On Mally's Alleged Heresy: A Reply

Edward N. Zalta*
Philosophy Department
Stanford University

Abstract: In this paper, I respond to critics who claim that E. Mally's distinction between two modes of predication, as it is employed in my theory of abstract objects, is reducible to, or analyzable in terms of, a single mode of predication plus the distinction between nuclear and extranuclear properties. I argue against these claims by developing counterexamples to the reductions and analyses. I also offer reasons for thinking that no such reduction/analysis could be successful.

§1: Introduction

Over the past thirty years, Alexius Meinong's theory of objects has come in for some reevaluation. Many philosophers no longer see Russell's objections to the theory as fatal. Some of these philosophers have found interesting ways to modify Meinong's naive theory so as to make it immune to Russell's objections. While some of the ways of altering Meinong's theory require revisions in the deductive apparatus of classical logic, others don't, and among the ones that don't require such revisions, two have been formalized and axiomatized. These are T. Parsons's theory of nonexistent objects (Parsons 1980) and my own theory of abstract objects (Zalta 1983). Both theories are based on distinctions made by Meinong's student Ernst Mally. Parsons's theory is based on Mally's distinction between two kinds of property, the 'nuclear' and 'extranuclear' properties. My theory is based on Mally's distinction (Mally

1912), which I've labeled 'exemplification' and 'encoding'. In a recent paper, Dale Jacquette asserts that the distinction between two modes of predication is reducible to a single mode of predication plus the distinction between nuclear and extranuclear properties (Jacquette 1989). He implies that my formal, axiomatic theory of abstract objects is reducible to a theory of nonexistent objects based on the nuclear/extranuclear distinction. Moreover, Kit Fine has argued for a somewhat similar claim, namely, that a two-way translation scheme between Parsons's language and my own can be given (Fine 1984).

In this paper, I argue against Jacquette's claims by showing that his proposed reduction fails. His proposal turns truths of my theory into falsehoods and *contradictions* and this demonstrates its inadequacy. I also offer what I take to be conclusive reasons why no such reduction could be successful, and in the process, I show that the two-way translation between Parsons's language and my own offered by Fine doesn't work. In what follows, I shall assume that the reader has some familiarity with Mally's distinctions, Parsons 1980, and Zalta 1983. The last of these is explicitly identified as one of the two targets of Jacquette's attempted reduction. The other target is Rapaport 1978, in which two modes of predication are used. I shall not explicitly defend Rapaport's views here, though I suspect that considerations similar to the ones that I raise in defense of my own theory will serve as a basis for defending Rapaport.

§2: Jacquette's Analysis

Let me begin by examining the exact expression of Jacquette's conviction that an object theory based on the nuclear/extranuclear property distinction is more basic than one based on two modes of predication. He says (1989, 5):

A more interesting argument can be made to show that Meinongian object theory based on Meinong's choice of the nu-

^{*}This paper was published in *History and Philosophy of Logic*, **13**/1 (1992): 59–68. I would like to thank my student Mark Criley for bringing to my attention one of the articles to which the present paper is a reply. I would also like to acknowledge the generous support I've received from the Center for the Study of Language and Information (CSLI).

¹Mally's distinctions are described in J. N. Findlay 1963. On p. 176, Findlay cites p. 176 of Meinong 1915 as the place where Meinong credits Mally with the nuclear/extranuclear distinction. On pp. 110–112 and 183–184, Findlay cites Mally 1912 as the origin of the distinction between 'being determined by' and 'satisfying' a property (I use 'encodes' and 'exemplifies' a property to label this distinction). This latter distinction has also recently resurfaced in the work of Castañeda 1974 (internal/external predication) and Rapaport 1978 (being constituted by a property vs. exemplifying a property).

clear—extranuclear property distinction is more fundamental than the Mallyan dual copula or dual modes of predication approach, in the sense that the dual copula or dual modes of predication distinction can be reduced to the nuclear—extranuclear property distinction, but not conversely, and that there are problems and object theory paradoxes which can be solved by the nuclear—extranuclear property distinction that cannot be satisfactorily solved by the dual copula or dual modes of predication distinction. These considerations justify Meinong's decision not to accept dual modes of predication, and set constraints for continued efforts to reconstruct a satisfactory formal Meinongian object theory logic.

