

Kripkean conceivability and epistemic modalities

Vittorio Morato 

Department of Philosophy, Sociology,
Education and Applied Psychology,
University of Padua, Padova, Italy

Correspondence

Vittorio Morato, Department of
Philosophy, Sociology, Education and
Applied Psychology, University of Padua,
Padova, Italy.

Email: vittorio.morato@unipd.it

Abstract

In this article, I show that (i) from what I call a “Kripkean” account of the relations between conceivability and metaphysical necessities, (ii) an apparently plausible principle relating conceivability and epistemic modality, and (iii) the duality of epistemic modalities, one can show the utterly anti-Kripkean result that every metaphysical necessity is an epistemic necessity. My aim is to present and diagnose the problem and evaluate the costs of some possible Kripkean reactions. In particular, I will evaluate the consequences and theoretical costs of rejecting the main ingredients of the argument, namely that we cannot genuinely conceive the negations of metaphysical necessities, that there is no postulated relation between conceivability and epistemic possibility (actually, between unconceivability and epistemic impossibility), and that epistemic possibility and necessity are not dualities.

1 | INTRODUCTION

In this article, I show that from (i) a Kripkean account of the relations between conceivability and metaphysical necessity, (ii) a principle relating conceivability and epistemic modalities, and (iii) the duality of epistemic modalities, one can show the utterly anti-Kripkean result that every metaphysical necessity is an epistemic necessity.

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Thus, I will show that starting from a Kripkean principle and combining it with some other principles—apparently not in contrast with the view—one can derive quite a pernicious form of antirealism about modality.¹

The situation should not worry much the Kripkeans (I am myself one of them!) because the extra principles the argument relies on do not belong to the “official” formulation of the view. To avoid the pernicious result, however, at least one of these extra principles should be explicitly denied, and this will reveal some unexpected and largely unnoticed theoretical commitments of standard Kripkeanism. The point of this article is simply to reveal such often unnoticed commitments, not to criticize Kripke’s doctrine.

I will start by presenting “Kripkean conceivability” in Section 1, while in Section 2, I will present the problematic argument. In Section 3, I will discuss the relations between epistemic possibility and conceivability. I will then evaluate the costs of rejecting each essential ingredient of the argument; rejecting one of the components of the argument will force the Kripkeans to endorse at least one of these views (i) that we cannot genuinely conceive the negations of metaphysical necessities, (ii) that there is no relation between conceivability and epistemic possibility and, in particular, that epistemic modality should be taken as an “objective” kind of modality, and (iii) that epistemic possibility and necessity are not dualities.

2 | KRIKKEAN CONCEIVABILITY

In a number of passages in *Naming and Necessity*, Kripke seems to defend a conception of the relations between conceivability and metaphysical modality based on the following principle:

(KC) If ϕ is a metaphysical necessity, then you cannot genuinely conceive that $\neg\phi$.²

The following are two revealing quotes by Kripke:

Now could this table have been made from a completely different block of wood? [...] though we can imagine making a table out of another block of wood or even from ice, identical in appearance with this one [...] it seems to me that this is not to imagine this table [...], but rather it is to imagine another table, resembling this one in all external details.

(S. A. Kripke, 1980, p. 114)

Once we know that this thing is composed by molecules [...], we can't then [...] imagine that this thing might have failed to have been composed by molecules.

(S. A. Kripke, 1980, p. 127)

¹By antirealism about modality or “modal antirealism,” in this context, I simply mean the view that modality is not a real, objective, mind-independent phenomenon. For example, response-dependent account of modality or conventionalism count as modal antirealisms in this sense. For a discussion of modal antirealism, see Divers (2021); for response-dependent accounts, see Menzies (1998).

²Of course, the negation of ϕ could be conceived of in various ways, so the proper formulation of the principle would be something like the following: if ϕ is a metaphysical necessity, then you cannot conceive ψ such that ψ is metaphysically incompatible with ϕ . For the rest of the article, I will stick with the initial formulation.

The second quotation is more explicit than the first about the impossibility of conceiving of the negation of a metaphysical necessity (“you can’t imagine ...”), but the principle defended therein seems to be weaker than (KC):

(KC⁺): If ϕ is a metaphysical necessity and x knows that ϕ , then x cannot genuinely conceive that $\neg\phi$.

However, in (KC⁺), the “knowledge condition” in the antecedent seems to be dispensable.

On one hand, assume that x does not know whether ϕ is a metaphysical necessity, but ϕ is a metaphysical necessity. It seems plausible that for a Kripkean, this would *not* be a situation where x would be able to genuinely conceive the negation of ϕ . If this were the view, then it would be one according to which, given a metaphysical necessity ϕ such that x does not know it, x would be able to genuinely conceive of the negation of ϕ . Kripke’s idea behind (KC) seems to instead be that it is *just the metaphysical status of ϕ* that bar the conception of its negation, not its epistemic status.

On the other hand, assume that x knows that ϕ is true, but that ϕ is not a metaphysical necessity. In such a case, there seems to be no reason to suppose that x would not be able to conceive of the negation of a metaphysically contingent piece of knowledge. In general, knowing something does not bar the ability to conceive its negation (unless it is a known metaphysical necessity). So again, it seems that it is the metaphysical status of ϕ that is related to the impossibility of genuinely conceiving its negation.

Therefore, it seems that (KC⁺) is not what Kripke had in mind.

The first quotation is less explicit regarding the impossibility to conceive. However, what Kripke explicitly claims is that to conceive of a certain wooden table as made of another block of wood *is not* to conceive something about that table. So let us consider the act (or the class of acts) of conceiving *a* table as made of another block of wood and the act (or the class of acts) of conceiving something about *this* table. We could paraphrase Kripke as saying that the two acts (or the two classes of acts) are *distinct* (or disjoint). However, if they are distinct (disjoint), they are necessarily so. Thus, this table cannot be conceived as made of another block of wood. Given that the material constitution of this table is just an example of an arbitrary metaphysical necessity, the same argument could be repeated for every other metaphysical necessity; thus, (KC) is true.

