

# Mark Jago, *The Impossible: An Essay on Hyperintensionality*

Oxford: Oxford University Press, 2014

ISBN: 978-0-19-870900-8

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*Keywords:* hyperintensionality, impossible, propositional attitude, rationality, content

Alice laughed. “There’s no use trying,” she said: “one can’t believe impossible things.” “I daresay you haven’t had much practice,” said the Queen. “When I was your age, I always did it for half-an-hour a day. Why, sometimes I’ve believed as many as six impossible things before breakfast.” (from *Through the Looking-Glass*)

Impossible things—e.g. that there are squares constructible using a straight-edge and a compass that have the same area as some circle, that the Evening Star is further away from the Sun than Venus, that numbers are ideas in the mind, etc.—are things that are false no matter what. In *The Impossible*,<sup>1</sup> Mark Jago, siding with the White Queen, proposes an account of how impossible things *can* be believed. The idea that impossible things can be believed, even if it is preferable not to believe them, probably does not strike anyone as odd. And there is no point defending a view nobody doubts. In order for the disagreement between the White Queen and Alice to be interesting, we need to consider what reasons we might have to go against common-sense and agree with Alice.

The idea that it is impossible to believe impossible things has surfaced on numerous occasions in philosophy. Empiricists (both the logical empiricists and the regular kind), Kant, and Wittgenstein all held it in some form or another. More recently, the view has cropped up in connection with versions of doxastic logic (e.g. Hintikka 1962), theories of information (e.g. Dretske

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<sup>1</sup> All subsequent references to page numbers and chapters are to (Jago 2014), unless noted otherwise.

1981), and theories of belief (e.g. Lewis 1979; Marcus 1983; Stalnaker 1984).<sup>2</sup> What gives rise to Alice's view in all of these cases is the thought that impossibilities (as well as necessities) are, in some sense, *empty*—that there just is not anything *to* believe in believing an impossibility. To see why impossibilities (and necessities) might be thought of as empty, consider the following argument.

The content of a declarative sentence, i.e. what we say when we utter the sentence, is in some way determined by the conditions under which the sentence is true. Thus, since impossibilities are true under *no* condition, they also lack content. If nothing is said by an utterance of an impossibility, then nothing is put forward for belief or disbelief, either. And so, we have reached Alice's view. This is one of four arguments that Jago considers (see 3–4). All four are tightly linked to what Jago refers to as *the possible worlds approach*—an approach to modelling content, belief, and other related phenomena in terms of *possible worlds*. What exactly possible worlds are is a controversial metaphysical issue, one that Jago addresses later in the book, but we get an intuitive idea by thinking of truth-conditions of sentences in the following way: if they obtain, then we live in a world in which the sentence is true, and if they do not, then we live in a world in which the sentence is false. Taking this intuitive sense of 'world', we can speak of all the worlds in which the sentence is true and all the worlds in which it is false. Truth-conditions of a sentence, since they determine exactly when the sentence is true, can then be seen as delineating the set of all worlds in which the sentence is true. And a belief e.g. that it is raining can be seen as a relation a subject stands in to worlds in which 'it is raining' is true, or more simply, to worlds in which it is raining. Many other things, besides content and belief, have been modelled in this way. In chapter 1, Jago gives a clear overview of this approach and its utility, one that can also serve as a good introduction to someone who is new to the idea.

In chapter 2, Jago gives a detailed overview of the main problem with the possible worlds approach, known in the literature as the *problem of hyperintensionality*. In a nutshell, the problem is that distinctions that the possible worlds approach allows us to draw between contents are not fine enough for all purposes, e.g. for modelling belief. As the White Queen points out, it seems that we can believe impossible things, but, if a belief that *p* is modelled as a relation to possible worlds in which '*p*' is true, then, since there are no possible worlds in which impossible things are true, it is predicted that impossible things are never believed. And this is not the only strange result we get. Necessary truths—things that are true no matter what—are true in every possible world. And thus, whichever possible worlds a subject

<sup>2</sup> I have borrowed the term 'Alice's view' from (Marcus 1983).

is related to in believing something, they thereby count as believing *all* the necessary truths, and conversely, if there is some necessary truth you fail to believe, e.g. some complicated mathematical theorem, it follows that you believe nothing at all. Similarly, if the truth of ‘*p*’ necessarily guarantees the truth of ‘*q*’ (e.g. by logically entailing it), then any world in which ‘*p*’ is true is also a world in which ‘*q*’ is true, and thus, a subject who believes that *p* thereby counts as believing that *q*, no matter how complicated the reasoning is that would lead from ‘*p*’ to ‘*q*’ (or whether it is even possible to reason from ‘*p*’ to ‘*q*’). All of these results seem obviously false. In short, then, as soon as we move into the territory of impossibility and necessity, the possible worlds approach seems to just break down.

