A Defense of Object Theory

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Abstract
Francesco Berto (2013) has recently defended a Meinongian ontology. In preparing the ground for his own view, he criticizes other, similar ontological views. In this paper, we examine some of the objections Berto raises for object theory, i.e., the theory of abstract objects defended in Zalta 1983, 1988, and elsewhere. We argue that these objections can be disarmed.

1 Introduction
In a recent work, Francesco Berto (2013) has criticized a number of Meinongian views, paving the way for the defense of his own form of Meinongianism. In what follows, we examine some of the objections Berto raises against object theory, i.e., the theory of abstract objects defended in Zalta 1983, 1988, and elsewhere. We argue that these objections can be disarmed.

In order to render our responses to Berto’s objections intelligible, we provide the reader with the following basic facts about object theory. First, it is based on two kinds of predication, exemplification (which is represented as ‘$F^n x_1 \ldots x_n$’) and encoding (which is represented as ‘$x F$’). Since these two forms of predication serve to disambiguate the English copula ‘is’, object theory is often called a ‘dual-copula’ theory. The axioms of object theory are formulated in a second-order, quantified modal language that includes the two forms of predication as atomic formulas. There is a distinguished predicate ‘$E!$’, which Zalta uses as follows: ordinary objects (‘$O!x$’) are objects $x$ that possibly have the property $E!$, while abstract objects (‘$A!x$’) are objects that couldn’t possibly have the property $E!$.

This leads to an interesting option for interpreting the language and resulting theory. On the one hand, one can interpret the predicate $E!$ as an existence predicate, so that the existential quantifier ($\exists$) becomes a quantifier that asserts only ‘there is’ or ‘some’. Under such an interpretation, abstract objects become objects that couldn’t possibly exist, and the principal axiom of the theory asserts, for any formula $\phi$, that there is an abstract (i.e., necessarily nonexistent) object that encodes just the properties $F$ satisfying $\phi$. This axiom schema may be formally represented as follows:

\[
\exists x (A!x \& \forall F (xF \equiv \phi)), \text{ where } \phi \text{ has no free } x
\]

Thus, the Meinongian reading of the this axiom schema implies that there are nonexistent objects. On the other hand, one can treat $E!$ as a predicate expressing concreteness, and treat the existential quantifier ($\exists$) as asserting existence. Under this interpretation, abstract objects become objects that couldn’t possibly be concrete (think of the number 1), and the principal axiom of the theory asserts, for any formula $\phi$, that there...
exists an abstract (i.e., necessarily nonconcrete) object that encodes just the properties $F$ satisfying $\phi$. This is the Platonic/Quinean interpretation of the theory, since it asserts that there exist (a fortiori) abstract objects.

The theory is neutral between the two interpretations. But for the present purposes, we shall focus on the Meinongian reading, since it is the most relevant for the context of Berto’s discussion.

2 Opening Criticisms

Before introducing his first objection, Berto says (p. 133):

it [dual copula Meinongianism] includes a theory of abstract properties, propositions, and worlds that provides a unified approach to a vast range of intensional and intentional phenomena.

Soon after this passage, however, Berto hints that there are some questions that open the dual-copula strategy to the concern that it is vague. He compares it with ‘nuclear’ Meinongianism, i.e., the Meinongian theory developed in Parsons 1980, which has only one kind of predication but two kinds of properties (nuclear vs. extranuclear). Berto says (p. 134):

This may signal that, just as nuclear Meinongianism is confronted with the problem of providing a principled distinction between what is nuclear and what is not, so the dual copula Meinongianism faces the issue of providing a principled distinction between what is only encodable and what is also exemplifiable. So the nuclear Meinongians problem of telling when a property is nuclear, as opposed to extranuclear, may correspond to a dual copula Meinongians problem with telling when an abstract nonexistent can exemplify a property, as opposed to only being allowed to encode it. In Abstract Objects, Zalta admits that the distinction has a “rather vague character” [Zalta 1983, 38], and doesn’t do more to enforce it than appealing to common sense.

There are two responses to make to this passage. First, Berto fails to mention here that Zalta has provided at least some principles of the kind being requested. For example, if we define:

- $F$ is an existence-entailing property (‘$EE(F)$’) $=_{df} \forall x (Fx \rightarrow E!x)$
- $\overline{F}$ (‘the negation of $F$’) $=_{df} [\lambda y \neg Fy]$

then Zalta would adopt the following principles that govern which properties are encodable or exemplifiable (1983, 38):

1. Every property is encodable, i.e.,
   
   $\forall F \exists x (xF)$

2. (a) Abstract objects don’t exemplify existence-entailing properties, and (b) necessarily don’t exemplify them, i.e.,
   
   (a) $\forall x (A!x \rightarrow \neg \exists F (EE(F) & Fx))$
   
   (b) $\forall x (A!x \rightarrow \Box \neg \exists F (EE(F) & Fx))$

3. (a) Abstract objects encode the negations of existence-entailing properties, and (b) do so necessarily, i.e.,
   
   (a) $EE(F) \rightarrow \forall x (A!x \rightarrow \overline{F} x)$
   
   (b) $EE(F) \rightarrow \Box \forall x (A!x \rightarrow \overline{F} x)$

So, principles can be (and have been) adopted that address Berto’s concern. The above principles repackage Zalta’s discussion (1983, 38) in a way that isn’t vague at all.

But the second problem with the above passage concerns its last line, where Berto says:

In Abstract Objects, Zalta admits that the distinction has a “rather vague character” . . .

