

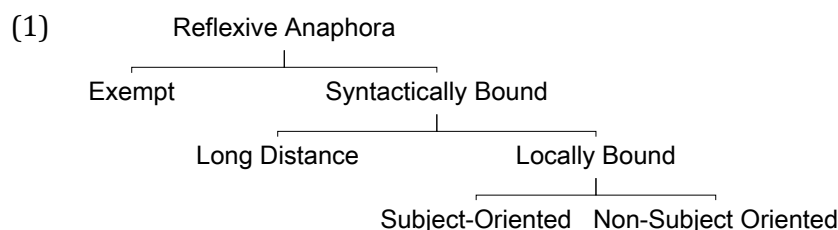
# (In Search of) Deep Universals in Reflexive Syntax<sup>\*</sup>

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Harvard Linguistics Universals Workshop

## 1. Introduction

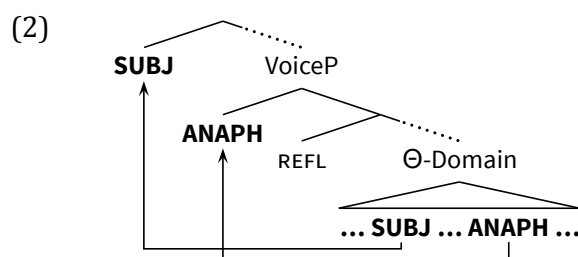
- ◆ Reflexivity is not a homogeneous phenomenon

- ▶ At least descriptively:



- ◆ Languages use a special structure for cases of binding by the local subject

- ▶ **(Local Subject Oriented Reflexivity; LSOR)**



- ▶ Two operative components of this analysis:

- A head on clausal spine (REFL) + a moving anaphoric pronoun

- ◆ **The structure in (2) will derive...**

- ▶ ...why local subjects matter
- ▶ ...why LSOR binding syntax looks different from other binding configurations
- ▶ ...the constraints on where LSOR syntax is (im)possible
- ▶ ...the different ways in which local subject binding can manifest in different languages
- ▶ ...why English LSOR anaphors are prosodically weak

- ◆ Evidence for (2) can be found in a typologically diverse set of languages

- ▶ **Hypothesis:** this LSOR structure must naturally arise as a result of the shape of our shared linguistic competence

- i.e., revealing deep universals of the human language faculty

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## 2. Restrictions on Antecedents of Binding

- ♦ In “standard” cases of reflexivity, most binding theories do not place constraints on the antecedent
  - Beyond whether the antecedent and anaphor are able to enter into the relevant syntactic or semantic licensing relationship
    - i.e., c-command or co-argumenthood
- ♦ **Semantic properties of the antecedent matter for many types of anaphors**
  - Appropriately referential or not (Clem 2016)
    - (3) Tswefap (Narrow Grassfields Bantoid; Cameroon)
      - a. ?**mbe wəɔ** a yɔ **ni=e**  
every one fact see self=3.sg  
*‘Every person saw himself’*
      - b. **mbe wəɔ** a yɔ **zhə n-tswə ni**  
every one fact see 3.sg.poss pl-head body  
*‘Every person saw himself’*
    - Analysis: quantificational DPs do not introduce the appropriate semantic machinery ( $\beta$  operators; Büring 2004) for reflexive binding
    - ‘Properties of antecedent’ reduces to formal aspects of the derivation
  - Perspective holder or not (Charnavel 2016, Charnavel and Sportiche 2016)
    - (4) Icelandic
      - a. Krafa **Jóns** til okkar er að styaðja **sig** við þessar aðstæður  
request John’s to us is to support sig with these conditions  
*‘John’s request from us is to support him in this situation’*  
(*Perspective holder = Jón*)
      - b. \*Skoðun **Jóns** virðist vera hættuleg fyrir **sig**  
opinion John’s seems be-inf dangerous for sig  
*‘John’s opinion seems to be dangerous for him’* (*Perspective holder ≠ Jón*)
    - Analysis: perspective holders are introduced as operators, local to the ‘exempt’ *sig*
      - ◊ Thus *sig* in fact always conforms to Principle A
    - ‘Properties of antecedent’ reduces to formal aspects of the derivation
- ♦ **Semantic constraints on antecedents...**
  - ...conform to existing generalizations of binding theories
  - ...are due to formal aspects of the derivation

### 2.1. Local Subject Orientation

- ♦ Do syntactic constraints on antecedents fit the same profile?
  - Namely, constraints on antecedents being a local subject, as in languages like French, Shona, Russian Sign Language, and Kannada

## (5) French

- a. \*Pierre **se** présente **les enfants** [Sportiche 2010]  
 Pierre se introduces the children  
*Intended: 'Pierre is introducing the children<sub>i</sub> to themselves<sub>i</sub>.'*
- b. **Pierre se** présente les enfants  
 Pierre se introduces the children  
*'Pierre<sub>i</sub> is introducing the children to himself<sub>i</sub>.'*

## (6) Shona (Southern Bantoid; Zimbabwe)

- a. \*Mufaro a- ka- **zvi-** bik -ir -a **mbudzi** [Storoshenko 2009:(23)]  
 Mufaro.1 subj.1-pst-**LSOR**-cook-appl-fv goat.9  
*Intended: 'Mufaro cooked the goat<sub>i</sub> for its<sub>i</sub> own benefit.'*
- b. **Mufaro** a- ka- **zvi-** bik -ir -a mbudzi  
 Mufaro.1 subj.1-pst-**LSOR**-cook-appl-fv goat.9  
*'Mufaro<sub>i</sub> cooked the goat for his<sub>i</sub> own benefit.'*

## (7) Russian Sign Language (Signing; Russia)

- a. \*BOY IX-A **GIRL** IX-B SELF+IX-A/\*IX-B TELL  
 boy girl refl tell  
*Intended: 'The boy tells the girl<sub>i</sub> about herself<sub>i</sub>.'*
- b. **BOY** IX-A GIRL IX-B SELF+IX-A/\*IX-B TELL  
 boy girl refl tell  
*'The boy<sub>i</sub> tells the girl about himself<sub>i</sub>.'*

## (8) Kannada (Dravidian; India)

- a. \*rashmi **tan-age-taane hari** @-yannu pariçayamaaDi-**koND**-aLu.  
 Rashmi self-dat -self Hari -acc introduce sol -3sf  
*Intended: 'Rashmi introduced Hari<sub>i</sub> to himself<sub>i</sub>.'*
- b. **rashmi tan-age-taane hari** @-yannu pariçayamaaDi-**koND**-aLu.  
 Rashmi self-dat -self Hari -acc introduce sol -3sf  
*'Rashmi<sub>i</sub> introduced Hari to herself<sub>i</sub>.'*

## ► No theories of binding predict this

- cf. Classical Binding Theory (Chomsky 1981, *et seqq.*),  
 Movement-based accounts of binding (Hornstein 2001, Kayne 2002),  
 Co-argument theories (Reinhart and Reuland 1993, *et seqq.*),  
 Valency-reducing theories (Bach and Partee 1980, Keenan 1988, *inter alia*)

► **This has been seen as a benefit:** not all languages seem to differentiate LSOR from a non-LSOR

- (9) a. Ken assigned **Angie** to **herself**.  
 b. **Ken** assigned Angie to **himself**.

