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Book Review

Jody Azzouni. *Deflating Existential Consequence: A Case for Nominalism*. Oxford University Press, New York, 2004. viii+241 pages

Social Construction: The Neglected Option

1 Introduction

To be *ontologically committed* to an item is to take that item to exist. The most significant question raised by this book is how should we determine our ontological commitments. The answer most likely to be offered by a contemporary analytic philosopher is usually accredited to W. V. O. Quine (cf. [4]). It is encapsulated in his famous dictum "to be is to be the value of a bound variable." Interpretation of this dictum is a matter of great controversy,[1] yet a common interpretation—the interpretation favored by Jody Azzouni—is the following: If one is interested in determining those items to which a particular discourse carries ontological commitment, one should go through a two-step process. One should first regiment the discourse in question as an interpreted first-order language, I. And then determine whether $(\exists x)Fx$ is derivable in I. If it is, and I is in the business of stating truths, then one should take Fs to exist. Thus Quine suggests that we determine our ontological commitments by assessing the range of the first-order quantifiers of our truth-stating discourses.

Azzouni offers a different proposal. He calls the items picked out by Quine's dictum *quantifier commitments* and argues that quantifier commitment is not a good indicator of ontological commitment. In particular, Azzouni argues that many of our quantifier commitments, such as mathematical entities, do not exist, or, as he might put it, exist in no sense at all. Azzouni further argues that ontological commitment is most appropriately indicated by an existence predicate. As a consequence he advocates seeking a *criterion for what exists*, that is, necessary and sufficient conditions for what exists, rather than a criterion for the ontological commitments of a truth-stating discourse.

Azzouni concludes his search for a criterion for what exists thus:

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> What's left is a . . . modest proposal—the suggestion that in fact (a sociological fact, if you will) we've (collectively) adopted *ontological independence* as our criterion [for what exists]. (p. 99)

As he puts the same point in an accompanying footnote, "in *our* community of speakers we take ontologically dependent items to exist in no sense at all" (p. 99, fn. 33).

What is the content of this thesis? And is it true? There are two difficulties involved in understanding its content. First, who are *we*? Or, equivalently, who gets to count as a member of *our* community of speakers? Azzouni never offers an explicit answer to this question, but he clearly intends for everyday folk and scientists to count as members of our community. Regrettably, he makes no effort to assuage the obvious concern that "our community"—so understood—does not share a single criterion for what exists. And second, what is 'ontological independence'? Or, equivalently, what is 'ontological dependence'? Unfortunately, Azzouni does not offer a metaphysical account of 'ontological dependence' and 'ontological independence', but rather offers epistemic criteria for assessing ontological dependence and independence.

There is a lot that could be said in response to Azzouni's rejection of Quine's approach to ontological commitment, but in this review I would like to criticize Azzouni's positive proposal for determining ontological commitment and, as a result, refute his argument for Nominalism. Specifically, I shall argue that we have every reason to believe that Azzouni's empirical thesis concerning our community's criterion for what exists is false. Before I offer this argument, however, let me track Azzouni's route to this thesis and consider some of the implications that he draws from it.

2 Summary

Azzouni's first port of call is the topic of truth. In Chapters 1 and 2, he offers a defense of two claims: first, that a broadly deflationary—metaphysically lightweight—account of truth is preferable to its competitors; second, that an adequate interpretation of scientific theorizing requires us to take certain empirical scientific laws and statements of applied mathematics to be true. The empirical scientific laws and statements of applied mathematics in question are ones that involve *quantifier* commitments to mathematical entities. That is, it is impossible to provide a first-order representation of the content of these laws and statements without quantifying over mathematical entities.

If the standard line on ontological commitment—Quine's—is correct, then these quantifier commitments bring with them ontological commitments to mathematical entities. But Azzouni seeks to defend a separation thesis—the separation of existential truth from ontology: "I take true mathematical statements as literally *true*; yet, nonetheless, I can describe mathematical terms as referring to *nothing at all*. Without Quine's criterion to corrupt them, existential statements are innocent of ontology" (pp. 4–5).