Jacquette then goes on to offer a reduction scheme.

Before we explicitly examine the reduction scheme, a slight digression is in order. Though I have said that I shall assume some familiarity with my work, it will prove useful to outline at least that part of the theory needed to understand both the proposed reduction and my counterexamples to the reduction. Here are the basic facts about the theory.

The distinction between x exemplifies F and x encodes F is represented symbolically in terms of the distinction between 'Fx' and 'xF'.² Ordinary existing objects like you, me, and this computer terminal are objects that exemplify the property of existence (E!), where 'existence' is just taken to mean 'having a location in space-time'. Such objects do not encode any properties, and it is axiomatic that: E! $x \to \neg \exists FxF$. Two such existing objects are identical just in case they both exemplify the same properties:

$$E!x \& E!y \rightarrow (x=y \leftrightarrow \forall F(Fx \leftrightarrow Fy)).$$

Abstract objects, on the other hand, are defined to be objects that fail to exist: $A!x =_{df} \neg E!x$. The notion of 'existence' here is just the notion of having a location in space-time. I call these objects 'abstract' rather than 'nonexistent' because in the more advanced, modal version of the theory, the 'abstract' objects are defined to be the kind of thing that couldn't have a location in space-time $(A!x =_{df} \neg \diamondsuit E!x)$. Since this is the notion of 'abstract' employed in the more comprehensive version of the theory, I use it for the less comprehensive, nonmodal version of the theory as well.

The theory asserts that for any condition ϕ on properties, there is an abstract object that encodes all and only the properties satisfying ϕ :

$$\exists x (A!x \& \forall F(xF \leftrightarrow \phi)), \text{ where } \phi \text{ has no free } xs$$

This abstraction principle for abstract objects is complemented by the following principle concerning the identity of abstract objects, namely, that two abstract objects are identical iff they encode the same properties:

$$A!x \& A!y \rightarrow (x=y \leftrightarrow \forall F(xF \leftrightarrow yF))$$

Though existing objects only exemplify and do not encode properties, abstract objects both encode and exemplify properties. The abstraction principle tells us what properties a given abstract object encodes. Lots of abstract objects will be incomplete with respect to the properties that they encode. That is, there are abstract objects x and properties F such that x neither encodes F nor encodes the negation of F. In formal terms, where $\bar{F} =_{df} [\lambda y \neg F y]$, the following is a theorem: $\exists x \exists F(\neg x F \& \neg x \bar{F})$. However, it is important to note that abstract objects may exemplify properties as well as encode them! For example, all abstract objects exemplify the property of nonexistence (\bar{E} !). In fact, since each abstract object is an object, it is complete with respect to the properties that it exemplifies. That is, each abstract object x is such that for every property F, either Fx or $\bar{F}x$.

Abstract objects may, but need not, exemplify the properties they encode. An object like "the round square", which encodes just the two properties roundness and squareness, does not exemplify either of these two properties. Instead, it exemplifies such properties as: being nonround (\bar{R}) , being non-square, having no shape or size, being thought about by Meinong, being thought about by Russell, etc. It exemplifies the first three properties in virtue of the fact that it is an abstract object, and as such, has no location in space-time and so fails to have a shape, size, etc. It exemplifies the latter two properties as a matter of contingent fact. Similarly, Sherlock Holmes is identified as that abstract object that encodes all and only the properties attributed to him in the Conan Doyle novels. So Holmes encodes the properties of being a detective, living at 221B Baker Street, having Watson as a friend, etc. But, qua object, he exemplifies all sorts of properties as well. For example, he exemplifies the property of being more famous than any real detective; he exemplifies the property of inspiring modern criminologists; etc. In what follows, we

 $^{^2{\}rm I}$ have motivated this distinction in various other places. See Zalta 1983,~1–14, and Zalta 1988,~15–19.

shall encounter examples of abstract objects that exemplify some of the same properties they encode. These exemplification and encoding facts may all be represented in the language of the theory, using the distinction between 'Fx' and 'xF'.

