

# Modal scepticism, Yablo-style conceivability, and analogical reasoning

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**Abstract** This paper offers a detailed criticism of different versions of modal scepticism proposed by Van Inwagen and Hawke, and, against these views, attempts to vindicate our reliance on thought experiments in philosophy. More than one different meaning of “modal scepticism” will be distinguished. Focusing mainly on Hawke’s more detailed view I argue that none of these versions of modal scepticism is compelling, since sceptical conclusions depend on an untenable and, perhaps, incoherent modal epistemology. With a detailed account of modal defeaters at hand I argue that Van Inwagen and Hawke’s scepticism is either groundless, or it leads to boundless and unacceptable modal scepticism. Additionally, I show that Hawke’s conception of analogical modal reasoning is problematic. Either his principle of similarity is arbitrary or it begs the question about modal scepticism. In contrast to Hawke’s restricted view of analogical modal reasoning, I present two examples of analogy-based modal justification of philosophically relevant possibility claims. My criticism of modal scepticism also shows that there is no good reason to insist on a sharp distinction between an unproblematic and a presumably dubious kind of modality. The upshot is that in absence of proper defeaters both Yablo-style conceivability and properly applied analogical reasoning are reliable guides to possibility, and also that modal justification comes in degrees. The proposed framework of defeaters of modal justification as well as the analysed examples of analogical modal reasoning trace out interesting new areas for further discussions.

**Keywords** Analogical reasoning · Defeaters · Hawke · Modal scepticism · Van Inwagen · Yablo-style conceivability

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## 1 Introduction

Imaginary cases are widespread in philosophy. A central question is: how can we know that a given hypothetical scenario is indeed possible? Some philosophers, such as Williamson (2007), have elaborated a counterfactual-based account of modality, others, like Chalmers (2002) or Yablo (1993) have defended the view that conceivability is a guide to possibility. This paper focuses on Yablo's account of conceivability as well as Van Inwagen's and Hawke's versions of modal scepticism, which take inspiration from this account of modal knowledge.

Van Inwagen (1998) and Hawke (2011) argue that although everyday modal claims are justified to some extent, general scepticism concerning (non-trivial)<sup>1</sup> “remote” or extraordinary possibility claims is warranted. They conclude that the crucial premises of many philosophical possibility arguments cannot be justified (such as, “the mind without body is possible”, or “a perfect being is possible”). However, it is unclear how a radical sceptical position can actually be vindicated by their arguments. Also, it is not obvious how seriously this form of modal scepticism would affect our reliance on thought experiments in philosophy.

This paper has an exegetical and a critical part. In the exegetical part (Sect. 2) I examine different interpretations of Van Inwagen's and Hawke's modal scepticism. I distinguish different meanings of “modal scepticism”, and argue that Hawke's and, perhaps, Van Inwagen's arguments support a sceptical position which is much more general and problematic than the ones these two authors explicitly defend—namely the view that virtually no possibility claims can be justified by conceivability.

The critical part of the paper coincides with Sects. 3–6. In these sections I present a series of objections against Hawke's more detailed modal epistemology. These objections affect both the radical and less radical versions of modal scepticism. To anticipate my conclusions, Hawke fails to establish either version of modal scepticism, and what is more, his modal epistemology is untenable for various reasons. Hawke holds implausibly high standards of conceivability and modal justification in general. Also, his distinction between basic and non-basic modality faces serious difficulties.

More specifically, in Sects. 3 and 4, I raise a series of problems with Hawke's conception of conceivability. In particular, in Sect. 3, I question Hawke's highly demanding standards for conceivability as well as his reading of Yablo. In Sect. 4, I offer a detailed view of defeaters of conceivability and present general objections against modal scepticism. In the light of this refined account of defeaters, it will turn out that general scepticism about so-called far-out or remote possibility claims is not compelling. I will argue that Van Inwagen's and Hawke's sceptical views are either incoherent or collapse into a global, and, thus, unacceptable modal scepticism. Furthermore, against Van Inwagen's and Hawke's strategy to support modal scepticism, I contend that it is not warranted to make use of two, completely different standards for modal justification. My conclusion is as follows: Yablo-style conceivability is a reli-

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<sup>1</sup> Namely, statements of the form “p is possible”, where p is known to be false, or its truth value is unknown. Usually the references to “non-trivial” are in brackets. Nonetheless, if it is not indicated otherwise, “modal claim” and “possibility claim” will always refer to non-trivial modal claims and non-trivial possibility claims respectively.

able guide to both so-called “everyday” and “remote” possibility claims, even though justification *via* conceivability might be defeated by further evidence.

Sections 5 and 6 focus on modal analogical reasoning. I show that Hawke’s suggested principle for similarity is either arbitrary or begs the question about modal scepticism. So, Hawke’s conception of analogical modal reasoning should be rejected. Also, I will argue that (in contrast to Hawke’s view) properly used analogical modal reasoning can be a guide to even some so-called remote and philosophically relevant modal claims. Hence, Hawke’s modal scepticism faces another kind of serious difficulty. Rather than looking for a clear distinction between basic (everyday) and non-basic (remote) modality, we should acknowledge that modal justification comes in degrees. Consequently, both Yablo-style conceivability and analogical reasoning can, to some extent, uphold philosophically relevant (and, in some sense “remote”) possibility claims.

Whereas Van Inwagen’s and Hawke’s modal scepticism would more or less radically scale back the usage of imaginary cases in philosophy, and urge us to revise our philosophical practice, this paper can be considered as an attempt to vindicate this practice. A detailed account of defeaters of modal justification in Sect. 4 and a sketched view about analogical modal reasoning in Sect. 6 trace out some promising fields for further investigation.

## 2 Van Inwagen’s and Hawke’s varieties of modal scepticism

One might wonder how conceivability can justify possibility claims at all—given that we do not have a viable explanation of how this psychological process provides cognitive access to modal truths, especially to some obscure or extravagant modal truths. A general sceptical argument about conceivability can be formulated like this: unlike in the cases of, say, perceptual or memory-based knowledge we do not know how conceivability “works”, and when or why it leads us astray. Therefore, one might conclude, it is reasonable to be sceptical or, at least, very cautious with conceivability-possibility arguments.<sup>2</sup> Nonetheless, this paper leaves this general problem out from consideration.<sup>3</sup> For dialectical reasons, it is not necessary to go into the details of this discussion, since neither Van Inwagen nor Hawke raises *this kind of* sceptical worry. Rather, both of them seem (at least implicitly) to assume that conceivability can *in principle* be a guide to possibility, but—they argue—when it comes to the so-called

<sup>2</sup> Basically, the problem is that given all we know about conceivability as a cognitive process, we cannot explain how we could gain knowledge about *causally isolated* state of affairs *via* conceivability, whereas we have a viable theory about how we gain perceptual knowledge. See: Roca-Royes (2007, pp. 117–118) for another formulation and a detailed discussion of the argument. This problem is analogous to Benacerraf’s problem in mathematics (Benacerraf 1973).

<sup>3</sup> Yablo calls this “the objection from naturalism” (Yablo 1993, pp. 3–4). He does not offer a well-articulated reply to this concern. Yablo indicates that appearances of possible states of affairs are like perceptual appearances: they are *prima facie* evidence. For Yablo the causal isolation concerning modal truths does not raise more serious a worry than it would in mathematics. Independently from this discussion, Chudnoff (2011) argues for a somewhat similar view, namely, that the special phenomenal character of intellectual seemings (including modal judgements) is *prima facie* evidence.

remote (or “far-out”) possibility claims, no one has ever conceived of a possible world in a *proper manner*.

For Yablo *p* is *conceivable* (in the philosophically relevant sense) for a subject *S*, if *S* can imagine a coherent, or, rather, an apparently coherent situation of a world that *S* takes to verify *p*, that is to say, if *S* can imagine a world that seems to be world in which *p* is true. Like perception, conceivability of this kind is factive: if *S* *really* conceives of *p*, then *p* is indeed possible.<sup>4</sup> Additionally, *p* is inconceivable for *S*, if *S* cannot imagine a world that *S* does not take to falsify *p*, where ‘to falsify’ means: ‘to fail to verify’ (Yablo 1993, fn. 60, p. 29).<sup>5</sup> The central question is: what does it mean to *properly* conceive of a possible world? Conceiving of a whole possible world in every detail would certainly be an unachievable goal. What we can conceive of is just a more or less detailed scenario that might or might not be a partial representation of a genuine possible world (cf. Yablo 1993, pp. 27–29). The problem is that it is not clear what parts of a (supposedly) possible world must somehow be conceived of to justify the possibility claim in question. This is the point where the modal sceptic steps on to the scene.

