De se attitudes: Ascription and communication
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> Ninan's argument, **part 1**:
>
> 1. Self-Misidentity and Shifted Indexicals show that the truth conditions for any DE SE attitude ascription is distinct from both DE DICTO and DE RE attitude ascriptions.
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> 2. If (1), then we need distinct truth conditions to ascribe thoughts DE SE.
>
> 3. We need distinct truth conditions to ascribe thoughts DE SE.

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1 Background

Consider the following context:

(1) Situation 1
John is intoxicated and watching TV. He is watching the speeches of various candidates in the upcoming election. He watches one particularly engaging candidate, and comes to think that this candidate will win. The candidate is none other than John himself; but because he is so intoxicated he doesn't realize that he is the candidate in question. In fact, he is rather pessimistic about his own prospects and thinks to himself, *I'm not going to win the election.*

(2) a. John expects that he will win the election.
    b. John expects [PRO to win the election.]

(2a) has a true reading in Situation 1, while (2b) is true only if John has a *de se* expectation that he, John, will win.

1.1 Centered worlds

Ninan (2010a) follows Lewis (1979) on centered worlds –

- A proposition p is a set of possible worlds.

- An agent's belief state determines the possible worlds compatible with what she believes – the agent's DOXASTIC ALTERNATIVES.

    - Lewis takes these doxastic alternatives to be CENTERED WORLDS, *i.e.,* pairs containing a possible world and an individual.[1]
    - A centered world $\langle w', x' \rangle$ is compatible with what an agent x believes in a world w iff x thinks in w that she might be x' in w' (x's beliefs do not exclude the possibility that she is x' in w').

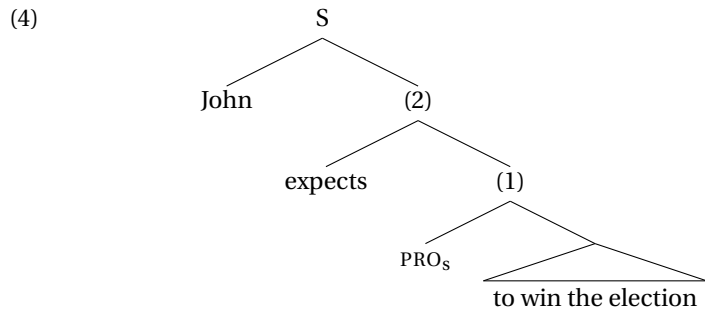- An agent x in world w believes a proposition p iff all her doxastic alternatives are contained in p.

Distinguishing *de se* from non-*de se* propositions:

(3) BORING centered propositions
A proposition p is boring iff for any world w and inhabitants x, y of w, $\langle w, x \rangle \in p$ iff $\langle w, y \rangle \in p$.

A *de se* content is an INTERESTING, i.e. non-boring, centered position.

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[1] Lewis considers centered worlds to be a triples including a time, but we can ignore time for the purposes of this analysis.

1.2 Deriving the contrast in (2)

(4)

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                    S
                  /   \
              John    (2)
                     /   \
                expects  (1)
                         /  \
                     PRO_s    \
                           to win the election
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(5) $[\![\text{PRO}_s]\!]^{c,i} = x_i$

(6) $[\![\text{expect}]\!]^{c,i} = \lambda p_{\langle se,t \rangle}.\lambda x_e$. every centered world $\langle w', x' \rangle$ compatible with what x expects in w_i is such that $p(w', x') = 1$.

(7)   Derivation:
      a. $[\![(1)]\!] = x_i$ wins the election in w_i.
      b. $[\![(2)]\!] = \lambda x_e$. every centered world $\langle w', x' \rangle$ compatible with what x expects in w_i is such that x' wins the election in w'.
      c. $[\![S]\!]$ = every centered world $\langle w', x' \rangle$ compatible with what John expects in w_i is such that x' wins the election in w'.

2 Monsters

(8)   Situation 2
      John says, *I am a hero*, and he doesn't say that anyone else is a hero.

(9)   a.   John said that he is a hero.
      b.   John said that I am a hero.

