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Objectual Attitudes and Intentional Objects:  
A Theory of Incomplete Objects

Le Quyen Vu Pham

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## Objectual Attitudes and Intentional Objects: A Theory of Incomplete Objects

Le Quyen Vu Pham

People can look for, want, fear or imagine actual, particular things; things in general; things that do not exist; or things that cannot exist. Sally may be looking for *this* dog, Fido; fear dogs but no specific one; want Snoopy the dog in her favorite comic; or, arguably, imagine a dog that is not a canine. This paper is about the objects of nonspecific searches, as opposed to searches for particular actual or particular fictional objects, such as Fido or Snoopy. The proposed account will be generalizable to other fulfillment-based objectual intentional attitudes. I will defend two theses: first, that to be a searcher is to stand in a relation to the intentional object of the search; and second, that intentional objects of nonspecific search are a particular sort of ontological entities, namely abstract, nonmental, and incompletely determined objects.

The first section will introduce the puzzle of intentional acts or states and their putative objects. The second section will be a critical survey of different approaches to answering the question about the nature of intentional objects, in which I will argue for my first thesis, that there is a real, nonmental intentional entity which the person holding the intentional attitude is in a relation with. The second thesis, my own account of what such an object may be, will be developed in the third section.

## I.

Certain acts or states such as wanting, seeking and fearing, and verbs which express these acts or states, unlike acts or states like buying and finding and the corresponding verbs expressing them, present linguistically and philosophically interesting puzzles. On the one hand, some kinds of inference that are valid for statements about buying and finding are not valid for

statements about wanting and seeking, such as substitution by coextensive terms and existential generalization. On the other hand, certain kinds of inference that seem intuitively legitimate need to be accounted for.

I will use the term *intentional attitudes* for acts or states that are about, represent or stand for things or properties, such as wanting, seeking, fearing, and so on. Following standard practice, I will call the verbs expressing them *intensional verbs*, such as ‘want,’ ‘seek,’ and ‘fear,’ to contrast with *extensional verbs*, such as ‘buy,’ ‘find,’ and ‘see.’<sup>1</sup>

While we cannot buy, find or see something that does not exist, it seems that we can want, seek or fear things that do not exist. There is, at least at the surface level, something that these intentional attitudes are “about,” an object of some sort *of* the act or state, or an object *for* the subject, something that we can say does not exist or cannot exist. I will label this sort of theoretical object the *intentional object* of the intentional attitude.<sup>2</sup>

As will be seen, the difference between intentional and nonintentional attitudes is related to that between intensional and extensional verbs, and intentional objects are likewise related to grammatical objects of intensional verbs.

## 1.

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<sup>1</sup> In this paper I only use the nonepistemic (and transitive) senses of ‘find’ and ‘see,’ that is, *not* the senses in ‘I find this topic interesting’ and ‘I see the distinction you are making.’

<sup>2</sup> Intentional objects, which are hypothesized metaphysical entities, are not to be confused with grammatical objects which follow intensional transitive verbs and which are linguistic items. In the sentence ‘Sally wants a horse,’ the indefinite description ‘a horse’ is in the grammatical object position following the intensional verb ‘wants.’

Suppose that the fastest horse in the corral is Allegro. Then (1) entails that Sally saw Allegro, but (2) does not entail that she wants Allegro:

- (1) Sally saw the fastest horse in the corral.
- (2) Sally wants the fastest horse in the corral.

Moreover, (3) entails that there is a specific unicorn that Sally bought, yet (4) does not entail that there is a specific unicorn such that Sally seeks it:

- (3) Sally bought a unicorn.
- (4) Sally seeks a unicorn.

In fact, committing to the truth of (3) commits us to the existence of at least one unicorn, whereas the truth of (4) is neutral as to the existence of unicorns.

Note that there are two readings of sentences like (4), i.e. sentences of the form ‘S Vs an F,’ where ‘V’ is an intensional verb and ‘F’ is a common noun. Consider the sentence: ‘Sally wants a horse.’ On its first, *specific reading*, the sentence is a consequence of ‘Sally wants Allegro.’ This mirrors the case with extensional verbs; in fact, this is the only reading for sentences with extensional verbs: ‘Sally bought a horse’ follows from ‘Sally bought Allegro.’ On the second, *nonspecific reading*, there need be no sentence expressing a relation between Sally and an actual, specific horse, such as ‘Sally wants Allegro,’ from which we can derive ‘Sally wants a horse.’ For every horse, of all actual horses, it is not true that Sally wants *it*, specifically, even though she would be perfectly happy if she could own any of those. In this paper, unless otherwise specified, I will be discussing only the nonspecific reading of sentences containing intensional verbs.

(4), which contains an intensional verb ('seeks') and an indefinite description in the object position ('a unicorn'), is ambiguous between specific and nonspecific readings, and hence by itself does *not* imply the existence of the entities apparently described by the indefinite description (a unicorn or unicorns).

Sentences like (2) and (4) exhibit the linguistic phenomenon of *intensionality*, which is often described in terms of failures of *extensionality*, namely failure of existential generalization and/or lack of specificity (as in (4)), and failure of substitution of coextensive terms to preserve truth value (as in (2), where 'Allegro' and 'the fastest horse in the corral' are coextensive).

For the restricted cases of intentionality considered in this paper, i.e. those of searches, intentionality goes hand in hand with intensionality: the intensionality of an expression of search is explained, in part, by the intentionality of the search, and the mental phenomenon of intentionality may only be examined via its linguistic reports.

Despite the nonextensionality, the following inferences involving intensional verbs appear to be valid nonetheless:

(5) Sally is looking for *a unicorn*.

Therefore, she is looking for *something*, i.e. there is something she is looking for.

Sally is looking for *a round square cupola*.

Therefore, she is looking for *something*.<sup>3</sup>

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<sup>3</sup> This is not the same as to say that if Sally is looking for a round square cupola, then there is such a thing as a round square cupola, period. I do not deny the nonexistence of impossible objects, or the nonexistence of merely possible objects in the actual world. The problem becomes interesting precisely when these purportedly nonexistent objects feature as the objects of searches.

- (6) Sally is looking for *a blue unicorn*.  
Therefore, *the unicorn she is looking for* must be blue.
- Sally is looking for *a round square cupola*.  
Therefore, *the cupola she is looking for* must be round and square.
- (7) Sally is looking for *a gorgon* and *a unicorn*.  
Therefore, she is looking for *two different things* (or kinds of thing).
- (8) Sally is looking for *a unicorn*, and John is looking for *a unicorn*.  
Therefore, Sally and John are looking for *the same thing* (or kind of thing).

Existential claims like (5) and modal claims like (6) seem to be true. Furthermore, each of the search acts in (7) and (8) appears to be distinct or similar, which suggests that there must be something that provides a basis for comparison, even though gorgons and unicorns do not exist. It is therefore tempting to say that there is some *thing* we are talking about when we make these claims, that some *entity* really fills in the theoretical role that we have labeled the intentional object. We are thus posed with a twofold puzzle: to account for the semantics of the *grammatical objects* of the intensional verbs in the above claims, and to account for the metaphysical nature of the *intentional objects* that the italicized phrases apparently describe.

## 2.

Different elements in the puzzle will determine what an analysis of intentional attitudes, via an analysis of statements containing intensional verbs, must account for, namely the different types of intentional attitudes, different metaphysical statuses of intentional objects, and different linguistic descriptions of intentional objects.