Here, by ‘distinction’ Berto is referring to the exemplification/encoding distinction, and is claiming that Zalta admits his own distinction is vague. But the passage Berto cites needs to be understood in its proper context. Here is the relevant passage (see Zalta 1983, 38):

These additions to our primitive vocabulary are supposed to reveal our pretheoretic conceptions about what simple properties and relations there are. […] These additions also make it possible to state an auxiliary hypothesis of the elementary theory— an hypothesis to which we shall appeal on occasion in the applications. Despite its rather vague character, it grounds a wide range of intuitions some of us may share about abstract objects.

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1The word ‘distinction’ here couldn’t refer to the nuclear/extranuclear distinction, since it wouldn’t constitute an admission on Zalta’s part to say that someone else’s distinction is vague! So Berto has to be suggesting that Zalta admits that the exemplification/encoding distinction is vague.
This passage occurs in the Section 5 of Chapter I, titled “An Auxiliary Hypothesis”, and the hypothesis is stated on p. 39, namely: abstract objects don’t exemplify nuclear properties. So, a careful reading here reveals that Zalta is not admitting that the exemplification/encoding distinction is vague, but instead noting that the auxiliary hypothesis is vague given that it uses a term (i.e., ‘nuclear’ property) that isn’t officially a primitive of object theory and isn’t therefore axiomatized in that theory.

Consequently, not only has the so-called admission been undermined, but the admitted vagueness in the auxiliary hypothesis of Zalta 1983 has now been replaced by the clear principles formulated above, which do not refer to or presuppose nuclear properties.²

3 The First Objection

All of the above is by way of preamble to Berto’s first real objection. He writes (p. 134):

A first objection consists in charging the distinction of ad-hocness. [...] How come no one has ever noticed a basic ambiguity of the predicative copula itself, detecting a difference between “is” ascribing a property to something that exemplifies it, and “is” ascribing a property to something that encodes it without exemplification?

To this, we make the following two points. First, Berto can’t claim, as he did earlier (p. 133) that the dual-copula view “includes a theory of abstract properties, propositions, and worlds that provides a unified approach to a vast range of intensional and intentional phenomena”, and at the same time claim the exemplification/encoding distinction is ad hoc. The two claims are in tension. If a distinction offers a unified approach to a vast range of phenomena, how can it be ad hoc?

But second, and more importantly, Zalta has shown in various publications that the exemplification/encoding distinction has indeed been noticed at several points in the history of philosophy, though under a different name. In Pelletier & Zalta 2000, it is shown that one of the foremost Plato scholars of the day, Constance Meinwald, has proposed that Plato himself marks a distinction in two types of predication: $x$ is $F$ pros ta alla (i.e., in relation to the others) and $x$ is $F$ pros heauto (i.e., in relation to itself). Meinwald writes (1992, 378):

I believe that Plato so composed that exercise [the second part of Parmenides] as to lead us to recognize a distinction between two kinds of predication, marked in the Parmenides by the phrases “in relation to itself” (pros heauto) and “in relation to the others” (pros ta alla).

... A predication of a subject in relation to itself holds in virtue of a relation internal to the subject’s own nature, and can so be employed to reveal the structure of that nature. A predication in relation to the others by contrast concerns its subject’s display of some feature.

Meinwald makes it clear here that when a Form is being predicated of itself, one should use predication pros heauto. Thus, The Triangle is triangular (namely, pros heauto, in virtue of a predication internal to the Form’s own nature) in a different way that existing triangular objects are triangular (namely, pros ta alla, in virtue of a predication in relation to something else, namely, The Triangle). Zalta (1983, 42) identified The Triangle as the abstract object that encodes just one property, namely, the property of being triangular. He argued there that The Triangle doesn’t exemplify this property; rather ordinary triangular objects exemplify the property. Pelletier & Zalta 2000 revised and enhanced this view by identifying The Triangle as the abstract object that encodes all and only the properties necessarily implied by being triangular. This thicker conception of the Forms does a better job of capturing the intuitions that Meinwald brings to bear in her article, and that can be traced back to Plato.

Further evidence that the distinction Meinwald observes in Plato is the encoding/exemplification distinction comes from the fact that Zalta (1983, 43–44) deployed the distinction to undermine The Third Man argument. He noted that one of the central premises of the argument, namely The Self-Predication Principle (“The Form of $F$ is $F$”), becomes ambiguous when there are two kinds of predication, and that if the copula ‘is’ in this principle is to be read as encoding, while the other principles of The Third Man argument use the copula ‘is’ in the exemplification sense, then the argument fails, due to an ambiguity. But this is just the very same

²It is important to remember that on the alternative, Quinean reading of the object-theoretic formalism, ‘existence-entailing’ properties become ‘concreteness-entailing’ properties, and so principle (1) would assert that abstract objects (necessarily) don’t exemplify concreteness-entailing properties, and principle (2) would assert that abstract objects (necessarily) encode the negations of concreteness-entailing properties.
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analysis that Meinwald gives in 1992 (387) to undermine the Third Man argument. We encourage the reader to examine both Meinwald 1992 and the subsequent developments in Pelletier & Zalta 2000, for further evidence that the exemplification/encoding distinction originated with Plato.

Next, we note that Boolos (1987) says that Frege had a distinction between two kinds of instantiation relation. Boolos writes (1987, 184):

Thus, although a division into two types of entities, concepts and objects, can be found in the Foundations, it is plain that Frege uses not one but two instantiation relations, ‘falling under’ (relating some objects to some concepts) and ‘being in’ (relating some concepts to some objects), and that both relations sometimes obtain reciprocally.

Boolos gives an example: the number 1 falls under the concept being identical to 1, but the concept being identical to 1 is a concept that is in the number 1, since the latter is identified as an extension (i.e., a logical object) consisting of all the first-order concepts that have exactly one object falling under them. Similarly, on Zalta’s theory (1999), the natural number 1 encodes rather than exemplifies all and only the properties that are exemplified by exactly one (ordinary) object.

