A unified analysis of shifted indexicals and logophoric pronouns

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1 Introduction

2 More common properties

3 The proposal: lexical (under)specification and competition

4 Conclusion
Some languages can ‘shift’ indexicals, and use them anaphorically to refer to arguments of the matrix clause.

This is exemplified in (1) for Erythrea Tigrinya, a semitic language that allows shifting of first and second person pronouns under verbs of speech:

(1) Kidane kə-xəyəd dəliə ?alləxu ?ilu
Kidane COMP-IMPF.leave PRF.want.1SG AUX.1SG say.3SG.M
‘Kidane; said that he; wanted to leave’ [Tigrinya, personal fieldwork]

(2) Həsen-i mi-ra va kɛɛz dəwletia
Hesen-OBL 1SG-OBL say COMP 1SG.NOM rich.be.PRS
‘Hesen; tells me$_{Spk}$ that he$_{i,Spk}$ is rich’ [Zazaki, Anand and Nevins 2004: (4)]
Logophoric pronouns

- A number of languages have logophoric pronouns, which fulfill essentially the same role - they can only refer to the attitude holder in speech and thought reports (Clements 1975, Hyman and Comrie 1981, Sells 1987, Culy 1994a).

(3) a. Nnsini dzə enyiia ê bʊ̀ nù  [Aghem, Butler 2009: (10-11)]
   Nsem  say  COMP  LOG  fall  FOC
   ‘Nsen$_i$ said that she$_i$ fell’

b. Nnsini dzə enyiia ù bʊ̀ nù
   Nsem  say  COMP  3SG  fall  FOC
   ‘Nsen$_i$ said that she$_*i/j$ fell’

(4) a. Oumar Anta inyemën waa be  gi
   Oumar Anta LOG.ACC seen AUX said
   ‘Oumar$_i$ said that Anta had seen him$_i$’

b. Oumar Anta won  waa be  gi
   Oumar Anta 3SG.ACC seen AUX said
   ‘Oumar$_i$ said that Anta had seen him$_*i/k$’
Prima facie, both phenomena share a great deal of empirical and theoretical similarities.

Why then, is it that we do not have a single, unified theory for both?

In this talk, I will try to pursue exactly this: provide a unified account of both phenomena in term of lexical competition and variation of features.
Indexical shift: overview

- Pervasive across languages (26 reported, pertaining to 19 families, including sign languages) (Sundaresan 2018, Deal 2020 for overviews)

- Seemingly not an instance of quotation: wh-extraction is possible from shifted embedded clauses, and NPIs typically are licensed in the same environments. As opaque structures, quotations typically rule out these configurations.

- Restricted to attitude reports environments, with a preference for speech predicates; shifting occurs mostly under say and tell, while less languages allow shifting under think and know, possibly forming an implicative hierarchy (Deal 20172020, Sundaresan 2018, Wurmbrand 2018).
Indexical shift: overview

- Seems restricted to pro-forms: locational and temporal indexicals, like *here* and *now*, are less prone to shift than first and second person. When these can shift in a given language, then pronominal indexicals can usually be shifted as well (but data is lacking to establish it as a fact). (Sudo 2012, Shklovsky and Sudo 2014, Deal 2017, 2020, Hübl 2013)

- Are always interpreted *de se*, i.e. as unambiguously referring to the attitude holder (for 1st person) or addressee (for 2nd) from a first person perspective (Schlenker 1999, ?, 2018, Deal 2019, 2020)

- By and large an **optional phenomenon**, save for a few languages under certain verbs, like Uyghur (Sudo, 2012) or Navajo (Speas, 1999). Mostly conflicting data on this point.
Logophoric pronouns: overview

- Occur in attitude reports environments, with a preference for speech predicates;
- Log pronouns or Log-marking preferably encodes reference to the reported speaker, but encoding of the reported addressee also exists (Goemai, Pero: Nikitina 2012b) (Hellwig 2006, Nikitina 2012a)
- Unambiguously express de se attitudes (Adesola 2006 for Yoruba, Bimpeh 2019, Bimpeh et al. 2022 for Ewe, contra Pearson 2015)
The most widely adopted theory of IS is the **monster-based account** of Anand and Nevins (2004) and Anand (2006): attitude verbs that shift indexicals come with (various sorts of) semantic operators that shift (various parameters of) the context of utterance:

\[
\left[ \text{Monster} \phi \right]^{c,i} = \left[ \phi \right]^{i,i} = 1
\]

- The monster operator Rewrites the context coordinates of the embedded clause into the coordinates of the index - a sequence isomorphic to the context that contains (at least) an author and a world variable (more on this below).
This analysis straightforwardly captures the following restriction, observed in many languages:

(5) All SIs within a attitude-context domain must pick up reference from the same context (where an attitude-context domain is the scope of an attitude verb up to the scope of the next c-commanded attitude verb.)

