

Object Theory and Modal Meinongianism*

Otávio Bueno
 Department of Philosophy
 University of Miami
 Coral Gables, FL 33124-4670
 otaviobueno@mac.com

and

Edward N. Zalta
 Center for the Study of Language and Information
 Stanford University
 Stanford, CA 94305
 zalta@stanford.edu

Abstract

In this paper, we compare two theories, modal Meinongianism (MM) and object theory (OT), with respect to several issues that have been discussed recently in the literature. In particular, we raise some objections for MM, undermine some of the objections that its defenders raise for OT, and we point out some virtues of the latter with respect to the former.

*This paper was published in the *Australasian Journal of Philosophy*, 95/4 (2017): 761–778. The authors would like to thank Stephen Hetherington, Fred Kroon, Paul Oppenheimer, and two anonymous referees for this journal for suggestions that led to improvements.

Modal Meinongianism (MM) has recently been proposed as a metaphysical and semantic theory that can analyze certain philosophically puzzling sentences (Berto 2013, Berto & Priest 2014, Priest 2016 [2005]). MM is developed within set theory and consists of (1) a formal language with a semantics that includes possible and impossible worlds, (2) a comprehension principle that asserts the existence of objects, and (3) a notion of existence-entailing properties. Modal Meinongians have recently criticized a number of alternative Meinongian views. In what follows, we (a) critically examine MM, (b) argue that it can't address the main problem that Meinongianism is designed to solve, (c) show that object theory (OT) can solve this problem (Zalta 1983, 1988, 2000), and (d) disarm some of the objections that modal Meinongians have raised against that theory.

1 Modal Meinongianism

The central principle of MM, according to Priest, is a Characterization Principle (CP), which we've reconstructed as follows on the basis of the discussion in 2016 [2005], p. 85:

Where $A(x)$ is any condition, a is someone who intends an object of thought c_A that is characterized by $A(x)$, and Φ is the appropriate intentional operator, $@ \Vdash^+ a\Phi A(c_A)$.

Using the accessibility relation Priest assigns to the operator Φ and agent a (2016 [2005], 9–11), this entails that c_A satisfies $A(x)$ at every world w that realizes what a Φ s in the actual world ($@$). Berto (2013, 141) similarly formulates a Qualified Comprehension Principle (QCP):¹

For any condition $\alpha[x]$ with free variable x , some object satisfies $\alpha[x]$ at some world.

Given these formulations of MM, how does a modal Meinongian use CP and QCP to address the principal problem that Meinongianism is supposed to solve: the denotation of fictional names like 'Sherlock Holmes'? How do modal Meinongians use their theory to specify a unique denotation for these names?

¹Note that this principle isn't expressed in the formal language Berto introduced to develop MM. Variables for worlds are not among the list of primitive expressions (2013, 156).

In CP, Priest introduced a name, c_A , to denote a characterized object. This name is indexed to the condition $A(x)$. But what guarantees that there is a unique such object satisfying the condition $A(x)$, entitling him to give it a name? If Holmes is characterized by some complex condition $A(x)$, how do we know there is a unique such object for the name ‘Holmes’ to denote? Priest does indeed assume that ‘Holmes’ uniquely denotes an object. In 2016 [2005] (84), he says: “Holmes has the properties he is characterized as having not at this world, but at those worlds that realize the way I represent the world to be when I read the Holmes stories.” In this and many other passages, he uses ‘Holmes’ to pick out a unique fictional character.

Similarly, Berto (2013, 148) assumes ‘Holmes’ uniquely denotes:

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 Doyles stories true. At those worlds, Holmes exists: being a detective, living in Baker Street, etc., arguably are properties that entail existence.

This suggests that we should take $\alpha[x]$ in QCP to be 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 the modal Meinongian that there is a canonical version of the story, i.e., that there is some body of properties that characterize Holmes in the story. Then QCP says:

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

But this isn’t a uniqueness claim. It doesn’t assert that there is a unique object that satisfies $\alpha[x]$ at some world. Yet the modal Meinongians appear to think they are entitled to talk theoretically about Holmes as if the name ‘Holmes’ denotes a unique object. So which theoretical object does it denote? The passage quoted above continues (Berto 2013, 148–149):

This combination of the (QCP) and the notion of existence-entailing property accounts for the plausible idea that Holmes, being a non-existent 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.

This passage presupposes that there is a unique object, namely Holmes, who has different properties at different possible worlds. But which theoretical object is Holmes? It is not just that at different worlds, different objects might realize the way Holmes is represented, but also that the modal Meinongian’s characterization principle doesn’t guarantee, at *any* world, that there is a unique object that satisfies there the characterization of Holmes in the Conan Doyle novels.