Boolos then goes on to formulate Frege Arithmetic by introducing notation, $G \eta x$, to represent: property $G$ is in object $x$. A careful study of Boolos’ paper reveals that when he contrasts the predication $G \eta x$ with $G x$, this is just a notation variant of object theory’s contrast between the predications $xG$ and $G x$. Indeed, the very same paradoxes that Boolos discusses in connection with $G \eta x$ (1987, 198) are the paradoxes of encoding that Zalta discusses in 1983 (158–160).

The distinction also clearly arises in Ernst Mally’s work, where the dual-copula theory is introduced in his book of 1912. He writes (1912, 64):

We say: the (abstract) object “circle” is defined or determined by the objectives “to be a closed line”, “to lie in a plane”, and “to contain only points which are equidistant from a single point”; we call it the determinate of these objectives, but not as an “implicit” one, because it does not satisfy the objectives, but, as one might say, only as an explicit one or as a “formdeterminate” of these objectives.

We can interpret Mally here as saying that the Platonic Form, The Circle, is determined by (sein determiniert) the property of being a circle, but does not satisfy (i.e., exemplify) it. Mally uses erfüllen (“to satisfy”), where we have been using exemplify.

Armed with this distinction, Mally was able to undermine Russell’s objections to Meinong’s naive theory of objects, as Berto observes in his book (2013, 132). The existence of an object that encodes existence, goldenness and mountainhood is consistent with the fact that nothing exemplifies being an existing golden mountain. The existence of an object that encodes roundness and squareness is consistent with the geometrical law that everything whatsoever that exemplifies being round fails to be square.

Next, we note that Kripke has formulated a version of the distinction and it plays a crucial role in his Locke Lectures of 1973. There we find (Kripke 2013 [1973], 74–75):

But here there is a confusing double usage of predication which can get us into trouble. Well why? Let me give an example. There are two types of predication we can make about Hamlet. Taking ‘Hamlet’ to refer to a fictional character rather than to be an empty name, one can say ‘Hamlet has been discussed by many critics’; or ‘Hamlet was melancholy’, from which we can existentially infer that there was a fictional character who was melancholy, given that Hamlet is a fictional character. (74)

... One will get quite confused if one doesn’t get these two different kinds of predication straight.

Kripke doesn’t regiment this distinction formally, and at one point, he suggests that the confusing double usage of predication involves two kinds of predicates. But the suggestion in the above passage is clearly the same first step one would take when introducing the distinction between exemplification and encoding, since the dual-modes-of-predication theorist

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3See the discussion surrounding the sentence labeled SuperRussell.

4Mally’s Ph.D. student, J.N. Findlay, writes (1963 [1933], 111):

On the view of Mally, every determination determines an object, but not every determination is satisfied (erfüllt) by an object. ... the determination ‘being round and square’ determines the abstract determinate ‘round square’, but it is not satisfied by any object.
would say that Hamlet exemplifies being discussed by many critics, but encodes being melancholy.

Finally, one can see the distinction made in passages in the work of other contemporary philosophers. For example, in Rapaport 1978 and van Inwagen 1983, the two kinds of predication are central to the points of the paper. Van Inwagen introduces a distinction between having a property and holding a property, but then goes on to say that this is to be analyzed as a three-place relation using a single mode of predication. But, clearly, he has noticed a distinction here; the very distinction upon which the exemplification/encoding distinction is based. All of the above examples show that, contra Berto, the two-kinds-of-predication view has been proposed before and in prominent places.

4 The Second Objection

Berto then goes on to report that many philosophers have found the distinction between two kinds of copula to be obscure. He writes (p. 134):

Being interpreted by some commentators as merely stipulative, the two copulas distinction has baffled them. Even leaving the charge of ad-hocness aside, they have asked for further information on the sense in which objects characterized by means of the (DCCP) [Dual Copula Comprehension Principle] “have” the properties at issue. The initial intuition literalist-naive Meinongianism relied on was that Sherlock Holmes had to be a detective living in Baker Street, the round square had to be round (and square), in the ordinary sense: that of exemplifying or instantiating a property, or of satisfying a certain condition, etc. Now it turns out that, for several properties $P$ and specifically for those appearing in the relevant characterizing conditions, Meinongian objects cannot be $P$ in the usual sense. In what sense, then, do they possess the characterizing properties? In what sense is the existent golden mountain a mountain, made of gold, and existent, if it cannot be an existent golden mountain, i.e., an exemplifier of those features? The encoding predication is believed by some to be obscure — and inevitably so, having been introduced ex novo and as a primitive. Michael Byrd [1986, 247], for instance, has claimed that “the dual predication view must face the task of giving a satisfactory account of the notion of encoding”, and wondered “what non-pictorial understanding can be articulated of the conditions under which ‘$o$ encodes $F$’ is true”.

In this passage, DCCP refers to the Object Comprehension axiom schema we described in Introduction to the present paper. The above passage makes several points about whether we can understand the distinction between exemplifying and encoding a property. It starts out by acknowledging that the distinction is stipulative. Presumably, this means that it is put forward as a theoretical distinction at the outset, to see whether it has theoretical consequences. Since the distinction postulates an ambiguity in the classical copula ‘is’, it is therefore bound to be somewhat new and surprising, though not necessarily baffling. But, in this passage, Berto appears to refuse to acknowledge that a theoretical distinction has been made: note the repeat italicization of the word ‘be’. He seems to be saying that there is only one intelligible sense of ‘is’, and only one intelligible way for an object to be $F$. But that is simply denying what has been granted at the outset, that a distinction has been stipulated on which there are two senses of ‘is’. Moreover, it is a distinction that has appeared several times in the literature, as documented in the previous section.