According to Van Inwagen and Hawke, in the case of possibility claims referring to hypothetical scenarios that are far-out from the actual world and/or remote from everyday experience, no one has ever successfully conceived of such a possible world in a sufficiently detailed and convincing manner.<sup>6</sup> For example—Van Inwagen argues—no one has ever conceived of a sufficiently detailed scenario that would justify the claim that transparent iron is possible. He points out that it is not enough to imagine, say, a scientific conference where scientists hold up a chunk that *looks like* transparent iron. This situation does not rule out, and thus is compatible with, there being no transparent iron (in that world), but the scientific community being wrong or deceived. Van Inwagen claims that only imagining the exact micro-physical structure of transparent iron would justify the claim that such a thing is possible. However, it is likely that no one has ever imagined such a scenario in this extremely highly detailed manner (cf. Van Inwagen 1998, pp. 79–80). Van Inwagen argues similarly that we are not justified in believing that naturally purple cows are possible (cf. Van Inwagen 1998, p. 78).

Van Inwagen, borrowing from Seddon (1972), posits that we do not know enough about the underlying structure of the remote cases to determine whether or not the conceived, and presumably possible scenario comes into a conflict with a relevant necessity.<sup>7</sup> However, it is not entirely clear whether this latter, perhaps, more general reason to doubt our capacity to grasp remote possibilities would undermine only

<sup>4</sup> Yablo also distinguishes *propositional* and *objectual* imagination: imagining the fact that there is a tiger behind me, and imagining the tiger itself (cf. Yablo 1993, p. 27). Although these are two distinct types of imagining, they usually come together. As Van Inwagen’s and Hawke’s modal sceptical arguments can be formulated presupposing either type of imagining, the following discussion of modal scepticism leaves out this distinction from consideration.

<sup>5</sup> Yablo also distinguishes *inconceivability* from *nonconceivability*. A proposition *p* is nonconceivable, if and only if “for every world *I* can imagine, *I* do not take that world to verify *p*” (Yablo 1993, fn. 60, p. 30).

<sup>6</sup> This is what Geirsson calls *The Completeness Argument* (Geirsson 2005, pp. 285–288).

<sup>7</sup> Thanks to an anonymous referee for calling attention to this point.

Yablo-style conceivability, or whether it would be harmful to any kind of justificatory method for remote modal claims.<sup>8</sup> Perhaps one can develop an independent argument for general modal scepticism based on the idea that we are usually ignorant about the details concerning remote possibilities. Still, in the following I take Hawke's argument for modal scepticism as a refined version of this worry.

In sum, the modal sceptic concludes that no one has ever conceived of a sufficiently detailed scenario that would justify the claim that either a perfect being, or a disembodied mind without body, or a fully operating body without consciousness is possible. Of course, there are many similar examples from philosophy. In particular, Hawke considers two conceivability-possibility arguments: the possibility of zombies [Chalmers (1996)], and the possibility of a mind without body. From his analysis he draws a quite general sceptical conclusion about remote and philosophically relevant possibility claims (cf. Hawke 2011, pp. 363–364). Both Van Inwagen and Hawke rely on Yablo's account, and argue that Yablo's modal epistemology entrains modal scepticism concerning these so-called remote philosophically relevant possibility claims (cf. Van Inwagen 1998, pp. 77–81; Hawke 2011, p. 353, pp. 362–364). To put it more precisely, Van Inwagen and Hawke conclude that remote possibility claims are undecidable *via* Yablo-conceivability. Like Van Inwagen, Hawke also supposes that there is no other method or process to justify remote possibility claims.<sup>9</sup>

Nonetheless, neither Van Inwagen nor Hawke claims that we have no modal knowledge at all. Van Inwagen posits that it is “mysterious” how we know basic or everyday modal claims, such as “it was possible for the table to be up against the wall” (Van Inwagen 1998, p. 73). Unlike Van Inwagen, Hawke proposes a substantive view about how these basic or everyday modal claims are justified. Hawke assumes that there are two different sources of modal justification: experience/analogy-based and conceivability-based (cf. Hawke 2011, pp. 359–361). This “hybrid” feature of his modal epistemology helps Hawke make a distinction between two kinds of modal propositions: basic and non-basic possibility claims (cf. Hawke 2011, pp. 361–362). The former should be unproblematic, whereas the latter are claimed to be dubious.

However, Hawke's distinction between these two types of possibility claims is far from being clear or unequivocal. First, he maintains that these two kinds of modal

<sup>8</sup> Notice that Yablo addresses some similar, if not the same kind of, sceptical worries. The core idea of these sceptical objections is that the subject needs an independent reason to deny or rule out that *p* is impossible. It is not sufficient to say that *S* conceives of *p* as possible, and *S* is unaware that *p* is impossible, since all of these are coherent with the fact that *p* involves an unnoticed impossibility. However, the objection says, you do not have any *further evidence* for the possibility of *p*—independently from that *p* *appears to be* conceivable for you—and appealing to conceivability as a guide to possibility would make the justification circular. Yablo distinguishes a couple of slightly different versions of the (so-called) Circularity Objection. Eventually, Yablo concludes that none of them succeed in undermining conceivability-based modal justification (cf. Yablo 1993, pp. 12–19). Also, it seems likely that the Circularity Objection—as Yablo formulates it—would entrain a boundless scepticism about conceivability, and perhaps about all kinds of modal justification. It is worth noting that Yablo's strategy to overcome this kind of worry is to show that we do not need to rule out *all* alternate possibilities that *might be* considered as a defeater of the possibility of *p* (cf. Yablo 1993, pp. 14–15). I follow a somewhat similar strategy in Sect. 4, although my main objection against modal scepticism relies on my proposed account of defeaters.

<sup>9</sup> This follows from his safe-explanation theory (i.e. his account of modal justification) and his reformulation of Van Inwagen's argument (cf. Hawke 2011, pp. 362–363). Van Inwagen makes this claim explicit (cf. Van Inwagen 1998, pp. 70–71).

claims have different sources of justification: basic possibility claims can be justified by experience and/or analogical and inductive reasoning (cf. Hawke 2011, pp. 361–362). Second, Hawke draws this distinction in terms of whether or not a given possibility claim is controversial (cf. Hawke 2011, p. 360). Finally, the separation seems to depend on the distance of the content of a given possibility claim from actual experience (cf. Hawke 2011, p. 360). Moreover, Hawke makes another, implicit suggestion: basic or everyday possibility claims represent non-actual state of affairs that would be true in a world that has causal laws that are similar (or identical) to those of the actual world. Non-basic or remote scenarios could be true only in worlds having causal laws significantly different from those of the actual world (cf. Hawke 2011, p. 361). All these characterisations look confusing. However, for the sake of discussion let me put aside this problem for the time being (I will return to it in Sect. 5). Here I will take for granted that the allegedly dubious class of possibility claims is captured by one of the definitions above.

Independently of this issue, it is unclear what the precise formulation of modal scepticism is. Relying on a careful reading of the texts, it seems likely that there is more than one viable interpretation of Van Inwagen's and Hawke's views. These various formulations of modal scepticism differ from each other in terms of their degree and scope.

To begin with, being sceptical about knowledge and about justification is not the same. In some passages Van Inwagen asserts that we do not have even *prima facie* justification based on Yablo-style conceivability for remote possibility claims (what-ever “remote” would mean).<sup>10</sup> In other words, Van Inwagen argues that, if we accept Yablo's account on conceivability, then for every *p*—where *p* is a remote (non-trivial) modal claim—no one has *prima facie* justification of *p*. Hawke explicitly argues for the following thesis: Yablo's account implies that the conceived scenario must be logically incompatible with and rule out not-*p* in order to justify the claim that *p* is true in that world, and thus that *p* is possible (cf. Hawke 2011, p. 353). He concludes in the same way: *no remote (philosophically relevant) possibility claims can be justified by means of (Yablo-style) conceivability*. Let us call this sceptical view about justification (MS1). On the other hand, at the end of his paper Van Inwagen clearly commits to the view that *we cannot have knowledge about (non-trivial) remote possibility claims via (Yablo-style) conceivability* (cf. Van Inwagen 1998, fn. 17, p. 84). Let us refer to this sceptical claim about knowledge as (MS1').

