Distinguishing theories of shifting indexicals: an Amharic case study

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1 Introduction

⇒ **Empirical focus:** a type of pronoun in Amharic (Ethiosemitic).

Goals: use novel Amharic data to move this debate forward

- Distinguish between two major categories of theories of this type of pronoun by considering new facts about antecedence.

- Show how both theories require revisions in order to accommodate novel data from plural shifting indexicals in Amharic.

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2 Background

- Indexicals are expressions of natural language that depend on the context of utterance for their semantic values.

- This includes expressions that pick out the speaker(s) of the context (*I/me,we*), the addressee(s) (*you*), the place (*here*), the time (*now*), etc.

  (1)　Now, we are talking to you here

- Which contexts are relevant?

  (2)　John said that I am here

  - In the English sentence (2) the indexical "I" can only refer to the speaker of (2), and not the the speaker of the reported speech act, John.

- What are shifted indexicals?

- In certain languages, the pronoun "I" can refer to the speaker of the reported speech act. For the Amharic sentence (3), "I" can refer to either the speaker of (3) or to John.

  (3)　*John　ǀ　dʒägna　lämɨn　nä-ññ　ǀ　yɨ-l-al?*
  　　　John　hero　why　Cop.Pres-1s　3ms-say-aux.3ms

  　　'Why does John say that {I am, he is} a hero?' (Leslau, 1995)

  - Note that this is not a quotative context, as evidenced by the *wh*-dependency into the embedded clause

- Two major theories of shifted indexicals

  - We have chosen to focus on two popular accounts that are representative of two strategies for the semantics of shifted indexicals. (Sudo, forthcoming; Delfitto and Fiorin, 2011; Speas, 1999)

  - The particular implementation details of each approach offer testable predictions.

  - We lay out the basic features of each approach and their predictions in the next section.

3 Predictions of the two theories

3.1 Anand and Nevins 2004, Anand 2006

→ **Anand and Nevins : operator approach** Shifting comes about because the language has *context-changing operators*; syntactically, something like a complementizer.

- A standard view about indexical since Kaplan is that semantic interpretation is dependent on an utterance context c, represented as a parameter on the interpretation function: $[\![\ ]\!]^c$.

- Each context c is a list that encodes who the speaker, place, time, etc. of the utterance is.

- A *context-changing operator* modifies such lists, so that the scope of the operator is evaluated with respect to the modified context

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[1]Anand (2006) defines several context-changing operators for different languages. Here is his definition for the Amharic Op_{per}, which only modifies the speaker and addressee values of the context:

　i. Amharic Op_{per}: $[\![\mathrm{Op}_{per}\ \alpha]\!]^{c,i} = [\![\alpha]\!]^{j,i}$, where $j = \langle\text{SPEAKER}(i), \text{ADDRESSEE}(i), \text{TIME}(c), \text{WORLD}(c)\rangle$

- For example, if an Amharic sentence like (3) spoken by S has a context-changing operator, then the embedded clause will be evaluated with respect to a new context which has John as the speaker value, and not S[1].

- For reasons that we won't spend time on here, this approach derives the following empirical generalization about shifted indexicals.

(4) No Intervening Binder Constraint (Anand (2006), p. 103)
A shiftable indexical ind-1 cannot pick up reference from a context c_A if there is another intervening context c_B which another indexical ind-2 picks up reference from.

- This constraint allows for binding configurations like (5), rules out ones like (6).

(5) $\mathbf{c}_A[...\text{attitude-verb } c_B...[\text{ind-1}_{c_A}...\text{attitude-verb } c_C...[\text{ind-2}_{c_A}]]]$

(6) * $\mathbf{c}_A[...\text{attitude-verb } c_B...[\text{ind-1}_{c_B}...\text{attitude-verb } c_C...[\text{ind-2}_{c_A}]]]$

Predictions: Anand's account predicts that the referential possibilities for shifted indexicals are constrained by the principle of No Intervening Binder

3.2 Schlenker 1999/2003

- For Schlenker, a special type of pronoun is responsible for the shifting behavior of Amharic indexicals; and not the presence of a special type of complementizer as in the Anand and Nevin's type approach.

- Essentially, Schlenker's account says that Amharic indexicals contain a free variable that can be bound by any of the λc operators in the sentence. Each clause is associated with its own λc.