To defend this separation thesis, Azzouni needs an argument that Quine's criterion of ontological commitment is incorrect, for example, that not all items picked out by this criterion exist. Azzouni provides, or at least attempts to provide, this argument in the second half of Chapter 3, where he argues that Quine and his followers have offered no good argument for the correctness of Quine's criterion.[2] In fact, Azzouni

talks about them having offered no good argument for Quine's triviality thesis—the thesis that Quine's criterion is not only correct but trivially so—because Quine (and his followers) defend the triviality of the correctness of Quine's criterion. The argument for this triviality thesis that Azzouni finds in Quine's writings goes as follows. The existential quantifier is the best way to regiment vernacular uses of "there is" and "there are", and these vernacular expressions "carry" ontological commitment. Azzouni responds to this argument by discussing a variety of vernacular uses of "there is" and "there are" that don't seem to "carry" ontological commitment. He considers five strategies—paraphrase, Meinongianism, substitutional quantification, metaphor/pretend, and cancellation—that a defender of Quine's triviality thesis might use to account for these awkward cases. Each is argued to be less attractive than the interpretative option that Azzouni favors, ontologically neutral anaphora.

Alongside the argument in Chapter 3 Azzouni suggests that a better way of determining our ontological commitments than by means of Quine's criterion is by using an existence predicate. In Chapter 4, Azzouni explores several criteria—the observable, the causally efficacious, the concrete, and the ontologically independent—that might specify the extension of such a predicate. In a series of arguments (pp. 91–98), he finds all of these criteria lacking, for none can be shown to be correct on *purely metaphysical or rational grounds*. That is, there is no argument employing philosophical considerations alone that should convince a philosophically astute individual of the correctness of any of these criteria in specifying the extension of an existence predicate.

Despite these arguments, Azzouni goes on to affirm the empirical claim that our community has adopted the criterion of *ontological independence* as our criterion for what exists. I think that it is worth quoting Azzouni's justification for this empirical claim in full. It comes at the end of an argument that a mild form of realism about fictional objects, one that takes them to exist but be dependent on our linguistic practices, cannot be ruled out on purely rational grounds. He writes as follows:

> Our general acceptance that fictional objects exist in no sense at all isn't a brute intuitive fact *about fictional objects*. Rather, this intuition is an application of a more general intuition that if something is entirely "made up" or is ontologically dependent on our linguistic practices or psychological states, then it exists in no sense at all. "Ontological dependent" here is *not* understood in the sense that it's, say, a psychological state or a linguistic item (e.g., a word)—these things *do* exist—but in the sense that it's (part of) the *content* of such a thing, and this isn't *content* in the sense that an *actual* apple is the *referent* of the word "apple," but in the more elusive sense that a hallucination of an elf (or apple) has as its content "an elf" (or "an apple") that exists in no sense at all, or in the (more elusive) sense that the phrase "that elf" (or "that apple"), when directed at a hallucination, picks out—has as its content—nothing at all (despite being meaningful). This general intuition explains not only why we take fictional objects to exist in no sense at all, but also why we take hallucinated or dreamt items to exist in no sense at all. (p. 98)

The remainder of the book is, to a large extent, devoted, as Azzouni puts it, "to milk[ing] this 'general intuition' for ontological implications" (p. 98).

In order to carry out this project, Azzouni must provide the reader with some understanding of ontological dependence and independence. After providing some reasons for believing that all metaphysical characterizations of these notions will be unsatisfactory (p. 113), Azzouni offers epistemic criteria by which we can determine

whether an item is ontologically dependent on, or independent of, us. His formal suggestion is encapsulated in two requirements, the Reliability Requirement and the Nontriviality Requirement:

