MODAL EPISTEMOLOGY, REALISM ABOUT MODALITY, AND THE IMAGINATION

MIHAI RUSU[*]

ABSTRACT. The main aim of this paper is to provide a critical discussion of the relation between realist epistemologies of modality and the imagination. Two prominent realist accounts of modal knowledge are examined: a Kripkean one and Williamson's counterfactual account. I argue that the constraint that Kripke believes should be imposed on the imagination in order to obtain, but also defend metaphysically necessary truths is too strong. This either makes it ineffective, or leads to serious doubts about Kripke's famous examples of necessary *a posteriori* truths. The conceptual tension between a modal epistemology that follows Kripke's suggestion and classicized Kripkean tenets in the philosophy of language is evinced in the analysis of Soames' version of Kripkeanism. Williamson's account follows the same line of imposing very strong constraints on the way we form or acquire knowledge of metaphysical necessity, which ultimately leads to similar doubts about its effectiveness. While this critique motivates some sceptical conclusions, it leaves the discussion about the force and extent of modal scepticism open.

Keywords: modal epistemology, necessary truth, metaphysical modality, Saul Kripke, Timothy Williamson, counterfactual.

1. Introduction. A terminological preliminary

Recent work in modal epistemology has focused more on explaining and characterizing our knowledge of metaphysical possibility, and much less on discussions of the epistemological status of metaphysical necessity. The fact that the two notions are interdefinable may obscure the fact that giving an adequate explanation of

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[*] University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Department for Teachers' Training, 3-5 Calea Mănăştur, Cluj-Napoca, Romania / Babeş-Bolyai University Cluj-Napoca, Department of Philosophy, 1 Mihail Kogălniceanu str., Cluj-Napoca, Romania. Email: mihaimcrusu@gmail.com

knowledge of necessity is a different (and arguably a more difficult) task than accounting for our knowledge of possibility. If nothing more, we are in possession of some unproblematic knowledge of real possibility, as everything that is actual is also possible, by any account.[1] The issue of the relation between conceivability and metaphysical modality occupies a central place in the literature, but it has been usually paired with the acceptance of Kripke's examples of *a posteriori* necessities as uncontroversial.[2] This has, in turn, led to one dominant concern of modal epistemologists, that is, to show why the seemingly conceivable counterexamples to Kripke's *a posteriori* necessities are not to be taken as indicative of genuine possibility. The idea that Kripkean cases of metaphysical necessity may themselves be in need of epistemological justification has eluded concern in many accounts.[3] Yet, showing that some proposition *p* may not count as a genuine possibility is not tantamount to showing that whatever *p* is supposed to be a counterexample of is necessary (and known to be so). An adequate and robust modal epistemology is still needed, that is, we are still in search of an account that explains not just some form of modal knowledge, but our knowledge of metaphysical necessity as a distinct type of modality that is not reducible to any sort of conceptual content.

The endeavour of this paper is mostly negative. I will first argue that the most obvious epistemological account that one can take out of Kripke's works on modal matters is untenable. I will then attempt to offer a more in-depth perspective of why certain types of realist theories of modality are bound to fail by discussing Williamson's views on modal epistemology.

At first, we need to make some conceptual and terminological clarifications. To date, there is no agreement on the differences between *epistemic possibility* and *conceptual possibility*. Some philosophers (Chalmers, Soames) don't distinguish between the two, while others (Fiocco) insist on separating them.[4] For Jackson, the demarcation line is not obvious, but he argues in favour of the 'conceptual possibility' terminology.[5] In a similar and related note, the distinction between *imagining* and *conceiving* seems to be imprecise, at least in what concerns modal matters. Some philosophers (Chalmers, Kung, Yablo) hold that modal conceivability can be accounted for in terms of the imagination, and the deliverances of the imagination (usually a special

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[1] Van Inwagen (1998) emphasizes the epistemological distinction, but doesn't pursue it.

[2] Famously expounded in Kripke (1980).

[3] Not in all accounts, however. Gutting (2009), Lowe (2007), Salmon (1986), and Tahko (2009) raise important epistemological doubts about Kripke's cases.

[4] See Chalmers (1996, 2002); Soames (2011); Fiocco (2007a).

[5] Jackson (2010: 87-88).

kind thereof) are trustworthy guides for assessing real possibility and necessity.[6] At the same time, other philosophers insist on the undependable nature of our imagination as a modal guide.[7] While one of the options is to discard the modal role of conceiving along with that of the imagination (which appears to be an acknowledgement of the interdependence of the two notions, perhaps even of their identity), one may also maintain that modal conceivability is connected to a different and more reliable faculty than the imagination.

