A Friendly Amendment to the Standard Analysis of Supposition

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On what I will call the **standard analysis** of supposition, when an agent supposes that ϕ, she temporarily adds the proposition that ϕ to the set of propositions she accepts, and goes on to reason in the way that she would if she believed that ϕ. This kind of analysis is given in a number of places in the literature on the norms governing belief revision. I think that this picture is mostly right, but I also think it needs what I take to be a friendly amendment. In this paper I will present the standard analysis, introduce a problem for it, and propose a revision to the standard analysis that solves the problem. I will then argue that my analysis captures some important facts about the way supposition works. Finally, I will argue that my analysis gives us a straightforward defense of the Ramsey test against an interesting challenge presented by certain indicative conditionals.

Here is a short introduction to the problem I will discuss. We are all familiar with Moore-Paradoxical sentences like "It's raining but I don't believe it." One thing that's remarkable about such sentences is that although they are often true, we cannot appropriately assert them or believe them to be true (except in some very special circumstances). But we *can suppose* that they are true. For example, suppose I have some inconclusive evidence that it's raining, and I wonder whether I should accept that it's raining. I might say to myself

> Suppose it's raining and I don't accept that it's raining: I won't bother to find the umbrella, and so I'll get wet. On the other hand, suppose it's not raining and I do

accept that it is raining: I'll waste a little time finding the umbrella, but I can spare it. So I'll find the umbrella.

I will argue that on the standard analysis of supposition, when I suppose that it's raining and I don't accept it, I come to accept the following three propositions, among others:

(1) the proposition that it's raining;
(2) the proposition that I accept that it's raining;
(3) the proposition that I don't accept that it's raining (i.e., the proposition that it's not the case that I accept that it's raining).

The problem is that proposition (2) and proposition (3) are contradictories, although I obviously haven't supposed anything contradictory in the scenario as described. My analysis of supposition *also* has the result that I accept both proposition (2) and proposition (3) when I suppose that it's raining and I don't accept it.[1] But I propose that a certain kind of 'compartmentalization' takes place, warding off the problems that could result from accepting that ϕ and accepting that $\neg\phi$.

Before beginning I want to note three reasons why it is important to improve our understanding of supposition. First, getting a better understanding of supposition will help us better understand other forms of conditional and hypothetical reasoning. Second, the first step of nearly every philosophical thought experiment can be paraphrased by a sentence of the form "Suppose that ϕ." Clarifying the nature of supposition will help us get clearer about the methodology of philosophical thought experiments. Third, although here I will discuss only the problems brought up by the supposition of Moore-Paradoxical sentences, there are similar problems for other propositional attitudes. For example, if I imagine, or conjecture, or pretend that it's raining and I don't accept it, I will both accept that I accept that it's raining and accept that I don't accept that it's raining. I will discuss only supposition in this paper, but I think that my approach to supposition generalizes to give a way to solve the analogous problems for other propositional attitudes.

[1] There is an obvious ambiguity in sentences like this one; throughout the paper when I use such sentences I mean for the complement of 'suppose' to be the entire conjunction: 'that it's raining and I don't accept it.'

Framework

A **proposition**, as I use the term, is a function from possible worlds into truth values. It is important to handle the distinction between propositions and sentences carefully in any discussion that touches on Moore's Paradox. One might hold, for example, that my assertive utterance of

(4) It's raining but I don't believe it.

expresses the same proposition that is expressed by your assertive utterance of

(5) It's raining but he doesn't believe it.

But assertive utterances of (4) clearly are Moore-Paradoxical whereas assertive utterances of (5) clearly are not. So, given plausible assumptions, Moore-Paradoxicality is a property of assertively uttered sentences, not a property of propositions.

When I say that a sentence is **Moore-Paradoxical**, I mean that, in general, when it is assertively uttered it exhibits the same oddity that is exhibited by assertive utterances of

(4) It's raining but I don't believe it.

