

## THE EXISTENCE ENTAILMENTS OF DEFINITE DESCRIPTIONS\*

As is well known, Russell<sup>1</sup> analyzed sentences of the form (1) as having the meaning in (2a), which can be paraphrased as in (2b) or (2c).

- (1) The  $\phi$  is  $\psi$ .
- (2) a.  $\exists x(\phi x \wedge \forall y(\phi y \rightarrow y = x) \wedge \psi x)$ 
  - b. There is an entity such that it is  $\phi$  and nothing else is  $\phi$  and it is  $\psi$ .
  - c. There is exactly one  $\phi$  and it is  $\psi$ .

Heim<sup>2</sup>, Elbourne<sup>3</sup> and Kripke<sup>4</sup> (henceforth *HEK*) have argued that the readings available for certain sentences in which definite descriptions are embedded under propositional attitude verbs and other operators raise a problem for the claim that the speaker *asserts* that there is exactly one  $\phi$ , as opposed to presupposing this. But Kaplan<sup>5</sup> and Neale<sup>6</sup> (henceforth *KN*) dismiss this concern. The purpose of the present article is to show that the argumentation of KN does not vindicate the Russellian analysis on this point. That is, I will argue that there is a real problem here for the Russellian analysis of the definite article. I will begin by recapitulating the objection of HEK and the response of KN; I will then argue that, properly formulated, HEK's objection is not affected by KN's criticism; and I will end by arguing, following Heim (*op. cit.*) and Elbourne (*op. cit.*), that an analysis of the definite article as presuppositional, along the lines of Frege<sup>7</sup> and Strawson<sup>8</sup>, captures the relevant facts adequately.

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<sup>1</sup>"On denoting," *Mind*, XIV (1905): 479–493, and in Alfred North Whitehead and Bertrand Russell *Principia Mathematica, Volume 1* (Cambridge: Cambridge University Press, 2nd edition, 1927), pp. 30–32, 66–71.

<sup>2</sup>"Artikel und Definitheit," in Arnim von Stechow and Dieter Wunderlich, eds., *Semantik: ein internationales Handbuch der zeitgenössischen Forschung* (Berlin: Walter de Gruyter, 1991), pp. 487–535, especially pp. 493–494.

<sup>3</sup>*Situations and Individuals* (Cambridge: MIT Press, 2005), especially pp. 109–112.

<sup>4</sup>"Russell's Notion of Scope," *Mind*, CXIV (2005): 1005–1037, especially p. 1023.

<sup>5</sup>"Reading 'On Denoting' on its Centenary," *Mind*, CXIV (2005): 933–1003, especially p. 985.

<sup>6</sup>"A Century Later," *Mind* CXIV (2005): 809–871, especially p. 846.

<sup>7</sup>"Über Sinn und Bedeutung," *Zeitschrift für Philosophie und Philosophische Kritik* C (1892): 25–50.

<sup>8</sup>"On referring," *Mind* LIX (1950): 320–344.

## I. HEK'S OBJECTION TO RUSSELL

Here, then, is the objection of HEK. We are dealing with examples like the following.

- (3) Hans wants the ghost in his attic to be quiet tonight.
- (4) Hans wonders whether the ghost in his attic will be quiet tonight.
- (5) If the ghost in his attic is quiet tonight, Hans will hold a party.

The Russellian analysis of definite descriptions predicts that (6a), in an appropriate context, should mean (6b).

- (6) a. The ghost in his attic will be quiet tonight.  
b. There is exactly one ghost in Hans's attic and it will be quiet tonight.

But then this seems to predict that (3)–(5) should have the readings in (7)–(9), respectively. We simply embed the truth conditions in (6b) under the relevant operators, closely following the syntactic form of the sentences.

- (7) Hans wants there to be exactly one ghost in his attic and for it to be quiet tonight.
- (8) Hans wonders whether the following is the case: there is exactly one ghost in his attic and it will be quiet tonight.
- (9) If there is exactly one ghost in his attic and it is quiet tonight, Hans will hold a party.

