

Modelling asymmetric variation for indexical shift

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Indexical shift (Schlenker, 2003; Anand, 2006; Shklovsky and Sudo, 2014), the phenomenon where an indexical is evaluated, not against the default utterance context, but against a linguistic context introduced within the proposition, is held to obtain exclusively under attitude predicates. Here, I present evidence showing that: 1. there is considerable selectional variation wrt. *which* attitude predicates effect indexical shift; 2. Such variation shows a clear implicational asymmetry privileging speech predicates. Standard analyses of indexical shift cannot handle such data. I propose a way to model such variation in syntactic terms.

Background: We can distinguish between “monster-centric” (MC) (Anand and Nevins, 2004; Anand, 2006; Shklovsky and Sudo, 2014) vs. “pronoun-centric” (PC) (Schlenker, 1999, 2003, et seq.) treatments of indexical shift. These differ wrt.: (i) the locus of variation for indexical shift; (ii) the nature of the shifter or “monster” ($\hat{\omega}$). Under MC, indexical shift obtains due to context-overwriting. An attitude verb introduces a contextual operator (the $\hat{\omega}$) which replaces the default utterance-context with the intensional index associated with the attitude verb: i.e. $[[\hat{\omega} \alpha]]^{c,i,g} = [[\alpha]]^{i,i,g}$. All indexicals are assumed to be capable of shifting, but attitude verbs vary in their ability to select a $\hat{\omega}$. In PC, all attitude verbs are quantifiers (not operators) that bind context-variables associated with indexicals in their scope: i.e. they *are* $\hat{\omega}$ s. PC is thus fundamentally non-selectional. The locus of variation lies in whether individual indexicals may be bound by the $\hat{\omega}$ or not. This is lexically specified on the indexical itself, yielding optional shift (Amharic ‘I’) vs. obligatory shift (Slave ‘I’), vs. obligatory non-shift (English ‘I’).

Data: (I): Primary data (my native Tamil dialect): Indexical shift, reflected on the 1st-person agreement on the embedded verb (*čejčč.een*, ‘won.1SG’) shows a *gradation* in acceptability: it is fully grammatical under ‘say’, less so under ‘think’ and least so under ‘discover’:

- (1) Seetha_i [_{CP} taan_{i,*j} poot[_{i-læ} čej-čč-een-nnū]
Seetha ANAPH.NOM.SG contest-LOC win-PRS-1SG-COMP
sonnaal/?neneččaal/*kaṇḍūpidiččaal.
said/?thought/*discovered

“Seetha_i said/?thought/*discovered [_{CP} that she_{i,*j} had won the contest].” (Literal)

(II) Dialectal variation (4 dialects: Hebbar Iyengar, Kongu Tamil, Palakkad Tamil, Madras Bashai; 12 native speakers) from my fieldwork in Tamil Nadu, India, produced identical results. For all speakers, indexical shift is easier under ‘say’ than under other attitude verbs (e.g. ‘think’, ‘perceive’). (III) Crosslinguistic variation: data from 26 languages (across 19 distinct language families) show that there is no language that allows indexical shift under a non-speech verb but *not* under a speech verb. This yields (2) (see also Sundaresan, 2012; Koev, 2013; Deal, 2017):

- (2) For a given grammar (language/dialect), if indexical shift is effected in the scope of a non-speech attitude predicate, it must also be effected in the scope of a speech predicate.

Implications: Under MC, indexical shift may obtain just in case an attitude verb selects a $\hat{\omega}$. Nevertheless, MC has nothing insightful to say about *which* class of attitude predicates would be more or less likely to effect shift, thus cannot deal with (2). As for PC, being fundamentally non-selectional, even the basic fact of variation under attitude verbs isn’t predicted under it.

Insights: *I. Indexical shift is an embedded root phenomenon:* Speech predicates actually have a privileged status among attitude predicates for a *number* of empirical phenomena (so called “root phenomena”), also found in embedded clauses (“embedded root phenomena” Hooper and Thompson, 1973) — e.g. anaphoric (Culy, 1994) and evidential (Speas, 2004) licensing, root transformation possibilities (Hooper and Thompson, 1973; Wiklund, Bentzen, Hrafnbjargarson, and Hróarsdóttir, 2009) and the relative ordering of adverbs and affixes (Cinque, 1999). The evidence above shows that indexical shift is part of this constellation.

