Watch your attitude: Role-shift and embedding in ASL

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Background and claim: Much of the work on attitude predicates, spawned by Hintikka (1962), has treated them as a uniform class – quantifiers over possible worlds. However, a number of suggestions have been made that highlight different subclasses. Here we present novel data from American Sign Language (ASL) that support a differentiation made by Anand and Hacquard (2009, A&H) concerning the objectivity and subjectivity of their complements, while also bringing into focus a special property of sign languages – Role Shift (RS).

Descriptively, RS refers to the addition of nonmanual markers such as eye, face, and torso movements that may accompany attitude reports in many SLs, including ASL, as in **(1)**. Like direct speech, RS-ed utterances have indexicals which can be evaluated in contexts other than the context of utterance, but like /indirect speech, they show signs of syntactic embedding.

$\overline{}^{\text{RS-a}}$ $\overline{}^{\text{RS-a}}$

(1) a. *a-MOM$_i$ SAY {1-IX$_i$ / a-IX$_i$} BUSY*   **b.** *a-MOM$_i$ IMAGINE {1-IX$_i$ / a-IX$_i$} BUSY*
  'Mom$_i$ said {I$_i$/ she$_i$ } was busy'   'Mom$_i$ imagined {I$_i$/ she$_i$ } was busy.'

Prominent syntactic analyses of RS (Lillo-Martin 1995, Quer 2005, 2011) assume that what is responsible for the shift of (certain) indexicals in the report clause under RS is the higher predicate – namely an attitude verb, null or overt – and some sort of operator below.

(2) a. Lillo-Martin (1995)   **b**. Quer (2011) (adpt. Quer 2005)

On **(2a)**, RS occurs with the Point of View (POV) attitude predicate, which takes as its complement a CP whose Spec is filled with an operator binding the indexicals in the IP below. When an overt attitude verb is present, POV is the first embedded verb (the subject of which is null), introducing the point of view of the matrix subject. Specifically, Lillo-Martin argues that 'IX-1' in ASL is logophoric (comparable to, e.g., 'yè' in Ewe, Clements 1975). On **(2b)**, the PV operator is in the head of the lower CP; semantically, it signals context-shift (Schlenker 2003).

Problems:

A. Both **(2a-b)** are silent on how the relevant lexical items in the matrix and the embedded clause combine to license the extent of non-manual markings. Lillo-Martin (1995) proposes that the non-manuals are part and parcel of the meaning of POV itself (always present in the RS cases), not expecting them on the overt predicates *SAY/THINK*. Quer (2005) makes no prediction regarding PVOp composing with these predicates. Our data show that while ungrammatical over the former (**(3a)**), RS extends over the latter (**(3b)**): **(2a)** undergenerates, and **(2b)** overgenerates.

$\overline{}^{\text{RS-a}}$ $\overline{}^{\text{RS-a}}$

(3) a. ** a-MOM$_i$ {SAY/ASSUME}   a-IX$_i$ BUSY*   **b.** *a-MOM$_i$ {THINK/IMAGINE} a-IX$_i$ BUSY*
  'Mom$_i$ {said/assumed} that she$_i$ was busy'   'Mom$_i$ {thought/imagined} that she$_i$ was busy.

B. If the role of the POV/PVOp is to introduce the point of view of the matrix subject, it is unclear why a 3rd-person pronoun co-referring with the subject can be found in the embedded subject position, unless independent evidence for the logophoric status of this pronoun is put forward. Given the findings in the literature, this type of claim may be difficult to maintain.