Van Inwagen argues for a quite different sceptical view as well, namely, “we have no sort of capacity that would enable us to know” remote possibility claims (Van Inwagen 1998, pp. 70–71). The rough picture that Van Inwagen offers is a kind of analogical reasoning for the following claim: the method by means of which we can gain knowledge about everyday modal claims is inappropriate for grounding knowledge about (non-trivial) remote modal claims (cf. Van Inwagen 1998, pp. 69–70). Here

<sup>10</sup> “Therefore, if Yablo's general thesis is right, and if I am right in my assertion that in the present state of knowledge no one is able to imagine a possible world in which there are naturally purple cows, it follows that (...) no one is even *prima facie* justified in believing that naturally purple cows are possible.” (Van Inwagen 1998, p. 78). Van Inwagen suggests that the same can be applied to any arbitrary remote possibility claim. Also see his own summary: Van Inwagen (1998, pp. 80–81).

is a reconstruction of the argument:<sup>11</sup> (1) Perception and conceivability are similar sources of justification. (2) Perception is an unreliable source concerning (physically) distant objects. (3) Thus, conceivability is an unreliable source concerning (modally) distant situations. Additionally, (4) there is no reason to suppose that there is another method that enables us to know non-trivial remote modal claims.<sup>12</sup> (5) Therefore, *we cannot know (non-trivial) remote modal claims by any means* (cf. Van Inwagen 1998, p. 76). Let us label this latter statement (MS2).<sup>13</sup>

It should be noted that, however, at best this argument is underdeveloped. It is not clear why we should take for granted the analogy between physical distance and modal “distance”. Remoteness from the actual world cannot be “measured” in the same way that we can measure physical distance. Additionally, for Yablo sensory-like imagining is not a necessary condition for proper conceivability, thus, the analogy between perception and conceivability should be considered weaker than the argument assumes (cf. Yablo 1993, fn. 55, p. 27). If so, it is far from obvious whether a weak and somewhat metaphorical analogy between perception and conceivability is sufficient for drawing such a strong modal sceptical conclusion like (MS2). At any rate, in the following, I focus mainly on Hawke’s more detailed arguments for modal scepticism that do not depend on these (presumably) independent considerations.

Finally, although both Van Inwagen’s and Hawke’s sceptical considerations target mainly remote modal claims, it does not seem uncharitable to say that Hawke’s (and, perhaps Van Inwagen’s) arguments can easily lead to a *general* scepticism about conceivability-based justification. Namely, to the view that *by means of Yablo-style conceivability no non-trivial possibility claim can be justified*. In the following, this claim will be referred as (MS3).

There are more than a few reasons to claim that Hawke’s (and, probably, Van Inwagen’s) position implies, or, at least, makes (MS3) plausible. Firstly, neither Van Inwagen nor Hawke gives a clear example of a successful justificatory process *via* Yablo-style conceivability.<sup>14</sup> Secondly, Hawke imposes high standards on conceivability-based modal justification, and he does not provide any reason why we cannot apply the same strict standards to the justification of basic (everyday) modal claims. Finally, as we will see, one of Hawke’s examples<sup>15</sup> and his analysis of it support general scepticism about conceivability concerning even the everyday cases. I will return to this point later.

<sup>11</sup> See also Geirsson’s reconstruction of two additional arguments for modal scepticism (Geirsson 2005, pp. 281–285). Both have a conclusion similar to (MS2), although Geirsson does not distinguish different formulations of modal scepticism.

<sup>12</sup> See Van Inwagen’s discussion about the “infallible Standard Atlas” where he rejects the notion of logical possibility (Van Inwagen 1998, pp. 71–72).

<sup>13</sup> Of course, Van Inwagen maintains that we do have knowledge about *trivial* remote possibility claims. There is no doubt that, for example, we know that neutron stars are possible (cf. Van Inwagen 1998, p. 76).

<sup>14</sup> Van Inwagen allows that we can have knowledge about some philosophically relevant cases which are close to everyday experience, such as the fake barn-case (cf. Van Inwagen 1998, fn. 3, p. 81). Interestingly, however, he does not claim that we can know these possibility claims by Yablo-style conceivability. I argue in Sect. 5 that Hawke’s modal epistemology in some sense excludes that we can have knowledge or even justified belief concerning basic (everyday) possibility claims by means of conceivability.

<sup>15</sup> This is Hawke’s analysis of his “favourite mug-scenario” (cf. Hawke 2011, p. 355).



All in all, at least four different versions of modal scepticism can be distinguished. As (MS2) implies (MS1'), (MS3) implies (MS1), and (MS1) also implies (MS1'), one might argue that it would be sufficient to refute only (MS1'). That is to say, our aim should be that to show we have (some) knowledge about remote possibility claims by Yablo-conceivability. However, as we shall see, (MS2) and (MS3) have their own problems, so it is worth separating the objections. In the next two sections, I consider the problems connected to the basic idea of modal scepticism. Then, in Sects. 5 and 6 I offer some independent objections to (MS2). The overall conclusion of Sects. 3–6 is that no version of modal scepticism is compelling or reasonable.

### 3 Against modal scepticism: rejecting overly demanding standards for conceivability

It is worth remarking that as far as Yablo-style conceivability is concerned Van Inwagen examines only two examples of possibility claims in some detail: the transparent iron-case and the purple cow-case (cf. Van Inwagen 1998, pp. 78–80). From these two cases he draws a general sceptical conclusion about *all* remote possibility cases. An initial worry about this strategy is that it seems dubious that on the basis of just two examples we are allowed to draw a general conclusion about *all cases*.<sup>16</sup> In this and the next section I argue that the burden of proof is on the sceptic—in the sense that the sceptic should find a defeater for *each prima facie* justified possibility claim. Therefore, the conclusion that can be actually drawn from Van Inwagen's and Hawke's points is not a general sceptical thesis about *all remote* possibility claims, but, rather, that *some* remote possibility claims are more or less justified, and *some* others are not justified (i.e. the evidence in such cases is defeated). For the sake of argument I will presuppose here that the notion of “remote” possibility is unproblematic. However, the overall criticism of modal scepticism in Sects. 3–6 will also show that it is not reasonable to insist on a sharp distinction between so-called remote and so-called everyday possibility claims.

Geirsson (2005, pp. 287–288) has raised an objection that seems to show that Van Inwagen's sceptical argument might have a wider scope than what he explicitly proposes. The objection says that if we were required to conceive of a possible scenario in an extremely detailed manner, this would be too demanding even for justification of *everyday* modal claims. Geirsson's counterexamples<sup>17</sup> show that Van Inwagen's sceptical considerations can brush aside everyday modal claims as well. If Van Inwagen's view collapses into *global* modal scepticism, this gives us a good reason to resist

<sup>16</sup> One might also worry that transparent iron is impossible. If so, then this example is misleading. As a matter of fact, it does not seem unlikely that iron as a natural kind has some fundamental physical properties (say, density) which can exclude the possibility of transparent iron in the first place. If transparent iron is impossible, then it is hard to see why we can draw any *general* epistemic principle for conceivability-based justification on the basis of *this* example. At least, it is an open question whether this is a really helpful example to motivate modal scepticism.

<sup>17</sup> The two counterexamples are as follows: (1) we can conceive of LPs that do not pop and click when played, even if we cannot conceive of technological details that would make this possible; (2) we can conceive of a scenario in which John F. Kennedy has died from natural causes, even though we can hardly imagine all the details that make the statement true in that world (cf. Geirsson 2005, pp. 287–288).



his arguments, because it remains unclear why it would be a *necessary condition* of conceivability that S must conceive of a world in such an extremely highly detailed manner. Hence, Geirsson argues, the justificatory standards of conceivability can be less demanding than what the modal sceptic suggests. (Indeed, *in some detail* we can imagine Chalmers’s zombies, a perfect being, or a mind without body.) Consequently, the standards of “proper” conceivability suggested by the modal sceptic are either too demanding or unmotivated.<sup>18</sup>

To respond to Geirsson’s objection Hawke elaborates his own modal epistemology. He quite radically modifies Yablo’s theory to support his own view about conceivability, namely, *safe explanation theory*. According to this account, an imagined world-scenario gives a modally safe explanation (justification) of p if and only if the conceived propositions  $q_1, q_2, \dots, q_n$  logically entail p, and any  $q_k$  is either a justified basic possibility claim or a non-basic possibility claim that is already justified (typically, by relying on justified basic possibility claims) (cf. [Hawke 2011](#), p. 362).