The **acceptance set** of an agent $\mathcal{A}$ is the set of propositions accepted by $\mathcal{A}$, where to **accept** the proposition that ϕ is to "treat it as true for some reason" (Stalnaker 2002, 716). The **common ground** of a conversation $\mathbb{C}$, with participants $\mathcal{P}$, is the set of propositions all of which are accepted by $\mathcal{P}$ for the purposes of the conversation, such that $\mathcal{P}$ all believe that $\mathcal{P}$ all accept the propositions, that $\mathcal{P}$ all believe that $\mathcal{P}$ all believe that $\mathcal{P}$ all accept the propositions, and so on (716). Given my assumptions about the nature of propositions, talk about common grounds is roughly interchangeable with talk about context sets, where the **context set** of a conversation $\mathbb{C}$ is "the set of possible situations that are compatible with [the] information" that is common ground in $\mathbb{C}$ (Stalnaker 1999b, 6). **Updating** is an operation that can take place either on the common ground or on an agent's acceptance set, in which a proposition is 'added' to the set in question, or a proposition is 'eliminated' from it.

Before we go on I need to make a disclaimer. It is important to distinguish between suppositions that are consistent with what the supposing agent believes or accepts, and suppositions that are inconsistent with what the supposing agent believes or accepts. Suppositions that contravene antecedent elements of a acceptance set are sometimes called "counterfactual suppositions" (e.g., Stalnaker 1998, 112); but this term is somewhat misleading. After all, a 'factual' proposition may contravene an element of an agent's acceptance set: all that's needed is for the right element of the acceptance set to be false. So it seems that acceptance set-contravening suppositions are not counter-*factual* but rather counter to what an agent *takes* to be factual. But even this is not quite right, because an agent may accept propositions without 'taking them to be factual.' At any rate, whether or not an agent believes that ϕ, if she accepts that ϕ and is to suppose that $\neg\phi$, we cannot say what she has done (in terms of operations on her acceptance set) without having characterized the dynamics of acceptance set revision. This is a tough nut to crack. So in this paper I will simply ignore cases of acceptance set-contravening supposition.

The standard view of supposition

Earlier I said that the 'standard view' of supposition proceeds from the following basic tenet:

The Standard View

> For an agent to suppose that ϕ is, inter alia, for the agent to temporarily accept the proposition that ϕ.

The pervasiveness of the standard view is due in part to Ramsey's influential footnote:

> If two people are arguing 'If *p* will *q*?' and are both in doubt as to *p*, they are adding *p* hypothetically to their stock of knowledge and arguing on that basis about *q*. (1931, 247)

It is likely also due in part to Stalnaker's adaptation of the Ramsey test:

> This is how to evaluate a conditional: First, add the antecedent (hypothetically) to your stock of beliefs; second, make whatever adjustments are required to maintain consistency (without modifying the hypothetical belief in the antecedent); finally, consider whether or not the consequent is then true. (1968, 44)

Here are a few more examples of philosophers appealing to versions of the standard view. Bas van Fraassen writes:

> Much of our opinion can only be elicited by asking us to suppose something, which we may or may not believe. The respondent imaginatively puts himself in the position of someone for whom the supposition has some privileged epistemic status. (1995, 351)

Van Fraassen does not say exactly what he means by "privileged epistemic status." But whatever he does mean, he clearly thinks that supposition can be modelled as, among other things, a temporary and in some sense "imaginative" operation on agents' acceptance sets, by which they are temporarily updated with the supposed proposition.

Similarly, James Joyce writes:

> In general, a *supposition* is a form of provisional belief revision in which a person accepts some proposition *C* as true and makes the minimum changes in her other opinions needed to accommodate this modification. Someone who supposes *C* acts *as if* she believes it for a time so as to see what its truth would involve when viewed from a special perspective. (1999, 182)

On Joyce's view, when an agent supposes that ϕ, he adds ϕ to his acceptance set "for a time" and, for that time, revises his other beliefs to accommodate his temporary acceptance of ϕ. This analysis raises a number of questions that I will have to ignore here. For my purposes it suffices that Joyce's analysis is another version of the standard view on supposition.