In Amharic, (b) can be true in Situation 2 – *I* can be coindexed with *John*. Moreover, a *de se* interpretation is required here, as (b) is judged false in the following situation:

(10)   Situation 3
      Drunken John is again watching TV. He watches a man recounting his military exploits. Impressed, John says, *That man is a hero*. The man John is watching is John himself, but he's so intoxicated that he fails to realize this. John doesn't say that anyone else is a hero.

2.1 Not lexical ambiguity

Ninan presents Anand and Nevins (2004)'s argument against the idea that Amharic and other similar languages should be analyzed with a lexical ambiguity in pronouns, as in (11). Under this analysis, true indexical (a) denotes the speaker of the utterance context, and the shiftable element (b) gets its value from the speaker coordinate of the index.

(11)   a. $[\![I_c]\!]^{c,i} = x_c$
       b. $[\![I_i]\!]^{c,i} = x_i$

Under the lexical ambiguity account, a sentence with two occurrences of a first-person pronoun could theoretically be four ways ambiguous:

(12)   a.   John said that I_c swindled my$_c$ brother.
       b.   John said that I_i swindled my$_i$ brother.
       c.   John said that I_c swindled my$_i$ brother.
       d.   John said that I_i swindled my$_c$ brother.

However, speakers of shifted-indexical languages like Zazaki report that the (c) and (d) readings above are not possible. Indexicals must shift together.

2.2 A monstrous analysis

Rather, the ambiguity is down to a phonologically null operator that shifts the context parameter to the current index:

(13) $[\![\text{OP } \phi]\!]^{c,i} = [\![\phi]\!]^{i,i}$

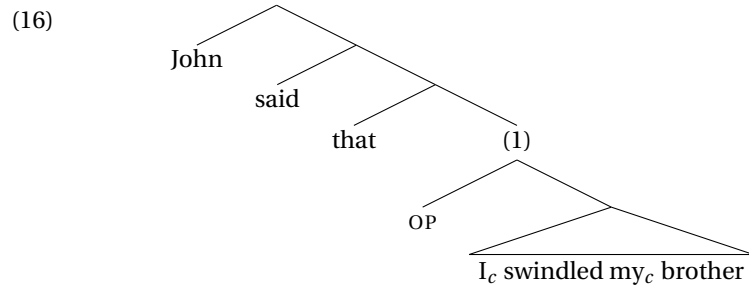*I* has an indexical meaning:

(14) $[\![I]\!]^{c,i} = x_c$

So the LF in (a) will yield the unshifted meaning, and (b) will give the shifted meaning.

(15)   a.   John said that [I swindled my brother.]
       b.   John said that [OP I swindled my brother.]

The shifted-indexical sentence will necessarily have a *de se* interpretation.

(16)

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            John
                \
                said
                    \
                that      (1)
                         /   \
                       OP
                          \
                       I_c swindled my_c brother
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By (13), The LF in (16) will give the following denotation for node (1):

(17) $[\![(1)]\!]^{c,i} = [\![\text{I}_c \text{ swindled my}_c \text{ brother}]\!]^{i,i}$
            $= x_i \text{ swindled } x_i\text{'s brother in } w_i$

3   Communicating the *De Se*

Stalnaker (1981): the CONTEXT SET (common ground, conversational assumptions) is the set of possible worlds compatible with the presuppositions of the participants in a conversation (See also Stalnaker (1978))

Ninan's argument, **part 2**:

1. If the common ground (CG) of a conversation is represented by a set of possible worlds and the same object plays the role of what is said and the role of what is believed on the basis of what is said, then we cannot communicate thoughts DE SE.

2. We can communicate thoughts DE SE.

3. The same object plays the role of what is said and the role of what is believed on the basis of what is said.

4. The CG of a conversation is not represented by a set of possible worlds.

- If Yuki wishes to communicate *de se* that her burrito is on fire, the common ground eliminates all centered worlds in which the center's burritos are not on fire.

- If Nadia accepts her utterance, she now presupposes the centered proposition in which the center's burrito is on fire.