The second quotation also reveals a fundamental feature of Kripke’s account of the relations between conceivability and metaphysical necessity. The impossibility to conceive of the negation of a metaphysical necessity—or to conceive of something metaphysically incompatible with a metaphysical necessity—does not manifest itself with a “mental block,” with the representation of a blank scenario or with the impossibility of forming one. To imagine the negation of a metaphysical necessity is still to imagine *something*. The problem, according to Kripke, is that it is to imagine something *different*. The proposition imagined while trying to imagine the negation of ϕ is not really $\neg\phi$.

Here comes the distinction between *genuinely* conceiving that ϕ and *nongenuinely* conceiving that ϕ . While you cannot *genuinely* conceive that $\neg\phi$ (where ϕ is a metaphysical necessity), what can you do is to *nongenuinely* conceive that $\neg\phi$.

To nongenuinely conceive of the negation of a metaphysical necessity is really to conceive of the negation of a *qualitative counterpart* of ϕ . To nongenuinely conceive that this table is not made from this block of wood is to conceive of a qualitative counterpart of this table, one that is

made of another block of wood. To nongenuinely conceive that water is not H₂O is to conceive, of a substance phenomenologically similar to water, one that is not H₂O.³

As Kripke (1980, p. 142) himself acknowledges, something similar to Lewis's counterpart theory applies in this case. To conceive of the negation of a metaphysical necessity ϕ about an object o is not to conceive of something about o , but rather of something about a distinct object o' related to o by some qualitative relation. This switch to the qualitative dimension is what explains the “illusions of possibility” we sometimes have when trying to conceive the negations of a posteriori metaphysical necessities⁴: we believe that water can be XYZ (and not H₂O) because within this modal qualitative dimension, water and its qualitative counterpart are taken to be the same substance, but they really are two distinct substances related by some qualitative relation (x has the same superficial appearances of y), that is contingent.

So what the second quotation reveals is the *error theory* associated to our conceivability judgments. I will call “Kripkean conceivability” the combination of (KC) and such an error theory.

However, why should the negations of metaphysical necessities be inconceivable for Kripke? What reasons would Kripke, or a Kripkean, have to endorse “Kripkean conceivability”?

If you take metaphysical necessities as those necessities that “obtains in virtue of the identity of objects” (Fine, 2002, p. 255), then in case ϕ is a metaphysical necessity about o , o could not exist unless ϕ is true. So if one has the “feeling” of conceiving $\neg\phi$ of o , one is not really conceiving something about o .

An assumption that is lurking in the background here is that the *content* of our mental states and, thus, of our conceiving is determined, or constrained, by metaphysical or essentialist principles, namely by the identity of the objects we conceive of. If a table t cannot be made of another piece of wood, then you cannot be in a mental state that is about t and that represents t itself as being made of another piece of wood.

In this sense, the *aboutness* of mental states works like (semantic) reference for linguistic expressions: both are *wordly, external relations*. As you cannot (semantically) refer to Jones using the already introduced name “Smith” (unless “Smith” is a name for Jones or you are introducing

³ In the Appendix of *Wittgenstein on Rules and Private Language* (1982, p. 116), Kripke gives a rather interesting and often unnoticed presentation of this view by means of the “duck example”:

If I see some ducks for the first time in Central Park, and learn my ‘concept’ of ducks from these ‘paradigms’, it may be plausible to suppose that it is impossible (‘nonsense’, if you will) to suppose that these very ducks could have been born in the fifteenth century. It also may be plausible to suppose that these very ducks could not possibly have come from different biological origins from those from which they in fact sprang. [...] It by no means follows, whether these essentialist claims are correct or not, that I cannot form the concept of ducks living at a different time, having different genetic origins, or of a different species, from the paradigms I used to learn the ‘concept of duck’.

For our purposes, the interesting point of this passage is that, according to Kripke, modal knowledge does not necessarily start with or is dependent on essentialist knowledge: even though I cannot imagine *this* duck being of a different species (or living in a different epoch), I can obtain the modal knowledge of ducks living in different epochs or having different genetic origin, taking this duck as a *paradigm*.

⁴The expression “illusions of possibility” is taken from Yablo (2006).

“Smith” as a new name for Jones), so you cannot think about t by thinking about something that is not t .⁵

Before proceeding, two observations are in order, one substantial and the other terminological.

First, when (KC) tells us that the negation of metaphysical necessity is unconceivable, this means that it is *impossible* to conceive the negation of a metaphysical necessity. The relevant modality here is epistemic, not metaphysical: (KC) tells us that it is epistemically impossible for a subject to conceive the negation of a metaphysical necessity. The impossibility is epistemic because it depends on the inability of a subject to distinguish an epistemic situation where she or he is in relation to water from an epistemic situation where she or he is in relation to a qualitatively similar liquid.

Second, Kripke seems to use “conceive” and “imagining” interchangeably, and I will do the same in the present article. This will be not irrelevant in what follows: conceiving of ϕ is not to be understood simply as the traditional Cartesian process of checking the conceptual coherence of ϕ or the process of noninferring a contradiction from the supposition that ϕ . “Kripkean” conceiving of ϕ has to be understood as something like mentally represent a scenario where ϕ is the case.⁶

3 | THE PROBLEMATIC ARGUMENT

Starting from (KC) and using some other principles that we are going to discuss in the following sections, one can built what I will call “the problematic argument”:

The problematic argument:

1. if ϕ is a metaphysical necessity, then x cannot genuinely conceive $\neg\phi$;
2. if x cannot genuinely conceive that $\neg\phi$, then $\neg\phi$ is not epistemically possible for x ;
3. if $\neg\phi$ is not epistemically possible for x , then x is epistemically necessary for x ;
4. *Therefore:* if ϕ is a metaphysical necessity, then ϕ is epistemically necessary for x .

⁵This view on the relation between the aboutness of mental states and metaphysical necessities is not offered as an exegetical point about *Naming and Necessity*. I think, however, that it is a plausible view to hold, given the background developed therein. Thinking about possibilities of an object o is thinking something *about* o only in the case we are thinking about a metaphysical possibility for o . When we are thinking about a situation that is metaphysically impossible for o (but metaphysically possible in general), we are, according to Kripke, “speaking loosely” about o (i.e., we are not really thinking about o). In such cases, we revert to a qualitative discourse about *an* object of the same kind of o . This switch from quantitative to qualitative modal discourse (and thus from referential to nonreferential thoughts) is *determined*, for Kripke, by metaphysical necessities: “*it is precisely because* it is not true that this table might have been made of ice from the Thames that we must turn here to qualitative descriptions and counterparts” (S. A. Kripke, 1980, p. 142, my emphasis). I interpret this turning to “qualitative descriptions and counterparts” as involving a way of thinking qualitatively about a table.

