

Updates Beyond Semantics and Pragmatics

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Overview I propose that there are updates to discourse's rule-governed, linguistic context that are neither semantic nor pragmatic. (i) I argue for the view, by appeal to an account of the semantics of definite descriptions. (ii) I discuss how the view was identified in seminal works in formal pragmatics and semantics, but that its importance has not been fully appreciated. (iii) I show how the view provides a superior version of the orthodox answer to a foundational puzzle concerning context-sensitive referential expressions.

1 Definite Descriptions Presuppose Discourse Uniqueness

- (1) A woman entered from stage left, and a woman entered from stage right.
#The woman was carrying a bouquet of flowers.¹
- (2) Sue bought a sage plant along with eight others. She loves the sage plant she bought.²

¹ Based on data from Roberts 2003.

² Mandelkern and Rothschild 2020, based on data from Heim 1982.

1.1 More from Mandelkern and Rothschild [2020]

- (3) a. Several couples came in today. There was one, a woman and a man.
The man was being so annoying.
- b. ??Several couples came in today. The man was being so annoying.
- (4) Several couples came in today. The man was being so annoying by asking each of the couples where they met.

1.2 Salience and Discourse Structure

- (5) a. If a bishop meets a bishop, the bishop blesses the bishop.³
- b. A woman met a woman. The woman hugged the woman.
- (6) The cat is in the carton. The cat will never meet our other cat, because our other cat lives in New Zealand. Our New Zealand cat lives with the Cresswells. And there he'll stay, because Miriam would be sad if the cat went away.⁴
- (7) A man in a dark suit was talking to a man holding a large envelope. After talking for about a minute they left the station going in opposite directions. Thirty seconds after they left, the man showed up and nervously looked around.⁵
- (8) ??If a bishop and a bishop meet, the bishop blesses the bishop.⁶

³ Based on data from Heim 1990.

⁴ Lewis 1979.

⁵ Szabó 2000.

⁶ Based on data from von Stechow, given in Elbourne 2005.

2 Deictic Discourse Referents

- (9) *John and Mary are in an art gallery surrounded by paintings.*⁷

#The painting is beautiful.

- (10) *John and Mary are working together rearranging their living room.*

#You will take the chair and I will take the chair.

⁷ Both are based on data from Maclaran 1982

Not Pragmatic The discourse referents for the multiple paintings/chairs are not introduced to context by presupposition accommodation.⁸ Nor are they introduced in virtue of being inferred to exist in virtue of mutually available information.

⁸ Presupposition Accommodation: “If at time *t* something is said that requires presupposition *P* to be acceptable, and if *P* is not presupposed just before *t*, then—*ceteris paribus* and within certain limits—presupposition *P* comes into existence at *t*” [Lewis, 1979].

Not Semantic To hold that the discourse referents are initiated by covert existential quantifiers requires a strange notion of logical form.

Proposal (First Pass) Discourse referents for objects in interlocutors’ mutual perceptual environment are added to their discourse context, not via pragmatic inferencing nor a linguistic expression’s semantically encoded update.

2.1 Antecedents

Stalnaker’s Commonplace Effect “A conversation is a process taking place in an ever-changing context...how does an assertion change the context? There are two ways, the second of which, I will suggest, should be an essential component of assertion. I will mention the first just to set it apart from the second: The fact that a speaker is speaking, saying the words he is saying in the way he is saying them, is a fact that is usually accessible to everyone present. Such observed facts can be expected to change the presumed common background knowledge of the speaker and his audience *in the same way that any obviously observable change in the physical surroundings of the conversation will change the presumed common knowledge. If a goat walks into the room, it would normally be supposed, from that point, that there was a goat in the room.*”⁹

⁹ Stalnaker 1999 page 86 (originally published 1978), emphasis added.

Heim’s Contextual Salience vs. Accommodation “In some sense, both deictic reference and anaphoric reference presuppose that the referent be already “familiar” to the audience: In the case of deictic reference, it has attained familiarity by being pointed at, being perceptually prominent, or being otherwise salient. In the case of anaphoric reference, it has been familiarized by previous mention...Let us assume that anything that is familiar for either reason is represented by a card in the file. An obvious implication of this assumption is that files must be able to change, and in particular, must be able to have new cards added, *without anything being uttered. For instance, if halfway through a conversation between A and B a dog comes running up to them and draws their attention, then that event makes the file increase by a new card.*”¹⁰

¹⁰ Heim 1982 section 2.3 of chapter 3, emphasis added.

“As I am walking up a driveway, someone says to me:

- (11) Watch out, the dog will bite you.

There was no previous discourse, there is no dog in sight, and I had no reason to believe that any dog lived here before I heard the utterance.”¹¹

¹¹ Heim 1982 section 5.2 of chapter 3.

