

Seemingly indefinite definites

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1 Introduction

The definite article is perhaps one of the most closely-studied items there is, being of strong interest not only to formal semanticists but also to linguists whatever their theoretical orientation, as well as psychologists and computer scientists and, more generally, almost anyone who is interested in reference and discourse.¹ There is an understandable default assumption behind the vast majority of this work, namely, that the definite article makes the same semantic/pragmatic contribution to the meaning of the whole under all circumstances; that is, there is in there somewhere a single albeit hard-to-define meaning that we can say is the meaning of the definite article. In this paper we take issue with this basic, common-sense assumption, and argue that there are, at least in English, two distinct classes of definites. We support this thesis with both semantic and experimental observation.

2 Semantic observations

Our claim is that routine-seeming definites of the type found in (1) represent a different class from those found in (2).

- (1) a. Mary went to *the store*.
b. I'll read *the newspaper* when I get home.
- (2) a. Mary went to *the desk*.
b. I'll read *the book* when I get home.

The intuition is that in saying (1), the speaker simply doesn't care which store or newspaper is under discussion, whereas in (2) a very definite book or desk is under discussion. This is a very thin intuition, of course. We are going to refer to the type in (1) as *weak* and the type in (2) as *regular*. Weak definites, we argue, share the

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same set of restrictions as occurrences of bare singular count nouns in English (Stvan, 1998, Baldwin et al, 2003; Zamparelli and heycock, to appear); for samples of work on bare singulars in other languages see e.g. Borthen (2003), Munn and Schmidt, 1999, among others). It turns out that, with a few exceptions, all definite NP's capable of weak readings also have the regular readings (though the reverse does not hold), so we are dealing with a systematic ambiguity. In order to detect which NP's are capable of weak readings, we use the VP-anaphora test. Consider (3) and (4)

- (3) Mary heard about *the riot on the radio*, and Bob did, too. (same riot, OK different radios)
- (4) a. Fred went to *the store*, and Alice did, too. (OK as different stores)
 b. Fred went to *the desk*, and Alice did, too. (must be same desk)

In (3) the same riot must have been heard about, but Mary and Bob need not have listened to the same radio (or same radio station), and (4a) contrasts with (4b) in that different stores could easily have been involved, whereas the same desk must be involved in both instances. Thus, the weak readings seem a lot like indefinites as one gets a similar semantic effect with examples like “Fred went to a store, and Alice did too”.

The claim is that the weak readings share the same restrictions and the same semantics as bare singulars in English (we use standard American English judgements); thus (5a) and (5b) could be thought of as simply alternative formal expressions of the same underlying semantics:

- (5) a. Sue took her nephew *to college/to prison/to class*
 b. Sue took her nephew *to the hospital/to the store/to the beach*

Bare singulars are restricted by the lexical items they can or must cooccur with (they need to be “governed”)—normally a preposition but oftentimes a verb.

- (6) a. They found him in (*on) *bed*.
 b. The ship is at (*under) *sea*.

There are purely lexical restrictions of which nouns may appear as bare singulars:

- (7) a. *They found him in *couch/cot/hammock*
 b. *The ship is at *ocean/lake*

And, with a few exceptions, bare singulars are not susceptible to restrictive modification:

- (8) a. *She traveled on *sore foot*
 b. *He was found in *silk-sheeted bed*.

Finally, there is some degree of ‘semantic enrichment’ involved. Thus, being in bed or in prison is not simply a locational property but also includes e.g. an intention to

sleep or actual incarceration. Semantically, bare singulars of the types exemplified appear to be nonspecific indefinite, and always hold narrowest scope in a sentence.

Once a set of weak readings for definites is localized via, e.g. the VP-ellipsis test, we see that these, too, share this same set of properties:

“Governed”:

- (9) a. Kenneth is at the store vs. behind the store
- b. They took the crash victims to the hospital vs. past the hospital
- c. Sally checked the calendar vs. tore the calendar

Lexically restricted

- (10) a. He went to the hospital vs. He went to the building
- b. Scarface is in the pen vs. Scarface is in the cage.
- c. They listened to the radio vs. They listened to the tape recorder

No modification

- (11) a. He went to the 5-story hospital.
- b. They both checked the calendar that was hanging upside down.
- c. Each man listened to the red radio on the picnic table.

Semantic enrichment:

- (12) a. Going to the store is going to *a* store and more...(shopping)
- b. Being in the hospital is being in *a* hospital, and more...(healing)

Finally, once distinguished, weak readings if thought of as indefinites are always narrowest scope and appear indistinguishable semantically from the bare singulars. While we are not actually claiming that NP’s like “the hospital” are the same as “a hospital” semantically, there is enough semantic similarity to use it as a working hypothesis.

3 Experimental observations

We conducted two studies. The first was a survey in which we established that naive subjects would share our own judgments regarding the VP Ellipsis facts presented above. This survey showed extremely conclusively that naive subjects in fact did share these intuitions about meaning as predicted.

The second study made use of free-head eye-tracking techniques, which is now widely used in psycholinguistic experimentation (see Tanenhaus et al, 2000 for one overview). The basic fact is that people will look at things being referred (e.g. in a picture) and that these looks are very closely time-locked to hearing the referring phrase, often with looks occurring even as the phrase itself is being uttered. In the experiments we did, we relied also on our own experiences from doing other experiments. We had previously observed that if one had an object being referred to (e.g. “the box”) and the display contained a single box off to one side, and a group of two or more boxes on the other side, there was a strong tendency to look at the single

box. On the other hand, under the same circumstances, upon hearing an indefinite (“a box”) there was a strong tendency to look at the group of boxes, and not the single box. Thus, at least in certain tasks, definite and indefinite reference can be distinguished behaviorally. We used this experience to construct an experiment in which we contrasted weak definites with indefinites and regular definites. Six contrasting pairs of nouns were constructed (e.g. “calendar” with weak and regular readings vs. “map” with no weak reading, in the construction “Mary looked at the calendar/the map”), balanced against a set of indefinites. The scenes presented had a person along with two types of objects: objects that the noun presented described (“target” items), and irrelevant objects (“distractor items”). Both targets and distractors were presented as a single object in one location in the scene presented and a group of two in another in the display looked at. Thus, if the target items are calendars (the sentence heard would be “Mary looked at the calendar”), cakes would be distractor items. Contrasted with this would be the same scene but with maps, grouped the same way (one/two), in place of calendars, with the sentence heard being “Mary looked at the map”; cakes remain the distractor. Since “calendar” has a weak reading, and “map” does not, we entertained the null hypothesis that the weak definites would be different from the regular definites, and that the weak definites would look more like indefinites.

Eye movement data for the three classes will be presented. The online eye-movement data come out somewhat different than we had thought, with indefinites mildly favoring looks to the single item and not the pair. However, the eye-movement data presented establish the following:

- 1) Weak definites are not interpreted on-line the same as indefinites
- 2) Weak definites are not interpreted on-line the same as regular definites.

Thus, the experimental results tend to support the claim that while weak definites are not the same as indefinites, they form a class that is distinguishable from the regular definites without weak readings, supporting the claims made based on the semantic observations above.

However, the interpretation of the experimental data is by no means straightforward. Given a semantic theory of how the noun phrases in question are interpreted, there is nothing like a direct experimental prediction that can be generated from this hypothesis. This raises the issue of what the “linking hypothesis” needs to be in order to generate behavioral predictions from constructs of linguistic theory.

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