- But then Mary presupposes that *her* burrito is on fire.

4   Ninan's solution

Ninan points out that using pair-centered worlds doesn't solve the problem. If John says to Mary, *My pants are on fire*, he is asserting $\{\langle w, x, y\rangle : x$'s pants are on fire in $w\}$. When she accepts this utterance, she becomes the second member of this ordered triple.

"We need to stabilize each center, so that when a pair-centered proposition p travels via assertion from John to Mary, who the first center of p represents does not change even after Mary 'receives' p." (p. 561)

- To do this: Use a CONVERSATIONAL SEQUENCE, or an ordered list of conversational participants.

- An ordered list of participants – the nth center of a pair-centered proposition always represents the nth member of the list.

So if John believes the pair-centered proposition $\{\langle w, x, y\rangle : P(w, x, y)\}$ relative to the conversational sequence $\langle$John, Mary$\rangle$, he believes two things:

1. Mary is John's addressee

2. John believes the following centered proposition:
$\{\langle w, x\rangle :$ there is a y such that y is x's addressee in w, and $P(w, x, y)\}$

If Mary believes the pair-centered proposition $\{\langle w, x, y\rangle : P(w, x, y)\}$ relative to the conversational sequence $\langle$John, Mary$\rangle$, she believes two things:

1. John is Mary's addressee

2. Mary believes the following centered proposition:
$\{\langle w, x\rangle :$ there is an x such that x is y's addressee in w, and $P(w, x, y)\}$

4.1　Utterance content

Ninan defines UTTERANCE CONTENT – what the participants in a conversation come to presuppose if an utterance is accepted, *i.e.* what the context set is updated with.

To define it formally, Ninan uses the KAPLAN DIAGONAL of a sentence ϕ.

(18)　**Kaplan diagonal of ϕ:**
　　The Kaplan diagonal of a sentence ϕ is the set of pair-centered worlds $\{c : [\![\phi]\!]^{c,c} = 1\}$

(19)　**Inverse Kaplan diagonal of ϕ:**
　　For any pair-centered propositions p and q, q is the inverse of p iff for all pair-centered worlds $\langle w, x, y\rangle$,
　　$\langle w, x, y\rangle \in q$ iff $\langle w, y, x\rangle \in p$

These definitions allow Ninan to define utterance content as follows:

(20)　Given a conversational sequence $\langle x, y\rangle$,
　　a.　If x utters a sentence ϕ, the content of her utterance is the diagonal of ϕ.
　　b.　If y utters a sentence ϕ, the content of her utterance is the inverse of the diagonal of ϕ.

5　Alternative

5.1　Motivation/Questions

- Can conversational sequence handle monsters? Given $\langle$John,Mary$\rangle$, $\{w, x, y\}$ but referent not x or y.

- Distinguishing semantic content, compositional semantic value, and objects of assertion (cf. Lewis (1980),Ninan (2010b))

- Shareable utterance/assertoric content

- DE SE and DE NUNC contents force nontrivial changes to updating the CG[2]

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[2]In the standard picture, participants only seek to eliminate centered worlds from the context set, as opposed to adding worlds to it. But this is not going to work for DE NUNC contexts since it could be that $[\![$it is 3:15pm$]\!]$ is in the CG, which rules out all centered worlds where the center speaks at 3:15pm, but our conversation could easily be over a minute long

5.2　Toy Model

One alternative challenges premise (3) of part 2, which is that the same object plays the role of what is said and the role of what is believed on the basis of what is said. The intuitive idea is this: thinking of oneself in a first person way is not the kind of thing that can be transmitted straightforwardly as information. Neither, it seems, is thinking of others in the way in which we do (DE RE and some acquaintance relation). We can communicate information about ourselves, but that is not yet to say that the way we do this, perhaps the DE SE way, is part of the semantic content that gets taken up by the conversation's common ground.

- As a silly example, take saying p enthusiastically. It is part of what one does in saying p that one says it enthusiastically, one does it in an enthusiastic way, but the only straightforward information imparted is p.