Intensional verbs may be divided into *propositional attitude verbs* (e.g. ‘believe,’ ‘doubt’) and *intensional transitive verbs* (‘want,’ ‘seek’), which respectively express *propositional attitudes* (believing, doubting) and *objectual attitudes* (wanting, seeking). The distinction between propositional and objectual attitudes is thus related to a linguistic distinction: propositional attitude verbs typically take ‘that’-clause complements, e.g. the italicized phrase in ‘Quine doubts *that Ralph wants a sloop*,’ whereas intensional transitive verbs typically take noun phrase complements, e.g. as in ‘Ralph wants *a sloop*.’<sup>4</sup>

Objectual attitudes may be divided into three broad types: *fulfillment-based* (e.g. wanting, seeking); *evaluation-based* (e.g. liking, fearing, worshipping); and *depiction-based* (e.g. imagining, drawing, resembling). This paper will only concern fulfillment-based objectual attitudes, and the intensional transitive verbs that express them. In what follows I will generally use *searches* and *seek* verbs, but the account should be extendable to *desires* and *want* verbs.

Four types of entities may be at least theoretically involved in intentional attitudes, each of which can be expressed by a proper name, a definite description, or an indefinite description: *ordinary concrete objects* (‘Allegro,’ ‘the fastest horse in the corral,’ ‘a horse’); *merely possible* (possible but not actual) *concrete objects*, including mythical and fictional objects (‘Pegasus,’ ‘the horse that Bellerophon rides,’ ‘a winged horse’); *abstract objects* (‘the original proof of Gödel’s first incompleteness theorem,’ ‘a prime number’); and *impossible objects* (‘Sylvan’s Box,’<sup>5</sup> ‘the round square cupola on Berkeley College,’ ‘a round square cupola’).<sup>6</sup>

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<sup>4</sup> The examples are from Salmon (2005), who was recycling examples from Quine (1956).

<sup>5</sup> Sylvan’s Box is a contradictory box in Graham Priest’s short story (1997). It both contains a statue and is entirely empty.

Abstract objects, impossible objects, proper names, and definite descriptions raise problems which go beyond the scope of this paper, which will only focus on cases of nonspecific searches for ordinary or merely possible concrete objects described by indefinite descriptions.

As hinted at the end of the last subsection, two separate, though related, issues need to be further distinguished, namely the *semantic problem* of what the semantic contribution of ‘a horse’ is to the meaning of the sentence ‘Sally seeks a horse,’ and the *metaphysical problem* of whether Sally is in a relation to any sort of entity, and if so, what sort of entity that may be, when we say truly that Sally seeks a horse.

The semantic problem is concerned with the linguistic expression ‘Sally seeks a horse,’ as it asks, for example, under what conditions or in what situations it would be true, and what the quantified expression ‘a horse’ contributes to the sentence, given that the meaning of the sentence is a function of the semantic values of its components. The metaphysical problem is concerned with the nature of the situation in which Sally wants a horse; it asks what such a situation consists of, what, if any, entities are involved.

The aim of this paper is to propose an answer to the metaphysical problem, of which there are two sub-issues: first, whether an appropriate description of the situation would refer to some sort of *relation* that the searcher is in; second, if so, what *entities* the searcher is thereby

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<sup>6</sup> Here are slightly more detailed, albeit still crude, definitions: Abstract objects are neither spatial nor temporal. Concrete objects are spatial *or* temporal *or* causally efficacious. What I later call “physical objects” are spatiotemporal *and* causally efficacious objects, which are completely determinate. Ordinary concrete objects are those belonging to actual *kinds*, which are types of objects with at least one instance in the actual world. Merely possible concrete objects belong to merely possible kinds, types of objects without actual instances. Impossible objects belong to “kinds” with no instances in any possible world.

related to, and if not, then whether a description of the situation could be exhausted by stating some sort of *property* that the searcher has or *state* that the searcher is in.

I will call the positive answer to the first sub-issue *relationalism*, according to which intentional objects are ontological entities, whatever metaphysical status they may have. The negative answer constitutes *antirelationalism*.<sup>7</sup>

## II.

This section will be an argument for a particular variety of relationalism, namely realism. I will first challenge the argument against relationalism, before turning to my criticisms of two antirealist and three realist accounts, and finally to two further arguments in favor of realist relationalism.

### 1.

Antirelationalism about intentional attitudes, in the way I define it, is a negative thesis: there is no real relation to an object that the searcher is in *by virtue of* being in a searching attitude (though there may be a linguistic relation between the grammatical subject, which refers to the searcher, and the grammatical object of the search verb); there are, therefore, no such entities as intentional objects of nonspecific searches. Intentional objects are at best our theoretical label for part of the descriptions of intentional attitudes.

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<sup>7</sup> Compare Uriah Kriegel's taxonomy (2008:83-85): Relationalist views correspond to what Kriegel calls "act-object theories"; in particular, realism and idealism on my account correspond to the "existent-object views," and Meinongianism to the "object view." Kriegel's "adverbialism" is one version of antirelationalism.

In a way, antirelationalism is nominalism about intentional objects: the antirelationist either rejects that the statements (5)-(8) are true, or accepts the truth of these statements, but only as nonliteral paraphrases of other statements that do not imply an ontological commitment to intentional objects.

The negative argument *against* relationalism can be put in the form of an argument by *reductio*, informally as follows: There can be searches that involve nonexistent “things” (properties etc.), but there cannot be relations to nonexistent things. If searches were relational, i.e. if to search for something were to be in a relation to that thing, then searches for nonexistent things would involve relations to nonexistent things, which would be absurd. And the case of searches for nonexistent things generalizes to all searches. Therefore, searching attitudes cannot involve relations to anything.<sup>8</sup>

In other words, relationalists are faced with a dilemma: they must either deny that there can be searches for nonexistent things, or accept that there *are* nonexistent things (and hence there can be relations to, including searches for, nonexistent things). Both horns of the dilemma seem absurd: we do think about and search for things that do not exist, and all the things that are cannot include nonexistent things.<sup>9</sup> The relationalist assumption must, therefore, be false.

The argument as formulated above presents relationalism as implying an obvious contradiction, namely that there exist things that do not exist. Such a contradiction is an inevitable conclusion given the assumption which the antirelationist takes to be uncontroversial: that there can be searches for nonexistent things. Yet the move from searches

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<sup>8</sup> See a formalization in Kriegel (2011:159).

<sup>9</sup> Compare Tim Crane’s formulation of essentially the same dilemma (2001:340, 342).

for nonexistent things to search-relations to nonexistent things attributes to relationalism the equation of objects of search (*sought-objects*) with objects “in the world,” i.e. actual and merely possible concrete objects (*found-objects*). It is one thing (A) to be looking for round square cupolas *and* for round square cupolas to not exist; it is another thing (B) to say that one who looks for a round square cupola *is* looking for a nonexistent thing. To be clear: it is one thing to hold that (A) to search for a sought-object is to be in a relation to that sought-object, while the sought-object has no corresponding found-object; it is quite another thing to hold that (B) to search for such a sought-object is to be in a relation to the nonexistent found-object (or, what is equally problematic, to be in a relation to no object). Since (A) does not entail (B), the absurdity of (B) does not refute (A).

What the antirealist argument ascribes to relationalism amounts to the latter, (B), which indeed would be problematic. As will become clear in the next subsection, while some relationalist views may involve commitment to nonexistent objects, it is not the only possible relationalist strategy. Not all relationalist views hold that sought-objects *are* found-objects.