## ◆ How do we derive LSOR where it exists?

- Closer investigation of the formal aspects of the derivation are necessary<sup>1</sup>

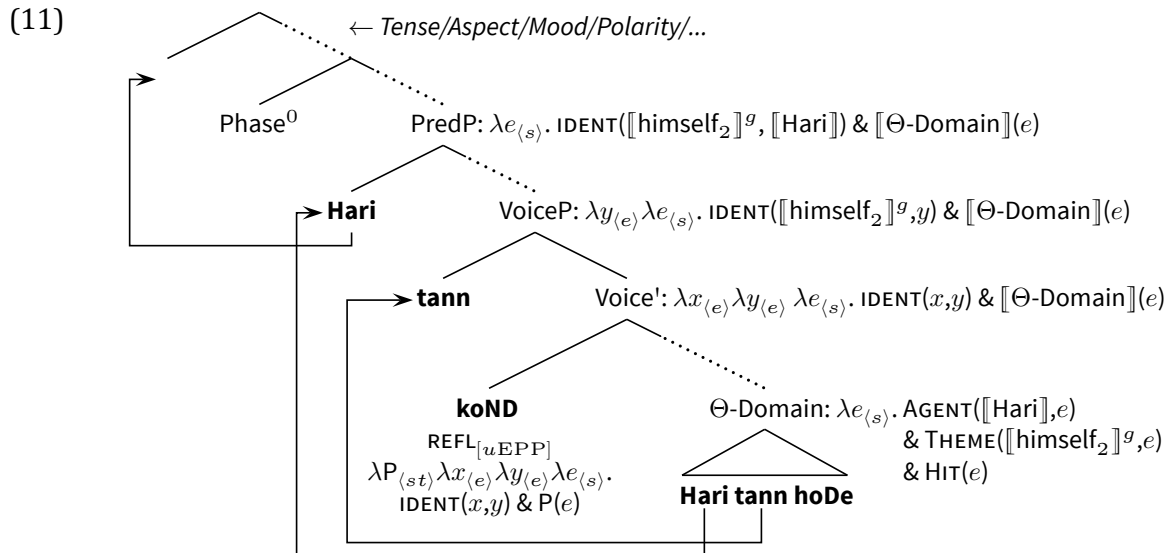
<sup>1</sup>Proposals were made by Burzio 1986 and Rizzi 1986b about the derivation, to only make Italian *si* possible in LSOR contexts. However, these analyses would require assumptions that are incompatible with current understandings of syntax. (In particular, they are incompatible with VP-internal subjects.)

## 2.2. Deriving Subject Orientation

- ♦ Let us take a simple example from Kannada

(10) Kannada  
 Hari tann-annu hoDe-du -[koND]-a  
 Hari self -acc hit -pst.prt-LSOR -3sm  
 'Hari hit himself.'

- ♦ The solution, which we will motivate as we go:<sup>2</sup>



- Thematic domain:

- Predicate with all its syntactic argument structure

- Anaphor:

- Treated as a simple pronoun (Lees and Klima 1963, Hornstein 2001)

- Voice:

- Outside of the thematic domain (Collins 2005, Gehrke and Grillo 2009, Harley 2013)

- REFL head:

- An instance of a Voice head
- Secondary predicate, interpretationally indicating that the event is a reflexive one, and co-identifying anaphoric pronoun and the subject<sup>3</sup>
- Triggers movement of the anaphor

- Lower Spell-Out Domain:

- Includes a VoiceP (Harwood 2013) and the small clause subject position (Bowers 2001)

- ♦ Premise: **The structure in (11) works the same no matter what is pronounced**

- There is always an antecedent and an anaphor
- There is always a REFL head

<sup>2</sup>Alternative semantics, with the same constituency, in Appendix A.1.

<sup>3</sup>See Appendix A.2 for discussion of possibly making the anaphor the semantic reflexivizer.

♦ Some notes on the derivation in (11):

- ▶ Anaphors (such as *tann*, and *himself*) are **semantically interpreted as a simple pronoun**

- They are not functions that take their sister as an argument
- As with any pronoun, a contextually-specified assignment function,  $g$ , determines its reference:

$$\llbracket \text{himself}_2 \rrbracket^g = g(2)$$

- ▶ Essentially, **the IDENT function constrains the assignment function,  $g$**

- In such a way that the assignments of its two arguments are (sufficiently) identical<sup>4</sup>

- ▶ Syntax feeds semantics cyclically, in such a way that **movement can feed semantic operations**

- Semantics crucially depends on syntax, and semantic computations happens regularly at small intervals during the building of the syntactic structure (e.g. Uriagereka 1999)
- “Any semantic object or operation on such objects has to have a correlate in the syntax, an expression or operation that triggers it. And conversely, all expressions and ***all structural operations in the syntax have to have a semantic correlate***. Thus the autonomy of syntax is limited.” (Stokhof 2006:2067, emphasis mine)
- **Semantic objects can compose with multiple semantic functions** by (syntactic) movement
  - ◊ The subject and anaphor each composes with its thematic licenser (before movement) and the IDENT function (after movement)
  - ◊ This isn’t novel: a movement theory of control (e.g. Hornstein 2001), a movement theory of possessor dative constructions (e.g. Lee-Schoenfeld 2006), etc. rely on this too.
  - ◊ (But see Appendices A.1 and A.2 for alternatives)

### 2.3. Deriving Constraints on LSOR Syntax

♦ LSOR relies on movement of the anaphor

- ▶ Prediction: if the anaphor is separated from the VoiceP by an island, LSOR syntax can’t be used
- ▶ Prediction: if the VoiceP is headed by something other than REFL, LSOR syntax can’t be used

<sup>4</sup>However this constraint is defined, it is loose enough that a proxy and its referent can be deemed as identical, since LSOR marking may occur with proxy interpretations, at least in some languages. There may be crosslinguistic variation on this point.

## 2.3.1. Islands

- ♦ **An LSOR derivation is ruled out when the bound argument is licensed in an island** that excludes the subject

- (12) a. Lucie [s'] est vue [French]  
 Lucie LSOR perf seen  
*'Lucie saw herself.'*
- b. Lucie a compté cinq filles [island en dehors d' elle-même]  
 Lucie perf counted five girls outside of herself  
*'Lucie counted five girls outside of herself.'*
- c. \*Lucie [s'] est compté(e) cinq filles [island en dehors (de) \_\_\_\_]  
 Lucie LSOR perf counted five girls outside (of) \_\_\_\_  
*Intended: 'Lucie counted five girls outside of herself.'*

- That (12c) contains an island is demonstrated by the ungrammaticality of WH-extraction from the same position: \**Qui a Lucie compté cinq filles en dehors (de)?*

- Any number of islands (e.g. coordination, complex NP, etc.) can exhibit the same effect
- So long as the island excludes the antecedent subject completely

- This type of data led (Kayne 1975:ch.5) to the conclusion that reflexive clitics “originate as pronouns in postverbal object NP position”, with some formal feature(s) “ensuring them to be spelled *se* in the clitic position.”

- ♦ Similar data in Kannada (2001a, p.c.):

- (13) a. Hari tann-annu hoDe-du -[koND]-a [Kannada]  
 Hari self -acc hit -pst.prt-LSOR -3sm  
*'Hari hit himself.'*
- b. \*Hari [island tann-annu mattu tann-a hendati-yannu] hoDe-du -[koND]-a  
 Hari self -acc and self -gen wife -acc hit -pst.prt-LSOR -3sm  
*Intended: 'Hari hit himself and his wife.'*
- c. Hari [island tann-annu mattu tann-a hendati-yannu] hoDe-d -a  
 Hari self -acc and self -gen wife -acc hit -pst-3sm  
*'Hari hit himself and his wife.'*

- Unlike the French examples, the reflexive movement in (13a) is string-vacuous

- ◊ This reflexive movement has been previously said to be possibly covert (Chomsky 1995:104)

- ◊ It is nonetheless sensitive to islands

- ♦ We understand these data if **anaphoric pronouns move to be closer to the subject antecedent**

## 2.3.2. Derived Subjects

- ♦ **Question:** Is movement enough?