II. $\hat{\omega}$ is syntactically encoded in C: Indexical shift typically obtains in finite, not nominalized, complements of attitude verbs (Shklovsky and Sudo, 2014, for Turkish, Gültekin Şener and Şener, 2011 for Turkish, Podobryaev, 2014 for Mishar Tatar, Wurmbrand, 2017 for Buryat). Crucially, the possibility of indexical shift in such languages correlates with opacity effects (e.g. tense mismatches, embedded negation, embedded nominative subject), diagnosing the presence of a CP phase; its impossibility, with transparency effects (e.g. long passivization, long-distance NPI licensing) diagnosing its absence (Wurmbrand, 2017, for Buryat, 6, Exx. 23-25). Strikingly, in the case of indexical shift in a nominalization in Balkar (Koval, 2014), focalization, scrambling and CP coordination tests reveal that the nominalization is categorially a CP.

III. *Descriptive entailment = structural entailment*: Cinque (1999) argues for a designated clausal position for adverbs & functional heads, corresponding to the syntax-semantics of the predicates they modify (also Cristofaro, 2005): SPEECH ACT \gg EVALUATIVE \gg EVIDENTIAL \gg EPISTEMOLOGICAL \gg A strong version of this idea involves strict monotonicity in this sequence of functional heads. Speas (2004) proposes that predicate classes select propositions involving different monotonic chunks of this hierarchy, using this to model selectional variation in evidential marking & logophora in embedded clauses.

Proposal: I combine the insights in I-III as in (3):

(3) MODELLING SELECTIONAL VARIATION FOR INDEXICAL SHIFT:

- (i) Indexical shift only under speech predicate (Tamil, Dargwa, Amharic, Navajo):
 $[_{SpeechActP} [_{SpeechAct} \hat{\omega}] [_{EvalP} [_{EvidP} [_{EpistP} \dots [_{TP} \dots]]]]]]$
- (ii) Indexical shift under a thought predicate (Laz, locative indexicals Nez Perce):
 $[_{SpActP} [_{EvalP} [_{Eval} \hat{\omega}] [_{EvidP} [_{EpistP} \dots [_{TP} \dots]]]]]]$
- (iii) Indexical shift under an evidential predicate:
 $[_{SpActP} [_{EvalP} [_{EvidP} [_{Evid} \hat{\omega}] [_{EpistP} \dots [_{TP} \dots]]]]]]$
- (iv) Indexical shift under all attitude verbs (Nuer, Tsez, Uyghur, Balkar, Mishar Tatar):
 $[_{SpActP} [_{EvalP} [_{EvidP} [_{EvalP} [_{EvidP} [_{EpistP} [_{Epist} \hat{\omega}] \dots [_{TP} \dots]]]]]]]]$

In (i), the $\hat{\omega}$ is encoded on SpeechAct, which is selected by a speech predicate alone. Thus, indexical shift obtains only under speech verbs in such languages. In (iv), the $\hat{\omega}$ is on Epist: this is selected not only by epistemic predicates but also by all intensional predicates (evidentials, evaluatives and speech-predicates) higher on the hierarchy. Such languages thus allow indexical shift under all classes of attitude verb. (ii) and (iii) represent intermediate scenarios wrt. the hierarchy, as indicated. (3) thus captures (2) in structural terms. It further explains why indexical shift doesn't obtain in non-CP nominalizations, since the $\hat{\omega}$ is instantiated on varieties of C.

Predictions: 1. Given strict monotonicity in complement-size, there should be an implicational relation between *all* predicate classes wrt. indexical shift. 2. The maximum left-peripheral space above $\hat{\omega}$ is available in the clausal complement of a speech predicate in a language where the $\hat{\omega}$ is merged on the lowest C head (Epist): e.g. Uyghur, Turkish or Buryat where indexical shift is allowed under all classes of attitude predicate. This is where we should find the greatest possibility for the *absence* of shift, despite the *presence* of a $\hat{\omega}$ — i.e. what looks like a *Shift Together* exception (Anand and Nevins, 2004). The Uyghur & Turkish examples in Shklovsky and Sudo (2014); Gültekin Şener and Şener (2011) all involve precisely such an environment. 3. Conversely, in languages where indexical shift obtains only under a speech predicate (e.g. Zazaki), the $\hat{\omega}$ is introduced in SpeechAct and the left peripheral space above it is rather limited. We expect fewer (or perhaps no) instances of “unshift” in the clausal complement above $\hat{\omega}$ here.

Finally, the $\hat{\omega}$ in (3) is most easily construed as the operator in MC; but it could plausibly be a quantifier, as in PC, if we can find a way to have the attitude verb *select* the $\hat{\omega}$ (instead of *being* it), e.g. by moving the (intensional) quantificational action from the attitude verb to one of the (Cinque-an) C heads it selects (Kratzer, 2006, 2012; Moulton, 2007, 2009).

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