 'buck-passing' property of there being some such reason or other not to suppose a proposition than the lower-order property that actually provides that reason. What this shows, I think, is that the normative account of the concept of impossibility—which, I argued, is well-motivated by consideration of the normative import of modal truths— yields an account of the property of impossibility itself which constitutes a genuine alternative to more traditional views; views which, on this model, are best understood as lower-order, or 'buck-keeping', views of impossibility.

Placing this dispute aside, however, I'll conclude by pointing out that both the buck-passing and buck-keeping versions of the normative account of the concept of necessity raise similar metaphysical questions. This is because, in both cases, a metaphysics is needed both for the relation of *being a reason* not to suppose impossible propositions and for the property or properties whose instantiation actually constitutes such a reason. If the normative account of the concept of impossibility is correct, then, the result in the last section regarding modal expressivism generalizes: any naturalizing account of modality must also naturalize at least one kind of normativity. Insofar as it seems plausible to think that impossibility is at least a normative concept, then, if not a normative property as well, it follows that the prospects for a naturalistic metaphysics of modality stand or fall with the prospects of a naturalistic metaphysics of normativity more generally.

3 Appendix

[Note: This appendix cashes out the senses of 'ought' and 'suppose' used in the paper by answering a number of objections to a version of the normative account of modality. It comes originally from a somewhat earlier draft, in which the normative account was presented in terms of possibility and necessity; rather than impossibility; I hope the differences—which are of no logical significance—are not too confusing rhetorically.]

Implicit and Explicit Supposition

The first concern involves an ambiguity in the notion of supposing a proposition. On one construal of the term, one supposes that p only when one 'says to oneself'; "Suppose that p"; or "Suppose that q: p then follows", or something of that sort. On this construal of the term, one might be worried that (3) and (4) don't capture the full force of modal claims: that, for instance, when I say '$\Box p$' I mean not just that one should never say to oneself 'Suppose that not-p' but also that one should never say to oneself 'Suppose that not-p and not-q'; or 'Suppose that $(q \supset \neg p)$; suppose further that q'; or, for that matter, anything else which has not-p as a logical consequence.

As I use it, however, one can suppose that p merely by 'saying to oneself' something from which p follows logically. Indeed, I believe that 'suppose' has a colloquial use on which it denotes supposition both implicit and explicit; on this use, (3) and (4) are perfectly adequate. For purposes of clarification, however, I offer:

> (3*) '$\Box q$' is explicable as 'one oughtn't implicitly or explicitly to suppose $\neg q$'

> (4*) '$\Diamond q$' is explicable as 'it's not the case that one oughtn't implicitly or explicitly to suppose q'

Non-Compossibility

A second concern involves the concern that, when one is engaged in a supposition to the effect that p, where '$\Box(p \supset \neg q)$', then one ought not to suppose that q (assuming, per the last section, that supposition is closed under logical entailment). But this would seem to have the same meaning as $\neg \Diamond q$, on the proposed explication; which would then imply that anything with a negation strictly implied by anything is impossible. Though this is true when p is a necessary truth, it's not, in general, true for contingent p: witness p='The wagon is red all over' and q='The wagon is green all over'; where, plausibly, $\Box(p \supset \neg q)$ but clearly $\Diamond q$.

This concern is, however, easily dealt with by strengthening (3) and weakening (4):

> (3**) '$\Box q$' is explicable as 'one oughtn't *ever* to suppose $\neg q$'

(4**) '$\Diamond q$' is explicable as 'it's not the case that one oughtn't *ever* to suppose that q';

I note again that 'ought' has a use on which 'ought not' is interchangeable with 'ought not ever'; on this use, (3**) and (4**) are equivalent to (3) and (4).

Goldbach's Conjecture

The third concern draws attention to the nature of the relevant 'ought', and involves cases where we know that some proposition must either be necessarily true or necessarily false, but we know not which. Mathematical conjectures, such as Goldbach's infamous Conjecture, are paradigmatic example: for Goldbach's Conjecture $=G$, $\Box G \vee \neg \Box G$; but it seems false, at least on some readings, to say 'Either one ought never to suppose that G is false, or one ought always to suppose that G is false'. I take it this is because, we think, if we don't know whether Goldbach's Conjecture is true or false, we might legitimately suppose either way.

Again, however, a relatively minor modification to (3) and (4) should suffice to address the concern:

(3***) '$\Box q$' is explicable as 'one oughtn't, if one believed all of the actual non-normative truths, to suppose $\neg q$'

(4***) '$\Diamond q$' is explicable as 'it's not the case that one oughtn't, if one believed all of the actual non-normative truths, to suppose that q'

I mean to use 'ought' in (3***) and (4***) in whatever 'internal', or 'subjective' sense in which it's false to say that one ought to suppose that Goldbach's Conjecture is true or one ought to suppose that Goldbach's Conjecture is false; in that sense, it's seem to be to me true that (and this is a mouthful—), either (a) if one had full knowledge of all the actual truths, then one ought to suppose that Goldbach's Conjecture is true; or (b) if one had full knowledge of all the actual truths, then one ought to suppose that Goldbach's Conjecture is false.[12] For this to be false, it would have to be possible for one to have full knowledge of all the actual truths, but still be able legitimately to suppose neither that Goldbach's Conjecture is true, nor that it's false. And this, I take it, is not plausible.

I'd maintain as well that there's another external, or objective, sense of 'ought' which means, roughly, 'ought if one believed all of the relevant truths' (here, truths about the non-normative actual facts); and it's in this sense that I mean to use 'ought' in (3) and (4).[13] I take it the existence of such a sense is

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[12]Assuming, that is, that the truth value of Goldbach's Conjecture is not indeterminate.

[13]This observation should at least begin to allay the concern, expressed to me by [redacted], that this account so idealized no longer has normative consequences for non-ideal agents, who lack all of the relevant beliefs, since it points up that in one, 'external' sense of the normative term 'ought', we ought do do what idealized agents 'internally' ought to do. But, admittedly there remain signficant questions here about how these 'external oughts' can be reason-giving or action-guiding.

evidenced by the apparent legitimacy of sentences like 'He should have folded—after all, his opponent had aces, whether he knew it or not'.

The Necessary a Posteriori

The fourth worry is similar to the third, but also raises a concern about the scope of the ought that appears in (3) and (4). Since it involves the notorious *necessary a posteriori*, it's also interesting in it's own right, as answering it should go a long way toward showing that the normative account can handle some recurring problems for philosophical accounts of modality. Consider a necessary truth known *a posteriori*: say, that water=H20. This, of course, was not always known: indeed, was not known until fairly recently, so far as these things go. The ancient Greeks, for instance, didn't know that water=H20. But still, it's necessarily true that water=H20, and hence, on the normative account, they ought always to have supposed that water=H20. But that seems false: they had no idea that water=H20, and this through no culpable fault of their own.

But it's easy to see that the reply to the last concern applies here as well: though there's a sense of 'ought' in which it's clearly false to say that the Greeks ought to have supposed that water=H20, in that very same sense, we surely think that, had they known all of the actual truths, then it would have been the case that they ought to have supposed that water=H20; and again, just as in the last case, for that very reason another sense of 'ought' in which it's true to say that they ought to have supposed that water=H20. This, roughly, is the 'objective' sense of ought, the sense in which it's true to say—to use a famous example—that I ought not to drink a glass of gasoline, even if I quite reasonably think that it's gin.