C. On the assumption that wh-movement out of the embedded clause goes through SpecCP, wh-movement should be ruled out in **(2a)**: SpecCP is filled – it contains the operator binding the

logophoric pronoun '1-IX' below. However, wh-extraction out of the RS-ed embedded clause is permitted with both "say"- and "think"-type verbs **(4)**.

$$\overline{(\,*\,\underline{\hspace{3cm}}\,)}\;\overline{}^{\text{RS-a}}\qquad\qquad\overline{}^{\text{RS-a}}$$

(4) a. *WHO WOMAN {?SAY/ASSUME} __ BUSY*   **b.** *WHO WOMAN {THINK/IMAGINE} __ BUSY*
    'Who did the woman {say/assume} was busy?'   *'Who did the woman {think/imagine} was busy?'*

Analysis:

We argue that the difference comes from the semantics of *THINK/IMAGINE* vis-a-vis *SAY/ASSUME*. A&H show that, among other differences, doxastic (*think/imagine/believe)* and proffering (*argue*/*say*/*claim)* attitudes impose different sentient requirements onto their attitude holders **(5)**.

(5) The book{argues, claims,...[says]}/#{...thinks,...[imagines]} that the Earth might be flat.

They argue that this is due to a difference in how the truth of the complement clause is evaluated: in doxastics, it is evaluated with respect to the private intensional domain of the subject, and thus cannot have inanimate subjects (*CON(e)=IMG(Holder(x,e), w))*. In contrast, proffering verbs report on acts that propose the complement as an entry to the common ground and are not evaluated with respect to the intentional domain of the subject. The former create a subjective stance (from the viewpoint of the attitude holder); the latter take an objective stance. More formally, doxastic predicates quantify over an intensional domain relativized to the belief holder. A&H's proposal results in **(6)** for ASL **(1)**, crucially distinguishing these two classes of predicates.

(6) a. a-MOM$_i$ SAY a-IX$_i$ BUSY: **(=1a)**

[[SAY]] = λe.λp.λx.λw. say'(e,w) & Holder(x,e) & ∀w'∈Goal(e)[∀w''∈∩CON(e $_{CG\text{-}w}$) [p(w')=1]]
        where e$_{CG}$=proposed common ground state resulting from accepting p to CG

[[MOM SAY IX_a BUSY]
      = 1 iff Holder (m,e) & say(e,w) & ∀w'∈ Goal (e)[∀w''∈∩CON(e$_{CG\text{-}w}$)[B(m))(w'')]]

b.   a-MOM$_i$ IMAGINE a-IX$_i$ BUSY: **(=1b)**

[[IMAGINE]] = λe.λp.λx.λw. belief'(e,w) & Holder(x,e) & [∀w'∈∩CON(e) [p(w')=1]]
        where ∩CON(e)=att. holder's doxastic alternatives =IMG(ιx Holder(x,e),World(e))

[[MOM IMAGINE IX_a BUSY]= 1 iff HOLDER(m,e) & belief'(e,w) & ∀w' ∈ ∩CON(e)[B(m)(w')]

We suggest that RS is relativized to the attitude holder, and extent of RS is based on this lexical distinction: in the case of doxastics, the lexical entry requires content relativized to the attitude holder, hence RS extends over it, as in **(1b)**, while the content of proffering verbs is instead relativized to the common ground *CON(e $_{CG\text{-}w}$)* and RS is limited to the complement, as in **(1a)**.

Upshot:

In SLs, many consider RS-related phenomena to be a defining property of a particular type of discourse: direct, indirect, or 'mixed' (Zucchi 2004). However, if the analysis presented here is on the right track, the RS-associated nonmanual markings are independent of these categorizations and are clearly dissociated from the shifted indexicals (Schlenker 2003, i.a.). Instead, they realize (parts of) the lexical entry of a sign and encode its quantification domain, reviving the debate regarding the syntactic views on nonmanual spreading.

SELECTED REFERENCES: Anand, P. & Haquard, V. 2009. Epistemics with attitude. *Proceedings of SALT 18*. http://hdl.handle.net/1813/13025. Lillo-Martin, D. 1995. The point of view predicate in ASL. In Emmorey & Reilly (Eds.) *Language, Gesture, and Space*, 155–70. Quer, J. 2005. Context shift and indexical variables in sign languages. *Proceedings of SALT 15*, 152–68. Schlenker, P. 2003. A plea for monsters. *Linguistics & Philosophy* 26, 29–120.