human relationships and being exposed to cultural icons (such as 'the Hunting of the Snark') and if causation is a reflection and articulation of the metaphysical dependence of a state of affairs on those that explain it then Kim's metaphysics of mind embeds a serious mistake.

The saying, 'Keep your friends close and your enemies closer' has some application to philosophy. Kim's metaphysics is supposedly part of this or a nearby world but it is not near enough; his reliance on a subvenient level of neural entities corresponding to mental states is not compatible with our understanding of this world where such things do not exist (either in type or token form) so that belief in them is a matter of misbegotten faith.

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Talking about Nothing. Numbers, Hallucinations, and Fictions By Jody Azzouni New York: Oxford University Press, 2010, pp. 288, \$74 ISBN: 978-0-19-973894-6 doi:10.1017/S0031819111000623

If everything exists, then it looks, *prima facie*, as if talking about nothing is equivalent to not talking about anything. However, we appear to be talking or thinking about particular nothings, that is, about particular items that are not among the existents. How to explain this phenomenon? One way is to deny that everything exists, and consequently to be ontologically committed to nonexistent 'objects'. Another way is to deny that the process of thinking about such nonexistents is a genuine singular thought. The first strategy we may call 'the Meinongian tradition' (championed by authors like Alexius Meinong, Ernst Mally, Terence Parsons, Richard Routley, and Ed Zalta), while the second could be dubbed 'the *de re* tradition' (connected to work by Gareth Evans, John McDowell, and Tyler Burge). Finally, the third way to solve the above puzzle, and probably the majority view in contemporary philosophy, is due to Bertrand Russell and W.V.O. Quine, who deny the particularity of the apparent nonexistent object and the singularity of the corresponding thought via the view that any statement about apparently particular nonexistents can be paraphrased into a quantified expression containing no genuinely referring terms.

Jody Azzouni's book is an attempt to argue for and develop a fourth view, based on the hitherto unrecognised notion of an 'empty singular thought', which Azzouni takes to have a place in logical space. Concomitant to developing the view, Azzouni applies it to three

typical cases of talk about nonexistents: numbers, hallucinations, and fictions. As the name suggests, empty singular thought is devised as having three essential characteristics: (1) it is genuine thought, no different from any other, (2) it is singular, that is, its content is partly determined by particular non-conceptualised states of affairs, and (3) nevertheless it is genuinely empty, unlike Meinongian thought, that is, its object 'does not exist in any sense', to use Azzouni's own formulation.

Azzouni undertakes some challenging acrobatics when trying to persuade the reader that his view is substantive and it does not end up being the same as any of the previous three views about apparent talk about nonexistents. As it will turn out later, in the second, critical part of my review, I'm not entirely convinced, at least when it comes to the claim that the idea of empty singular thought is going to be much different from the Meinongian tradition.

Let me then first offer a brief overview of each of the chapters, after which I turn to some criticism.

After a 17-page long general introduction to the topic of apparent reference to nonexistents and a brief exposition of his views on existence and truth, Azzouni takes up, in the first chapter, the task of accommodating his nominalism about numbers with the idea that nevertheless numerical thought is genuinely singular. There are several arguments presented. On the apparent singularity side, it is pointed out that, psychologically speaking, one can't help but think in terms of objects when one is deploying mental processes of numeration. On the nominalist side, it is argued that the above psychological necessity is compatible with the thinker explicitly disbelieving that numbers exist. Whether one is a nominalist or a realist does not make a psychological difference when it comes to numerical thought processes. Further, the view that numerical thought is to be understood as both empty and singular is defended against the 'mock' thought view associated with what I have earlier called 'the de re tradition', as well as against Meinongianism, according to which the singularity of such thoughts is grounded in nonexistents. Azzouni devises at this point a scheme, later applied to the other two types of discourse about apparent nonexistents as well (i.e. hallucinations and fictions), according to which syntactically there are two relations of reference, namely, *reference*<sup>r</sup> and *reference*<sup>e</sup>, the former establishing the connection between a singular term and an existent, while the latter is supposed to hold between a singular term and a nonexistent. However, semantically, only the former is a genuine relation, the latter being a pseudo-relation as its purported reference does not exist or does not have any being whatsoever, the background