[Adapted from Anand 2006: 100]

(6) Vizeri Rojda Bill-ra va Ke ez to-ra miradişa
Yesterday Rojda Bill-to say-PST that I you-to angry.be-PRES
✓ ‘Yesterday Rojda;i told Bill;j that he;i was mad at him;j’
✓ ‘Yesterday Rojda;i told Bill;j that I_speak was mad at you_addr’
✗ ‘Yesterday Rojda;i told Bill;j that I_speak was mad at him;j’
✗ ‘Yesterday Rojda;i told Bill;j that he;i was mad at you_addr’

(Anand and Nevins, 2004)
Logophoric pronouns: the theory

- Almost every theory of LPs in formal linguistics are syntactic (a notable exception being the recent theory of Bimpeh et al. (2022)): all assume that LPs are variables bound locally by a dedicated logophoric operator (Op-LOG), in the vein of Koopman and Sportiche (1989).

- Koopman and Sportiche’s work was aiming at accounting for the puzzling interaction that existed in Abe between LPs and a certain kind of complementizer, that would force co-reference between the LP and the matrix subject under attitudes:

(7) a. Yapi ka api ye  O / n ye sE
    Yapi tell api COMP 3SG/LOG is handsome
    ‘Yapi\textsubscript{i} told Api that he\textsubscript{i,j} is handsome.’

b. Yapi hE KO n ye sE
    Yapi say COMP LOG is handsome
    ‘Yapi\textsubscript{i} said that he\textsubscript{i,j} is handsome.’

c. Yapi hE KO O ye sE
    Yapi say COMP 3SG is handsome
    ‘Yapi\textsubscript{i} said that he\textsubscript{*i,j} is handsome.’

[Abe, Koopman and Sportiche 1989: (66)]
Anand (2006) (following Adesola (2006) and others) claims that the examples above support the following generalization: the logophoric form n can only be licensed when c-commanded by a null operator introduced at the left edge of the embedded clause (by Ko);

Whenever this structural relationship fails to obtain, or when the other pronoun O occupies the expected position of the strong pronoun, co-reference with the logophoric subject is impossible, giving rise to an ‘anti-logophoric effect’.

Elaborating on the fact that LPs in the appropriate configurations must be read de se, Anand (2006) concludes, following the analysis of restrictions on pronoun interpretation in dream reports from Percus and Sauerland 2003b, 2003a, that the correct generalization is the following:

**De re blocking effect**

(8) Every bound de se element must be de re free.

[Adapted from Anand 2006: 52]
However, both generalizations - the *de re* blocking effect (DRBE) for LPs and the *shift together* (ST) constraint for IS have both faced empirical challenges.

We will examine a few and argue that they are substantial enough to motivate a departure from both accounts.
A problem for IS-theories: shift together violations

- It has been demonstrated for various languages that shift together is too strong a constraint: it *might*, but *must not*, hold in many attested ‘shifty’ languages (but see Deal 2018 and Deal 2020: appendix A for dissenting views).

**Languages allowing ST violations (non-exhaustive)**

Contrary to what has been assumed, many LP-systems systematically allow for a syntactically unbound use of LPs. This is illustrated in (9) for Wan, where the logophoric pronoun appears in a matrix clause:

(9) bé è àà talí kəlé é di é lə ságlà á
then 3SG 3SG.ALN stranger man DEF cow DEF eat start that
gə! po á laa di é tə á gə! [...] la
here.is thing that 2SG.ALN cow DEF killed that here.is [...] 2SG
zə bò ba ta á
affair leave LOG.SG on NEG
“Then he (the hyena) started eating the cows of his (the hare’s) stranger. [And the hare said:] Here it is! Here’s what killed your cow! <Here’s what killed your cow! Look into the stomach! Let us set on fire some leaves of the mлаan tree. We will see who killed your cow.> You should not leave the blame on me.’ (lit., ‘You should not leave the affair on meLog.’) [Wan, Nikitina (2012a): (9)]
• Any binding configuration would fail to obtain here, since the LP *ba* appears free in an unembedded sentence, itself part of a narrative sequence consisting of six independent clauses.