> *The Reliability Requirement:* The process, by which someone A comes to believe claims about xs, is *reliable* with respect to xs if and only if given that that process has led A to believe Sx, then (under a broad range of circumstances) Sx, and/or given that that process has led A to believe $\neg Sx$, then (under a broad range of circumstances) $\neg Sx$.
>
> *The Trivial Explanation:* A process P is reliable with respect to xs because xs have the property that P is reliable with respect to them.
>
> *Definition:* A process P is *licensed* as *nontrivially reliable* by an explanation of its reliability with respect to ontologically independent xs only if that explanation of P's reliability isn't the trivial one.
>
> *Nontriviality Requirement:* If a set of objects are taken to be ontologically independent of us, then we're required to show that *all* our methods for establishing truths about such items are licensed as non-trivial. (pp. 99–100)

It is worth noting—as Azzouni does—that the presence of stipulation in a discourse is a good indicator that the Nontriviality Requirement is not met for the "referents" of that discourse and thus that the item(s) in question is (are) ontologically dependent on us.

Having offered his epistemic criteria for ontological independence, the first class of objects to which Azzouni applies these criteria is mathematical abstracta:

> Here's an argument that we shouldn't take mathematical abstracta to exist any more than we take fictional items to exist: Mathematical abstracta are ontologically dependent on our linguistic practices in just the same way that fictional items are, and because—this is an important part of the claim—the tacit conventions at work in our ontological practices aren't specific to fiction but to *any* collection of purported items that aren't ontologically independent of us, they should be extended to mathematical abstracta. (p. 103)

The first premise of this argument needs a defense. Azzouni provides it in the second half of Chapter 4 by arguing that mathematical abstracta fail the Nontriviality Requirement.

So, Azzouni's argument for Nominalism has as a central premise an *empirical* thesis based on his assessment of folk-ontological intuitions. His argument's reliance on this premise prompts Azzouni to investigate vernacular expressions that might be thought to indicate ontological commitment and to consider folk-intuitions about what exists. He provides an extensive discussion of "there is" and "there are" in the second half of Chapter 3. Little is said in that chapter, however, about everyday uses of "exist(s)". This is a flaw that Azzouni attempts to rectify in Chapter 5. Yet while he offers some reasons to believe that there is no straightforwardly syntactic sense in which everyday uses of "exist(s)" can be taken to indicate ontological commitment, he clearly is not completely convinced by his own arguments. In some concluding remarks, Azzouni tells us, "I hasten to add that I wear my newly adopted nominalistic garb lightly. This isn't only because I hold that nominalism is a position that can't be adopted for philosophically convincing reasons . . . but because . . . there is still a question of *exactly which* prompting of barely conscious folk-ontological intuitions

we should be swayed *by*" (p. 120). We shall see in the next section that his qualms are justified.

In Part II, Azzouni returns to the project of "milk[ing] this 'general intuition' for ontological implications" (p. 98). The remainder of the book is devoted to an assessment of the ontological status of the posits of mathematized scientific theories. Before Azzouni can consider these mathematized theories in detail, however, he needs to put some groundwork in place. He begins in Chapter 6 by providing a recapitulation of his well-known (epistemic) distinctions between thick, thin, and ultrathin posits (cf. Azzouni [1]). Azzouni's tripartite distinction relates to the epistemic burdens surrounding acceptance of the existence of the items in question. Roughly speaking, ultrathin posits are posits that have no epistemic burdens associated with their acceptance, whereas thick posits are posits that require us to forge substantial epistemic access to them before we accept their existence. Thin posits, by contrast, must satisfy two conditions: (a) they must provide the (Quinean) theoretical virtues of simplicity, familiarity, scope, fecundity, empirical adequacy, and so on, and (b) they must satisfy a defeasibility condition. This defeasibility condition is an addition to Azzouni's earlier definition of thin posits and plays a substantial role in the arguments of Chapter 7.

The main project of Chapter 7 is a defense of the following identifications: first, posits that are thick or thin, posits that are ontologically independent, posits that are causally efficacious, and posits that exist; second, posits that are ultrathin, posits that are ontologically dependent, posits that are causally inert, and posits that don't exist. Chapter 7 also serves to emphasize how radical Azzouni's break with the Quinean tradition in epistemological and metaphysical theorizing about scientific posits is, for while mathematical abstracta are among the ultrathin posits of mathematized scientific theories, they are by no means the only such posits. Many of the nonmathematical posits of mathematized scientific theories are ultrathin.

