Split indexicality

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Workshop *Varieties of perspective shift*
École Normale Supérieure, June 6-7, 2024

Outline

Indexicality

- Central question in philosophy and semantics: **how do indexicals acquire their meaning?**
- Favorite theory: indexicals are *directly referential* (Kaplan, 1977)
- Act as 'pointers' to various elements of the context of utterance (speaker, addressee, location, time)

(1) a. $[\![\text{I}]\!]^c = \text{the speaker of } c$
b. $[\![\text{you}]\!]^c = \text{the addressee of } c$
c. $[\![\text{here}]\!]^c = \text{the location of } c$
d. $[\![\text{now}]\!]^c = \text{the time of } c$

- In what follows, we will restrict our attention on indexical **pronouns**, i.e. *I* and *you*.

I/you vs he/she

- Favorite theory: indexicals pronouns such as *I* and *you* are **radically different** from other pronouns such as *he*, *she*, *it*.
- 3rd person pronouns can have indexical uses, as in (2a), but also so-called **bound** uses, (2b):

(2) a. *(Pointing to a man)*
He seems happy!
b. Every PhD student loves his committee.
☞ For every student x, x loves x's own committee.

- However, indexicals cannot be bound:

(3) a. *David:* I am happy!
b. Every PhD student loves my committee.
☞ For every student x, x loves **David**'s committee.

- Conclusion: **meaning of indexicals cannot depend on some other element of the sentence.**

Indexicals in reported discourse

- Indexicals always refer to the **actual utterance context**.
- Even if other contexts are explicitly introduced, indexicals still want to refer back to the utterance context.

(4)
a. *Bertrand:* I am happy. $[\![\text{I}]\!]^c$ = Bertrand
b. *Tom:* Bertrand said that I am happy. $[\![\text{I}]\!]^c$ = Tom
c. *Steve:* Tom said that Bertrand said that I am happy. $[\![\text{I}]\!]^c$ = Steve
d. ...

Indexicality: summary

- Overall conclusion: indexicals are **words without content** - their meaning is always a placeholder for some element in the utterance context.
- Indexicality is an **inherent property** of a definite set of words - these words which meaning is some component of the utterance context.
- I will challenge both of this assumptions and argue that **indexicality is not an inherent property of first and second person elements**.

Main claims

- Indexicality **is not** an inherent property of first and second person forms, although it often composes with them.
- Indexicality is a **feature** that can combine with person features, but need not.

Pronouns and features

- Favorite theory: indexicals are a **different kind of pronouns**.

(5)

	indexical	**bound**
1st	✓	?
2nd	✓	?
3rd	✓	✓

- However, a look at other languages tells us that **pronominal systems are rather uniform** in many respects.

Pronouns and features

- All pronouns come equipped with atomic features, called ϕ-*features*, that we find on every pronominal system.
- ϕ-features typically include **person**, **gender** and **number**.

ϕ-features

(6)

Person	Gender	Number
1st	MASC	SG
2nd	FEM	PL
3rd	NEUT	

- ϕ-features can appear on all three person forms, and compose rather freely in the paradigm.
- Features are also uniform with respect to **meaning**: they are interpreted as **presuppositions** restricting the range of possible referents the pronouns denote (Sauerland 2008, 2009, Cooper 1979; Heim 2008).

Looking at the world's languages

- For instance, in Mandarin Chinese (Sino-Tibetan), the feature **number** is expressed on both pronouns and nouns in all persons:

(7)

	SG	PL
[1]	*wo*	*wo-**men***
[2]	*ni*	*ni-**men***
[3]	*ta*	*ta-**men***
noun	*xuésheng* 'student'	*xuésheng-**men*** 'students'

[Bobaljik 2008: (8)]

- The feature is clearly expressed by the morpheme ***men***, which is 'stacked' on top of all forms in the paradigm.
- This is evidence that pronouns are not atomic: **features are**.

Looking at the world's languages

- In Ilocano (Austronesian, Philippines), the feature **number** is augmented with a dual category:

(8)

Person	SG	DUAL	PL
[1] inclusive	-	*ta*	*tayo*
[1] exclusive	co	-	mi
[2]	*mo*	-	yo
[3]	*na*	-	*da*

[Bobaljik 2008: (12)]

- Note that the addition of a **dual** feature causes the paradigm to 'split', **allowing Ilocano to have four first person forms**.
- This is a case of 'split-person'.