This problem isn’t solved by the modal Meinongian’s understanding of identity (Berto 2013, 179–181) or in the distinction between intra- and extra-fictional uses of the name ‘Holmes’ (*ibid.*, 182–185). The cited passages presuppose that the name ‘Holmes’ picks out a unique object. As another example, we find (2013, 181):

Yet Sherlock Holmes is not Brad Pitt: for the latter has, at the actual world, at least one property that the former lacks – most noticeably, existence. . . . Holmes is not George Washington: even if neither exists nowadays, the latter has, at the actual world, the property of having existed, that is, of being a past existent, a feature the former lacks.

Clearly, here, Berto has referenced three particular objects, i.e., Holmes, Pitt, and Washington, and talked about the properties they have, or fail to have, at one particular world. Moreover, he writes (2013, 182):

all sentences concerning Holmes, whether they constitute ... intra-fictional or extra-fictional ascriptions, refer to one and the same thing: Holmes.

That modal Meinongians presuppose a unique referent for ‘Holmes’ is further supported by the fact that they add the constant ‘ h ’ to their formal language and logic and then represent sentences about Holmes using ‘ h ’ (Priest 2016 [2005], 122; Berto 2013, 178).

But our question is, can such a theorist produce and justify a formal, theoretical statement that identifies which object h is? Can they produce a theoretical equation of the following form:

$$h = \iota x(\dots x\dots)$$

where the right side of the equation is a uniquely identifying description stated in terms of the data? We're not asking that the modal Meinongian produce a *definition* of 'h' — it is permissible for the description $\iota x(\dots x\dots)$ to contain occurrences of 'h', since the description may be constructed from data of the form, "In the Conan Doyle novels, Holmes is F ". For example, in the next section, we'll see how OT offers a formal understanding of the following theoretical identification of Holmes:

(A) Sherlock Holmes of the Conan Doyle novels = the abstract object that encodes exactly the properties F such that, in the Conan Doyle novels, Holmes is F .

(A) (and its formal counterpart (A'), stated near the end of Section 2 below) isn't a definition but rather a theoretical principle; it becomes specific in the presence of data of the form "In the Conan Doyle novels, Holmes is F ". So, we aren't asking the modal Meinongian for a definition. Rather, we are asking for a theoretical principle of the form $h = \iota x(\dots x\dots)$ 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.

Maybe the answer is in Berto & Priest 2014, where they say (184):

According to MM, $A(\varepsilon xA(x))$ holds in full generality; but it may not hold at the actual world (though it may). All that can be guaranteed is that it holds in some world or other, namely those worlds that realize the situation envisaged by the person who uses the description. Call this version of Characterization CP_M .

They then *use* the name 'Holmes' and assert a variety of claims about him (e.g., ordinary claims that we would accept as capturing truths about Holmes). Yet CP_M offers no means of asserting a theoretical identification of Holmes. Indeed, the recent discussions of MM, by using the indefinite description $\varepsilon xA(x)$ in the characterization principle, seem to abandon the hope of giving a theoretical identification of Holmes comparable to (A). Thus, none of the forms of MM (CP, QCP, CP_M) can give the kind of answer that OT offers, further details of which we provide in the next section.

The present point is related to, but distinct from, the criticisms of MM that were raised in Kroon 2012. Kroon objects that MM can't preserve the truth of the intuitively true claims like "the golden mountain is golden" and "the golden mountain doesn't exist". In responding to these objections, Berto & Priest (2014) revise one of the central tenets of MM, so that its central tenets become:

- (i) If something satisfies $A(x)$ at @, $\varepsilon xA(x)$ denotes one such thing.
- (iii) If not, it picks out some *non-existent* object or other which satisfies $A(x)$ in the situation one is envisaging.²

But this further refinement of MM still doesn't address our objection. We are asking, what theoretically-described object are they referring to, in their paper, when they *use* the name 'Holmes' (Berto & Priest 2014, 188, 196). Even when modal Meinongians say "Holmes is a detective only at worlds that realize the stories", they are referring to a particular thing, namely Sherlock Holmes, and saying that *it* has properties at worlds that realize Doyle's characterization. But, their theory doesn't entitle them to use the name 'Holmes' in this way.

2 Comparison with Object Theory

Object theory (Zalta 1983, 93; 2000, 128) answers the question we just posed for the modal Meinongian. OT is a set of principles that axiomatizes the domains of abstract and ordinary objects, and its theorems constitute interesting philosophical claims we take to be true. It too has a semantic component that allows us to confirm that truth and entailments have been preserved.

Basic OT begins with a distinction in two kinds of predication, *exemplification* ($F^n x_1 \dots x_n$) and *encoding* (xF). Since these two forms of predication serve to disambiguate the English copula 'is', OT is often called a 'dual-copula' theory. The axioms of OT 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 is used 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 $E!$.