However, there seem to be strong reasons behind the two conflations. It is true that, traditionally, conceiving is taken to be more 'objective' than imagining. Many philosophers treat concepts as some sort of abstract objects which are independent (or at least not entirely dependent) on minds. Consequently, some of our purported acts of conceiving should fail in relation to certain objects and their properties. E.g., it might be pointless to attempt to conceive water that is not H_2O according to a view of this type, if 'being H_2O' is somehow part of the (shared) concept of <water>. This is, basically, viewing concepts as meanings (and viewing meanings in an objectivist manner).[8] But this is not to say that someone cannot *imagine* water being something else than H_2O, if we take imagination to be something else than conceiving, that is, a faculty much less constrained by thinker-independent rules and content. But this is not the only sense of 'concept' in philosophical literature. Many contemporary philosophers support, for instance, a representational theory of the mind, and treat concepts as mental representations.[9] The senses are different, and correspondingly, the constraints imposed on conceiving are different. On views with less objectivist import, the boundary between conceiving and imagining is naturally rather blurry, but even on a general note, it is not clear that imagining is really something else (whether less or more) than a conceptual activity. This doesn't mean that conceiving and imagining are one and the same thing, but a demarcation between the two is also rather hard to trace, especially if one tries to specify it by looking at the way these notions have been used in recent philosophical work. Typically, we associate the imagination with some sensory-like processes, but philosophers have also theorized non-pictorial types of imagination. Yablo, for instance, makes an important distinction between *propositional imagination* (imagining that *p*) and *objectual imagination* (imagining some objects "as endowed with certain properties").

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[6] Chalmers (2002); Kung (2010); Yablo (1993); Kripke (1971, 1980).

[7] See Bealer (2002); Byrne (2007); Ellis (2001); Fiocco (2007b) for just a few examples of explicit skepticism about the modal powers of imagining/conceiving.

[8] See Peacocke (1992) and Zalta (2001) for views of this type.

[9] See Fodor (2003) and Millikan (2000) for just two contemporary instances of this traditional view in the philosophy of mind.

Taking such a distinction into account, it is only natural to inquire how much sensorial content is needed for some mental act to count as an imagining. Yablo explicitly rejects the idea that we need sensory-like images for adequately imagining something.[10] Again, this makes distinguishing between imagining and conceiving a difficult task, leaving open the question if imagining is nothing more than a form of conceptual activity.

I think it is for similar reasons that some philosophers don't acknowledge a firm distinction between epistemic possibility and conceptual possibility. Not all thinkers are happy with this lack of precision. Fiocco has written a very insightful and informative paper devoted precisely to specifying the adequate distinction between these two notions.[11] Epistemic possibility is traditionally defined as possibility in relation to a certain subject's body of knowledge. A proposition p is epistemically possible if p is consistent with what S (the subject) knows. Alternatively, as in Yablo's weaker definition of epistemic possibility, it is just the possibility of p that needs to be consistent with what S knows. Epistemic possibility is rejected in both guises by Fiocco as a legitimate source of knowledge of metaphysical possibility, if one acquiesces to a robust view of the nature of modal reality. Fiocco argues that conceptual possibility, defined as the compatibility of the concepts contained in a proposition, is also ill-suited as a purveyor of robust modal knowledge. Nevertheless, conceptual possibility should be distinguished from epistemic possibility, according to Fiocco. He construes the former as objective (because concepts are also objective) and *a priori*, whereas epistemic possibility is relative to a subject and has an *a posteriori* dimension, as it depends on the actual knowledge a subject possesses. But this understanding of conceptual possibility relies upon a preferred theory of concepts and, on a wider note, on the semantic and epistemological views one espouses. Epistemic possibility is defined as the consistency of a proposition with other propositions forming a subject's body of knowledge. We cannot attempt to re-explain this condition as metaphysical compossibility as it would beg the question against the ones that hold that metaphysical possibility should be defined in relation to epistemic possibility. But consistency is basically conceptual possibility.

Epistemic possibility could be therefore construed as a specific form of conceptual possibility, more precisely, conceptual possibility in relation to a subject's body of knowledge. Let me take an example to make things clearer. Soames has argued that Kripke outlines two routes to necessary *a posteriori* truths, and only one of them is correct, namely the one that proceeds by way of essential properties.[12]

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[10] Yablo (1993: 27, n. 55).
[11] Fiocco (2007a).
[12] Soames (2002; 2006; 2011).

I will simplify Soames' account here for my current purposes, but I will discuss it in more detail in the next chapter. In Soames' version, Kripke's essentialist route to the necessary *a posteriori* starts from an initial state of ignorance concerning the actual possession of some purportedly essential property, like composition or origin. In this state, it is epistemically possible for, say, a table to be entirely made of wood, but it is also epistemically possible that the table be entirely made of iron, or plastic, or what have you. Each of the following propositions:

> *p**: The table in front of me is entirely made of wood.
> *p***: The table in front of me is entirely made of iron.
> *p****: The table in front of me is made of 50% wood and 50% iron.

is epistemically possible for a subject, because there is nothing the subject knows that precludes it. Yet, the subject already holds various more or less implicit modal beliefs involving the concepts used in the propositions, which may count as knowledge. For instance, she believes that the table must have a (physio-chemical) composition, even if she doesn't know precisely what that composition is. She also believes that the table could have been in another room, even if it is actually here. More importantly, while *p**, *p***, *p**** are all compatible with what the subject knows, every one of them is incompatible with every other, if composition is indeed essential to an object. In a Kripkean account, this is due to the *a priori* (i.e. conceptual) background of metaphysical necessities. Some material objects cannot have a (entirely) different composition than the one they actually have. It needs to be stressed that this is a conceptual affair: we already know *a priori*, according to Soames, who claims to be following Kripke, which types of properties are essential. In our initial state of ignorance, we have many candidates that are epistemically possible, but once we have determined the actual property the object has, then…well, then the account becomes a little complicated, as we will see in the following chapter. Soames holds that this is the moment we obtain metaphysical necessity, so to say. We find out that, to continue with our example, the table is actually made of wood. But this empirical discovery also provides us with a modal truth. Because the table is actually made of wood, then it must be made of wood in any metaphysically possible situation, i.e., it is metaphysically necessary that the table is made of wood. Whatever our concerns or objections, a process such as the one described here is regulated by conceptual (*i.e.*, *a priori*) rules. The epistemic possibilities regarding the composition of the table are the ones afforded by our concepts (<composition>, <table>, <wood>, <iron>, etc.) in relation to what we know regarding the table. Now, the question is: isn't the metaphysical necessity of the table being made of wood also an epistemic/conceptual necessity in the end?