Looking at the world's languages

- **Observation:** Pronouns are not atomic: there can be multiple persons with different meanings in a given paradigm.
- **Question:** could we find languages that have multiple first and second person **that are not indexical?**

Looking at the world's languages

- To put it differently: **is there any available evidence that indexicality behaves like a feature in pronominal paradigms**, attaching to first or second person forms, but not others?
- If so, **we should be able to find cases where indexicality causes the person paradigm to split**, just like number does in the Ilocano example.

The main idea

- The answer that I will provide here is **positive**: there are languages in which one can find **non-indexical first and second person pronouns**.
- This is evidence that **indexicality behaves very much like a feature on its own, distinct from [PERSON]**.

Main thesis

Indexicality is not a primitive category of natural languages, but expressed through a dedicated feature, distinct from [PERSON]: the feature **[ACTUAL]**.

- Important consequences for our understanding of pronouns cross-linguistically, but also for our semantic theorizing about indexicality.

Outline

Methodological remarks

- The data on which this work is based has two different sources:

Secondhand data, mostly from typological (descriptive) as well as theoretical work.

Felicity judgments through elicitation sessions with a native speaker of the language Tigrinya (Semitic; Erithrea).

- Special thanks to **Tekleweini Weldemhret**, whose patience, interest in languages and mastery of French allowed me to collect the data necessary for this work.

The phenomena at stake

- Two phenomena will be of interest for our purposes: **shifted indexicals (SIs)** and **logophoric pronouns (LPs)**.
- These phenomena are observed in a wide variety of languages, pertaining to very different families, sometimes not genetically related.
- Both of these phenomena allow us to take a different perspective on first and second person pronouns, in that they allow **indexicals to be used as anaphors in reported discourse**.

Shifted indexicals

- Consider the following sentence in Tigrinya (Semitic; Eritrea):

(9) Segen ʔanɛ fɛtɛna tɛawitʔ-ə (ʔɨj-ə) ʔɨl-a
Segen **1SG.NOM** exam pass.PST.**1SG** COP.PRS-**1SG** say.PST-3SG.F
✓ 'Segen$_i$ said that she$_i$ passed the exam.'
✓ 'Segen$_i$ said that I passed the exam.'
[Tigrinya (Semitic), personal fieldwork]

- In Tigrinya, the first person pronoun and first person marking can be used to refer to the speaker of the **reported discourse context**, not just the utterance context.

Shifted indexicals

Language	Family	1 shifts	2 shifts	here shifts	now shifts	Source
Aqusha Dargwa	Northeast Caucasian	✓	✓	?	?	Ganenkov (2021)
Amharic	Semitic	✓	✓	?	?	Schlenker 1999, 2003
Buryat	Mongolic	✓	✓	?	?	Wurmbrand (2018), Bondarenko (2022)
Poshkart Chuvash	Turkic	agr	✗	✗	✗	Knyazev (2022)
Farsi	Iranian	✓	✓	✓	✓	Anvari (2020)
Japanese	Japonic	✓	✓	?	?	Sudo (2012)
Korean	Koreanic	✓	✓	✓	✓	Park (2014)
Kurmanji	Iranian	✓	✓	?	?	Koev (2013)
Matses	Panoan	✓	✓	✓	✓	Ludwig et al. (2010), Munro et al. (2012)
Navajo	Athabaskan	✓	✓	✗	✗	Speas (1999)
Nez Perce	Sahaptian	✓	✓	✓	✓	Deal 2013, 2017, 2020
Northern Tabasaran	Northeast Caucasian	✓	✓	?	?	Ganenkov and Bogomolova (2021)
Slave	Athabaskan	✓	✓	?	?	Rice (1986)
Tamil	Dravidian	agr	?	?	?	Sundaresan 2011, 2012
Mishar Tatar	Turkic	agr	agr	?	?	Podobryaev (2014)
Kazan Tatar	Turkic	✓	✓	?	?	Personal fieldwork, Stockwell (2018)
Telugu	Dravidian	agr	?	?	?	Messick 2017, 2022, 2023
Ethiopia Tigrinya	Semitic	✓	✓	?	?	Spadine (2020)
Eritrea Tigrinya	Semitic	✓	✓	?	?	Personal fieldwork
Turkish	Turkic	✓/agr	✓	✓	✓	Şener and Şener (2011), Özyıldız (2012), Akkuş (2019), Oguz et al. (2020), Erdogan (2022)
Tsez	Northeast Caucasian	✓	✓	✗	✗	Polinsky (2015)
Tsova-Tush	Northeast Caucasian	✓	✓	✓	✓	Hauk (2020)
Uyghur	Turkic	✓	✓	✗	✗	Sudo (2012), Shklovsky and Sudo (2014)
Zazaki	Iranian	✓	✓	✓	✓	Anand and Nevins (2004), Anand (2006)