²We've kept the number of (iii) the same as that used in Berto & Priest 2014.

Two interpretations of the language are available. One interprets the predicate $E!$ as an existence predicate, so that the existential quantifier (\exists) becomes a quantifier that asserts only ‘there is’ or ‘some’. Abstract objects then become objects that couldn’t possibly exist, and the principal axiom of the theory asserts, for any formula ϕ , that *there is* an abstract (i.e., necessarily nonexistent) object that encodes just the properties F satisfying ϕ . This axiom schema may be formally represented as follows:

Comprehension Principle

$\exists x(A!x \ \& \ \forall F(xF \equiv \phi))$, where ϕ has no free xs

Thus, the Meinongian reading of this axiom schema implies that there are nonexistent objects.

Alternatively, $E!$ can be interpreted as expressing *concreteness* and the existential quantifier (\exists) as asserting existence. Under this interpretation, abstract objects become objects that couldn’t possibly be concrete (e.g., the number 1), and the principal axiom of the theory asserts, for any formula ϕ , that *there exists* an abstract (i.e., necessarily nonconcrete) object that encodes just the properties F satisfying ϕ . This is the Platonic/Quinean interpretation of the theory, since it implies that there exist abstract objects.

The formal 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 the current discussion.

Now let’s return to the problem we posed for MM. First, we note that the following open formula with free variable F distinguishes a group of properties:

(B) In the Conan Doyle novels, Holmes is F .

To represent (B), the object theorist first defines stories to be situations that are authored, where a situation is any abstract object that encodes only properties of the form $[\lambda y p]$ (being such that p), for p some proposition. The object theorist then defines a proposition p to be *true in a situation* s iff s encodes $[\lambda y p]$. The notation for *truth in a situation* is $s \models p$. In other words, the object theorist defines:

$$s \models p =_{df} s[\lambda y p]$$

Consequently, the representation of (B) becomes:

$$CD \models Fh$$

where ‘CD’ names the extended story (a situation) given by the corpus of Conan Doyle novels (Zalta 1983, 91; 2000, §4). So, the object theorist takes the body of data to be our judgments as to which properties F satisfy (B). Then OT’s comprehension principle asserts that there is an abstract object that encodes exactly the properties F such that $CD \models Fh$. It 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.,

$$\exists!x(A!x \ \& \ \forall F(xF \equiv CD \models Fh))$$

Thus, the definite description “*the* abstract object x such that x encodes exactly the properties F such that $CD \models Fh$ ” is well-defined. Formally, we can represent this description as:

$$\iota x(A!x \ \& \ \forall F(xF \equiv CD \models Fh))$$

Hence, 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. We can now represent the identity claim labeled (A) in Section 1 as (A’), where h_{CD} stands for Sherlock Holmes of the Conan Doyle novels:

$$(A') \ h_{CD} = \iota x(A!x \ \& \ \forall F(xF \equiv CD \models Fh))$$

We again emphasize: 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 description on the right identifies Holmes.³

So if modal Meinongians can’t offer a theoretical identification of Holmes, not only is their use of ‘Holmes’ as a name ungrounded but their claim that MM offers a better analysis of fictional entities than OT can’t be sustained. Without a way to generally formulate theoretical identifications of fictional objects, we don’t see that MM offers a better analysis of fictional objects.

³We don’t require that everyone agree on exactly which sentences of the form “In the Conan Doyle novels, Holmes is F ” are true. Instead, we require only that everyone agree that some properties F satisfy this open formula and others don’t. Everyone agrees, in principle, that there is some group of properties F that satisfy this open formula. Given that minimal condition, we can accept that Holmes is defined by those properties, whatever they turn out to be.

3 Encoding is Not *Ad Hoc*

The distinction between encoding and exemplification has received some critical attention. In what follows, we defuse the objections that modal Meinongians have raised against it.

One issue the modal Meinongians have been concerned about is the potential *ad hoc* character of the distinction (Berto 2013, 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?

Priest (2016 [2005], xxxii) says something similar, namely, “it is hard not to feel that there is a certain artifice in the distinction”.

In response to this, we note, first, that the modal Meinongian can’t claim, as Berto does (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, the exemplification/encoding distinction has been introduced at several points in the history of philosophy, though under a different name. Pelletier & Zalta (2000) show that a well-known Plato scholar, Constance Meinwald, 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*).

Zalta (1983) and Pelletier & Zalta (2000) both show that the above view is preserved in OT. When Meinwald says The Form of the Triangle *is* triangular *pros heauto*, OT says that it *encodes* being triangular; when

Meinwald says that existing triangular objects are triangular *pros ta alla*, OT says they *exemplify* being triangular and participate, in a defined sense, in The Form of the Triangle. The latter is identified as an abstract object that encodes (the properties implied by) triangularity.

