

An alternative theory of indexical shift

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1 Overview

- In cases of indexical shift, an indexical pronoun ('I', 'you', 'here', 'now') is *shifted*, in the sense that it is no longer evaluated against the utterance-context but against the intensional parameters of an attitude.
- (1) illustrates obligatory shift for *men* ('I') in Uyghur (Turkic) (Shklovsky and Sudo 2014, 383, Ex. 4b):

(1) Ahmet [men] ket-tim] di-di.
Ahmet [1SG leave-PST.1SG say-PST.3
✓ 'Ahmet_i said that I_i left.' ✗ 'Ahmet_i said that I_{speaker} left.'

- Consequently, in a context where Ali utters (1), (1) can only have the reading that Ahmet said that he (Ahmet) left; it cannot mean, as it indeed must in English, that Ahmed said that *Ali* (the speaker of the utterance in (1)) left.
- In other words, while Uyghur 'I' necessarily targets the speaker of the intensional "context" associated with the matrix speech verb; its English counterpart necessarily targets the speaker of the utterance context.

There are two main approaches to indexical shift:

Monster-Centric (MC): indexical shift via context-overwriting (Anand 2006, Deal 2017, a.o.)

Pronoun-Centric (PC): Indexical shift via quantifier-variable binding (Schlenker 1999, 2003, et seq.)

Shift Together: All indexicals that *can* shift in a local domain, *must* shift (Anand and Nevins 2004, et seq.).


In this talk, I show that the descriptive state-of-affairs with respect to ST is more nuanced:

- *Shift Together obtains as a baseline; but legitimate exceptions systematically obtain under certain certain conditions.*
- Empirical evidence: "monstrous" agreement in Tamil (Sundaresan 2012, 2018), embedded imperatives in Korean and Slovenian (Stegovec and Kaufmann 2015); potential evidence from Zazaki, Turkish, and Kurdish (Akkuş 2018), and Late Egyptian (Kammerzell and Peust 2002).

This in turn entails that neither MC nor PC is adequate as it stands:

- ☞ MC undergenerates Exceptions to Shift Together.
- ☞ PC overgenerates Exceptions to Shift Together.

Further problem:

- ☞ Indexical shift is an embedded root phenomenon: indexical shift obtains more readily under speech predicates than other attitude verbs.
- ☞ The  must be severed from the attitude verb.

I develop a new model of indexical shift that accommodates these results.

2 Indexical shift: a (very!) brief primer

- An utterance doesn't exist in a vacuum: it is tied to a *context*, uttered by a speaker, to addressee(s), at a time and a place.
- But when a sentence contains/embeds another, as when it reports what someone *else* says or thinks (e.g. Marie: "Jill says that John is tired!") we have, not one, but *two*, contexts.
- Thus, in (2) below, we have the utterance-context whose *Author* is Marie, and whose *Addressee* is Susan and whose *World* is the actual world; and we also have the dream-context whose *Author* is Jill and whose *World* is the dream-world:

(2) Marie to Susan: Jill dreamed [that I was a hobbit].

- Marie can reasonably utter (2) even without believing that hobbits are real because the expression *a hobbit* denotes a dream-hobbit, not a real hobbit: formally, it is evaluated *de dicto*, relative to Jill's dream-context.
 - In contrast, the pronoun *I*, despite also being clausally embedded, stubbornly clings to the utterance-context: i.e. it must denote the *Author* of the utterance-context, Marie, and not the *Author* of the dream-context, Jill.
 - In his seminal paper (Kaplan 1989), David Kaplan argued that this is because expressions like 'I', 'you', 'here' and 'now' form a special type of context-sensitive expression called *indexical*: unlike other pro-forms and R-expressions, indexicals are *context-rigid*, referring *directly* to the utterance-context and cannot be manipulated by intensional operators.
 - Indeed, Kaplan famously proclaimed that "Operators like 'In some contexts it is true that' which attempt to meddle with characters [function from contexts to intensions], I call *monsters*. I claim that none can exist in English (without sneaking in a quotation device)." (Kaplan 1989, 510-11).
- ☞ A groundbreaking linguistic discovery of the last two decades has been that Kaplan's conjecture is, in fact, empirically falsified in cases of *indexical shift*, where indexicals may indeed be interpreted *de dicto* under the scope of an attitude predicate.
- This is shown again with *men* 'I' in Uyghur (3), which can denote either the *Author* of the utterance-context, or the *Author*, Ahmet, of the one associated with the speech verb:

(3) Ahmet [men ket-tim] di-di.
 Ahmet [1SG leave-PST.1SG say-PST.3
 ✓ 'Ahmet_i said that he_i left.' (literally 'Ahmet_i said that I_i left.')