In addition to the well-known issues described above, Jago also identifies an interesting new issue with the possible worlds approach, one that is quite independent of belief. To use his example (48), necessary truths like ...

(a) Puss is crafty or Puss is not crafty

(b) Rover is snoring or Rover is not snoring

... seem to have different contents. (a) is about Puss and not about Rover, and (b) is about Rover and not about Puss. So, (a) and (b), although both necessary truths, are about different things, and thus we say different things when we utter them. But when modelled using possible worlds, the two sentences are predicted to say the same thing.<sup>3</sup>

After elaborating on the problems that the possible worlds approach faces, Jago identifies three ways to proceed. We can either i) try to explain away hyperintensional phenomena, thereby saving the possible worlds approach, ii) abandon the possible worlds approach and try something completely different, or iii) try to find an extension of the possible worlds approach that can handle hyperintensionality. In the latter half of chapter 2, Jago considers and rejects various attempts at taking the first route, most notably by Robert Stalnaker (1984). Jago does however sympathize with the motivation for taking the first route, namely to retain the possible worlds approach which, as he puts it, is “one of philosophy’s success stories” (13).

<sup>3</sup> Though, a possible response to this problem might be that (a) and (b) are not really necessary truths. Their logical forms may be unpacked respectively as ...

(a’)  $\exists x(\text{Puss} = x \wedge (x \text{ is crafty} \vee \sim x \text{ is crafty}))$

(b’)  $\exists x(\text{Rover} = x \wedge (x \text{ is snoring} \vee \sim x \text{ snoring}))$

If the existence of Puss and Rover is contingent, then the two sentences, despite the appearance of being instances of the Law of Excluded Middle, would also be contingent. Whether the existence of individuals is contingent is a controversial issue in metaphysics and logic. For a discussion of it, see (Williamson 2013).

We should thus not be too quick to dismiss it entirely by going for the second route. Additionally, in chapter 3, Jago identifies problems with the most popular alternative to the possible worlds approach: the view that contents of sentences are finely structured entities which have little to do with truth-conditions and are very similar to sentences themselves.<sup>4</sup> It should, however, be noted that some of the problems that Jago points out in the structuralist account, like Frege's puzzle concerning substitutions of co-referential expressions, have been solved by contemporary proponents of the view.<sup>5</sup>

Jago's own strategy for dealing with the problem of hyperintensionality is to take the third route. Being sympathetic to the possible worlds approach, Jago aims to preserve as much of it as he thinks can be preserved. With structuralism now the mainstream view, the possible worlds approach is usually mentioned only in passing and is generally dismissed out of hand. This makes Jago's approach refreshing. His proposal is to extend the possible worlds approach by adding *impossible* worlds to it. Impossible worlds are simply worlds in which some impossibilities are true. With such worlds included in the picture, we can keep the idea from the possible worlds approach that sentences pick out worlds in virtue of being true in them, but we now have worlds for sentences like '1+1=1' to pick out as well. Because of this, we can keep modelling beliefs as we did before but without having to agree with Alice, since there are now worlds one can relate to in believing impossible things.

The idea of introducing impossible worlds in this way to solve the problem of hyperintensionality is itself not new.<sup>6</sup> What makes Jago's proposal original is his defense of the impossible worlds approach against two serious objections. One of them, which is also the most common objection against any appeal to impossible worlds, is that impossible worlds, much more so than possible worlds, are metaphysically suspect. In chapter 4, Jago considers and rejects most of the mainstream metaphysical accounts of worlds. The clarity and detail with which he does this are particularly noteworthy, making the chapter (like his chapter on the possible worlds approach) an excellent introduction to those who are new to the topic. Jago works out his own metaphysical account of worlds in chapter 5, defending a version of *linguistic ersatzism*, the view that worlds (in this case both possible and impossible worlds) are sets of sentences. To get sentences suitable for such a task, Jago, taking inspiration from Carnap (1947), defines an exotic *world-making* language which has as its atomic expressions things that natural lan-

<sup>4</sup> It should be noted that after the publication of his book, Jago (2015) has proposed ways of reconciling his view with at least some versions of structuralism.

<sup>5</sup> See e.g. (Soames 2010); (Hanks 2015).

