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Abstract

In a recent paper, Peter Kung presents an epistemology of possibility, based on his theory of imagination. The resulting theory is, what he calls, a fallibilist theory of modal evidence from imagination. In this paper, I will argue that his epistemology of possibility can be interpreted as having two distinct goals: an ambitious and modest goal. The former goal has it that imagination plays a substantial role in the epistemology of possibility, whereas the latter has it that imagination is, in general, not epistemically vacuous.

I will argue that Kung's account cannot satisfy the ambitious goal, as there are scenarios that are uncontroversially possible, but that do not satisfy Kung's restrictions to count as evidence for possibility. I will argue that it is quite obvious that imagination does not play a significant role in such scenarios and that, in general, it is unclear whether Kung can account for such possibilities (i.e., even with the tools that go beyond imagination). Secondly, I suggest that Kung's account also fails to satisfy the modest goal, as there are also cases that seem to be imaginable according to Kung's account, yet of which it is doubtful that they are metaphysically possible. Finally, I will present an idealized version of Kung's theory that should be infallible and argue that such an account still fails to satisfy the modest goal. This casts serious doubt on the entire project of having a quasi-sensory account of imagination as a tool for our epistemology of possibility.

Keywords: [Epistemology of Possibility; Metaphysical Possibility; Imaginability; Modal Epistemology; Conceivability]

INTRODUCTION

The epistemology of possibility, as we will understand it, is concerned with metaphysical possibility claims.¹ That is, it concerns itself with how we get to know the truth-value of modal sentences such as:

- (1) Hansel and Petal could be friends

¹Whenever I use phrases such as 'possibility claim,' 'possibility' (and their like) in this paper, this should be read as concerning *metaphysical possibility*, unless otherwise specified.

- (2) I could have been in pain (adapted from Vaidya 2016)
(3) I could create a round square

Recently, Peter Kung has argued for a particular construction of *restricted imagination* as the main tool for the epistemology of possibility (Kung, 2010). In this paper, I aim to show that there are statements such that, when ruling on their modal status, Kung's theory of imagination plays no substantive role.

In order to do so, I will first argue that there are two possible goals that a theory of epistemology of possibility (and *a fortiori* Kung's theory) could have: an ambitious and a modest goal. Then, I will proceed to provide a case that aims to show that Kung's account cannot satisfy the ambitious goal and, secondly, a case that suggests that there are also severe issues for Kung's account even if it tries to pursue the modest goal. In general, all arguments raised against Kung concern the role that imagination plays in his account. I will conclude by presenting an idealized version of Kung's theory that should be infallible and argue that such an account still fails to satisfy the modest goal. This should case doubt on the entire project of having a quasi-sensory account of imagination as a tool for our epistemology of possibility.

Before I introduce Kung's theory of imagination and the resulting epistemology of possibility, let me briefly make a methodological note. I want to stress that here I focus, as Kung implicitly seems to do, on the epistemology of *mere possibility* and assume there to be an independent epistemology of *necessity* (cf. Hale 2003; Vaidya 2016). I stress this because I believe that if one makes the claim that imagination plays a substantial role in the epistemology of possibility, she should not avail herself of knowledge of necessities too much (I will elaborate on this in some of the objections that I raise).

1 KUNG'S EPISTEMOLOGY OF POSSIBILITY

In his paper, 'Imagination as a Guide to Possibility,' Kung (2010) sets out to provide an epistemology of possibility that is based on an, independently motivated, theory of imagination. In this section, I will explicate his theory. Following Kung, I will first focus first on his theory of imagination before turning to the resulting epistemology of possibility.

1.1 KUNG'S THEORY OF IMAGINATION

Kung's theory of imagination rests heavily on the analogy between perception and imagination. That is, Kung aims to provide a quasi-sensory account of imagination, where the imagined content consists of two parts: qualitative content

and assigned content. Qualitative content is similar to that of perception in that it presents the “‘basic observational’ properties in imagined space” (Kung, 2010, p. 624). Some basic qualitative properties that Kung mentions are shape, colour, distribution in space, etc. This allows us to account for imaginings in which there is a qualitative thing that looks exactly like me, but that is black-haired. However, this does not yet allow us to imagine that it is *me* that is black-haired (as opposed to just a qualitative duplicate of me). As it would be counter-intuitive if our account of imagination is unable to distinguish between imagining me, *Tom*, and a qualitative duplicate of me, Kung introduces a second component of content: *assigned content*.