Any proposed reduction that fails to take seriously the above facts will not do justice to the theory. I hope to show that Jacquette's proposed reduction fails to take seriously the fact that abstract objects may exemplify properties. Just before he offers the reduction sentences, he says (1989, 5):

The reduction of the dual copula or dual modes of predication distinction to the nuclear—extranuclear property distinction is easy to accomplish, since the two predication modes arise entirely in connection with whether or not an object has the extranuclear property of existence. ... Zalta... distinguishes between the properties encoded by a nonexistent object and those exemplified by an existent object, elegantly exploiting the argument places left and right of n-ary predicate symbols

Already, it looks as if Jacquette has assumed that abstract objects just encode their properties while ordinary existing objects exemplify their properties. As we have just seen, this is not the case. Abstract objects may both encode and exemplify properties.

This apparent misunderstanding is confirmed when we examine Jacquette's reduction sentences. He says (1989, 5):

These distinctions [between encoding and exemplifying] can be reduced to the nuclear–extranuclear property distinction with univocal nonplural predication by the following equivalences. The extranuclear existence property may be symbolized 'E!'. An extranuclear Sosein function 'S' is introduced, which takes a Meinongian object into its Sosein as interpreted by Zalta and Rapaport.

Jacquette then offers the following two reduction sentences for encoding and exemplification, respectively:

$$x_1 \dots x_n F^n \leftrightarrow \bar{E}! x_1 \& \dots \& \bar{E}! x_n \& F^n \in \mathcal{S}(x_1 \dots x_n) \& \neg F^n x_1 \dots x_n$$

 $F^n x_1 \dots x_n \leftrightarrow E! x_1 \& \dots \& E! x_n \& F^n x_1 \dots x_n$

Jacquette does not tell the reader what the Sosein function S is, though presumably it maps each object into the set of properties that constitute its primitive nature. This notion comes to us from naive Meinongian theory—every object has a nature that consists of the properties which make it what it is, whether or not it exists. But note that Jacquette has this function S operating on sequences of objects. He doesn't address the question of whether it makes sense to say that an n-tuple of objects has a nature, nor does he mention that this nature, were there such a thing, would have to be a set of relations.

This whole question about the nature of n-tuples could have been avoided if Jacquette had focused on the theory as I presented it. The presentation in Zalta 1983 does not generalize the notion of encoding to n objects. Encoding is a monadic form of predication. There are no general formulas of the form $x_1 cdots x_1 cdots x_2 cdots x_3 cdots x_4 cdots x_4 cdots x_5 cdots x_4 cdots x_5 cdots x_5 cdots x_6 cdots x_6 cdots x_7 cdots x_7 cdots x_8 cdots x_7 cdots x_8 cdot$

(A)
$$xF \leftrightarrow \bar{E}!x \& F \in \mathcal{S}(x) \& \neg Fx$$

Though Jacquette does not say so explicitly, his comments (previously cited) suggest that the predicate ' \bar{E} !' denotes the negation of the predicate 'E!'. In other words, ' \bar{E} !' is simply an abbreviation ' $[\lambda y \neg E!y]$ '. If this is correct, then we may read Jacquette's reduction of encoding as follows: x encodes F if and only if x exemplifies nonexistence, F is part of the Sosein or nature of x, and x fails to exemplify F.

Similarly, the reduction sentence for exemplification has the following consequence for one-place properties F:

(B)
$$Fx \leftrightarrow E!x \& Fx$$

In other words, x exemplifies F if and only if x exists and x exemplifies F.