Kadmon’s Textbook Discussion “...the antecedent discourse referent of a given definite NP need not be triggered by linguistic text. Suppose that I point to the (*only*) door of the room we are in, or look at it, and say 12.

- (12) The door is about to open.

We may assume that because the door of this room is in the immediate utterance situation, and since, *furthermore, I raised its salience by attracting your attention to it*, the file now contains a discourse referent representing this door.”¹²

¹² Kadmon 2001 page 78, emphasis added.

2.2 Some Clarity

A Stalnakerian Proposal Here is how a pragmatic account of the infelicity of 9 (or 10) would naturally be spelled out.¹³ One way the common ground may change is as follows: if *P* is believed by each of the interlocutors to be commonly believed, then it is common belief that *P*.

¹³ Based on the discussion of accommodation in Stalnaker 2002.

Step 1 At *t*-3, it becomes common ground that there is a painting to the left of the interlocutors. At *t*-2, it becomes common ground that there is a painting to the right of the interlocutors...

Step 2 At *t*, speaker says, pointing at one of the paintings, “The painting is beautiful.” But the addressee *cannot* stop believing that it is common belief that the other paintings exist. So the uniqueness presupposition of the definite description is violated.

First Problem Why is it that, in Step 2, the addressee cannot come to believe that the speaker does not believe the other paintings exist? Perhaps because of a certain sort of social motivation?

- “We have something like a need to see others and be seen by them as fellow *travellers*, and to stand with others and look out at a shared world: a need to sustain relations of mutual cognitive focus with other people, *and to join other people in relations of shared cognitive focus on things in the world*.”¹⁴

¹⁴ Dickie 2020 page 39, emphasis added. See also Tomasello et al. 2005, Campbell 2018, Harder forthcoming for related proposals.

Second Problem If Steps 1 and 2 explained the infelicity of 9, then 2 would also be infelicitous (repeated here as 13), but it is not.

- (13) Sue bought a sage plant along with eight others. She loves the sage plant she bought.

Crucially, Step 1 must not be simply that several paintings are entailed to exist by the common ground. There must be discourse referents for each painting.

My Proposal (Second Pass) Discourse referents for objects in interlocutors' mutual perceptual environment are added to their discourse context, in virtue of the interlocutors tracking each other's perceptual attention to objects (Step 1), where that tracking is largely outside of their control (Step 2).

3 A Puzzle about Context-Sensitivity

Consider two utterances u and u' of 14, where different men m and m' are pointed at.

- (14) That man was sad.

Given that understanding, or grasping what is said by, each of these utterances involves something different,¹⁵ one of the following three theses must be false.

¹⁵ Different men pointed at so different men to be thought of

- (i) The logical form of a sentence (plus the lexical meanings of its simple constituents and rules of composition) determines what is required to understand any token of it.
- (ii) What is required to understand a token of a sentence determines what is required to understand the utterance of which it is a token.
- (iii) The sentence tokens in u and u' have the same logical form.

The Traditional Kaplanian View denies i by introducing a notion of extralinguistic context, which a demonstrative's type-level linguistic meaning combines with in order to determine a particular referent.¹⁶ But such a view struggles to explain how demonstratives may be used anaphorically (and quantificationally), where they pick up an indefinite discourse referent from the linguistic context.

¹⁶ Kaplan 1989

- (15) A man walked in. That man was sad.

Recent Work by Stojnić et al. [2013, 2017] denies iii: u and u' contain different covert existential quantifiers, to which the tokened demonstratives are anaphoric.¹⁷ But these existentials must establish *definite* discourse referents, to explain how the two utterances are about distinct men; hence, the existentials must be roughly restricted as follows: *there exists some man identical to n*—where “n” is a covert proper name.

The Neo-Strawsonian denies ii by distinguishing between sentence and utterance understanding: understanding the token sentences in u and u' is determined by type-level linguistic meaning, but grasping the reference is something further, a part of understanding the utterances.¹⁸ But such a view proposes radically that there is no such thing as linguistic reference.

My Proposal provides a way of denying i, which meets the issues raised above. Deictic demonstratives are anaphoric to discourse referents, but which are not initiated by any element of logical form, even covert: so the discourse referents may be definite, without appeal to covert proper names. And the discourse referents are initiated into discourse’s rule-governed linguistic context, not via pragmatic inferencing: so deictic demonstratives may be given a semantic treatment uniform with anaphoric ones.