So, Berto’s real objection in the above passage can’t simply be his denial that there are two senses of the copula. Rather, the real objection seems to be, how are we to characterize the two modes of predication in terms that can be understood? Indeed, the objection culminates in a quote from Byrd (1986), who demands necessary and sufficient conditions for the statements of the form “$x$ encodes $F$”.

But now that we have the real objection before us, it is clear how to respond. First, note that the object theorist presenting the axioms of object theory is in the same situation as a set theorist presenting the axioms of set theory. The set theorist starts with a theoretical primitive, $x \in y$, and then axiomatizes it. The very first principle that a set theorist states concerns identity conditions for sets by way of extensionality: $\forall z (z \in x \equiv z \in y) \rightarrow x = y$. The set theorist then goes on to state existence conditions for sets, e.g., via axioms that assert the existence of the null set, pair sets, unions, infinite sets, separated sets, etc. The object theorist does the very same thing. In Zalta 1983, axioms for encoding were presented. One principal axiom for abstract objects asserts their identity
conditions: \( A!x \& A!y \rightarrow (\forall F(xF \equiv yF) \rightarrow x = y) \). That is, abstract objects \( x \) and \( y \) are identical whenever they encode the same properties. Zalta then goes on to state existence conditions for abstract objects; these are captured by a single comprehension principle: \( \exists x(A!x \& \forall F(xF \equiv \phi)) \), where \( \phi \) is any formula in which \( x \) isn’t free.\(^5\) So, object theory and set theory have been formulated using the same standards of mathematical rigor.

But suppose now someone comes along and says to the set theorist: your primitive notion \( x \in y \) baffles me. In what sense is something a member or element of something else? What are the necessary and sufficient conditions for the statement \( x \in y \)? Well, a set theorist would immediately respond: I can’t present necessary and sufficient conditions because I am taking \( x \in y \) as a primitive of the theory. Instead of presenting necessary and sufficient conditions, axiomatic theories often implicitly characterize the primitive notions of the theory by way of axioms. The more you understand the axioms and their consequences, the better you understand the primitive notions. I urge you, the set theorist would say, to start proving some theorems and see whether you start to get a feel for the conditions under which \( x \in y \).

But a set theorist can also say a bit more. She can say: I can give you at least a hint as to what \( x \in y \) means, though you can’t take the suggestion too literally. You know what it is for something to be a container of marbles. The individual marbles are elements of that container. Similarly, you know what it is for a committee to have members: the people appointed to the committee are its members. Insofar as you understand ‘element of’ and ‘member of’ in these examples, you have an initial grasp of what I mean by set membership as expressed by \( x \in y \). But, of course, as I said, you can’t take this too literally. One might suggest that if you remove one marble from the container of marbles, the container has remained the same even though its elements have changed. Similarly with committees; the committee members may change but the committee remains the same. Not so with sets; if the members of a set change, then the set changes. The identity of the set is essentially tied to the identity of its members. That’s what the principle of extensionality asserts: distinct sets have distinct members. So you have to be careful that you don’t take the examples too literally when trying to understand \( x \in y \).

Now a dual-copula theorist can respond in exactly the same way as the set theorist. The primitive form of predication, \( xF \), is a primitive of the theory. By adding it alongside \( Fx \) as an atomic formula, we know that it expresses a primitive form of predication. No necessary and sufficient conditions can be given, but rather the axioms implicitly characterize the primitive form of predication. The better you understand the axioms the better you grasp the primitive, and the way to understanding the axioms is by proving theorems and applying the distinction to the data.

This latter, of course, leads the dual-copula theorist to provide some intuitive examples, just as the set theorist did. She can say: when I assert “Holmes encodes being a detective” I intend to be asserting that Holmes is characterized by the property of being a detective but not exactly in the same way as if Holmes had exemplified the property. After all, you couldn’t have hired Holmes, you couldn’t have paid him money to solve your cases, and you won’t find his grave. If Holmes had exemplified the property of being a detective, those things would have been possible. But by saying that Holmes encodes being a detective, I am postulating a way for the property of being a detective to characterize Holmes. That is just what my theory is: it begins by postulating a second way for properties to characterize objects.

The dual-copula theorist might also provide the following example (Zalta 1988, 18). Think about the content of your mental representation of Mark Twain. The content might involve the property of having a walrus mustache, and maybe the properties of being white-haired and wearing a white suit and Western bow tie. It might involve a wide variety of facial-feature properties. However, the content of your representation itself doesn’t really exemplify these properties. The content does not have a walrus mustache; the representation is not white-haired, does not wear a suit etc. If you were to change any one of these properties, you would have a different content and your mental representation would be a slightly different one. The content therefore involves these properties in a crucial sense. This sense of ‘involve’ is what we mean by ‘encode.’ The properties abstract objects encode characterize them, and so encoding is a kind of predication.

We trust that by making the above responses, a dual-copula theorist has done as much as anyone can be expected to do in philosophy: a distinction has been introduced, formalized, axiomatized, and motivated.

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\(^5\)This asserts that where \( \phi \) is any condition satisfied by some properties \( F \), there is an abstract object that encodes precisely those properties \( F \) that satisfy \( \phi \).
with intuitive examples. The charge that the distinction is obscure just won’t stand, especially given that it has been made and found intelligible in a variety of contexts in the history of philosophy.