- Possibility: all the anaphor needs to be surface c-commanded by the antecedent

- If the anaphor moves to a high position, only the subject will c-command it

- Prediction: any local subject will satisfy LSOR's needs

- (Note: something extra would need to be said about why the LSOR form can be morphosyntactically distinct in other ways)

♦ **Answer:** Movement is not enough

- **Derived subjects** (e.g., of passive clauses) do not license LSOR marking (Kayne 1975, Burzio 1986, Lidz 1996, Rizzi 1986a, Sportiche 2010, Storoshenko 2009)

## (14) French Passive

- a. Sa femme [se] décri<sup>r</sup> -a à Jean [Kayne 1975]  
 His wife LSOR describe-fut.3s to Jean  
*'His wife will describe herself to Jean.'*
- b. Jean sera décrit à lui-même par sa femme  
 Jean pass.fut.3s described to himself by his wife  
*'Jean will be described to himself by his wife'*
- c. \*Jean [se] sera décrit (à lui-même) par sa femme  
 You LSOR pass.fut.3s described (to himself) by his wife  
*Intended: 'Jean will be described to himself by your wife.'*

## (15) Kannada Passive

- a. rama tann-inda vancis -al -paTT -a [Lidz 1996:47]  
 Rama self -instr deceive-inf-[pass.pst]-3s  
*'Rama was deceived by himself.'*
- b. \*rama tann-inda vancis -koLL-al -paTT -a  
 Rama self -instr deceive-[refl] -inf-[pass.pst]-3s  
*Intended: 'Rama was deceived by himself.'*

- Derived subjects of **Subject-to-Subject Raising predicates** also disallow LSOR<sup>5</sup>

## (16) French StSR

- a. Remy semble fatigué à lui-même  
 Remy seems tired to himself  
*'Remy seems tired to himself'*
- b. \*Remy se semble fatigué  
 Remy LSOR seems tired  
*Intended: 'Remy seems tired to himself'*

## (17) Kannada StSR (Lidz 1996)

- a. hari (tann-age) santooshaagiruwaage kaNis-utt -aane  
 Hari (self -dat) be.happy seem-pres-3sm  
*'Hari seems (to himself) to be happy'*
- b. \*hari (tann-age) santooshaagiruwaage kaNis-[koLL]-utt -aane  
 Hari (self -dat) be.happy seem-LSOR-pres-3sm  
*Intended: 'Hari seems to himself to be happy'*

♦ We understand this data if **what drives the movement is the REFL Voice head**

- Passive and StSR require use of a non-REFL Voice<sup>0</sup>

<sup>5</sup>Subject-to-subject raising without an intervener (e.g. with raising predicates like *tend*) does not require a non-active voice (such predicates may in fact be voice-less clauses, see Sailor and Ahn 2010), while subject-to-subject raising over an experiencer predicates (e.g. *seem*, *appear*) do involve a non-active Voice<sup>0</sup>. Empirical evidence from acquisition supports this: verbal passives and raising over an experiencer are acquired rather late, and at the same time, while raising without an experiencer intervener (e.g. with *tend*) is acquired much earlier (Orfitelli 2012) – thus perhaps their late acquisition has something to do with the relevant non-Active Voice<sup>0</sup>s and/or their syntactic effects. Additionally, it may be that Japanese raising over experiencer predicates *mieru* and *omoeru* contain overt realizations of this non-active voice: the *-e* morpheme (Akira Watanabe, p.c.).

### 2.3.3. Core Properties of the Derivation

- ♦ The syntax-semantics interface is responsible for local subject orientation
  - ▶ The LSOR anaphor will need to be identical to the subject, due to where each of them is merged
    - Only the subject occurs in a position where it can saturate the second of IDENT's arguments
    - Binding between e.g. a direct object and an indirect object cannot employ REFL
  - ▶ The reflexive argument **must move to VoiceP** for the derivation to converge<sup>6</sup>
    - This requires that it not be merged in an island not containing VoiceP, even in languages where there is no obvious movement (cf. (13))
- ♦ With REFL as a type of Voice, we rule out local derived subjects as potential antecedents for LSOR
  - ▶ Passive/StSR require some other (non-REFL) Voice to yield the derived subject
    - Any other Voice is in complementary distribution with REFL w.r.t. merging in VoiceP<sup>7</sup>

|   |
|---|
| <b>THIS REFL VOICE<sup>0</sup> DERIVES LSOR, DUE TO:</b>  |
| (i) its <b>selectional properties</b> ,<br>(ii) its <b>structural height</b> ,<br>(iii) <b>where subject and anaphor occur</b> in the derivation, and<br>(iv) <b>semantic composition</b> |



- ♦ Since REFL is the formal aspect of the derivation that we need
  - ▶ **Formal statements about reflexivity do not need to make any statements about the antecedent's syntactic role**
  - ▶ We are still conforming to (and perhaps deriving) the generalizations in various binding theories

<sup>6</sup>This movement takes place in the narrow syntax; it is not LF-movement. See discussion of English (and for more details, see Ahn 2015).

<sup>7</sup>Alternately, there could be multiple syntactic loci of grammatical voice – this would open the door to the possibility of Reflexive voice (and all its effects) being compatible with other grammatical voices. This would predict the possibility of the grammatical effects multiple voices in a single clause (contra e.g. Sailor and Ahn 2010). And since reflexive has been found to be excluded the possibility of Passive and Reflexive Voice<sup>0</sup>s in a single clause, if there are multiple loci for Voices, selection or some other existing mechanisms would have to exclude the Reflexive-Passive combination (at least in languages like those investigated thus far).



### 3. Typological Variation in LSOR

- ♦ **Big Question:** What is the source of cross-linguistic variation in marking reflexivity?
  - ▶ There is great variety in ‘strategies’ for encoding LSOR across languages
    - Anaphoric pronouns (English pronoun-*self*)
    - Voice morpheme (Greek -NAct)
    - Agreement morphemes (Shona *zvi-*)
    - TAM morphemes (Kharia -*ki*)
    - ...
  - ▶ Without looking deeper, it may seem that languages are more or less free to expone it however they like
- ♦ Immediately, we can see how an analysis with a REFL Voice and anaphoric pronoun helps
- ♦ The variation can be understand as **surface variations that depend on the same structural base:**
  - ▶ LSOR derivations involve two principal constituents:
    - the LSOR anaphor and the REFL Voice<sup>0</sup>
    - Each of which could be overt or be silent.
  - ▶ Additionally, the movement of the anaphor may have obvious effects on surface word order, or it could not.
- ♦ This leads in principle to 6 logically possible basic types of languages
  - ▶ Each of these languages is attested, and all languages can be classified in this way:

(18) Basic Typology of LSOR

|                    | LSOR anaphor overt |               | LSOR anaphor silent |                             |
|--------------------|--------------------|---------------|---------------------|-----------------------------|
|                    | mvt not obvious    | mvt obvious   | mvt not obvious     | mvt obvious                 |
| <b>REFL overt</b>  | Kannada            | Greek         | Finnish, Kharia     | <i>logically impossible</i> |
| <b>REFL silent</b> | English, Japanese  | French, Czech | Shona, Dogrib       | <i>logically impossible</i> |

- ♦ Beyond these basic types of languages, further variation is predicted:
  - ▶ By potential homophony between:
    - REFL and other Voices, or
    - the paradigms for LSOR anaphors and other anaphors
  - ▶ Also by other interactions between REFL Voice and the other constituents that are in (indirect) selectional relationships with VoiceP
    - e.g. auxiliary, agreement, and aspectual projections

### 3.1. LSOR and Voice

#### ◆ Across languages, LSOR does not pattern uniformly as either active or non-active

- This is predicted: LSOR is controlled by a unique grammatical Voice, but not every grammatical Voice requires its own morphological paradigms (explicitly shown in Alexiadou and Doron 2012)

- Modern Greek uses the same non-active voice paradigm for middles, passives, and reflexives<sup>8</sup> (Embick 1998, Alexiadou and Doron 2012)

|         |  |                   |
|---------|--|-------------------|
| (19) a. | o Janis diavase to vivlio<br>the John read. <b>Act</b> .pfv.pst.3s the book<br>'John read the book'                      | [Greek Active]    |
| b.      | afto to vivlio diavazete efkola<br>this the book read. <b>NAct</b> .ipfv.npst.3s easily<br>'This book reads easily'      | [Greek Middle]    |
| c.      | afto to vivlio diavastike xtes<br>this the book read. <b>NAct</b> .pfv.pst.3s yesterday<br>'The book was read yesterday' | [Greek Passive]   |
| d.      | i Maria afto-katastrefete<br>the Maria self-destroy. <b>NAct</b> .ipfv.npst.3s<br>'Maria destroys herself'               | [Greek Reflexive] |

- Other languages divide up Voice morphology differently

- Consider this tiny 3-language typology of Voice<sup>0</sup>s:<sup>9</sup>

| (20)           | Passive Voice <sup>0</sup> | Middle Voice <sup>0</sup> | Refl. Voice <sup>0</sup> | Active Voice <sup>0</sup> |
|----------------|----------------------------|---------------------------|--------------------------|---------------------------|
| <b>English</b> | non-act. morph.            |                           | act. morph.              |                           |
| <b>Greek</b>   |                            | non-act. morph.           |                          | act. morph.               |
| <b>Kannada</b> | pass. morph.               | ?                         | refl. morph.             | act. morph.               |

*Voice<sup>0</sup>s and Their Morphological Realizations with the Verb*

- This table is meant to demonstrate that there can be syncretism: **LSOR markers can also mark other grammatical functions**<sup>10</sup> (e.g. Geniušienė 1987, Lidz 1996)
- ◆ Crucially, reflexive-marking verbal affixes always indirectly constrain possible antecedents of binding in the *same* way

#### (21) Generalization on Reflexive Verbal Affixes

If a verbal affix is used to mark reflexivity, the local subject must be the antecedent of binding.