Boolos (1987, 184) says that Frege had a distinction between two kinds of instantiation relation:

[a]lthough 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 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 formulates Frege Arithmetic by using $G\eta x$ to represent: property G is in object x . A careful study of his paper reveals that when he contrasts the predication $G\eta x$ with Gx , this is just a notational variant of OT’s contrast between the predications xG and Gx . 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 arises in Ernst Mally’s book of 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, . . .

In other words, 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*.⁴ Mally undermined Russell’s objections to Meinong’s naive

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

theory of objects by using the distinction, 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 exemplify being square.

Kripke formulated a version of the distinction in his Locke Lectures (2013 [1973], 74–75):

But here there is a confusing double usage of predication ... 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)

Kripke doesn’t *formalize* this distinction, 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 the same step one would take when introducing the distinction between exemplification and encoding, since the dual-modes-of-predication theorist would say that Hamlet *exemplifies* being discussed by many critics, but *encodes* being melancholy.

Finally, the distinction appears in Rapaport 1978 and van Inwagen 1983. Van Inwagen distinguishes between *having a property* and *holding a property*, and then says that this is to be analyzed as a three-place relation using a single mode of predication. But, clearly, he has noticed the very distinction upon which the exemplification/encoding distinction is based. All of the above examples show that the two-kinds-of-predication view has been proposed before and in prominent places.

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 isn’t satisfied by any object.

4 Encoding is Not Vague or Obscure

While it is acknowledged that the ‘dual-copula’ approach used in OT yields a wide variety of philosophical analyses and applications (Berto 2013, 133), questions are still raised about the distinction between exemplifying and encoding a property. Thus, we find (Berto 2013, 134) saying that the dual-copula Meinongian faces the problem of:

... 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.

We have two responses. First, the objection fails to acknowledge that OT can provide at least some principles of the kind being requested. For example, if we define:

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

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

1. Every property is encoded by some object, 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) $EE(F) \rightarrow \forall x(A!x \rightarrow \bar{F}x)$
 - (b) $EE(F) \rightarrow \Box\forall x(A!x \rightarrow \bar{F}x)$

So, principles can be adopted that address the concern raised. The above principles aren’t vague at all.

But the second problem with the above passage concerns its last line, where it is suggested that exemplification/encoding distinction is vague. The documentation offered in support of this claim 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.

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 isn’t suggesting 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 OT and isn’t therefore axiomatized in that theory.

Consequently, not only is there no admitted vagueness in the exemplification/encoding distinction, but the admitted vagueness in the auxiliary hypothesis of Zalta 1983 has now been replaced by the clear principles formulated above, which don’t refer to or presuppose nuclear properties. The primitive notion, x encodes F (xF), in its use in the axioms of OT is no more nor less vague than the primitive notion x is a member of y ($x \in y$) in its use in the axioms of Zermelo-Fraenkel set theory.

A further charge about the notion of encoding is that it is obscure and that the distinction between encoding and exemplification isn’t clear. Berto, in an extended passage (2013, 134) acknowledging that the distinction is stipulative, goes on to point out that though the original Meinongian intuition is that Holmes has to *be* a detective (and the round square has to *be* round), these objects cannot have their properties in the usual sense. He asks, in what sense do they possess them, i.e., in what sense is the golden mountain a mountain made of gold? He concludes by noting that Michael Byrd [1986, 247] demands that “the dual predication view must face the task of giving a satisfactory account of the notion of encoding ... [and] conditions under which ‘ o encodes F ’ is true”.

To untangle the points being made here, note that by granting that the encoding/exemplification distinction is stipulative, Berto acknowledges that it is being put forward as a theoretical distinction. 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 modal Meinongians appear to refuse to acknowledge that a

theoretical distinction has been made. In the relevant passage (2013, 134) Berto repeatedly italicizes 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 between two senses of ‘is’ has been stipulated, indeed, one that has appeared several times in the literature.

So, the real objection in the passage referenced above can’t simply be the denial that there are two senses of the copula. Rather, the real objection seems to be stated by Byrd (1986): what are the (necessary and sufficient) conditions for the statements of the form “ x encodes F ”?

But consider an analogy with set theory. Object theorists presenting the axioms of their theory are in the same situation as set theorists presenting the axioms of ZF. Set theorists start with a theoretical primitive, $x \in y$, and then axiomatize it. The very first principle of set theory is Extensionality: $\forall z(z \in x \equiv z \in y) \rightarrow x = y$. Then existence conditions for sets are given, 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 same. Once encoding is taken as primitive, identity conditions for abstract objects are stated: $A!x \ \& \ A!y \rightarrow (\forall F(xF \equiv yF) \rightarrow x = y)$. Then existence conditions that comprehend the domain of abstract objects are asserted. This is the Comprehension Principle formulated in Section 2. So, OT has been formulated using the same standards as ZF.