³The reasons for this are explained in Zalta 1988, 36–7.

7

Before I present counterexamples to (A) and (B), I would like to make a global observation, namely, that Jacquette is not proposing a reduction of one theory to another theory. In particular, he is not trying to show that the theory in Zalta 1983 is reducible to the one in Parsons 1980. One clear way of establishing that a theory T is more fundamental than theory T' is to show that T' can be reduced to T but not vice versa. The question of theory reduction is clearcut—a theory T' reduces to a theory T just in case there are definitions in T of the primitive notions of T'such that all of the axioms of T' come out as theorems of T. So it is noteworthy that Jacquette is not trying to establish a strong claim about theory reduction, but is opting for some weaker claim. Recall again the first quotation from p. 5 of Jacquette's article, where he says he plans to show "that Meinongian object theory based on Meinong's choice of the nuclear–extranuclear property distinction is more fundamental than the Mallyan dual copula or dual modes of predication approach, in the sense that the dual modes of predication distinction can be reduced to the nuclear–extranuclear property distinction, but not conversely,"

So though Jacquette alleges that Meinongian object theory based on the nuclear/extranuclear distinction is 'more fundamental', instead of attempting to reduce my theory to one based on this distinction, Jacquette attempts to "reduce" the distinction between the two modes of predication. He therefore analyzes only the atomic statements of the two copula approach! (A) and (B) analyze the atomic modes of predication in terms of a conjunction of atomic sentences which utilize a single mode of predication (exemplification) and the distinction between nuclear and extranuclear properties.⁴ However, for the analysis to be successful, not only must the biconditionals (A) and (B) be true, but the truth of any complex sentence consisting of some combination of atomic exemplification and encoding subformulas must be preserved when the subformulas are replaced by the formulas equivalent to them according to (A) and (B).

Thus, there are two strategies for showing that (A) and (B) fail as a

analysis. One strategy is to show that, as biconditionals, they are false, and this can be done by producing a direct counterexample. The other strategy is to produce a complex sentence, such as 'xF & Fx' which is true for some x and F on the two copula approach, but the analysis of which given (A) and (B) turns out false. In what follows, we use both strategies, beginning with the latter.

Note that the analysis of encoding, namely (A), requires that if an object x encodes F, then x fails to exemplify F in the eyes of the language used for the analysis. Intuitively, this must be wrong, for there are all sorts of abstract objects that may exemplify the very properties that they encode. Take, for example, the object we might label as 'the non-square square'. The two modes theory treats this as the object that encodes just the property of being square (S) and the property of being nonsquare (\bar{S}) . We may consistently assert that this object exemplifies \bar{S} as well as encodes it. After all, it is an abstract object, and as such, it fails to have a location in space-time and so fails to have a shape of any kind. It therefore exemplifies being non-square. The non-square square, so analyzed, is an interesting object because it is one of those objects that, intuitively, exemplifies one of the very same properties that it encodes, namely, being non-square. So if we let 'a' denote the non-square square (as just described), then the following two sentences are consistent in the two copula theory: $a\bar{S}$ and $\bar{S}a$. The former is in fact a theorem of the theory, whereas the latter is something that may be added as a hypothesis. Nevertheless, the two are jointly assertable without contradiction.

But these jointly consistent sentences yield an inconsistency on the proposed analysis. By (A), we have:

$$a\bar{S} \leftrightarrow \bar{E}!a \& \bar{S} \in \mathcal{S}(x) \& \neg \bar{S}a$$

But by (B) we have:

$$\bar{S}a \leftrightarrow E!a \& \bar{S}a$$

Clearly, our original, jointly assertable sentences become transformed into sentences from which two contradictions are derivable. On the one hand,

$$\exists x (A!x \& \forall F(xF \leftrightarrow F = S \lor F = \bar{S}))$$

In fact, by the definition of identity for abstract objects, there is a unique such object, and hence, we are entitled to introduce a name or a description for this object, as we do below.