A claim like the last calls out for a detailed illustration. This is precisely what Azzouni provides in the last two chapters of this book. In Chapter 8, he supplies an informative—and reasonably subtle—account of how mathematics gets applied in scientific theorizing. Azzouni imparts the details of this account by discussing Newtonian cohesive-body mathematics (ncm), a theory that formalizes a part of Newtonian mechanics that still finds wide application. In Chapter 9, a number of the posits of ncm, and some posits of other mathematized physical theories, are investigated to determine whether or not they exist. Among the posits argued to be ultrathin, and hence to exist in no sense at all, are space-time points and forces.

3 Azzouni's Empirical Thesis Concerning Existence

Azzouni's general strategy in the second half of Chapter 4 is to motivate the empirical thesis that all items "entirely made up" by us, that is, items that are ontologically dependent on our linguistic practices or psychological states, exist in no sense at all, and then use this thesis in a defense of Nominalism. Azzouni motivates this thesis by reflecting on the ontological status of fictional objects and the contents of dreams and hallucinations. Thus, Azzouni seeks to consider cases about which we have strong folk-intuitions, offer a general characterization of what informs those intuitions, and then use that characterization to settle the ontological status of items about which our intuitions are much weaker.

I suspect that Azzouni is correct in claiming that we do have strong folk-intuitions about the ontological status of objects "entirely made up" in dreams, hallucinations, and fictions and that these intuitions do inform us that these items do not exist. This does not, of course, guarantee that the items in question do not exist, but it is good prima facie evidence for them having this status.

What I am not convinced about is that *all* items "entirely made up" by us are taken by folk-intuition not to exist. Consider the claim "there exists a (legal and political) border between the U.S.A. and Canada," the claim "in the U.S.A. there exist laws prohibiting murder," and the claim "the games of baseball and tennis exist." Members of my linguistic community should, and usually will, quite happily affirm the truth of each of these claims. Further, they will affirm the truth of these claims *because* their folk-intuitions inform them that (legal and political) borders, laws (in the sense of statutes),[3] and games (such as baseball and tennis) exist. Items in all three categories are considered by everyday folk to be real. Once again, this does not guarantee that they exist, but it is good prima facie evidence that they do.

Unfortunately for Azzouni, items in all three categories are "entirely made up" by us—not only in an intuitive sense, but also according to Azzouni's formal definition. Intuition informs us that these items are "entirely made up" by us because they are entirely the product of social conventions, stipulations, and practices. Formally, we are reliable indicators of truths about borders, laws, and games in virtue of them being the products of our social conventions, stipulations, and practices. Consequently, the trivial explanation of our reliability with respect to these truths is available to us and they fail Azzouni's Nontriviality Requirement. So, at least according to ordinary folk, Azzouni's category—the ontologically dependent—is metaphysically heterogeneous. It contains not only items that we take not to exist but also items that we have made real—that is, brought into existence—by the adoption of certain social conventions, stipulations, and practices.

What response might Azzouni offer to these examples? One response would be to claim that, *contra* folk-intuitions—or at least *my* assessment of folk-intuitions—these items do not exist. After all, the "general intuition" that he takes to characterize folk-ontological intuitions about fictional objects and the contents of dreams and hallucinations deems these items to be nonexistent. And if it is a legitimate strategy to extend this "general intuition" to cover mathematical (and other) abstracta, then it is a legitimate strategy to extend this "general intuition" to cover these social constructions.

This response is problematic, however, for there is an important difference between abstracta and social constructions like borders, laws, and games. While there is good reason to believe that everyday folk don't have strong intuitions about whether or not mathematical abstracta exist—despite the fact that many of us make positive existential claims in mathematics classes—the same cannot be said for these types of social constructions. All of these items seem very real to everyday folk. Further, as noted above, the strategy that Azzouni uses in his argument for Nominalism is non-question begging—if it *is* non-question begging—because it applies a principle obtained from cases about which we have strong folk-intuitions to cases in which our folk-intuitions are much weaker. The same could not be said of a parallel argument for the nonexistence of borders, laws, and games. Consideration of these items suggests rather that Azzouni has not been careful enough in providing his general characterization of folk-ontological intuitions. While the fact that certain

items are "entirely made up" might be relevant to our folk-ontological judgment that they do not exist, having this characteristic alone isn't, it would seem, sufficient (for us) to convict a particular item of nonexistence.