5 A Final Objection

Berto develops one final objection to the dual-copula view. The objection (pp. 135–7) seems to be that the analysis of ordinary statements should not identify abstract objects as the denotations of expressions like “the golden mountain”, “the fountain of youth”, “Holmes”, “Gandalf”, etc., for no one takes statements about these things to be statements about abstract objects. This objection takes several forms. In the first form, Berto says (2013, 135–6):

Take a negative existential like “The golden mountain does not exist”. According to the theory this is true, as it should be, insofar as the description in it denotes an abstract and necessarily nonexistent item. This may sound unsatisfactory. The unsettled intuition is that a golden mountain should be something concrete and contingently lacking existence. If we put it in the realm of abstracta, we seem to take it as closer to a recursive function than to any ordinary mountain.

We make several observations about Berto’s claim that the “unsettled intuition is that a golden mountain should be something concrete and contingently lacking existence.”

First, an intuition is something that is expressed in non-technical language, and so the ‘be’ in Berto’s phrase “should be something concrete” has to be understood as the ordinary copula. As such, we can claim that we preserve that intuition by noting that there is a sense of ‘is’ in which the golden mountain is concrete, namely, the encoding sense. For if we interpret the description “the golden mountain” as denoting that abstract object that encodes all of the properties necessarily implied by being golden and being a mountain, then that abstract object encodes being concrete, since this latter property is necessarily implied by each of the two former properties. Hence, there is a sense of ‘is’ for which the object denoted by “the golden mountain” is concrete.

Moreover, we can preserve Berto’s intuition that the golden mountain contingently lacks existence, as follows. To see why, note the following sense of ‘existence’ described by Kripke when he says (2013 [1973], 9):

Say we have the story about Moses: what do we mean when we ask whether Moses really existed? We are asking whether there is any person who has the properties—or at least enough of them—given in the story.

Now in object theory, it is a theorem that if \( x \) is a fictional character that originates in story \( s \), then \( x \) exemplifies \( F \) in story \( s \) if and only if \( x \) encodes \( F \). Since fictions are under discussion, we can use ‘\( x \) encodes \( F \)’ to understand Kripke’s notion “\( x \) has \( F \) in the story”. Thus, we can introduce a defined notion of existence (i.e., one distinct from the primitive existence predicate ‘\( E! \)’) that captures Kripke’s idea, as follows:

\[
E!_2 x \overset{df}{=} \exists y \forall F (xF \to FY)
\]

That is, \( x \) exists_2 if and only there is something \( y \) that exemplifies all of the properties \( x \) encodes. So the golden mountain fails to exist in the sense of exists_2—nothing exemplifies all the properties that the golden mountain encodes. But note that the golden mountain contingently fails to exist_2, for it is possible that something exemplifies all the properties that the golden mountain encodes, i.e., it is possible that the golden mountain exists_2. If we introduce \( a \) as a name for the golden mountain, then we’ve established that \(!E!_2 a \land E!_2 a\), i.e., the golden mountain contingently lacks existence_2. So if Kripke is right about what we mean when we ask whether \( x \) exists, there is a sense of ‘exists’ in which the golden mountain does contingently fail to exist, despite the fact that, as an abstract object, it necessarily fails to exemplify the property \( E! \).

Notice how the concept of existence_2 also allows us to address Berto’s intuition that “a golden mountain should be something concrete”. Assuming Berto intended to assert that the golden mountain should be something concrete_2 (and not just a generic claim that doesn’t reference a fictional entity), then we take him to mean: if the golden mountain had existed, it would have been concrete. But this intuition is preserved by the concept of existence_2: if the golden mountain had existed_2, i.e., if there had been something \( y \) that exemplifies all the properties the golden mountain encodes, then it (i.e., \( y \)) would have been concrete. This is in fact true, since the golden mountain encodes being concrete. So, if this

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*See Zalta 1983, Chapter II, where this definition is proposed.*
is what Berto’s intuition comes to, the object-theoretic analysis of “the golden mountain” preserves it.

In the second form of the objection, Berto says (136):

... take again “Ponce de Leon searched for the fountain of youth”. If “the fountain of youth” is to stand for an abstract, necessarily nonexistent property-encoder, then this is not what Ponce de Leon was looking for. He was searching for a concrete object, whose existence he believed in. It seems strange to say that what Ponce de Leon was looking for, unbeknownst to himself, was an abstract object. James Tomberlin has claimed that “if asked, Ponce de Leon correctly would have resisted any suggestion that the object of his search was an abstract entity rather than a concrete one”.

Here, the problem is that in stating the objection, Berto says something questionable, namely, “[H]e [Ponce de Leon] was searching for a concrete object.” Now this claim, on one natural reading, is simply false, for it asserts:

\[ \exists x (\text{Concrete}(x) \& Spx) \]

Under the assumption that the fountain of youth doesn’t exist, then there is no concrete object for which Ponce de Leon was searching. Maybe Berto has some other formal representation in mind, but if it involves intensional objects, then it isn’t clear that such an intensional object would make Berto’s claim, that de Leon was searching for something concrete, true!

What we have then is a situation where Berto is facing a clear conflict of intuitions. He wants to use the intuition that “Ponce de Leon was searching for a concrete object” as evidence in support of the intuition that “Ponce de Leon was not searching for an abstract object”. But the falsehood of the former undermines its ability to lend credence to the latter. Since this shows that we have a conflict of intuitions, we don’t see that Berto can use just one of those conflicting intuitions as a basis for an objection to object theory. Moreover, if in saying that de Leon was searching for something concrete, Berto simply means that “if the fountain of youth had existed, it would have been concrete”, then this too is preserved by object theory. We showed this above, at the end of our discussion of the first form of the objection.