⁴It is unclear to me just how the nuclear/extranuclear distinction figures into (A) and (B). Jacquette says that the existence predicate designates an extranuclear property, and that the Sosein function is extranuclear. But what is the force of saying these things? We do not know what the nuclear/extranuclear distinction amounts to unless he gives us a theory or an analysis of the distinction the way Parsons does.

⁵Formally, the theory asserts that there is such an object by the following instance of the abstraction schema for A-objects:

we may derive that E!a and $\bar{E}!a$ (which by λ -conversion constitutes a contradiction). In addition, we may derive that $\bar{S}a$ and $\neg \bar{S}a$. The first contradiction arises because the analysis ignores the fact that both existing and abstract objects may exemplify properties. Exemplification is not limited to the existing objects, as the reduction sentences imply. The second contradiction arises because analysis ignores the fact that on the two copula theory, some abstract objects exemplify the very same properties that they encode.

Though this example of the non-square square shows that the analysis fails, it requires that we use both a theorem $(a\bar{S})$ and an added hypothesis $(\bar{S}a)$ that is consistent with the theory. An even better example can be constructed using only theorems of the theory. The theory actually asserts that there is an object that exemplifies one of the same properties that it encodes. Consider the abstract object that encodes just the property of nonexistence $(\bar{E}!)$. Let us call this object 'b'. So it is a trivial theorem that b encodes nonexistence, and this is formally captured as: $b\bar{E}!$. But since b is an abstract object, it exemplifies the property of nonexistence as well: from A!b, it follows by definition that $\neg E!b$, and by λ -conversion, it follows that $[\lambda y \neg E!y]b$. So it is a theorem that $\bar{E}!b$. Now we have the same situation as before, since we have the conjunction $b\bar{E}!$ & $\bar{E}!b$. The conjunction tells us that a certain object x both encodes and exemplifies a certain property F, except this time, both conjuncts are consequences, and hence truths, of the theory.

Clearly, Jacquette's analysis turns this true conjunction into a false-hood. No legitimate analysis should fail to preserve the truth value of the sentences being analyzed.

Recall that the other strategy for demonstrating the inadequacy of the analysis is to produce a direct counterexample to (A) or (B). It is easy to produce a direct counterexample to (B). Consider, for any abstract object c, the claim that c exemplifies the property of nonexistence $\bar{E}!$. In other words, consider the claim $\bar{E}!c$. On the two copula theory I've developed, claims of this form are axiomatic, and hence true. Now consider the biconditional that (B) yields with respect to this truth:

$$\bar{E}!c \leftrightarrow E!c \& \bar{E}!c$$

$$\exists x (A!x \& \forall F(xF \leftrightarrow F = \bar{E}!))$$

Again, any such object is unique, and we are entitled to give it a name.

So axiomatic truths of the two copula theory become equivalent to contradictions on the proposed analysis. This reveals how clearly (B) fails as part of the analytic scheme.

There is another important inadequacy of the proposed analysis that ought to be mentioned. It is revealed by the fact that the two copula theory does not appeal to sets or the notion of set membership. Yet (A) requires the notion of set membership in the language that couches the analysis. Now either sentences of the form ' $x \in y$ ' constitute a new primitive form of predication for the nuclear/extranuclear approach or they do not. If they do, then metaphysically, this is just another two copula approach in disguise. If they do not, and sentences of the form $x \in y$ are simply exemplification predications of the form (x, y), then, at the very least, sets (and the axioms of set theory) must be included as part of the metaphysical foundations. This is a price that has to be paid and which ought to be mentioned. As it stands, the language of my two copula approach is metaphysically 'pure', for it contains no primitive mathematical notions. The theory has a similar metaphysical purity, for it postulates no primitive mathematical objects. Consequently, Jacquette has not addressed the question of whether a similarly pure language and theory of objects based on the nuclear/extranuclear distinction, in and of itself, is sufficient to translate and reduce, respectively, the language and theory of the two copula approach.⁸