One further move that Azzouni could make in favor of this first response is the following. He could claim that my assessment of folk-ontological intuitions about borders, laws, and games is mistaken, that is, he could claim that everyday folk do not take these items to exist. This is an empirical claim, and the only way that it could be settled would be by empirical investigation. I certainly haven't performed the required investigation, and I would be very surprised if Azzouni had. Yet were he to respond in this way, his response would strengthen a worry I mentioned in the Introduction. That worry is that "our community", understood in the way Azzouni appears to understand that collection, does not share a single criterion for what exists. While some might share Azzouni's standard, others—like myself—are firmly convinced of the existence of items like borders, laws, and games, and so, more than likely, operate with a different standard.

Let us consider a second response that Azzouni could offer in reply to these counterexamples. He could admit that his general characterization of the principle that underwrites our folk-ontological assessment of items "entirely made up" in fictions, dreams, and hallucinations is too broad and seek a principle that covers these items, does not cover the counterexamples we have been considering, that is, borders, laws, and games, *and* that can still be used in his argument for Nominalism.

What are the prospects for a less general characterization of "ontological dependence"? Finding some such characterization is easy, as we shall see in Section 5. The difficulty is in finding a characterization that excludes borders, laws, and games and that can be used in Azzouni's argument for Nominalism.

Before we seek a new characterization of "ontological dependence", however, we need to get clear on exactly what collects together borders, laws, and games. We need to do this so that we can ensure that our new characterization does not cover these items. So far, I have been very loosely calling borders, laws, and games social constructions. But the class of social constructions is heterogeneous, particularly from a metaphysical perspective. What we need are tools that can be used to identify the class of social constructs that is of concern to us here.

4 Social Construction

In "Ontology and Social Construction" [3], Haslanger gives expression to a variety of ways in which social activities might be involved in social construction. The most basic distinction she makes is that between "causal construction" and "constitutive construction".

Causal construction and constitutive construction are two ways of constructing *existent items*. Legal and political borders, laws, and games are all constitutive social constructs. These items owe their existence to the constitutive significance of acts, decisions, or practices of social importance. As examples of causal social constructs, consider items like houses, cars, scissors, and chairs, that is, artifacts, where an artifact is a medium-sized spatio-temporal object that has been manufactured for some particular purpose. Artifacts of this type are causally constructed in the sense that their creators causally manipulated the spatio-temporal world to bring them into existence. This causal construction is social in nature if either the purpose for which

this construction took place was social, or the implementation of this construction was social.[4]

Haslanger offers the following characterizations of these two varieties of social construction:

> *Causal social construction:* Something is causally socially constructed if and only if social factors play a causal role in bringing it into existence or, to some substantial extent, in its being the way that it is.
>
> *Constitutive social construction:* Something is constitutively socially constructed if and only if in providing a definition or account of what it is for something to be an item of the type in question we must make reference to social factors.[5]

Legal borders, laws, and games are constitutive social constructs because the social significance of acts, decisions, and practices in constituting these items ensures that social factors have to be adverted to in giving an account of them.

While my exposition so far might suggest that constitutive and causal social construction are mutually exclusive, this is not the case. Many cases of social construction involve both elements, though one or the other might be dominant in any particular case. An excellent example of this is a regulation baseball for major league play. Two distinct types of considerations are involved in something's being a regulation baseball. First, the ball in question must have certain physical characteristics, for example, it must be a certain size, shape, color, and so on. Baseballs are manufactured to have these characteristics. Thus they are causal social constructs. The second consideration is that the ball has to have been deemed regulation by an individual acting on behalf of the league and be signed by the league's commissioner. This consideration makes regulation baseballs instances of constitutive social constructs.