Hawke also argues that one can use in a conceived scenario only propositions which are *less modally controversial* than the possibility statement in question to be justified. If one just *stipulated* p itself in the imagined scenario, that would not produce a proper justification for the possibility of p. As Hawke remarks, in this case the evidence would be “made up”, not “discovered” ([Hawke 2011](#), p. 358). In other words, the imagined scenario must be logically incompatible with not-p without begging the question (cf. [Hawke 2011](#), pp. 358–359). Hawke also claims that a justification of the possibility of p obtained in this way would be defeated if, for example, one recognises that the scenario involves inconsistency (cf. [Hawke 2011](#), p. 359).

Building on this more developed modal epistemology, Hawke argues for (MS1) and (MS1′) in a way similar to Van Inwagen’s. Against Hawke, I will argue that he fails to give satisfactory reasons for accepting his own conception of Yablo-conceivability—that is, safe explanation theory—and thus sufficient reasons to believe either (MS1) or (MS1′). Therefore, Hawke’s strategy to establish any version of modal scepticism considered in Sect. 2 is unsuccessful [by *modus tollens*, since (MS2) implies (MS1′), and (MS3) implies (MS1)].

The crucial question is why we should demand that the imagined scenario must *logically imply* (without begging the question) p. Hawke considers some alternative conceptions of how conceivability could justify possibility claims, and either rejects them or maintains that they collapse into his preferred view (cf. [Hawke 2011](#), p. 358). Let us focus on two of these alternatives. According to the first option, justification of the possibility of p comes from the fact that the modally uncontroversial propositions included in the fictitious scenario *provide evidence* that the imagined scenario is really possible and p holds in that possible world. According to another view, if the modally uncontroversial propositions included in the fictitious scenario *explain* p, then we have justification for the possibility of p (i.e. for that the conceived scenario is indeed possible and p holds in that possible world).

In contrast to Hawke’s analysis (cf. [Hawke 2011](#), p. 358), however, both options above seem reasonable. As for the first, Hawke argues that evidence for conceivability

<sup>18</sup> See Hawke’s analysis of Geirsson’s objection ([Hawke 2011](#), pp. 354–355).

must be conclusive, otherwise the imagined scenario would not justify the possibility claim in question. However, the fact that evidence is inconclusive is not a serious problem at all once one assumes fallibilism, which is widely accepted in current epistemology. As a matter of fact, Hawke is a fallibilist about the justification of basic possibility claims (and thus about perception, memory and induction), as he admits that *analogical modal reasoning* can lead us astray (cf. Hawke 2011, p. 361). If so, it is unclear why conceivability should be different from other sources of modal justification, and why having inconclusive conceivability-based evidence would cause a disastrous problem, whereas we can tolerate inconclusive evidence coming from other sources of (modal) justification.

As for the second alternative, Hawke suggests that explanation in modal cases can only come in accordance with what safe explanation theory demands, and thus this alternative would collapse into his own view. That is to say,  $p$  is an “explanation” of the scenario including  $q_1, q_2, \dots, q_n$  if these latter logically imply  $p$  (Hawke 2011, p. 358). Clearly, this is an unusual and seriously problematic view of explanation. Explanation is normally an abductive inference. That is to say, what explains is not and does not have to be a logical consequence of what is explained. Without good reasons, it is arbitrary to assume a totally different notion of explanation in the modal context. If the only reason to do so is to provide some support to the safe-explanation theory, then, clearly, this move would beg the question.

Another, quite different argument by Hawke in support of his strict standards of conceivability is the favourite mug-case (cf. Hawke 2011, p. 355). This example is at least as confusing as his previous points, because it seems to lead to a general sceptical view about conceivability (MS3), and, perhaps, an even more radical sceptical view about all kinds of modal knowledge. Let me emphasize that this radical version of modal scepticism would be inconsistent with both Van Inwagen’s and Hawke’s overall view. (I return to this problem in the next section).

By the favourite mug case Hawke attempts to show that the conceived scenario, in order to justify the possibility of  $p$ , must rule out and be incompatible with not- $p$ . If this argument is sound, then the safe explanation theory should be adopted. Hawke asks us consider the following modal claim ( $m$ ): “it is possible that I prepare myself a cup of tea in the kitchen, in my favourite tea mug” (Hawke 2011, p. 355). It seems at first we can easily conceive of such a scenario, so it is possible.

However, Hawke argues, we have not imagined a scenario in an appropriately detailed manner, which is required to justify believing that  $m$ , because what we have actually conceived of does not rule out and is compatible with the following scenario: the mug I imagined is not my mug but, rather, another mug that is an exact and perfect replica of my favourite mug. Perhaps, my favourite mug was stolen and replaced by the replica. Or my mug was smashed before I bought it, and rather (in the non-actual world) I purchased the replica. Hawke concludes that the conceived scenario must rule out this and other, similar defeater background scenarios. This is exactly what Hawke’s own version of Yablo-conceivability demands (cf. Hawke 2011, p. 353; p. 359).

In my view, Hawke’s analysis of the favourite mug case not only supports scepticism about remote (and philosophically relevant) possibility claims [(MS1) and (MS1’)], but it also leads to a general scepticism about everyday possibility claims (MS3). Since the same kind of concern that Hawke raises in the favourite mug case can be

raised in virtually all everyday cases. For instance, I might have failed to “properly” conceive that I could have been in my living room, since it might be the case what I conceived was not my living room, but a set for film-making which *looks like* my living room. Examples in the same fashion are countless. Then, if we follow Hawke, it becomes hard to conclude that there is *any* possibility claim that can be justified *via* conceivability.

At this point, one might argue that if it turns out that no possibility claims can be justified by Yablo-conceivability (MS3), then it is rather a problem of Yablo’s account but not a problem of modal scepticism. Fair enough. However, in fact, Yablo does not need to commit to such a demanding requirement of conceivability. Rather, Yablo’s assumption is that conceivability is a defeasible guide to possibility, and until no defeater arises, the conceived scenario *prima facie* justifies *p*’s possibility (cf. Yablo 1993, fn. 35. p. 13; p. 17; p. 32). He assumes that conceivability is similar to perception in that manner. For Yablo an *appearance of p* in a conceived scenario is *prima facie* evidence that *p* is possible.<sup>19</sup>

Hawke interprets Yablo’s analysis of the Goldbach case<sup>20</sup> as an attempt to propose a *general epistemological principle* about conceivability that requires the conceived scenario to *entail* *p* in order to provide justification for the possibility of *p* (cf. Hawke 2011, p. 353). However, it is more reasonable to say that if Yablo intends to suggest any general principle by this example it is only applicable to mathematical and logical propositions where the *possibility of p* logically *implies* the *truth of p* (and also the *necessity of p*). In order to verify the *possibility of* a mathematical proposition (which is the same as verifying that it is *actually true*), we need a *proof* for *p*. A proper mathematical proof logically entails *p*, so *logically rules out* not-*p*. On the other hand, the possibility of non-mathematical propositions is a different story. We do not need a proof to justify *p*’s possibility, if *p* is a non-logical or a non-mathematical claim. (Let alone that it does not seem sensible to think that there are *proofs* of this latter kind of possibility claims.) Also, justifying the possibility of *p* (where *p* is contingent) does not entail the truth of *p*.

To sum up, Hawke fails to give convincing reasons for his own version of Yablo-conceivability. The safe explanation theory holds unrealistic standards for conceivability-based justification. As we saw, all proposed reasons for Hawke’s justificatory standards are unconvincing. Without further arguments, Hawke’s account of conceivability appears to be nothing but a somewhat sophisticated reiteration of Van Inwagen’s conclusion. Therefore, it fails to give a satisfactory response to Geirsson’s objection and similar worries.

<sup>19</sup> In a recent interview Yablo explicitly asserts again that conceivability is a defeasible guide to possibility. He does not seem to commit to such a strict requirement what Van Inwagen and Hawke propose. See: <http://www.3ammagazine.com/3am/about-aboutness/> (accessed: 22.03.2015).

<sup>20</sup> Yablo argues that it is not sufficient to imagine scenario in which a computer printing out something that is claimed to be a counterexample to the Goldbach conjecture (GC) in order to justify that not-GC is possible. Given that no one knows whether such a counterexample exists, the only way to make sure that I conceived of a hypothetical scenario in which not-GC holds is to conceive of a *real* proof of not-GC. However, of course, no one has conceived of the proof of non-GC so far (cf. Yablo 1993, pp. 31–32).