Another line of response is to note that the following claims are consistent:

- The fountain of youth is an abstract entity.
- Ponce de Leon denies (or would deny) that the fountain of youth is an abstract entity.
- Ponce de Leon thought that the fountain of youth is concrete.

All of these claims can be true together. So it is not clear that Ponce de Leon’s understanding is relevant for the analysis of the description “the fountain of youth”.

Furthermore, Berto fails to distinguish two ways of reading the description “the fountain of youth” as it (or its Spanish equivalent “la fuente de la juventud”) might be used by Ponce de Leon. If Ponce de Leon were to say “The fountain of youth is concrete”, then object theory gives us two ways of understanding the description (in addition to two ways of reading the copula). If we read “the fountain of youth” using the simplest exemplification formulas of classical logic, as “the \( x \) such that \( x \) exemplifies being a fountain the waters of which confer everlasting life”, then clearly, de Leon has failed to refer and his claim is false. But if we take “the fountain of youth” in the mouth of de Leon to mean “the \( x \) such that, according to the legend, exemplifies all of the properties necessarily implied by being a fountain the waters of which confer everlasting life”, then object theory provides a denotation for this description, namely, the abstract object that encodes all of the properties necessarily implied by being such a fountain. In that case, we may read de Leon’s utterance as a true encoding claim: such an object does encode being concrete (given that being concrete is necessarily implied by being such a fountain). Hence, in ambiguous natural language, de Leon may correctly assert: the fountain of youth is concrete.

Finally, Berto states the last form of the objection as follows (136):

Purely fictional objects like Holmes or Gandalf make for other cases. Can these be abstract encoders of properties? I’m not sure whether it is true, as Mark Sainsbury has stated, that “authors, who ought to know, would fiercely resist the suggestion that [their characters] are abstract”. But it seems that we typically don’t think of Holmes or Gandalf as abstracta, of which works of fiction claim things that look (in Gilbert Ryle’s terminology) like “category mistakes” for they could not possibly hold of abstracta, such as their being detectives, or wizards, or their wearing a deerstalker.
We think this objection can be put to rest as follows.

In ordinary, run-of-the-mill fiction, when authors cognize and think about their characters as they are composing their stories, we can all agree that they are imagining objects that are, in some sense, concrete creatures, inhabiting a spacetime much like our own, etc.\footnote{David Lewis, in the opening paragraph of his 1978 article, says, “... is there not some perfectly good sense in which Holmes, like Nixon, is a real-life person of flesh and blood?” (1978, 37). We agree, and the sense of ‘is’ in question is encodes.} But given that what they are describing is fictional, there are no concrete creatures or spacetimes of the kind being imagined. So what does it mean to say that “an author would fiercely resist the suggestion that her characters are abstract” or that “we don’t typically think of Holmes or Gandalf as abstracta”? The author (or we) would also say that the creatures aren’t real, so how do we reconcile that with the claim that the characters aren’t abstract? Again, we have a conflict of intuitions. We think authors and ordinary people would agree that fictional characters are abstract in virtue of being fictions but they don’t exist in reality. In light of that, we think that an analysis on which fictions are represented as abstract objects that have (in the sense of encode) the properties by which they are imagined, is consistent with the claims reported in the above passage.

Indeed, if Kripke is right, the object-theoretic analysis exactly matches our ordinary intuitions about the existence of those characters. Consider a more inclusive excerpt from passage in Lecture 1 of Kripke 2013 [1973] quoted earlier, in which Kripke says:

Say we have the story about Moses: what do we mean when we ask whether Moses really existed? We are asking whether there is any person who has the properties, or at least enough of them, given in the story. ... Then — and this is the paradigm which has been generally accepted — to affirm the existence of, say, Sherlock Holmes, is to say that there is a unique person satisfying the properties attributed to Holmes in the story.

Here Kripke is suggesting that to claim that Holmes exists is to claim that there is a unique object that exemplifies what is attributed to Holmes in the story. This matches the object-theoretic analysis almost exactly, because it is a theorem of object theory that Holmes exemplifies $F$ in the story if and only if Holmes encodes $F$. So, substituting “Holmes encodes $F$” for “Holmes exemplifies $F$ in the story”, we can rephrase the Kripke’s analysis of existence claims as follows: to affirm that Holmes exists is to affirm that there is a unique person exemplifying the properties that Holmes encodes. So, if there is no unique such person, then Holmes doesn’t exist. And that obtains in the case of Sherlock Holmes.

Consequently, the analytical suggestion that fictions are abstract, theoretical entities matches ordinary intuitions about the conditions under which fictions exist.

### 6 Comparison with Modal Meinongianism

Of course, Berto proposes that his own version of Meinongianism is a better theoretical account of the data than object theory. The central principle of his theory is (p. 141):

**Qualified Comprehension Principle (QCP):**
For any condition $\alpha[x]$ with free variable $x$, some object satisfies $\alpha[x]$ at some world.

We find it odd that this principle can’t be expressed in the formal language Berto uses to develop his theory. On p. 156, he lists the primitive expressions of his language, and nowhere are there special variables ranging over worlds. Instead he includes primitive modal operators for necessity ($\square$) and possibility ($\Diamond$). But then, referring to these modal operators, he says, parenthetically, “we are not making much use of these”, which leads us to believe that he doesn’t intend to express QCP above in his formal language by using a $\Diamond$ to somehow replace the phrase “at some world”. So we are puzzled about whether QCP is a metaphysical principle that is to be expressed in Berto’s theoretical object language, or a metatheoretic principle of his semantics, in which possible worlds, and variables ranging over them, are taken as primitive.