• As Nikitina (2012a) notes, a further problem for binding analyses is that the sequence is not introduced by any verb of speaking, suggesting that the LP may not be selected by any speech predicate in the first place - a point to which we return below.
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4 Conclusion
• Observation: whenever indexical shift (IS) is obligatory, the use of a 3rd person form in speech reports triggers a disjointness inference:

(10) Kidane kɔ-xεyɔd dɛliu ?allo ?ilu
Kidane COMP-IMPF.leave PRF.want.3SG.M AUX.3SG.M say.3SG.M
‘Kidane; said that he* i/j wanted to leave’

Generalization

In IS-languages, embedded 3rd person proforms under verbs of speech cannot co-refer with the author of the report.
The same pattern is observed in logophoric languages (LP-languages):

(11) a. Kofi be yè dzo
    Kofi say LOG leave
    ‘Kofi; said that he\textsubscript{i}/*j left’

b. Kofi be e dzo
    Kofi say 3SG leave
    ‘Kofi\textsubscript{i} said that he\textsubscript{*i/j} left’

[Ewe, Clements 1975]

Generalization

In LP-languages, embedded 3rd person proforms under verbs of speech cannot co-refer with the author of the report.
More common properties: pronoun-agreement mismatches

- Both IS and LPs have the property of triggering **pronoun-agreement mismatches**, where the person features on the controller do not match those on the target:

(12) Anta inyemẹ yogo bojẹ-m gi
    Anta LOG tomorrow go.PROG-1SG say.PST
    ‘Anta; said that she; is going tomorrow.’
    [Adapted from Culy 1994b: (19a)]

(13) àbu papà tolim ẹbè àlózì iñèz morotó
    AUX father say COMP 1SG.go.NPST 3SG Moroto
    ‘Father; said that he; was going to Moroto.’
    [Karimojong, Curnow 2002: (18)]
More common properties: pronoun-agreement mismatches

A similar pattern can be found for IS-systems: Aqusha Dargwa, a language spoken in the Caucasus, can only shift 1st person agreement on the verb: in that language, 1st person agreement can be triggered by 1st and 3rd person controllers, (14):

(14) a. ʔlis hanbikib [nu q’an iub-ra ili]
    Ali think.PST.3SG 1SG late became.1 COMP
    ✓‘Ali₂ thought that he₁ was late’
    ✓‘Ali₂ thought that I was late’

    b. ʔlis hanbikib [nu q’an iub ili]
    Ali think.PST.3SG 1SG late became.3 COMP
    ✗‘Ali₂ thought that he₁ was late’
    ✓‘Ali₂ thought that I was late’

    (Aqusha Dargwa, adapted from Ganenkov 2021: (10-11))
(14) a. Ṣlis hanbikib [nu q’an iub-ra ili]
   Ali think.PST.3SG 1SG late became.1 COMP
   ✓‘Ali; thought that he; was late’
   ✓‘Ali; thought that I was late’

b. Ṣlis hanbikib [nu q’an iub ili]
   Ali think.PST.3SG 1SG late became.3 COMP
   ×‘Ali; thought that he; was late’
   ✓‘Ali; thought that I was late’
   (Aqusha Dargwa, adapted from Ganenkov 2021: (10-11))

- Aqusha Dargwa being an optional-shifting language, the sentence in (14a) is ambiguous between an indexical reading (where the embedded 1sg pronoun and agreement marker both refer to the actual speaker) and a shifted reading (where they refer to the author of the report, Ali), mirroring the Karimojong data.