§4: Counterexample to Fine's Alleged Translation

It seems to me that no pure nuclear/extranuclear language (theory) using just a single mode of predication could possibly serve to translate (reduce) the two-copula language (theory). That is because the metaphysical pictures embodied by the language of each approach are just incommensurable. There are several aspects to this incommensurability. First, the language of the two copula approach pictures the worlds as having two kinds of objects and a single kind of relation, whereas that of the nuclear/extranuclear approach pictures the world as having a single

⁶Formally, the theory asserts that there is such an object with the following instance of the abstraction schema for A-objects:

 $^{^7{}m In}$ Zalta 1983, 147–53, I tried to show how mathematical objects and relations can be identified as abstract objects and abstract relations.

⁸It is important to remember here that the monadic version of my two-copula approach is proved consistent by the existence of a model for the theory in ZF; see Zalta 1983, 160–64. But I do not see what philosophical conclusions could be drawn from the fact that the theory has a mathematical model.

kind of object and two kinds of relations. These pictures are so radically different that there seems to be no natural way to interpret one approach in terms of the other.

Secondly, in the language of the nuclear/extranuclear approach, existence is treated as an extranuclear property. This means it can be no part of the nature or Sosein of an object. On Parsons's version of the nuclear/extranuclear approach, the notion of the nature of an object is captured by the nuclear properties that an object exemplifies. Objects are generated by an abstraction principle that employs conditions on nuclear properties alone. So extranuclear existence is never part of the nature of an object in the sense that it can never be part of the defining condition for an object. By contrast, the property of existence may be part of the nature of an object on the two modes approach. The notion of an abstract object's nature is captured on the two copula approach by the properties that the object *encodes*. Abstract objects may encode existence, and so existence may be part of the nature of an object, in direct contrast to the nuclear/extranuclear approach. For example, on the two copula approach, it is part of the nature of Sherlock Holmes that he exists. The theory asserts that existence is a property that Holmes encodes, since he is attributed existence in the novels. But it does not follow that Holmes exemplifies existence. By contrast, extranuclear existence is not part of the nature of Holmes on the nuclear/extranuclear approach.

One might argue that, on Parsons's theory, the nuclear, 'watered down' version of existence may be part of the nature of an object. But then the nuclear, 'watered down' version of extranuclear existence is not the same property as extranuclear existence. On Parsons's theory, an extranuclear property that an object may exemplify is never identical with any of the nuclear properties that make up the nature of the object. The domains of extranuclear and nuclear properties are disjoint and mutually exclusive. But on the two copula approach, the very same properties exemplified by an object may be encoded as part of its nature. Suppose for the moment that a given relation F on the two-copula approach corresponds, on Parsons's approach, to both a nuclear version F^N and an extranuclear version F^E , where F^N is the nuclear, watered-down version of F^E (symbolized: $F^N = w[F^E]$). Suppose further we have a case where both xF and Fx are true on the two copula approach. Even if we were to analyze the encoding claim that xF by the claim that F^Nx , and analyze the exemplification claim that Fx by the claim that $F^{E}x$, we wouldn't get a theorem that corresponds to:

(C)
$$\exists x \exists F(xF \& Fx)$$
.

The closest that a nuclear/extranuclear theorist could come to this is:

$$\exists x \exists F^N \exists F^E (F^N x \& F^E x \& F^N = w[F^E])$$

But, of course, this does not capture the significance of (C), for though $F^N = w[F^E]$, it is never the case that $F^N = F^E$ on Parsons's view. This nuclear/extranuclear approach cannot express the idea that one and the same property is both a part of the nature of an object x and at the same time an extranuclear property that x exemplifies.