Three paragraphs from Gilbert Harman, which make what he considers all the same point, illustrate how one can be confused between the searched for and the found: “There is no such thing as a Fountain of Youth, but that does not mean Ponce de Leon wasn’t looking for anything. He was looking for something. . . *His search had an intentional object*. But the thing that he was looking for, *the intentional object of his search, did not (and does not) exist*” (1990:34, emphases mine). The italicized claims respectively say (A) that there was an object of the search, but (B) that the object of the search did not exist. It should rather read: “there was a sought-object, but no found-object.”

Harman goes on in the next paragraph: “A painting of a unicorn is a painting of something; it has a certain content. But *the content does not correspond to anything actual*; the thing that the painting represents does not exist. . . *The content is not actual*; the object pictured, the intentional object of the picturing, does not exist. It is only an intentional object” (34, emphases mine).<sup>10</sup> Although I have not discussed depiction-based attitudes, what Harman calls the “content” of a painting would be what I call the intentional “object” of the painting. Three claims should be distinct: (A) that the object painted, the represented or “found” object does not exist; (B) that the intentional object of the painting, the “searched for” object, does not exist; and (C) that the painting, the representing or “searching” does not exist. Harman seems to be asserting, in one sentence or another, all of (A), (B), and (C). Relationalism makes the claim (A), but denies the claims (B) and (C).

The general positive thesis of antirelationalism states that nonexistent “things” or properties “figure” nonrelationally in the *X* of searching attitudes, where *X* is different for different accounts. According to adverbialism, *X* is the intentional *type* or *mode*. According to representationalism, *X* is the intentional *content*. One species of representationalism, propositionalism, takes *X* to be the intentional attitude’s *propositional content*.

### *Adverbialism*

Adverbialism is the position that there is no *object* of search but only a *mode* of searching. There is no entity that the intentional attitude is directed upon, but only its mode, type or way; there is nothing that the attitudes are about but only what they are like. As Uriah Kriegel

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<sup>10</sup> Harman appears to use ‘intentional object’ as I do, i.e. to stand for “the thing that [Ponce de Leon] was looking for” (34). The quote demonstrates Harman’s representationalism (see below).

puts it: “For any  $x$ , representing  $x$  does not involve constitutively bearing a representation relation to  $x$ ; what it involves constitutively is representing  $x$ -wise” (2008:84). To seek a unicorn is to seek unicorn-wise and to hallucinate a tree is to hallucinate tree-wise, with ‘unicorn-wise’ and ‘tree-wise’ being adverbial modifiers of the states ‘seeking’ and ‘hallucinating.’

The main challenge for an adverbial theory is the loss of compositionality or analyzability. To adapt from Kriegel’s discussion (2011:161-162): Adverbialism has difficulty accounting for the inference from ‘I am seeking white-horse-wise’ to ‘I am seeking horse-wise,’ since ‘horse-wise’ is only a “morphological [not syntactic] component” of the “syntactically simple” ‘white-horse-wise’ (162). Kriegel proposes that “principles” like the following be added: that the property of seeking horse-wise is “a genus, or determinable” of which the property of seeking white-horse-wise is “a species, or determinate” (163). That is, in the same way that we have in our language the postulate that whatever is a strawberry is a berry, we now add to it the postulate that whatever is white-horse-wise seeking is horse-wise seeking. Adverbial modifiers such as ‘white-horse-wise’ remain syntactically simple, and properties such as seeking white-horse-wise remain metaphysically simple.

Supplementing our language in this way, whether *ad hoc* or systematically, would exponentially multiply the number of meaning postulates: not only by the great number of adjectives that can modify the great number of nouns, but also by the great number of possible intentional attitudes. Yet there is more to natural language than just adjectives modifying nouns: the paraphrase language must be able to allow *all* possible semantic inferences, including, for another example, that from ‘I am seeking two-horses-wise’ to ‘I am seeking at-least-one-horse-wise.’ In order for the paraphrase language to behave logically and semantically the same as our

ordinary language, the paraphrase-language postulates must mirror most if not all of the meaning postulates of English—to such an extent that these adverbial modifiers seem just as committed to ontological entities as English seems to be. Just as we *refer* to horses in speaking English in order to count them, so the adverbial modifiers ‘two-horses-wise’ and ‘at-least-one-horse-wise,’ whose semantics enables “counting” and which look like English except for the hyphens and the suffix ‘-wise,’ seem just as capable of *referring* to horses.

### *Representationalism*

Representationalism is the position that an intentional attitude has no ontological, substantial entity as its *object* but only some representation as its *content*. What I have in mind is Tim Crane’s version. Crane argues that the intentional “object” of an intentional attitude is (a) what the attitude is about, “what is represented by the mind,” (b) *not* some sort of entity in itself, but (c) an object-for-a-subject (e.g. 2001:342, 2013:92-93). The “aboutness” of an intentional attitude is not constituted by a relation to some entity, but by the representational content it has.<sup>11</sup> The putative entity *X* that we may read into the intentional attitude of seeking *X* is, roughly, a “feature,” indicated by the subscript, of the search’s representational content  $Y_X$ , such that the search is “about” *X* only *by virtue of* its having the content  $Y_X$ . As Crane puts it in terms of thought: “Thoughts *have* contents, and it is because of this that they are *about* their objects” (2001:348).

It is unclear what Crane means by (a), other than that intentional objects are a sort of representational content; yet he takes the notion of representation to be “basic” i.e. undefinable

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<sup>11</sup> Crane’s representationalism is antirealist: “[Intentional phenomena, reported by intensional transitive verbs, such as] fear, expectation, imagining, etc. . . provide cases of superficially relational structures which cannot really be so” (2013:116). See also the dilemma he uses to undermine relationalism (fn.9).

(2013:116-117). Declaring that there is not much to say about representation only defers answering questions about the account. It is not clear, first, in what sense the representational content  $Y_X$  “contains” (represents or stands for)  $X$ , and how a search’s being about  $X$  by having  $Y_X$  does *not* constitute some sort of relation to  $X$ . Second, it is not clear whether being “for” a subject, which by the third definition (c) constitutes what the object *is*, is a property or alternatively a sort of relation to the subject, and how the definition avoids substantial conceptions of such subjects and objects. If being-for constitutes only a property of the object, and subjects and objects are not to be construed as ontological entities, little will we have to say about them besides talking about representers and representeds.

### *Propositionalism*

A species of representationalism, propositionalism is the view that all intentional attitudes can be described linguistically as propositional attitudes, attitudes whose content is a proposition: just as a belief is a belief *that* something is the case, so a desire is not a desire *for* something but a desire *that* something be the case, a search is a search *that* something be the case, and so on. Propositionalism is thus an attempt to unify the linguistic analysis of intensionality by applying the same sentential strategy to intensional verbs that appear on the grammatical surface to be nonpropositional, in particular by uncovering an embedded verb clause. Thus, ‘I seek a unicorn’ is really ‘I try to find a unicorn,’ or ‘I try *that* I find a unicorn.’

Despite the temptation to read ‘belief that’ or ‘desire that’ as indicating a relation between a believer or desirer and a proposition, propositionalism as presented here does not count as a relationalist view, but rather is more a representationalist, content-based account, where content is propositional content. For some proposition  $p$ , ‘desire that  $p$ ,’ which expresses a

subject  $S$ 's propositional desire, is ambiguous between 'desire that  $p$ ' and 'desire that- $p$ .' The former expresses a desire that  $p$  be the case, whereas the latter expresses a desire for the proposition  $p$  and hence implies a relation between  $S$  and  $p$ . In the former case, the proposition  $p$  is the *content* of the desire, whereas in the latter it is the *object* of the desire. The distinction between desiring that  $p$  and desiring the proposition that  $p$  parallels the distinction between believing that  $p$  and believing the proposition that  $p$ .