#### 4 Against modal scepticism: modal justification and defeaters

To defend modal scepticism, one might argue that Van Inwagen and Hawke do not impose extremely high standards on conceivability-based modal justification but that, rather, they have pointed out that when we consider remote possibility claims, it is always very easy to find defeaters.<sup>21</sup> The modified and perhaps dialectically stronger argument for modal scepticism would be something like this. (P1): If P is a remote possibility claim which is *prima facie* justified by Yablo-conceivability, then it is always (very) easy to find a defeater of P.<sup>22</sup> (P2): If there is a defeater of P, then believing P is not justified. (C): If P is a remote possibility claim, then (probably) believing P is not justified by Yablo-conceivability.

A first problem with this version of the sceptical argument is that it appears to be defective in a way similar to the way in which Hawke's favourite mug example is defective. If it is easy to find a defeater background scenario for remote modal claims, then it should also be easy to find defeaters for everyday scenarios (as Hawke indicates in his favourite mug-case). It is unclear why remote possibility claims and everyday possibility should differ in this respect. If so, then everyday cases should be also rejected, and general scepticism about conceivability (MS3) would follow. However, (MS3) is unreasonable, so, it seems, we are finished.

Nevertheless, this is not the whole story. We should dig a little deeper to show the fundamental problems with the idea behind modal scepticism. Rather than looking for precise criteria about the extent to which a possible world must be conceived, we need to rely on a more detailed and coherent view of how defeaters work in the modal context. In this section I proceed as follows. Firstly, I propose three plausible restrictions on defeaters of modal justification. In the light of this conception of defeaters, we can explain why a defeater does not work and why it is ineffective, as well as why it does and why it should be considered seriously. Secondly, my account clarifies how some potentially devastating defeaters (including what Hawke suggests in his favourite mug case) can be blocked. Finally, by relying on these principles of defeaters I argue against modal scepticism, and show that some so-called remote and philosophically relevant possibility claims can actually be justified by Yablo-style conceivability.

The overall conclusion of this section is that *in absence of proper defeaters* Yablo-style conceivability does justify the belief that the conceived scenario is possible. The burden of proof is always on sceptic's side: to reject a given possibility claim, the sceptic should find a defeater for *that particular* possibility claim. As my account of defeaters shows, it is not easy to find defeaters of even *remote* possibility claims. Even though there are cases in which it is warranted to be cautious, or even sceptical, the upshot is not that we *cannot know any* remote, philosophically relevant possibility statements, rather that *some* (remote) possibility claims are somewhat justified, whereas *some* others are unjustified or even refuted.

First of all, let us consider principles of conceivability-based modal justification. In the light of considerations made in Sect. 3, the basic idea of Yablo-style conceivability

<sup>21</sup> I am grateful for this point to an anonymous referee.

<sup>22</sup> This argument allows that conceivability—in principle—is *prima facie* evidence for possibility. It is worth noting that, however, Van Inwagen does not share this assumption (cf. Van Inwagen 1998, p. 78).

can be summarized as follows:<sup>23</sup> if it is *appears to S* that he or she conceives of a possible world in which *p* is true, then *S* is *prima facie* justified in believing that *p* is possible.<sup>24</sup> This follows from the assumption that conceivability is a *defeasible* guide to possibility. If *S* were required to conceive of a *genuinely* possible world—rather than an *apparently* possible one—then conceivability could not provide *prima facie*—and, thus, defeasible—evidence for possibility.

A proposition *D* is a defeater of evidence *E* for the belief *P* if and only if believing *E* is evidence for believing that *P*, but believing *E* and *D* together is not evidence for believing that *P*, or, it is evidence for believing that not-*P*.<sup>25</sup> In the modal context, *P* is always an abbreviation of the proposition: “*p* is possible”. There is a great variety of defeaters in the modal context.<sup>26</sup> Some defeaters come from further reflection on the conceived scenario. Others are a matter of empirical investigation. Both types have subcategories. First, *D* can be a proposition that *justifies* the impossibility of *p*, that is to say, *D* justifies not-*P* [call this *rebutting defeater* (r-d)]. Second, *D* can *undermine* the previous evidence *E* for *P*. That is to say, *D* is a reason to believe that *E* is not sufficient to justify *P*, although *D* does not justify not-*P* [call this *undermining defeater* (u-d)].

Obviously, it is not the case that any arbitrary statement can be a defeater of any other. There are restrictions on the usage of defeaters in both non-modal and modal contexts. Here I propose three principles of defeaters in modal contexts. (At least, the first and second can be applied to non-modal cases as well.) The first says that every defeater *D* *in principle* can be defeated by another defeater *D*\*. Let us call this principle (DD). Given a general fallibilist picture of justification, this principle is trivial. Since both Van Inwagen and Hawke are fallibilists, they should accept (DD).

It is also clear that it is not enough to *be aware* that *D could be* a defeater of *P* to make *D* actually work as a defeater. My second principle says: *D* is a defeater of *P* for a subject *S* if *S* has some *independent* and *serious evidence* for *D* itself—that is, a *good reason* to believe that *D*. Call this principle (ED1). Without this restriction, any arbitrary and implausible belief of *S* could be a defeater.<sup>27</sup> An undermining defeater is a proper defeater for *P*, if and only if it passes condition (ED1).

Finally, it is worth noting that (u-d) and (r-d) have different force. Rebutting defeaters are stronger: if they succeed, they justify believing in not-*P*, i.e. believing

<sup>23</sup> “(...) when I imagine a world of such and such a type, it appears to me that a world of that type could really have existed. But when I take it to verify *p*, I take it that if a world like that *had* existed, then *p* would have been the case. So, when I imagine a world which I take to verify *p* (...) I have it appear to me that *p* is possible.” (Yablo 1993, p. 30).

<sup>24</sup> See: Yablo (1993, p. 6; fn. 35, p. 13; p. 32). Geirsson (2005, p. 295) also makes this principle explicit.

<sup>25</sup> This is what is usually called as *evidential defeat*. The concept of epistemic defeasibility can be traced back to Chisholm who draws an analogy between ethical and epistemological defeasibility. See: Chisholm (1966, pp. 48–49).

<sup>26</sup> My analysis utilises Yablo’s and Geirsson’s discussion about defeaters (cf. Geirsson 2005, pp. 296–298; Yablo 1993, pp. 33–37). The terminology is borrowed from Yablo who also mentions a third kind of standard defeater, namely, *offsetting defeater* which is slightly weaker than undermining defeater (cf. Yablo 1993, fn. 67, p. 35).

<sup>27</sup> It is also clear that scientists do not have to take seriously *any* ridiculous hypothesis that *might be* a defeater of a corroborated scientific theory. Perhaps, some considerations about defeaters in the modal context have relevance to the discussion about non-modal scepticism as well.

that “*p* is impossible”. Therefore, when *D* is supposed to be a (r-d) of *P*, *D* is proper defeater of *P* if and only if the evidence for *D* is *significantly stronger than* the original *E* evidence for *P*. Call this third principle (ED2).<sup>28</sup>

Let us now consider some application of these principles. I will examine eight examples in more detail. Some of these examples have been previously discussed. Four of them concern *proper* defeaters and the remaining four *improper* defeaters. There are both (u-d) and (r-d) among them. Some of these defeaters come from reflection and others depend on empirical investigation. Van Inwagen and Hawke’s strategy to support modal scepticism is based on showing defeaters arising upon reflection.