Assigned content is, roughly, linguistic content that comes with the qualitative content. There are two types of assigned content on Kung's account: *labels* and *stipulations*. Labels are very simply (linguistic) labels for the things of the qualitative imagining. So, when I imagine Susan giving a lecture, I do not only imagine a thing qualitatively similar to Susan, I am sure that I am imagining *her*, Susan, not just a look-a-like. This is secured through the label, ‘Susan’, that accompanies the qualitative content. Stipulations, on the other hand, are propositional contents that go “above and beyond that of the mental image” (Kung, 2010, p. 625). *Background* stipulations “fill in background information about the imagined situation” and *foreground* stipulations “make claims about objects in the mental image that are not depicted by the image” (ibid.). So, if I imagine Susan and Andy meeting as friends, then their friendship is a foreground stipulation and the fact that they will talk in English or that they meet on a Friday are background stipulations. Importantly, even though two types of content play a role in the imagination—qualitative content and assigned content—the “imagery comes with everything already labelled and stipulated,” that is, it is not the case that it is a two-step process (ibid.).

Before we turn to how Kung uses this theory of imagination in his epistemology of possibility, let me stress, with great emphasis, that I have no quarrel with Kung's theory of imagination *as a theory of imagination*. Actually, I think that his theory of imagination is on the right track. I am, however, critical of the use of it *as an epistemology of possibility*, to which we will turn next.

1.2 KUNG'S EPISTEMOLOGY OF POSSIBILITY

The combination of qualitative and assigned content allow Kung to account for the impossibility puzzle: the fact that “[i]magining impossibilities isn't unusual” (idem., p. 626). However, even though this might be a good thing for a theory of imagination, it is very problematic for an epistemology of possibility. So, given this, Kung needs to find a way to restrict assignments in order to describe, what

he calls, *probative* imaginings: imaginings “that provide evidence for possibility” (2010, p. 633). As it is the *unrestricted* assigned content that gives rise to the imagining of impossibilities, Kung excludes the following imaginings from his epistemology of possibility:²

[A]n imagining that *P* will not be evidence that *P* is possible if *P*'s truth in the imagined situation follows from the assignments alone.
(2010, pp. 633-634)

A naïve attempt to define probative imaginings would be the following: *P* is possible in an imagined scenario *S* if *P*'s truth in the imagined situation follows from the qualitative content alone. However, remember that we want to say that it is *Susan* that is giving the lecture and that it is *me* who is possibly black-haired, not some qualitative duplicates of us. (To paraphrase Kripke (1980), why should Susan care if some qualitative duplicate of her won the presidential elections.) Imaginations based *only* on qualitative content are far too weak to function as an epistemology of possibility (cf. Berto & Schoonen 2017). Thus, we seemed to have reached an impasse: unrestricted assigned content is too strong for an epistemology of possibility in that it allows us to imagine the impossible and purely qualitative content is too weak in that we cannot account for any possibility claims concerning specific individuals.

The solution is that Kung (2010) allows only for, what he calls, *authenticated* assigned content in probative imaginings. Authenticated content is assigned content for which we have independent evidence that it is possible. One example of such evidence is evidence from actuality. For instance, if I see Susan sitting opposite of me, then I have good evidence that Susan actually exists and thus possibly exists (see also Hale 2003, who refers to this as the principle *ab esse ad posse*, and Hawke 2011, who also refers to this as the *actuality principle*). Therefore, concludes Kung, we may use the label ‘Susan’ in our probative imaginings and, similarly, any label we can recursively authenticate like this. It is this insight that leads to Kung's positive proposal of his *modal evidence from imagination* (MEI) account:³

²Interestingly, Kung compares unrestricted assignments with suppositions and points out that we would not take the ability to suppose that *P* as evidence for *P*'s possibility. See also Balcerak Jackson (2016) on the difference between imagining and supposing.

³A minor thing to flag here is the unclear notation used by Kung. He has not, strictly speaking, provided any indication what kind of meta-variables he uses and what they range over. So it is somewhat unclear if ‘*S*’ should range over imagined situations, ‘*P*’ over propositions(?), and ‘*Q*’ and ‘*V*’ over contents. However, I will only alter the original notation when disambiguation is required. Moreover, in the original article, Kung mentions some more conditions; one of which will be discussed later on in this paper and the rest do not affect the arguments that I give here.

DEFINITION 1. MEI

Imagining situation S provides new evidence that P is possible just in case:

- i** The qualitative content Q and the assigned content V (if any) make it intuitive that, in S , P is the case. (Kung, 2010, p. 639)
- ii** Without qualitative content Q , it would not be intuitive that, in S , P . (ibid.)
- iii** Let V_1, \dots, V_n be the contents of the individual assignments that constitute assigned content V . The imaginer must be in a position to either
 - a)** provide evidence that $V_1 \& \dots \& V_n$ is possible via some other source; or
 - b)** provide evidence that $V_1 \& \dots \& V_n$ is possible in accordance with [conditions i and ii]—that is, imagine a $V_1 \& \dots \& V_n$ verifying situation without merely assigning $V_1 \& \dots \& V_n$. (idem., p. 642)

According to Kung, “we authenticate many assignments by appeal to actuality” (2010, p. 648). For example, consider what would have to be authenticated in order for an imagined scenario where Hansel and Petal are distinct to be probative? Kung captures all that needs to be authenticated by translating the imagined content into sentences of the following form:⁴

$$\exists x \exists y (\text{Hansel}(x) \wedge \text{Petal}(y) \wedge \text{Distinct}(x, y))$$

So, one needs to authenticate that Hansel could possibly exist and does so by appealing to the actual existence of Hansel. The same goes for Petal. Further, one can “appeal to the actual diversity [of Hansel and Petal] to satisfy [the distinctness] demand” (Kung, 2010, p. 644).