The fact is, however, that none of (3)–(5) have these predicted readings. In saying (3), for example, we would not be attributing to Hans the odd desire to have a ghost in his attic. And in saying (4), we are not saying that Hans wonders, among other things, whether there is exactly one ghost in his attic; it sounds rather as if Hans is *assuming* that there is exactly one ghost in his attic and *wondering* only whether it will be quiet tonight. A similar remark can be made about (5): in this example it sounds as if the speaker is assuming that there is exactly one ghost in Hans's attic, whereas this possibility is explicitly left open in (9).

## II. KN'S RESPONSE TO HEK

Thus the objection of HEK. In response, KN point out that propositional attitude verbs do not support entailments. Suppose that we have a sentence of the form  $\ulcorner S \text{ PAs Comp } p \urcorner$ , where  $\ulcorner S \urcorner$  refers to an agent,  $\ulcorner PA \urcorner$  is a propositional attitude verb,  $\ulcorner \text{Comp} \urcorner$  is a complementizer (*that* or *whether*), and  $\ulcorner p \urcorner$  is a declarative sentence. Suppose further that  $\ulcorner p \urcorner$ , uttered in isolation in a particular context  $c$ , entails (what we would express by)  $\ulcorner q \urcorner$ , a declarative sentence with distinct truth conditions (as evaluated in  $c$ ). KN's point is that not all sentences of the form  $\ulcorner S \text{ PAs Comp } p \urcorner$  entail the corresponding sentence  $\ulcorner S \text{ PAs Comp } q \urcorner$ . For example, (10) entails (11), but (12) does not entail (13) (Kaplan, *op. cit.*).

- (10) There are honest men.
- (11) There are men.
- (12) Diogenes wonders whether there are honest men.
- (13) Diogenes wonders whether there are men.

It is now possible to argue in analogous fashion about (4). (14) entails (15). Perhaps (4) does indeed have the Russellian logical form possessed by (8), repeated here as (16). But this does not mean that it is predicted to entail (17).

- (14) There is exactly one ghost in Hans's attic and it will be quiet tonight.
- (15) There is exactly one ghost in Hans's attic.
- (16) Hans wonders whether there is exactly one ghost in his attic and it will be quiet tonight.
- (17) Hans wonders whether there is exactly one ghost in his attic.

This seems to deal with the worry expressed by HEK about (4), and a similar argument could be made about (3).

## III. A FIRST RESPONSE TO KN'S RESPONSE

What can be said in response to KN's argument? The first thing to note is that KN do not deal with examples involving conditionals, like (5). Could their argument be extended to deal with such examples? It might seem as if it could. After all, (18) does not entail (19).

(18) If there are honest men, Diogenes will be surprised.

(19) If there are men, Diogenes will be surprised.

KN could claim, then, that (9), repeated here as (20), should not be expected to entail (21).

(20) If there is exactly one ghost in his attic and it is quiet tonight, Hans will hold a party.

(21) If there is exactly one ghost in his attic, Hans will hold a party.

Thus KN would be able to argue against all the kinds of example cited by HEK.

I do not, however, believe that KN's argument can profitably be extended along the lines just indicated. For the problem with examples like (5) is not that (5) is predicted by Russell to entail (21). (21) entirely omits the requirement that the ghost in question be quiet tonight, and is thus not remotely plausible as an entailment of (5). The problem with (5) and its Russellian paraphrase (20) is that we have a strong intuition that the speaker has to be assuming that there is exactly one ghost in Hans's attic in saying (5), whereas no commitment along these lines is made by (20). We can emphasize the difference by preceding the two sentences with a claim not to know the truth of a relevant proposition:

(22) I do not know whether there are any ghosts in Hans's attic. But if the ghost in his attic is quiet tonight, he will hold a party.

(23) I do not know whether there are any ghosts in Hans's attic. But if there is exactly one ghost in his attic and it is quiet tonight, he will hold a party.

Native speakers of English consistently maintain that the speaker of (22) sounds self-contradictory. But the speaker of (23) does not. So the contributions to the truth conditions made in the one place where (22) and (23) differ cannot be the same. But the clauses in the one place where (22) and (23) differ are just a sentence involving a definite description and its Russellian paraphrase. So the Russellian paraphrase cannot be accurate.