Propositionalism as a linguistic position has been criticized by many, mostly on account of the observation that there is no non-*ad hoc* way of applying a propositionalist analysis for all intensional transitive verbs that preserves the semantics and logic of the original expressions. For example, even though a clausal analysis of 'seek' seems syntactically plausible, when applied across the board it erases the important lexical differences between various search verbs: translating all search attitudes into 'try to find' overlooks the nuanced differences in meaning between the various search behaviors, e.g. 'look for,' 'search for,' 'hunt for,' and 'rummage about for' (Partee 97). The overgeneralization problem lies in the systematic reduction of the similarity in intensional behavior between propositional attitude verbs and intensional transitive verbs into their syntactical equivalence, the process of which necessarily cannot accommodate all semantic features. Moreover, there are intensional transitive verbs for which it seems impossible to reveal covert propositional content, such as 'imagine,' 'love,' and 'think about.' A unified analysis of intensional transitive verbs, therefore, must be nonpropositionalist.<sup>12</sup>

## 2.

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<sup>12</sup> For further criticisms of propositionalism, see Partee 1974:96ff., Forbes 2013:§3, and Crane 2013:109-112.

Relationalism is the affirmation of what antirelationalism denies. It is the thesis that intentional attitudes are relational, and intentional objects are “real”: they are objects in the ontological sense, and the attitude holder, by virtue of having the intentional attitude, is in a non-nominalist relation with the intentional object of his or her intentional attitude.

There are three main relationalist answers with regard to the nature of intentional objects: what I call *idealism* states that they are *concrete mental objects*, entities inside the searcher’s head and merely the product of his or her mind; *realism* states that they are *abstract nonmental objects*, some sort of mind-independent entities; and, perhaps most controversially, what has been labeled in the literature as *Meinongianism* states that they are *nonexistent objects*. My positive account will be a realist view that incorporates certain features of Meinongianism.

### *Idealism*

Idealism claims that intentional objects are mental entities. There may be houses “out there” in the world, but Sally’s search has as its object the house-idea in Sally’s mind. Objects of searches are not only “abstract” (in the way that mental representations are “abstract,” i.e. concrete but not physical), but are essentially private to the searcher. By turning all objects of search into mental entities, this approach provides a plausible account for searches for merely possible objects, e.g. unicorns, without invoking a potentially uneconomical ontology.

One argument for idealism may proceed as follows: Let us call Sally’s (specific) search for Allegro the satisfiable search, and her search for Pegasus the unsatisfiable search. There is no difference in (or, at least there is something in common between) the nature of Sally’s subjective experience in the satisfiable case and that of her experience in the unsatisfiable case; in each

case, for example, she believes that the object of her search exists and that her search is satisfiable. Presumably what can be said about the one case can also be said about the other. In both cases, Sally is searching for something. In the unsatisfiable search, what she is searching for, the intentional object of her search, is not an object in the world (Pegasus does not exist), so it must be an idea in her mind. Therefore, the intentional object in the satisfiable case is also an idea in Sally's mind.

Idealism runs into the immediate objection that one must not confuse things in the world and the ideas of them; one looks not for an idea of something, but for the thing itself. This is part of a larger problem not unique to idealism, and will be discussed in §II.3.

Nevertheless, the form of the above argument is reminiscent of that of the argument for the traditional representative theories of perception, whose troubling conclusion is that all we perceive when we perceive anything, whether in veridical perception or hallucination, is the "sense data" of our perceptual experience, not things in the world. A Searlean refutation of the argument will argue that in the unsatisfiable case, there is nothing that Sally is searching for.<sup>13</sup> This contradicts my intuition fact (5) above, and reveals representationalist assumptions, the criticism of which I will not repeat.

There is, moreover, a fallacy in an assumption of the idealist argument, which is exactly what I have pointed out as the antirelationist's fallacy in rejecting relationalism. According to the above argument: (a) the object of Sally's search exists; (b) Pegasus does not exist; therefore (c) Pegasus is not the object of Sally's search; therefore (d) the object of her search is some sort

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<sup>13</sup> See John Searle's description of and critique of what he calls the "Bad Argument" for perception, 2015:20-29.

of idea. While I accept the truth of the premises (a)-(b) and the intermediate conclusion (c), I disagree that the inference to the idealist conclusion (d) is valid. In fact, the argument from (a)-(b) to (c) rests on two ambiguities, one of the word ‘exist’ and the other of the name ‘Pegasus.’

(a) As a *concrete or abstract* object in the world, the object of Sally’s search *does* exist. (b) As a *concrete* object in the actual world, Pegasus does not exist (however we can make sense of nonexistent statements). (c) The concrete object that Sally cannot find cannot be identical to the concrete or abstract object that Sally is searching for. Yet the name ‘Pegasus’ refers to both: it applies to both the nonexistent mythological horse, and the existent intentional object of Sally’s search. To put it differently, as before, the confusion is between, respectively, the found-object and the sought-object. While found-Pegasus is not identical to sought-Pegasus, the fact that there is no found-Pegasus does not entail that there is no sought-Pegasus or that, contrary to idealism, the sought-Pegasus must be the Pegasus-idea.

### *Meinongianism*

Meinongianism, or nonexistent-object theory, is a double thesis. First, it states that there are objects with a sole property (or only two properties, and so on), such as the object *blue*, which has the property of being blue as its only property, even if naturally all blue things are extended things made out of certain materials etc. These are incompletely determined or incomplete objects. Second, Meinongians claim that the unextended object *blue*, and other such objects, are necessarily nonexistent (Reicher 2014:§4).

The argument that leads one to Meinongianism about intentional objects presumably has the same form as that for idealism, but a different interpretation of the conclusion: Sally is looking for a round square cupola; there is an object of her search, which is a round square

cupola; round square cupolas are necessarily nonexistent; therefore, the object of her search is necessarily nonexistent. While idealists take this conclusion to be a clue to look elsewhere for candidates for sought-objects, Meinongians take the conclusion literally as saying the sought-object is a necessarily nonexistent entity. The argument generalizes from searches for impossible objects to all searches.

Meinongianism has come under much criticism, most notably those against its implication that there *are* things that do not exist. I will grant the opponent of Meinongianism this truism: there is no difference between things that *exist* and things that *are*; all things that exist are all things that are. Nonetheless, the objects posited in the first Meinongian thesis may not be so objectionable. In the final section of this paper, I will propose a way to make sense of quasi-Meinongian objects.

However, for the third time, I will point at the sought-found fallacy in the above argument: what does not exist is the found-object, not (necessarily) the sought-object. Any theory that proposes that the sought-object is the found-object will have to provide an additional argument for it. In what follows I will describe one such theory, namely satisfaction-based theories, where the sought-object is taken to be the found-object in a possible situation of satisfaction.

### *Realism*

According to the realist, objects of searches exist “outside of” individual minds; they are real, nonmental, public entities that multiple searchers can enter into a relation with. Since the objects of nonspecific searches are not particular objects, and in many cases are merely possible,

they cannot be concrete objects, even if the things found in successful searches will be concrete. Hence the realist's intentional objects are abstracta.

Different realist approaches provide different accounts of what particular sort of abstracta these are. I will describe one such account, the *satisfaction-based analysis*, according to which intentional objects are entities in possible situations of satisfaction. Along with propositionalism, satisfaction-based accounts are approaches to objects of intentional attitudes via linguistic analyses of complements of intentional verbs.