principle being that a relation holds only if its relata exist. Similarly, for thoughts, we get the distinction between *aboutness*<sup>r</sup> and *aboutness*<sup>e</sup>. So, for instance, 'Sherlock Holmes' refers<sup>e</sup> to Sherlock Holmes, but does not refer<sup>r</sup> to anything whatsoever. At the same time 'Hilary Clinton' refers<sup>r</sup> to Hilary Clinton, and does not refer<sup>e</sup> to anything. Similarly, thoughts can only be about<sup>e</sup> Sherlock Holmes when they are purportedly about Sherlock Holmes, Finally, whereas sentences containing no empty singular terms have truth-makers, those that are about<sup>e</sup> nonexistents only have what Azzouni calls 'truth-value inducers'. Truth-value inducers are facts that are responsible or that ground the assertibility or otherwise of sentences apparently about nonexistents. For example, contrary to what Quine's approach entails, there is good reason to think that there are true sentences about Sherlock Holmes beyond the negative existential 'Sherlock Holmes does not exist'. Such a sentence is 'Sherlock Holmes was invented by Sir Arthur Conan Doyle', which most people would intuit to be true. Azzouni takes such a sentence to be true, its empty singular term, 'Sherlock Holmes' as referring<sup>e</sup> to Sherlock Holmes, its nonempty singular term, 'Sir Arthur Conan Doyle' as referring<sup>r</sup> to Sir Arthur Conan Doyle, and the truth-value of the sentence being grounded in certain facts about the context in which the author of the fiction built up the character of Sherlock Holmes.

Similar considerations apply to numbers, in whose case it is mathematical practice that constitutes the truth-value inducers of sentences containing nominalisitcally understood number concepts. Numbers, therefore, only refer<sup>e</sup> and sentences containing numeral concepts are only about<sup>e</sup> numbers.

Chapters 2 and 3 apply the above scheme to hallucinations and fictions, respectively. Azzouni argues that we are forced genuinely to quantify over hallucinations and over fictional entities in the sense of using the quantifiers outside the scope of such locutions as 'it is hallucinated that...' or 'according to the fiction...'. For example, in the case of hallucinations Azzouni constructs a thought experiment in which we are supposed to imagine a situation in which one is induced to have a hallucination containing hallucinated hobbits, but in such a way that the scene before ones eyes also contains real human agents (actors playing the role of hobbits). There are reasons to quantify over both the actors and the hallucinated agents outside the scope of 'it is hallucinated that', as well as to attribute properties in the very same way to both hallucinated and real objects. One such reason presented by Azzouni is based on the validity of certain natural deduction rules as applied to what the subject seems to perceive in the given situation. For example, the

generalization 'Every hobbit hallucinated by S either resembles a hobbit from a movie or one from the calendar that S keeps under his bed' makes perfect sense in the context of what S's phenomenal field presents, and can be used for various derivations falling under natural deduction, but is not equivalent to 'It is hallucinated that every hobbit is either resembles a hobbit from a movie or one from the calendar that S keeps under his bed', because these sentences have different inferential properties, i.e. they do not entail the same propositions. As regards fictions, Azzouni wants to delimit his view from both Meinongians, who are committed to the being of fictional objects as ones that have or are constituted by a set of properties (those properties they are depicted to have by the author of the ficition), and the fictional realists, who only claim that fictional objects exist actually as abstracta, though they don't have the properties they are depicted as having.

Chapter 4 offers a potted history of positivistic and post-positivistic theorizing about inter-theoretic relations, such as explanation and various types of reduction. Azzouni argues that the quest for reductions in the classical senses of the term has failed and that the more appropriate way to characterize what actual science is dealing with when it involves cross-domain relations is what Azzouni calls 'gross correlational regularities', i.e. empirically established correlations that contain the vocabulary of one sicientific speciality in their antecedent and the vocabulary of another speciality in their antecedents. After illustrating these with some actual examples, Azzouni discusses the logical form of such regularities.

Finally, Chapter 5 is dedicated to the issue of incorporating all the previous ideas into the somewhat more formal framework of a broadly Tarskian semantics.

Of course, I have only been able to offer a rough sketch of Azzouni's book, which is rich in argument, wide in scope, and original, as well as very clear in style, hence enjoyable to read by a large philosophical audience. I would like nevertheless to end with a few critical remarks.

To start with an issue of style, as a reader I found it quite bothering that there is an abuse of parentheses in the book, namely, in the form of proper parts of sentences enclosed between parentheses. I have not counted them, of course, but my guess is that as far as the first 100 pages are concerned there must be, on average, at least 9 or 10 parenthetical parts of sentences per page.

Now some remarks about the main points that form the skeleton of Azzouni's theory of empty singular thought. In general, it seems to me that his approach is not much different from Meinongianism, in some form or other, even though he resolutely denies such an

association. Whenever he tries to argue for a determinate difference from or even opposition to Meinongianism of what he asserts about empty singular terms, I find him not very convincing.