- Crucially, sentence (14b), where the embedded subject is 1sg but the verb is inflected for third person, lacks the shifted interpretation.
More common properties: no locality effects

- IS do not have to be bound (in any sense) locally, and can refer to any context parameter that has been introduced in the matrix clause:

(15) Jon-i Seoul-eyse Bill-i yeki-eyse Mary-ka na-lul
    John-NOM Seoul-at Bill-NOM here-at Mary-NOM 1SG-ACC
    cohahanta-ko malhayssta-ko malhayssta
    like-COMP say-COMP say-PST
    ‘John\textsubscript{i} said in Seoul\textsubscript{m} that Bill\textsubscript{j} said here\textsubscript{m} that Mary likes me\textsubscript{i,j,Sp}\’
    (Korean, Park 2016: (53), cited in Deal (2018))
More common properties: no locality effects

- As a matter of fact, IS can also occur in unembedded environments, where a reported interpretation can be contextually inferred (as in a discourse sequence, for instance); this is observed in Kurmanji (Indo-Iranian), in which indexical shift is licensed across sentences:

(16) **Context:** You talked to Ehmet last night and he complained that he is ill. Later you say:

a. Mun dhuni Ehmet ra şor kür-un
   I.ERG yesterday Ehmet with word do.PST-PL
   ‘Yesterday I talked to Ehmet’

b. Ez e nexoş-um
   I.NOM COP ill-1SG
   ‘I_{Ehmet} am ill’

[Kurmanji (Indo-Iranian), Koev 2013: (46)]
More common properties: no locality effects

- Analogous case with Georgian, where a dedicated phrase-final marker o triggers agreement between a first-person marked verb form and the reported addressee, distinct from the utterance speaker:

(17) Context: Nino and Dato have been dating for a significant period of time, and Nino tells Gio she loves Dato. If I overhear their conversation, I can tell you:

Nino-m m-i-txr-a-o (rom) Dato
Nino.ERG 1-APPL-say-3SG.AOR-o COMP Dato.NOM
        m-i-qvar-s-o
        1-APPL-love-3SG.PRS-o

‘Nino told me$_{Gio≠Speaker}$ that I love Dato’

(Georgian, Thivierge 2019: (6))
Shared properties of both systems

<table>
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<tr>
<th>Properties</th>
<th>Shitable indexicals</th>
<th>Logophoric pronouns</th>
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<td>Licensed under attitudes</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Prefer speech predicates</td>
<td>✓</td>
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</tbody>
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- Existing theories cannot accommodate these similarities, which are empirically attested and quite robust cross-linguistically.
- In what follows, I will propose a system that is able to handle these, while preserving the signature behavior of both systems.
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The core of the proposal lies in the lexical entries assumed for the pronouns in the relevant systems.

On the grammatical side, we assume that pronouns are endowed with dedicated set of features, *phi-features*, those being *person*, *gender* and *number*.

These features are often taken to be universal across languages, playing a key role in predicting syntactic phenomena such as agreement (Corbett, 2006).

These features are in turn interpreted as presuppositions restricting the range of possible referents the pronouns denote (Sauerland 2008, 2009), Cooper 1979; Heim 2008).
The morphosemantics of person

- We take the features in (18) to be universally active across languages (where 1, 2, 3 stand for the respective persons); those features are given the partial semantics denotations in (19) (McGinnis 2005; Bobaljik 2008, Harbour 2016, Sauerland and Bobaljik 2022).

- Since 3rd person pronouns are devoid of person features, no entry is associated with them.

(18) a. 1: [AUTHOR]
b. 2: [PART(ICIPANT)]
c. 3: []

(19) a. \[ \begin{array}{c}
\begin{array}{c}
1 \\
\end{array}
\end{array}
\]^{g,c,i} = \lambda x : s(c) \sqsubseteq x.x
b. \[ \begin{array}{c}
\begin{array}{c}
2 \\
\end{array}
\end{array}
\]^{g,c,i} = \lambda x : s(c) \sqsubseteq x \lor a(c) \sqsubseteq x.x
• Features form a scale, based on semantic markedness Sauerland (2008); each feature in the scale is entailed by the features above it.

• 2nd person possesses a Participant feature with a disjunctive meaning: its referent can be either the speaker (or author) of the context of utterance c, or the addressee of such context. Last, the 1st person has an Author feature that will uniquely identify the speaker in c.