⁶See, for example, Liao and Gendler (2019) and Szabò Gendler (2000) for the difference between imagination and conceivability. The notion of conceivability as mental construction of scenarios should be distinguished, as said, from the act of supposing or assuming; in this sense, it is similar to what Chalmers (2002) called “positive conceivability.” On the basis of the difference between positive conceivability and supposition, one could take a position according to which one can suppose that a contradiction is true (in a *reductio*, for example) while not being able to positively conceive it as true. The distinction between supposing a contradiction (or a metaphysical impossibility) versus positively conceiving a contradiction (or a metaphysical impossibility) avoids that the Kripkean position on the impossibility of conceiving metaphysical impossibilities becomes too restrictive in a way that it would make impossible for it to explain how a *reductio* works or how to understand a paraconsistent logic.

Given that x is arbitrary, the conclusion at step 4 could be generalized and interpreted in full generality: if ϕ is a metaphysical necessity, then it is epistemically necessary.

The fundamental ingredients of the argument are the following.

In step 1, I have used (KC). In step 2, I have used a principle connecting conceivability and epistemic modalities, namely:

(CEP⁻): If x cannot conceive that ϕ , then ϕ is not epistemically possible for x .

Finally, in step 3, I have used the duality of epistemic modalities:

(DUAL): $\Box^e \phi \leftrightarrow \neg \diamond^e \neg \phi$ ⁷

(where \Box^e and \diamond^e stand for epistemic necessity and possibility, respectively).

The argument could be seen as showing that a Kripkean conception of the relations between metaphysical necessities and conceivability is incompatible either with those conceptions of epistemic modality where inconceivability is a guide for epistemic impossibility (it is incompatible with (CEP⁻)) or with those conceptions of epistemic modality where epistemic possibility and necessity are duals. In order to block the argument—given that the Kripkean would not reject (KC)—one has to show that either (CEP⁻) or (DUAL) is false.

My point in the article is that either option will reveal unexpected commitments for us Kripkeans and some of them quite implausible.

Before proceeding a(nother) terminological note: in what follows, I will use the term “Kripkean” for whoever holds (i) that there are metaphysical necessities and (ii) that we cannot *genuinely* conceive the negations of them. Whether Kripke is a Kripkean might be contested on hermeneutic grounds (even though I am pretty sure that [i] and [ii] are both quite faithful to Kripke’s original position), but I am more interested in evaluating the consequences of a certain position (that I have chosen to call “Kripkean”), than in the difficult art of Kripkean philology. I think that the combination of something like (i) and (ii) is an interesting position to be discussed independently from what is really endorsed by Kripke in *Naming and Necessity*.

Notice that it might be difficult to justify (ii) unless one believes that metaphysical modality is the *absolute* kind of modality. If metaphysical modality is not absolute, some other modality X will be the absolute modality (if there is an absolute modality at all) but then, there is at least one metaphysical necessity $\Box^M \phi$ such that its negation would be X -possible; the X -possibility of $\neg \phi$ can be, after all, conceivable. All of this can be resisted by either defending the view that, for some reason, X -possibilities (or just the X -possibilities of the negations of metaphysical necessities) are not conceivable or that, even though metaphysical modality is not absolute, still the negation of metaphysical necessities are not conceivable. Both of these lines of resistance, however, seem to be problematic.⁸

⁷Of course, duality could be expressed starting from possibility:

(DUAL*): $\diamond^e \phi \leftrightarrow \neg \Box^e \neg \phi$.

⁸For a deflationary view on metaphysical modality (and, in particular, for an argument against its absoluteness), see Clarke-Doane (2021); see also Priest (2021).

In the next section, before evaluating the consequences and costs for a Kripkean to deny either (CEP⁺) or the duality of epistemic operators, I will consider the consequences for a Kripkean to abandon (KC).

4 | ABANDONING KC?

The problematic argument could be understood initially as putting pressure on the other constitutive element of the position that I have conventionally characterized as “Kripkean,” namely (KC).

Hence, let us discuss what would be the costs for a Kripkean to reject (KC).

If (KC) is false, then there is a metaphysical necessity ϕ such that we would be able to genuinely conceive of its negation. In particular, there might be an essential predicate ϕx that is true of an object o such that we could genuinely conceive of o that it is not satisfying ϕx . This conceived scenario should be understood as being consistent with the metaphysical necessity of ϕo .

This would be a case where the aboutness of a mental state of conceiving would not be determined or constrained by metaphysical necessities (or at least by those metaphysical necessities deriving from the identity of objects).

In a situation where ϕo is metaphysically necessary and where it is possible to be in a mental state Γ whose content is about o and where o is represented as not being ϕ , we could say that the truth of “ Γ is about o ” is not determined anymore by the identity of o . In turn, this would be possible if the relation of aboutness (between a mental state and individual) is itself not anymore determined by the identity of o .

Thus, we might define *externalist* conception of aboutness one where “ Γ is about o ” is true, where the aboutness of Γ is o (i.e., Γ is about o) and where such relation of aboutness is determined by the identity of o . We might define an *internalist* conception of aboutness one where “ Γ is about o ” is true, the aboutness of Γ is o , but where such an aboutness is not determined by the identity of o . The cost of abandoning (KC) for a Kripkean is that of abandoning an externalist conception of aboutness and endorsing an internalist conception of it.

An internalist conception of aboutness could be defended by blurring the distinction between genuinely conceiving and nongenuinely conceiving. An internalist might say, for example, that conceiving something about water is nothing over and above conceiving something about a transparent, drinkable liquid. If we call “water*” the phenomenological counterpart of water, the internalist might say that to conceive that water is not H₂O is nothing over and above than conceiving that water* is not H₂O.

The internalist conception of the aboutness is problematic for the Kripkean.