- This is predicted because REFL Voice is what controls LSOR

<sup>8</sup>Lexical reflexives do not employ an *afto*- anaphor, but still use non-active voice morphology. Perhaps lexical reflexives in Greek involve a different REFL Voice (this can be motivated by semantic and morpho-syntactic differences between lexical reflexive and productive reflexive strategies; see e.g. Moulton 2005.). Or perhaps lexical reflexives employ a second kind of anaphor, which could have a unique phonological form (possibly silent) and which can only be used with certain predicates (as a sort of phrasal idiom). It is possible that both proposals are right: there is this second REFL which selects this second (silent) anaphor.

<sup>9</sup>The way this table is set up might implicate a kind of linear continuum of voices, with Passive and Active being diametrically opposed. This implication need not hold; e.g. Voice<sup>0</sup>s might be better described along multiple dimensions, and a linear representation based solely on "activity" is not adequate. (i.e. It is not clear how many features ought to be used to define Voice.)

<sup>10</sup>In some languages LSOR marking patterns with actives to the exclusion of other voices; this is exactly what's predicted if REFL were a unique voice involved in all of these languages

- ◆ For this reason, **using a special Voice affix for reflexivity is limited** in exactly the same ways that we have seen LSOR to be limited

- ▶ For example, the Greek non-active voice morphology is impossible when the reflexive anaphor is trapped in an island, or is not subject oriented:<sup>11</sup>

(22) Greek<sup>12</sup>

- afto-sistinome sti Maria  
self-introduce.[NAct].1s to.the Maria  
*"I introduce myself to Maria"*
- ?sistisa [ton eafto mu ce ton Yani] sti Maria [Island]  
introduced.[Act].1s myself and the Yani to.the Maria  
*"I introduced Yani and myself to Maria"*
- sistisa tin Maria ston eafto tis [Object Oriented]  
introduced.[Act].1s the Maria to.herself  
*"I introduced Maria to herself"*

- To be clear, (22b-c) are ungrammatical with a non-active voice and/or the *afto*- prefix
- ▶ Additionally, the Kannada Reflexive voice suffix cannot co-occur with the Passive suffix:

(23) Kannada (Lidz 1996:47)

- rama tann-inda vancis -al -paTT -a [Passive Voice]  
Rama self -instr deceive-inf-[pass.pst]-3s  
*'Rama was deceived by himself.'*
- \*rama tann-inda vancis -koLL-al -paTT -a  
Rama self -instr deceive-[refl] -inf-[pass.pst]-3s  
*Intended: 'Rama was deceived by himself.'*

### 3.2. LSOR and Anaphors

- ◆ In some languages, the LSOR anaphor is differentiated from other anaphors

- ▶ The subject oriented anaphor in תוכנ סכנ is distinct from one which is object oriented:

(24) תוכנ סכנ (Culy et al. 1994:329)

- Anta [Omar ne ] [sa unכ -מכ ] sčaa be [Subject Oriented]  
Anta Omar OBJ word LSOR -POSS talked PST  
*'Anta<sub>1</sub> talked to Omar<sub>2</sub> about herself<sub>1</sub>/\*himself<sub>2</sub>.'*
- Mariam [Omar ne] [ku wo -מכ sa ] sčaa be [Object Oriented]  
Mariam Omar to head 3S -POSS word talked PST  
*'Mariam<sub>1</sub> talked to Omar<sub>2</sub> about himself<sub>2</sub>/\*herself<sub>1</sub>.'*

- ◆ The following table shows some of the ways various anaphors can be realized within and across languages:

| (25)                     | French    | Japanese                | Czech | English    | Tongan     |
|--------------------------|-----------|-------------------------|-------|------------|------------|
| <b>LSOR anaphor</b>      | se        | jibunjishin             | se    | themselves | kianautolu |
| <b>Non-LSOR anaphor</b>  | eux-mêmes | { jibun<br>karejishin } | sebe  | themselves | kianautolu |
| <b>Non-Refl. Pronoun</b> | eux       | karera                  | je    | them       | kianautolu |

*Variation in 3PI Pronominals Across a Selection of Languages*

<sup>11</sup>(22c) is highly context dependent; my informants found it did not find it good until explaining a context where Maria has amnesia.

<sup>12</sup>Thanks to Nikos Angelopoulos for the judgments

- ▶ Just as with REFL Voice, there can be homophony across categories of anaphors

♦ **Homophony may abound, but it is constrained by the categories of anaphors available in the Grammar**

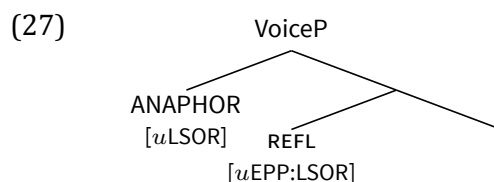
- ▶ There is an category for LSOR, but no category for local direct object oriented reflexivity

♦ This predicts the following crosslinguistically-supported generalization:

(26) **Generalization on LSOR and Reflexive Anaphors**

If an anaphor requires its antecedent to have a certain grammatical role, then that grammatical role is that of the subject.

- There are anaphors require their antecedent to be the subject, but no anaphors require their antecedent to be, e.g., a direct object<sup>13</sup>
- ▶ In the domain of local subjects, this generalization is derived with **REFL's ability to place selectional restrictions on the anaphor it selects**<sup>14</sup>
  - REFL selects a certain kind of anaphor in its specifier; this results in an anaphor with a different featural make-up, and thus a possibly different form



♦ An immediate benefit of this selection-based analysis for unique LSOR forms:

- ▶ The non-LSOR anaphor is predicted to be the same as the anaphor that occurs in islands while being local-subject bound
  - French shows this clearly: anaphors in an island and object-bound anaphors make use of the same paradigm

(12b) Lucie a compté [island cinq filles en dehors d' **elle-même**]  
 Lucie perf counted five girls outside of herself  
*'Lucie counted five girls outside of herself.'*

(28) la psychiatrie a révélé Jean à **lui-même** [French]  
 the psychiatry perf revealed Jean to himself  
*'Psychiatry revealed Jean to himself.'*

- ▶ Because neither object-oriented anaphors nor those in islands will have the [uLSOR] feature<sup>15</sup>

<sup>13</sup>Non-LSOR anaphors do not require any specific grammatical role of their antecedent. All non-LSOR anaphors investigated thus far are compatible with antecedents from a range of grammatical roles – even subject antecedents (under certain conditions).

<sup>14</sup>Left open is the question of how long-distance subject orientation is derived, and how subjecthood is formalized. Perhaps subjecthood in long-distance SOR is similar local SOR, in that it is incidental and is the consequence of something else.

<sup>15</sup>Of course, object-oriented anaphors and those in islands could differ featurally allowing them to be distinct lexical items. It is not clear at this time what feature would distinguish them, but if such a feature can be shown to exist, then we would predict lexical differences between the two of them as well.