I will explore some answers to this question later on. For now, I just use Soames' example to show how epistemic modality can be regarded as conceptual modality. The precise differences and relations between the two types of modality are difficult to determine, as Soames' version of Kripkeanism, whether correct or not, seems to show quite vividly (if it need be shown) that knowledge also shapes our concepts, and therefore our conceptual possibilities.

In conclusion, even if the choice might be disputed, I will opt for talking about *epistemic modality* and *imagination*, and leaving *conceptual modality* and *conceiving* out of the discussion. Even though the differences between the two pairs of concepts may be of some importance for the topics of this paper, I will not explore them further here.

2. A Kripkean account

Modal epistemology is almost absent from *Naming and Necessity*. Remarks hinting at explanations of our modal knowledge in Kripke's most popular work are scarce. We may speculate on the reasons for this lack of concern on Kripke's part: probably, he took at least some forms of modal knowledge as largely uncontroversial (we have modal knowledge and it is obvious we have it). However, we won't concern ourselves with these matters here. It is rather clear that modal epistemology is not a chief concern of Kripke in *Naming and Necessity*. Yet, at least one type of view on the epistemology of modality is explicitly present, albeit in an undeveloped manner in Kripke's work. This view has been notably interpreted as Kripke's preferred modal epistemology by Soames and Kung.[13] It has also been developed more thoroughly by the former.[14] I will show in this chapter why this view of modal knowledge should be disputed, even by Kripkeans. To do so, I will start from Soames' account of how we acquire knowledge of metaphysical modality according to a Kripkean framework.

Soames argues that there are two attempted routes to the necessary *a posteriori* in Kripke's work and only one of them is sound, namely the essentialist one. I will not evaluate the reasons behind Soames' rejection of the other route here, as they are not of very much interest for my current purposes. As said in the previous chapter, the essentialist route starts from an initial state of ignorance concerning the possession of a purported essential property by some object. But this is not an absolute ignorance, as we already know that whatever that property

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[13] Soames (2002; 2011); Kung (2016).
[14] In Soames (2002; 2006) and, especially, in Soames (2011).

is (say, origin or composition), it must be essential, that is, true of that object in every metaphysically possible world. However, in the state of ignorance various versions are coherently conceivable, and therefore epistemically possible (the table could be made of wood, ice, plastic, etc.). Each of these epistemic possibilities engenders its own system of metaphysical possibilities. While there are propositions that belong to multiple possibility systems (e.g., it is metaphysically possible for me to see the table at the worlds where the table is made of wood, but also at the worlds where the table is made of iron or plastic or what have you), there are propositions that belong to a single system of metaphysical possibility (precisely those about composition, in our example). To wit, no world where the table is made of iron can belong to the system of metaphysical possibility engendered by the epistemic possibility that the table is made of wood. The plurality of epistemic possibilities concerning essential properties is needed because otherwise necessary truths regarding them wouldn't be *a posteriori*. The fact that various versions are conceivable means we don't have knowledge of certain essential properties *a priori.*

What we do know *a priori*, according to Kripke, is that certain types of properties and relations are essential to the objects that bear them. However, we need empirical evidence precisely in order to rule out all those states that are coherently conceivable, but are in fact metaphysically impossible. We know that composition is essential for material objects. At a certain moment, we may entertain various metaphysically incompatible, but coherently conceivable stories concerning the composition of a certain object. When we find out how the world actually is, we do away with all these rival epistemic possibilities and are left with metaphysical necessity. The table is necessarily made of wood, because it is actually made of wood. The correct system of metaphysical possibility is singled out – it is the one containing the worlds where the table is made of wood and all the other worlds that are possible in relation to those worlds. This is Soames' picture of Kripke's underlying epistemology of metaphysical modality.[15]

The picture raises some theoretical difficulties which I will discuss in this chapter. These difficulties are not treated by Soames, who is more concerned with distinguishing between the two Kripkean routes to the necessary *a posteriori*. Nevertheless, Soames' preferred essentialist route has problems of its own.