Satisfaction-based analyses build on the classic semantic analysis proposed by Richard Montague. According to Montague, and as characterized in Richard (2001:108-109), Moltmann (2013:175-176), and Soames (2010:68ff.):

Under a specific reading, a transitive verb names a relation between the extension of the grammatical subject and the *extension* of the grammatical object. Under a nonspecific reading, it names a relation between the extension of the grammatical subject and the *intension* of the grammatical object. The following are rough translations:

Sally seeks a house.

specific:  $\exists x (x \text{ is a house} \ \& \ \text{sally seeks } x)$

nonspecific: sally seeks  $q$

where  $q$  is a term that expresses the intension of 'a house'.

The *extension* of a noun phrase, in either subject or object position, in function terms, is a function from {functions from individuals to truth values} to truth values. In set terms, a noun

phrase denotes a set of sets of individuals.<sup>14</sup> For example, ‘a house’ denotes the set of sets which have a non-empty intersection with the set of houses. The *intension* of a noun phrase is a function taking a possible world and returning the noun phrase’s extension in that world, i.e. a function from possible worlds to {functions from [functions from individuals to truth values] to truth values}.

Montague’s analysis thus appears to present a relationalist picture of searching, desiring etc., in which the searcher, desirer etc. is in a relation with a complex functional object. Friederike Moltmann shows that this interpretation of the analysis faces the Substitution Problem (2013:177-178; see also 2013:105-107): if the object noun phrase ‘a house’ in ‘Sally seeks a house’ *is* such and such a function, then the sentence seems equivalent to ‘Sally seeks such and such a *function*.’ The latter at least sounds awkward, if not false. However, Moltmann’s criticism overlooks a distinction between semantic (non-ontological) objects such as functions, and metaphysical objects (ontological entities) such as individuals and sets. *Functional* objects may not be the right candidate for intentional objects, but Montague’s analysis does not imply that they are. It is perhaps less unfair to say that Montague would respond to the puzzle about intentional objects by saying, rather, ‘Sally seeks such and such a *set*.’

Mark Richard’s satisfaction-based account describes one type of set as part of the search situation—or, in his terminology, a success-based account of the hunt. The analysis goes along these lines (e.g. Richard 2001:116): ‘John hunts a horse’ is true if and only if for some hunt *h*, ‘John’ names the agent of *h*, and *h* demands the intension of ‘a horse’. That is, ‘a horse’

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<sup>14</sup> The interchangeability between function-talk and set-talk is due to characteristic functions: A function from a domain to truth values corresponds to the subset of the domain for whose members the function returns the value TRUE. The function is known as the characteristic function of that subset.

determines the property ‘horse’, and for every relevant success story  $\langle w, s \rangle$  for  $h$  (a situation  $w$  where the hunt is satisfied by the set  $s$  of things found), the set of things found *because* they have the property ‘horse’ is in the extension of ‘a horse’ at  $w$ . Like Montague, Richard would consider what I call intentional objects to be *intensions* of quantified noun phrases like ‘a horse,’ which according to my distinction above are a particular type of ontological entities, namely sets of sets of individuals in possible situations.

What I agree with in the satisfaction-based theory, to use my terminology, is that there is a clear separation between the sought-object and the found-object. The found-object does not exist in the present situation of the search, from which it does not follow that there is no sought-object. However, I reject the consequence of this view that searches without success stories, i.e. impossible searches, are without objects. Furthermore, because the noun phrase complement of the intensional verb is nonreferential, satisfaction-based theories<sup>15</sup> do not provide a straightforward answer to the question: What is the object of Sally’s search?

### 3.

My defense of realist relationalism so far has been presented negatively via: an objection to the argument against relationalism; objections to various positive accounts of intentional objects, including adverbialism, representationalism, propositionalism, idealism and Meinongianism; and a worry that satisfaction-based realism offers an incomplete account. In this subsection I will present two further arguments both in favor of realist relationalism and against the other accounts: an argument from *the problem of first-person account*, and an argument from *problems of individuation and comparison*.

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<sup>15</sup> presented here as relationalist theories

First, any theory that states that the searcher is *really* searching for something other than what she takes herself to be searching for will face the problem of first-person account, the problem that the theory provides a radically different, presumably objective answer that is at odds with what is described by subjective experience. For any proposal for the nature of intentional objects of search, somebody is bound to resist: “But I am not looking for *that!*”

Antirelationalism tells us that when we go looking for something, we are not looking for anything, but are only, and roughly, in a “searching mode.” The “objects” of our searches and desires have to be revealed to be contrary to what we think: they are in fact no objects at all, not ontological entities but only some sort of mental content or manner. Likewise, Meinongianism would be highly counterintuitive: we do not take ourselves to be looking for nonexistent objects, or we would not go looking at all.

Moreover, the kind of conflation of objects in the world with objects “in the head” that idealism maintains presents philosophy’s familiar problem: If we adopt an imagistic conception of ideas, so that an idea of Allegro is some sort of mental image of Allegro, then it would be a mistake to confuse something with the idea of it, just as it would be silly to take a painting of a horse to be a real horse. Alternatively, if we take the idea of Allegro to be some sort of verbal description or mental representation of Allegro, then although Allegro may be mentioned in the description or featured in the representation, it is not itself the description or the representation. To quote Harman: “[Ponce de Leon] was not looking for an idea of the Fountain of Youth. He already had the idea. What he wanted was a real Fountain of Youth, not just the idea of such a thing”, but what the idea was *of* (1990:36). A *representing* is not identical to the *represented*.

In terms of capturing our pre-theoretical intuitions, of all the theories presented so far, satisfaction-based realism seems to offer the most agreeable account: I am looking for something, such that when my search is successful, I will have found such-and-such.

Nevertheless, any appeal to common sense as an additional basis for arbitrating between different theories—that is, the position that all else being equal, we should go with the view that best agrees with our intuitions—only constitutes a weak argument in favor of any view. Yet, where there remains objection to counterintuitiveness, we must distinguish between two senses of searching: the *de dicto*, subjective or first-person sense, what the person claims that they are doing or takes themselves to be doing; and the *de re*, objective or third-person sense, what the person is really doing. As I grab the glass on the table, I may be taking myself, in the *de dicto* sense, to be trying to drink a glass of milk, while I am in fact trying, in the *de re* sense, to drink a glass of white paint.<sup>16</sup> Whatever we may take ourselves to be doing, whatever we feel that or think we know that we are doing, may well not be what we are in fact doing.

A support for such a divergence between first- and third-person accounts is the observation that even what we take ourselves to be looking for may often be contradictory: Sally, who is a confirmed nominalist about universals and abstract objects, may claim to be looking *not* for a universal house, but for a particular one. Yet upon more philosophical reflection, she may come to believe that she is not looking for any particular object. If such a situation is possible, then first-person accounts may themselves be confused and mistaken. At least insofar as our intuition about the objects of our searches and desires is concerned, just as intuitiveness should not be a strong reason to adopt any metaphysical theory, i.e. a theory should not be preferable

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<sup>16</sup> The example is from Nicholas J. J. Smith (379).

only because it appears more intuitive, so counterintuitiveness should not count as a strong reason against any theory, either, i.e. a theory should not be objectionable only because it appears more counterintuitive.