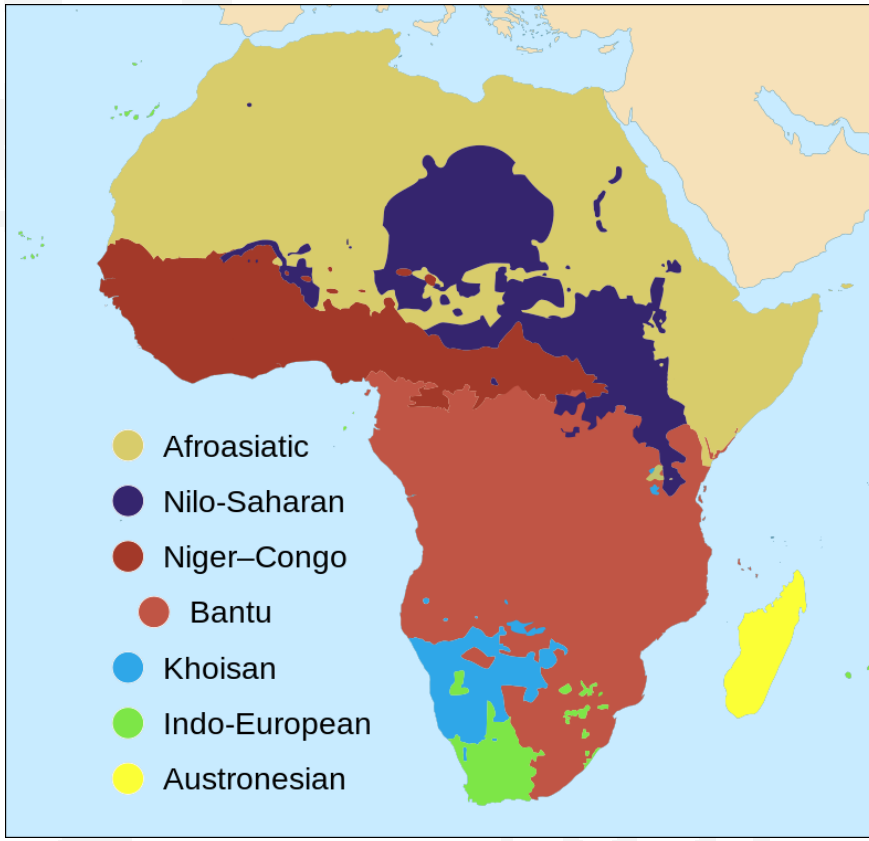
Table: Shifty indexical classes across languages.

Indexical shift: properties

- **Semantically restricted to attitude reports environments**, with a preference for speech predicates (Sundaresan 2018, Wurmbrand 2018, Deal 2020).
- **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, 2003, 2018, Deal 2019, 2020)

Logophoric pronouns

- In a wide variety of African languages (mostly Niger-Congo, Afroasiatic, Saharan and Nilotic, see Culy 1994), one finds pronouns that fulfill precisely this function, i.e. referring to reported speakers:



Logophoric pronouns

- Logophoric pronouns (LPs) can refer to reported speakers, as in (10), or reported addressees, as in (11):

(10) Oumar Anta **inyemɛn** waa be gi
Oumar Anta **LOG.ACC** seen AUX said
'Oumar$_i$ said that Anta had seen him$_i$'
[Donno Sɔ(Niger-Congo), Culy 1994: (1)]

(11) ca peemu ta kayu laa mu mijiba
say.PST LOG.2SG FUT drive away man DEM stranger
'[He] said that he$_{a(i)}$ is going to drive the stranger away.'
(lit. '[He] said that you$_{a(i)}$ are going to drive the stranger away.')
[Pero (Afro-Asiatic), Frajzyngier 1985: (23b)]

Logophoric pronouns: properties

- Occur in attitude reports environments, with a preference for speech predicates (Culy, 1994);
- Unambiguously express *de se* attitudes (Adesola 2006 for Yoruba, Bimpeh 2019, Bimpeh et al. 2022 for Ewe)

Disjointness inferences with shifted indexicals

- Using a third person *in lieu* of a first person in these sentences triggers the following inference: namely, that the referent intended by the pronoun is another, salient individual - **but not the author of the report**.