Stalnaker's analyses treat supposition as a relation holding between participants in a conversation and a proposition. He writes:

> A supposition . . . is different from an assertion in two obvious ways: first, the intention is to add the content expressed in the supposition to the context set only temporarily; second, an act of supposition does not represent its content as something the speaker believes, and is not subject to criticism on the ground that it is false. But since it alters the context, at least while it is in effect, in the same way as a successful assertion, one should expect to find parallels in the behavior of the two speech acts, and one does. (1998, 17)

Supposition in a conversation $\mathbb{C}$ updates the common ground / context set of $\mathbb{C}$, and hence updates the acceptance sets of the participants in $\mathbb{C}$. Again, in "Common Ground" (2002) Stalnaker writes:

> Acceptance, as I have used the term, is a category of propositional attitudes and methodological stances toward a proposition, a category that includes belief, but also some attitudes (presumption, assumption, acceptance for the purposes of an argument or an inquiry) that contrast with belief, and with each other. To accept a proposition is to treat it as true for some reason. (716)

On Stalnaker's view, an agent's supposition that ϕ entails her acceptance that ϕ, which, at a minimum, entails the updating of her acceptance set with the proposition that ϕ.

Van Fraassen, Joyce, and Stalnaker all hold versions of the standard view of supposition, and Ramsey arguably did so as well. To be fair, I should note that I have quoted from papers and books the main interest of which is not supposition. Nevertheless, it will be worthwhile to see what problems there are with the view all these philosophers seem to hold.

The problem

How should we describe the updating that takes place when an agent supposes that it's raining and she doesn't believe it? According to the standard view, such an agent temporarily adds the proposition that it's raining and she doesn't believe it to her acceptance set. Given plausible assumptions about the semantics of 'and,' this means that she updates with both

(6) the proposition that it's raining; and
(7) the proposition that she doesn't believe that it's raining.

In other words, the agent comes to *accept* both (6) and (7). There *almost* looks to be some tension here: how could a minimally rational agent both accept that it's raining, and accept that she doesn't believe that it's raining?

We have not yet found the real problem with the standard view, however. To do so, we will need to get clearer about the differences between belief and mere acceptance. Recall that to accept that ϕ, in Stalnaker's sense, is to treat the proposition that ϕ as true for some reason. This definition allows that it is possible for a fully rational agent to accept that ϕ while believing that $\neg\phi$. In particular, agents often accept propositions that they either don't believe or believe to be false. For

example, an agent might accept—for purposes of conversation—that it's raining, and all the while believe that it isn't. This is one reason why an agent's accepting both (6) and (7) above is not in itself problematic. My accepting that it's raining is entirely compatible with my accepting that I believe that it isn't raining. So the joint supposition of (6) and (7) does not pose any genuine problems for the standard view.

We can now consider a variation on traditional Moore-Paradoxical sentences:

(8) It's raining and I don't accept[2] that it's raining.

Despite the fact that (8) has all the oddness of typical Moore-Paradoxical sentences, there is *no* problem with an agent's supposing that it's raining and she doesn't accept that it's raining. Indeed, any agent can easily suppose that it's raining and that she doesn't accept it—that is, that it's raining but she doesn't treat it as true for any reason. According to the standard view, for an agent to suppose that it's raining and she doesn't accept it, she must update her acceptance set with

(6) the proposition that it's raining; and
(9) the proposition that she doesn't accept that it's raining.

In addition, to suppose that ϕ is, in general at the very least, to do so consciously and intentionally. So an agent who supposes that ϕ will not only suppose that ϕ but will also accept that she supposes that ϕ. For that reason, she will not only accept that ϕ but will also accept that she accepts that ϕ. According to the standard view, then, her acceptance set would include (6) and (9) above, and, from her acceptance that she accepts that (6), it would also include

(10) the proposition that she accepts that it's raining.