Could we salvage the Russellian analysis here by stipulating somehow that definite descriptions take obligatory wide scope over conditionals? Then we would obtain (24) as a paraphrase of (22):

(24) I do not know whether there are any ghosts in Hans's attic. But there is an entity such that it is a ghost in Hans's attic and nothing else is a ghost in Hans's attic and if it is quiet tonight Hans will hold a party.

This paraphrase would obviously account for the intuition that the speaker of (22) is being inconsistent. But there is a serious problem with this idea, and that is that the antecedents of conditionals are scope islands; it is not possible, in other words, for quantifier phrases contained in them to scope out of them.<sup>9</sup> This is obviously bad news for the neo-Russellian view according to which definite descriptions are quantifier phrases of a certain kind.<sup>10</sup>

Here is a detailed demonstration that definite descriptions do not take obligatory wide scope over conditionals. Let us first remind ourselves of the fact, well established in the literature just referred to, that quantifier phrases formed with *every* cannot take scope out of the antecedents of conditionals. Note that (25) cannot have the reading in (26):

(25) If every boy wins a prize, the headmaster will be happy.

(26) Every boy  $x$  is such that if  $x$  wins a prize the headmaster will be happy.

And (27) cannot have the reading in (28):

(27) If the headmaster praises every boy, he will be happy.

(28) Every boy  $x$  is such that, if the headmaster praises  $x$ ,  $x$  will be happy.

Now consider example (29) and the conceivable reading in (30):

(29) If every boy wins the prize he wants, the headmaster will be happy.

(30) Every boy  $x$  is such that, if  $x$  wins the prize  $x$  wants, the headmaster will be happy.

(29) does not have the reading in (30). So *every boy* has not taken scope over the conditional but takes scope within the antecedent.<sup>11</sup> But this sentence has a very

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<sup>9</sup>The notion of islands for overt syntactic movement goes back to John Ross *Constraints on variables in syntax* (doctoral dissertation, MIT, 1967). A classic reference dealing extensively with islands for scope is Robert May *Logical Form: its Structure and Derivation* (Cambridge: MIT Press, 1985). The topic has been dealt with extensively in generative linguistics. For a useful survey, see Anna Szabolcsi "The syntax of scope" in Mark Baltin and Chris Collins, eds., *The Handbook of Contemporary Syntactic Theory* (Oxford: Blackwell, 2003), pp. 607–633.

<sup>10</sup>Stephen Neale *Descriptions* (Cambridge: MIT Press, 1990).

<sup>11</sup>I discount the possibility that *every boy* might take scope over the antecedent of the conditional but not over the whole conditional (antecedent plus nuclear scope). I do not see what this could possibly amount to in semantic terms. And besides, the headmaster's happiness in the current example is clearly contingent on *every boy* winning the prize he wants; *every boy* belongs semantically inside the antecedent, then.

natural reading in which *every boy* binds *he*. So *he* is within the scope of *every boy*. It is also an integral part of the definite description *the prize he wants*: *he wants* is an intersective modifier of *prize*, and there is no evident way of making it scope higher than *prize*. So the definite description is within the scope of *every boy* and is thus within the scope of the conditional. So definite descriptions do not take obligatory wide scope over conditionals. Since this is the case, to resume the main thread of the argument, the Russellian analysis of definite descriptions predicts that (22) will have a reading equivalent to (23). But it does not.

#### IV. A SECOND RESPONSE TO KN'S RESPONSE

I maintain, then, that examples like (5) still constitute a problem for the Russellian analysis of definite descriptions. But have KN relieved the analysis of its apparent embarrassment over examples like (3) and (4)? I believe not.

Suppose Hans sincerely tells us (31). If he then goes on to say (32a), is he being consistent? And if he goes on to say (32b)?

(31) I am unsure whether there is a ghost in my attic.

- (32) a. I am wondering whether there is an entity such that it is a ghost in my attic and nothing else is a ghost in my attic and it is being noisy.  
b. I am wondering whether the ghost in my attic is being noisy.

Suppose, again, that Hans sincerely tells us (31). If he then goes on to say (33a), is he being consistent? And if he goes on to say (33b)?