Consider Humphrey. Given that Humphrey is an actual object, from “I am conceiving that Humphrey is winning the election” one is expected to be able to derive something like “Of Humphrey, I am conceiving that he is winning the election.” An internalist might have difficulties in accepting this inference (because acts of conceiving are about qualitative counterparts), but she or he might also bite the bullet and claiming that the latter sentence is equivalent to “Of Humphrey*, I am conceiving that he is winning the election” (where Humphrey* is a qualitative counterpart of Humphrey). From a linguistic point of view, a qualitative counterpart of Humphrey is basically a qualitative *description* of Humphrey or, better, a set of qualitative descriptions associated to “Humphrey” that are satisfied by Humphrey and all other individuals qualitatively similar to him. For a Kripkean, however, the reference of that occurrence of

“Humphrey” outside the conceivability operator (and eventually also the occurrence inside it) is determined by the identity of the real Humphrey, not that of Humphrey*. That occurrence of “Humphrey” is a device of direct reference, not a descriptive name of some sort. Thus, to abandon (KC) corresponds, for a Kripkean, to embracing an internalist conception of aboutness and an internalist conception of aboutness corresponds, in turn, to embrace descriptivism. This is clearly not a move that a Kripkean is willing to make.

So, on one hand, we have the problematic argument with its antirealist consequences, on the other we have a reaction to the argument (abandoning [KC]) that drives us directly into some form of descriptivism. Definitely, this is a hard dilemma. What should we do? Should we try to save a realist conception of metaphysical modality or avoid descriptivism? Clearly, the Kripkean cannot choose between these two alternatives, but then abandoning (KC) is not the right way of tackling the problematic argument. There are other options.

5 | EPISTEMIC MODALITY AND CONCEIVABILITY

The problematic argument relies on (CEP⁻) and, more generally, on the existence of some connections between conceivability and epistemic possibility.

Although the relation between conceivability and *metaphysical* possibility has been hotly debated and explored, the connection between conceivability and epistemic possibility is either taken for granted or easily dismissed as clearly *not obtaining*.

On the first side stands, for example, S. Soames (2011), who defines epistemically possible worlds as “maximally complete ways the universe can coherently be *conceived* to be” (my emphasis). For Soames, then, an epistemic possibility is something that can coherently be conceived by an agent. In this sense, (coherent) conception is related to epistemic possibility and it is really a guide for it.

On the other side stand Gendler and Hawthorne (2002, p. 4), who claim that “conceivability is *clearly not* a general guide to epistemic possibility” (my emphasis).

According to Gendler and Hawthorne (2002), we can distinguish at least two notions of epistemic possibility, a “permissive” and “strict” notion:

Epistemic possibility 1, EP1 ϕ is epistemically possible for x if and only if x does not know that $\neg\phi$.

Epistemic possibility 2, EP2 ϕ is epistemically possible for x if and only if ϕ is consistent with everything x knows.

Under these two definitions of epistemic possibility, a principle like (CEP⁻) seems to be false in cases where (KC) is also true.

Let us see the case for EP1.

If (KC) is true, then the negations of metaphysical necessities cannot be genuinely conceived. Given that the atomic number of rhodium is 45, Sam is not able to conceive that the atomic number of rhodium is *not* 45. However, assume that Sam knows nothing about rhodium; thus, Sam does not know that the atomic number of rhodium is 45. In such a case, there is a proposition—that the atomic number of rhodium is not 45—that is unconceivable by Sam (because it is the negation of a metaphysical necessity), but it is such that Sam does not know its negation. By EP1, the proposition that the atomic number of rhodium is 45 is thus an epistemic possibility for Sam.

Thus, our proposition is unconceivable and epistemically possible. (CEP^-) is false, given (KC) and EP1.

The case for EP2 is similar. Consider again Sam and his inability to conceive the negation of the metaphysical necessity that rhodium has the atomic number 45. Assume that Sam knows very little about chemistry or science. Let us say that everything Sam knows about is about *baroque music* (and assume, for the sake of argument, that there are no connections between chemistry and baroque music). In such a case, it seems that the proposition that rhodium does not have the atomic number 45 is consistent with everything Sam knows (it is consistent with everything Sam knows about baroque music). By EP2, the proposition that rhodium does not have the atomic number 45 is an epistemic possibility for Sam. However, such a proposition is also unconceivable by Sam. The proposition that rhodium does not have the atomic number 45 is an unconceivable epistemic possibility and it is a counterexample to (CEP^-) . (CEP^-) is false, given (KC) and EP2.

Hence, if one is a Kripkean (or simply believes in (KC)) and endorses either EP1 or EP2 as definitions of epistemic modality, (CEP^-) comes out false. If (CEP^-) is false, the problematic argument is blocked.

EP1 and EP2 are quite popular and widespread definitions of epistemic possibility. There are some signs that even Kripke endorses one of them in *Naming and Necessity*.⁹ But EP1 and EP2 are problematic.

I will now present two cases against EP1 and EP2; both of them are slight variations of cases presented by M. Huemer (2007).¹⁰

Let us start with EP1.

Assume that Rigel 7 is a very distant and largely unknown planet belonging to the equally distant and largely unknown Rigel system. Sam, as the most of us, has never heard about Rigel 7 and does not know a thing about such an exotic planet; he has no thoughts about it. Imagine further that Sam is at home, staring at his couch, under normal conditions. He sees nothing on the couch. Now, in such a situation, we would say that it is *epistemically impossible* for Sam that Rigel 7 is on his couch: he is in normal conditions, and in such conditions, he is *sure* of seeing nothing on his couch; yet Sam does not know that Rigel 7 is not on his couch. He is not in the conditions of entertaining any proposition about Rigel 7, so, *a fortiori*, he is not knowing any proposition about Rigel 7.¹¹ Sam does not know that Rigel 7 is not on his couch, yet it is epistemically impossible that Rigel 7 is on his couch. Thus, a proposition could be epistemically impossible and yet its negation unknown. This shows that EP1 is false

⁹In Hughes (2004), while discussing the relations between metaphysical and epistemic modalities in Kripke, it is attributed to Kripke the view that epistemic possibility is “compatibility with one’s knowledge” and thus EP2 (p. 87). Later on, however, it is attributed to Kripke the view that epistemic impossibility is “a priori excludability” (p. 88) and thus that epistemic possibility is non-a priori excludability. As we will see, however, the two notions are different.