(9) Kidane kə-xɛyəd dɛliɛ ʔallɛxu ʔiɬlu
Kidane COMP-IMPF.leave PRF.want.1SG AUX.1SG say.3SG.M
'Kidane$_i$ said that he$_i$ wanted to leave'

(12) Kidane kə-xɛyəd dɛliu ʔallo ʔiɬlu
Kidane COMP-IMPF.leave PRF.want.3SG.M AUX.3SG.M say.3SG.M
'Kidane$_i$ said that he$_{*i/j}$ wanted to leave'

[Tigrinya, personal fieldwork]

Generalization

In languages with shifted indexicals (SIs), 3rd person pronouns in reported speech cannot co-refer with the author of the report.

Disjointness inferences with Logophoric pronouns

- In a LP-language, using a 3rd person when a LOG is expected triggers the same kind of inference as in Tigrinya:

(13) a. Nnsɨni dzɛ enyɨa **é** bvʉ nù
Nsem say COMP **LOG** fall FOC
'Nsen$_i$ said that she$_i$ fell'

b. Nnsɨni dzɛ enyɨa ù bvʉ nù
Nsem say COMP 3SG fall FOC
'Nsen$_i$ said that she$_{*i/j}$ fell'

[Aghem (Niger-Congo), Butler 2009: (10-11)]

Generalization

In languages with logophoric pronouns (LP-languages), 3rd person pronouns in reported speech cannot co-refer with the author of the report.

Shared properties of both systems

Properties	Shitable indexicals	Logophoric pronouns
Licensed under attitudes	✓	✓
Preference for speech predicates	✓	✓
de se readings	✓	✓
Disjointness inferences	✓	✓

Outline

The morphosemantics of person

- I take pronouns to be complex entities consisting of the following person features (McGinnis 2005; Sauerland and Bobaljik 2022 i.a.)

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

(15) a. $[\![\text{AUTHOR}]\!]^{g,c,i} = \lambda x : s(c) \sqsubseteq x.x$
b. $[\![\text{PART}]\!]^{g,c,i} = \lambda x : s(c) \sqsubseteq x \vee a(c) \sqsubseteq x.x$

- Since 3rd person pronouns are devoid of person features, no entry is associated with them.
- Crucial for our purposes is that the meaning of the AUTHOR feature be a subset of the PART feature.
- This asymmetry derives a non-monotonic scale on which a mechanism of strengthening takes place: Heim's 1991 *Maximize Presupposition!* principle.

Maximize Presupposition! and person features

- Cooperative speakers tend to prefer more informative presuppositional alternatives over their less-informative counterparts.

Maximize Presupposition!

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

- Utterance of ϕ should be avoided if ϕ has an alternative ψ whose presupposition is stronger than that of ϕ, and whose assertive strength (or informativity) are the same in the utterance context.

Maximize Presupposition! and person features

- Uttering ϕ under those conditions would make the hearer infer that the presuppositionally stronger ψ was avoided on purpose, probably because the speaker takes ψ to be false.
- Utterance of ϕ 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.

The interpretation of person features

- Person features, like other ps triggers, give rise to antipresuppositions (Marty 2017, 2018):

(17) *Context: John is speaking to Mary.*
   a. *John:* #John is happy.
   b. *John:* I am happy.

(18) a. *John:* #Mary is happy.
   b. *John:* You are happy. (adapted from Schlenker 2005: (18))

Back to indexicality

- Consider a language such as English. I propose that English makes use of the following person inventory:

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

☞ Note that both 1st and 2nd person pronouns are specified with an **actual** feature!

Shifting and binding

- Schlenker (2003), 2011: attitude verbs in languages making use of SIs and LPs can bind context pronouns associated with pronominal elements in the clause they combine with.
- Pronominal indices combine with a context pronoun c of type k which, in turn, combine with any of the person features exposed in (14).
- Pronominal indices are of type $\langle k, e \rangle$, that is, individual concepts of sorts (Von Fintel and Heim, 2011).