Let us sketch a toy model for how communication of content associated with DE SE thoughts would work. In this model, the common ground entails the conversational sequence. If the common ground entails the conversational sequence, then we only need possible worlds propositions to be added to the common ground. If we only need possible worlds propositions to be added to the common ground, then what we communicate is not the same as what we come to believe, contra (3).

For concreteness, take Stalnaker's later definition of common ground:

> It is common ground that ϕ in a group if all members *accept* (for the purpose of the conversation) that ϕ, and all *believe* that all accept that ϕ, and all *believe* that all *believe* that all accept that ϕ, etc.Stalnaker (2002)

Step 1　: Suppose that Ishmael and Janet are the only two conversants. Ishmael says "I love cookies."

Step 2　: It is common ground that when Ishmael speaks, Ishamael speaks to Janet. It is common ground that when Janet speaks, Janet speaks to Ishmael. Barring extremely odd conversational settings, a conversational sequence is entailed by the common ground (it is in the set of possible worlds compatible with the common ground).

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and those worlds must be added back.

Steps 3 : From (1) and (2), the common ground allows Janet to infer that Ishamel loves cookies since 'I' must mean the person speaking, it is common ground that this is so, and Janet does not have reason to challenge him. If the statement is added to the common ground, Janet comes to believe DE RE that Ishamel loves cookies.

On this model, DE SE/DE TE information is inferred from the common ground, and what is common ground are possible worlds propositions. If the common ground includes information about the identity of speakers and hearers, even if merely by demonstratives, then it will entail the conversational sequence.

Ninan remarks that positions of this sort "can only be maintained by abandoning one of the central aspects of Lewis's view — that DE SE information cannot be represented using possible worlds propositions" (p.561) But strictly speaking, positions of this sort only deny that DE SE information is communicated by communication of DE SE attitudes.

6   Evaluation

Problem for Conversational Sequence:

My little cousin, Cynthia, and I are playing. She wants to be Michelle Obama and she wants me to be a public school principal named Ralph. She says to me, 'I want you to restart your PE program.'

Suppose that the conversational sequence is ⟨Cynthia,Victor⟩. Then the content of Cynthia's utterance is the pair-centered proposition in which the first center's desire worlds are all such that the second center finds money for his PE program. But relative to the conversational sequence, that means Cynthia said that Cynthia wants Victor to restart his PE program.

   Options:

1. The conversational sequence, under pretense, is

   ⟨Michelle Obama, Ralph the Principal⟩

   - Problem 1: The conversational sequence is either a fixed objective fact or it is determined by what one accepts for the sake of conversation. If it is a fixed objective fact, then the conversational sequence does not shift under pretense. If it is determined

by what one accepts for the sake of conversation, then it is no different than having the sequence be entailed by, and hence able to change according to, what is common ground.

   - Problem 2: Context and conversational norms will govern when to drop pretense (rules for invoking "time out"), but what governs shifting back and forth between conversational sequences? When the use of 'I' as said by Cynthia means Michelle, it seems plausible that she can make it mean Cynthia again (These shifts can be explained by common ground facts).

2. Pretend DE SE belief is not really belief DE SE. At best it is DE RE of the thing one is pretending about. So, communication of pretend DE SE content does not go by the actual conversational sequence.

   - Problem: Still there must be a way of making sense of how rational inferences, in a DE SE way, can be made within pretense, imagination, or even plain false belief. Cynthia can start saying things about what she would have done Ralph hadn't agreed to φ, or what she should tell Barack later that night, as Michelle Obama.

   Problem for Common Ground:

   In step 2, we mentioned that the speaker and hearer may not keep good track of their identities. If communication does not break down, there must be some explanation of that aside from the common ground (what Stalnaker calls a 'defective context',Stalnaker (2002)).

   A conversational sequence determines the content of an utterance by providing names of objects as replacements of free variables based on their place in the sequence. Participants need not understand who it is they are talking about.

   Response. One would expect failures of appropriate inference if speaker and hearer identity are not part of the common ground. Communication does not break down because assertoric content is successful at a relatively coarse level of grain.

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