But to accept (9) is to accept that one does not treat the proposition that it's raining as true for *any* reason; whereas to accept (10) is to accept that there *is* some reason for which one treats

[2] 'Accept' in Stalnaker's sense is a "technical term . . . not intended as part of an analysis of a term from common usage" (1984, 79). So we may need to introduce a new term for Stalnakerian acceptance—'accept*', say—and consider instead the sentence "It's raining and I don't accept* that it's raining." I will ignore this complication in what follows.

the proposition that it's raining as true: (9) and (10) are contradictories. So our agent accepts contradictory propositions.

Of course, there are situations in which it's appropriate to accept contradictory propositions. The acceptance of contradictory propositions is arguably part of proof by reductio, for example. But the mere supposition that it's raining and I don't accept it does not resemble proof by reductio in any respects that are relevant for our purposes here. This supposition does resemble other cases in which it's appropriate to accept contradictory propositions, however, as I am about to argue. But until we notice this resemblance, the fact that supposing a Moore-Paradoxical sentence to be true involves accepting contradictory propositions is quite puzzling.

A solution to the problem

I noted earlier that it is common for agents to accept propositions that they don't believe. In fact, agents often accept *contradictory* propositions, as in when they believe that ϕ and accept for purposes of conversation that $\neg\phi$. To handle such situations, Stalnaker introduces the notion of **compartmentalization of acceptances**. As he writes:

> . . . what a person accepts can be compartmentalized in a way in which what he believes cannot be. A person may accept something in one context, while rejecting it or suspending judgment in another. There need be no conflict that must be resolved when the difference is noticed, and he need not change his mind when he moves from one context to the other. (1984, 80–81)

Stalnaker's idea is roughly this: agents accept propositions for all sorts of different reasons. For example, a "historian *accepts* the truth of each of the statements made in his narrative" for the purpose of "constructing" a "coherent total story." But, being conscious of his own fallibility, that same historian may believe that some of the statements in the story are false (92–93). It is no mark against the historian's rationality that he idealizes somewhat, on the one hand, while recognizing, on the other, that he has engaged in idealizations. So, his idealizing acceptance that ϕ is cordoned off from his belief that not ϕ—or, that not *exactly* ϕ—to prevent the derivation of a contradiction. He accepts ϕ, and he accepts $\neg\phi$. But he cannot derive $(\phi \wedge \neg\phi)$, because his acceptance of ϕ is

compartmentalized off from his acceptance of $\neg\phi$. What justifies this compartmentalization is the fact that the reasons why the agent accepts ϕ are disjoint from the reasons why he accepts $\neg\phi$.

Recall that an agent who supposes that it's raining and she doesn't believe it accepts contradictory propositions—(9) and (10), above. I think the right way to handle this potential problem is by appealing to compartmentalization. Clearly, our agent accepts

(6) the proposition that it's raining

to make it possible for her to reason from a supposition. She accepts

(9) the proposition that she doesn't accept that it's raining

for the same reason. (6) and (9) are consistent, and so we do not yet need to appeal to compartmentalization. But she does not accept

(10) the proposition that she accepts that it's raining

to reason from her supposition, but instead as a result of being aware that she has supposed that it's raining. To put the point briskly: (6) and (9) constitute her *supposition*, whereas (10) constitutes (part of) her *recognition* of her supposition. She accepts (6) and (9) for exactly one reason—a reason which happens not to be a reason for her to accept (10). So compartmentalization takes effect between (6) and (9), on the one hand, and (10) on the other.

