

SUSPENSION, ENTAILMENT, AND PRESUPPOSITION

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Abstract. The paper is concerned with the rational requirements for suspended judgment, or what suspending judgment about a question rationally commits one to. It shows that two purported rational requirements for suspended judgment cannot both be true at the same time, at least when the entailment relation between questions is understood a certain way. The first one says that *one is rationally required to suspend judgment about those questions that are entailed by the questions that one already suspends judgment about*. The second one says that *one is rationally required to believe the presuppositions of the questions one suspends judgment about*. Two plausible solutions to the problem are discussed. One of them explicates the relation of entailment between questions in an alternative manner, and the other one rejects the presupposition requirement. Either way, a closure requirement for suspended judgment can be maintained which is analogous to the closure requirement for belief. Whereas belief is ideally closed under entailment between propositions, suspended judgment is ideally closed under entailment between questions.

1 Set up

I will be using the term ‘suspended judgment’ here as a placeholder for a doxastic state of being on the fence as to what the answer to a given question is. A state of suspended judgment on a question is a state of unsettledness or indecision with regard to which of its answers are true.¹

¹Many describe suspended judgment as a state of *doxastic neutrality*—see for example Sturgeon (2010) and Friedman (2017). Note, however, that the kind of unsettledness required for suspended judgment in the present sense is compatible with lack of perfect neutrality as to which of the question’s answers are true, in the sense that the suspender may favor some answers over the others in terms of her credences or degrees of confidence. The suspender can be more confident that one of the question’s answers is true than she is of the others and yet still be undecided as to which of those answers is actually the case. See also Wagner (2022) for the characterization of suspended judgment as a state of (doxastic) indecision.

In a case of suspension of judgment, there is more than one answer to the target question that might be true as far as the subject herself can tell—she is still in doubt as to which of those answers is the actually true one.² The suspender has a question, but no answer to it. The attitude of suspended judgment is an interrogative doxastic attitude.³

More precisely, in order to be in that doxastic state, the subject must not yet have settled on or believe any of the question's *complete* answers after having considered the question. She may have already settled on some of the question's *partial* answers, however, in which case the question will still be *open* relative to what the subject believes.

For example, the subject may suspend judgment about *where Frege was born* even though she believes that *Frege was not born in Vienna*. That *Frege was not born in Vienna* is at least a partial answer to the question of *where Frege was born*, since it rules out one of the possible complete answers to it, namely, that *Frege was born in Vienna*, without yet settling the question. For any other city *c*, however, our subject doesn't yet believe that *Frege was born in c* (a complete answer to the target question), and she is still unsettled or in doubt as to which of these complete answers is actually the case.

It is also possible for one to suspend judgment about a *polar* or *yes/no*-question while believing some of its partial answers. For example, a subject might suspend judgment about *whether the universe had a beginning* while at the same time believing a partial answer to that question, say, that *the universe didn't start with the Big Bang*. That *the universe had a beginning* and that *the universe didn't have a beginning* respectively are complete answers to the original question. And, since the proposition that *the universe didn't start with the Big Bang* does not yet entail that *the universe didn't have a beginning* (it could have begun in some other way), though it rules out one way in which the universe could have had a beginning, our subject hasn't yet settled her question either in the positive or in the negative.

²Accordingly, Huemer (2011, p. 1) takes it that saying something of the form 'It may or may not be that *p*' is a way of expressing one's state of suspended judgment about *whether p*. Additionally, I say, the utterance of an interrogative is also a way of expressing suspended judgment. For example, in uttering the interrogative sentence 'Who let the dogs out?' I may be expressing my state of suspended judgment regarding *who let the dogs out*.

³See Friedman (2013) on the notion of interrogative or question-directed attitudes.

Ascriptions of suspended judgment embed interrogative complements such as ‘whether it will rain’, ‘who shaves the barber’, ‘what he said’, ‘when will the sun explode’, etc. I use ‘ Q ’ as a placeholder for such interrogative complements when embedded in ascriptions of suspended judgment (as in ‘She suspends judgment about Q ’), and as a placeholder for the corresponding interrogative sentences when occurring outside such linguistic contexts (as in ‘ Q presupposes that p ’).

Questions are the semantic values of interrogatives—both interrogative sentences and interrogative complements. There are different ways of representing questions in formal semantics, but a more-or-less standard approach is to think of them as sets of complete answers, understood in turn as propositions.⁴

In one variation of this view, a question is the set of its *maximal* complete answers. For example, the proposition that *the universe had a beginning* is a maximal complete answer to the question of *whether the universe had a beginning*, while the proposition that *the universe began with a Big Bang* is a complete answer that entails that maximal complete answer, without being a maximal complete answer to it. So the former but not the latter answer belongs to the set that makes up the question of *whether the universe had a beginning*. Another option is to have that set be downward closed, so that it contains *all* the complete answers to the question, including the ones that entail any of its maximal complete answers.⁵ In the latter case, *both* of the aforementioned answers belong to the set that makes up the question of *whether the universe had a beginning*.