✗ 'Ahmet_i said that I_{speaker} left.' (Shklovsky and Sudo 2014, 383, Ex. 4b)

- The embedded clause in (3) is transparent to *wh*-movement: a speaker may thus question something *in* the attitude report (4), which would of course be impossible if the report involved a "sneaky quotation device" (**Who did Ahmet say "I saw"?*):

(4) Tursun [men kim-ni kör-dim] di-di?
 Tursun 1SG who-ACC see-PST.1SG say-PST.3

'Who did Tursun_i say that he_i saw?' (literally, 'Who did Tursun_i say that I_i saw?') (Shklovsky and Sudo 2014, Ex. 7, 384)

- Shifted indexicals have since been observed for temporal (e.g. temporal adverbials in Navajo Speas 1999, and tense in Romanian and Russian Giorgi (2010)), and modal (evidenced by the subjunctive "Konjunktiv I" phenomenon in German, as argued in Schlenker 2003, and in certain sign languages as discussed in Quer (2005)) contextual domains and can be obligatory as well as optional.

3 Monster-centric vs. pronoun-centric approaches to indexical shift

Monster-centric (MC) and pronoun-centric (PC) theories differ along two main dimensions:

- (i) Locus of variation wrt. indexical shift.
- (ii) The nature of the shifter or monster that effects shift in its scope.

3.1 The monster-centric view (MC)

- Under MC (Anand and Nevins 2004, Anand 2006, Shklovsky and Sudo 2014, a.o.), all indexicals, including ones in languages like English, are in theory *capable* of shifting: what is parametrized is whether the environment for such shifting (specifically a shifted context) is available to them or not.
- E.g. $\llbracket I \rrbracket^{c,g} = \lambda c. Author(c)$; When *Author* is evaluated against c^* (the utterance context, default), we get an “English-style” unshifted indexical; when *Author* is evaluated against a “shifted” context, we get a shifted indexical.
- A “shifted” context is introduced by a $\hat{\lambda}$: this is an intensional operator selected by an attitude verb which takes the default utterance-context and *overwrites* it with the index associated with the attitude predicate.¹
- Thus: $\llbracket \hat{\lambda} \alpha \rrbracket^{c,g} = \llbracket \alpha \rrbracket^{i,g}$, for $\alpha =$ the attitude-report.
- Parametric variation for indexical shift arises as a function of whether a verb optionally (Amharic, Zazaki), never (English), or always (Slave, Laz) introduces a $\hat{\lambda}$ in its scope.
- Languages may further parametrically vary with respect to which types of contextual parameters (*Author, Addressee, Time, World* or *Location*) may be shifted (Anand 2006, Deal 2014).

3.2 Pronoun-centric view (PC)

- i. Under the pronoun-centric view (PC) (Schlenker 1999, 2003, et seq.), the $\hat{\lambda}$ is not an operator but a quantifier over contexts.
 - ii. The utterance-context is thus never overwritten and may co-occur with the shifted one: “dual context” effects are possible.
 - iii. An indexical may “decide for itself” (via lexical presuppositions) whether (a context variable associated with) it may be bound by such a $\hat{\lambda}$ (yielding shift), or not (yielding unshift).
- “I” in English, *never shifts* because it is *never bound*: it is lexically specified to be evaluated against the utterance-context (c^*) alone.

$$(5) \quad \llbracket I_{English} \rrbracket^{c,g} = \left[\left[\bigwedge_{\mathbf{I}_5 \ \mathbf{i}_k} \right] \right]^{c,g} = g(5) \text{ iff } g(5) = Author(c)$$

- “I” in Zazaki/Amharic *optionally shifts* because it is *optionally bound* by the intensional $\hat{\lambda}$ or the utterance $\hat{\lambda}$: it is lexically underspecified wrt. the context it is evaluated against.

$$(6) \quad \llbracket I_{Amharic} \rrbracket^{c,g} = \left[\left[\bigwedge_{\mathbf{I}_5 \ \mathbf{i}_k} \right] \right]^{c,g} = Author(g(i_k)), \text{ iff there is a unique speaker of } g(i_k)$$

¹The utterance-context and intensional index both denote a tuple consisting of $\langle Author, Addressee, Time, World, Location \rangle$. The index and utterance-context are thus assumed to be formally equivalent (i.e. of the same semantic type), thus the former can overwrite the latter, yielding indexical shift.

- “I” in Slave/Uyghur *always shifts* because it *always bound* by the intensional λx : it is lexically specified to be evaluated against an intensional context.