The second set of problems for theories of intentional objects involves resemblance, in particular the problem of accounting for the possibility of comparison and individuation as in (7)-(8). To expand from (7)-(8), the following list the minimum resemblance facts which call for explanation:

- (9) A white-horse search is more similar to a horse search than to a house search.
- (10) A unicorn search is more similar to a winged-horse search than to a gorgon search.
- (11) Sally's house search has something in common with John's house search.
- (12) Sally's house search in 2012 has something in common with her house search in 2015.

Moreover, we also need to account for the possibility of likening or juxtaposing objects of search with objects found in successful searches, i.e. sought-objects with found-objects:

- (13) What Sally found was exactly/hardly/almost etc. what she was looking for.

An advantage of Meinongianism over realism about intentional objects is that Meinongian objects, entities like the object *blue*, are simple enough, i.e. have clear identity and individuation conditions, that the theory is able to straightforwardly account for the above explananda. Realism is in turn superior to idealism, since entities "in the world" (in possible situations) have clearer identity and individuation conditions than ideas or mental entities. Such a hierarchical advantage of the objects in one theory over another is due to the degree of complexity of the properties which each theory grants its intentional objects: Meinongian objects

have the absolute minimum of properties, realist objects are more or less full-blown objects, whereas ideas have the most obscure properties.

I thus propose in my account to keep the gist of one promising Meinongian idea, namely the first thesis about the minimal properties of incompletely determined objects. Like Meinongian objects and unlike ordinary objects, intentional objects on my account have only certain determinate properties but not others. Unlike Meinongian objects, however, they have more than just the one (two etc.) properties characterized in their names. And finally, unlike Meinongian objects, and like realist objects, they exist nonetheless.

### III.

While the incapacity to solve the two sets of problems in the last subsection offers no decisive reason to reject any of the accounts so far explicated, realist relationalism has been shown to be more promising as far as explanatory power goes. This third and final section will fill in the details of one species of realism inspired by the satisfaction-based theory's use of possible situations and the nonexistent-object theory's notion of incompletely determined objects. So I present my theory of *incomplete objects*.

#### 1.

Let us provide general forms for the explananda (5)-(8) in §I.1. The puzzle of intentional objects is the challenge to provide an adequate theory that captures the intuitive truth of the following claims:

- (14) If  $S$  seeks an  $H$ , then there is something that  $S$  seeks.
- (15) If  $S$  seeks an  $H$  that  $F$ s, then the  $H$  that  $S$  seeks must  $F$ .

(16) If  $S$  seeks an  $H$  and a  $G$ , then  $S$  seeks two things.

(17) If  $S_1$  seeks an  $H$ , and  $S_2$  seeks an  $H$ , then  $S_1$  and  $S_2$  seek the same thing.

where  $H$  and  $G$  stand for different nouns or noun phrases, and it is either not necessarily true, or necessarily true but not analytically or *a priori*, that all and only  $H$ s are  $G$ s.<sup>17</sup>

When a subject  $S$  is looking for something nonspecific,  $S$  is in a relation with that object of  $S$ 's search, which is an entity that:

- (i) exists (given 14);
- (ii) is abstract;
- (iii) has all the properties that the searcher requires (given 15); and
- (iv) has only the properties that the searcher requires, plus all those implied by these.

(i) and (ii) are characteristic of a realist account; in honor of what (iv) implies, I will name the intentional objects as postulated in my account *incomplete objects*. I will use “complete” and “incomplete” as short for “completely determinate” and “incompletely determinate.” Being completely determinate in this usage is to satisfy the principle of excluded middle for *all* properties; all and only physical objects are complete, such that for any property  $P$ , there is a fact of the matter whether the complete object is  $P$  or not  $P$ . Incomplete objects have determinate properties relevant to the search, but are not determinate with regard to all the other properties: for some irrelevant property  $P$ , there is no fact of the matter whether the incomplete object is  $P$  or not  $P$ . To be clear, incomplete objects are intentional objects or sought-objects according to my account; as success reports like (13) show, they may or may not have corresponding found-objects, which would be complete.

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<sup>17</sup> So  $H$  and  $G$  can be ‘a creature with a heart’ and ‘a creature with a kidney,’ or ‘water’ and ‘H<sub>2</sub>O,’ or ‘Superman’ and Clark Kent,’ but *not* ‘bachelor’ and ‘unmarried man.’

Incomplete objects may strike us as a superfluous addition to our common sense ontology, yet it is not the sheer presence of these extra sorts of entities that is potentially problematic, but how they may be identified, individuated and described. (16) and (17) give preliminary constraints on how these sought-objects are to be individuated or identified by their properties. Without identity or individuation conditions, we would not be able to say that Sally is looking for a unicorn, not a gorgon.

Given only the four theses (i)-(iv) above, contradictions immediately arise:

(18) Sally is looking for a concrete house.

The house Sally is looking for is abstract. (from ii)

The house Sally is looking for must be concrete. (from iii and 15)

(19) Sally is looking for a physical i.e. complete house.

The house Sally is looking for is not complete. (from iv)

The house Sally is looking for must be complete. (from iii and 15)

Thus, in addition to the claims of existence (14), of resemblance (9)-(12) and (16)-(17), of search success (13), and of search requirements (15), the explananda thus far include these contradictory statements (18)-(19). This subsection has asserted the existence of intentional entities (i), which enter in the search relations established in §II. The next subsection will provide an account of the properties of incomplete objects as intentional objects, thereby making better sense of the theses (ii)-(iv) to explain the claims of search resemblance and search success. The final subsection will elaborate on the properties of incomplete objects as regards search requirements and explain away the apparent contradictions in (18) and (19).

There are different types or levels of properties.<sup>18</sup> *Metaphysical properties* are properties such as existence, concreteness, abstractness, incompleteness, and self-identity. *Natural properties* are properties such as being an animal, being a horse, having a color, being blue all over, being searched for by Sally, being a present for Sally's brother, and so on. Natural properties can be more generic or more specific; for example, having extension is more generic than being three feet long.

Natural properties can also be prior or posterior. *Prior properties* are properties that something has before the conclusion of the search, e.g. being the fastest horse in the corral. *Posterior properties* are properties that something acquires by virtue of or as a result of satisfying the search, e.g. being the *new* chairperson.

There are an infinite number of prior and posterior properties, both of which may be generic or specific. Posterior properties solve the (not aforementioned) problem of whether the incomplete object of John's search for a new secretary has, already, the property of being the office's newly appointed secretary. John looks for promising candidates (or so we say; really, he is looking for *one* incomplete object), and only when he has decided on the most suitable (complete) person for the job does he *then* appoint the person to be his secretary. Similarly, the incomplete object of Sally's search for a present for her brother is *not* the present for her brother, but only its complete version will be.

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<sup>18</sup> Meinongians make various kinds of property distinctions, e.g. between characterizing and non-characterizing properties, between nuclear and non-nuclear properties, or between determinables and determinates (for an overview, see Nelson 2012:§2). These distinctions approximate the (nonbinary) distinction between generic and specific properties that I make within natural properties.

Incomplete objects, as opposed to complete objects, have some determinate properties but not others:

- (v) The object of search has metaphysical properties, and all and only the natural properties demanded by or implied by the search, but no posterior properties.

Nonetheless, incomplete objects have the same identity condition as complete objects do, by the principle of identity of indiscernibles: for any two objects of search  $x$  and  $y$ , if, for every property  $P$ ,  $x$  has  $P$  iff  $y$  has  $P$ , then  $x$  is identical to  $y$ . This applies to comparison between searches:

- (vi) A search for  $x$  and a search for  $y$  are searches for the same thing iff for all metaphysical and natural properties  $P$ ,  $x$  has  $P$  iff  $y$  has  $P$ .
- (vii) Objects of different searches are of the same kind iff they share at least some natural properties.