4 Formal Appendix

4.1 Background Dynamics

- (16) A CONTEXT C is a set of partial assignment functions $c : \mathbb{N} \rightarrow D$
- (17) There is an F-DISOURSE REFERENT at index i of C iff $\forall c \in C : \llbracket F \rrbracket(c_i)$
- (18) $\llbracket \exists x^i \rrbracket = \lambda C. \bigcup_{c \in C} \{c \bullet_i e \mid e \in D\}$
- (19) $c \bullet_i e$ = the unique c' such that c' differs from c at most in that $c(i) = e$
- (20) $\{\emptyset\} \llbracket \exists x^1 \rrbracket = \{\{\langle 1, a \rangle\}, \{\langle 1, b \rangle\}, \{\langle 1, c \rangle\}, \dots\}$ ¹⁹
- (21) $\llbracket F(x_i) \rrbracket = \lambda C. \{c \in C \mid c_i \in \llbracket F \rrbracket\}$
- (22) $\llbracket \phi \wedge \psi \rrbracket = \lambda C. (C \llbracket \phi \rrbracket) \llbracket \psi \rrbracket$

¹⁷ Motivated by a theoretical approach that aims to show how grasp of linguistic conventions is enough to grasp what is said by utterances [Fodor and Lepore, 2004, Lepore and Stone, 2015]

¹⁸ Strawson 1950, Bach 2003, Heck 2014

¹⁹ Introducing a discourse referent with an indefinite, for instance “anⁱ F” (or $\exists x^i \wedge F(x_i)$) minimally alters the input context so that it contains an F-discourse referent at index i .

4.2 Definite Descriptions

- (23) $\llbracket [\text{the NP}] \text{ VP} \rrbracket$
- (24) $\llbracket the \rrbracket = \lambda P. \lambda Q. \lambda C. \frac{\exists! i \forall c \in C(P(c_i))}{\{c \in C \mid Q(c_{ii}(\forall c \in C(P(c_i))))\}}$ ²⁰

²⁰ Roberts 2003, Barker 2004: definite descriptions presuppose uniqueness among discourse referents.

4.3 Demonstratives and Responses to the Puzzle

- (25) That man was sad.²¹
- (26) A man was walked in. That man was sad.

²¹ Uttered pointing to one or another man, as above.

(27) [[that NP] VP]

Kaplanian Response But with a treatment of anaphora.²²

²² Rothschild and Yalcin 2017.

$$(28) \llbracket dthat_i \rrbracket = \lambda P. \lambda Q. \lambda k. \lambda C. \frac{P(k_i)}{\{c \in C \mid Q(k_i)\}}$$

$$(29) \llbracket cthat_i \rrbracket = \lambda P. \lambda Q. \lambda k. \lambda C. \frac{\forall c \in C (P(c_i))}{\{c \in C \mid Q(c_i)\}}$$

Non-Ambiguity Demonstratives are always sensitive to the discourse context.

$$(30) \llbracket that_i \rrbracket = \lambda P. \lambda Q. \lambda C. \frac{\forall c \in C (P(c_i))}{\{c \in C \mid Q(c_i)\}}$$

Neo-Strawsonian Response Understanding any token of 25 involves simply grasping the update function in 31, though understanding the overall utterance requires more.

$$(31) \llbracket That_i \text{ man was sad} \rrbracket = \lambda C. \frac{\forall c \in C (man(c_i))}{\{c \in C \mid sad(c_i)\}}$$

Stojnić et al.'s Response Here's a simple version of their proposal, which clearly displays what matters about it with regard to the puzzle. Different utterances of 25, uttered while pointing at different men m and m' , are tokenings of different logical forms, where “n” is a name that refers to m and “n'” to m' .

$$(32) \exists x^i = n \wedge That_i \text{ man was sad}$$

$$(33) \exists x^i = n' \wedge That_i \text{ man was sad}$$

Types of Discourse Referents A discourse referent at index i of C is **DEFINITE** iff $\exists e \in D \forall c \in C : c_i = e$ (otherwise, it is an **INDEFINITE** discourse referent). In the initial context on the left of the arrow in 34, there is an indefinite discourse referent at index 1. After the update represented by the arrow, there is a definite discourse referent at index 2.

$$(34) \{\{\langle 1, b \rangle\}, \{\langle 1, c \rangle\}, \{\langle 1, m \rangle\}\} \rightsquigarrow \{\{\langle 1, b \rangle, \langle 2, o \rangle\}, \{\langle 1, c \rangle, \langle 2, o \rangle\}, \{\langle 1, m \rangle, \langle 2, o \rangle\}\}$$

My Proposal For each object o in the interlocutors' mutual perceptual environment, the following update is brought about in virtue of the the interlocutors' automatic tracking of each other's perceptions.

$$(35) \lambda C. \bigcup_{c \in C} \{c \bullet_1 o\}$$

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