(7) λc_1 John said λc_2 that Bill said λc_3 that I_c will win

For Schleker, there are three possibilities for a shiftable $[\![I_c]\!]$ in 7:

    i. $[\![I_c]\!] = \text{AUTHOR}(c_1) = $ speaker of (7)

    ii. $[\![I_c]\!] = \text{AUTHOR}(c_2) = $ John

    iii. $[\![I_c]\!] = \text{AUTHOR}(c_1) = $ Bill

Predictions: A theory like Schlenker's predicts the opposite of what we expect from Anand's predictions: there is a possibility for intervening binders, since nothing restricts which λc binds free variable in $[\![I_c]\!]$.
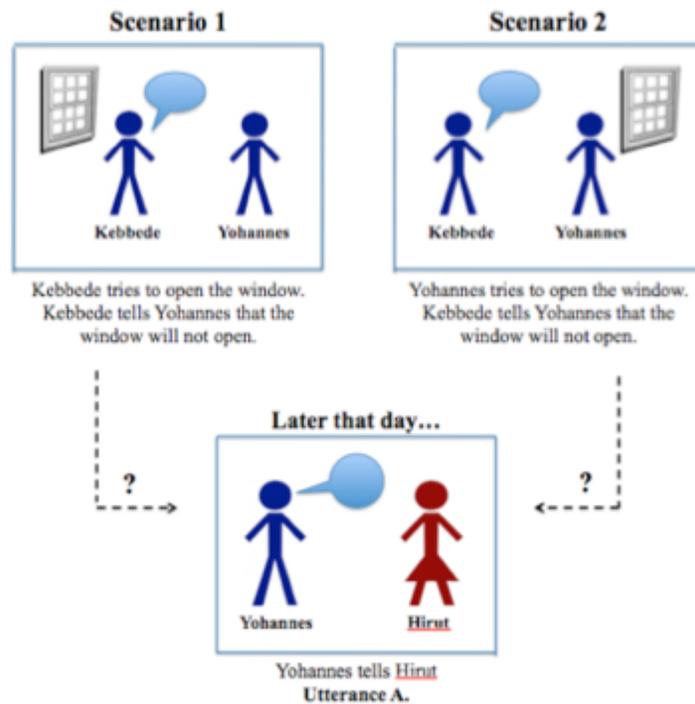
3.3 Predictions about plurality

- Both Schlenker and Anand give a semantics for first person shifting indexicals that assigns a *singular value* to the indexical.

- This view predicts that such pronouns should not be allowed in constructions that involve *essentially plural predicates*.

- We show that this prediction is not borne out, and thus both accounts require revisions to accommodate these facts; details in §4.2

4 Fresh Data and New Directions

4.1 Deciding between the two theories

(8) *Käbbädä   mäskot-u   al-ɨkkäfät-ɨll-ɨññ   al-ä*
Kebbede   window-the   Neg-open.Imperf.1s-Obj.1s   say.pfv-3Ms
al-ä
say.pfv-3Ms

'Kebbede said that the window wouldn't open for me'

Scenario 1 — Kebbede, Yohannes

Kebbede tries to open the window. Kebbede tells Yohannes that the window will not open.

Scenario 2 — Kebbede, Yohannes

Yohannes tries to open the window. Kebbede tells Yohannes that the window will not open.

Later that day...

Yohannes, Hirut

Yohannes tells Hirut

Utterance A.

●

(9) *Käbbädä   mäskot-u   al-ɨkkäfät-ɨll-ɨññ   al-ä*
     Kebedde   window-the   NEG-open.IMPERF.1s-OBJ.1s   say.PFV-3Ms
     al-ä-ññ
     say.PFV-3Ms-OBJ.1s

     'Kebedde said to me that the window wouldn't open for me'

● Here, the second indexical *me* is interpreted as coreferential with the window, and the third indexical is coreferential with Käbbädä. This violates No Intervening Binder since the most embedded clause refers to the matrix context, even though there's an intervening shifted indexical taking its value from a different clause.

● (9) seems to point toward Schlenker's theory, and not Anand's as far as no-intervening-binder is concerned.

● Still, Schlenker's theory as it stands requires restrictions in order to account for these new data.