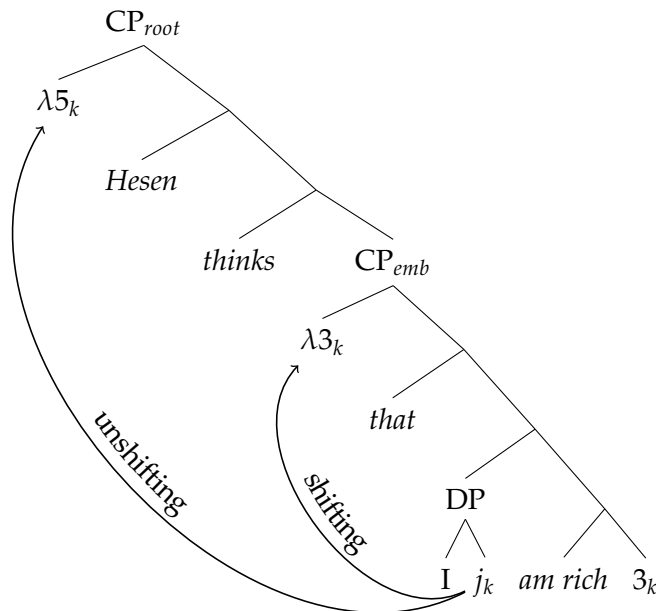
$$(7) \quad \llbracket I_{Slave} \rrbracket^{c,s} = \left[\left[\bigwedge_{I_5 \ i_k} \right] \right]^{c,s} = Author(g(i_k)) \text{ iff there is a unique speaker of } g(i_k) \text{ and } g(i_k) \neq c$$

Consider now the case of optional indexical-shift for 1st-person from Zazaki, below (from Anand and Nevins 2004):

- (8) $H_{e_s e_n i_j}$ (mi_k-ra) va ke εz_{j/k} dεwletia.
 Hes_{e_n}.OBL I.OBL-TO said that I rich.be-PRES
 “Hes_{e_n} said that I_{Auth(c*)} am rich.” (Unshifted reading)
 “Hes_{e_n} said that he_{i,*j} is rich.” (Shifted reading)

Below is a derivation of (8) under the pronoun-centric view:

- (9) [$H_{e_s e_n j}$ thinks [_{CP} that I_{j,Auth(c*)} am rich]].
 (10)



4 Shift Together & Exceptions to Shift Together

Once again:

- ☞ PC overgenerates Exceptions to Shift Together (Shift Together is problematic);
- ☞ MC undergenerates Exceptions to Shift Together (Exceptions to Shift Together are problematic).

4.1 Introducing Shift Together

Shift Together Constraint: “All shiftable indexicals within an attitude-context domain must pick up reference from the same context.” (Anand 2006, Ex. 297, 100, updated from the original observation in Anand and Nevins 2004).

Shift Together does seem to be a robust constraint in several languages – and is illustrated below for Zazaki (reformatted from Anand and Nevins 2004, 4, Ex. 13):

- (11) Vizeri Rojda Bill-ra va ke ez to-ra miradiša
 Yesterday Rojda Bill-to said that I you-to angry.be-PRES
 LIT. “Yesterday Rojda said to Bill that I am angry at you.”
 READING 1: ✓ “Yesterday Rojda_i said to Bill_j that he_i is angry at him_j.”
 READING 2: ✓ “Yesterday Rojda_i said to Bill_j that I_{Auth(c*)} am angry at you_{Addr(c*)}.”
 READING 3: ✗ “Yesterday Rojda_i said to Bill_j that I_{Auth(c*)} am angry at him_j.”
 READING 4: ✗ “Yesterday Rojda_i said to Bill_j that he_i is angry at you_{Addr(c*)}.”

- Under MC, Shift Together falls out for free:
 - i. All indexicals are, in theory, capable of shifting;
 - ii. Thus, if an indexical lies in the scope of a $\hat{\lambda}$, it must shift.
 - iii. The shifting of one indexical diagnoses the presence of such a $\hat{\lambda}$; thus if one indexical of a certain class shifts, all other indexicals of the same class under the $\hat{\lambda}$ must shift as well.
- Under PC, Shift Together is not predicted:
 - i. An indexical may “decide for itself” whether to shift (be bound by a $\hat{\lambda}$) or not.
 - ii. There is thus nothing to prevent a situation where one indexical is lexically specified to shift, while another is lexically specified not to do so.

4.2 Shift Together violation in Tamil

☞ *Monstrous agreement* (Sundaresan 2012) refers to the phenomenon where the predicate of a 3rd-person speech report surfaces with 1st-person agreement under an anaphor (cf. (12)).

- (12) Raman_i [_{CP} taan_{i,*j} Sudha-væ virūmb-ir-een-nnū] so-nn-aan.
 Raman ANAPH.NOM.SG Sudha-ACC love-PRS-1SG-COMP say-PST-3MSG
 “Raman_i said [_{CP} that he_{i,*j} is in love with Sudha].”
 Lit: “Raman_i said [_{CP} that self_{i,*j} am in love with Sudha].”

- In Sundaresan (2012), I show that the clausal complement in (12) constitutes an indirect, not a direct, speech report — e.g. it is transparent to NPI licensing by a matrix Neg operator (13) and also allows long *wh*-object movement out of the embedded clause:

- (13) Raman_i [_{CP} taan_{i,*j} orū tappu-m se-nḷ-eeen-nnū] ottukka-læ.
 Raman[NOM] [ANAPH-SG.NOM one mistake=NPI make-PST-1SG-COMP] admit-NEG
 “Raman_i didn’t admit [_{CP} that he_{i,*j} made any mistake.]”