The difference between those two options won’t affect the points that are made here. I will deploy the set-theoretic notation ‘ $a \in Q$ ’ below to convey the information or proposition that a is one of the *complete* answers to Q , thus treating questions as the sets of their complete answers. But this construal of questions is just an expedient in this context, not strictly needed to formulate the puzzle that will occupy us below.⁶

⁴Different versions of this general approach can be found in Hamblin (1973), Karttunen (1977), Groenendijk and Stokhof (1984), Ciardelli et al. (2019).

⁵See Roelofsen (2019) for an overview of these and other options.

⁶It is important to emphasize here that those are views about the *semantic values* of interrogative sentences and complements, not views about what it takes for a speaker to *understand* such expressions. Compare to declarative sentences: we might give a truth-conditional, compositional semantics for the declarative sentences of a language in terms of sets of possible worlds and set-theoretic relations between them, without

Questions also have *presuppositions*. To give an often used example, the question of *whether you quit smoking* presupposes that *you were a smoker before*. Perhaps you weren't, however, in which case you won't give any direct answer to that question if I pose it to you—you will rather *correct* my question by denying its presupposition ('But I never smoked!'). The notion of presupposition that is relevant here is also a semantic one. A question's presupposition in this sense is any proposition p such that p is a necessary condition for any of the complete answers to that question.⁷ More precisely, where a and p are variables for propositions:

(PRE) A question Q presupposes that p if and only if, for any $a \in Q$, necessarily, a is the case only if p is the case.

I have just presented some of the building blocks for the investigation to follow, to do with the notions of suspended judgment, questions and presupposition. One last notion that will be important here is that of a *rational requirement*. These are requirements of *structural* rationality. They are supposed to be such that, when a subject's doxastic state fails to abide by them, the attitudes that make up that state don't fit together or they form an *incoherent* set of attitudes.⁸

Examples include the requirement not to hold mutually contradictory beliefs and the requirement not to assign higher credence to a conjunction than one assigns to one of its conjuncts. A rationally ideal cognizer always abides by such requirements.

I will assume here that the rational requirement operator takes *wide scope* over combinations of ascriptions of doxastic attitudes/their

thereby intending to give necessary and sufficient conditions for a speaker to count as understanding the sentences of that language. The competence of speakers with the language does not consist of their knowledge of such truth-conditions as they are formulated in formal semantics. Similarly, when we construe of the semantic values of an interrogative as the set of its complete answers, we are not assuming that speakers have to entertain or think of all of the answers that belong to that set in order to count as understanding the interrogative.

⁷See also Belnap and Steel (1976, p. 5), Groenendijk and Stokhof (1984, pp. 31-32). For the notion of proper presupposition of speech acts, see Zakkou (forthcoming).

⁸See Broome (1999) and Christensen (2004) for this notion of rationality. The distinction between *substantial* rationality (responsiveness to reasons/evidence) and *structural* rationality (coherence), is more sharply drawn in Worsnip (2021, Ch. 1) and Fogal and Worsnip (2021).

denials.⁹ It is possible, however, to reconstruct the points that I make here by giving that operator a narrower scope or by interpreting it as a dyadic conditional operator.¹⁰

One rational requirement in particular will play a crucial role here, namely, the ‘Don’t Believe and Suspend’ requirement:

(DBS) Where $a \in Q$, one is rationally required not to suspend judgment about Q while believing that a .

According to (DBS), it is incoherent for one to suspend judgment on a question while at the same time believing one of its complete answers. Consider: suspending judgment about *whether the universe had a beginning* and believing at the same time that *the universe didn’t have a beginning*, suspending judgment about *where Frege was born* and believing at the same time that *Frege was born in Jena*, etc. In all of these cases, there is conflict within the subject’s attitudes—a lack of coherence between her attitude of suspension and her attitude of belief.¹¹

I will be relying on the truth of (DBS) or taking it for granted here. In particular, I will not treat its rejection as a viable solution to the problem presented in Section 4.

2 The entailment requirement for suspension

What other rational requirements there might be for the attitude of suspended judgment? In particular, are there rational requirements that tell the subject to suspend judgment on yet other questions, given the questions she is suspending judgment about?