The main problem is, simply put, that there is no apparent exit from the space of epistemic possibility to that of metaphysical necessity. The epistemic possibilities are never truly eliminated from the modal space – they are still there. Or if they are done away with, the newly discovered necessary truth should also be

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[15] See Soames (2011: 80-87) for the complete development of Soames' view on this issue.

construed as an epistemically necessary one. This is very similar to what Frank Jackson notes in the first part of his critique of what he calls the 'two-spaceism' of Lycan and Soames.[16] Two-spaceism is the idea that there are two spaces of possibility, metaphysical and epistemic (Jackson uses the term 'conceptual possibility'), and the space of metaphysical possibility is a proper subset of the space of epistemic possibility. Jackson is very much at odds with the idea that there are epistemic possibilities that are metaphysically impossible. To argue for his point of view, Jackson discusses various cases of widely accepted examples of metaphysically necessary truths and their metaphysically impossible, but epistemically possible alternatives. The strategy behind Jackson's examination of these cases is the same. The first example is that of a simple identity statement "Mark Twain = Samuel Clemens". According to many, this is a metaphysically necessary truth. But, if two-spaceism is correct, there should be worlds where "Mark Twain ≠ Samuel Clemens" is true. Those worlds should be metaphysically impossible, but epistemically possible. Jackson argues that there are in fact no such worlds. The reason is simple: if Mark Twain is Samuel Clemens at w_1, but Mark Twain is also different from Samuel Clemens at w_2, then Mark Twain at w_1 must be different from Mark Twain at w_2. Identity is a transitive relation, which means that if there is transworld identity, Mark Twain at w_2 is identical with Samuel Clemens at w_1 (because he is identical with Mark Twain at w_1); but then, he should also be identical with Samuel Clemens at w_2, as the two Samuel Clemens are assumed to be identical. The contradiction is obvious. Giving up transworld identity and introducing some sort of similarity relation, such as the counterpart relation, doesn't help, as the other worlds would not be worlds where *our* Mark Twain and Samuel Clemens are not identical. If Mark Twain is Samuel Clemens, then whatever makes the counterpart of Mark Twain at, say, w_3 similar enough so as to represent Twain at that world should also make him the counterpart of Samuel Clemens at the world in question. Therefore, at any world, the same propositions will be made true or false regarding both Mark Twain and Samuel Clemens.

A similar moral applies to essentialist cases. If what makes water water is being H_2O, then it is also conceptually impossible for water not to be H_2O. If what makes water water is being the liquid that fills the oceans and rivers, that falls from the sky, etc., then it is also metaphysically possible for H_2O not to be such a kind. Jackson finds the idea of worlds that are metaphysically impossible, but conceptually possible "deeply obscure."[17] He summarizes the crux of his argument very eloquently when discussing the case of composition:

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[16] Jackson (2010: 88-92).
[17] Jackson (2010: 90).

Many who hold that the constitution of an object is an essential property of it argue that some particular object's not being made of wood, in the case where it is in fact made of wood, is metaphysically impossible. Suppose they are right. Should we then say that a possible world where this very table – the one I am now writing on, which is made of wood – is not made of wood is an example of a world that is conceptually possible but metaphysically impossible? No. For what makes the table, in the claimed conceptually possible world where it is not made of wood, this very table? If a table's constitution is an essential property of it, part of the answer must be its being made of wood. But then the world said to be conceptually possible is no such thing. A table made of wood not being made of wood is conceptually impossible.[18]

An argument such as Jackson's can be pushed toward more radical conclusions, ones that perhaps Jackson, and surely orthodox Kripkeans, would not endorse. Suppose we accept that there are no conceptually possible worlds where objects do not have their essential properties, i.e., essential properties are inseparable even from a conceptual standpoint from the objects that possess them, as Jackson holds. The reasoning seems to be sound: the table could not have existed without being made of wood. Then, whenever I imagine something concerning that table, I must rule out all scenarios where the table is not made of wood. Tables of a different constitution, even if they are in the same place, have the same appearance, have a very similar history, etc., are simply different tables. Yet, there is something here that should disturb a very fine Kripkean ear. If it is not conceptually possible for an object to lack an essential property, this means that knowledge of the possession of that essential property by that object should be *a priori*. This, of course, jeopardizes Kripke's famous examples of necessary *a posteriori* truths. The least we can say is that necessary truths seem to create the very same effects for our conceiving/imagination that *a priori* truths engender.

There are various places in Kripke's two famous works on the topic of modality that seem to show that Jackson's perspective is well-founded and, more importantly, that the process whereby we attain modal knowledge is bound to lead to a restriction to our imagination in the absence of which the imagination is inefficient in delivering us modal truth. I choose one fragment from *Identity and Necessity* to illustrate this point, but there are other passages in *Naming and Necessity* that convey the same idea: "[G]iven that [the lectern] is in fact not made of ice, is in fact made of wood, one cannot imagine that under certain circumstances, it could have been made of ice."[19]

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[18] Jackson (2010: 92).
[19] Kripke (1971: 153).

The problem that is ignored by many philosophers is that not only the proposed restriction on the imagination is unnaturally strong, but also that it should lead to something very much like *a priori* knowledge. This, of course, imperils Kripke's famous cases of *a posteriori* necessity. If the restriction on our imagination is the way we recognize metaphysical necessity or an immediate effect of this recognition, then Kripke's examples of *a posteriori* necessity are compromised, as they make use of our intuitions concerning this type of modality. Kung uses the term "Error theory" to refer to the theory of modal imagination that can be drawn out of the cited remark or from similar ones by Kripke. The idea is straightforward: whenever we think we imagine an object without one of its essential properties, we are in error. The object we imagine is a different one, even if similar in many respects, to the one we consider. This engenders the so-called modal illusions that are brought up as counterexamples against metaphysical necessities. Now, it is to be debated if this is or was Kripke's undeveloped epistemology of modality. Due to the sketchiness of Kripke's remarks on the subject matter, a definitive answer is hard to put forward. What is, however, much clearer is that such a theory forces the Kripkean into a very un-Kripkean stance. To see this better, let us return to Soames' proposed model for an epistemology of modality.