<sup>6</sup> See e.g. (Hintikka 1975); (Rantala 1982); (Barwise 1997). There are many others.

guage atomic expressions pick out in the (real) world. Jago, in other words, shows how the world—the real world—around us can be seen as made up of sentences. The result is sophisticated and elegant. Especially noteworthy is his defense of the existence of negative facts and the use he puts them to in solving the problem of non-actual entities—the main obstacle in defending any form of ersatzism.

The other problem that the impossible worlds approach faces is this: although we do not want logical relations to provide links between contents which are *so* strong as to imply Alice's view, we still want them to provide *some* kind of link. For example, when we say that someone knows that the weather is cold and rainy, there is, as Jago notes, something very strange about saying that they do not know that the weather is cold. The obvious explanation for this strangeness is that 'the weather is cold and rainy' logically implies 'the weather is cold'. The problem of how to account for this while avoiding falling back into the idea that we know (and believe) everything that logically follows from what we know (and believe) is what Jago refers to as *the problem of bounded rationality*. Jago introduces the problem and considers some responses to it in chapter 6. In chapters 7 and 8, he develops his own response to the problem: that logical relations establish *normative* links between contents, links one must respect to count as rational.<sup>7</sup> The main obstacle in this that Jago focuses on is that people who we count as rational *must* fail to respect some of those normative links. If they didn't, they would be *ideally* rational, and they are not. Jago elegantly overcomes this issue by showing that in such cases it will always be *indeterminate* which link the person fails to respect, and consequently, since it is irrational for *us* to take something indeterminate to be true, we can never rationally count others as being irrational in such cases.

There are a few problems with Jago's proposal. One issue, also pointed out in (Nolan 2015), is that linguistic ersatzism, including Jago's version of it, turns truth-conditional semantics into a form of translational semantics—we end up analyzing the contents of sentences in terms of *more sentences*, albeit in the worldmaking language. What we eventually want from a semantic theory, however, is an account of the relation that language bears to the non-linguistic reality. In the last chapter of the book, Jago considers this worry in passing. The response he gives is that sentences in his worldmaking language are constructed from *worldly* entities. And so, his account of content "does make contact" with non-linguistic reality (263). But this response fails to address the real issue. Although sentences in the worldmaking language have worldly entities as constituents, they have them as *syntactic* con-

<sup>7</sup> For a similar treatment of the problem of bounded rationality, see (Jenkins Ichikawa and Jarvis 2013).

stituents. Jago does introduce a semantics for them, namely by stipulating that each atomic expression in the worldmaking language has itself as its semantic value, roughly speaking.<sup>8</sup> But this does not seem to help. To break the circle of attaching sentences to sentences, we need to introduce genuine truth-conditions at some point. Perhaps there is an obvious way it can be done in Jago's framework, but his response to the objection leaves it unclear.

Another problem with the book, though not with Jago's own view, is that his criticism of Stalnaker's attempt at explaining away hyperintensionality relies on a somewhat sloppy reading. There are paragraphs in Stalnaker's book (1984: chs. 4–5) from which Jago cites where Stalnaker explicitly considers and responds to objections that Jago raises. Stalnaker's account of deductive inquiry has two parts which, Stalnaker (see 1984, 77–76) emphasizes, are only plausible when considered in conjunction. However, Jago considers and rejects the two parts separately, thereby attacking two straw-men. For example, on page 84, Stalnaker directly engages with an objection akin to Jago's, showing how the interplay between the two parts of his account block it.

A final issue I want to raise concerns Jago's general strategy of trying to explain hyperintensional phenomena by developing an extension of the model employed in the possible worlds approach. There is no shortage of such extensions. Some of them (e.g. Rantala 1982) introduce impossible worlds, others (e.g. Egré 2006) do not. What makes the possible worlds approach interesting is not the *model* it employs but the philosophical reasons for thinking that the approach, contrary to appearances, is *correct*. Jago does not seriously engage with those philosophical reasons (although he lists some of them in the introduction). To provide a fully satisfactory response to Alice, we need to move away from questions about how to model hyperintensionality and ask instead whether we can make sense of it.

Despite these issues, Jago's book is an important addition to the literature on hyperintensionality. Jago's emphasis on the virtues of the possible worlds approach serves as a reminder of what we give up when we follow the contemporary trend of structuralism. His articulation of the problem of bounded rationality and his defense of a solution to it set an important and yet relatively unexplored constraint on any account of hyperintensionality that even those who side with Alice need to address. Hopefully, *The Impossible* will come to mark a point where the debate between the White Queen and Alice starts to get the attention it deserves.

<sup>8</sup> This is true of predicates in the worldmaking language. Referring expressions get a more sophisticated treatment. See chapter 5 for details.

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