The relation of property implication will involve more than just logical implication. For example, the property of being blue all over implies the property of being not red all over.

Thus the resemblance explananda (9)-(12) may be explained: it is by virtue of the natural properties that incomplete objects may be similar or different. If Sally and John are both looking for a secretary, without any further requirement, then they are each in a relation to one and the same incomplete object, namely the incomplete object that has the properties of being<sup>19</sup> a secretary, being a human being, and so on. If Sally specifies that she wants a French secretary, while John wants a German-speaking one, then Sally and John are looking for the same *kind* of incomplete object, since their incomplete objects of search share at least the property of being a

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<sup>19</sup> or more accurately, the properties of being *required* to be so and so. This refinement for natural properties of intentional objects will be made in §III.3.

secretary. Their sought-objects are not the same *particular* incomplete object as they do not share in all their natural properties. Just as it will be vague to say whether a concrete horse can be said to be of the same kind as a concrete book, so it will remain vague as to which common properties are sufficient to count two incomplete objects as belonging to the same kind.

As was seen in (v), because no object of a nonspecific search has a completely determinate set of natural properties, incomplete objects of search i.e. sought-objects are necessarily incomplete. By contrast, found-objects are determinate as regards all of the prior and posterior natural properties. The condition for search success, i.e. for “identifying” incomplete sought-objects with complete found-objects, is as follows:

- (viii) An object satisfies a search iff it is complete and has a sufficient number of the prior natural properties that the incomplete object of the search has.

When Sally looks for a rope, the incomplete rope that she is in a searching relation with has the (not mutually exclusive) properties of, to list a few, being a rope, having a length, and existing. When Sally finds a piece of rope, it then has the properties, again to give a nonexhaustive list, of being six feet long, being found by Sally, being useful in such and such ways—in addition to the properties it “inherits” from its incomplete version.

Objects of search could acquire more properties as the searcher’s description elaborates, in the epistemic sense of being revealed to have more and more properties than are previously known. As the searcher decides on more requirements of search, however, objects of search only acquire more properties in a metaphorical sense. In fact, when the searcher thinks more about what she wants for her search, she does not “narrow down” her search by picking out a smaller set of objects her search, since for every search she is in a search relation with a specific

incomplete object, not a set of incomplete objects. Rather, she modifies the search by entering into a search relation with a *new* incomplete object, which may have all the properties of the previous sought-object plus the new, added natural properties.

Finally, the condition (viii) for the relation between the sought-object and the found-object will have to be restated, making use of search requirements, to account for the apparent contradiction concerning metaphysical properties that the sought-object is abstract and incomplete, whereas the found-object is concrete and complete.

### 3.

The theses (iii)-(v) together imply that any object of nonspecific search is incomplete:

For some property  $P$ , it is neither the case that it is  $P$ , nor the case that it is not  $P$ .

We will see how this is not a contradiction of the principle of excluded middle. The thesis may be spelled out as follows. Just as with complete objects, for an incomplete object  $i$ :

(ix) For any property  $P$  relevant to the search,  $i$  is either  $P$  or not  $P$ .

But also, and more crucially:

(x) For some property  $P$  not relevant to the search,  $i$  is either  $P$  or not  $P$ , but it is neither the case that  $i$  is  $P$ , nor the case that  $i$  is not  $P$ .

A property  $P$  is relevant to the search iff it is either mentioned in the search description, or implied by those mentioned in the description.<sup>20</sup> Assuming the principle of excluded middle,

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<sup>20</sup> Relations of property implication may be worked out in better detail using the generic-specific hierarchy in §II.2.

for every property  $P$ , the disjunctive property of being either  $P$  or not  $P$  is search-relevant, by virtue of the search object's being an entity at all, but *not* necessarily the individual properties of being  $P$  and being not  $P$ .

For example, when Sally's search is described by the sentence 'Sally is looking for a green or blue house,' and she presently has no other requirements in mind, the following properties are search-relevant, to give a nonexhaustive list: being either a house or not a house; being a house; being either green or blue; being either green or not green; being either made of wood or not. By contrast, the following properties are search-irrelevant: being green; being blue; being made of wood; not being made of wood; and so on.

Call the incomplete object of Sally's search  $h$  (for "house");  $h$  is denoted by 'the house that Sally seeks.' Let us use the notation  $Pa$ , for some property  $P$  and some (complete or incomplete) object  $a$ , to express ' $a$  is  $P$ .' Here is an *incorrect* way to capture (ix)-(x):

$Gh \vee Bh$	$h$ is either green or blue
$\neg Gh$	it is not the case that $h$ is green
$\neg Bh$	it is not the case that $h$ is blue
$\neg(\neg Gh)$	it is not the case that $h$ is not green
$\neg(\neg Bh)$	it is not the case that $h$ is not blue

The above are clearly contradictory in a two-valued, first-order logic. The reason that the above are wrong is the same reason that (20) is unacceptable while (21) is acceptable:

Sally is looking for a blue unicorn.

(20) The unicorn Sally is looking for is blue.

(21) The unicorn Sally is looking for must be blue.

Similarly, it is not acceptable to say (22), but acceptable to say (23):

Sally is looking for a green or blue house.

(22) The house Sally is looking for is either green or blue.

(23) The house Sally is looking for must be either green or blue.

As noted in passing by Moltmann (1997:6), with the presence of a wide-scope modal operator such as ‘must,’ that is, “in the context of modal subordination,” which is another sort of intensional context, it is possible to neutrally “refer” to the object of search without committing to the existence of unicorns and green-or-blue houses. To illustrate how a definite description like ‘the house Sally is looking for’ does not necessarily carry ontological commitment inside a modal context, notice that (24) is intelligible despite the necessary nonexistence of a round square (or nonsense of ‘round square’), let alone triangular round ones:

Sally is looking for a triangular round square.

(24) The round square Sally is looking for must be triangular.

The modal context and the notion of search-relevance correspond to the proviso “that the searcher requires” in (iii) and (iv). Call  $R_s$  the sentence operator for Sally’s requirement. Given a relevant property  $P$  and an irrelevant property  $Q$  to Sally’s house search:

$$R_s (Ph \vee \neg Ph)$$

$$R_s Ph \vee R_s \neg Ph$$

$$R_s (Qh \vee \neg Qh)$$

$$\neg R_s Qh \wedge \neg R_s \neg Qh$$

The above claims (ix) and (x) about relevant and irrelevant properties of an object of search can be formally applied to Sally’s house search, without contradictions, as follows:

$$R_s (Gh \vee Bh)$$

$$R_s (Gh \vee \neg Gh)$$

$$\neg R_s Gh$$

$$\neg R_s \neg Gh$$

$$R_s (Bh \vee \neg Bh)$$

$$\neg R_s Bh$$

$$\neg R_s \neg Bh$$

$$R_s (Wh \vee \neg Wh)$$

$$\neg R_s Wh$$

$$\neg R_s \neg Wh$$

The formal, though simplified, truth conditions of the search reports are thus, using the notation  $Sab$  to express ‘ $a$  seeks  $b$ ’ (taking ‘seeks’ to be synonymous with ‘is looking for’):

(25) Sally is looking for a blue unicorn.

$$\exists x (Ssx \wedge R_s Ux \wedge R_s Bx)^{21}$$

‘Sally is looking for a blue unicorn’ is true iff Sally is in a search relation with an object  $x$ , such that according to her requirements,  $x$  is a unicorn and is blue.<sup>22</sup>

(26) Sally is looking for a green or blue house.

$$\exists x (Ssx \wedge R_s Hx \wedge R_s (Gx \vee Bx))$$

‘Sally is looking for a green or blue house’ is true iff Sally is in a search relation with an object  $x$ , and according to her requirements,  $x$  is a house and is either green or blue.