• Crucial for our purposes is that the meaning of the Author feature be a subset of the Participant feature; this asymmetry derives a non-monotonic scale on which a mechanism of strengthening takes place.
Heim (1991) proposes the pragmatic principle *Maximize Presupposition!* to account for the fact that cooperative speakers tend to prefer more informative presuppositional alternatives over their less-informative counterparts. This principle is stated in (20):

\[
\text{(20) Do not use } \phi \text{ if there is a } \psi \in \text{Alt}(\phi) \text{ s.t.} \\
a. \ p(\psi) \subset p(\phi), \text{ and} \\
b. \ [\phi] \equiv [\psi]
\]

*MP!* states that an utterance of \( \phi \) should be avoided if \( \phi \) has an alternative \( \psi \) whose presupposition is stronger than that of \( \phi \), and whose assertive strength (or informativity) are the same in the utterance context.
• Uttering $\phi$ under those conditions would make the hearer infer that the presuppositionally stronger $\psi$ was avoided on purpose, probably because the speaker takes $\psi$ to be false.

• Utterance of $\phi$ would give raise to an antipresupposition (Percus, 2006).

• If person features are presupposition triggers, we should expect to observe $MP!$-related effects in the pronominal domain as well.
Let us start with LP-systems. I assume that such systems make use of the following feature set:

(21) a. 1: [AUTHOR, ACTUAL]
    b. LOG: [AUTHOR]
    c. 2: [PART(ICIPIANT)]
    d. 3: []

(22) a. 1\[1\]^{g,c,i} = \lambda x : s(c) \sqsubseteq x.x
    b. LOG\[1\]^{g,c,i} = \lambda x : s(c) \sqsubseteq x \lor s(i) \sqsubseteq x.x
    c. 2\[1\]^{g,c,i} = \lambda x : s(c) \sqsubseteq x \lor s(i) \sqsubseteq x.x \lor a(c) \sqsubseteq x \lor a(i) \sqsubseteq x.x

LP systems differ with respect to English-like systems in that some pro-forms can inherit an Author feature only, while other forms are specified with an Author feature augmented with an Actual feature (cp. ?; Deal 2021).

This is just to say that logophors will be semantically treated as constants with a disjunctive meaning, being able to refer to either the reported or the actual author, while 1P pronouns will uniquely identify the actual speaker.
Note that we straightforwardly derive disjointness inferences for both systems under that account: the use of a 3rd person in speech reports environments will trigger the inference that its referent is neither the actual nor the reported speaker.

This also applies for obligatorily shifting languages, but not to optional shifting languages (cf. Anvari 2019 for Farsi, and Polinsky 2015 for Tsez), for reasons we hint at below.
If the system proposed above is correct, then a LOG form could not be used *in lieu* of a 1st person form when the actual and the reported speaker coincide, on pains of triggering a disjointness inference through \( MP! \).

This is indeed what we observe in LP-systems, where the following *1-LOG pattern is disallowed:

\[
\begin{align*}
\text{a. & mm kọ mm dọ &} \\
& 1\text{SG said} & 1\text{SG fell} \\
& \text{‘I said I fell’} \\
\text{b. & # mm kọ mm dọ-ẹ &} \\
& 1\text{SG said} & 1\text{SG fell-LOG} \\
& \text{‘I said I fell’ } [\text{Gokana, Hyman and Comrie 1981: (11)}]
\end{align*}
\]

A similar pattern can be found in Wan (Niger-Congo, Ivory Coast; Nikitina 2012a), Ewe (Pearson, 2015) and Danyi Ewe (Niger-Congo, Togo; O’Neill 2015), as well as Ibibio (Niger-Congo, Southern Nigeria; Newkirk 2019).
In some languages, logophoric contexts exhibit a special case of ‘person neutralization’ between third and second person antecedents, which are referred both to with LPs;

(24) a. ﬂô kô ﬂô dô
    2SG said 2SG fell
    ‘You said you fell.’

b. ﬂô kô ﬂô dô-ε
    2SG said 2SG fell-LOG
    ‘You said you fell.’

[Gokana, Hyman and Comrie 1981: (10)]

On the present account, it is expected that a sentence where the author of the embedded speech event is referred to using a 2nd person pronoun will be infelicitous, regardless of what his discourse status in the actual context is; a logophor should be used instead - which is just what we observe.