According to Soames, at first, we entertain various epistemic possibilities regarding the possession of certain (types of) properties by certain objects or kinds. Then, we discover the actual property the object possesses. At this moment, the rival epistemic possibilities are done away with, one way or another, and we are left with metaphysical necessity. The arduous matter is to determine precisely how are these rival epistemic possibilities done away with. One natural solution is something like the Error theory: whenever we imagine objects or kinds without their essential properties, we are not imagining the object or kind in question at all, but some different object or kind. The proposal seems very natural when we consider only what happens after we obtain a certain piece of knowledge concerning an essential property, but it is already very strong. *From now on*, you cannot imagine water as being something else than H_2O. If the process works the way the picture suggests, something in the texture of our concepts, whatever that is (and whatever our preferred theory of concepts is) must be changed, and this change is not only based on *a priori* principles, it should also lead to *a priori* knowledge, if it is to be efficient. If we cannot imagine water that is not H_2O in any circumstance, then it seems that *being H_2O* is associated with the concept of <water> in a very robust manner – otherwise, it would not be able to constrain our imagination and/or intuitions so strongly. However, this is not all. Given that the table is in fact made of wood, Kripke's example goes, then one cannot imagine it

could have been made of something else. A very natural interpretation of this remark is that the restriction should also work in retrospection, that is, it should affect imaginings that are prior to the moment of the discovery of the actual property in question (which is also the moment when the real modal property is determined, or at least, determinable). No distinction between moments of time is or should be made. This means that Soames' route to the necessary *a posteriori* is not operational, at least not in the way Soames describes it. If there are no metaphysical impossibilities that are epistemically possible, then the initial moment of ignorance doesn't contain the various epistemic possibilities regarding the essential properties of the object or kind considered. What we actually entertain are various scenarios concerning very similar, but different objects or kinds. Only scenarios where the Queen is the daughter of her actual parents are epistemic possibilities regarding the Queen, only possible worlds where water is H_2O are epistemically possible worlds containing *our* water, in all other worlds there are different substances filling the role of water, etc. This is a view that extends the epistemology of mathematical modality to all types of real modality. One may believe one imagines, for instance, that the number 99,999,921 is divisible by 11 (whatever that takes), but this is not an epistemic possibility regarding this number, given that the number has the property it actually has.

While there is nothing obviously wrong with this epistemological theory, I contend that the proposed restriction is much too strong, and consequently it doesn't work, at least not for the way agents usually construe and perform with the modal imagination. To see this, we need only reflect for a little while on why Soames' essentialist route doesn't seem wrong or unnatural at first glance. There is no principled restriction on acts of the imagination that vary on essential properties: while essential properties are not on an epistemic par with ordinary properties, scenarios wherein objects or kinds possess properties incompatible with the purported essential properties they actually have can be legitimately entertained. There is no functional epistemological restriction on these types of scenarios in our current practices. Imagine for instance that it is a hot summer day, I am lying down in my room in front of my TV set, and I imagine that if the temperature were to go up by one degree, the TV set would melt in front of my eyes. What the error theorist would tell me is that this is not really possible – the constitution of my TV set would not allow it and, therefore, it is neither epistemically possible. I am not actually imagining my TV set melting in front of my eyes. But this is very peculiar. The natural answer is: of course I am imagining my TV set melting, how can someone or some theory say that I am not? The one thing that may be disputed is if my imagining has any modal force in this case.

The example of the TV set may be seen as problematic, but other examples are easily adduced. At any given time, communities of speakers – including communities of specialized speakers – or large parts thereof hold various mistaken beliefs about the essential properties of objects or natural kinds. E. g., there were people who thought whales were fish, there still are many such people, probably. Yet, to hold that someone who thought whales could have gills or could lay eggs was not actually thinking about whales is a very implausible position. For all we know, the person who discovered how whales reproduce might have set out looking for whale eggs at first, much like Columbus went searching for the Indies. The object we imagine things about is many times right there in front of us – it seems very strange to hold that it disappears from our imagination whenever we, knowingly or unknowingly, envisage a situation that is incompatible with its essential properties. Sometimes, examining or dealing with the implications of our erroneous beliefs is what makes us realize they are wrong in the first place. The nature and value of this process seems lost if we hold these beliefs cannot be about the same object.