By way of analogy, consider one typical example of a rational requirement for belief: that one believes the propositions that *follow*

⁹Broome (2007) defends the wide-scope interpretation, and Kolodny (2007) criticizes it. For convincing responses to worries about the wide-scope interpretation, see Brunero (2010) and Way (2011).

¹⁰For the latter kind of interpretation and its advantages, see Comesaña (2015).

¹¹If the reader agrees with Lewis (1982), Stalnaker (1984) and others that our minds admit of different *fragments* (ways of framing things that facilitate access to different bits of information), then think of (DBS) as relativizing the ascription of suspended judgment and the ascription of belief to the very same fragment. See Borgoni, Kindermann and Onofri (2021) for a recent volume on the issue of fragmentation and how it bears on epistemological issues.

from p if one believes that p —subject, maybe, to the condition that the believer entertains the former propositions and she is sensitive to their inferential connections to p /she is aware that they follow from p .

Just as there is one such ‘closure’ requirement for ideally rational belief, we might think, so there should be a closure requirement for ideally rational suspension. The difference is that, whereas the former attitude is ideally closed under entailment relations between *propositions*, the latter attitude is ideally closed under entailment relations between *questions*.¹² In other words, we might want to endorse the following:

- (E) Where Q_1 entails Q_2 , one is rationally required to be such that: if one suspends judgment about Q_1 then one suspends judgment about Q_2 .

It is possible to enrich the antecedent of the conditional embedded in (E) with conditions that are analogous to the ones that are sometimes added to the conditional that is embedded in the closure requirement for belief: the subject not only suspends judgment about Q_1 , but also considers Q_2 and is sensitive to the logical connections between Q_1 and Q_2 , say. For the sake of simplicity, however, we can just stick to (E) crudely formulated as is above, and think of it as a blueprint for some such better qualified principle. So from now on, I will not mention any such additional conditions (that the subject considers Q_2 , etc.) and I will leave them implicit.

The expression ‘entails’ in (E) is flanked by variables for questions, as opposed to variables for propositions. It therefore suggests that there are entailment relations between questions, not only entailment relations between propositions. I will explore at least two ways of explicating such a relation between questions here, one stemming from work in the semantics of natural language interrogatives (Section 4), the other one from the field of erotetic logic, or the logic of questions (Section 6).

One disadvantage of (E) is that its truth-value is unclear to us until we have such explications to interpret the meaning of ‘entails’ in it, or until we have examples of entailment relations between questions before us (compare to the requirement of closure for belief: we can

¹²See also Rosa (2021) and Friedman (forthcoming) for this idea.

quickly think of many familiar examples of entailment relations between propositions). So a more informative assessment of (E) will have to wait for more theoretical baggage.

What can be said with more determinacy about (E) at this point is the following. Suppose a question Q_1 entails another question Q_2 , whatever more precisely that means. Then the only way in which a subject can *violate* the requirement issued by (E) is by suspending judgment about Q_1 and not suspending judgment about Q_2 . In contrast, if the subject doesn't suspend judgment about Q_1 , or if she suspends judgment about Q_2 , she abides by that requirement and is not deemed incoherent as far as (E) itself goes. Accordingly, we read the 'if... then...' construction embedded in (E) as having the truth-conditions of the *material* conditional.¹³

3 The presupposition requirement

The entailment requirement in (E) is not the only rational requirement for suspended judgment we can think of, in addition to (DBS). (E) was motivated by analogy to the closure requirement of belief. But the analogy can lead to yet another principle of coherent suspension, other than (E).

Suppose that p entails that q (entailment relation between propositions). If that is so, then in a good sense the proposition that p also *presupposes* the proposition that q , in that the former is true only if the latter is true. So when we say that, if p entails that q , then the subject is rationally required to be such that she believes that p only if she believes that q (closure requirement), we are in a sense saying that the subject is rationally required to believe the presuppositions of the propositions that she believes.¹⁴

And now the analogy to the closure requirement of belief suggests that, when it comes to suspended judgment on a question too, the suspender is rationally bound to believe the question's presuppositions,

¹³Namely, 'if p then q ' is true if and only if either ' p ' is false or ' q ' is true.

¹⁴Since we are giving wide-scope to the requirement operator, this means: the subject is required to either believe the presuppositions of the propositions that are believed by her, or cease to believe what she does.

just like she is rationally bound to believe the presuppositions of the propositions that are believed by her.

The idea is therefore the following:

- (P) Where Q presupposes that p , one is rationally required to be such that: if one suspends judgment about Q , then one believes that p .