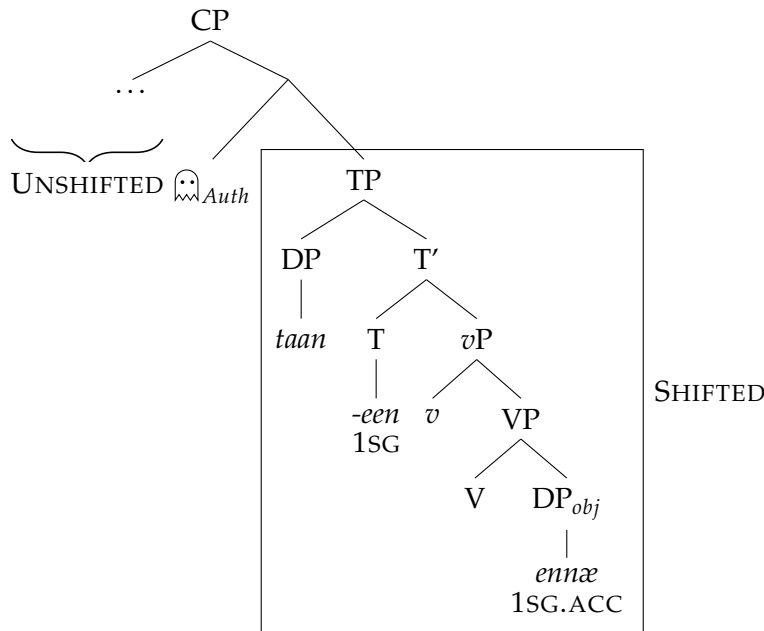
- As such, I conclude that what I call monstrous agreement is triggered by an obligatorily shifted 1st-person *pro* (a perspectival pronoun), in the embedded CP, denoting the reported Speaker *Raman*.
- Monstrous agreement has also been observed for Turkish (Gültekin Şener and Şener 2011) & Telugu (Messick 2016), and potentially also Mishar Tatar (Podobryaev 2014) (pace Deal (2018)).

Tamil monstrous agreement sentences like (14) instantiate a superficial exception to Shift Together:

- (14) Raman_i [_{CP} taan_{i,*j} kaŋŋaadi-læ enn-æ paar-tt-ee-n-nnũ] ottũŋd-aan.
 Raman.NOM ANAPH.NOM mirror-LOC me-ACC see-PST-1SG-COMP admit.PST-3MSG
 LIT: “Raman admitted [_{CP} that self had seen me in the mirror].”
 READING 1: ✓ “Raman_i admitted that he_{i,*j} had seen me_{c*} in the mirror.”
 READING 2: ✗ “Raman_i admitted that he_{i,*j} had seen me_i in the mirror.” i.e. “Raman_i finally admitted that he_{i,*j} had seen himself_i in the mirror.”

- The monstrous agreement on the verb diagnoses the presence of a (silent) 1st-person obligatorily shifted indexical in the embedded CP.
- But in (14), we have an *unshifted* 1st-person indexical in the embedded CP, which is overt, namely the direct object *ennæ* (‘me’).

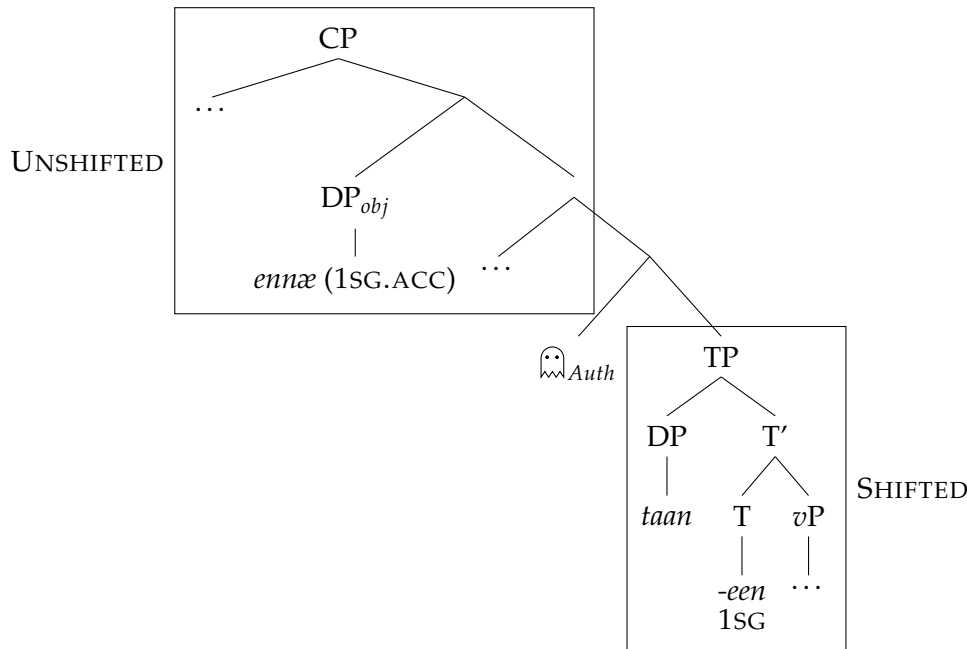
(15)