The view that we cannot imagine metaphysical impossibilities, which was seemingly expressed by Kripke, is therefore too strong and seems to work against other more well-known Kripkean tenets, such as the existence of the necessary *a posteriori*. On a natural interpretation, much in the vein of Jackson's remarks, the essential properties should become robustly associated to our concepts, so as to preclude conceptually possible, but metaphysically impossible propositions. If this happens only after we determine an essential property, or before (and concepts should be strongly dependent on the nature of the objects they are about, despite our ignorance), that is not ultimately very important. According to the traditional view, being *a priori* is a matter of principle, as in the case of mathematical propositions. The proposed restriction on our imagination / conceptual faculties blurs the distinction between *a priori* and *a posteriori* knowledge to the point of making it inoperable. This doesn't save, however, Soames' modal epistemology. Soames still has to explain how it is that we manage to get metaphysical modality out of the space of epistemic possibility. The solution given by the Error theory is simple, but implausible and incompatible with Soames' route. Because the route starts with various epistemic possibilities, it is imperative to explain how we manage to do away with these epistemic possibilities and single out metaphysical necessity. A nice metaphor for this process would be the birth of Athena from Zeus' head. Yet, so much should be preserved from Jackson's remark: the epistemic possibilities are still there, and if this is a cognition process, it is difficult to say how we tell apart this now useless epistemic possibilities from the one epistemic possibility that is also a metaphysical necessity.

I would argue the problem is not so much with Soames' version of Kripkeanism, but with a tension that lies at the very heart of a Kripkean account, or more precisely at the intersection of the philosophy of language, epistemology, and metaphysics seen from an orthodox Kripkean perspective. On the one hand, we have non-trivial modal truths – especially necessary truths – which constitute modal knowledge. Whether knowledge of metaphysically necessary truths is the sole result of knowledge of essential properties (as Soames would want it), or not (as more traditional Kripkeans hold), the problem remains the same. We need a justification of our knowledge of modal truths, one which is preferably aligned with the metaphysical theory and use in language.[20] This theory should naturally include a description of the faculty and processes whereby we acquire modal knowledge. But on the other hand, we have probably the most famous Kripkean stance, pertaining to the philosophy of language. According to the Kripkean account, names and possibly natural kind terms should work as tags, that is, they should be separable from any descriptive content, and *that includes the essential properties that may be attributed to them*. The fact that there are expressions of natural language whose function is to stick to their referents in whatever circumstances (even if that function is not always guaranteed) is designed to help us keep track of objects, most importantly in situations of ignorance, poor knowledge or error that might affect our cognitive relation with the objects and kinds of our world. But naturally, we might be in ignorance or error concerning purportedly essential properties, too. The very permissive, perhaps idiosyncratic, limits of modal imagination reflect this underlying mechanism that allows us not to lose touch with objects, even when we are ignorant or mistaken about their properties. The independence of names and possibly natural kind terms from descriptive content is mirrored by the freedom of our imagination.

The question that emerges at this point is whether the moral extracted from the failure of the Soames-Kripke epistemological account may be extended to other realist accounts that attempt to combine the objectivity of modal truth with an explanation of modal knowledge that relies on epistemic modality / modal imagination. A general argument against this coupling is perhaps difficult to develop, and there are notable attempts to configure theories of modal knowledge based on the imagination that are acceptable to the realist.[21] Nevertheless, there seems to be a deep incompatibility between theories that consider imagination as the purveyor of modal truth and realist modal metaphysics. Descriptions of the process of singling out metaphysical necessity from the space of epistemic possibility appear to outline

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[20] This reconciliation of metaphysics and epistemology (which we may supplement with a language unity requirement) is what Peacocke (1999: 1) calls "the Integration Challenge."
[21] See Geirsson (2005); Kung (2010; 2016); Yablo (1993).

something that looks very much like *a priori* knowledge, as in the case of the Error theory. In the next chapter, I will examine a differently built modal epistemology, Williamson's counterfactual account.[22] Williamson's theory and the Kripkean picture have a common philosophical trait: an underlying ontological realism. To a large extent, Williamson's account also relies on the imagination as a source of modal knowledge (Williamson's examples are largely imagination-based), but Williamson holds that this is not the only means of developing counterfactual suppositions. Williamson's theory is in many respects different from Kripke's perspective or Soames' version of Kripkeanism, but I will attempt to draw a parallel between the two views which shows they suffer from a similar problem and the remedies they propose are also similar and ultimately ineffective.

3. Williamson's counterfactual epistemology

The epistemology of modality that Williamson has outlined has been the subject of much debate. This has a lot to do with the sketchiness of the account, but even if some objections may be answered satisfactorily by a more developed theory, there still remains a deep, underlying problem which seems to be quite similar to the one that the Kripkean epistemology faces. Moreover, this problem is even more stringent as Williamson eschews appeal to the *a priori* for his modal epistemology. In order to clarify my stance, I will proceed by summarizing the most important criticisms that Williamson has received concerning his counterfactual account and the way the criticisms have been countered in the literature. This will provide us with a clearer picture of the gap that still needs to be filled by the theory.