Now suppose someone complains 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 $x \in y$? 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 I’m systematizing the primitive notions by giving axioms. The more you understand the axioms and their consequences, the better you understand the primitive notions. So I would urge you to start proving some theorems and see whether you start to get a feel for what it means to say that x is a member of y .

But set theorists can also 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. Consider a container of marbles: the individual marbles are elements of that container. Or consider a committee: 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. If you remove one marble from the container of marbles or change one member of the committee, the container and committee may remain 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 states: distinct sets have distinct members. So you can't take the examples too literally.

A dual-copula theorist can respond the same way. The primitive form of predication, xF , is a primitive of the theory. By adding it alongside Fx as an atomic formula, it expresses a primitive form of predication. No necessary and sufficient conditions can be given, but rather the axioms systematize the primitive form of predication. The better you understand the axioms, the better you grasp the primitive, and the way to understand the axioms is by proving theorems and applying the distinction to the data.

Furthermore, intuitive examples can be given, just as with set theory. When we assert "Holmes *encodes* being a detective" we 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, we are postulating a way for the property of being a detective to characterize Holmes. That is just what our 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). Consider the content of your mental representation of Samuel Clemens. 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 isn't 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 with 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, motivated with intuitive examples, formalized, and axiomatized. 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 Can Fictions Be Analyzed as Abstract?

One final concern raised by the modal Meinongian seems to be that the denotations of expressions like "the golden mountain", "the fountain of youth", "Holmes", "Gandalf", etc., should not be identified as abstract objects, for no one takes ordinary statements involving these expressions to be statements about abstract objects. This objection takes several forms. In the first form, the concern goes as follows (Berto 2013, 135–6):

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 the above 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 "should be something concrete" has to be understood as the ordinary copula. As such, 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 the description "the golden mountain" denotes the abstract object that encodes all and only the properties necessarily implied by being golden and being a mountain, then that 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 preserve the intuition that the golden mountain contingently lacks existence, as follows. Consider the following sense of 'exis-

tence’ discussed by Kripke when he says (2013 [1973], 9):⁵

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.

In OT, it is a theorem that if x is a fictional character that originates in story s , then x exemplifies F in story s iff 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 the sense Kripke is discussing, as follows (Zalta 1983, Ch. II):

$$E!_2x =_{df} \exists y \forall F (xF \rightarrow Fy)$$

That is, x exists₂ iff there is something y that exemplifies all of the properties x encodes. So the golden mountain fails to exist in the sense of exists₂—nothing exemplifies all the properties that the golden mountain encodes. The golden mountain also *contingently* fails to exist₂, for it is possible that something exemplifies all the properties that the golden mountain encodes, i.e., it is possible that the golden mountain exists₂. If we introduce a as a name for the golden mountain, then we’ve established that $\neg E!_2a \ \& \ \diamond E!_2a$, i.e., the golden mountain contingently lacks existence₂. So in the sense of ‘exists’ that Kripke is discussing, the golden mountain contingently fails to exist, despite the fact that, as an abstract object, it necessarily fails to exemplify the property $E!$.

The concept of existence₂ also allows us to address the modal Meinongian’s intuition that “a golden mountain should be something concrete”. Assuming that the Meinongian intends to assert that “*the* golden mountain should be something concrete” (and not just a generic claim that doesn’t reference a fictional entity), then the ‘should’ statement means: if the golden mountain had existed, it would have been concrete. But this intuition is preserved by the concept of existence₂: if the golden mountain had existed₂, 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

⁵We’re not claiming that this is Kripke’s view, but it is a view worth considering.

concrete. So, if this is what the modal Meinongian’s intuition comes to, the object-theoretic analysis of “the golden mountain” preserves it.

The second form of the objection goes as follows (Berto 2013, 136):

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.

However, in stating the objection, Berto says something questionable, namely, “[H]e [Ponce de Leon] was searching for a concrete object.” This claim, on one natural reading, is false, for it asserts, where C denotes being concrete:

$$\exists x (Cx \ \& \ Spx)$$

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!

Since encoding offers a reading of a structural ambiguity in the natural language copula, we can provide an explanation of the intuition in question. For the English claim “Ponce de Leon was searching for an object that is concrete” is true under the following reading, where again C denotes being concrete:

$$\exists x (xC \ \& \ Spx)$$

Using ambiguous English, the above formal sentence can be read as: there is something that is concrete that Ponce de Leon searched for, i.e., Ponce de Leon searched for something concrete.