4.3 Not a viable option: DirectObject_{1st.acc} >> Auth

One potential solution to this dilemma would be to propose that, while the Auth intervenes between the direct object and *pro*, as in (16) — thus, only the latter is shifted:

(16)



I will argue against this conclusion on two grounds:

- (i) The direct object in (14) must be base-merged below ☹️_{Auth} and also does not A-move about ☹️_{Auth}.
- (ii) The direct object also does not obligatorily A-bar *move* to a position above ☹️_{Auth}.

4.3.1 DirectObject_{1st.acc} is base-merged below ☹️_{Auth}

It is fairly trivial to show the DirectObject_{1st.acc} is indeed base-merged below ☹️_{Auth}:

- (i) In a monstrous agreement structure like (12), the perspectival anaphor *taan*, as the external argument, is merged in standard thematic subject position in Spec, *vP*.
- (ii) The silent obligatorily shifted 1st-person indexical pronoun which *triggers* monstrous agreement is either *taan* itself or, following detailed arguments in Sundaresan (2012, 2018), a perspectival pronoun that binds *taan*.
- (iii) The shifted indexical must thus be merged *at or above* Spec, *vP*.
- (iv) Given that the indexical, being obligatorily shifted, must *always* be merged in the scope of a ☹️ this ☹️ must then, be merged even higher in the structure.

Consequences:

- In order for the overt *unshifted* 1st-person indexical to be above the ☹️, as in (16), it would necessarily also have to be base-merged above the subject in Spec, *vP*.
- This is extremely unlikely as a first merge position, given that the direct object has structural accusative case (Burzio's Generalization).

Finally, (17)-(18) further show that, while subjects can bind (direct-)objects, objects cannot bind subjects:

- (17) Sri_i tann-æ_{i,*j} kaŋŋaaɖi-læ aɭagũpaar.ttũ-ŋɖ-aan.
 Sri.NOM ANAPH-ACC mirror-LOC checkout.ASP-PST-3MSG
 "Sri_i checked himself_{i,*j} out in the mirror."

- (18) *Taan_{i,*j} Sri-æ_i kaŋŋaadi-læ a.ɟagũpaar.ttũ-ŋd-aan.
 Sri.NOM ANAPH-ACC mirror-LOC checkout.ASP-PST-3MSG
 LIT: “Self_{i,*j} checked Sri_i out in the mirror.”
 INTENDED: “Sri_i checked himself_{i,*j} out in the mirror.”

Thus, the direct object also does not A-move to a position above the subject.

4.3.2 DirectObject_{1st.acc} doesn't A-bar move above $\overset{\text{Auth}}{\text{Auth}}$

- Again, the $\overset{\text{Auth}}{\text{Auth}}$ has to be higher than the subject in Spec, *v*P.
- At LF the DirectObject_{1st.acc} can scope below a low temporal adverb in T/*v*.
- Thus, at LF, DirectObject_{1st.acc} can be below $\overset{\text{Auth}}{\text{Auth}}$.

The relevant *once* \gg *three* scope in (19) is reinforced by the emphatic adverb ‘only’:

- (19) Sri_i [CP taan_{i,*j} enn-oo:dæ muu:ŋũ akkaa-væ=jum oreë orũ daram daan seendũ
 Sri.NOM ANAPH.NOM me-GEN three sister-ACC=CL one.EMPH one time only together
 paar.tt-iru-kkir-een-nnũ] so-nn-aan. (✗ three \gg once; ✓ once \gg three)
 see.ASP-COP-PRS-1SG-COMP say-PST-3MSG
 LIT: “Sri_i said [CP that self_{i,*j} has seen all my_{c*} three sisters together only once.”
 INTENDED: “Sri_i said [CP that he_{i,*j} has seen all my_{c*} three sisters together only once.”

5 Shift Together violations in other languages

- ☞ Embedded imperatives in Korean (and Slovenian Stegovac and Kaufmann 2015) instantiate exceptions to Shift Together.
- ☞ Other potential counter-examples to ST are attested in Mutki Zazaki, Telugu, and Late Egyptian.

5.1 Embedded imperatives in Korean

- ☞ Person-sensitive verbal suppletion (*tal* vs. *cwu* = ‘give’) in Korean embedded imperatives diagnoses a Shift Together Exception.

Korean has two forms of the verb ‘give’ — *cwu* and *tal* (Lee and Amato 2018):²

- While *cwu* is the Elsewhere form, *tal* seems to be used just in case: (i) the clause is imperative, and, (ii) the GOAL argument is coindexed with the speaker, and (iii) The GOAL is construed as an eventual recipient of the THEME:

- (20) IMPERATIVE CLAUSE (SPEAKER RECIPIENT): *tal*:
 (Ne) na-ekey satang-ul tal-la.
 you-NOM I-DAT candy-ACC give-IMP
 ‘Give me_{c*} a candy.’