### 3.3. LSOR and Other Exponents

- ◆ In some languages, there are morphological exponents beyond the anaphor and a voice morpheme that are sensitive to LSOR
  - ▶ e.g. agreement morphemes (Lakhota), Tense/Aspect/Mood morphemes (Kharia), and aspectual auxiliaries (French/Italian)
    - Lakhota Agreement
 

|      |    |                              |        |
|------|----|------------------------------|--------|
| (29) | a. | [m]-ik- pázo                 | [REFL] |
|      |    | 1s-refl-display              |        |
|      |    | <i>'I displayed myself.'</i> |        |
|      | b. | [wa]-pázo                    | [ACT]  |
|      |    | 1s- display                  |        |
|      |    | <i>'I displayed (it).'</i>   |        |
    - Kharia TAM marking
 

|      |    |   |        |
|------|----|---|--------|
| (30) | a. | yo -Dom-[ki]-kiyar                      | [REFL] |
|      |    | see-refl -pst-du                        |        |
|      |    | <i>'The two of them saw themselves'</i> |        |
|      | b. | lebu -ki-te yo -[yo]-j                  | [ACT]  |
|      |    | person-pl-obl see-pst -1sg              |        |
|      |    | <i>'I saw the people'</i>               |        |
    - French auxiliary selection
 

|      |    |   |        |
|------|----|---|--------|
| (31) | a. | Sa femme s' [est] décrit(e) à Jean  | [REFL] |
|      |    | His wife LSOR perf describe.part to Jean  |        |
|      |    | <i>'His wife described herself to Jean.'</i>  |        |
|      | b. | Sa femme l' [a] décrit(e) à Jean  | [ACT]  |
|      |    | His wife 3.acc perf describe.part to Jean   |        |
|      |    | <i>'His wife<sub>1</sub> described him/her/it<sub>2</sub> to Jean<sub>3</sub>.'</i> |        |
  - ▶ Importantly, these non-voice/non-anaphor morphological alternations for reflexivity are not present when LSOR is otherwise ruled out
    - i.e. when the anaphor and subject are separated by an island, when object oriented, or in the presence of a non-REFL voice
- ◆ Moreover, in all of these languages, **voice has an independent relationship with the relevant paradigm**
  - ▶ Lakhota uses different agreement paradigms for active and non-active clauses
  - ▶ Kharia has different TAM markers for active and non-active clauses
  - ▶ French passives have unique auxiliaries
- ◆ This is evidence that agreement, aspectual, and auxiliary systems are selectionally related with Voice<sup>16</sup>
  - ▶ Otherwise it could not impose selectional restrictions on them
    - (This selectional relationship may be indirect)

<sup>16</sup>Further paradigms that reflexive Voice is in selectional relationships with include participial projections (Kannada LSOR affix *-koND* requires a verb in the past participle form; Lidz, p.c.) and aktionsart projections (Greek *afto-* and non-active voice has certain aspectual restrictions; Alexiadou 2012).

- ◆ This leads to a generalization on what can be a marker for LSOR:

(32) **Generalization on LSOR and Other Morphosyntactic Patterns**

If grammatical voice may effect morphological alternations in a certain paradigm (e.g. the agreement paradigm), then LSOR may also effect alternations in that paradigm.

- ◆ This provides **very strong evidence that reflexivity is formally represented in the same way as voice** (i.e. as a Voice<sup>0</sup>).
  - ▶ Because the relevant LSOR-sensitive morphosyntactic phenomenon is sensitive to grammatical voice more generally.
- ◆ LSOR clauses may resemble actives, passives, or neither along several dimensions:<sup>17</sup>
  - e.g. voice morphology, agreement morphology, TAM markers, and auxiliary selection

(33)

| LSOR clauses...                     | ...pattern like actives | ...pattern like non-actives | ...pattern distinctly |
|-------------------------------------|-------------------------|-----------------------------|-----------------------|
| <b>Voice morph.</b>                 | English                 | Greek                       | Kannada               |
| <b>Agr. morphology</b>              | Chickasaw               | Lakhota                     | Shona                 |
| <b>TAM Markers</b>                  | Mandinka                | Kharia                      | ?                     |
| <b>Aux. selection</b> <sup>18</sup> | Spanish                 | French                      | Sye(?)                |

*LSOR effects on Morpho-Syntactic Paradigms*

- ◆ Two important restrictions about this array of LSOR markings
  - ▶ In these languages, **all these morphological paradigms** (voice marking, agreement, TAM marking, and auxiliary selection) **are sensitive to voice, more generally**
  - ▶ All the morpho-syntactic effects of reflexivity in (33) are predicted to be limited in the same ways that LSOR is restricted
  - ▶ For example, the Shona *zvi* reflexive agreement marker cannot occur when the voice of the clause is passive (Storoshenko 2009:§5.1)
    - Compare the grammatical, non-passive (34) with the ungrammatical passive (35):

(34) Mufaro a- ka-zvi- bik -ir -a mbudzi [Storoshenko 2009:(23)]  
 Mufaro.1 subj.1-pst-**LSOR**-cook-appl-fv goat.9  
 'Mufaro<sub>i</sub> cooked the goat<sub>j</sub> for himself<sub>i/\*j</sub>.'

<sup>17</sup>This division of reflexive as its own Voice distinct from Active or Passive (or Unaccusative) can explain why reflexives vary across languages, with regard to being treated like transitives (Active) or intransitives (Middle/Unaccusative/Passive/...). Specifically, this table addresses why, in Spanish-type languages, reflexives exhibit an active-like pattern, while in French-type languages, reflexives exhibit an unaccusative-like pattern. (The latter has contributed to the conclusion that French reflexives are unaccusative (Sportiche 1990); see Sportiche (2010, 2014) for specific criticisms against this.)

<sup>18</sup>Auxiliary selection in French is sensitive to reflexivity only in the perfect. All that is indicated by this row is that auxiliary selection *in some part of the grammar* is impacted by reflexivity. As for Sye, it is said to have reflexive auxiliary *ehpe* (Crawley 1998), I put a question mark here for two reasons. First, and more importantly, the data in Crawley's grammar is inadequate to argue either way whether *ehpe* is restricted to LSOR contexts or not. All the sentences given are simple non-passive mono-transitives, such as:

i. y- ehpe n- ochi [Crawley 1998:127]  
 3sg:distpastdo.reflexively nom-see:3sg  
 'He/She saw himself/herself'

Second, it is not clear how grammatically similar *ehpe* is to more familiar auxiliaries; for example, the verbal complement is glossed as a kind of nominalization in Crawley (though this is, of course, an analysis).

- (35) \*A- ka- zvi- bik -ir -w -a  
 subj.1-pst-LSOR-cook-appl-pass-fv  
*Intended: 'She was cooked for herself'*

### 3.4. English Anaphors and Prosody

- ◆ What about English?
  - ▶ Is there evidence for LSOR derivations being distinct from non-LSOR derivations?
- ◆ Yes – there are *prosodic* differences
  - ▶ Non-LSOR anaphors behave (a priori) “normally” in their prosody
  - ▶ LSOR anaphors behave (a priori) “exceptionally” in their prosody
- ◆ In distribution of ‘default’ phrasal stress

- ▶ LSOR anaphors “avoid” phrasal stress where other constituents would “attract” it

(36) Q: What happened at work today?

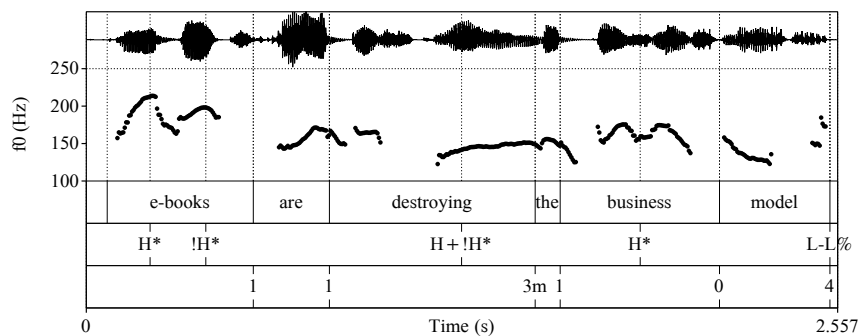
A1: #Mark told Maxine about *himself*.

A2: Mark told *Maxine* about himself.