1. *P*<sub>1</sub>: “It is possible that (*p*<sub>1</sub>) Hesperus is brighter than Phosphorus”, *D*<sub>1</sub>: “Hesperus is Phosphorus”. Explanation: *D*<sub>1</sub> is an instance of experience-based (r-d). Given (ED2), *D*<sub>1</sub> is a proper defeater of *P*<sub>1</sub>, since the astronomical evidence for *D*<sub>1</sub> is *significantly stronger than* the *prima facie* evidence coming from the (apparent) conceivability of *p*<sub>1</sub>. Although, the Greeks had *some* justification for *P*<sub>1</sub> (as *p*<sub>1</sub> had appeared to be conceivable for them), they had a justified but false belief (cf. Yablo 1993, pp. 33–34; p. 39).
2. *P*<sub>2</sub>: “It is possible that (*p*<sub>2</sub>) there exists a barber who is a man in town who shaves all those, and only those men in town who do not shave themselves”. *D*<sub>2</sub>: “This scenario is logically inconsistent (barber-paradox)”. Explanation: *D*<sub>2</sub> is a (r-d) by reflection. Clearly, it is a proper defeater of *P*<sub>2</sub>, as it satisfies (ED2). The weak *prima facie* evidence for *P*<sub>2</sub>—arising from the apparent conceivability of *p*<sub>2</sub>—is defeated (cf. Yablo 1993, p. 35).
3. *P*<sub>3</sub>: “It is possible that (*p*<sub>3</sub>) a supercomputer prints out a counterexample to, or a refutation of Goldbach’s conjecture (GC)”. *D*<sub>3</sub>: “We lack a proof of not-GC, and, in fact, what one has conceived of is a world where the supercomputer just makes a mistake”. Explanation: Yablo’s Goldbach case has already been examined in the previous section. Now we have a deeper explanation why *D*<sub>3</sub> is a proper defeater of *P*<sub>3</sub> without accepting Hawke’s unrealistic standards for conceivability. To our present state of knowledge, we do not have a proof of not-GC. We also know that conceiving of *p*<sub>3</sub> does not include a proof of not-GC. So, we have a good reason to accept *D*<sub>3</sub> as an (u-d) of *P*<sub>3</sub>. Until we do not have a proof of the claim that “there is an even integer greater than two which cannot be expressed as the sum of two primes”, it is difficult, if not hopeless, to come up with a new defeater *D*<sub>3</sub>\* capable of defeating *D*<sub>3</sub> (cf. Yablo 1993, pp. 31–32).
4. *P*<sub>4</sub>: “It is possible that (*p*<sub>4</sub>) a ‘ghost’ exists, that is, a disembodied mind without body is possible” *D*<sub>4</sub>: “For *P*<sub>4</sub> to be true events that are consequences of the ghost’s interactions with the physical world must be also possible, however, the possibility of this latter events is not justified, and also it is implausible in itself”. Explanation: This is one of Hawke’s examples (cf. Hawke 2011, p. 363). As far this particular

<sup>28</sup> Notice that Hawke’s modal epistemology is at least coherent with either (ED1) or (ED2). As we saw, Hawke argues that stipulating either *P* itself or another modal claim *Q* which is *more modally controversial* than *P* would not be sufficient for the justification of *P* (cf. Hawke 2011, pp. 357–358). This is so because we need independent evidence for the possibility of *p*. If this principle is applied to defeaters (as a defeater itself can be a possibility claim as well), perhaps we get something close to either (ED1) or (ED2).



- case is concerned, Hawke's defeater seems convincing. This is a proper (u-d) supported by both reflection and empirical knowledge. We have good reasons to accept  $D_4$  instead of  $P_4$ . Clearly, it is not sufficient for the justification of  $P_4$  to imagine a ghost borrowed from a movie that can move physical objects.<sup>29</sup>
5.  $P_5$ : "It is possible that ( $p_5$ ) I make a cup of tea in my favourite mug in  $t1$ ".  $D_5$ : "What has been conceived is logically consistent with the following: my favourite mug was smashed beforehand and it was replaced with its perfect replica" (cf. [Hawke 2011](#), p. 355). Explanation: Of course, the defeater scenario  $D_5$  also seems possible. Still,  $D_5$  is not a proper (u-d) because it can be easily defeated by filling out the original scenario with some more detail in a way to make it immune from this defeater. In other words, it is very easy to defeat  $D_5$  itself (DD). What is more, the same strategy can be applied to defeat any further similar defeater of  $P_5$  one might come up with. Moreover, as we saw before, there is another reason to undermine  $D_5$ , namely it is neither a sufficient nor a necessary condition for the justification of  $P$  that the conceived scenario must be logically incompatible with not- $P$  (except for the cases of mathematical and logical claims). (This latter consideration to reject improper defeater scenarios applies to the next three cases as well).
  6.  $P_6$ : "It is possible that ( $p_6$ ) S was born on another day".  $D_6$ : "Birthday is a necessary property of human beings". Explanation: If  $D_6$  worked, it would be a (r-d). That is to say, it would make impossible that S was born on another day. However, the condition (ED2) for rebutting defeaters is clearly not satisfied in this case. We have evidence for the possibility of  $p_6$  by conceiving it as a coherent situation. The evidence in favour of  $D_6$  is actually much weaker than this former evidence. As a matter of fact, the independent evidence for  $D_6$  is very weak (if there is any evidence at all). Hence, we do not have any serious reason to consider  $D_6$  as a real defeater of  $P_6$ . At best,  $D_6$  can only show that *if* birthday were a necessary property, then  $P_6$  *would be* defeated (cf. [Yablo 1993](#), p. 36).
  7.  $P_7$ : "It is possible that ( $p_7$ ) John F. Kennedy died of seizure"  $D_7$ : "The world is *necessarily deterministic*: everything that happens is metaphysically necessary; that is, what actually happened could not have been otherwise". Explanation: Again, if  $D_7$  were true, then it would make impossible that Kennedy died of seizure. In order to be a proper (r-d)  $D_7$  should meet condition (ED2). However, we do not have (significantly) stronger evidence for  $D_7$  than what we gain from the conceivability of  $p_7$ . As a matter of fact, it is very controversial that the world is or could be necessary deterministic. Similarly to the previous case,  $D_7$  can only show that *if* the world were necessary deterministic, then  $P_7$  *would be* defeated.
  8.  $P_8$ : "It is possible that ( $p_8$ ) S did not lose his (her) hair between the period  $t1$ - $t2$ "  $D_8$ : "The world is *super-deterministic*: it is physically deterministic, and the metaphysically possible combinations of the natural laws as well as the initial state of the universe are very limited.  $P_8$  could not have been the case, if there is no metaphysically possible outcome of the deterministic universe(s) in which S exists and S did not lose his (her) hair". Explanation:  $D_8$  is a somewhat more

<sup>29</sup> Of course, it does not exclude the possibility that mind-body dualism may be justified by another, more subtle conceivability-possibility argument. [Lycan \(2009\)](#) argues that the standard objections against dualism are not compelling, and a dualist can reasonably adhere to her position.



sophisticated defeater than  $D_5 - D_7$ . Potentially, it is also an instance of (r-d): if  $D_8$  were true, it would make impossible that S has not suffered from hair loss in any possible world. Also,  $D_8$  is *prima facie* conceivable. However, the evidence for  $D_8$  appears significantly weaker than what one can have in favour of  $P_8$ . Moreover, one can fill out the original scenario with more and more details without facing any inconsistency or any defeater of our present state of knowledge. This would make stronger evidence for  $P_8$  than we have for  $D_8$ . Therefore, in the light of principle (ED2),  $D_8$  is not a proper defeater.

Notice that defeaters similar to  $D_5 - D_8$  can be produced in virtually any case. If we could not defuse defeaters of this type, Yablo's conceivability-based modal epistemology would entrain general scepticism about conceivability (MS3). However, with the account of defeaters sketched above at hand, (MS3) can be easily avoided. Furthermore, an even more serious problem for Van Inwagen and Hawke comes from the potential defeaters like  $D_6 - D_8$ . Defeaters of this type would not just affect conceivability-possibility arguments, but rather any other kind of modal justification. To block these defeaters, it would not suffice to either postulate a "mysterious" capacity for the justification of everyday modal claims (like Van Inwagen does), or appeal to analogical reasoning (like Hawke does).

For instance, the analogy between an individual X and other normal people who died of heart attack would be undermined, if it were impossible for X to die of heart attack for some of the reasons above. To consider another case, if the world were necessary deterministic, then it could not have been the case that my table is in the kitchen in  $t_3$ , even though we have analogical justification for believing in that possibility. Alternatively, in a super-deterministic world it could not have being the case that I leave my room though the door in  $t_4$ , although we have analogical or some other kind of "basic" modal justification for believing that possibility.

It is crucial for the modal sceptic to offer good reasons to block these kind of defeaters at least in everyday (and supposedly unproblematic) cases, otherwise the modal sceptic cannot save everyday modal knowledge. However, it is hard to see how it is possible to defuse these devastating defeaters (and many others) *without* accepting (DD), (ED1) and (ED2) or principles quite similar to them. So my objection against modal scepticism (when interpreted as arguing that it is easy to find defeaters of the justification of remote modal claims) comes in the form of a dilemma. Either the modal sceptic accepts the above three principles of defeaters (or very similar principles), or the modal sceptic does not. In the latter case, scepticism about even everyday modal claims follows, since without these principles the modal sceptic could not defuse radical and ubiquitous defeaters like  $D_6 - D_8$ . In this case, Van Inwagen's and Hawke's position would be incoherent (or at least very implausible) as they could not save everyday modal knowledge. On the other hand, if the modal sceptic takes these principles of defeaters on board, then *general scepticism* about every remote possibility claim would be groundless. For it would be unjustified to maintain that in case of remote possibility claims it is *always very easy* to find a *proper* defeater that passes the conditions (DD), (ED1) and/or (ED2).