In order to avoid confusion in what is to come, let us use ‘imagine’ to talk about the unrestricted imagining and use ‘imagine_{MEI}’ for the probative imaginings.

1.3 THE GOAL OF KUNG'S PROJECT

As Kung himself is not overly explicit about the aim of his project, it is of great importance to get clear on it. In general, there seem to be two main aims that a theory of an imagination-based epistemology of possibility could have:

- (i) For most of our possibility claims, ‘it could have been P ’, P is imaginable_{MEI} and in fact, the imaginability_{MEI} of P is our main reason to accept such possibility claims (cf. Hawke 2011 and Vaidya 2016).

⁴This notation varies slightly and insignificantly from Kung's (2010).

- (ii) If a proposition P is imaginable_{MEI}, then P is generally (*modulo* fallibilism) a genuine metaphysical possibility (i.e. *not* an impossibility) (cf. Byrne 2007).

Given these two aims, there are two obvious ways of defining the goal of Kung's epistemology of possibility:^{5,6}

Ambitious: Kung's imagination-based epistemology of possibility is the main epistemology for ordinary counterfactual/possibility claims. That is, imagination_{MEI} is the main evidence for our knowledge of metaphysical possibility.

Modest: Kung aims to show that (qualitative) imagination is, in general, not epistemically vacuous.

Arguably, **Ambitious** comes down to accepting both aims (i) and (ii); whereas **Modest** seems to drop (i), while holding on to (ii). Note that, in such a set up, any argument raised against **Modest** is also an argument against **Ambitious**.

Although Kung is seldom very explicit about his aim, I take it that the way he introduces his model (as something that does provide evidence for possibility); Kung's examples and attitude throughout his article; and the formulation of his definition of MEI (i.e., the use of "just in case") indicate that we can interpret Kung as pursuing the ambitious goal.⁷

In the following two sections, I will first argue that Kung's account fails to accomplish the ambitious goal by providing a scenario that I take to be uncontroversially metaphysically possible, but that is not imaginable_{MEI}. Secondly, I will argue that there are issues for Kung even if he pursues the modest goal. That is, I will argue that there are metaphysically impossible scenarios that are imaginable_{MEI} on Kung's account.

⁵Thanks to Peter Hawke for suggesting phrasing the distinction this way.

⁶Anand Vaidya suggested that there might be a *super-modest goal* of Kung's account. With such a goal, imagination would be non-vacuous in that it gives us a form of epistemic *entitlement* (as opposed to justification of the modal belief). This is indeed another possible goal, but note that this would result in a very uninteresting theory. Moreover, the best argument in favour of such a super-modest goal is to argue that all other accounts of modal epistemology are even worse off than this rather uninteresting account. Kung has not done so and, given the enormous amount of modal epistemological accounts in the literature (cf. Evnine 2008; Vaidya 2016; Strohming & Yli-Vakkuri 2017), it seems that this is not so easily done. (Thanks to Anand Vaidya and Daniel Nolan for raising these points.)

⁷Moreover, the following quotes seem to indicate that he aims to accomplish both (i) and (ii), respectively. "I am in a position to develop a positive account of when imagination *does* provide evidence for possibility" (2010, p. 637, original emphasis), and "[t]he strategy is to uncover a principled distinction between probative and non-probative imaginings *such that cases of imagined impossibilities that we have looked at fall squarely on the non-probative side of the partition*" (2010, p. 633, emphasis added).

2 AUTHENTICATING NON-QUALITATIVE PROPERTIES

In this section, I will provide a scenario that I take to be uncontroversially possible, yet, that does not seem to be imaginable_{MEI} on Kung's account of *probative* imagination. I will argue that this scenario represents a large class of very mundane possibilities and that, due to this generality, this shows that Kung's account fails to satisfy the ambitious goal.

Consider the following scenario:

Hansel and Petal are horrible enemies, they hate each other very much. If there is one thing they know, and that they know the other to know, is that they are *not* friends. Now take the following claim:

- (4) Hansel and Petal are friends
 (4') $\exists x \exists y (\text{Hansel}(x) \wedge \text{Petal}(y) \wedge \text{Friends}(x, y) \wedge x \neq y)$

It seems very uncontroversial to take (4) to be both possible and imaginable and, accordingly, that any account of imagination should predict that (4) is imaginable; independent of one's ideas of the relation between imagination and possibility. However, I want to argue that Kung's account is unable to predict this to be the content of a *probative* imagining.