For example, the question of *how the universe began* presupposes that *the universe had a beginning*. It then follows from (P) that subjects who suspend judgment about *how the universe began* without believing that *the universe had a beginning* are in an incoherent doxastic state.¹⁵

What (P) says is that belief is a condition for rational suspension of judgment. One cannot coherently suspend judgment about something without believing something, namely, any presupposition of the very question one suspends judgment about. One is required to either believe the question's presupposition, or rather cease to suspend judgment on that question.

There are indeed cases where the subject seems to be incoherent in suspending judgment on a question without thinking that one of its presuppositions are true. Such cases seem to support (P) at first, because (P) *entails* that they are cases of incoherence.

Consider for example a case where, being fully aware that *there isn't a largest prime number* as I am, I go on and suspend judgment about *what the largest prime number is*. There is obviously something incoherent about me in this (luckily hypothetical) case. If I already believe that *there isn't a largest prime number*, then I should also think that there is no true complete answer to the question of *what the largest prime number is*. In fact, I will deny or disbelieve any complete answer to that question that is brought to my attention, e.g., that *3 is the largest prime*, that *97 is the largest prime*, etc. So why be on the fence about *which prime number is the largest one*? The question 'doesn't arise' given what I believe—so I shouldn't be suspending judgment about it.

We must be careful, however, about *exactly which* principles of rational suspended judgment such cases give support to. In particular, a weaker principle than (P) would do the job of explaining that/why I am in an irrational state in the aforementioned case, namely:

¹⁵The 'if... then...' of (P), much like the one of (E), is read again as a material conditional.

(PN) Where Q presupposes that p , one is rationally required not to be such that: one suspends judgment about Q and believes that *not- p* .

In the case from the previous paragraph, I was violating (PN), for in that case I was suspending judgment about a question Q (*What is the largest prime number?*) which presupposes a proposition p (*There is a largest prime number*), while believing that *not- p* (*There isn't a largest prime number*). So we don't need (P) to explain my irrationality—(PN) does the job.

Of course, this is not to say that there aren't other considerations that speak in favor of (P) itself. There are after all cases where the subject doesn't so much as deny or disbelieve the presupposition of the question she is suspending judgment about, and yet she still seems to be doing something wrong.

As a potential example of that, consider a case where I suspend judgment about *which of Ruth Marcus and Willard Quine is the greatest philosopher of all times*, though I do not so much as think that *either Ruth Marcus or Willard Quine is the greatest philosopher of all times*—but I do not disbelieve or deny that, either (I do not believe that *neither Ruth Marcus nor Willard Quine is the greatest philosopher of all times*). Yet, it seems like I'm doing something wrong suspending judgment about which of those two philosophers is the greatest one, seeing as I don't think that at least one of them is.

Since I do not disbelieve the target question's presupposition, (PN) is silent about the coherence of my doxastic state in the latter case. But (P) delivers the verdict that my doxastic state is incoherent, and therefore it counts as a possible explanation of what is wrong with me in this new example (see Section 5 for an alternative explanation).

That is a 'bottom-up' way of motivating (P), that is, on the basis of particular examples. Another way of motivating (P)—a 'top-down' way, which is based on even more general principles—goes roughly as follows.

Questions with false presuppositions are defective questions.¹⁶ They are defective under a number of dimensions. To begin with, *there are no true complete answers* to questions with false presuppositions. It follows from this that, where Q relies on a false presupposition, no one will ever know Q , or know the true answer to Q (since the question of

¹⁶On this point, see also Willard-Kyle (2023).

when Plato wrote the Critique of Pure Reason relies on a false presupposition, no one can ever know *when Plato wrote the Critique of Pure Reason*). For knowledge is factive.

And it would seem that, in order for one to coherently suspend judgment on a question, one has to take that question to be non-defective. For why should one occupy oneself with a question, or put it in one's cognitive agenda, if one doesn't already think that the question is an okay question, i.e. a *non-defective* question? In particular, then, in order for one to coherently suspend judgment on a question, one has to take the question's presuppositions to be true, so that it *will* admit of true complete answers (answers that are not prevented from being knowable—at least not on that count). And that is just what (P) says.

4 One notion of entailment between questions and a puzzle

We can now combine (E) and (P) with different explications of the notion of entailment between questions in order to explore what their consequences are. The first notion that I will explore here comes from the literature on the semantics of interrogatives, and it says the following: Q_1 entails Q_2 if and only if every complete answer to Q_1 entails a complete answer to Q_2 .¹⁷ Call that *the first notion of entailment*, and let ' \models_1 ' be the symbol for it.