This suggests that there is an important sense in which the two languages are just incommensurable. They organize the world in such fundamentally different ways that it makes little sense to try to translate one to the other. The above facts demonstrate that the two-way translation between the languages of the two approaches offered by Kit Fine doesn't work. Fine asserts (1984, 98):

We may treat the encoder's assertion that x exemplifies P as tantamount to the nuclear theorist's assertion that x has P; and we may treat the encoder's assertion that x encodes P as tantamount to the nuclear theorist's assertion that x has the nuclear property P^N associated with P (of which more will be said later). Under the reasonable assumption that every nuclear relation is a nuclear weakening R^N of some extranuclear relation R, this then leads to a two-way translation between the languages of the encoder and the nuclear-theorist. . . .

Under such a translation, the theories on one approach will be interpretable as theories on the other approach. It is not to be expected that the actual theories developed on either approach will be mutually interpretable; the choice of axioms is too random for that. But to any reasonable theory of the one sort, there will correspond a reasonable theory of the other sort.

I think we can show that Fine's two-way translation between the two languages doesn't work simply by pointing to the existence of sentences such as (C). Note that Fine, like Jacquette, only offers a link between the *atomic* sentences of the two languages. But this is a far cry from

giving a general two-way translation, for we have seen that the molecular and quantified sentences have to be intertranslatable as well. A theorem such as (C) is a very important quantified molecular sentence of encoding theory, and nothing in Fine's "translation procedure" suggests how it could be translated into the language of the nuclear/extranuclear theory. We saw that the only possible candidate fails to capture an important component of the meaning of (C). The fact that there is no sentence in the nuclear/extranuclear approach that captures the significance of (C) indicates that this 'mutual interpretability' that Fine discusses comes to nothing more than the fact that the atomic elements of the two languages have corresponding roles. But from this, it does not follow that that one language can be translated into the other. Sentences like (C) give the lie to that claim. So, contrary to what Fine says, it is not the randomness in the choice of axioms that prevents the mutual interpretation.

§5: Conclusions

If this is right, then instead of trying to argue that one theory (language) is reducible (translatable) to the other, it seems better to investigate just which theory (language) bears the most philosophical fruit. This is decided by: (i) the volume of data which can be explained by the theories or analyzed in terms of the notions embedded in the languages, and (ii) the naturalness, simplicity, and elegance in terms of which such explanations and analyses are given.

Let me conclude with one final note. Jacquette offers other reasons in his paper for thinking that the two-copula approach is inferior to the nuclear/extranuclear approach. Recall the first quotation, where he says there are problems and object theory paradoxes which can be solved by the nuclear–extranuclear property distinction that cannot be satisfactorily solved by the dual copula or dual modes of predication distinction. I believe that it is not too difficult to show that the particular problems and paradoxes Jacquette cites do not plague the two-copula approach; but I shall leave the task of doing so for some other occasion.

Bibliography:

Castañeda, H. N., 1974 'Thinking and the structure of the world', *Philosophia*, 4, 3–40

- Findlay, J. N., 1963 Meinong's theory of objects and values, Oxford (Clarendon Press)
- Fine, K., 1984 'Critical review of Parsons's Nonexistent Objects', Philosophical Studies, 45, 95–142
- Jacquette, D., 1989 'Mally's heresy and the logic of Meinong's object theory', *History and Philosophy of Logic*, **10**, 1–14
- Mally, E., 1912 Gegenstandstheoretische Grundlagen der Logik und Logistik, Leipzig (Barth)
- Meinong, A., 1915 Über Möglichkeit und Wahrscheinlichkeit, Leipzig (Barth)
- Parsons, T., 1980 Nonexistent objects, New Haven (Yale University Press) Rapaport, W., 1978 'Meinongian theories and a russellian paradox', Noûs, 12, 153–80
- Zalta, E., 1983 Abstract objects: an introduction to axiomatic metaphysics, Dordrecht (D. Reidel)
- ———, 1988 Intensional logic and the metaphysics of intentionality, Cambridge (MIT Press/Bradford Books)