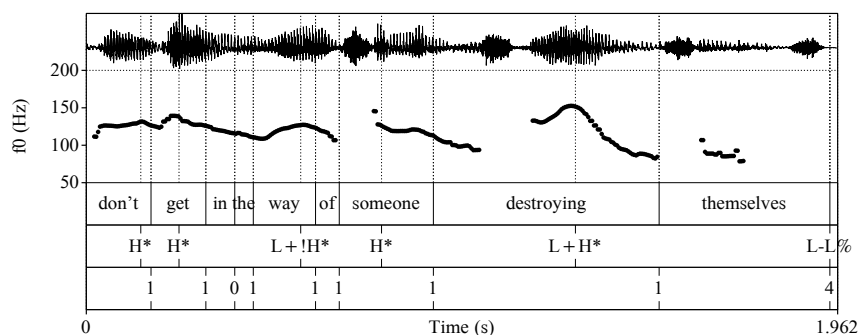
A3: Mark told Maxine about a *discovery*.

A4: #Mark told *Maxine* about a discovery.

(37) “To begin, here is the conventional wisdom about publishing: E-books are destroying the *[business model]*.”  
*(All Things Considered, 2012/12/27)*



(38) “The oldest rule in politics is: don’t get in the way of someone *destroying* themselves.”  
*(All Things Considered, 2011/11/14)*



- ▶ Non-LSOR anaphors behave like other constituents

(39) Q: What did the colonials do to the existing peoples?

A1: They turned them against their brothers.

*Final Stress*

A2: They turned them against themselves.

*Final Stress*

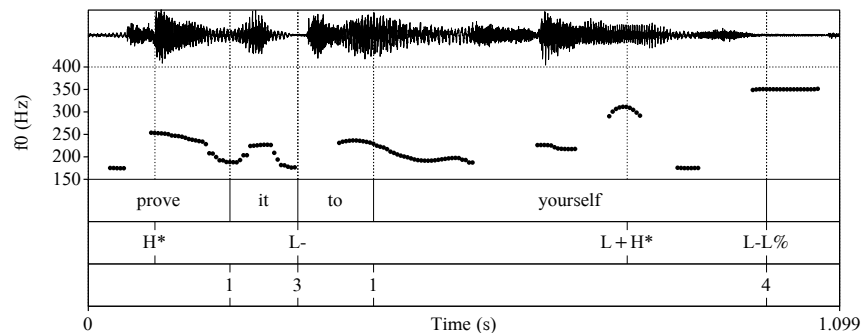
► **Constraints on LSOR syntax also govern where you get weak anaphoric pronouns**

► (Subject orientation, island sensitivity, Voice sensitivity)

♦ **In the interpretation of focus stress**

► LSOR anaphors allow an ‘unexpected’ interpretation in contexts like (40):

(40) “Don’t take our word for it. Take your word for it! Prove it to yoursélf!” (*Ad for Purex*)



■ This focused reflexive has a ‘normal’ interpretation:

‘The one you should prove it to is you’

■ It also has an ‘unexpected’ interpretation:

‘This should be something you do to yoursélf’ ( $\approx$  *You prove it to you!*)

► On the other hand, non-LSOR anaphors are not ambiguous in this way

(41) Show me to myself!

■ This focused reflexive has a ‘normal’ interpretation:

‘The one you should show me to is me’

■ It **lacks** the ‘unexpected’ interpretation:

#‘Show me to me’

► **Constraints on LSOR syntax also govern where you get this ambiguity**

► REFL can’t instantiate the external argument licenser<sup>19</sup> (*pace* Labelle 2008)

■ If REFL also introduced external arguments, there are some predicted interpretations that are missing (Ahn 2012, 2015)

♦ For more detailed argumentation, see Ahn 2015

► Including exact formulations of how these are the expected prosodic forms, on the basis of exceptionless phonological rules

<sup>19</sup>At least not in English.



## 4. Generalizations and Attempts at Deep Universals

- ♦ There is a lot of variation in marking LSOR, but it is still limited
  - (21) **Generalization on Reflexive Verbal Affixes**  
If a verbal affix is used to mark reflexivity, the local subject must be the antecedent of binding.
  - (26) **Generalization on LSOR and Reflexive Anaphors**  
If an anaphor requires its antecedent to have a certain grammatical role, then that grammatical role is that of the subject.
  - (32) **Generalization on LSOR and Other Morphosyntactic Patterns**  
If grammatical voice may effect morphological alternations in a certain paradigm (e.g. the aspectual paradigm), then LSOR may also effect alternations in that paradigm.
- ♦ A single solution, resulting from principles of locality and selection, is the deep constraint:

|   |
|---|
| <b>CONSTRAINT ON POSSIBLE EXPONENTS OF LSOR</b>   |
| LSOR's morphosyntactic exponents are limited to Voice <sup>0</sup> and its selectional relatives. |

- ▶ Voice's selectional relatives include the anaphor, aspectual auxiliaries, agreement markers, etc.
- ♦ In addition, morphophonology will also add a level of variation
  - ▶ e.g. any marker may be overt or silent
  - ▶ Even if overt, it homophony/syncretism may obscure its identity as an LSOR marker
- ♦ Finally, each of these exponents may impose their own syntactic effects (e.g. REFL-triggered anaphor movement)
  - ▶ But such effects may not always be readily apparent (e.g. covert movement)

### ♦ Sidebar on Word Order and Reflexive Movement

- ▶ We have no *prima facie* reason to expect that the movement **would** affect word order
- ▶ That is, even if the LSOR object anaphor *appears* to be in the same linear position as other objects, movement may have still taken place
  - Descriptively, some movements requires other movement(s)
    - ◊ Recall Holmberg's Generalization(for a summary, see e.g. Vikner 2006)
  - It could be that the reflexive movement also requires another/other movement(s)
    - ◊ And the combination of both/all of the movements ends up resulting in an unchanged string (i.e. covert movement can occur in the narrow syntax; cf. Kayne 1998)
- ▶ To be clear, movement (and, in our case, anaphor movement for LSOR) can be string-vacuous
  - but may still be detectable, e.g. via prosody and/or interpretation

- ♦ All of this variation is predicted by the Borer-Chomsky Conjecture (Baker 2008)
  - ▶ **All variation is in lexical items** and their morphophonological properties

| VARIATION AT THE SURFACE  |
|---|
| <ul style="list-style-type: none"> <li>♦ All types of variation are <i>surface</i> effects               <ul style="list-style-type: none"> <li>▶ All the syntactic properties will remain constant across languages, because of UG</li> <li>▶ (i.e. the height of REFL, and how its denotation necessitates movement)</li> </ul> </li> </ul> |



- ♦ **Where there was once chaos we now have order**; this theory helps us understand...
  - ▶ ...how surface manifestations of LSOR can vary
  - ▶ ...why LSOR (but not non-LSOR) can be encoded with unique verbal morphology
  - ▶ ...why LSOR may have verbal and pronominal exponents (as well as others)

## 5. Conclusions

- ♦ Like semantic restrictions on antecedents of reflexive binding, the syntactic restriction of being a local subject **reduces to formal properties of the derivation**
  - ▶ Binding theory generalizations remain in tact
  - ▶ No need for special BT statements in any Grammar distinguishing local subjects from other syntactic objects
- ♦ The formal properties of the derivation that give rise to the LSOR constraints are **two basic components**
  - ① **REFL Voice**<sup>0</sup>
    - ◇ Its formal properties determine the two core parts necessary to derive LSOR
      - ❶ (featurally unique) anaphors move to a reflexive VoiceP
      - ❷ the semantic reflexivizer is associated with the reflexive VoiceP
  - ② **The architecture of Grammar**
    - ◇ LSOR exhibits the patterns that it does (within and across languages) simply as a result of locality of selection and the interfaces with syntax
- ▶ Correct Prediction: LSOR contexts are constrained, in the same ways **across languages**
  - Antecedents must be local subject
  - REFL and the anaphor cannot be separated by an island
  - The clause must not be in a non-REFL Voice