Authenticating the first two conjuncts of (4') is unproblematic. I can authenticate the first by appealing to the actual Hansel and the second by appealing to the actual Petal.⁸ However, how does one authenticate 'friendship' or 'being friends'? Kung himself believes that one cannot appeal to qualitative content in the case of friendship, as he notes that the fact "[t]hat the two are friends is a foreground stipulation; there is *nothing* in the image imagined as their friendship" (2010, p. 625, emphasis added). So, Kung owes us a story on how to authenticate the 'friendship'-stipulation.

I will first argue that it is not so straightforward how this is done in the friendship-case and then suggest that this generalises to a lot of very mundane possibilities.

Remember how stipulations have to be authenticated; by providing evidence that the stipulation is possible "via some other source or authenticate it recursively." Let us assume that if we cannot qualitatively imagine friendship initially, that we can also not authenticate the stipulation through recursive qualitative imaginations. Thus, if Kung's theory can satisfy the ambitious goal, it is *not* imagination

⁸I will ignore the last conjunct for, as we saw above, we can appeal to the actual distinctness or diversity of Hansel and Petal in order to authenticate this.

doing the significant work. Importantly, note that this friendship-case represents a very large class of metaphysical possible propositions that all involve a non-qualitative property. So, for a large class of metaphysically possible propositions, imagination does not do substantive work in the epistemology of possibility. This is the first objection against Kung.

However, I want to argue for the even stronger claim that Kung's account cannot authenticate such propositions at all. Below, I will use the friendship-case as a *representative* for this larger class of propositions. That is, the aim is not to come up with authentication conditions for friendship, but to show that propositions that concern non-qualitative properties cannot, in general, be authenticated on Kung's account. This would show that there are problems if Kung aims to pursue to ambitious goal that extend beyond the insignificant role of imagination.

I will discuss a couple of options as to what kind of 'other sources' could Kung appeal to in order to authenticate the friendship-case (as a representative for such propositions in general).

Remember that we explicitly stated that Hansel and Petal are actually *not* friends, so, we cannot appeal to actuality in order to authenticate their friendship. Alternatively, one may resort to the friendship of others in order to authenticate that *friendship* is possible. In order to authenticate the possibility of friendship, one could appeal to the actual friendship between, for example, Susan and Andy.

However, consider the following, parallel reasoning. Kung argues that 'distinctness' is not a purely qualitative property, thus, that two objects are really distinct has to be authenticated (see Kung 2010, pp. 649-650).⁹ So, parallel to authenticating the imagined friendship of Hansel and Petal by appealing to the actual friendship of Susan and Andy, we should be able to authenticate the imagined distinctness of Hesperus and Phosphorus by appealing to the actual distinctness of Saturn and Earth. But, contrary to this finding, most of us agree with Kripke (1980) that Hesperus and Phosphorus are identical; that they are necessarily so; and, thus, that the distinctness of Hesperus and Phosphorus is impossible. Given that there does not seem to be a principled distinction that can be made between appealing to Susan and Andy for their friendship and appealing to Saturn and Earth for their distinctness (at least not without resorting to prior modal intuitions), it seems that authenticating the stipulation of friendship this way raises more issues than it solves.

Maybe then Kung was wrong and we can simply qualitatively imagine_{MEI} two

⁹To see why this is so, let us use the term 'thing' in order to describe qualitative occupants in space, whereas we will use the term 'object' to refer to entities that possibly exist (both terms are used somewhat loosely). So, one need not authenticate that there is *something* in the imagined scenario, this is the purely qualitative content. "What needs authentication is the *identity* of the thing," i.e. to what object it relates (Kung, 2010, p. 643, original emphasis).

people being friends; one might suggest that it actually fairly easy to imagine_{MEI} this. Just consider two authenticated objects, e.g., Hansel and Petal, and imagine_{MEI} them slapping each other on the back, laughing while they do this, hanging out together, and ‘doing stuff friends typically do’. Yet, this is not as easy as it might seem. Consider the actual world, where Hansel and Petal are known enemies, and consider a scenario where, as a form of sarcasm and belittlement, Petal slaps Hansel on his back, sarcastically laughing as she does so. It seems that this cannot be distinguished from the case where two friends perform the same acts of friendship based solely on the *qualitative content*. So, it seems that one cannot have any certainty whether she is imagining a scenario of authentic friendship or of sarcasm and belittlement. (Or, similarly, we cannot rule out that Petal secretly hates Hansel, but does not show this to anyone.)

The points in the last paragraph, although they may not be knock-down arguments against the authentication of friendship, hint towards a deep underlying problem that bears against Kung’s account accomplishing the ambitious goal. That is, there seem to be many propositions that concern non-qualitative properties—such as friendship, but also such as pain and others—that do not seem to be imaginable_{MEI} on Kung’s account due to the non-qualitative nature of the properties involved.