¹⁰The original case against EP1, called “D1” by Huemer, is presented on pp. 124–125; the original case against EP2, called “D2” by Huemer, is presented on p. 125.

¹¹Note that here it is only required that knowledge of ϕ requires *entertainability* of such a proposition, not necessarily belief.

because according to EP1, given any proposition ϕ , ϕ is epistemically possible just in case its negation is not known.¹²

Let us now see a case against EP2.

Assume that Sam is a good, but not an excellent, student of logic. Sam has just produced a one-and-a-half page proof, reaching the conclusion that ϕ . He is not sure that the proof is right, and he would say, if asked, that the proof could be wrong, and this usually means that the conclusion, ϕ , *could be false*. Of course, he knows the axiom of the logical system he has used. Now, imagine, however, that Sam's proof is perfectly valid.

Now, in such a situation, it seems natural to suppose that the negation of the conclusion of the proof, $\neg\phi$, is an epistemic possibility for Sam. As said, he is not sure about the proof, and he would also be disposed to assert something like " $\neg\phi$ could be true," if asked. However, by hypothesis, the proof is valid, ϕ is a logical consequence of the axioms known by Sam, and thus, $\neg\phi$ is *inconsistent* with what Sam knows.

According to EP2, thus, $\neg\phi$ should be counted as epistemically impossible for Sam and, if duality of epistemic modality holds, ϕ should be counted as epistemically necessary. This contradicts the intuition that $\neg\phi$ should be epistemically possible for him.

In general, in all cases where (i) ϕ follows from ψ (ii) you know that ψ , but (iii) you do not know that ϕ is a consequence of ψ , $\neg\phi$ will come out epistemically impossible under EP2, even when you believe that $\neg\phi$ *might* be true. In such cases, you believe that $\neg\phi$ might be true, even though you do not have any epistemic possibility that this is so.

The cases against EP1 and EP2 have something in common.

What suffices to falsify EP1 is the existence of a proposition that Sam has never entertained or is not currently able to entertain. If x has never entertained ϕ , x does not know that $\neg\phi$, so ϕ comes out as epistemically possible. Under EP1, the fact that a proposition ϕ has never been entertained by a subject is sufficient to make such a proposition (and its negation) an epistemic possibility for him.

What suffices to falsify EP2 is the existence of an unknown inconsistency with a proposition a subject knows. The fact that the inconsistency is unknown might depend either on the fact that the subject is unaware or unsure of the logical connections between the propositions she knows or on the fact that the subject has never entertained the proposition logically connected with the proposition she knows. Under EP2, the unknown inconsistent proposition comes out epistemically impossible.

¹²One could argue that the conclusion that Sam knows that Rigel 7 is on his couch simply follows by closure under logical consequence (of knowledge). If, by hypothesis, (i) Sam knows that nothing is on his couch and given that, (ii) if nothing is on Sam's couch, then Rigel 7 is not on his couch, then, by closure, (iii) Sam *knows* that Rigel 7 is not on his couch. Huemer's argument is thus not convincing, if closure holds. But the point is exactly here. The application of the closure principle conflicts with the fact that, if Sam is not competent in the use of "Rigel 7" (i.e., he knows nothing about Rigel 7), he seems not to be able to *entertain* a proposition about Rigel 7 (where by "entertain" a proposition one could mean some sort of "conceptual awareness" of its components). Given that it is usually assumed that, for someone to know that Rigel 7 is not on his couch, someone needs to entertain the proposition, then Sam does not know that Rigel 7 is not on his couch. Those who think that, simply by closure, we can conclude the contrary (namely that Sam knows, after all, that Rigel 7 is on his couch) should also assume that: (iv) it is possible to know a proposition without properly entertaining it and that (v) one could entertain a proposition without being conceptually aware of its constituents. In effect, if one instead believes that (iv) and (v) are false (namely believes that to know a proposition one has to entertain such a proposition and that to entertain a proposition one has to be aware of its constituents), the argument could also be seen as (yet another) argument against the principle of closure for knowledge. The notion epistemic possibility emerging from EP1 (and for analogous reasons from EP2) is thus only consistent with a conception where a principle of closure holds for such a notion. Huemer's point is that such a "closure conception" of epistemic possibility is not plausible.

In both cases, thus, EP1 and EP2 seem to commit us to an *objective conception of epistemic possibility*. Objective in the sense that what epistemic possibilities or necessities a subject has is largely independent on how (and whether) the proposition is epistemically presented to her (more on how a proposition could be “epistemically presented” to an agent below).

The existence of objective epistemic possibilities combines well with the rejection of (CEP⁻). Indeed, the incompatibility of EP1 and EP2 with (CEP⁻) depends just on that.

(CEP⁻) tells us that unconceivable propositions are epistemically impossible. If (CEP⁻) is false, then there are *unconceivable* epistemic possibilities, epistemic possibilities that are, in a sense, out of our “epistemic spectrum” and independent on us.

Unconceivability is often taken to be the mark—or at least a revealing sign—of objectivity: indeed, one could say that a certain area of discourse is objective in case it could not be expected, at least a priori, that all the truths that constitute it are conceivable. A certain kind of modality X could be characterized as an objective modality in case it could not be expected that all X possibilities can be conceived. EP1 and EP2 seem to presuppose an objective conception of epistemic modality.

The notion of objective epistemic modality, however, is problematic, for at least two reasons.

The first reason is that *if* epistemic modalities belong to the family of objective modalities, then the boundary between objective/nonobjective modality is at risk of being blurred. Williamson, for example, defines objective modality as a *nonepistemic*, nonintentional, nonpsychological kind of modality.¹³ Being *nonepistemic* seems to be one of the essential features of objective modality. If objective modality is a modality that is independent from the epistemic states of the agents, objective epistemic modality is a modality that is independent from the epistemic states of the agents. Admittedly, this is quite weird! How could *epistemic* modality be independent from the epistemic states of the agents?