If this is right, then (6) and (9) are compartmentalized off from at least some of the agent's beliefs, (10) foremost among them. What about her other beliefs? Her supposition should not be compartmentalized off from *all* of her antecedent beliefs, because otherwise the agent wouldn't be able to reason on the basis of anything but what she explicitly supposed. In fact, because in this paper I am only considering suppositions that are consistent with the agent's antecedent beliefs, the *only* beliefs that we *must* compartmentalize off are beliefs like (10): beliefs about the effects that her supposition has had on her acceptance set. That is, the only beliefs that might contradict the content of the supposition are the agent's 'reflective' beliefs about the changes to her acceptance set resulting from the supposition. So we need to compartmentalize the content of the supposition

off from *those* beliefs, but no others.[3] And this is just what is predicted by the justification I gave for compartmentalizing (6) and (9) off from (10). Compartmentalization occurred there because the agent's reason for accepting (6) and (9)—to be able to reason from the supposition that it's raining and she doesn't believe it—was not a reason for accepting (10). But one reason for the agent to accept all the acceptances she had prior to the supposition is to be able to reason from the supposition. So those beliefs should not be compartmentalized off from (6) and (9).

To reiterate: we can say that the agent accepts (6) to be able to reason from a supposition, and that she accepts (9) for the same reason. She does *not* accept (10) to be able to reason from her supposition. How could she? She didn't even accept (10) until after she made her supposition. But she does accept the beliefs she had prior to the supposition to be able to reason from her supposition, among *many other* reasons. That's part of what supposition is, when it doesn't contravene any elements of an agent's acceptance set: it *adds* to what we already accept, rather than replacing it. So the agent's prior beliefs are not compartmentalized off from her supposition.

The problem is solved. Although the agent accepts contradictory propositions—(9) and (10)—she does not accept their conjunction, because her acceptances are compartmentalized off from each other. They are compartmentalized off from each other because they do not share *any* reasons for acceptance. Finally, the cure is not too strong for the patient: the agent's beliefs antecedent to the supposition are not compartmentalized off from the content of the supposition, because all those acceptances share a reason for acceptance. Namely, they are all accepted for the purpose (among others) of reasoning from the supposition.

Now that we have seen how to solve the problem, it should be clear that compartmentalization takes place whether or not the content of the supposition contradicts the agent's beliefs about the effects her supposition has on her acceptance set. In cases where there is no threat of contradiction, there is no problem. But that doesn't mean there's no compartmentalization. Indeed, compartmen-

[3]This isn't to say that there may not be other grounds for compartmentalization—to accommodate the presuppositions of other conversational participants, for example. I will continue to abstract away from this detail.

talization takes place for just the same reason that it did when there was the threat of contradiction. Consider an agent who supposes that it's raining. She accepts the proposition that it's raining, in order to be able to reason from that supposition. She also accepts the proposition that she accepts that it's raining, because she knows that she has supposed that it's raining. But these acceptances are compartmentalized off from each other, because she does *not* accept that she accepts that it's raining in order to be able to reason from her supposition. Finally, as before, one reason that she accepts her antecedent beliefs is to be able to reason from her supposition. So her antecedent beliefs are not compartmentalized off from the content of her supposition.

I don't think that this artifact of my account is undesirable. Indeed, it seems to me that compartmentalization *must* be a mandatory part of supposition, because accounts that fail to recognize this will miss some important facts about supposition. For example, there's a big difference between my asking you to suppose that it's raining, and my asking you to suppose that it's raining and that you believe (or even just accept) that it's raining. But if the kind of compartmentalization that I am appealing to *did not* take place, then there would be no such difference. So compartmentalization takes place in *every* act of supposition. As the title of this paper suggests, I think that defenders of the standard analysis of supposition should be friendly to this result. But it is somewhat surprising that compartmentalization plays such an important role in supposition.