So, for example, by the first notion of entailment:¹⁸

- (1) *Who was the unique killer of Laura Palmer?* \models_1 *Did Bob kill Laura Palmer?*

Every complete answer to the 'premise'-question in (1) entails a complete answer to the 'conclusion'-question in (1). For example, that *it was Ana (and no one else) who killed Laura Palmer* entails that *Bob did not kill Laura*

¹⁷This notion is found in the partition theory of questions of Groenendijk and Stokhof (1984), which they call 'a kind of implication relation between questions' (pp. 220-221). See also Ciardelli, Groenendijk and Roelofsen (2019, p. 27), where Q_1 entails Q_2 if and only if $Q_1 \subseteq Q_2$, and questions here are the downward closed sets of their complete answers.

¹⁸The examples feature the names of fictional characters from David Lynch's television series *Twin Peaks*.

Palmer, and that *it was Bob (and no one else) who killed Laura Palmer* entails that *Bob killed Laura Palmer*, etc.

By the same token, however:

(2) *Who killed Laura Palmer?* \vDash_1 *Was Laura Palmer killed?*

And that is again because every complete answer to the premise-question in (2) (e.g., that *Bob killed Laura Palmer*) entails a complete answer to the conclusion-question in (2) (that *Laura Palmer was killed*).

Now we can show that either of (E), (P), or the first notion of entailment must be rejected. For (E) says, remember:

(E) Where Q_1 entails Q_2 , one is rationally required to be such that: if one suspends judgment about Q_1 then one suspends judgment about Q_2 .

By putting (2) and (E) together, we derive the following consequence:

(3) One is rationally required to be such that: if one suspends judgment about *who killed Laura Palmer* then one suspends judgment about *whether Laura Palmer was killed*.

And (P) says, remember:

(P) Where Q presupposes that p , one is rationally required to be such that: if one suspends judgment about Q , then one believes that p .

But the question of *who killed Laura Palmer* presupposes that *Laura Palmer was killed*. So (P) entails:

(4) One is rationally required to be such that: if one suspends judgment about *who killed Laura Palmer* then one believes that *Laura Palmer was killed*.

But (3) and (4) cannot both be true—at least not under the plausible assumption that I can coherently suspend judgment about *who killed Laura Palmer*. For suppose I suspend judgment about *who killed Laura Palmer*. According to (3), I am in a coherent state only if I also suspend

judgment about *whether Laura Palmer was killed*. And, according to (4), I am in a coherent state only if I believe that *Laura Palmer was killed*.

Suppose I abide by both requirements, (3) and (4). Then I am in the following state: I suspend judgment about *who killed Laura Palmer*, I suspend judgment about *whether Laura Palmer was killed*, and I believe that *Laura Palmer was killed*. That state is not coherent, however, seeing as the ‘Don’t Believe and Suspend’ requirement is true, again:

(DBS) Where $a \in Q$, one is rationally required not to suspend judgment about Q while believing that a .

In the example just given, I believe an answer to the question of *whether Laura Palmer was killed*, namely, the answer that *Laura Palmer was killed*, while suspending judgment on that very question. So I can only abide by both (3) and (4) in the envisioned situation if I fail to abide by (DBS). If (3) and (4) are true, then it is not possible for me to coherently suspend judgment about *who killed Laura Palmer*, which is clearly false, since it is at least possible for me to coherently do that. (There is nothing specific about the question of *who killed Laura Palmer* here—the problem generalizes to infinitely many questions that subjects can coherently suspend judgment about).

Given that one of (3) and (4) must be false, one of (E), (P) and the first notion of entailment must be rejected. Should we reject the entailment requirement (E)? Or maybe the presupposition requirement (P)? Or the first notion of entailment between questions?

5 Reject the presupposition requirement

One option is to reject the presupposition requirement on the basis of some of our pre-theoretic judgments about coherence. It seems, for example, that I can coherently suspend judgment about *who killed Laura Palmer* without believing that *Laura Palmer was killed*—which is a presupposition of the former question—but suspend judgment about *whether Laura Palmer was killed*, too.

We can think of the purported possibility along the following lines. I know that *Laura Palmer is dead*, though I cannot make up my mind as to *whether she has been killed* (I suspend judgment about that). I disbelieve a bunch of complete answers to the question of *who killed Laura*

Palmer—for example, I disbelieve that *I killed Laura Palmer*, and that *Napoleon killed Laura Palmer*, etc. But, when it comes to some other complete answers to that question, I suspend judgment about whether they are the case—for example, I suspend judgment about *whether Bob killed Laura Palmer*, about *whether Leland killed Laura Palmer*, etc. There were some sketchy characters surrounding Laura Palmer in the situation, and I can't rule out the possibility that those suspects have killed her (though I also can't rule out the possibility that she died in some other way).