In order to reinforce this point about the nonobjective nature of epistemic modality, consider the following two sentences:¹⁴

- (1) The Goldbach conjecture is possibly true.
- (2) The Goldbach conjecture is possibly false.

One of the reasons to postulate a distinctive, *epistemic* kind of modality—one of the *roles* an epistemic kind of modality is designed to have—is that of modeling situations where both (1) and (2) may be counted as true *with respect to certain bodies of information and/or agents*. Following Bach (2011, p. 19), call such bodies of information relativized to agents “perspectives.” Under a quite plausible (and traditional) interpretation of “objective,” if epistemic possibility is objective, the true values of (1) and (2) would then be *independent* from such perspectives. But if the true values of 1 and 2 are objective in this sense, 1 and 2 cannot be true together, because, taken as independent from any perspective, 1, if true, is necessarily true while 2, if false, is necessarily false. An objective kind of epistemic modality would then be useless to model just the kind of situations that epistemic modality is designed to model.

Objectivity could also be understood, in a slightly different way, as independence from *guises*, ways in which a certain content is presented. Consider the following case.¹⁵ Assume that “*n*” and

¹³Cfr. Williamson (2016, p. 454).

¹⁴I would like to thank a referee of *Analytic Philosophy* for pressing me on this.

¹⁵Inspired by a similar point made in Williamson (2016, p. 454).

“29” are two co-referential names. The role of epistemic modality is that of modally distinguish the proposition expressed by “29 is 29” from the proposition expressed by “*n* is 29” (assume here a fine-grained conception of propositions for which the propositions expressed by the two sentences are, in effect, distinct). The role of epistemic modality would be that of counting the first proposition as epistemically necessary, but not the second. But, again, under a plausible interpretation of “objective,” if epistemic modality is objective, then it should be insensitive to guises and, in particular, on whether we call something “29” or “*n*” (as soon as “29” and “*n*” are co-referential). The two propositions should then be both seen as epistemically necessary. Again, an objective kind of epistemic modality would just be useless, if one of the roles such kind of modality was supposed to play was that of modally distinguish intentionally equivalent propositions presented in different guises.

Notice that, under this “functional-role” interpretation of epistemic modality, it becomes easier to understand the failure of the T-axiom, $\phi \rightarrow \diamond \phi$, for epistemic modality. Assume that one of those roles is that of modeling a situation where some proposition is true, but there is an agent for whom, not only it might be false, but it is surely false given her perspective and thus for whom it is epistemically impossible. Take, for example, a case where the Goldbach conjecture (*G*) is true, but there is an agent for whom it is surely false. This case seems plausible and it would be a situation where an instance of the T axiom—something like $G \rightarrow \diamond^e G$ (where \diamond^e is epistemic possibility)—would be false. If epistemic modality is objective, T would hold and we would not be able to model such kinds of cases.

A related issue on the T-axiom: it is sometimes claimed that the existence of epistemic modalities, such as *it is known that*, satisfying the \Box -version of the T-axiom could be taken as a sign of the nonexistence of the difference between epistemic/nonepistemic (i.e., objective) modalities (cfr. Clarke-Doane, 2019, p. 267). Given that there are epistemic operators that clearly satisfy the axiom—this is the view—the satisfaction or the nonsatisfaction of the axiom does not constitute anymore the definitive criterion to distinguish epistemic/objective modality. So the distinction is really blurred.

In response to this line of argument, my answer is that we should not be so quick: it is surely true that “it is known that” satisfy the \Box -version of the T-axiom, but also $\phi \rightarrow \diamond \phi$ is an instance of it and—unless one is already a committed modal antirealist (making the argument question begging)—it is definitely less plausible to show that *it is known that* satisfies the \diamond -version of T. To prove that an operator (epistemic or of any other type) satisfies a modal axiom is slightly more complicated than proving that such a notion satisfies *an instance* of the axiom.¹⁶

The second reason why an objective conception of epistemic modality is problematic is the following. Such a conception brings with it, obviously, an objective conception of *epistemic necessity*. But epistemic necessity is, in some way or another, to be related to knowledge. For some, epistemic necessity simply *is* or is equivalent to knowledge (an epistemic necessity for *S* is something that *S* knows).¹⁷ At a minimum, knowledge implies epistemic necessity and something like this principle might hold: if *x* knows that ϕ , ϕ is epistemically necessary for *x*. But if there are objective (and, as said, possibly unconceivable) epistemic necessities, there might be cases where *S* knows some proposition who is unable to conceive. Such a proposition would be an

¹⁶The equivalence between the \Box and the \diamond version of the T-axiom is provable on the basis of the definability of \diamond in terms of \Box and contraposition. One could deny that in the case of *it is known that* there is a corresponding \diamond version of the operator (*it is knowable that?*). In such a case, however, it becomes difficult to understand in what sense such an operator satisfies a modal axiom or in what sense “it is known that” that is a modality.

¹⁷See, for example, Priest (2021, 1875).

unconceivable known proposition. But according to a quite standard approach to knowledge, there cannot be such kind of propositions: knowledge implies belief and thus, *a fortiori*, conceivability.¹⁸

The situation seems to be the following: if we define epistemic possibility along the lines of either EP1 or EP2, the problematic argument will be blocked, because, in such a case, (CEP⁻) will come out as false. However, EP1 and EP2 are based on an objective conception of epistemic modality and is problematic for two reasons. The first is that the existence of epistemic objective modalities blurs the distinction between objective and nonobjective modalities, something upon which all Kripkeans (and many non-Kripkeans, too) rely on. The second is that an objective conception of epistemic modalities is an unexpected cost that all Kripkeans should pay *just* to block the problematic argument (in the case, of course, where one wants to block the argument by rejecting (CEP⁻)).

There seems to be definitions of epistemic possibility that do not seem to presuppose the objective conception. In general, it seems that any nonobjective conceptions of epistemic possibility be compatible with (CEP⁻). Compatibility with (CEP⁻) signs the boundary between an objective and nonobjective conception of epistemic modality.