What the above show us is that the strength of Kung’s epistemology of possibility rests in the qualitative features of the imagining. Conversely, any *non-qualitative* content that cannot be authenticated qualitatively (through the recursion), poses a problem for Kung. So, any abstract mere possibility claim cannot, it seems, be authenticated and thus cannot be ruled in as possible on Kung’s account. The reason why these examples carry the force they do is that even a modal sceptic like [Van Inwagen \(1998\)](#) holds that basic possibilities are such that any epistemology of possibility should be able to account for them. Or, as Hawke puts it, “a theory of modal epistemology or modal metaphysics is likely to be viewed with suspicion if it suggests that we are not justified in believing basic modal claims” (2011, p. 360).

Let us conclude this objection with two general conclusions that we can draw from the above. First of all, the above shows that Kung’s epistemology of possibility hinges quite heavily on the notion of authentication for non-qualitative feature of the imagination. However, such non-qualitative features often cannot be recursively be imagined_{MEI}, so the tools for authentication already go beyond imagination as a tool for our knowledge of possibility claims. Moreover, we saw that it is doubtful whether there is *any* way for Kung to authenticate such stipulations, even with these tools that go beyond imagination. Secondly, and most importantly, the reason why this objection carries so much force is its generality.

The example used here stands for a very large class of everyday, mundane possibility claims concerning non-qualitative properties of which we *do* seem to have modal knowledge.¹⁰

What I hope to have shown in this section is that there is a large class of possibility claims ‘it could have been P ’, where P is a very mundane metaphysical possibility, yet P is not imaginable_{MEI} on Kung’s account. That is, Kung’s account cannot accomplish the ambitious goal. In the next sessions, I will argue that it is also not straightforward whether his account can satisfy the modest goal (remember that any argument against the modest goal also carries over as an argument against the ambitious goal).

3 RESTRICTING ASSIGNED CONTENTS

The previous section showed that there are issues for Kung’s account in satisfying the ambitious goal, we now turn to issues for Kung if the goal of his theory is **Modest**. Remember that on the modest goal, Kung’s epistemology of possibility has to be such that whenever a proposition P is imaginable_{MEI}, then P should in general be a genuine possibility (i.e., not an impossibility). Now, consider the following scenario:

Justin Timberlake has a remarkable imagination: he can imagine a squarish-looking figure, one that he finds intuitively is square, and stipulate that it is round. In such a fertile imagination, *what is assigned may float free of and potentially flout what is intuitive*. [...] [O]ur model should not allow unrestrained imaginings, if such exist, to count as evidence of possibility. *The problem is a conflict between what Justin finds intuitive [...] and what he stipulates.* (2010, p. 654, emphases added)

As it is, Justin’s imagination satisfies all conditions of MEI and so it seems that we have a probative imagining of a round square. However, we do not want to let this “count as evidence that round squares are possible” (Kung, 2010, p. 654). The source of this problem is the following: given (i)-(iii) of MEI we are allowed to combine any authenticated assigned content with any qualitative content. This gives rise to a wide range of extreme possibilities. In the case described above,

¹⁰Going beyond Kung, one might argue that we have modal knowledge of such situations without even picturing these situations with our mind’s eye. One option would be to adopt a general *similarity principle* as discussed by modal empiricists (cf. Hawke 2011). Although I am very sympathetic to the particular combination of modal empiricism and moderate modal scepticism that Hawke defends, I do think that some of the issues raised here (especially those concerning the Hesperus/Phosphorus case) carry over to such an account. I hope to explore these issues in such a setting in future work.

the fact that Justin has authenticated the stipulation 'round' allows him to apply it to any purely qualitative imagining, even that of a square.¹¹

In order to avoid these extreme cases and to not let them "count as evidence", Kung extends MEI with the following condition:¹²

- iv There is no P such that either (a) P follows 'from the assignments alone' yet it is intuitive that not- P ; or (b) it is intuitive that P and intuitive that not- P .
(Kung, 2010, p. 654)

The main focus of this section will be explicating the work condition (iv) is supposed to do. That is, (1) I will argue that Kung's condition (iv) does not do the work it needs to do, (2) suggest a charitable reformulation that seems to work somewhat better, and (3) conclude that, even on the charitable reformulation, condition (iv) seems to severely limit the scope of the work that imagination does in Kung's epistemology of possibility.

First we need to address whether or not condition (iv) works in the Justin Timberlake case. So, let us go through the workings of (iv) to see if and how it blocks the probativeness of this imagination. Let the content, P , of the scenario, S , be 'that is a round square', the qualitative content, Q , '(there is) a squarish looking thing', and the assigned content, V , 'it is round'. Note that condition (iv.a) does not seem to rule out the round square case (what Kung means with 'from the assignment alone' is that something like the conditional ' $V \rightarrow P$ ' is true, see his p. 640). For 'a round square' does not follow from assigned stipulation 'round' alone. One might argue that it does follow if the stipulation is '*that* imagined things is round,' but in this case it still would only follow if we also take into account the qualitative content that '*that* imagined thing' is squarish-looking (if *that* thing were a sphere, it would not be problematic). Hence, condition (iv.a) does not block the imagining.¹³

¹¹Jonathan Schaffer pointed out to me that this seems to point towards a deeper issue, namely that we seem to be in need of a proper *logic of stipulations* that indicates what stipulations and assignments of content are possible and allowed. I agree, however, pursuing this is outside the scope of this paper.