Now I consider the question of *who killed Laura Palmer*, say, because a fellow investigator has uttered the interrogative 'Who killed Laura Palmer?' out loud and I heard them (the question has been brought to my attention). I don't think the fellow investigator is in an epistemically better position than I am when it comes to settling the question of *whether Laura Palmer was killed*, but they have prompted me to consider the question of who killed Laura Palmer all the same. So now I also suspend judgment about *who killed Laura Palmer*.

In this last case, I suspend judgment about both questions: the question of *who killed Laura Palmer* and the question of *whether Laura Palmer was killed*. And it seems that, insofar as I don't believe that *Laura Palmer was killed*, there is no incoherence in my doxastic state.

It is not hard to produce examples where a subject suspends judgment on a question while *also* suspending judgment on whether some of its presuppositions are true, instead of believing them, apparently without incoherence.¹⁹

But that is in conflict with (P). We can reject (P) on the basis of those judgments and endorse something weaker than (P), like (PN) from above, which forbids suspending judgment on a question while *disbelieving* one of its presuppositions.

What, then, is to be made of the considerations that seemed to speak in favor of (P), instead of the weaker (PN)? I suggest that we can explain that impression away by pointing out that something anal-

¹⁹Here is another possible example: I suspend judgment about *whether the universe started with the Big Bang* while also suspending judgment about *whether the universe had a beginning* (as opposed to believing that the universe had a beginning), despite the fact that the question of *whether the universe started with the Big Bang* presupposes that *the universe had a beginning*.

ogous to (P) seems to hold true for the activity of *inquiry*, as opposed to its holding true for the state of suspended judgment. The relevant considerations give support to an instrumental norm of inquiry, not to a coherence requirement for suspended judgment. If (P) strikes us as true, it is because such an instrumental norm of inquiry strikes us true.

Consider again the case where I suspend judgment about *which of Ruth Marcus and Willard Quine is the greatest philosopher of all times*, though I do not think that *either Ruth Marcus or Willard Quine is the greatest philosopher of all times* (and I do not disbelieve that either). It seems, we noted, that I'm doing something wrong suspending judgment about which of those two philosophers is the greatest philosopher, seeing as I don't think that at least one of them is—and (P) delivers that verdict. But perhaps that is not what I'm doing wrong (what I am doing wrong here is not that I am failing to be coherent). What could more conceivable be wrong or problematic, however, would be to start inquiring into which of those two philosophers is the greatest one without first establishing that at least one of them is.

We can think of it like this. Inquiry is an activity, it is something that we do, and we do it with a goal, namely, the goal of settling a question.²⁰ As with any other goal-directed activity, the rationality of inquiry depends on an estimation of its costs and benefits (the kind of rationality concerned here is instrumental rationality, the rationality of actions). In particular, if the question's presuppositions are not true, then the question will not have a true complete answer. Searching for a true answer to it would be a wild-goose chase. It would cost time and resources (including cognitive resources such as working memory space) for nothing. Before one sets off to inquire into the question, then, one better make sure its presuppositions are true—in which case the question will have a true answer, and consequently the chances that one will make a worthwhile use of one's time and resources by inquiring

²⁰There should be more than one way to make more precise sense of the goal of settling a question, e.g., we can take it to be the goal of knowing what the true answer to the question is—see Kelp (2021) for some discussion on this. Accordingly, Whitcomb (2017) and Friedman (2017) advance a norm of inquiry according to which one shouldn't inquire into a question one already knows the answer to. See Archer (2018) for purported counterexamples to that norm, and van Elswyk and Sapir (2021) for a response. Falbo (2023) proposes that inquiry aims at epistemic improvement more broadly, not only knowledge.

into it are greater.²¹

So the thought is, for example, that whereas there is nothing wrong (coherence-wise) with me suspending judgment about *who killed Laura Palmer* and also suspending judgment about *whether Laura Palmer was killed*, the act of inquiring into *who killed Laura Palmer* is less risky from my own perspective when my own perspective represents the world as being such that Laura Palmer was killed. The risk that I am ruling out here is that I'll be wasting my valuable time and resources on a fruitless endeavour, a search for a true answer where there isn't one. (P) is false, but an analogous norm of inquiry with the instrumental 'should' is true. Maybe we think (P) is true because we think some such norm of inquiry is true.

I won't have space to explore the implications of this strategy for rejecting (P) here—for example, a loosening of the ties between suspended judgment and inquiry seems to ensue from it (because inquiry into *Q*, but not suspended judgment about *Q*, is normatively constrained by belief in *Q*'s presuppositions).²² The message so far is just that rejecting (P) is a well-motivated move.