Take, for example, the following definition of epistemic necessity:

Epistemic possibility 3, EP3 ϕ is epistemically possible if and only if the following is true: if x were to consider whether ϕ is the case, x would not know that $\neg\phi$.¹⁹

If Sam were able to consider whether Rigel 7 is on his couch, he would be in a situation where he would be able to entertain the proposition that Rigel 7 is on his couch. Given this, in such a situation, Sam would still be seeing that nothing is on his couch, so Sam would know, in that situation, that Rigel is not on his couch. Thus, the counterfactual is false, and the proposition that Rigel 7 is on Sam's couch will come out as epistemically impossible, as expected.

The problems with EP2 are equally solved basically for the same reason. Even though ϕ is a logical consequence of ψ and, thus, $\neg\phi$ is epistemically impossible for Sam, if Sam were to consider whether ϕ , he would not know for this reason that ϕ is true, so $\neg\phi$ is epistemically possible for Sam, as expected.

Does EP3 validate (CEP⁻)?

(CEP⁻) is false in case there is a proposition that is unconceivable, but it is also an epistemic possibility for a subject. According to EP3, to be an epistemic possibility for a subject, there must be a possible situation where the subject considers whether the proposition is true. This requires the ability to conceive the proposition in question. If the proposition is inconceivable, then there is no such situation. Hence, EP3 seems to be incompatible with the existence of inconceivable epistemic possibilities; if there are no such kinds of proposition, (CEP⁻) is true.

Consider the contrapositive of (CEP⁻):

If ϕ is an epistemic possibility, then ϕ is conceivable.

¹⁸There has been some discussions on whether knowledge is possible without belief: some cases are discussed in Myers-Schutz and Schwitzgebel (2013) and Radford (1966). See Williamson (2000, p. 42) for a discussion, and a rebuttal, of this kind of cases.

¹⁹This is definition D_3 in Huemer (2007), and it is explicitly designed to remedy to the defects of EP1 and EP2.

If ϕ is an epistemic possibility for x , then, according to EP3, it must be possible for x to consider whether ϕ is true. In such a case, x would be able to conceive ϕ ; thus, ϕ is conceivable. However then, (CEP^-) is true. So it seems that EP3 validates (CEP^-) .

We could try with another definition of epistemic possibility:

Epistemic possibility 4, EP4 ϕ is epistemically possible for x at t if and only if the empirical evidence x possesses at t and/or ideal reasoning are not sufficient to rule out ϕ .²⁰

Under EP4, what is epistemically possible is something that is not ruled out either by a priori reasoning and/or by empirical evidence. For example, if my empirical evidence is not sufficient to rule out that Bob owns a car because I do not have enough empirical information about Bob's possessions, then it is an epistemic possibility for me that Bob owns a car. If I am in the condition to rule out that Bob owns a car because I know that Bob only has a bike, then "Bob owns a car" expresses a proposition that is an epistemic impossibility for me or, which is the same, "Bob does not own a car" expresses a proposition that is epistemically necessary for me.

In case $\neg\phi$ is ruled out based on ideal reasoning *alone*, we will say that ϕ is an a priori epistemic necessity, and in case ϕ is not ruled out only based on ideal reasoning, then ϕ is an a priori possibility. In case the ruling out of $\neg\phi$ is knowledge of ϕ , then epistemic necessity is knowledge and an a priori epistemic necessity is a proposition known a priori.

According to EP4, it is *the capacity (or incapacity) of ruling out* that gives us access to the realm of epistemic modality. Regarding some proposition ϕ and some epistemic agent x , we have the following cases:

1. x rules out $\phi \Leftrightarrow \neg\phi$ is an epistemic necessity;
2. x rules out $\neg\phi \Leftrightarrow \phi$ is an epistemic necessity;
3. x is not able to rule out $\phi \Leftrightarrow \phi$ is an epistemic possibility;
4. x is not able to rule out $\neg\phi \Leftrightarrow \neg\phi$ is an epistemic possibility (so ϕ is not epistemically necessary).

Under this conception of epistemic possibility, the falsity of (CEP^-) corresponds to a situation where the incapacity to conceive of ϕ is accompanied by the incapacity of ruling out ϕ and, thus, to a situation where inconceivability does not exclude epistemic possibility.

This, however, seems to be problematic, and much depends on our interpretation of what it means for a subject to be "incapable" of doing something. On one interpretation, x 's inability of ruling out ϕ manifests itself whenever the evidence (empirical or ideal) that x has is not enough to conclude that ϕ is false. The falsity of (CEP^-) requires that there is some evidence that an agent associates with ϕ , while not being able to conceive ϕ . Now, it seems plausible to assume that, to associate some evidence with a proposition, the subject must be capable of at least entertaining the proposition and hence conceiving of it. However, if this is the case, (CEP^-) cannot be false: ϕ cannot be an epistemic possibility for x without x 's ability to conceive ϕ .

On another interpretation, x 's inability of ruling out ϕ might also include those cases where x does not assign any evidence to ϕ because x does not entertain ϕ . In such a case, ϕ would count as epistemically possible under EP4 in an objective sense.

²⁰For this approach to epistemic possibility, see Kment (2012) and Chalmers (2011). The ability of ruling out a proposition amounts to the ability of excluding that the relevant proposition is true.

Note, however, that an objective conception of epistemic possibility would be at work under EP4 only in this extreme case. In all other cases, where the subject is not capable of ruling out ϕ but assigns some evidence to ϕ , ϕ would count as epistemically possible and conceivable. Furthermore, there is a sense in which even assigning zero evidence to ϕ might require the ability to entertain ϕ .

What distinguishes EP1 and EP2 from EP3 and EP4 and, in general, what distinguishes objective from nonobjective conceptions of epistemic possibilities is the existence of a connection between entertainability and epistemic possibility. This, I surmise, is the discriminating line between the objective and nonobjective conception of epistemic possibility. (CEP^-) is only false on those conceptions of epistemic possibility where such a connection is lost, while it is true in all those conceptions where such a connection, however weak, is maintained.

6 | ABANDONING THE DUALITY OF EPISTEMIC MODALITY

At step 5 of the problematic argument presented in Section 3, the duality of epistemic modalities is used. The aim of this last section is to evaluate the possible consequences, for a Kripkean, of abandoning the duality of epistemic operators.