But let’s put this aside. Even if we assume some understanding of QCP that resolves the above issue, it is not clear to us how Berto can use it to explain the denotation of fictional names like ‘Holmes’. To see the problem, one may ask: how does Berto’s modal Meinongian use his theory to specify a unique denotation for the name ‘Holmes’? Perhaps the answer to this question appears on pp. 148-149. In this passage, Berto’s theoretical description of Holmes occurs (148):

Holmes is represented in Doyle’s stories as a detective, who lives in Baker Street 221b, etc. Holmes has the properties that characterize
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him, not at this world, but at the worlds that make Doyles stories true. At those worlds, Holmes exists: being a detective, living in Baker Street, etc., arguably are properties that entail existence.

Clearly, Berto is taking $\alpha[x]$ for use in QCP to be a formula like the following:

$x$ is a detective and $x$ lives at 221B Baker Street and $x$ plays violin and $x$ has Dr. Watson as a friend and Moriarty as an arch enemy, and . . .

where the ellipsis is filled in by some canonical version of the story. Let’s grant Berto this canonical version of the story, i.e., that there is some body of properties that characterize Holmes in the story.

But now QCP says:

Some object $x$ satisfies $\alpha[x]$ at some world.

The problem is that this is not a uniqueness claim. It doesn’t assert that there is a unique object that satisfies $\phi$ at some world. But Berto thinks he is entitled to talk theoretically about Holmes, as if the name ‘Holmes’ denoted a unique object. We can agree pretheoretically that ‘Holmes’, in the context of Doyle’s stories, does have a unique denotation. But which theoretical object does it denote in Berto’s theory? He says (148–149):

Holmes is represented in Doyle’s stories as a detective, who lives in Baker Street 221b, etc. Holmes has the properties that characterize him, not at this world, but at the worlds that make Doyle’s stories true. At those worlds, Holmes exists: being a detective, living in Baker Street, etc., arguably are properties that entail existence. . . .

This combination of the (QCP) and the notion of existence-entailing property accounts for the plausible idea that Holmes, being a nonexistent object at the actual world, can neither kick nor be kicked by anyone here; nor can he be found anywhere (not even in London, 221b Baker Street); nor presumably can he have thoughts here – whereas he can be thought of by existent readers of Doyles stories like us. If Doyle’s stories represent Holmes as (let us suppose) kissing Watson, then the (QCP) tells us that Holmes effectively kisses Watson, at the worlds that realize the stories; at those worlds, Holmes really exists.

In the above passage, Berto is presupposing that he is talking about a unique object, namely Holmes, who has different properties at different possible worlds. But which theoretical object is Holmes? His comprehension principle QCP doesn’t guarantee, at any world, that there is a unique object that satisfies there the characterization of the Conan Doyle novels.

As far as we can tell, this problem isn’t solved by Berto’s discussion of identity in Section 8.1.3 (pp. 179–181) or in his discussion of intra- and extra-fictional uses of the name ‘Holmes’ in Section 8.2.1 (pp. 182–185). These discussions presuppose the very question we are asking, since the discussion assumes that the name ‘Holmes’ picks out a unique object. Note that Berto supposes one can add the formal name ‘$h$’ to his language and logic and then represent sentences about Holmes using ‘$h$’. But our question is: can he produce and justify a formal, theoretical statement that identifies which object $h$ is? In other words, can he produce a theoretical equation of the following form:

$h = ix(\ldots x\ldots h\ldots)$

where the right side of the equation is a uniquely identifying description that identifies Holmes’ as some unique object $x$ in terms of data containing the name ‘$h$’? We’re not asking here that Berto produce a definition of ‘$h$’, for an equation of the above form would be circular if regarded as a definition. Instead, we are asking for a theoretical principle such that when the data (e.g., the identifying beliefs about Holmes) are provided as input, the right side of the equation is a theoretical description of Holmes.

The question we’ve posed for Berto has an answer in object theory, for the latter yields and justifies just such a theoretical equation. The following open formula with free variable $F$ distinguishes properties that satisfy the formula:

In the Conan Doyle novels, Holmes is $F$

This gets represented in object theory as:

$CD \models Fh$

Then object theory’s comprehension principle both asserts that there is an abstract object that encodes exactly the properties such that $CD \models Fh$, but also implies, given its theory of identity for abstract objects, that there is a unique abstract object that encodes exactly the properties such that $CD \models Fh$, i.e.,
Consequently, the definite description “the abstract object that encodes exactly the properties such that $CD \models Fh$” is well-defined. Formally, we can represent this description as:

$$\exists x (\forall x : \forall F (xF \equiv CD \models Fh))$$

Consequently, we are theoretically justified in using this description to identify a unique denotation for the name ‘Sherlock Holmes’ as it is used in the Conan Doyle novels: Sherlock Holmes of the Conan Doyle novels (‘$h_{CD}$’) is the abstract object that encodes exactly the properties $F$ such that $CD \models Fh$, that is:

$$h_{CD} = \exists x (\forall x : \forall F (xF \equiv CD \models Fh))$$

This is not a definition but a theoretical principle of identity. It has just the right form: given a body of data of the form “In the Conan Doyle novels, Holmes is $F$”, the right side yields a theoretical description that identifies Holmes.

So unless Berto can offer some theoretical identity claim about which object Sherlock Holmes is, not only is his use of ‘Holmes’ ungrounded in his discussion of identity in Section 8.1.3 (pp. 179–181) and in his discussion of intra- and extra-fictional uses of the name ‘Holmes’ in Section 8.2.1 (pp. 182–185), but his claim that modal Meinongianism offers a better analysis of fictional entities than object theory can’t be sustained. We note here that the discussion of de re representation of fictional objects in Section 9.3 and 9.4 seems inconclusive. Since no theoretical identification of fictional objects like Holmes, such as the one available in object theory, has been offered, we’re left puzzled as to why Berto thinks modal Meinongianism offers a better analysis of fictional objects.