When the addressee of the utterance context and the reported speaker coincide, a 2nd person cannot be used on pains of triggering a disjointness inference, as in (24a).
The present system makes one further prediction: due to their relative underspecification compared to LPs, 2nd person pronouns should be able to refer to reported addressees, a prediction that seems borne out, cf. (25):

(25) è gé zò bé là bà póli
3SG said come then 2SG LOG.SG wash

‘She$_i$ said come and wash me$_i$.’ [Wan, Nikitina 2012a: (18)]

The data above is quite interesting when compared to IS-systems, since the second person in (25) is ‘shifty’ in a similar sense.
Typological variation through re-ranking of features

- However, the proposed featural set does not allow us to derive systems like that of Ewe, which does not allow for reported addressees to be referred to with the second person (Clements 1975; Nikitina 2012b).

- In (26), reported addressees are referred to with 3rd, not 2nd, person pronouns:

  (26) Kofi gblo na wo be yè-a-dyi ga-a na wo
  Kofi speak to 3PL COMP LOG-T-seek money-D for 3PL
  ‘Kofi, said to them, that he would seek the money for them.’
  [Ewe, Clements 1975: (152)]

- In our system, 2nd person should be compatible with encoding of the reported addressees.
Typological variation through re-ranking of features

- We should therefore allow the Actual feature to be part of the featural makeup of 2nd person elements, enforcing reference to actual addressees only.

(27) a. 1: [Author, Actual]
b. 2: [Participant, Actual]c. Log: [Author]d. 3: []

(28) a. $[1]^{g,c,i} = \lambda x : s(c) \sqsubseteq x.x$
b. $[2]^{g,c,i} = \lambda x : s(c) \sqsubseteq \lor a(c) \sqsubseteq x.x$
c. $\text{Log}^{g,c,i} = \lambda x : s(c) \sqsubseteq x \lor s(i) \sqsubseteq x.x$

- In that system, the entailment relation holding between all three features is broken: 1 competes with Log and 2nd, but 2nd and Log do not - They are not formal alternatives of each other (in the sense of Katzir 2007).
Typological variation through re-ranking of features

- This predicts that no inference regarding the referent of 2nd vs that of LOG can be predicted: using a 2nd person form in embedded contexts should be compatible with its referent being the reported author as well.

(29) You$_i$ said to Kofi$_j$ that 2$_i$ liked him$_j$ [pseudo-Ewe]

- I don’t know whether this prediction is borne out.
More variation

- There are languages with LOG addressees, such as Goemai and Mupun (West Chadic, Nigeria; Hellwig 2006, Frajzyngier 1993).
- There are also languages with LOG addressees, but no LOG authors, such as Pero (West Chadic; Frajzyngier 1989).
- This suggests that the ACTUAL feature can compose rather freely in the system:

\[
\begin{align*}
&\text{LP-system with Log addressees (Goemai, Mupun):} \\
&(30) \text{a. } 1: [\text{AUTHOR, ACTUAL}] \\
&\quad b. 2: [\text{PART, ACTUAL}] \\
&\quad c. \text{LOG - AUTH: [AUTHOR]} \\
&\quad d. \text{LOG - ADDR: [PART]} \\
&\quad e. 3: []
\end{align*}
\]

\[
\begin{align*}
&\text{LP-system with Log addressees but no Log authors (Pero):} \\
&(31) \text{a. } 1: [\text{AUTHOR, ACTUAL}] \\
&\quad b. 2: [\text{PART, ACTUAL}] \\
&\quad c. \text{LOG - ADDR: [PART]} \\
&\quad d. 3: []
\end{align*}
\]
Recall that, in most IS-systems, the shifted reading is **optional**; an indexical parse is always possible, leading to massive ambiguity in speech reports.

I would like to propose that this is the result of featural underspecification: 1st person pronouns of IS-systems lack the [Actual] feature that non-IS systems (like English) have.

(32) a. 1: [AUTHOR]
b. 2: [PART(ICIPANT)]
c. 3: []

(33) a. \[1\]^{g,c,i} = \lambda x : s(c) \sqsubseteq x \lor s(i) \sqsubseteq x.x
b. \[2\]^{g,c,i} = \lambda x : s(c) \sqsubseteq x \lor s(i) \sqsubseteq x.x \lor a(c) \sqsubseteq x \lor a(i) \sqsubseteq x.x
As emphasized by Deal (2020) (73), no IS-system seems to allow 2nd person shifting while disallowing shifty 1st person, while the reverse pattern (shifty1st with unshifty 2nd person) seems to be attested.