Williamson argues that our capacity to handle metaphysical modality is a byproduct of our naturally developed ability to develop and entertain counterfactual suppositions.[23] To this end, he presents the two following equivalences between modal concepts and counterfactual conditionals:

(N) $\Box A \equiv (\neg A \,\Box\!\!\rightarrow \bot)$
(P) $\Diamond A \equiv \neg (A \,\Box\!\!\rightarrow \bot)$

That is to say, "we assert $\Box A$ when our counterfactual development of the supposition ¬A robustly yields a contradiction" and "we assert $\Diamond A$ when our counterfactual development of the supposition A does not robustly yield a

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[22] Formulated in Williamson (2007).
[23] Williamson (2007: 162).

contradiction."[24] The gist of Williamson's theory (and also its ambivalence) is captured by the following passage: "modulo the implicit recognition of this equivalence, the epistemology of metaphysically modal thinking is tantamount to a special case of the epistemology of counterfactual thinking."[25]

Now, the major question that arises in regard to Williamson's account is how substantial is his epistemology of modal notions. In the first phase of the debate surrounding Williamson's theory, the major criticisms it has drawn seem to proceed under the (not entirely unmotivated) assumption that this theoretical attempt is indeed a robust form of epistemology, more precisely, a reductive account, whereby knowledge of modal notions is reduced to knowledge of counterfactuals. Following Deng's account (but modifying it slightly), we can subsume the objections against Williamson's theory under two categories: circularity objections and explanatory power objections.[26]

Consider the first type of charge – circularity. According to Williamson, we recognize a metaphysical necessity □A by the particularity that any counterfactual development of ¬A leads to contradiction. To give a picture of how this is supposed to work, Williamson uses the following example:

(1) Gold is the element with atomic number 79.

If this is a metaphysically necessary truth, then the supposition that gold is not the element with atomic number 79 should yield a contradiction. However, this is not readily apparent. There is no contradiction that follows immediately from entertaining this hypothesis. Williamson solves this difficulty by simply claiming that constitutive facts are to be held fixed across any counterfactual simulation:

> If we know enough chemistry, our counterfactual development of the supposition that gold is [not] the element with atomic number 79 will generate a contradiction. The reason is not simply that we know that gold is the element with atomic number 79, for we can and must vary some items of our knowledge under counterfactual suppositions. Rather, part of the general way we develop counterfactual suppositions is to hold such constitutive facts fixed.[27]

Boghossian is one of the proponents of a circularity criticism to Williamson's account.[28] The question is in virtue of what we hold constitutive facts fixed and, ultimately, what makes certain facts constitutive, that is, immune to variation in

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[24] Williamson (2007: 163).
[25] Williamson (2007: 158).
[26] Cf. Deng (2016: 484-489).
[27] Williamson (2007: 164).
[28] Boghossian (2011).

any counterfactual development. The projected answer seems to be that we already recognize these truths as metaphysically necessary, so counterfactual simulations are useless, and explanations of modality *via* counterfactuals run in a circle. While some of the remarks of Williamson - such as the one from p. 158 cited above - may lend themselves to a substantial interpretation, I agree with Deng that Williamson should be able to defend himself from circularity charges by simply pointing out that his account is not a reductive one, therefore we don't have an analysis of modality by way of counterfactuals. Williamson also emphasizes in a reply to Boghossian that statements such as (1) are not modal or required to be so.[29]

While the circularity charges can indeed be avoided, I want to argue that the explanatory power criticisms should be taken into account. Peacocke, Roca-Royes, and Tahko have all expressed various concerns about the account's capability of providing an adequate explanation of our modal knowledge.[30] Deng rejects the counterarguments of Peacocke, Roca-Royes, and Tahko arguing that their requirements on Williamson's theory are way too strong in relation to Williamson's explicit goals. Then, Deng goes on to provide his own criticism of Williamson's account, by arguing that Williamson's examples of counterfactual development are always about causal possibility and never about a distinct type of metaphysical modality (i.e., one that is not natural, mathematical, logical, etc.).[31] While I am sympathetic to Deng's conclusion, I think he dismisses the explanatory power critiques much too quickly. I will only focus here on Roca-Royes critique of Williamson's counterfactual account and use it in order to build my own argument against Williamson's proposals.

Deng answers just one of the arguments that Roca-Royes levels against Williamson, namely her worry that Williamson's account doesn't provide an elucidation of modal epistemology, the reason being that counterfactuals are actually dependent on background knowledge of the constitutive. According to Roca-Royes, the problem is consequently transferred from modal knowledge to knowledge of constitutive facts, *via* counterfactuals. Basically, Deng defends Williamson by arguing that scientific knowledge provides us with the wanted knowledge of constitutive facts. However, scientific truths (even as laws) are not modal in content, even if they may have modal implications.

I am not quite certain that this is enough to respond to this type of counterargument. While this doubt doesn't tell against our ability to acquire modal knowledge, it raises a serious concern about the utility of the counterfactual account. If we have knowledge of constitutive facts, then counterfactuals are dispensable,

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[29] Williamson (2011).
[30] Peacocke (2011); Roca-Royes (2011); Tahko (2012).
[31] Deng (2016: 489-493).

precisely because these constitutive truths have modal implications that we are or may become aware of. Perhaps Williamson may defend his account successfully by insisting here again that his is not a substantial account, neither as reduction, nor as explanation/elucidation.