- (33) a. I would like there to be an entity such that it is a ghost in my attic and nothing else is a ghost in my attic and it is quiet tonight.  
b. I would like the ghost in my attic to be quiet tonight.

Native speakers judge that Hans's propositional attitudes are consistent if he continues with the (a) sentences above, and inconsistent if he continues with the (b) sentences.

HEK's claim, then, should not be that (32a) entails that Hans is wondering whether there is exactly one ghost in his attic; it should be that the utterance of (32b) is inconsistent with Hans being unsure whether there is a ghost in his attic, whereas the utterance of (32a) is not. But (32a) is just a Russellian paraphrase of (32b). So the Russellian paraphrase cannot be accurate. An analogous argument can be made with respect to (33).

Once more there is a temptation to try to rescue Russell's analysis here by claiming that definite descriptions must take wide scope over relevant operators—attitude verbs, in this case. Then, instead of (32a) and (33a), we would have to have (34) and (35) as paraphrases of (32b) and (33b):

(34) There is an entity such that it is a ghost in my attic and nothing else is a ghost in my attic and I am wondering whether it is being noisy.

(35) There is an entity such that it is a ghost in my attic and nothing else is a ghost in my attic and I would like it to be quiet tonight.

If these were the only meanings available to (32b) and (33b), we would understand why they seemed incompatible with (31). But this analysis is impossible to sustain. Consider (36):

(36) Ponce de León is wondering whether the fountain of youth is in Florida.

In an example like (36), assuming that the speaker does not believe in the existence of a fountain of youth, it is claimed as a virtue of the Russellian analysis that definite descriptions are able to take *narrow* scope with respect to propositional attitude verbs.<sup>12</sup> For the reading with narrow scope for the definite description would be as follows:

(37) Ponce de León is wondering whether there is an entity such that it is a fountain of youth and nothing else is a fountain of youth and it is in Florida.

This paraphrase, whatever may be its other merits or demerits, at least does not commit the speaker to the existence of a fountain of youth. Contrast the reading in which the definite description takes wide scope over the attitude verb:

(38) There is an entity such that it is a fountain of youth and nothing else is a fountain of youth and Ponce de León is wondering whether it is in Florida.

This clearly commits the speaker to the existence of a fountain of youth. Since (36) does not necessarily involve such a commitment, it is important that the narrow scope reading in (37) is available. But then the Russellian is forced to admit that definite descriptions can take narrow scope with respect to propositional attitude verbs. So the Russellian analysis predicts incorrectly that (32b) and (33b) will have readings equivalent to (32a) and (33a).

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<sup>12</sup>See, for example, Neale, *Descriptions*, p. 27.

## V. THE FREGEAN ANALYSIS OF DEFINITE DESCRIPTIONS

The Fregean analysis of definite descriptions differs from the Russellian approach in that it makes the existence and uniqueness of the ghost presuppositions<sup>13</sup>, not assertions. As I have argued in previous work (Elbourne, *op. cit.*), it seems perfectly well equipped to deal with the examples we have been looking at.

Take (5), repeated here as (39).

(39) If the ghost in his attic is quiet tonight, Hans will hold a party.

We observed earlier that the speaker of this sentence seems to be *assuming* the existence of a ghost in Hans's attic. We could equally well have said that the speaker is *presupposing* the existence of such a ghost. On the Fregean analysis of the definite article, the definite description introduces such a presupposition and it becomes a presupposition of the entire sentence. It is well established in work on the "projection" of presuppositions that the antecedents of conditionals allow presuppositions introduced in them to become presuppositions of the conditional as a whole.<sup>14</sup> The behavior of (39) follows immediately from the supposition that it (or a speaker who uses it) presupposes the existence of a ghost in Hans attic, as the reader can verify. In particular, it is now obvious why a speaker of (22) should sound self-contradictory.

Let us move on to (3) and (4), repeated here as (40) and (41).

(40) Hans wants the ghost in his attic to be quiet tonight.

(41) Hans wonders whether the ghost in his attic will be quiet tonight.