Another line of response is to note that the following claims are jointly 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. In other words, it may be that Ponce de Leon *thought* he was searching for a concrete object, but this is consistent with the fact that the object of his search is something abstract. Ponce de Leon’s *conception* of the fountain of youth is certainly relevant — but it is relevant to understanding the *sense* of the term “the fountain of youth”, not the denotation of this term.

Furthermore, the modal Meinongian fails to distinguish two ways of reading the description “the fountain of youth” as it might be used by Ponce de Leon. If Ponce de Leon were to say “The fountain of youth is concrete”, then OT 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 object that exemplifies being a fountain the waters of which confer everlasting life”, then clearly, the description denotes nothing and the claim is false. But if we take “the fountain of youth” in the mouth of de Leon to mean “the object that, according to the legend, exemplifies all of the properties necessarily implied by being a fountain the waters of which confer everlasting life”, then OT provides a denotation for this description, namely, the abstract object that encodes those properties. 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, given this reading of the ambiguous natural language sentence, de Leon may *correctly* assert: the fountain of youth is concrete.

Finally, the last form of the objection goes as follows (Berto 2013, 136):

I’m not sure whether it is true, as Mark Sainsbury has stated, that “authors ... 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 ... 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. 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.⁶ 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? Here we have a conflict of intuitions. We think authors and ordinary people would agree that fictional characters are abstract in virtue of being fictions that fail to 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, depending on the interpretation of the language of OT, the framework can be shown to be consistent with our pre-theoretic intuitions about existence, nonexistence, and possible existence. For within OT’s formal framework, (1) there are at least two senses in which Holmes fails to exist, (2) there is a sense in which Holmes exists, (3) there is a sense in which Holmes can’t be identical with any possible object (and so couldn’t possibly exist), and (4) there is a sense in which Holmes possibly exists. In connection with (1), Holmes fails to exist in both of the following senses:

- (i) Since Holmes is abstract ($A!x$), and *being abstract* is defined as *not possibly existing* ($\neg\Diamond E!x$), it follows that Holmes doesn’t exist ($\neg E!h$).
- (ii) We defined a second, weak sense of existence ($E!_2$) in this section on which Holmes fails to exist, namely, in the sense that nothing exemplifies all of the properties Holmes encodes.

In connection with (2), the sense in which Holmes exists is $\exists y(y = h)$, which is true since the name ‘Holmes’ (*‘h’*) denotes. Quineans take this to be sufficient for existence: to exist is to be the value of a variable, despite the Meinongian’s insistence that the existential quantifier doesn’t have existential import. Quineans would not be moved; they would say that OT is committed to a sense in which Holmes exists.⁷

⁶David Lewis 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*.

⁷If Quine is right about this, then OT’s distinguished predicate $E!$ has to be rein-

In connection with (3), we noted above that by being abstract, Holmes doesn't possibly exist. But this means he isn't identical with any object that does possibly exist, i.e., $\neg\exists x(\diamond E!x \ \& \ h=x)$. This preserves Kripke's view that Holmes can't be identified with any possible object: possible objects are complete and determinate down to the last detail, just like actual objects. But Holmes isn't one of these possible objects: there are too many possible objects that exemplify all of the properties attributed to Holmes in the stories. So there is no way to assign a denotation to 'Holmes' from among those objects.

Finally, in connection with (4), the sense in which Holmes possibly exists is this: it is possible that there is an existing object that exemplifies all of the properties Holmes encodes, i.e., $\diamond\exists y\forall F(hF \rightarrow Fy)$, i.e., given our definition of $E!_2$ in this section, $\diamond E!_2h$. This entails that there are (complete and determinate) possibly existing objects that exemplify all of the properties attributed to Holmes in the Conan Doyle novels. Certainly this preserves a sense in which Holmes possibly exists.

Consequently, we think that the analytical suggestion that fictions are abstract theoretical entities, when filled out as above, can preserve ordinary intuitions about the existence, nonexistence, and possible existence of fictional characters such as Holmes.

6 Modal Meinongianism Not Generalizable

We'd like to point out that MM doesn't seem to be generalizable in the same way that OT is. For OT offers an account of *fictional properties* like being a unicorn, being a hobbit, etc., in addition to giving an account of fictional individuals. That is, OT's account of fictional individuals generalizes to fictional entities at higher logical types. The primitive notions and definitions of OT can be recast in a simple type-theoretic framework, as follows: let ' i ' be the type for individuals and let ' $\langle t_1, \dots, t_n \rangle$ ' be the type of relations between objects of type t_1, \dots, t_n , for any types t_1, \dots, t_n . Then the language of OT can be easily typed: the two atomic

terpreted as a *concreteness* predicate. So the fact that Holmes exists in the Quinean sense that $\exists y(y = h)$ is consistent with the claims made in (1) when reinterpreted accordingly: Holmes is not concrete ($\neg E!h$), and nothing exemplifies all of the properties Holmes encodes ($\neg E!_2h$). On this Quinean reading, Holmes exemplifies being abstract but doesn't encode it (since it isn't attributed to him in the novel), but he encodes being concrete, but doesn't exemplify it.