¹²Let me briefly flag here that it seems that I take this to be a way to smuggle in further restrictions on what assigned content is allowed with regards to probative imaginings. Moreover, note that, as it is presented by Kung, it is not at all clear that this is not a purely *ad hoc* restriction in order to avoid problematic cases. Kung does not provide any principled, independent argument for the condition. Below I will suggest that there possibly is a more principled version of the restriction.

¹³One might argue that this is an uncharitable interpretation of what Kung means here and that there is a reading where P does follow from the assigned content alone. The idea would be that the qualitative content, that there is a squarish looking thing, comes with the label 'square'.

What about the second option for exclusion (iv.b), i.e., the claim that there is no P such that both P and not- P are intuitive? Consider the following interpretation of this:¹⁴

- ▶ It is intuitive that, in S , that is a round square.
- ▶ It is intuitive that, in S , that is not a round square.

It seems that if Justin Timberlake finds it intuitive that he imagined a round square, then it is not the case that he also finds it intuitive that he has imagined something that is not a round square. However, I think that there is a charitable interpretation that involves an ambiguity in the uses of ‘imagine’. On this interpretation, one finds it intuitive that she imagines P (for she just did), but she does not find it intuitive that P could be the case (i.e., she finds it intuitive, in general, that P is not the case). ‘Intuitive’ here is ambiguous in the sense that the first mention refers to her imagining *qua* imagining and the second mention refers to *the content* that the imagining represents. What should be obvious from this more charitable interpretation is that it depends on prior modal intuitions (i.e., the imaginer does not find it intuitive that P *could* be the case). This already hints towards the conclusion that imagination does not play a significant role in these cases.

We can capture this charitable interpretation by a (charitable) reformulation of condition (iv):¹⁵

iv* There is no P such that P follows from a probative imagining and there is conflicting (modal) evidence from a different source.

In that case, the content that there is a round square follows from the stipulation and label alone. (Thanks to Pierre Saint-Germier (p.c.) for pushing this.)

If this is really how Kung intended the round square case to be interpreted, then it is not at all clear how it passes condition (ii) of MEI in the first place. Condition (ii), remember, states that without the qualitative content it would not be intuitive that P . This points to a more general observation about condition (iv.a) in combination with condition (ii): it is unclear how a content P in a scenario S that ‘passes’ condition (ii) could be ruled out by condition (iv.a), as it seems that if P would follow from the assigned content alone, it would not pass condition (ii). Therefore, I think that if this is indeed the interpretation that Kung aimed for, it is not condition (iv) that does the work.

¹⁴Note that the negation cannot take wide-scope, for then it results in a blatant contradiction at the actual world. To see this, let $I(\cdot)$ stand for ‘it is intuitive that’, then the wide-scope reading would be: $I(P) \wedge \neg I(P)$.

¹⁵A worry one might have is that condition (iv*) is a way to capture the fallibilism of Kung’s account; the worry being that such a condition is redundant if one admits fallibilism. Note that this is *not* the case. Fallibilism concerns particular pieces of evidence that might lead one astray; the condition (iv*) concerns conflicting pieces of evidence (fallible or otherwise). (Thanks to Peter Hawke (p.c.) for pressing this point.)

A slightly weaker version would be: when we imagine_{MEI} a content, P , and there is conflicting modal evidence from a different source, then we hold out judgement on the modal status of P .

Let us assume that we have some modal evidence for *a priori* necessities. (How we get to this evidence is an orthogonal issue here. Arguably, in the case of *a priori* necessities, we can get to such evidence through *a priori* reasoning (cf. Hale 2003).) Also, assume that we can know *a priori* that being square is being non-round (and *vice versa*). Then we have a straightforward, independently motivated, solution for the round square imagined by Justin Timberlake. Justin has an imagination_{MEI} of a round square. However, he also has evidence for the *a priori* necessity that there are no round squares. Given this conflicting evidence from different sources, Justin should postpone judgement on the modal status of round squares.