Pure instances of causal social construction, if they exist, are rare. These do not occur, at least in general, because we causally construct items for recognized goals or purposes. And their use for these socially recognized goals or purposes makes them constitutive social constructs as well as causal social constructs. Pure instances of constitutive social construction are more common however, that is, it is not uncommon to have cases in which *all that there is* to their being X or there being Xs is certain acts, decisions, or practices of social significance. The clearest examples of pure constitutive social constructs, that is, items that exist in virtue of being socially constructed by a pure instance of constitutive social construction, are legal statutes. All that there is to a collection of statements being a legal statute is, roughly speaking,[6] its having appropriately proceeded through the process of approval and having been passed by a legitimate legislative authority. And while we might mark legal and political borders in various ways and use a variety of props in games, legal and political borders and games are also pure constitutive social constructs. There is nothing more to the existence of a legal and political border than the adoption and following of certain legal, political, financial, etc., conventions. And there is nothing more to the existence of most games than the presence of a certain type of rule-governed practice. Pure constitutive social constructs are "entirely made up" by us. They are, at least if we use Azzouni's criteria, "ontologically dependent" on us. They fail the Nontriviality Requirement for the very reason that borders, laws, and games fail this requirement.

Given that constitutive construction is here being contrasted with causal construction, I should note that it is not that even pure constitutive social constructs can

have no influence over how the spatio-temporal world is or, indeed, that the spatio-temporal world can have no influence over which items we construct constitutively. One only need reflect on the impact of laws and borders to recognize this. What our contrast emphasizes is that the mechanism by which an item becomes a constitutive social construct is not causal in nature. Rather, this status is achieved by means of acts, decisions, or practices of social import.

While perhaps not ideal, I hope that the above gives an indication of what collects together borders, laws, and games and how these items can be distinguished from various other items, such as houses, cars, major league baseballs, and so on, which are also social constructs. Let us now consider how we might modify Azzouni's criteria for "ontological dependence" so that items "entirely made up" in fictions, dreams, and hallucinations are "ontologically dependent" on us, but pure constitutive social constructs are "ontologically independent" of us.

5 Ontological Dependence Modified

Toward this end, let us ask, in virtue of what is some prose fictional rather than nonfictional? And in virtue of what are some phenomenal experiences dreams or hallucinations rather than memories or typical experiences? In the case of fiction, it is that the prose is being used in a nonliteral way rather than a literal way. In the case of dreams and hallucinations, it is the fact that the phenomenal experience is nonveridical rather than veridical. We are unable to characterize an object described in some prose as an entirely fictional object if we don't understand, at least implicitly, what it would be to use that prose in a contrastively literal way. And, similarly, we are unable to characterize an item in a phenomenal experience as merely the content of a dream or hallucination if we don't have an understanding of what it would be for that phenomenal experience to be veridical.

What distinguishes pure constitutive social constructs from Azzouni's examples of items that are "ontologically dependent" on us is that we lack a contrasting "literal/veridical" way of engaging in the activities and practices that constitute pure constitutive social constructs. We don't know what it would be for a legal border between the U.S.A. and Canada *really* to exist if its *real* existence requires something over and above the legal, political, financial, and so on, practices that constitute its existence. Similarly, we don't know what it would be for major league baseball *really* to exist if its *real* existence requires something more than the practice of major league baseball. Consequently, our everyday assertions that pure constitutive social constructs exist are perfectly literal, at least to the extent that it makes sense to talk about a literal use of some existential assertion when one has no nonliteral use with which to contrast this literal use. By way of contrast, we do know what it would be for Sherlock Holmes *really* to exist—as opposed to existing as a fictional character—and we do know what it would be for an elf *really* to exist—as opposed to existing in a work of science fiction or as the content of a dream or hallucination.