Since these examples involve propositional attitude verbs, we need to know what happens to presuppositions that are introduced by sentences in the scope of such verbs. This question has already been insightfully investigated. Karttunen<sup>15</sup> has

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<sup>13</sup>The Fregean analysis of the definite article is in principle neutral between different analyses of presupposition. Whatever kind of thing presuppositions turn out to be, the Fregean analysis can say that the existence and uniqueness entailments associated with definite descriptions are that kind of thing. It is also important to note that the Fregean analysis is not committed to having definite descriptions be directly referential: I personally am inclined to think that definite descriptions are individual concepts (Elbourne, *op. cit.*, Chapter 3).

<sup>14</sup>Antecedents of conditionals are "holes" for presupposition projection, in Karttunen's terminology: see Lauri Karttunen "Presuppositions of compound sentences," *Linguistic Inquiry* IV (1973): 169-193. For additional data and a survey of rival theories of presupposition projection, see David Beaver "Presupposition," in Johan van Benthem and Alice ter Meulen, eds., *Handbook of Logic and Language* (Amsterdam and Cambridge, MA: Elsevier and MIT Press, 1997), pp. 939-1008.

<sup>15</sup>"Presupposition and linguistic context," *Theoretical Linguistics* I (1974): 181-194.

observed that in such cases the presuppositions of the embedded sentence come to form part of a new presupposition carried by the whole sentence, namely that the subject of the propositional attitude verb believes the presuppositions of the embedded sentence. For example, it is commonly assumed that (42) carries the presupposition in (43):

(42) John has stopped drinking.

(43) John drank.

According to Karttunen, then, when we embed (42) under a propositional attitude verb, as in (44), its presupposition will no longer be present as such; there will instead be a presupposition to the effect that the subject of the attitude verb believes (43).

(44) Mary believes that John has stopped drinking.

This seems to be correct. The proposition that John drank is certainly not a presupposition of (44), since we can felicitously continue as in (45).

(45) Mary believes that John has stopped drinking. But in fact John never drank.

And it seems infelicitous now to add that Mary believes that John never drank:

(46) Mary believes that John has stopped drinking. But she never believed he did drink.

It seems, then, that (44) presupposes that Mary believes that John drank. So Karttunen is correct: the presupposition of the embedded sentence has been taken and made into a component of the presupposition of the sentence as a whole.<sup>16</sup>

Following Karttunen, then, we can postulate that the presupposition that there is exactly one ghost in Hans's attic, carried by the embedded sentence in (40) and (41), is manipulated by the propositional attitude verb and contributes to a presupposition carried by the whole sentence to the effect that Hans believes that there is exactly one ghost in his attic. This, again, seems to be in accordance with our intuitions. In particular, it is now understandable why we attribute inconsistent propositional attitudes to Hans when he follows (31) with (32b) or (33b): he asserts agnosticism with respect to the question of whether there is a ghost in his attic and then presupposes that he believes there is such a ghost.

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<sup>16</sup>See Irene Heim "Presupposition projection and the semantics of attitude verbs," *Journal of Semantics* IX (1992): 183–221, for extensive further discussion.

## VI. CONCLUSION

I submit, then, that the Fregean analysis of definite descriptions is superior to the Russellian analysis with respect to the data examined in this article. This conclusion should be viewed in the context of other recent works arguing in favor of the Fregean analysis.<sup>17</sup>

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<sup>17</sup>See the following works: Elbourne *op. cit.*, especially pp. 99–109; Kai von Fintel “Would you believe it? The King of France is back! (Presuppositions and truth-value intuitions)”, in Marga Reimer and Anne Bezuidenhout, eds., *Descriptions and Beyond: an interdisciplinary collection of essays on definite and indefinite descriptions and other related phenomena* (Oxford: Oxford University Press, 2004), pp. 315–341; Michael Glanzberg “Definite descriptions and quantifier scope: some Mates cases reconsidered,” *The European Journal of Analytic Philosophy*, III (2007): 133–158, and “Descriptions, negation and focus” in Robert Stainton and Christopher Viger, eds., *Compositionality, Context, and Semantic Values* (New York: Springer, forthcoming); and Daniel Rothschild “Presuppositions and Scope,” *Journal of Philosophy* CIV (2007): 71–106.