However, the worry remains and I will try to show this by discussing a different example. Consider a scenario where I qualitatively imagine a bearish-looking thing and I label this bear 'Putin'. Given that I can authenticate the label I used by appeal to the existence of the actual Putin, it seems that I have imagined_{MEI} that Putin is a bear.¹⁶

First of all, it seems that this imagined scenario is not blocked by the original condition (iv) of Kung (for similar reasons as to why the round square case is not blocked by it). Moreover, it seems that in this case the new condition, (iv*), does not fare any better. In order for it to rule *out* the Putin-case as being probative, there has to be conflicting modal evidence from a different source. However, note that it cannot be evidence from actuality, for the fact that Putin is not actually a bear only shows that what we have imagined_{MEI} is a *mere* possibility. It can also not be evidence that Putin is possibly not a bear, for then all we have shown is that we have imagined_{MEI} a *contingent* mere possibility. It thus seems that in order to find properly conflicting evidence, the evidence should concern a necessity. Arguably, the main options would be strong modal intuitions that humans could not be anything else or knowledge of the *a posteriori* necessity that Putin is necessarily human. Importantly, both are problematic, as they lead either to the reliance on modal intuitions and not on imagination (such as, e.g., the account of Bealer 2002) or to shift all the heavy-lifting to the epistemology of necessity and then derive the epistemology of possibility from this (such as, e.g., the account of

¹⁶If you do not find that this example describes a problematic case in that it is not an obvious impossibility, change the bear in something qualitatively imaginable that Putin necessarily cannot be (e.g., a rain cloud). One note on this case, Kung himself notes that it is not so problematic that Tom Nagel *looks* like an egg and that this is significantly different from the claim that Tom Nagel *is* an egg. Although I agree that the claims are significantly different, I find it hard to understand how one would recognise this difference in her imagined scenario (see Kung 2010, pp. 654-655).

Hale 2003). Either way, imagination no longer does any substantive work.

(Note that this case is significantly different from the case of Justin Timberlake and the imagined round square. In that case, resorting to necessity claims to hold off judgement is less problematic as these concern *a priori* necessities and involve *a priori* reasoning to get to the judgement. Arguably, it is less objectionable to resort to evidence of such necessities in those cases.)

What this shows is that there seem to be propositions that are imaginable_{MEL}, but of which it is very doubtful that they are metaphysically possible. In the case of the round square, Kung's only response seems to be the *ad hoc* addition of condition (iv) and even that does not seem sufficient (as the Putin-case aims to show). Moreover, the addition of condition (iv) shows that, once again, there are often methods to gain modal knowledge that trump the usage of imagination. This shows that Kung's account does not straightforwardly accomplish (ii) and, thus, raises issues even if Kung aims to pursue the modest goal.

4 PROBLEMS FOR QUASI-SENSORY ACCOUNTS OF IMAGINATION

The previous two sections raised issues for Kung's epistemology of possibility. First, I argued that Kung's account fails to accomplish the ambitious goal and, secondly, I argued that his account also has trouble even if it aims to pursue the modest goal. In this final section, I will conclude by presenting an idealized version of Kung's theory that should be infallible and argue that such an account still fails to satisfy the modest goal. This should cast doubt on the entire project of having a quasi-sensory account of imagination (as in Kung's account) as a tool for our epistemology of possibility.¹⁷

As mentioned earlier, Kung's theory of imagination hinges heavily on the analogy between imagination and perception. This is also one of his main arguments for the probativeness of the qualitative component of imaginations. For example, Kung claims the following:

I think it is plausible that states with basic qualitative content provide evidence for possibility. The basic qualitative content of perceptual

¹⁷Let me point out that Roca-Royes (2011) presents a general argument against conceivability-based accounts of modal epistemology, where she argues that no account of conceivability-based modal epistemology can get off the ground without substantial prior modal intuitions. I find Roca-Royes' argument very persuasive. However, note that this is different from the aim of this section, namely, to critically evaluate the role of quasi-sensory imagination in our epistemology of possibility.

experience presents a way that space *can consistently* be filled around the perceiver. [...] The scenarios used in skeptical arguments make this point nicely: suppose I am deceived by an evil demon and there is no material world. Still, we think, my visual experiences give me evidence of the way the world *could be*. This is so even if it is not in fact filled that way. What goes for the basic qualitative contents of perceptual experiences also goes for the basic qualitative contents of imaginative experiences. (2010, pp. 637-638, original emphases)

Importantly, if Kung's main argument for the epistemic non-vacuousness of qualitative imagination is one by analogy to perception, then imagining is just as fallible as perception, which is something that Kung indeed confirms. "What I have described at some length is a fallibilist modal epistemology. [...] It isn't infallible evidence; there are cases where imagining even according to MEI will lead to an incorrect judgment about possibility" (Kung, 2010, p. 658). I will argue that fallibilism with regards to imagination is much less innocent than fallibilism with regards to perception. If this is right, then the analogy with perception actually becomes troubling for any perception-based theory of imagination that aims to pursue the modest goal.

Consider the reasons why we usually accept fallibilism: (i) we have a good idea of what the underling *ideal* situation has to be in order for the evidence to be infallible and (ii) it turns out that most of the time our evidence from the practice in question is actually right. In the case of perception, we have a very good understanding of what an ideal situation needs to be in order for actuality to be *entailed* by perception (e.g., good lighting, properly functioning optical nerves, sobriety, etc.). If need be, we could recreate these ideal situations and then perception would not fail to be a guide to the actual. Secondly, (ii) is validated in the case of perception by the fact that we rely on our perception to inform us about actuality constantly in our everyday life and most of the time our perception turns out to be right.