Let us say that a way of engaging in an activity or practice, which can produce items that are "ontologically dependent" on us—according to Azzouni's original criteria—is *contrastingly veridical* if this particular way of engaging in that activity or practice does not produce items that are "ontologically dependent" on us—once again, according to Azzouni's original criteria—but rather serves some other purpose of a veridical nature. On the basis of the above, we can see that one way to modify Azzouni's characterization of "ontological dependence" would be to add an extra

condition: the activity or practice responsible for the item(s) in question is one for which there is a contrastingly veridical way of engaging in that activity or practice.

This modified characterization of "ontological dependence" would certainly classify the cases that we have been considering in the correct way. Items "entirely made up" in fictions, dreams, and hallucinations, would be classified as "ontologically dependent" on us, because in addition to failing Azzouni's Nontriviality Requirement, they are all produced by activities or practices that can be engaged in, in a contrastingly veridical way, while borders, laws, and games would be classified as "ontologically independent", because the activities and practices responsible for constituting these items have no contrastingly veridical way in which they can be engaged. In addition, this extra condition seems to capture folk-intuitions about why items that are "entirely made up" in fictions, dreams, and hallucinations do not exist. It is precisely because they are elements of a fiction, rather than a description—a dream, rather than a memory, a hallucination, rather than a typical experience—that we take these items not to exist.

Yet if Azzouni were to adopt this modified characterization of "ontological dependence", then his argument for Nominalism would not go through, for, as John Burgess has been arguing for some time (cf., for example, [2]), we have no sense of what it would be to use existential pure mathematical assertions in a literal way if this is to be contrasted with our everyday uses of these statements. We have no sense of what it would be for mathematical entities *really* to exist that goes beyond their mere existence.

A deeper understanding of this fact can be achieved by investigating the literal vs. nonliteral distinction further, specifically, by investigating the nature of this distinction more closely. Let us consider some examples. Suppose that one is faced with prose describing a talking mouse. Taking this prose in a literal way would contradict the well-known fact that there are no talking mice, a fact of which it is safe for us to suppose the author of the prose is aware. Or suppose that one is faced with prose describing magical wizards frequenting the earth. Taking this prose in a literal way would contradict the well-known fact that there are no magical wizards frequenting the earth. Once again, this is a fact of which we can safely suppose the author of the prose is aware. Faced with an individual making assertions of either type, or writing prose of either type, what is one to do? The statements in question are so clearly false that we can't understand the individual as literally asserting them as true, so instead we come to understand her as asserting these statements nonliterally.

Don't misunderstand me. I am not claiming that we always reach the conclusion that some prose is a fiction or that some statement is being asserted nonliterally by means of an assessment of its certain falsehood or an assessment that its literal ascription to its author would be ascribing her clearly contradictory beliefs. This is most certainly not the case. We accept many things as fictions simply because they are classified as such. And frequently we do not know enough about the world to be able to assess independently that certain claims are systematically false. What I am claiming is that it is by means of exposure to cases of this type, that is, cases where the statements are clearly false, that we come to understand the distinction between literal and nonliteral use. Alongside telling children fictional stories, we inform them of the falsehood of the statements made in these stories. It is by means of a recognition of the conflict between what is described in the story and how the world

really is that a child comes to grasp that certain stories are fictional and comes to terms with the distinction between using certain statements literally and nonliterally.

Yet because this is the nature of the distinction between asserting something literally and asserting it nonliterally, we only have a grasp on the application of this distinction to statements and discourses when it is possible for those statements or discourses to conflict directly with well-known facts about how the world is. It is precisely a lack of grasp of this type of conflict that underwrites our lack of knowledge of what it would be for a legal border between the U.S.A. and Canada *really* to exist if its *real* existence requires something over and above the legal and political acts and decisions that constitute its existence. New acts and decisions relevant to legal borders might conflict with old acts and decisions concerning them, perhaps thereby changing which legal borders exist. But an assertion that a legal border exists between the U.S.A. and Canada can't be false in virtue of anything but legal and political acts and decisions concerning the existence of countries and their legal borders. So, an assertion that a legal border exists between the U.S.A. and Canada can't conflict with anything but previous legal and political acts and decisions.