**Unattested featural system:**

(34) a. 1: [AUTHOR, ACTUAL]
   b. 2: [PART(icipant)]
   c. 3: []

Functionally, such as system would be highly sub-optimal, since in reporting what someone said, we are more likely to mention the reporter than his or her addressee (cf. the scarcity of systems with LOG addressees).
A possible explanation of this fact can be provided if we assume that LP- and IS-systems are functionally related.

The prohibited pattern would amount to a LP-system with a ‘logophor gap’, allowing cross-referencing of both actual and reported addressees with the 2nd person, but only indexical reference to the actual speaker with 1st - not singling out reported authors.

Unattested featural system:

(35) a. 1: [AUTHOR, ACTUAL]
   b. ?
   c. 2: [PART(ICIPANT)]
   d. 3: []
The proposal is able to handle cases where ST systematically fail to hold.

I propose a pragmatic principle (which could be further grounded in more general principles of anaphora resolution in language, cp. Smyth 1994, Kehler and Kehler 2002) that speakers prefer to interpret pronouns relative to an homogeneous context/index whenever possible:

**Context homogeneity principle (CHP)**

Whenever possible, index pronouns with referents within the same context/index tuple.
Prediction 1: no ST/CHP when no referents available

In Turkish, ST fails for second person when there is no referent accessible for indexing within the same context; as a consequence, the 2nd person is interpreted indexically:

(36) Tunç pro sen-i nere-ye götür-eceğ-im de-miş?
    Tunç pro 2SG-ACC where-DAT take-FUT-1SG say-DUB-3SG
    ‘Where did Tunç say that he would take you?’

[Turkish, Özyıldız (2012): (22)]
However, if such an addressee is explicitly mentioned, the shifted reading becomes available:

(37) Tunç Ayşeye pro sen-i nere-ye götür-eceğ-im de-miş?
Tunç Ayşedat pro 2SG-ACC take-FUT-1SG say-DUB-3SG
‘Where did Tunçi say to Ayşej that hei / I would take herj / you?’

[Turkish, Özyıldız (2012): (23)]

This is fully expected under the present account, since the disjunctive semantics of the 2nd person make it compatible with both readings. The CHP requires that referents are provided for indexing to proceed; if there are none, indexicals will retrieve their reference from different contexts.
The systems correctly predicts agreement mismatches, when the referents are retrieved from different contexts: assuming that agreement is meaningful, the unmarked verbal form will be indexed to the overall speaker, and not to the closest attitude holder:

(Aqusha Dargwa, adapted from Ganenkov 2021: (10-11))
This is a variant of the *3/LOG pattern above, where the use of a third person form where a SI/LP is expected triggers disjoint reference: here, disjointness is constrained (3rd person agreement cannot be ‘elsewhere’ and refer to any individual) but can refer to the speaker.

Similar data are observed in Farsi (Anvari, 2019), Tsez (Polinsky, 2015) and Kazan Tatar (p.f.)

Although this must be backed up by a theory of agreement, the way it intuitively works is clear: person indexicals in Aqusha Dargwa and related languages can control two types of agreement, depending on which context they are evaluated against - a syntactic reflex of their disjunctive featural specifications.
1. Introduction

2. More common properties

3. The proposal: lexical (under)specification and competition

4. Conclusion
I have argued that LP and IS systems are quite alike, the former having grammaticalized an [Actual] feature that IS-systems lack.

Assuming a unified account of IS and LP systems that relies on the combinatorics of person features allow to derive attested common properties of both systems, while preserving their empirical peculiarities.

A central issue that I have not engaged into here is the sensitivity displayed by both categories to the semantics of the attitude they are embedded in - their common preference for speech reports. This is a very complex issue, very likely to rely on syntactic factors such as clause size and selection (Wurmbrand 2018; Lohninger and Wurmbrand 2020), which attest the plurality of levels needed to be looked at in the study of speech reports.
Thank You!

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References IV