In order to appeal to fallibilism in the case of imagining, it seems that we need to be able to, at least, give ideal conditions conform (i), and possibly, argue for (ii) as well. I will consider what the ideal conditions for probative imaginings would be on Kung's account in particular (but I think that such an argument can be easily extended to any perception-based theory of imagination).

Let us take as our starting point Kung's definition for probative imaginings (see page 5). In order to turn this into a description of an ideal scenario, let us replace all cases of 'make it intuitive' by 'entails' and cases of 'provide evidence' with 'knows'. The resulting description of idealized-MEI (I-MEI) can then, as we are

working with knowledge and entailment, be formalised. Let ' \models_S ' be entailment in situation S , ' \diamond ' metaphysical possibility, and ' \mathcal{K}_a ' knowledge of an agent a , then the idealised principle is as follows:

DEFINITION 2. I-MEI

Imagining situation S , with qualitative content Q and assigned content V , entails that P is possible just in case:

- i** $\{Q, V\} \models_S P$
- ii** $\{V\} \not\models_S P$
- iii** Let V_1, \dots, V_n be the contents of the individual assignments that constitute assigned content V and let a be the imaginer. Then,
 - a)** $\mathcal{K}_a(\diamond V_1) \wedge \dots \wedge \mathcal{K}_a(\diamond V_n)$; or
 - b)** $\mathcal{K}_a(\exists T \text{ s.t. } [(\{Q', V'\} \models_T V_1 \wedge \dots \wedge V_n) \text{ and } (\{V'\} \not\models_T V_1 \wedge \dots \wedge V_n)])$

Note that if there are indeed counterexamples to this idealised principle, then any quasi-sensory theory of imagination would have a hard time to be a reliable guide to what is metaphysically possible, even with the modest goal in mind (for there may be cases where P is imaginable_{I-MEI}, but where P is not metaphysically possible). I believe that we can construct a scenario such that it complies with I-MEI (hence, should be infallible), yet that still leads our modal judgements astray. That is, it passes I-MEI while being impossible. Consider the following imagined scenario:

Let S be an imagined scenario such that the qualitative content, Q , concerns the conception/origin of two distinct things and their 'being' all the way until current time in the night's sky, and let the assigned content, V , be constituted as follows:

V_1 : The label 'Hesperus'

V_2 : The label 'Phosphorus'

V_3 : Stipulation that if the origins of two things are distinct, then the two resulting objects are distinct

Finally, let P be 'Hesperus and Phosphorus are distinct'.

Let us see if S is judged to be probative or not with regards to the idealised principles sketched above.

- (i): It seems true that $\{Q, V\} \models_S P$. We have qualitatively imagined two planets with two different origins (importantly, Kung himself argues that we can qualitatively imagine origins, see his pp. 652-653) and we label these two different things 'Hesperus' and 'Phosphorus' (by V_1 and V_2), call this C_1 . Together with Q and V_3 , C_1 results in knowledge that, in S , Hesperus and Phosphorus are distinct. This is P .
- (ii): Note that $\{V\} \not\models P$ also holds, for we need Q in order to perform the necessary modus ponens with V_3 to get that the two things are really distinct objects (in the imagined scenario).
- (iii): We know that all the individual assigned contents are possible. First of all, the labels of V_1 and V_2 can be authenticated by appeal to actuality. Secondly, given what was said above about *a priori* necessities, it seems that V_3 can be known through *a priori* reasoning. (One might add that we need to know that V_3 is possible, so we need another principle of the form $\Box V_n \Rightarrow \Diamond V_n$. It seems that we could also authenticate this stipulation through *a priori* reasoning.)

There are probably many things to be said about the counterexample given here (for example, a Kripkean might wonder whether we can authenticate both the labels V_1 and V_2). However, this example does raise the issue whether fallibilism with respect to imagination can be justified in a similar way as it can be with respect to perception.¹⁸ Accordingly, it raises the issue whether any quasi-sensory account of imagination would ever be able to satisfy only the modest goal of an epistemology of possibility.

CONCLUSION

The main aim of this paper has been to raise some issues for Kung's epistemology of possibility. In particular, to object to the idea that imagination plays an important role on his account. I suggest that there are two ways in which we can interpret the goal of Kung's (2010) project: the ambitious and the modest goal. After this, I argued that there are serious problems if Kung aims to satisfy the ambitious goal and, secondly, that there are also issues if he aims to pursue the modest goal. Finally, I presented a case that I take to bear against any imagination-based account of the epistemology of possibility, in particular when the imagination in question is based on the analogy with perception.

¹⁸Moreover, it is also unclear whether imagination as a guide to possibility is as reliable as perception as a guide to actuality (which was reason (ii) for accepting fallibilism).

At the very least these arguments put the ball back in Kung's court; more strongly, I take them to cast serious doubts on the success of his project (and arguably similar projects).

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