(20) a. $[\![\text{say } c_i\ \phi]\!]^g = \lambda x.\forall c' \in \text{SAY}(x, g(i)) : [\![\phi]\!]^g(c') = 1$

b. $[\![\text{Kidane says that I } c_i \text{ want to leave}]\!]^{g,c*,i} =$
1 iff $\forall c' \in \text{SAY}(K, i)$, $s(c')$ is a hero in c'.

The [ACTUAL] feature

- The innovation consists in introducing the [ACTUAL] feature, which could be described as a genuinely indexical feature: it takes the output of a given person feature ϕ given any context of utterance c and specifies that this context has to be the actual context of utterance c^*:

The ACTUAL feature

(21) $[\![\text{ACTUAL}]\!]^{g,c^*,i} = \lambda c_i : c_i = c^*.c_i$

- In English, first and second person pronouns are non-shiftable: they always denote participants of the actual context of utterance.
- But this is not the case in every person system across languages!

Featural inventories: English

- English featural inventory:

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

- English pronominal structure:

(22) a. I_5 = [[[[pro_5 [c_i]] PART] AUTHOR] ACTUAL]
b. you$_7$ = [[[pro_7 [c_i]] PART] ACTUAL]
c. it$_2$ = [[pro_2 [c_i]]

- Entry for the English first person:

(23) $I_5 \in dom([\![\cdot]\!]^{g,c^*,i})$ iff $\left\{ \begin{array}{c} 5 \in dom(g) \\ s(c^*) \sqsubseteq g(5)(c^*) \end{array} \right\}$. If so, then $[\![I_5]\!]^{g,c^*,i} = g(5)(c^*)$.

Featural inventories: logophoric systems

- Consider first a logophoric language such as Wan, that has a speaker logophor.
- I assume that Wan makes use of the following feature set:

(24) **Featural system of languages with speaker logophors (e.g. Wan, Aghem)**
  a. 1: [PART, AUTHOR, ACTUAL]
  b. LOG: [PART, AUTHOR]
  c. 2: [PART]
  d. 3: [ ]

(25) a. I_5 = [[[[pro_5 c^*] PART] AUTHOR] ACTUAL]
  b. LOG_4 = [[[pro_4 c_i] PART] AUTHOR]
  c. you_2 = [[pro_2 c_i] PART]
  d. it_7 = pro_7

Featural inventories: logophoric systems

- The speaker logophor in Wan has the following denotation:

(26) $\textsc{log}_4 \in dom([\![\cdot]\!]^{g,c^*,i})$ iff $\left\{ \begin{array}{c} 4 \in dom(g) \\ s(c_i) \sqsubseteq g(4)(g(c_i)) \end{array} \right\}$. If so, then $[\![\textsc{log}_4]\!]^{g,c^*,i} = g(4)(g(c_i))$.

- In words, the presupposition of LOG is satisfied iff the assignment g(4) maps to the speaker of the reported context c_i.

Featural inventories: logophoric systems

- Compare the entry above to the entry of the first person indexical in Wan:

(27) $\mathrm{I}_5 \in dom([\![\cdot]\!]^{g,c^*,i})$ iff $\left\{ \begin{array}{c} 5 \in dom(g) \\ s(c^*) \sqsubseteq g(5)(c^*) \end{array} \right\}$. If so, then $[\![\mathrm{I}_5]\!]^{g,c^*,i} = g(5)(c^*)$.

- Here, the presupposition of *I* is satisfied only if the pronoun refers to the speaker of the actual context, just as in English; it cannot be used to refer to some other speaker.
- This is so because the first person in Wan, but not the logophor, bears an actual feature.

Featural inventories: Shiftable indexicals-systems

- An indexical-shifting language will be a language in which **neither first and second person forms are featurally specified with an actual feature**.
- This allows their first and second person pronouns to pick out their referents within any contexts.
- In other words, first and second person pronouns **behave as logophors in these languages**.

(28) **Featural system of languages with SIs** (Tigrinya, Uyghur)
  a. 1: [PART, AUTHOR]
  b. 2: [PART]
  c. 3: [ ]

(29) a. $1\text{SG}_4 = [\ [\ [\ pro_4\ c_i\ ]\ \text{PART}\ ]\ \text{AUTHOR}\ ]$
  b. $2\text{SG}_2 = [\ [\ pro_2\ c_i\ ]\ \text{PART}\ ]$
  c. $3\text{SG}_7 = pro_7$

☞ No actual feature!