Matters of perceived weakness or strength aside, I will focus here on another thread of Roca-Royes' critique. More precisely, Roca-Royes compares two epistemologies of counterfactuals, a Williamsonian one (W) and one (EC) which is very similar to Williamson's account, with the exception of not requiring that some constitutive facts be held fixed across all counterfactual scenarios. According to (EC), we can amend our background knowledge, even if these constraints should be minimal, and use our sense of how nature works, just as in Williamson's account. What is important is that we don't need constitutive knowledge in order to develop efficient counterfactual suppositions. I will not go into the details of Roca-Royes' arguments here. I am concerned with just one of her theses here, namely that "from a naturalistic perspective, (EC) is more plausible for *e*-counterfactuals than (W)."[32] Now, it is true that this statement needs some kind of direct justification, and this explanation is not fully provided by Roca-Royes. To wit, we would need to investigate the way counterfactual scenarios are actually entertained, but Williamson doesn't provide us with a justification either. It is not clear at all that we naturally proceed the way Williamson thinks we do, that is, by blocking any variation on constitutive facts. This puts some of the worries of the critics of Williamson, such as the importance of providing the *correct* account of constitutive knowledge, into perspective. If there is no quasi-automatic introduction of constitutive facts in counterfactual scenarios, then it is very important how we come to know constitutive facts, but most of all, how we are able to distinguish them, i.e., how we know something (and not something else) is constitutive.

The requirement of holding some background knowledge, namely constitutive facts, fixed in counterfactual suppositions mirrors Kripke's proposed constraint on the imagination. The success of the counterfactual explanation is dependent on the presence and pervasiveness of this procedure. Otherwise, this account cannot vindicate our knowledge of metaphysical modality – while we may get some appraisal of possibility at the end of counterfactual developments, there is no guarantee that we have singled out metaphysically necessary (or metaphysically possible) truths. The question remains if pieces of *a posteriori* knowledge can play this role – if they can impose such a strict constraint on our imagination (and on whatever other faculties and capacities are included in developing counterfactual suppositions).

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[32] Roca-Royes (2011: 551). *E*-counterfactuals are defined by Roca-Royes (2011: 538) as "counterfactuals that have a metaphysically possible antecedent and a logically consistent consequent."

Before formulating the conclusions of this paper, I would like to make one final, small note about Williamson's account of modal knowledge, that I hope to develop elsewhere more thoroughly. If we examine closely Williamson's rejection of the role of understanding in linguistic competence, on the one hand, and his epistemology of modality, on the other, we should notice there is an underlying tension between the two. Williamson considers some examples that seem to show that understanding a term is not essential for correctly using that term, thereby endorsing a social externalism of the type proposed by Burge.[33] Deviant understandings of a term may exist and even be professed by speakers, yet, as those speakers are part of a community, successful linguistic exchanges with members of that community ensure that they use that term competently.[34] However, Williamson also holds (as we have just seen) that substantial constraints should be, and indeed are, imposed on the way we develop counterfactuals. If the way we know modal truths is in any way related to this process, then these constraints should be reflected in the content of our modal notions. But modal notions are expressed by modal terms in language, so, when Williamson insists that users may have various incompatible understandings of the same term without this amounting to a separation between competent and incompetent users of that term, he must accept that this also happens in the case of modal expressions. But what is the correct and what are the deviant understandings of metaphysical modalities? The answer must be that the way the expressions are predominantly used in the linguistic community is the decisive criterion. Now, if we think about Roca-Royes' more permissive view on the epistemology of counterfactuals and accept that the dominant notion of metaphysical possibility is shaped along the lines of her (EC), then robust realism about metaphysical modality appears to be in trouble. It simply is not enough to provide us a strong and, more importantly, correct notion of real possibility.[35]

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[33] Burge (1979).

[34] See Williamson (2007: 95-98) for more details on Williamson's arguments and examples.

[35] Supplementing or replacing a criterion of predominant use with a principle of division of linguistic labour, along the lines of Putnam (1975), will not necessarily get the counterfactual account out of trouble. For one, it is not clear whose counterfactual practice should be upheld. It may be that scientists proceed differently from philosophers in counterfactual thinking and, consequently, they might accept incompatible counterfactual simulations about the same contents. Secondly, it is not clear that there is widespread consensus even inside one group of experts about the right way of developing counterfactuals, as debates between philosophers seem to confirm.

4. Concluding remarks

The aims of this paper are mostly negative. My main goal was to show that imagination (traditionally conceived) is not enough for providing knowledge of metaphysical modal truth, in accordance with the demands of a realist framework. This thesis was illustrated and argued for mainly with regard to the Kripke-Soames epistemology of modal necessity. The constraint this epistemology attempts to impose on the imagination is unnaturally strong and ultimately ineffective. However, even if it were effective, this constraint would jeopardize Kripke's famous examples of necessary *a posteriori* truths that are linked to his widely accepted views on referential terms. While Williamson's account is more nuanced, purporting to make room for the application of many more cognitive capacities than the imagination, it gives way to the same quandary. In order to result in adequate assessments of metaphysical necessity, counterfactual developments must lead to contradiction. The process is, however, way too simple: we just hold constitutive facts fixed. Yet, it is unclear that counterfactual suppositions proceed this way, which makes a counterfactual account powerless (derived, at most, from more fundamental knowledge). The failure of one epistemology in accounting for modal knowledge mirrors the failure of the other.

What is then the correct modal epistemology? The answer to this question is beyond the scope of this paper. The epistemology of essence seems to be a promising option for the realist. Other alternatives recover the role of imagination, but it is hard to see how these elucidations are to proceed without favouring a conceptual(ist) dimension. Whatever the options, the freedom of the imagination appears to remain intact.

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