Compare these truth conditions with those for reports of specific searches:

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<sup>21</sup> ignoring tense

<sup>22</sup> The truth conditions imply that the incomplete objects will have any other properties *by virtue of* being a blue unicorn.

(27) Sally is looking for Allegro.

$$\exists x (Ssx \wedge R_s x = a)$$

‘Sally is looking for Allegro’ is true iff Sally is in a search relation with an object  $x$ , such that Sally requires  $x$  to be Allegro.

(28) Sally is looking for a house (namely, her brother’s house).

$$\exists x (Ssx \wedge R_s Hx)$$

‘Sally is looking for a house’ is true iff Sally is in a search relation with an object  $x$ , such that Sally requires  $x$  to be a house.

Note that the truth conditions for ‘Sally is looking for a house’ are exactly the same for both specific and nonspecific “readings.” The specific reading arises only with an independent piece of information, or with the reader’s imagination or presumption, that Sally is having a specific house in mind. The semantics of the sentence describing Sally’s search for a house is exactly the same whether Sally is looking for a specific house or not.

Thus sentences containing intensional transitive verbs “allow” existential generalization, in the sense that their logical interpretations contain a wide-scope existential quantifiers. The things that Sally is looking for, i.e. her sought-objects, exist and have certain properties *according to* her search requirements. Even when Allegro is the fastest horse in the corral, because of  $R_s$ , (27) does not necessarily have the same truth value as (29):

(29) Sally is looking for the fastest horse in the corral.

$$\exists x (Ssx \wedge R_s x = \iota y Iy)$$

where ‘ $\iota y Iy$ ’ is the iota notation for ‘the unique  $y$  such that  $y$  is the fastest horse in the corral’.

Finally, compare the above with the following (again, oversimplified) truth conditions for sentences containing extensional verbs:

(30) Sally found Allegro.

$$\exists x (Fsx \wedge x = a)$$

‘Sally found Allegro’ is true iff Sally is in a finding relation with an object  $x$ , such that  $x$  is Allegro.

The linguistic phenomenon of intensionality is thus a matter of scope ambiguity, and the source of the intensionality effects is the presence of the operator  $R$ . Hence intensional verbs such as ‘seek’ and ‘want’ are intensional *not* in the sense that the relations they express, e.g. that of seeking and wanting, are not relations to specific entities, as those of finding and buying are, but only in the sense that sentences containing them contain a modal operator that blocks certain extensionality effects. The operator appears in both the nonspecific and specific readings of sentences containing intensional verbs. Note that an indefinite description such as ‘a horse,’ which is a quantifier expression, still *names* no object in either an intensional sentence like ‘Sally is looking for a horse’ or an extensional sentence like ‘Sally is seeing a horse,’ even though both sentences are *about* specific objects (the first one is about an incomplete object with the property of being required to be a horse, the second one is about, say, Allegro).

We are now in a position to return to the apparent contradictions in (18)-(19). Use  $A$  for “abstract” and  $C$  for “concrete.” When Sally seeks a concrete (and complete) house, even if the requirement is only implicit:

$$Ah \wedge R_s Ch$$

Even though by definition, an entity cannot be both abstract and concrete, nor can it be both incomplete and complete, there is no contradiction in saying both that  $h$  is a concrete, complete object *according to Sally’s requirements*, and that it is *itself* an abstract, incomplete object.

However, we must avoid analyzing R as a *metaphysical* necessity operator: If it is true that the house that Sally wants is blue *according to Sally's requirements* iff the house Sally wants *must* be blue, as (18)-(19) suggest, then for all properties  $P$ ,  $R_s P$  is logically equivalent to  $\Box P$ . But if, as with metaphysical or epistemic “must,” for any  $a$ ,  $\Box Pa$  logically implies  $Pa$ , then  $R_s Pa$  logically implies  $Pa$ . If so, then we are faced again with a contradiction:

$$Ah \wedge R_s Ch$$

$$Ah \wedge \Box Ch$$

$$Ah \wedge Ch$$

If we are keeping the equivalence between  $R Pa$  and  $\Box Pa$ , then we must explain the logical behavior of the operator R in such a way that  $\Box Pa$  does not entail  $Pa$ , for example as in deontic logic. That is, Sally may require her object of search to be so-and-so, i.e. as in (15) we may say it “must” be so-and-so, but it need not actually be so-and-so. The incomplete object of search has such and such natural properties according to the searcher’s requirement, but in itself it has only the metaphysical properties enumerated in (i)-(ii), such as those of existence, abstractness and incompleteness. The properties that the incomplete object is said to have in (iii)-(v) are to be understood within a requirement context, i.e. inside R’s scope.

The intensional operator R is reminiscent of the intensional operator “in such-and-such fiction,” call it F, in the literature on fictional truths. Just as a fictional character has both the metaphysical property of being fictional, plus the properties of being so and so in the fiction, i.e. *as described by the author*, so an object of search has the metaphysical property of being incomplete, plus the properties *as required by the searcher*. David Lewis suggests that we analyze F as a “restricted universal quantifier over possible worlds”: “a prefixed sentence ‘In

fiction  $f$ ,  $\phi$ ' is true. . . iff  $\phi$  is true at every possible world in a certain set, this set being somehow determined by the fiction  $f$ ' (1978:39). We may arrive at a logic in which  $R Pa$  is true in our world iff  $Pa$  is true in every accessible possible situation, where the accessibility relation is tied to search satisfaction and not reflexive: the present situation is not a situation where the search is satisfied.

There is thus the remaining task of specifying such a set of accessible situations, and of extending the account to logically impossible objects of search.

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The account of the intentional objects of objectual attitudes in this paper is a version of what I have called realist relationalism, the view that a searcher stands in a relation with the intentional object of his or her search, which is an existent, nonmental, abstract object which has only the properties required by or implied by the search. I have argued for relationalism both by presenting further objections to three antirealist views, namely adverbialism, representationalism, and propositionalism, and more crucially by criticizing an argument against relationalism, by showing that the argument commits a fallacy in assuming that relationalism requires that the sought-object be the found-object. The arguments for two relationalist views, namely idealism and Meinongianism, were also rejected on account of their conflation of sought-objects and found-objects. I then showed that the third relationalist view, realism, in particular satisfaction-based accounts, allows for an appropriate distinction between sought-objects and found-objects. My incomplete-object account of intentional objects is based on both satisfaction-based theories and nonexistent-object theories.

What, then, does Sally look for, when she looks for her dog Fido, for a dog but no specific one, or Snoopy the dog? My own positive account presents intentional objects of search as incomplete objects, abstract entities which have only the properties as required by or implied by the search. The object of Sally's nonspecific dog search is an incomplete object that is required to be a dog. The object of her, perhaps confused, Snoopy search is an incomplete object that is required to be a small, black-and-white, etc. beagle. And when Sally goes looking for Fido, she is looking for an entity as described by her own characterization of Fido: a dog of a certain approximate size, which has a certain type of coat of a certain approximate color, which will respond to her call 'Fido!' and so on. There is also a complete, physical entity in the world, named Fido, which will be the object of her finding.

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