- Theory predicts **global optionality in shifting** (just like in Schlenker 2003), since every person-specified element will always be able to obtain its reference via the matrix context pronoun, or the embedded one.
- This is a welcome result, considering that indexical shift is by and large an optional phenomenon (see Sundaresan 2018, Deal 2020).

Back to disjointness inferences

- Spelling out the actual feature on two different lexical items within the pronominal system allows to straightforwardly derive the disjointness inferences observed above.
- Consider the following hypothetical Wan sentence:

(30) a. $^{\#}\text{Nsen}_5$ said that 3SG_5 fell.
b. Nsen_5 said that LOG_5 fell.

(31) a. **Antipresupposition of (30a) (with epistemic step):**
$\rightsquigarrow CG\neg[\forall c' \in \text{SAY}(N, w)[s(c^*) \sqsubseteq g(5)(g(c')) \wedge a(c^*) \sqsubseteq g(5)(g(c')) \wedge s(c') \sqsubseteq g(5)(g(c')) \wedge a(c') \sqsubseteq g(5)(g(c'))]]$.
b. $\rightsquigarrow$ it is common ground that $g(5)(g(c'))$ is not a participant of either the actual context nor the reported context.
c. $\rightsquigarrow$ Referents of *Nsen* and 3SG are distinct.

- (30a) is bad because the meaning of 3rd person will clash with the intended meaning of the sentence in that context.
- Here, a logophoric pronoun is expected.

Back to disjointness inferences

- The same goes for SI-systems, in which 1st person forms can be used in embedded contexts and therefore, compete with 3rd person:
- Consider the following hypothetical Tigrinya sentence:

(32) a. #Kidane$_3$ said that 3SG$_3$ wanted to leave.
b. Kidane$_3$ said that 1SG$_3$ fell.

(33) a. **Antipresupposition of (32a) (with epistemic step):**
$\rightsquigarrow CG\neg[\forall c' \in \text{SAY}(N, w)[s(c^*) \sqsubseteq g(3)(g(c')) \wedge a(c^*) \sqsubseteq g(3)(g(c')) \wedge s(c') \sqsubseteq g(3)(g(c')) \wedge a(c') \sqsubseteq g(3)(g(c'))]]$.
b. $\rightsquigarrow$ it is common ground that $g(3)(g(c'))$ is not a participant of either the actual context nor the reported context.
c. $\rightsquigarrow$ Referents of *Kidane* and 3SG are distinct.

- Again, (32a) is bad because the meaning of 3rd person will clash with the intended meaning of the sentence in that context: the first person is expected in that case.

Outline

Prediction: *1-LOG patterns

- 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 via *MP!*.
- This is what we observe in a large number of LP-systems, in which the following *1-LOG pattern is disallowed:

(34) a. mm kɔ mm dɔ
1SG said 1SG fell
'I_i said I_i fell'

b. #mm kɔ mm dɔ-ɛ
1SG said 1SG fell-LOG
'I_i said I_i fell'

[Gokana, Hyman and Comrie 1981: (11)]

- Languages in which this pattern is attested are Wan (Niger-Congo, Ivory Coast; Nikitina 2012a), Ewe (Pearson, 2015) and Danyi Ewe (Niger-Congo, Togo; O'Neill 2015), and Ibibio (Niger-Congo, Southern Nigeria; Newkirk 2019), among many others.

Prediction: *1-LOG patterns

- Use of 1st over LOG is expected in that case, for the presupposition associated with 1st is both stronger than that of LOG and is satisfied in the present context (speakers of both actual and reported contexts coincide):

(35) $^{\#}\text{I}_7$ know that LOG_7 love Ama.

(36) **Antipresupposition of (35) (with epistemic step):**
a. $\rightsquigarrow^{\#} CG \neg[\forall c' \in \text{SAY}(s(c^*), w)[s(c^*) \sqsubseteq g(7)(g(c'))]]$.
b. $\rightsquigarrow^{\#}$ It is common ground that $g(7)(g(c'))$ is not the actual speaker.

Prediction: second person antecedents

- In many LP-languages, the antecedents of logophors can be third or second person pronouns (1st person are excluded by the *1-LOG pattern outlined above);

(37) a. #oò kɔ oò dɔ
2SG said 2SG fell
'You$_i$ said you$_i$ fell.'

b. oò kɔ oò dɔ-ɛ
2SG said 2SG fell-LOG
'You$_i$ said you$_i$ fell.'