Indeed, the modal sceptic can show defeaters in some cases involve so-called remote philosophical modal claims (for example, the claim that it is possible for the mind to

exist without body, or the claim that transparent iron is possible). However, the reason why these defeaters appear to work is *not* that the conceived scenario is logically compatible with not-P. (As we saw, this would be an unrealistic requirement anyway.) Rather, the reason is that these defeaters are proper in the sense clarified above. For instance, Example 4 illustrates why Hawke is right (in this sense) in claiming that imagining a ghost from the fictitious stories is not sufficient to justify the possibility of a disembodied mind. Nevertheless, even if doubts about *some* remote possibility claims are warranted, it does not mean Van Inwagen and Hawke's *general* sceptical conclusion is correct.

We saw that it is unreasonable to require that the conceived scenario must be logically incompatible with not-P to provide (*prima facie*) justification for P. *Without* this requirement, and *with* the more reasonable principles (ED1) and/or (ED2) and (DD) at hand, the conclusion to be drawn is that even some obscure possibility claims may have some *prima facie* justification *via* conceivability [such as, the possibility of a perfect being (cf. Van Inwagen 1998, p. 67)], and the burden of proof to reject these claims is always on the critic who should find a defeater in *each case*.<sup>30</sup>

For instance, it would be no easy task to find a *proper* defeater for remote and philosophical possibility claims like the following: Putnam's Brains-in-a-Vat scenario<sup>31</sup> (cf. Putnam 1981, pp. 1–21), or Nozick's experience-machine (cf. Nozick 1974, pp. 42–45), or the conceivability of the fact that a vast amount of inexplicable suffering exists (cf. Van Inwagen 1998, p. 68). Also, for example, the possibility of Thomson's violinist case seems justified (cf. Thomson 1971, pp. 48–49). All of these scenarios are remote from everyday experience or from the actual state of affairs. Serious defeaters of these (and many other) possibilities have not been offered so far. As we saw, the modal sceptic's general worries do not pass the plausible conditions of defeaters.

In sum, it is a coherent position to take on board some particular worries raised by Van Inwagen and Hawke, but still refrain from endorsing modal scepticism.<sup>32</sup> Of course, the evidence for believing that “p is possible” might eventually be defeated. Without doubt, much more should be said about defeaters in the modal context. Here are some important questions that I have to leave open. Where does the strength of modal evidence precisely come from? Can we give more precise criteria to assess the evidence for modal justification? Still, a lesson to be learned is that modal justification

<sup>30</sup> One might also accept that, for example, the possibility of purple cows is not justified because we are ignorant about the details that make purple cow pigments possible [but: Geirsson (2005, p. 299) argues for the contrary claim, namely, perhaps we are not totally ignorant about those details]. At any rate, it remains unclear what general conclusion can be drawn from this otherwise philosophically uninteresting case. Moreover, appealing to ignorance typically is not the best way to defeat initial evidence. Clearly, we should introduce restrictions on the argument from our ignorance, since the same worry can be raised in virtually all everyday cases. In my view, a better way to think about this issue is to ask: “Is our ignorance of the details that make p possible *always* sufficient to defeat *any kind of* conceivability-based justification?” My answer would be: “probably, no”.

<sup>31</sup> Of course, presumably, this scenario is non-actual, and, thus, it is a far-out possibility.

<sup>32</sup> As a matter of fact, in a recent interview Yablo expressed his doubts about Chalmers's zombie argument. See: <http://www.3ammagazine.com/3am/about-aboutness/> (accessed: 22.03.2015). Geirsson (2014) is devoted to argue that the possibility of philosophical zombies is unjustified. However, of course, Yablo and Geirsson are far from being modal sceptics.

is a matter of degree. It is unreasonable to hold two *completely different standards* for the justification of two, presumably different types of possibility claims (i.e. “everyday” and “remote” ones). Since modal sceptics have failed to provide strong reasons for that view, the upshot is that there is *no single and simple argument* capable of defeating all (or even a specified subset of possibility claims) which is at the same time ineffective against so-called everyday possibility claims. Conceivability provides *prima facie* evidence for possibility claims in general, and, always the critic is supposed to find a proper defeater for the *particular claim in question*. Therefore, (MS1) and (MS3) should be rejected.

Let me add that if modal scepticism coincided with the more modest thesis that *some particular* obscure and/or controversial possibility claims are unjustified, then modal scepticism would not be a “dangerous” view that we should fear. In philosophical discussion, it is usually taken for granted that, say, the possibility of a perfect being or Chalmers’s philosophical zombies are controversial matters.

Finally, as far modal *knowledge* is concerned, notice that if *defeasible justified true belief* is enough for modal knowledge, then scepticism about modal *knowledge* (MS1′) and (MS2) should be also rejected. It is also worth recalling Yablo’s principle: conceivability is a factive state. Perhaps we do not know whether we have *really* managed to conceive of a possible world in which *p* holds. Perhaps we do not know that we know that “*p* is possible”, but that is a different matter.

## 5 Problems of Hawke’s similarity principle

One of Van Inwagen’s claims is (MS2): we cannot know remote (or far-out) possible claims *by any means* (cf. [Van Inwagen 1998](#), pp. 70–71). There are good reasons to think that Hawke’s modal epistemology implies (MS2) as well, as he restricts the scope of analogy-based modal justification only to basic (everyday) cases, and holds very demanding requirements for justification *via* conceivability (i.e. safe explanation theory). In this section I argue that Hawke’s Similarity Principle is either arbitrary or begs the question about (MS2). Hawke fails to give independent reasons for the thesis that analogical reasoning captures only basic (everyday) possibility claims and conceivability can at best be a guide to so-called remote possibility. In the next section, I offer two counterexamples to (MS2) which show that, in fact, we can justify some remote, philosophically relevant possibility claims by analogy (whatever “remote” might mean). The lesson to be drawn is that we should also reject Hawke’s account of analogical modal reasoning.

For Hawke basic possibility claims must serve as grounds for non-basic possibility claims. Basic modal claims are justified by the Actuality and Similarity principles (cf. [Hawke 2011](#), pp. 361–362). The Actuality Principle is trivial: if *p* is actual, then *p* is possible. The Similarity Principle says that if *A* is possible and *B* is similar to *A* in a relevant aspect, then *B* is also possible ([Hawke 2011](#), pp. 360–361). Let us consider the latter principle in more detail. To be able to apply this principle, it is essential to determine which properties of objects or events are relevant because, in some sense, virtually everything is similar to everything else. Hawke suggests that the Similarity Principle relies on a kind of inductive reasoning, namely, in the past *S* experienced

that  $p$  was actual, so,  $p$  was possible. Then,  $S$  can conclude that  $q$  which is similar to  $p$  is also possible (cf. Hawke 2011, p. 361).

Furthermore, Hawke outlines the following, fairly vague explication of the Similarity Principle: “a similarity is relevant to the possibility of  $p$  if that similarity stands in some kind of causal or determining relation to the advent of the states of affairs that make  $p$  true”. (Hawke 2011, p. 361). Here is an interpretation: “if event  $E$  is possible, because it is actual, and if events  $E$  and  $F$  belong to the same causal kind, then  $F$  is also possible”. The phrase “ $x$  and  $y$  belong to the same causal kind” means something like this: “had  $y$  actually happened, it would have been caused by the same kind of cause that actually caused  $x$ ”.

However, if we accept Hawke’s suggestion and assume that relevant similarity in modal cases is only *causal similarity*, the Similarity Principle would have a narrow scope. If it worked, it could only reveal *physical* possibilities: propositions that are true in those possible worlds that have the same, or very similar, ontology and laws of nature as the actual world. However, this restriction of analogical modal reasoning seems to be arbitrary. Two scenarios or worlds sharing the same natural laws and ontology can still radically differ. For example, the Brains-in-Vats Scenario might be physically possible, but—assuming the world is by and large the way we take it to be—this scenario is very dissimilar from the actual world. Alternatively, imagine physically possible, but extremely different and wondrous alternate world histories.