Let's start with numbers. As is the case in general with quantification, which Azzouni takes as ontologically non-committing in the context of apparent talk about nonexistents, talk about and quantification over numbers is said to be compatible with nominalism. Why? Well, because one can explicitly think that one is not committed to the existence of numbers while admitting as a psychological fact about oneself that thought of objects is involuntarily required for mathematical activity. The problem is: why would we conclude from this much that one is really not ontologically committed to mathematical objects? Just because one says or thinks so? Why would 'I'm not a realist about mathematical objects, but...' not be, *mutatis mutandis* (!), on a par with: 'I'm not a racist, but...'?

The main problem, however, in my opinion, is that it is hard not to think of Azzouni's approach, based on the above distinction between *reference*<sup>r</sup> and *reference*<sup>e</sup> (and *aboutness*<sup>r</sup> and *aboutness*<sup>e</sup>) as congenial to some kind of Meinongianism. Let's first consider the definition of these expressions that Azzouni offers (44):

'Quite simply, a thought or sentence is about<sup>r</sup> something (and a term refers<sup>r</sup> to something) if, respectively, what it is about exists and what the term refers to exists. Otherwise, it is about<sup>e</sup> that something, and correspondingly, the term refers<sup>e</sup>.'

This is quite problematic since if we replace 'otherwise' with 'if what the thought or sentence is about, and what the term refers to, does not exist', then we simply get that sentences or thoughts can be about, and terms can refer to, things that don't exist. It is cold comfort to think that this is not really commitment to reference to nonexistents just because one renames reference to 'reference<sup>e</sup>'. At least as far as the above quote goes, we lack an explanation as to why reference<sup>e</sup> is not to be taken as simply reference to nonexistent objects. Azzouni argues that 'reference' simpliciter should be taken as what ordinary people take it to be, which neutral on the issue whether its relata exist. But the problem is precisely that one way to explain this fact is that people are Meinongian, unknowingly.

Azzouni tries to persuade us that there really is an important difference between his approach and Meinongian ones. First, he says (44) that the difference is that Meinongians take the notion of reference between an empty term and what it refers to as a genuine relation, whereas according to Azzouni's understanding these are not relations at all, but pseudo-relations, since relations require the existence of

relata. There are several problems here. One is that introducing pseudo-relations is not a way to solve the problem of apparent reference to nonexistents, but just to reformulate it; it is very similar to how Brentano, in his later (*reist*) theory of intentionality, tried to get away with nonexistent intentional objects by postulating what he called '*etwas Relativliches*' (commonly translated as 'quasi-relations'), which some philosophers before me (Tim Crane, Wolfgang Huemer) have pointed out to be nothing else but a restatement of the problem. It looks to me that while Azzouni's Meinongian denies that relations require the existence of their relata, hence she postulates reference as holding between some terms and nonexistents, Azzouni postulates pseudo-relations to hold between some terms and ... nonexistents (what else than those?)

Finally, Azzouni thinks that another important difference is that whereas Meinongians think of nonexistent objects as having properties, which is hard to square with the idea that they don't exist in any sense whatsoever, Azzouni's referents<sup>e</sup> do not have any properties and hence don't exist in any sense. Nevertheless, when we get to the issue of how sentences apparently about nonexistents are truth-apt, we learn that, for instance, a hallucinated object, like a beautifully singing siren, though she doesn't *have* the property of singing beautifully, she *presents* that property (to a hallucinatory); similarly when it comes to properties of a fictional character, like Sherlock Holmes, we learn that, though he doesn't *have* the property of being smart, he is nevertheless *depicted as having* that property. Now, this approach reminds me of Meinong's student's, Ernst Mally's idea of So-Sein (so being) as independent of Sein (being) - an idea adopted by Meinong himself - which has later come to be developed as the dual copula strategy by Meinongian philosophers, like Terence Parsons and Ed Zalta. When Azzouni says that Sherlock Holmes is not smart, not a detective, not non-smart either, etc., but depicted as smart, depicted as a detective, etc., Mally would have said that Sherlock Holmes does not *satisfy* all these properties, though he (or his So-Sein) is determined by these properties, Parsons would say that being smart, being a detective, etc. are not extra-nuclear properties of Holmes, though they are nuclear ones, and Zalta would say that Holmes does not *instantiate* these properties, but only *encodes* them.

There are several other problems that arise, but for lack of space I will have to stop here. There might many ways to skin a nonexistent cat, but I doubt that Azzouni's is one of them.

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