## 6. Open Questions

- ◆ Why is REFL so high in the structure? ( $\approx$  Why is Voice so high?)
  - ▶ Because Voice depends on a predicate and all its argument structure projections?
  - ▶ Because of semantic composition?
  - ▶ Perhaps both?
- ◆ Why this structure for LSOR?
  - ▶ Something about reflexivity is deeply connected to Voice
  - ▶ But why is REFL a grammatical voice phenomenon?
- ◆ Is Principle A necessary?
  - ▶ Syntax/semantics of LSOR mean principle A will always hold for LSOR anaphors
  - ▶ What about other, non-LSOR reflexives?
    - Long-distance (subject-oriented) reflexives
    - Non-subject-oriented local reflexives
    - Exempt reflexives?
  - ▶ Does the binding of these anaphors reduce to something else?
    - i.e., can we *dissolve* Binding Theory as a formal mechanism, and instead rely on general principle of grammar?
    - Thereby deriving Principle A, without needing to stipulate it in the grammar? (ala Rooryck and Vanden Wyngaerd 2011)
- ◆ Within languages, the anaphoric pronouns used in different reflexive contexts appear to be morphologically very similar
  - ▶ For example:
    - English LSOR and non-LSOR contexts make use of the same segmental form:
      - ◇ pronoun+*self*
    - Japanese LSOR and non-LSOR contexts make use of similar forms:
      - ◇ *jibun-jishin* and *jibun/kare-jishin*
  - ▶ What is **the core (syntactic/semantic) contribution** of pronoun+*self* that allows English to do this?
  - ▶ What are the individual contributions of the morphological bits in the various Japanese anaphors?
- ◆ Within languages, the grammatical voice paradigms are shared between REFL and other voices
  - ▶ What is the underpinning of different grammatical voices sharing morpho-syntactic paradigms?
    - Accidental homophony?
    - Feature underspecification?
    - Something else?

- ◆ What if a language seems to be an apparent counterexample to one of the generalizations about LSOR?
  - ▶ Markers of LSOR may be identical in form with other elements
    - In Swedish, there appears to be one set of anaphors for both local and long-distance subject-oriented reflexivity
      - ◇ We would hope this is some sort of homophony or featural underspecification
    - This means putative counterexamples ought to be carefully considered, as surface forms are not entirely reliable
  - ▶ Not every language will differentiate the surface form of LSOR and non-LSOR clauses
    - Recall the case of English
    - One might have to look more closely to find properties associated with REFL Voice<sup>0</sup>
    - But, once the properties of LSORs/REFL are identified, they could be used as a diagnostic for whether a subject is a derived subject

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### A. Alternative Semantic Derivation

- ◆ Notational variant of main analysis, using lambda abstraction

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(42)

SubjectP

← *Tense/Aspect/Mood/Polarity/...*

PredP:  $\lambda e_{\langle s \rangle}. \mathbf{IDENT}(x,y) \ \& \ \mathbf{AGENT}(\llbracket \text{Hari} \rrbracket, e)$   
 $\& \ \mathbf{THEME}(\llbracket \text{himself}_7 \rrbracket^g, e) \ \& \ \mathbf{HIT}(e)$

Hari

VoiceP:  $\lambda 2 \lambda e_{\langle s \rangle}. \mathbf{IDENT}(x,y) \ \& \ \mathbf{AGENT}(t_2, e)$   
 $\& \ \mathbf{THEME}(\llbracket \text{himself}_7 \rrbracket^g, e) \ \& \ \mathbf{HIT}(e)$

tann

Voice!:  $\lambda 1 \lambda 2 \lambda e_{\langle s \rangle}. \mathbf{IDENT}(x,y) \ \& \ \mathbf{AGENT}(t_2, e)$   
 $\& \ \mathbf{THEME}(t_1, e) \ \& \ \mathbf{HIT}(e)$

koND

REFL<sub>[uEPP]</sub>

$\lambda P_{\langle st \rangle} \lambda 1 \lambda 2 \lambda e_{\langle s \rangle}. \mathbf{IDENT}(1,2) \ \& \ P(e)$

$\Theta\text{-Domain}: \lambda e_{\langle s \rangle}. \mathbf{AGENT}(\llbracket t_2 \rrbracket, e)$   
 $\& \ \mathbf{THEME}(\llbracket t_1 \rrbracket, e) \ \& \ \mathbf{HIT}(e)$

Hari tann

hoDe

- ◆ Essentially what we've done here is say that, if this REFL Voice head is merged, there needs to be movement of two things from in its complement to a higher position (like the EPP)
  - ▶ Without this movement, the semantic derivation will crash
    - We've reduced the *u*EPP feature to the denotation of REFL  
(Or at least made them effect the same result)
- ◆ The same as the analysis presented in the talk
  - ▶ Both the subject and anaphor must move, in order for a derivation with REFL Voice<sup>0</sup> to converge
  - ▶ Both rely on tight relations between syntactic and semantic structure

- ◆ Some theories assume differently that (some) anaphors are the semantic reflexivizers (Bach and Partee 1980, Szabolcsi 1987, Keenan 1988, Schlenker 2005, Spathas 2010)

- In such a theory, the reflexivizer *himself* has a denotation like the following:

$$(43) \quad \llbracket \text{himself} \rrbracket = \lambda R_{\langle eest \rangle} \lambda x. R(x, x)$$

- ▶ I'll call this the Anaphor=Reflexivizer (A=R) approach, as opposed to the Voice=Reflexivizer (V=R) approach
- ▶ Regardless which theory is correct, the generalizations found about LSORs **rely on movement**
  - An A=R theory does not inherently rely on movement
  - **But if movement to VoiceP happened for independent reasons...**
    - ◊ Semantic composition, 'reflexive marking' (e.g. Reuland 2011), etc.



- **...only when the VoiceP is headed by REFL, then we can maintain all generalizations seen so far**
- ▶ What must remain constant:
  - A unique REFL VoiceP, to which reflexives move
  - If REFL Voice is not implemented...
    - ◊ We almost certainly lose the connection to passives
    - ◊ We potentially lose the connection to subject orientation and the linear position facts
- ▶ What must differ:
  - The denotations of the reflexivizer function (since structural locus differs)
  - The derivation of Focus-bearing reflexives for English
    - ◊ If the anaphor were the reflexivizer, REAFR prosody/interpretation ought to be possible, even in cases where movement to VoiceP doesn't take place. (See Chapter 4 of Ahn 2015)

## B. Reflexives without REFL Voice

- ♦ The auxiliary '*be*' is used as a perfect marker non-active voices (including REFL) in French/Italian
  - ▶ So clauses in the perfect with the LSOR marker, *si*, use '*be*' as their perfect auxiliary:
 

(44) Gianni si è accusato [Italian, Burzio 1986]  
 Gianni LSOR perf.NAct accuse.part  
 '*Gianni accused himself*'
  - ▶ There are other clauses with a reflexive meaning, which use the non-LSOR ('strong form'), *se stesso*
  - ▶ These clauses, as in (45), behave as active clauses, in that they use the '*have*' perfect auxiliary:
 

(45) Gianni ha accusato se stesso  
 Gianni perf.Act accuse.part himself  
 '*Gianni accused himself*'
- ♦ (44) and (45) show **there must be (at least) two kinds of reflexive anaphors**
  - ▶ They can be used in very similar contexts, so **when do you use which reflexive?**
  - ▶ Perhaps the answer is like Grodzinsky and Reinhart (1993)'s Rule I or Fox (2000)'s Rule H, which place limits on derivational possibilities in coreference:
 

(46) Rule H A pronoun  $\alpha$ , can be bound by an antecedent,  $\beta$ , only if there is no closer antecedent,  $\gamma$ , such that it is possible to bind  $\alpha$  by  $\gamma$  and get the same semantic interpretation.

(47) Rule I  $\alpha$  cannot corefer with  $\beta$  if an indistinguishable interpretation can be generated by replacing  $\alpha$  with a bound variable,  $\gamma$ , bound by  $\beta$ .
  - ▶ To extend this to the current problem, I propose a strong hypothesis, in the form of an additional rule:

- (48) Rule J refl Voice<sup>0</sup> must be merged if (i) its presence is grammatically possible and (ii) its presence doesn't change the interpretation.<sup>20</sup>

♦ This raises another question: why Rule J?

- ▶ This seems to be **part of a larger pattern in syntax**:

(49) The more constrained derivation is utilized to the greatest extent possible.