6 Another notion of entailment between questions

Rejecting (P) arguably doesn't do away with all unacceptable consequences of the premises of our argument from Section 4, however—that is, the argument to the conjunction of (3) and (4) (which cannot both be true, assuming that (DBI) is true).

To say, as we did in the previous section, that it seems coherent for one to suspend judgment about both questions at the same time, the question of *who killed Laura Palmer* and the question of *whether Laura*

²¹Willard-Kyle (2023) has recently defended a *knowledge norm of inquiry*, according to which one shouldn't inquire into a question unless one knows that it has a true answer. That norm would seem to entail (P), seeing as knowledge entails belief. But for that we need the extra assumption that knowing that the question has a true answer entails knowing the question's presuppositions. Furthermore, Willard-Kyle means the knowledge norm to be an epistemic norm, whereas the 'should' of the norm of inquiry I am considering here is the 'should' of practical rationality—it is a norm concerning a certain type of goal-directed *activity*.

²²See Friedman (2017), who defends the view that suspended judgment is an inquiring attitude.

Palmer was killed, is not yet to deny the coherence of suspending judgment about *who killed Laura Palmer* while believing at the same time that *Laura Palmer was killed*. Neither of these doxastic states is necessarily incoherent. In fact, it seems perfectly coherent for one to suspend judgment about *who killed Laura Palmer* and believe at the same time that *Laura Palmer was killed*. But this verdict conflicts with the combination of (E) and the first notion of entailment. For the combination of (E) and the first notion of entailment again gives us:

- (3) One is rationally required to be such that: if one suspends judgment about *who killed Laura Palmer* then one suspends judgment about *whether Laura Palmer was killed*.

Now suppose I suspend judgment about *who killed Laura Palmer* and I believe that *Laura Palmer was killed*. Either all that is true and I don't suspend judgment about *whether Laura Palmer was killed*, or all that is true and I do suspend judgment about *whether Laura Palmer was killed*. If the latter (never mind if this is so much as possible), I fail to abide by (DBS) and I am therefore incoherent. If the former, then I fail to abide by (3)—so that if (3) were true I would again be in an incoherent state. But it doesn't look like I am incoherent here: I am simply suspending judgment on a question, believing its presupposition, and not suspending judgment about whether that presupposition is true. What is incoherent about that?

So, although we may have already abandoned (P), we haven't excised all evil yet. The question now is whether we should reject (E) or the first notion of entailment, seeing as they entail (3), and (3) itself is false.²³

Before we go on and reject (E), however, we would do well to look at alternative notions of entailment between questions. The motivation behind (E), remember, is that it is analogous to the closure requirement of ideally rational belief. Propositions are the contents of belief, and

²³To 'reject' the first notion of entailment here doesn't mean endorsing the claim that it is not a legitimate notion of entailment on a par with others (when they are thought of as relations *within* a logic or formal system). It means, rather, endorsing the claim that it is not a notion of entailment between questions with which we can ground true rational requirements for suspended judgment, understood again as an interrogative attitude.

questions are the contents of suspended judgment. Just like the former is ideally closed under entailment relations between propositions, the thought was, so the latter is ideally closed under entailment relations between questions.

Luckily, there are alternative notions of an entailment relation between questions, other than what I have called the first notion of entailment above. Here is one such way, drawn from work on erotetic logic by Wiśniewski (1996). We say that Q_1 entails Q_2 if and only if (a) every complete answer to Q_2 entails at least a partial (if not a complete) answer to Q_1 and (b) if all the presuppositions of Q_1 are true, then all the presuppositions of Q_2 are true.²⁴

We can gloss (a) as follows: entailment between questions is a matter of openness-preservation, in the sense that if the premise-question is still open, then the conclusion-question is open, too (contra-positively: if the conclusion-question is closed, then so is the premise-question). And we can gloss (b) as follows: if Q_1 has a true complete answer, then so does Q_2 . Call that the second notion of entailment, and let ' \models_2 ' be the symbol for it.

Indeed, in contrast to the first notion of entailment, we now have that:

(5) *Who killed Laura Palmer?* $\not\models_2$ *Was Laura Palmer killed?*

That is because (a) is not satisfied for that pair of premise- and conclusion-questions: that *Laura Palmer was not killed* is a complete answer to the latter, though it does not entail any partial or complete answer to the former. (The converse of (5) also does not hold, this time because (b) is not satisfied).