I said earlier that my acceptance of ϕ is compartmentalized off from my acceptance of ψ just in case my reasons for accepting ϕ are disjoint from my reasons for accepting ψ. (As far as I can tell, this view is consistent with Stalnaker's position in *Inquiry*, but I am not sure whether it is his considered view.) It's worth noting that given this conception, the metaphor of 'compartmentalization' is potentially misleading. I say this because on my way of thinking about compartmentalization, the relation *being compartmentalized with*—i.e., the relation *not being compartmentalized off from*—is not an equivalence relation. Although it is obviously reflexive and symmetric, it is not transitive, because it's possible for my reasons for accepting that ϕ to overlap with my reasons for accepting that ψ, while my reasons for accepting that ψ overlap with my reasons for accepting that

χ, although my reasons for accepting that ϕ are disjoint from my reasons for accepting that χ.

For example, suppose I haven't made up my mind about whether or not it's raining. But you and I are in a conversation, and you clearly presuppose that it's raining. So for purposes of conversation, I accept that it's raining. Of course, I also accept everything I believed prior to accepting that it's raining for purposes of conversation. Now *while I am doing this* I may *suppose* that it's not raining. That is, for the purpose of reasoning from a supposition, I accept that it's not raining. And, again, I accept everything that I believed prior to accepting that it's not raining also for the purpose of reasoning from my supposition. So my reasons for accepting that it's raining overlap my reasons for my prior beliefs, and my reasons for accepting that it's not raining also overlap with my reasons for my prior beliefs. So my prior beliefs are not compartmentalized off from either my acceptance that it's raining or my acceptance that it's not raining. But my acceptance that it's raining *is* compartmentalized off from my acceptance that it's not raining, because my reasons for accepting the one are disjoint from my reasons for accepting the other. Thus the logic of so-called compartmentalization is weaker than S5; it is Brouwerian.

I want to close by mentioning one payoff had by these observations about supposition. Consider a 'Thomason conditional,' i.e., a conditional like:

(11) If my business partner is cheating me, I'll never realize that he is.[4]

Such sentences are sometimes taken to pose a problem for the Ramsey test. The Ramsey test is the claim that the acceptability of an indicative conditional 'If *A*, *C*' is a function of the amount of credence that one gives *C* on the supposition that *A*. The problem that Thomason conditionals are supposed to pose is this:

> . . . when I pretend to accept 'My partner is cheating me' and whatever flows from that in my belief system, I find myself also pretending to accept 'I am aware that my partner is cheating me'. So the conditional fails the quoted version of the Ramsey test, yet the conditional may be perfectly all right. (Bennett 2003, 28–29)

[4]Van Fraassen credits such examples to Richmond Thomason in van Fraassen 1980.

One response to this argument asks us not to confuse the *mere supposition* that *A* with all the things one would learn or come to believe *on learning* that *A* (see, e.g., Stalnaker 1984, 105). For example, when we learn that *A* we "normally—perhaps always" learn that we learn that *A* (105). When we merely suppose that *A*, by contrast, we do not learn that we learn that *A*, although we do learn that we *accept* that *A*, as I have tried to emphasize. As I understand it, Stalnaker's response amounts to this: when the Ramsey test asks us to consider the credence we would give to *C* on the supposition that *A*, we should in some sense ignore everything that we come to accept in supposing that *A* except *A* itself and what we "infer from" *A* (105).

What I say about Thomason conditionals is similar but, I think, a bit easier to explain. Note that insofar as it appeals to supposition, the Ramsey test appeals to *compartmentalized* supposition. So I *do* "pretend to accept 'I am aware[5] that my partner is cheating me,' " as Bennett suggests. But I do *not* accept that I accept my partner is cheating me for the purpose of reasoning from the supposition: my supposition and antecedent acceptances are compartmentalized off from my beliefs about the effects my supposition has had on my acceptance set. So the fact that I accept that I accept that my partner is cheating me makes no difference to my suppositional reasoning. In particular, it makes no difference to the credence I give *C* on the supposition that *A*.

[5]I think 'aware' isn't the word Bennett should have used here. In what follows I substitute 'accept' on his behalf.

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