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

Prediction: second person antecedents

- 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**, because its referent is the speaker of the reported context - 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 (37a).

(38) a. $^{\#}$You$_1$ know that 2SG$_1$ love Ama.
b. You$_1$ know that LOG$_1$ love Ama.

(39) **Antipresupposition of (38a) (with epistemic step):**
a. $\rightsquigarrow^{\#} CG \neg[\forall c' \in \text{SAY}(a(c^*), w)[s(c^*) \sqsubseteq g(1)(g(c')) \wedge s(c') \sqsubseteq g(1)(g(c'))]]$.
b. $\rightsquigarrow^{\#} g(1)(g(c'))$ is not the actual speaker nor the reported speaker.

Prediction: 'shifty' uses of second person

- 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 in some languages such as Wan:

(40) è gé zò ɓé **là** **ɓà** pólì
3SG said come then 2SG LOG.SG wash
'She$_i$ said come and wash me$_i$.' [Wan, Nikitina 2012a: (18)]

- This is as expected, since in the Wan pronominal system, 2nd person is not indexical, bearing no actual feature:

(24) **Featural system of languages with speaker logophors**
a. 1: [PART, AUTHOR, ACTUAL]
b. LOG: [PART, AUTHOR]
c. 2: [PART] ☞ no ACTUAL feature!
d. 3: [ ]

Typological variation through re-ranking of features

- The data above is quite interesting when compared to IS-systems, since the second person in (40) is 'shifty' in a similar sense.
- 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 (41), reported addressees are referred to with 3rd, not 2nd, person pronouns:

(41) 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$_i$ said to them$_j$ that he$_i$ would seek the money for them$_j$.'
[Ewe, Clements 1975: (152)]

☞ No inference that the referents of *wo* are not addressees in the reported context!

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 in Ewe-like systems, enforcing reference to actual addressees only.

(42) a. 1: [PART, AUTHOR, ACTUAL]
b. 2: [PART, ACTUAL] ☞ ACTUAL feature re-ranks 2nd person!
c. LOG: [PART, AUTHOR]
d. 3: []

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).
- These languages are typoligically scarce, however (Nikitina, 2012a), possibly suggesting an implicational hierarchy (maybe on a functional basis?), just like what is observed e.g. for word order across languages.
- This suggests that the actual feature can compose rather freely in the system, but that pragmatic factors constrain such composition:

LP-system with Log addressees (Goemai, Mupun):

(43) a. 1: [PART, AUTHOR, ACTUAL]
b. 2: [PART, ACTUAL]
c. LOG - AUTH: [PART, AUTHOR]
d. LOG - ADDR: [PART]
e. 3: []

LP-system with Log addressees but no Log authors (Pero):

(44) a. 1: [PART, AUTHOR, ACTUAL]
b. 2: [PART, ACTUAL]
c. LOG - ADDR: [PART]
d. 3: []

More variation

- An analogous tendency is observed in IS-systems, in which there is a tendency for 2nd person to be less 'shifty' than first person.
- As emphasized by Deal (2020), no IS-system seems to allow 2nd person shifting while disallowing 1st person shifting, while the reverse pattern (shifty1st with unshifty 2nd person) seems to be attested.

An unattested featural system:

(45) a. 1: [PART, AUTHOR, ACTUAL] ☞ refers to the current speaker only
b. 2: [PART] ☞ can refer to both current or reported participants
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).

Take home message

While the [ACTUAL] feature is a linguistic primitive available in any pronominal system, its composition with other person features seem to be constrained by pragmatic factors.

Outline

Conclusions

- Looking at speech reports environments, I have argued that LP and IS systems are quite alike, the former having grammaticalized the feature [ACTUAL] that IS-systems lack.
- English and Romance languages, by contrast, have fully grammaticalized [ACTUAL] on both persons.
- The present analysis **suggests a new picture of indexicality**.

Conclusions

- Indexicality in the sense of Kaplan (1977) **does not seem to be an intrinsic property of discrete lexical forms**, which would be inseparable of first and second person elements across languages.
- Rather, **it seems to behave as a featural primitive** that can associate with person features, **but is not reducible to them: [ACTUAL].**
- Given that indexicality is a property shared by elements of different categories (nouns, adverbs, verbs), we might hypothesize that [ACTUAL] can in principle associate to different lexical categories.

Thank you!

Feedback much welcome:
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