formulas would be introduced as having the following forms:

$$F^{\langle t_1, \dots, t_n \rangle} x^{t_1} \dots x^{t_n}$$

(objects x^{t_1}, \dots, x^{t_n} exemplify relation $F^{\langle t_1, \dots, t_n \rangle}$)

$$x^t F^{\langle t \rangle}$$

(object x^t encodes property $F^{\langle t \rangle}$)

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

$$\exists x^t (A!^{\langle t \rangle} x^t \ \& \ \forall F^{\langle t \rangle} (x^t F^{\langle t \rangle} \equiv \phi)),$$

where ϕ is any formula with no free occurrences of x^t

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 ϕ , where ϕ is a condition on properties of type t objects. In this principle, the predicate ' $A!$ ' has the type $\langle t \rangle$, i.e., it denotes a property of type t objects, and we assume there is such a property of this type for every type t . Similarly, the variable ' F ' is of type $\langle t \rangle$, i.e., it is a variable that ranges over properties of type t objects.

This theory has been applied to such fictional properties as *being a unicorn* and *being a hobbit* (Zalta 2006). Briefly, the idea is that if we take the legend (l) about unicorns or the corpus of Tolkien novels (n) about hobbits, 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*:

- (C) According to the legend l , *being a unicorn* exemplifies \mathcal{F} .
 $l \models \mathcal{F}U$
- (D) According to the novels n , *being a hobbit* exemplifies \mathcal{F} .
 $n \models \mathcal{F}H$

These are open formulas in which the variable \mathcal{F} occurs free. \mathcal{F} ranges over properties of properties (these are entities of type $\langle\langle i \rangle\rangle$). Some properties of properties satisfy these open formulas and some don't. So, where we take type t to be the specific type $\langle i \rangle$, then x has type $\langle i \rangle$, $A!$ has type $\langle\langle i \rangle\rangle$, \mathcal{F} has type $\langle\langle i \rangle\rangle$, and OT asserts the following axioms:

$$\exists x(A!x \ \& \ \forall \mathcal{F}(x\mathcal{F} \equiv l \models \mathcal{F}U))$$

$$\exists x(A!x \ \& \ \forall \mathcal{F}(x\mathcal{F} \equiv n \models \mathcal{F}H))$$

The first asserts that there is an abstract property (i.e., an entity of type $\langle i \rangle$) that encodes just the properties \mathcal{F} of properties such that, in the legend l about unicorns, the property *being a unicorn* exemplifies \mathcal{F} .⁸ Similarly, the second asserts that there is an abstract property (i.e., an entity of type $\langle i \rangle$) that encodes just the properties \mathcal{F} of properties such that, in the Tolkien novels n about hobbits, the property *being a hobbit* exemplifies \mathcal{F} . Since these abstract properties are unique, we can identify the properties *being a unicorn* and *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 abstract entity of type i , the properties *being a unicorn* and *being a hobbit* are abstract entities of type $\langle i \rangle$. Given some body of truths of the form (C) and (D) above, we have uniquely identified the fictional properties in question.

So, in OT, there is a parallel between fictional individuals and fictional properties. Just as fictional individuals are abstract and so, by definition, not possibly concrete, similarly, fictional properties are abstract properties and therefore not possibly concrete properties. Among the possibly concrete properties we find concrete properties, like *being happy*, *being red*, etc., but also the properties that might be exemplified but are not, such as *being a giraffe in the Arctic Circle*, *being a million carat diamond*, *being a talking donkey*, etc. These properties are determinate and not axiomatized by OT. But *being a unicorn* and *being a hobbit*, are both (a) abstract, and (b) indeterminate with respect to the properties of properties that they encode.⁹ Thus, in OT, we can truly say that *being a unicorn* and *being a hobbit* are abstract properties, not ordinary properties.

To continue the analysis, let's suppose that species can be identified as properties. Then OT validates Kripke's view that *being a unicorn* is "not a possible species" since *being a unicorn* can't be identified with any possibly concrete property. Kripke (1980 [1972], 157) notes that there are too many different possible species, e.g., ones with different DNA structures, etc., that are consistent with the legend about unicorns.¹⁰ In

⁸Clearly, the properties attributed to the property *being a unicorn* in the legend are such higher-order properties as: being a property exemplified by white, horse-like animals, being a property exemplified by animals with one horn on their forehead, etc.