- See also: weak/strong pronoun alternation (Cardinaletti and Starke 1999), object-shift-dependent specificity (Germanic, Adger 1994; Tagalog, Rackowski and Richards 2005), possessor raising (e.g. Nez Perce, Deal 2011; Hebrew and Romance, Landau 1999), movement for focus (Zulu, Halpert 2011; Hungarian, Szendrői 2003), etc.<sup>21</sup>
- ▶ Perhaps this is done to minimize vagueness/maximize pragmatic cooperation
  - “If you didn't use the more constrained derivation, you must have had a (structural/interpretational) reason not to”

## C. More Cross-Linguistic Data

Below are several the morpho-syntactic configurations that many languages employ when the local reflexivity exhibits LSOR properties:<sup>22</sup>

- (50) (Albanian, Indo-European; Williams 1988)  
 Gazetari i a përshkroi Agimin vetes  
 journalist-the 3sgDat 3sgAcc describe.pastdef.act Agim self.dat  
*'The journalist<sub>1</sub> described himself<sub>1/\*2</sub> to Agim<sub>2</sub>'*
- (51) (Czech, Slavic; Toman 1991)  
 Sultán si nabídl otroka  
 Sultan refl.dat offer slave  
*'The sultan<sub>1</sub> offered the slave<sub>2</sub> to himself<sub>1/\*2</sub>'*
- (52) (Danish, Scandinavian; Vikner 1985)  
 ... at Peter fortalte Michael om sig selv  
 ... that Peter told Michael about refl intns  
*'... that Peter<sub>1</sub> told Michael<sub>2</sub> about himself<sub>1/\*2</sub>'*

<sup>20</sup>It might seem desirable to reduce Rule J to being a consequence of Rule I, since REFL Voice<sup>0</sup> forces a bound-variable interpretation (see Ahn 2011). However, such an analysis faces some empirical issues, since it seems that bound variable interpretations can arise without REFL:

i. Dr. Freud told Dora about herself before he did [tell] Little Hans [about himself].

<sup>21</sup>Preminger 2011 discusses object shift for specificity as always involving a single grammatical function, which desires movement as much as possible but which does not crash the derivation if movement does not occur. This framework could be useful in explaining possessor raising, movement for focus, and possibly even English reflexive anaphors – the extra movement is done as much as possible; but, if it is not possible, the operation that would normally induce movement can still succeed.

However, if an account in the spirit of Preminger's account is correct, more would have to be said for phenomena in which different lexical items are used for moved and unmoved forms – for example, weak/strong pronoun alternations and LSOR/non-LSOR anaphor alternations in languages that use different lexical items (e.g. Romance). It would require the grammar would have to have an additional set of rules that dictates the choice lexical item for anaphor type, independent of the item's licensing conditions (a post-syntactic, late Spell-Out-type Lexical Insertion model might be appropriate).

Alternatively, it may be that there are two grammatical operations, each selecting different lexical items.

<sup>22</sup>It may be that some of these morpho-syntactic reflexive strategies listed here are not quite the same as what we've already seen. We need to be careful, as the morpho-syntactic configuration used for LSOR in a given language may have a broader distribution, beyond just LSOR. That is, due to homophony/paradigm-sharing, it might be that the morpho-syntactic configuration for LSOR (determined by REFL Voice) is surface-identical to some other kind of reflexivity (not determined by REFL Voice).

- (53) (Finnish<sup>23</sup>, Uralic; Ahn 2011)  
 Jussi puolusta-utu-i paremmin kuin Pekka  
 Jussi.nom defend -refl-past better than Pekka.nom  
*'John<sub>1</sub> defends himself better than Peter<sub>2</sub> does [defend-himself<sub>2/\*1</sub>].'*
- (54) (French, Romance; Sportiche 2010)  
 Marie se montre Jean  
 Marie refl show.3sg John  
*'Marie<sub>1</sub> is showing John<sub>2</sub> to herself<sub>1</sub>/\*himself<sub>2</sub>'*
- (55) (Greek, Hellenic; Tsimpli 1989)  
 O Yanis afto-katastraf-i -ke  
 The Yani.Nom self-destroy -NonAct-3sg.past  
*'Yani destroyed himself'*
- (56) (Inuit, Eskimo–Aleut; Bittner 1994)  
 Juuna-p Kaali immi-nik uqaluttuup-p -a -a  
 Juuna-erg Kaali self -ins tell -ind-[+tr]-3sg.3sg  
*'Juuna<sub>1</sub> told Kalli<sub>2</sub> about himself<sub>1/\*2</sub>'*
- (57) (Japanese, Altaic; Katada 1991)  
 Bill-ga Mike-ni zibun-zisin-no koto -o hanas-ita  
 Bill-nom Mike-dat refl -intns-gen matter-acc speak-pst  
*'Bill<sub>1</sub> told Mike<sub>2</sub> about himself<sub>1/\*2</sub>'*
- (58) (Kannada, Dravidian; Lidz 2001b)  
 rashmi tan -age-taane hari-yannu paričaya -maaDi-koND -aLu  
 Rashmi self-dat -intns Hari-acc introduction-do -LSOR.pst-3sg.f  
*'Rashmi<sub>1</sub> introduced Hari<sub>2</sub> to herself<sub>1</sub>/\*himself<sub>2</sub>'*
- (59) (Lakhota, Siouan; Charnavel 2009)<sup>24</sup>  
 iwó- m- igl- ak -e  
 talk.about-1sg.II-refl-talk.about-abl  
*'I talk about myself'*
- (60) (Lango, Nilo-Saharan; Foley and Van Valin 1984)  
 Lócà ò- kwá -o dákó pìr -é kɛnɛ  
 man 3sg.a- ask -3sg.u woman about -3sg self  
*'The man<sub>1</sub> asked the woman about himself<sub>1</sub>/\*herself<sub>2</sub>'*
- (61) (Malayalam, Dravidian; Jayaseelan 1999)  
 raaman kṛiṣṇan -ooḍə taṇ-ne patti taṇne samsaariċcu  
 Raman Krishnan-to self-acc about emph talked  
*'Raman<sub>1</sub> talked to Krishnan to himself<sub>1/\*2</sub>'*
- (62) (Marathi, Indo-Aryan; Wali and Subbarao 1991)  
 Lili -ni Susi -laa swataah -baddall kaahihi saangitla naahi  
 Lili -erg Susi -to self -about anything told not  
*'Lili<sub>1</sub> didn't tell Susi<sub>2</sub> anything about self<sub>1/\*2</sub>'*

<sup>23</sup>See Ahn (2011) for argumentation that Finnish -UtU is the Voice morpheme.

<sup>24</sup>Charnavel does not give a grammatical example with two possible binders in a single clause. Instead she says that, in order to express something like *'I talk to Anne about herself'*, you cannot use the reflexive morpheme, and instead must use a paraphrase like *'I talked to Anne and I talked about her'*.

- (63) (Norwegian, Scandinavian; Hellan 1988)  
 Jon fortalte meg om seg selv  
 John told me about refl intns  
*'Jon<sub>1</sub> told me<sub>2</sub> about himself<sub>1</sub>/\*myself<sub>2</sub>'*
- (64) (Russian, Slavic; Timberlake 1979)  
 Ja emu skazal vse o sebe  
 I him told all about refl  
*'I<sub>1</sub> told him<sub>2</sub> everything about myself<sub>1</sub>/\*himself<sub>2</sub>'*
- (65) (Russian Sign Language, Signing; Kimmelman 2009)  
 BOY IX-A GIRL IX-B SELF+IX-A/\*IX-B TELL  
 boy girl refl tell  
*'The boy tells the girl about himself/\*herself'*
- (66) (Sign Language of the Netherlands, Signing; Kimmelman 2009)  
 BOY IX-A GIRL IX-B ABOUT ZELF+IX-A/\*IX-B A-TELL-B  
 boy girl about refl told  
*'The boy tells the girl about himself/\*herself'*
- (67) (Tɔɔ Sɔɔ, Niger-Congo; Culy et al. 1994)  
 Mariam Omar nɛ sɔ unɔ mɔ sɔaa be  
 Mariam Omar to word refl poss talked pst  
*'Mariam<sub>1</sub> talked to Omar<sub>2</sub> about himself<sub>1</sub>/\*herself<sub>2</sub>.'*