- ☞ What’s interesting for the current discussion is that *tal* can also be used in embedded imperatives.

²All data, not otherwise attributed to a source, reflect native speaker judgments collected by Hyunjung Lee (Leipzig). In addition to Lee’s own native speaker judgments, the results summarize an Acceptability Judgement Task with stimuli (on a 1-7 grammaticality scale), conducted by Lee among 24 native Korean speakers. 32 fillers of varying acceptability were added and the stimuli were counterbalanced and distributed. Out of the 24 native speakers, only 8 could get *cwu*; among these, none allowed *cwu* without also allowing *tal*.

- ☞ In such cases, *tal* targets, not the utterance-context speaker, but the speaker argument of an immediately higher speech predicate.

This is illustrated in (21) below:

- (21) Swuci-ka Yuswu-eykey [Cimin¹-ika Cengmi-eykey [casin¹-eykey senmwul-ul (cwu-<tal)-la-ko]
Swuci-NOM Yuswu-DAT Cimin-NOM Cengmi-DAT self-DAT gift-ACC give-IMP-C
hay-ss-ta-ko] mal-hay-ss-ta.
v-PST-DECL-C say-PST-DECL
'Swuci told Yuswu [that Cimin_i told Cengmi_j [to give self_i a gift.]]'
Intended: 'Swuci told Yuswu [that Cimin_i told Cengmi_j "Give me a gift.]]''

- Per Pak, Portner, and Zanuttini (2008) show that Korean imperatives are part of a more general class of "jussives"³ which are *indexically shifted* for person (with the embedded jussive subject being an obligatorily shifted indexical), when embedded.
- Thus, when *tal* (the suppletive form used to track the speaker Goal) is merged in such a clause, this Goal denotes, not the utterance-context speaker, but the speaker of the intensional event associated with the higher attitude verb ('tell').

Against this background, consider (22) which involves a Shift Together exception (contra Park 2014, who reports that Korean obeys Shift Together):

- (22) Cimin_i-ika Cengmi_j-eykey [casin_i-eykey na_{c*}-lul (tal-<cwu)-la-ko] mal-hay-ss-ta.
Cimin-NOM Cengmi-DAT self-DAT I-ACC give-IMP-C say-PST-DECL
'Cimin_i told Cengmi_j [to give me_{c*} (to) herself_i.]'⁴


- The use of suppletive *tal* diagnoses the presence of a shifted 1st-person indexical; this co-occurs with an unshifted 1st-person direct object.

5.2 Embedded imperatives in Slovenian

Supporting evidence for dual contexts comes from Slovenian embedded imperatives (see Stegovec and Kaufmann 2015, for more):

- The 2nd-person indexical in embedded imperatives in Slovenian must be anchored to the utterance-context, as in (23) from Stegovec and Kaufmann (2015, 624, Ex. 7):

- (23) Žare₁ to Jure₂: Marko₃ jerekel Petru₄, damu_{3,4,k} pomagaj₂.
Marko.NOM is said Peter.DAT that him.DAT help.IMP.2P.SG
LITERAL: "Marko said to Peter that you should help him."
READING 1: ✓ "Marko₃ said to Peter₄ that you_{Addr(c*)} should help him_{3,4,k}."
READING 2: ✗ "Marko₃ said to Peter₄ that you₄ should help him_{3,4,k}."

- This is in direct contrast to embedded imperatives in Korean, as we have just seen.
- Under a simple monster-centric account, the embedded imperative in Slovenian, in contrast to that in Korean, would not contain a , accounting for the unavailability of a shifted reading on the 2nd-person indexical there.

³"In sum, we can view jussive clauses as those with the canonical function of adding a requirement to some individual [Speaker or Addressee, or both] in the conversational context" (Pak et al. 2008, 164).

⁴To make this sentence less cheesy/marked, informants were given a discourse scenario like this: *My sister Cengmi, who is very fond of me, has a birthday coming up but doesn't know what to do to celebrate. Cimin, a mutual friend of ours, suggests to Cengmi that she have me visit her for her birthday, as a gift to herself on that day.*

But certain signature properties of (embedded) imperatives: e.g. the ill-formedness of negating the preja-cent (which yields the anomaly of a sentence like: “#Go right on Broad Street and then left on Locust, but I don’t want you to do that.”), track the Author of the *shifted* and not the utterance, context, yielding the minimal Pseudo-Slovenian contrasts below (adapted from Stegovec and Kaufmann 2015, 626, Exx. 11-12):

- (24) # Paul_i said to me_{Auth(c*)} that (you_{Addr(c*)}) LISTEN.IMP.2P.SG to me_{Auth(c*)}, but (he_i added that) he_i didn’t want that.
- (25) Paul_i said to me_{Auth(c*)} that (you_{Addr(c*)}) LISTEN.IMP.2P.SG to me_{Auth(c*)} but I_{Auth(c*)} don’t want that.