Finally, we’d like to point out that Berto’s modal Meinongianism doesn’t seem to be generalizable in the same way that object theory is. For object theory can give us an account of such fictional properties like being a unicorn, being a hobbit, etc., in addition to giving an account of fictional individuals. Object theory’s account is based on a generalization to higher logical types. We can recast our discussion in the simplest type-theoretic framework possible as follows: let ‘$i$’ be the type for individuals and let ‘$(t_1, \ldots, t_n)$’ be the type of relations between objects of type $t_1, \ldots, t_n$, for any types $t_1, \ldots, t_n$. Then the language of object theory can be easily typed: the two atomic formulas would be introduced as having the following forms:

$$\forall x : \forall F (xF \equiv F^{(t_1, \ldots, t_n)})$$

(read: objects $t_1, \ldots, t_n$ exemplify relation $F^{(t_1, \ldots, t_n)}$)

$$\forall x : \forall F (xF \equiv F^{(t)})$$

(read: object $x$ encodes property $F^{(t)}$)

These are well-formed for every type $t$, no matter how complex. Then we may type the comprehension principle for abstract objects:

$$\exists x (\forall x : \forall F (xF \equiv \phi))$$

That is, for any type $t$, there is an abstract entity of type $t$ that encodes all and only the properties of type $t$ objects that satisfy $\phi$, where $\phi$ is a condition on properties of type $t$ objects. In this principle, the predicate ‘$A!$’ has the type $(t)$, i.e., it denotes a property of objects of type $t$, and we assume there is such a property of this type for every type $t$. Similarly, the variable ‘$F$’ is of type $(t)$, i.e., it is a variable that ranges over properties of objects of type $t$.

This theory has been applied to such fictional properties as unicorns and hobbits (Zalta 2006). Briefly, the idea is that if we take the myth about unicorns (call it $m$) or the corpus of Tolkien novels about hobbits (call it $n$), then we have data of the following form, where $U$ denotes the property of being a unicorn and $H$ denotes the property of being a hobbit:

(A) According to the myth $m$, unicorns exemplify $F$

$$m \models FU$$

(B) According to the myth $n$, hobbits exemplify $F$

$$n \models FH$$

These are open formulas in which the variable $F$ occurs free. $F$ ranges over properties of properties (these are entities of type $(\langle i \rangle)$). Some properties of properties satisfy these open formulas and some don’t. So, where we take type $t$ to be the specific type $(i)$, object theory has the following axioms:

$$\exists x^{(i)} (\forall x : \forall F (xF \equiv m \models FU))$$

$$\exists x^{(i)} (\forall x : \forall F (xF \equiv m \models FH))$$
The first asserts that there is an abstract property (i.e., an entity of type \((i)\)) that encodes just the properties \(F\) of properties such that, in the myth about unicorns, the property \(\text{being a unicorn}\) exemplifies \(F\). Similarly, the second asserts that there is an abstract property (i.e., an entity of type \((i)\)) that encodes just the properties \(F\) of properties such that, in the Tolkien novels about hobbits, the property \(\text{being a hobbit}\) exemplifies \(F\). Since these abstract properties are unique, we can identify the properties \(\text{being a unicorn}\) and \(\text{being a hobbit}\), respectively, with the abstract properties asserted to exist. This is completely analogous to what we did in the case of Holmes: whereas Holmes is an entity of type \(i\), the properties \(\text{being a unicorn}\) and \(\text{being a hobbit}\) are entities of type \((i)\). Given some body of truths of the form (A) and (B) above, we have uniquely identified the fictional properties in question.

Thus, in object theory, we can truly say that \(\text{being a unicorn}\) and \(\text{being a hobbit}\) are abstract properties, not ordinary properties. This validates Kripke’s view that \(\text{being a unicorn}\) is not even a possible species. Kripke (1972, 157) notes that there are too many different possible species, e.g., ones with different DNA structures, etc., that are consistent with the myth about unicorns. But the fictional property of being a unicorn is just incomplete, given the myth, and so can’t be identified with any of the completely determined possible species. This suggestion is preserved, because abstract properties, like abstract individuals, are incomplete with respect to the properties (of properties) they encode. The property of \(\text{being a unicorn}\) has been identified solely in terms of the incompletely specified properties of properties given by the myth. By contrast, ordinary properties are ones that don’t encode properties at all. Just as with ordinary individuals, they only exemplify their properties. If the ordinary properties are the ‘possible’ properties (in the sense that they could be exemplified) and the abstract properties are the ‘impossible’ ones, in the sense that they aren’t the kind of thing that could be exemplified, then we have validated Kripke’s view that \(\text{being a unicorn}\) isn’t a possible property. Of course, this is not to say that it is a possible property in the sense that: there might have been a property (i.e., an ordinary property, that is possibly exemplified) that exemplifies all the properties of properties attributed to \(\text{being a unicorn}\) in the myth.

Thus, object theory can be generalized to account for fictional properties. But as far as we can tell, modal Meinongianism isn’t, or at least, hasn’t been, generalized in this way. It is, therefore, premature for Berto to conclude that modal Meinongianism offers a better analysis of fictional entities than object theory.

**Bibliography**


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8Kripke writes (1972, 157):

If we suppose, as I do, that the unicorns of the myth were supposed to be a particular species, but that the myth provides insufficient information about their internal structure to determine a unique species, then there is no actual or possible species of which we can say that it would have been the species of unicorns.

We preserve the analogy: both fictional individuals and fictional properties can’t be identified with possible individuals or possible properties, respectively.