4.2 Pointing toward a new direction: data from plural shifted indexicals

● It has been known for sometime that, despite the presence of a plural pronoun in the embedded clause, there is a reading of sentences like (10) that reports of very singular attitudes.

(10) All the candidates said that they are going to win
     ...can mean: Each candidate said: "I am going to win"

● This fact is usually handled by appealing to Feature Deletion (Stechow 2002 and others). Basically this says that, among other features, number is not semantically interpreted and the bound pronoun is treated as singular.

(11) LF Feature Deletion Under Variable Binding (von Stechow, 2002)
     Delete the features of all variables that are bound

● Anand explicitly adopts this rule for shifting (2006, p. 95), though he was primarily concerned with person features and not plurality.

● The literature on plurality tells us that some predicates are essentially plural: they can hold of some *things* together, even if they do not hold of any singular *thing* among them. These include reciprocal predicates 12 and predicates that can be used to express cumulativity 13.

(12) They/*He kissed each other

Cumulativity (Krifka 1992, Schein 1993)

(13)   a. Obama and Romney kissed Michelle and Ann

       b. The candidates kissed the ladies

       c. They kissed them

       → (a-c) can be true even if **each** candidate did not kiss both Michelle **and** Ann.

● Since these predicates require a semantically plural subject, theories that assign a singular value in such cases predict that the resulting sentence should be ill-formed.

● We have discovered new data that shows that essentially plural predicates can appear in construction with a plural shifted indexical

(14)   *atʃ'u-wotʃtʃ-u*   *kä-Michelle-na*   *Ann*   *gar*
candidate-Pl.Def   with-Michelle-and   Ann   with
inni-däns-all-än   *al-u*
1Pl-dance.Ipfv-Aux-1Pl   say.Pfv-3Pl
'The candidates said we will dance with Michelle and Ann'

(15)   *atʃ'u-wotʃtʃ-u*   *inni-ʃänf-all-än*   *al-u*
candidate-Pl-Def   1Pl-win.Ipfv-Aux-1Pl   say.Pfv-3Pl
'The candidates said we will win'

(16)   *insäsa-wotʃtʃ-u*   *inni-gäddɨl-all-än*   *al-u*
animal-Pl-def   1Pl-kill.ipfv-aux-1Pl   say.pfv-3Pl
The animals said that we will kill (each other)

- We take this as evidence that the plural features on the shifted indexical are not deleted and that the indexical is semantically plural.

- These new data points cannot be accounted for by either of the theories mentioned here.

- An adequate theory has to resolve the tension between two properties of attitude reports with plural shifting indexicals: (i) that such reports speak of "singular self-directed attitudes" for each agent; and (ii) that the embedded clause is associated with a proposition that is essentially plural in the sense discussed above, and does not describe the attitudes of any single agent.

- The theories mentioned here have something to say about (i), but nothing about (ii).

5   Conclusions

- Main generalizations from data
  - Amharic does not display No Intervening Binder, leading to less support for A&N's conclusions

- Plural shifted indexicals can appear with an essentially plural predicate.

- Conclusions for theoretical analysis

- Schlenker needs to have more precise predictions for cases of multiple embeddings.

- Revisions must be made to theories of shifting indexicals in order to accommodate the semantic plurality of plural indexicals.

- Learnability
  - The Anand-type view requires the child to learn for each verb whether it takes an Op, and which type. The Schlenker-type view holds some set of pronouns are presumably part of UG, and the child needs to associate a morphological form with each. The learning story for both seems quite subtle and difficult to articulate, but *a priori* Schlenker's story seems to be somewhat easier. Whether shifted indexicals can be tied to other properties to make a "Shifted Indexicals Parameter" remains to be seen.

- Similarly – what determines what languages have shifted indexicals and which don't? What is part of UG – the pronouns, the operators, both?

- Relevance for other African languages
  - Other African languages with shifting indexicals like Engenni (Thomas, 1978) Aghem (Hyman, 1979) should be explored further at least in regards to the phenomena discussed here.
  - If Schlenker is right, certain properties of shifting indexicals are shared with logophors, possibly making some of the generalizations discussed here germane to these types of pronouns as well. Logophors are found in several African languages such as Ewe (Clements, 1979) Gokana (Hyman and Comrie, 1981), Mupun (Frajzynger, 1985), Yoruba (Pulleyblank, 1986).

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