- In (25), the negated constituent doesn’t negate the Author of the shifted context, which is Paul, but that of the utterance context (“I”): this sentence is well-formed.
- This contrasts with the (nearly) minimally contrasting sentence in (24), where the negated preja-cent pronominally refers back to the Author of the shifted context, namely Paul, which is ill-formed.
- Stegovec and Kaufmann take these types of pattern to mean that the utterance-context cannot be fully overwritten and that the indexical in embedded imperatives in Slovenian must be able to be evaluated against the shifted-, as well as against the utterance-context.

5.3 Other potential Shift Together violations

- Shift Together violations are potentially also attested in Mutki Zazaki (Akkuş 2018, 18, Ex. 67), Telugu (Messick 2016), Mishar Tatar (Podobryaev 2014, pace Deal 2017, 2018).
- Another potential violation comes from Late Egyptian (ca. 15th-7th cent. BC), as in (26), from Kammerzell and Peust (2002, 308, Ex. 25).⁵

- (26)

 jm jr-y Nht.mw.t.f ‘nh n- nb r-dd bn jw.j.r-

 AUX.IMP make-SUBJ Nakhtmutef oath for- lord COMP NEG FUT:1S-

 nt^c m- ty-j- śr(t)

 divorce:INF from- DEM.F-1s- daughter

LITERAL: “Nakhtmutef_i should take an oath by the Lord (i.e Pharaoh) that I_i will not divorce my_{c*} daughter.”

READING: “Nakhtmutef_i should take an oath by the Lord (i.e Pharaoh) that he_i will not divorce my_{c*} daughter.”

SCENARIO: “A certain Nakhtmutef has behaved improperly towards the daughter of Talmonth. Now, Talmonth demands in court that Nakhtmutef swear not to repeat his action” Kammerzell and Peust (2002, 308).

- ☞ Assuming these examples all involve bonafide (i.e. underlying as opposed to just superficial) counter-examples to Shift Together — they constitute a real challenge for a context-overwriting approach as in MC.
- ☞ PC can deal with these exceptions unproblematically but it does so at a cost: namely that it cannot predict Shift Together at all, which is, in fact, a robust constraint in many languages.

⁵Thanks to Ruth Kramer (p.c.) for vetting this example for me – and for checking that the L^AT_EX instantiations of the truly astounding number of hieroglyphic bird species in (26) are indeed accurate!

6 s are selected: selectional variation for indexical shift

- ☞ Indexical shift is an embedded root phenomenon: it obtains more readily under speech predicates than under other classes of attitude verb (Sundaresan 2012, Koev 2013, Deal 2017).

6.1 Dialectal microvariation: Tamil monstrous agreement

Fieldwork data (40 speakers): (i) Hebbar Iyengar (Karnataka); (ii) Kongu Tamil (western Tamil Nadu); (iii) Palakkad Tamil (Kerala); (iv) Madras Bashai (Chennai); (v) Central Tamil, showed that:

- ☞ There is dialectal variation in *how* easily monstrous agreement may obtain; but in a given dialect, 'say' effects monstrous agreement more easily than other attitude verbs, for all informants.⁶

6.2 Crosslinguistic variation in indexical shift

(27) Mini-typology of indexical shift across 26 languages (19 families):

⁶In many dialects (not mine), finite clausal embeddings are independently dispreferred (see also Annamalai 1999), with gerundivals taking their place.

Language	Family	Verb(s)	Class description
Tamil	Dravidian	SAY	optionally shifts 1st-person verb agreement
Telugu	Dravidian	SAY	optionally shifts 1st-person verb agreement
Dargwa	Northeast Caucasian	SAY	optionally shifts 1st-person verb agreement
Donna So (?)	Niger Congo	SAY	obligatorily shifts 1st-person verb agreement
Amharic	Semitic	SAY	optionally shifts 1st/2nd person indexicals
Aghem	Bantu	SAY	optionally shifts 1st/2nd person indexicals
Late Egyptian	Afro-Asiatic	SAY	optionally shifts 1st/2nd person indexicals
Kurmanji	Iranian	SAY	shifts 1st/2nd person indexicals
Zazaki	Iranian	SAY	optionally shifts 1st person indexicals
Navajo	Athabaskan	SAY	optionally shifts 1st/2nd person indexicals
Matsés	Panoan	SAY, TELL	optionally shifts all indexicals
Laz	Kartvelian	SAY, THINK	obligatorily shifts 1st/2nd person indexicals
Nez Perce	Sahaptian	SAY, THINK SAY, THINK, KNOW	optionally shifts locative indexicals optionally shifts 1st/2nd person indexicals
Slave	Athabaskan	SAY ASK, TELL THINK, WANT	obligatorily shifts 1st person indexicals optionally shifts 1st/2nd person indexicals optionally shifts 1st person indexicals
Ancient Greek	Greek	SAY (e.g. say, order)	person and temporal indexical shift
Korean	Koreanic	SAY SAY, other attitude verbs	optionally shifts 1st/2nd person indexicals optionally shifts locative/temporal indexicals
Nuer	Nilotic	SAY, other attitude verbs	optionally shifts 1st-person verb agreement
Balkar	Turkic	SAY, other attitude verbs	optional indexical shift
Mishar Tatar	Turkic	SAY, other attitude verbs	optional indexical shift
Uyghur	Turkic	SAY, other attitude verbs	optional indexical shift
Buryat	Mongolic	SAY, other attitude verbs	optional indexical shift
Tsez	Northeast Caucasian	SAY, other attitude verbs	optional indexical shift
Japanese	Japonic	SAY, other attitude verbs	optional indexical shift
Catalan Sign Language	Sign Language	Attitude role-shift: SAY, other attitude verbs (can be covert)	optional indexical shift
American Sign Language	Sign Language	Attitude role-shift: SAY, other attitude verbs (can be covert)	optional indexical shift
French Sign Language	Sign Language	Attitude role-shift: SAY, other attitude verbs (can be covert)	optional indexical shift