So the conflict that we saw in Section 4 doesn't even get off the ground here, for now we don't get to derive the trouble-making requirement in (3)—not even if we assume that the presupposition requirement (P) is true (in which case we would have to explain the impression away, endorsed above, that it is coherent for one to suspend judgment on a question and on its presuppositions at the same time). As far as the combination of (E) and the second notion of entailment goes, subjects are

²⁴See Wiśniewski (1996 p. 7).

rationally free to suspend judgment about *who killed Laura Palmer* without suspending judgment about *whether Laura Palmer was killed*. And that is again a desirable result.

Perhaps, then, we can endorse (E) while thinking of the entailment relation in its antecedent as the second notion of entailment. We would then have a rational requirement for suspended judgment that is analogous to the closure requirement for belief—one that generates neither normative conflicts when combined with (P), nor the counterintuitive verdicts that ensued from the combination of (E) with the first notion of entailment.

7 Concluding remarks

Reflection on the issues discussed above has put us in a better standing with respect to the question of what the rational requirements for states of suspended judgment are. We saw, first, that the rejection of the presupposition requirement (P) is well-motivated, over and above the fact that it conflicts with the entailment requirement (E) as formulated with the first notion of entailment. Suspended judgment about a given question, it would seem, is not rationally constrained by belief in that question's presuppositions (even though maybe inquiry is).

Second, we found that if (E) is to be a true principle of coherence—or if ideally rational suspended judgment is to be closed under an entailment relation between questions—then the notion of entailment that features in it better not be the *first* notion of entailment in any case. Luckily, when we formulate (E) with the *second* notion of entailment, we are not committed to the problematic consequences that (E) has when it is formulated with the first notion of entailment.

As far as the considerations presented here go, then, we are free to endorse (E), rejecting (P) as we may. Suspended judgment is ideally closed under entailment between questions, just like belief is ideally closed under entailment between propositions. Whether that is a good theoretical choice for us to make, of course, will ultimately depend more specifically on which other requirements become instances of (E) when formulated with the second notion of entailment.

As a brief illustration of how that would go, consider a generalization of the second notion of entailment, which also allows us to assess

entailment relations featuring propositions, besides questions, as occupying the position of premises: $\{Q_1, p\}$ entails Q_2 if and only if (a_G) every complete answer to Q_2 combined with p entails at least a partial (if not a complete) answer to Q_1 and (b_G) if all the presuppositions of Q_1 are true and p is true, then all the presuppositions of Q_2 are true (see again Wiśniewski 1996). Now let ‘ $q?$ ’ abbreviate the interrogative ‘Is it the case that $q?$ ’, for any q , and let ‘ \supset ’ be the material conditional. Given that much, we have:

$$(6) p, q? \models_2 (p \supset q)?$$

That is, according to our generalization of the second notion of entailment, the proposition that p and the question of *whether q is the case* entail the question of *whether $(p \supset q)$ is the case*.²⁵ To get a rational requirement out of (6), we map propositions into beliefs and questions into attitudes of suspended judgment, thus:

- (7) One is rationally required to be such that: if one believes that p and suspends judgment about whether q , then one suspends judgment about whether $(p \supset q)$.²⁶

And this looks like a true rational requirement indeed. If I believe that *Janice said that I got the job* but I suspend judgment about *whether I got the job* then, if I am to remain coherent and not abandon either of those two attitudes, I should also suspend judgment about whether the following conditional is true: *if Janice said that I got the job, then I got the job* (read as a material conditional).

²⁵The satisfaction of (b_G) for this case is obvious. What about (a_G)? The conclusion-question has two maximal complete answers, namely $(p \supset q)$ and $\neg(p \supset q)$, where ‘ \neg ’ is (classical) negation. From $(p \supset q)$ and p (the proposition-premise), it follows that q (answer to the premise-question). From $\neg(p \supset q)$ and, redundantly, p , it follows that $\neg q$ (another answer to the premise-question).

²⁶Rosa (2021) grounds a version of (7) on the canonical framework of doxastic logic plus a suspension operator defined thus: $Sp? \stackrel{\text{def}}{=} \neg Bp \wedge \neg B\neg p$, where B is the ideally rational belief-operator. But notice that the framework that is being deployed here to derive rational requirements (through the second notion of entailment) is much more general and encompassing than Rosa’s. In particular, notice that Rosa’s method takes only suspended judgment about polar or yes/no questions into account, whereas the method suggested here takes suspended judgment about any kind of question into account.

A more systematic study of these structural requirements derived from the second notion of entailment, and an assessment of their truth when checked against particular cases, is left for future work. The considerations presented here put forward a workable hypothesis, then, about how we might go about fleshing out requirements of coherence for doxastic states involving suspended judgment—a yet under-explored territory.

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