Consider now the following definitions by Hawke: (a) basic possibility claims are those which are justified by the Actuality and/or the Similarity Principle; (b) non-basic possibility claims are those which are not justified by these principles (cf. Hawke 2011, pp. 361–362); and, (c) being a non-basic possibility is the same as being far removed from everyday experience (cf. Hawke 2011, p. 362).<sup>33</sup>

Apart from the problem that (a)–(c) seem incompatible<sup>34</sup>, we should conclude from (a)–(c) that: (d) the Similarity Principle (or analogical modal reasoning) cannot be a guide to remote possibility claims. It would mean that, at best, Yablo-conceivability could be a guide to remote modal claims.<sup>35</sup> Given scepticism about conceivability, (a)–(c) and so (d) beg the question about (MS2). Additionally, we saw in the previous sections that it would be an arbitrary and seriously problematic restriction on the scope of Yablo-conceivability to assume that it cannot be a guide to “everyday” possibility claims.

All in all, Hawke suggests different concepts of “remote” (and “non-basic”) modality: remoteness can be defined by the distance from the causal laws of the actual world; also, in terms of the distance from everyday experience. The first is an arbitrary assumption, the second, given scepticism about conceivability (either (MS1) or (MS1’)), begs

<sup>33</sup> See also premise “P\*2” of Hawke’s most elaborated version of his argument for modal scepticism (Hawke 2011, p. 363).

<sup>34</sup> For example, there are several uncontroversial modal claims that we can know by the Actuality Principle (so, they must be basic), still they are remote from everyday experience (so, they must be non-basic). Consider: “it is possible that Einsteinium’s atomic number is 99”.

<sup>35</sup> “(...) it is far from clear what other means we might have for assessing the truth of these [remote] possibility-claims, other than imagination-centered techniques that have been carefully formulated to avoiding the weaknesses of ‘mere’ imagining.” (Hawke 2011, pp. 362–363).

the question against (MS2). Consequently, Hawke fails to give independent reasons for the assumption that analogical reasoning targets *only* possibilities which are close either to everyday experience or to the actual world in terms of the causal (physical) similarity. In the following section I offer two examples to show that analogical modal reasoning has actually a wider scope than Hawke assumes.

## 6 Counterexamples to (MS2): analogical reasoning about remote possibilities

Let me now argue more directly that (MS2) should be rejected in the light of some counterexamples. Let us consider Putnam's super-spartan argument against logical behaviourism (Putnam 1980, pp. 29–30). Super-spartans can suppress all pain-behaviour, even though they feel pain like anyone else. As Putnam argues, the imagined scenario of super-spartans<sup>36</sup> shows that it is *possible* to be in pain, while not having the behavioural dispositions associated with pain. Therefore, Putnam concludes, having certain behavioural dispositions is not necessary for being in a certain mental state. So, logical behaviourism is false. Whilst Putnam's original argument is a kind of conceivability-possibility reasoning that the modal sceptic might reject, it is not hard to rephrase it as an analogical argument. We know that there are fire-walkers and fakirs in the actual world who can suppress pain-behaviour in *some cases*. Of course, they are far from being super-spartans. However, it is hard to find any fundamental dissimilarity between actual fire-walkers, fakirs and non-actual super-spartans. The difference is only in terms of degree. Therefore, relying on analogical reasoning the possibility of super-spartans appears justified.

It is perhaps worth adding two remarks. It is likely that the scenario of super-spartans is (somewhat) remote to everyday experience. Also, this scenario is more controversial than, for instance, the following reasoning: it is possible for me to leave my room though the door, because it was possible in the past that I left my room though the door (cf. Hawke 2011, p. 361).

Additionally, if we dismiss Hawke's restricted conception of similarity, we can broaden the scope of analogical reasoning to include (apparently) physically impossible scenarios as well. Let us consider another example. It appears to be justified by analogy that human life full of happiness and without suffering is possible. Certainly, there are actual people who are happy, healthy, have an easy life without any serious problem. Or, at least, there are some people who have been in such an enviable situation for a short period of their lives. If so, then we can reason similarly as we did in the super-spartan case: the difference between these people and those non-actual people who have a perfectly happy life is only a matter of degree. Consequently, the metaphysical possibility that every human being's life is without suffering and is full of happiness can be justified by analogy. Presumably, this scenario would be metaphysically possible, but physically impossible. For perfectly happy human life

<sup>36</sup> Be precise, Putnam has two scenarios, the first is about super-spartans, and the second is about so-called super-super-spartans (cf. Putnam 1980, p. 30). Nevertheless, for the sake of simplicity, I refer only to the super-spartans case.

probably requires a different environment with different natural laws. Needless to say, this possibility claim has serious philosophical significance: the argument from evil depends on the assumption that God *could* and *should have* created such a world.

At this point the modal sceptic might try to reformulate the sceptical argument. Given that the perfectly human life-scenario is probably physically impossible, and it also looks remote to typical everyday experience, our guide in this case is *only* conceivability rather than *any kind of* analogical reasoning. Therefore, the modal sceptic might argue, one should put forward a scenario with the exact, alternative laws of nature which could have made such a world possible, however, no one has come up with such a detailed scenario as yet.

It is clear that this reply leads us back to the problem that Hawke owes us a clear and *per se* convincing explication of how the Similarity Principle works. Of course, if one follows Hawke and takes for granted that the relevant similarity *must be* some kind of causal similarity, then the Similarity Principle *by definition* can capture only possibility claims that are true in worlds whose causal laws are same as (or very similar to) the actual world. Alternatively, if one assumes that the Similarity Principle could capture only possibilities which are close to the everyday experience, then the two counterexamples above must be rejected without further considerations. However, we have seen before that the first assumption would be arbitrary, the second would beg the question.

Furthermore, we saw (also in Sect. 2) that Hawke's distinction between basic and non-basic modality is far from unambiguous. Due to the fact that none of these previously considered definitions are clear-cut or formal, it would be hard to draw a clear distinction in any case. Actually, all of these definitions suggest that the fact that a possibility is basic (everyday) or non-basic (remote) is not a black-or-white matter, but it comes in degrees.<sup>37</sup>

All in all, whether a philosophically relevant possibility claim is close to or somewhat remote from the actual world, in principle, analogical reasoning *in a proper sense* can justify it to some extent. Therefore, both (MS2) and Hawke's distinction(s) between basic and non-basic modality should be rejected. Rather than pressing for drawing such a distinction, it is more helpful to emphasize that modal justification comes in degrees.

## 7 Concluding remarks

Drawing all the previous points together, the overall conclusion is as follows. Both Van Inwagen and Hawke fail to give sufficient reasons for any of the versions of modal scepticism discussed in this paper. Modal justification is a matter of degree. Relying on Yablo's and Geirsson's more realistic standards of conceivability, it is reasonable

<sup>37</sup> We can move even further and argue that possibility itself is a matter of degree. Kment (2014) has developed the view that "possibility" and "necessity" are not absolute terms, they come in degrees. Kment elucidates the notions of possibility and necessity in terms of the closeness to the actual world. One advantage of this account is that it can analyse impossible scenarios as well, because for Kment modality should not be interpreted in terms of *possible* worlds, but, rather, by a set of rules that defines how remote the hypothetical scenario is from the actual world.



to think that at least some of the important philosophical possibility claims are *fallibly* justified regardless of their “remoteness”. It is also dubious that any sharp distinction between the unproblematic and the presumably dubious kind of modal claims can actually be drawn.

The lesson to be drawn is that the sceptic or the critic has the task of finding a proper modal defeater in each case. However, it is not easy to find serious defeaters in several so-called “remote” modal claims (whatever “remote” might mean). With a more sophisticated view of defeaters at hand, it is clear that, in principle, both Yablo-style conceivability and analogical reasoning from the actual to the possible can alone justify *some* philosophically relevant and (supposedly) “remote” possibility claims.

To conclude, our philosophical practice relying on conceivability-possibility arguments should not be revised as radically as modal sceptics suggest. In order to defend extensive reliance on imaginary cases we also need a more nuanced picture of analogical modal arguments. Presumably, properly applied analogical modal reasoning is a distinct source of modal justification. At any rate, we need a more detailed account of analogical reasoning and its connection to conceivability-based modal justification. Yablo’s conceivability-based account of modality provides a firm basis for further investigations, if it is supplemented by an extensive analysis of the role of analogical reasoning in thought experiments as well as a detailed theory of the defeaters of modal justification.

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