A similar situation surrounds mathematics. All good mathematics is mathematics that does not come into logical conflict with other widely accepted theories about the world. If one can derive a contradiction by adding a new mathematical theory to a widely accepted theory that wasn't already derivable from that theory alone, then one should not accept the new mathematical theory. This adequacy condition on good mathematics ensures that there are no conflicts between mathematics and widely accepted theories about the world. In turn, this lack of conflict accounts for why we lack an understanding of what it would be to assert mathematical statements from good mathematical theories in a literal way, if this is to be contrasted with our everyday uses of these assertions. Further, it would appear that Azzouni agrees, for he "take[s] true mathematical statements as literally *true*" (p. 4). What this amounts to is that there is no contrastingly veridical way of engaging in mathematical practices. Consequently, mathematical entities are not, according to the above modified characterization, "ontologically dependent" on us.

So the above (very natural) way of modifying Azzouni's original characterization of "ontological dependence" is not available to Azzouni if his argument for Nominalism is to be saved. What are the prospects for an alternative characterization of "ontological dependence"? I'm not sure, but I would not be optimistic if I were Azzouni. If there is some other characterization of which he can avail himself, then it will, I suggest, lack the obviousness of the characterization just considered, for that characterization does seem to capture our folk-intuitions about why it is that items "entirely made up" in fictions, dreams, and hallucinations do not exist.

What, then, are Azzouni's other options for responding to the challenge to his case for Nominalism offered by pure constitutive social constructs? I am not aware of any. His case for Nominalism seems to have been straightforwardly refuted by these counterexamples. A similar fate has befallen his positive proposal concerning ontological commitment. Yet despite these failures, there is something that the arguments in the second half of Chapter 4 of this book should prompt us to consider. It is the suggestion that mathematical abstracta are pure constitutive social constructs.[7] For if the arguments in the second half of Chapter 4 are successful and mathematical abstracta are not analogous to the objects "entirely made up" in fictions, dreams, and hallucinations, then what else could they be? I am not aware of any options.

6 Conclusion

Unfortunately, the main positive proposal of this book is, as we have seen, flawed. Yet, I do not want to leave the reader with the impression that this book is without value. Azzouni's extended discussion of ncm in Chapters 8 and 9 is interesting and informative. Those who take Quine's criterion of ontological commitment for granted would do well to work their way through the arguments in Chapter 3—if only to find some flaw. And Azzouni is undoubtedly correct in suggesting that we have much more fine-grained tools for theorizing about science available to us than are recognized by Quinean orthodoxy. I only wish that the positive contributions in this book were not so overshadowed by its flaws.

Notes

1. See p. 50, fn. 2, for a discussion of the controversy surrounding the interpretation of this dictum.

2. Before offering this argument Azzouni provides an argument to challenge the belief that "objectual quantifiers are always ontologically committing" (p. 54). He argues that those who hold this belief inevitably smuggle in the ontological commitments in question by assuming that the metalanguage they use to interpret their objectual quantifiers has the commitments in question.

3. Whenever I talk about laws in this review, I shall be talking about statutes rather than laws of nature.

4. In claiming that artifacts are causal social constructs, I am not excluding that they are also constitutive social constructs. On the contrary, many, if not most, artifacts are also constitutive social constructs. So, for example, roughly speaking, something is a chair in virtue of it playing (fulfilling) a recognized *social* role (function). This fact about chairs makes them constitutive social constructs.

5. These definitions are taken from [3], p. 98, though I have slightly modified the second.

6. There are other considerations involved. For example, a statute must not be declared unconstitutional and it must not be overridden by later legislative activities. None of these further considerations undermine the claim that legal statutes are pure constitutive social constructs.

7. I develop and defend this suggestion in my forthcoming Ph.D. thesis.

References

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[3] Haslanger, S., "Ontology and social construction," *Philosophical Topics*, vol. 23 (1995), pp. 95–125. 241, 246

[4] Quine, W. V. O., "On what there is," *Review of Metaphysics*, vol. 2 (1948), pp. 21–38. 235

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