⁹Every individual and every property is complete with respect to the properties they exemplify. However, exemplified properties of properties are not the ones we use to identify fictional properties. So we can put aside the properties of properties that fictional properties exemplify.

¹⁰Kripke writes (1980 [1972], 157):

OT, the fictional property of *being a unicorn* is incomplete with respect to its encoded properties, given the legend, and so can't be identified with any of the completely determined possible species (i.e., can't be identified with any possibly concrete properties). The property of *being a unicorn* has been identified solely in terms of the incompletely specified properties of properties given by the legend.

By contrast, *ordinary* properties are ones that don't encode properties at all. They are, by definition, possibly concrete (where now 'concreteness' is a higher-order property of properties). So the situation is analogous to Holmes: Holmes isn't 'possible' because there is no possibly concrete (and complete) individual with which he can be identified; there are too many of those consistent with the Conan Doyle novels. Similarly, *being a unicorn* isn't 'possible' because there is no possibly concrete (and complete) property with which it can be identified; there are too many possibly concrete properties consistent with the legend (i.e., too many possibly concrete properties that exemplify all the properties of properties attributed to *being a unicorn* in the legend). This, then, validates Kripke's view that *being a unicorn* isn't a possible property.

Of course, just as with fictional individuals, we can define a sense in which *being a unicorn* is a 'possible' property, namely: there might have been a possibly concrete (and possibly exemplified) property that exemplifies all the properties of properties attributed to *being a unicorn* in the legend.

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

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 once species are taken to be properties: fictional properties can't be identified with possibly concrete properties.

Bibliography

- Berto, F., 2013, *Existence as a Real Property: The Ontology of Meinongianism*, Dordrecht: Springer.
- Berto, F., and G. Priest, 2014, “Modal Meinongianism and Characterization: Reply to Kroon,” *Grazer Philosophische Studien*, 90(1): 183–200.
- Boolos, G., 1987, “The Consistency of Frege’s *Foundations of Arithmetic*,” in *On Being and Saying*, J. Thomson (ed.), Cambridge, MA: MIT Press, 3–20; reprinted in G. Boolos, *Logic, Logic, and Logic*, Cambridge, MA: Harvard University Press, 1998, pp. 183–201. [Page reference is to the reprint.]
- Byrd, M., 1986, “Review of Zalta’s *Abstract Objects*,” *Journal of Symbolic Logic*, 51(1): 246–248.
- Findlay, J., 1963 [1933], *Meinong’s Theory of Objects and Values*, Oxford: Clarendon Press.
- Kripke, S., 1980 [1972], *Naming and Necessity*, Cambridge, MA: Harvard University Press.
- Kripke, S., 2013 [1973], *Reference and Existence: The John Locke Lectures*, Oxford: Oxford University Press.
- Kroon, F., 2012, “Characterization and Existence in Modal Meinongianism,” *Grazer Philosophische Studien*, 86: 23–34.
- Lewis, D., 1978, “Truth in Fiction,” *American Philosophical Quarterly*, 15(1): 37–46.
- Mally, E., 1912, *Gegenstandstheoretische Grundlagen der Logik und Logistik*, Leipzig: Barth.
- Meinwald, C., 1992, “Good-bye to the Third Man,” in *The Cambridge Companion to Plato*, R. Kraut (ed.), Cambridge: Cambridge University Press, pp. 365–396.
- Pelletier, F.J., and E. Zalta, 2000, “How to Say Goodbye to the Third Man,” *Noûs*, 34(2): 165–202.
- Priest, G., 2016 [2005], *Towards Non-Being: The Logic and Metaphysics of Intentionality*, second edition, Oxford: Oxford University Press; first edition, 2005.
- Rapaport, W., 1978, “Meinongian Theories and a Russellian Paradox,” *Noûs*, 12(2): 153–180.
- Sainsbury M., 2010, *Fiction and Fictionalism*, London & New York: Routledge.
- van Inwagen, P., 1983, “Fiction and Metaphysics,” *Philosophy and Literature*, 7(1): 67–78.
- Zalta, E., 1983, *Abstract Objects: An Introduction to Axiomatic Metaphysics*, Dordrecht: D. Reidel.
- , 1988, *Intensional Logic and the Metaphysics of Intentionality*, Cambridge, MA: MIT Press.
- , 2000, “The Road Between Pretense Theory and Abstract Object Theory,” in *Empty Names, Fiction, and the Puzzles of Non-Existence*, A. Everett and T. Hofweber (eds.), Stanford: CSLI Publications, pp. 117–147.
- , 2006, “Deriving and Validating Kripkean Claims Using the Theory of Abstract Objects,” *Noûs*, 40(4): 591–622.