
Heim’s article assumes an intensional semantics and allows for context-dependency. Utterances of expressions in contexts c are evaluated with respect to a world and a time. We are still working with an extensional semantics at this point in the course, and I have not yet introduced you to systematic ways of taking into account context-dependency, so we will have to skip some of the points Heim makes.

1. Three analyses of definite descriptions

In her article, Heim discusses three analyses of definite descriptions like the mayor of Northampton.

(a) The directly referential analysis: on this proposal, the mayor of Northampton is a proper name that picks out a particular individual, Mary Clare Higgins, in the same way a proper name does. We will not discuss this proposal here, since we would need to have a detailed discussion of proper names and direct referentiality. Note, however, that there are DPs of the form the NP that are true proper names on anybody’s account: the United States of America, the Alps, the Adirondacks, etc. What is it that makes those DPs true proper names?
(b) The Russellian analysis: definite descriptions are quantifier phrases. Within our framework, this would mean that the definite article *the* receives the following translation into ETL:

\[ \lambda P \lambda Q \exists x(Q(x) \& \forall y(P(y) \leftrightarrow y = x)) \]

(c) The presuppositional analysis: this analysis is in the spirit of Frege, and this is why Heim calls it a “Fregean analysis”. It is, however not the formal proposal that Frege adopted. On the presuppositional analysis, the definite article *the* receives the following translation into ETL:

\[ \lambda P \ i x \ P x \]

**Class exercise:** Translate the sentences (1) and (2) below into ETL, assuming (a) a Russellian analysis, and (b) a presuppositional analysis.

(1) The mayor spoke.
(2) The mayor did not speak.

2. **Advantages of the presuppositional analysis: Negation**

(3) The emperor of Canada spoke.
(4) The emperor of Canada did not speak.

(5) Somebody greeted the Emperor of Canada.
(6) Nobody greeted the emperor of Canada.

- If there is no emperor of Canada, the presuppositional analysis says that none of the sentences in (3) to (6) has a truth-value. Russell would only be able to say that sentences (3) to (6) are false if he stipulated that definite descriptions must take widest scope in those sentences.
3. But there seems to be a scope ambiguity!

- As Russelians have been pointing out over the years, definite descriptions can take scope under negation after all:

(7) You I am going to have breakfast with the emperor of Canada tomorrow.
I You cannot possibly have breakfast with the emperor of Canada tomorrow, because there is no emperor of Canada!

4. More examples favoring the Russelian analysis

(8) If Mary has a son, her son goes to Amherst High School.
(9) Either John doesn’t have a donkey, or he keeps his donkey very quiet.
(10) The emperor of Canada does not exist.

5. Scope data favoring the presuppositional analysis

(11) a. It is too bad that the mayor of Northampton will speak.
     b. # It is too bad that there is exactly one mayor of Northampton and that she will speak.
     c. There is exactly one mayor of Northampton and it is too bad that she will speak.
     d. * Who is it too bad that t will speak?

(12) a. We were wondering whether the mayor of Northampton will speak.
     b. # We were wondering whether there is exactly one mayor of Northampton and whether he or she will speak.
     c. There is exactly one mayor of Northampton, and we were wondering whether she will speak.
     d. * Who were we wondering whether t will speak?

(13) a. Nina heard the news that the mayor of Northampton will speak.
b.  # Nina heard the news that there is exactly one mayor of Northampton and
    that she will speak.

c.  There is exactly one mayor of Northampton, and Nina heard the news that
    she will speak.

d.  * Who did Nina hear the news that t will speak?

(14) a.  If my spouse had cooked, we would be eating a better meal.

b.  # If I had one and only one spouse and he or she had cooked, we would be
    eating a better meal.

c.  I have one and only one spouse, and if she had cooked, we would be eating a
    better meal.

d.  * Who if t had cooked, we would be eating a better meal.

“In the literature, such examples are considered evidence that the existence and uniqueness
condition associated with the definite article is a presupposition. In order to understand
what is meant by this and what it contributes to an explanation of our observations, we must
digress briefly into the theory of presupposition. Students of presupposition are in no way
in agreement what presuppositions are. For the sake of concreteness, we choose here a so-
called semantic concept of presupposition ……” (Heim, o. cit., 9). The basic idea is that
expressions are not assigned values unless all of their presuppositions are satisfied.

6. Other expressions triggering presuppositions

(15) a.  It stopped raining.

b.  It didn’t stop raining.

c.  Hans wanted it to stop raining.

d.  Hans wondered whether it stopped raining.

e.  If it stopped raining, it would get warmer.

f.  It can’t have stopped raining, since it hasn’t even started yet.
7. The final word

“… It should not go unmentioned that there are quite a few mysteries involved here even for those well versed in the most recent presupposition literature. In as much as the semantics of such sentences can be characterized insightfully within a theory of semantic presuppositions, a Fregean interpretation gains support over a Russellian one. But as long as this has not been accomplished fully, the contest isn’t over.” Heim, op. cit., p. 12.

8. Good recent overview articles on presuppositions