Duality (of epistemic modality) can be expressed in the following way:

$$(DUAL): \Box^e \phi \leftrightarrow \neg \diamond^e \neg \phi. \text{ }^{21}$$

In general, the role of duality is that of connecting in a certain way the \Box and the \diamond operators of a certain kind of modality. If dual holds, then we could use the definition of necessity for a certain kind of modality X , X -necessity, to generate a definition of the corresponding notion of X -possibility.

In the problematic argument in step 3, duality is used to prove that, if $\neg \phi$ is not epistemically possible for x , then x is epistemically necessary for x . The direction needed is from $\neg \diamond^e \neg \phi$ to $\Box^e \phi$. Rejecting duality to block the problematic argument means that from the nonexistence of the epistemic possibility for x that $\neg \phi$, it does not follow that ϕ is epistemically necessary.

The cases where duality seem to fail are interestingly connected to the Rigel 7 scenarios discussed in the previous session.

Because there are good reasons to deny that the proposition that Rigel 7 is on Sam's couch expresses an epistemic possibility for Sam (in the case Sam has no concept of Rigel 7), there are good reasons to deny that the proposition that Rigel 7 is *not* on his couch is an epistemic possibility for Sam (in the case Sam has no concept of Rigel 7). If Sam has no concept of Rigel 7, there is no epistemic possibility for him regarding Rigel 7. Thus, we are in a situation where the epistemic possibility that Rigel 7 is not on his couch does not exist for Sam. However, if duality holds, we should conclude that the proposition that Rigel 7 is on his couch is an epistemic necessity for him. If there are no epistemic possibilities for Sam about Rigel 7, there will not be any epistemic necessities for Sam about Rigel 7.

Cases that motivate our *defense* of (CEP^-) (because they are cases that are counterexamples to the conceptions of epistemic possibility where (CEP^-) comes out false) are also cases that motivate an *attack* on duality.

²¹Of course, duality could be expressed starting from possibility:

$$DUAL^*: \diamond^e \phi \leftrightarrow \neg \Box^e \neg \phi.$$

What is wrong in the problematic argument is that it makes use of two principles ((CEP⁻) and duality) that are incompatible. (CEP⁻) is only compatible with a nondual conception of epistemic modality. Hence, if the Kripkean accepts (CEP), the problematic argument is blocked for the falsity of duality, if she or he accepts duality, the argument is blocked for the falsity of (CEP⁻).

If she or he chooses this second option, however, she or he has also to accept an objective conception of epistemic modality, because duality is only compatible with these conceptions. As we have seen in the previous section, however, there are some costs in accepting these kinds of conceptions: for example, they break the tie between epistemic modality and knowledge, because they are compatible with a situation where ϕ could be an epistemic necessity for x and x does not know ϕ .

There are ways to restore some forms of duality of epistemic modals in a way that is compatible with the truth of (CEP⁻). This move would render the problematic argument less general, but still problematic for Kripkeans.

For example, we could relativize duality only to those propositions that a subject is able to entertain. Borrowing and adapting a terminology used by Prior (2003), we could define a proposition that a subject is actually able to entertain, “statable proposition,” and we could introduce a stability operator. $S\phi$ means that ϕ is stable. $S\phi$ is true for a subject x in case x can entertain ϕ . If x has actually entertained a proposition ϕ , then ϕ counts as stable as well.²² We could then reformulate duality as follows:

$$(DUAL-S): S\phi \rightarrow (\Box^e \phi \leftrightarrow \neg \diamond^e \neg \phi).$$

Given that the propositions about Rigel 7 are (contingently) not in the conceptual space of Sam or never entertained by him, the propositions about Rigel 7 are not stable, so duality does not apply to them. In this way, from the nonexistence of the epistemic possibility for Sam that Rigel 7 is not on his couch, we cannot apply duality to obtain the undesired result that the proposition that Rigel 7 is on his couch is epistemically necessary for Sam.

By relativizing duality to stable propositions, we could have both (CEP⁻) and a limited version of duality, restoring a weaker form of the problematic argument. Even this weaker form, however, would be problematic for Kripkeans.

Assume that Sam has actually thoughts about water and H₂O, so propositions about water and propositions about H₂O are stable of Sam. Or assume, in a stronger way, that Sam has actually entertained the proposition that water is H₂O, so the proposition that water is H₂O is stable for him.

Now, if we apply the problematic argument to *this proposition*, we would be allowed to infer, using our weaker form of duality, DUAL-S, that, from the nonexistence for Sam of the epistemic possibility that water is not H₂O, it is an epistemic necessity for Sam that water is H₂O. This would still be a problematic conclusion for Kripkeans, because now all metaphysical necessities *stable by a subject* would turn out to be epistemic necessities.

7 | CONCLUSIONS

In this article, I have presented a problematic argument for the “Kripkeans.” I have defined a Kripkean as whoever embraces at least the following two claims: (i) there exists metaphysical (or

²²In Prior’s system of quantified modal logic Q, a proposition is stable if all of its constituents exist. I have given a more epistemic reading of this operator earlier. On Prior’s Q and its philosophical underpinnings, see Menzel (1991).

objective) modalities and (ii) it is not possible to genuinely conceive of the negation of metaphysical necessities (KC). I have shown that by adding some further elements such as (iii) a principle connecting conceivability and epistemic modalities such as (CEP⁻) and finally (iv) the duality of modal epistemic operators, an argument could be construed to show that every metaphysical necessity is also an epistemic necessity.

I have shown that a Kripkean might react to the argument by rejecting, or qualifying, one of (ii)–(iv). I have argued, however, that the eventual rejection of at least one among (ii)–(iv) forces a Kripkean to defend implausible, theoretically costly, or simply unexpected views. For example, rejecting a principle like (CEP⁻) forces the Kripkean to accept an objective conception of epistemic modalities. If epistemic modalities are objective, however, the fundamental distinction, for a Kripkean between objective and nonobjective modalities, is blurred and the connection between epistemic necessities and knowledge becomes problematic.

ORCID

Vittorio Morato  <https://orcid.org/0000-0001-6332-0907>

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How to cite this article: Morato, V. (2023). Kripkean conceivability and epistemic modalities. *Analytic Philosophy*, 00, 1–18. <https://doi.org/10.1111/phib.12310>