Table 27 and the fieldwork results show that indexical shift patterns like an *embedded root phenomenon*:

(28) For a given grammar, if indexical shift is possible in the scope of a non-speech attitude predicate, it must also be possible in the scope of a speech predicate.

☞ Problem for PC: Since *all* attitude verbs are fundamentally monstrous;

☞ Problem for MC: It must still say something extra to deal with the specialness of speech predicates.

7 Proposal: a hybrid model of indexical shift

Desiderata for our proposal:

- (i) Shift Together is a robust restriction in many languages: *Problem for PC*;
- (ii) Exceptions to Shift Together obtain in certain languages: *Problem for MC*;
- (iii) The $\hat{\lambda}$ is a distinct grammatical element, separate from the attitude verb: *Problem for PC*.

7.1 A new species of $\hat{\lambda}$ s

- Schlenker’s insight (Schlenker 1999, 2003) — attitude verbs quantify, not over worlds, but over contexts (tuples of intensional indices $\langle \text{Speaker}, \text{Addressee}, \text{Time}, \text{World}, \text{Location} \rangle$ characterizing the intensional event):

“In traditional model-theoretic accounts, attitude verbs are essentially construed as quantifiers over possible worlds. Thus John believes that it is raining’ is true just in case it is raining in every world compatible with John’s belief. I will argue for a minimal modification of this analysis. What shifted indexicals of the Amharic variety show, I’ll suggest, is that attitude verbs are *quantifiers over contexts of thought- or of speech*” (Schlenker 1999, 2).

- This is appealing: deriving indexical shift via contextual quantification rather than context-overwriting allows us to deal with dual-context effects like Shift Together Exceptions.
- At the same time, our $\hat{\lambda}$ needs to be distinct from the attitude verb, since indexical shift does not universally occur under all attitude verbs.
- ☞ What we need, in other words, is a way to *sever* contextual quantification from the attitude verb.
- Interestingly, Kratzer (2006, 2012), Moulton (2007, 2009), Elliott (2017) independently propose that the propositional content of an attitude is selected, not by the attitude verb, but by a dedicated complementizer associated with this verb.
- (29) states that *that* selects a proposition (set of worlds) and a (covert or silent) contentful individual (e.g. ‘rumor’ in (30)), and states that for all worlds that are compatible with this content, the proposition holds in those worlds.
- (30) is thus true just in case Susan believed a rumor in the current world and that I was drunk in all worlds that are compatible with this rumor:
 - (29) $\llbracket \text{that} \rrbracket^{c,s} = \lambda p_{\langle s,t \rangle} \lambda x [\forall w'. \text{compatible}_w(x)(w') \rightarrow p(w')]$
 - (30) Susan expressed (the rumor) that I was drunk.
- Since intensionality is now “outsourced” to a dedicated complementizer in its scope, ‘express’ in (30) now simply denotes an eventuality of expressing something:
 - (31) $\llbracket \text{express} \rrbracket^{c,s} = \lambda x \lambda s. \text{express}(x)(s)$

Fundamental insight:

- ☞ Unify Schlenker’s insight that intensional quantification is over contexts with Kratzer (2006, 2009), Moulton (2009), Elliott (2017)’s insight that intensional quantification is executed, not by the verb, but by a dedicated complementizer under the verb.
- ☞ This yields a genuinely new breed of $\hat{\lambda}$: it is a contextual quantifier that is encoded on a particular type of C head.

For independent empirical reasons⁷, I assume that contexts ($\in D_k$) come in different shapes:

(32) Definition of a context:

$\forall c_k \in D_k$. w is the unique *World* of c , x is the unique *Author* of c , y is the *Addressee* of c (if there is one), t is the unique *Time* of c , and l is the unique *Location* of c .

(33) All well-formed contexts:

- a. $c_{world} = \{World\}$
- b. $c_{author} = \{World, Author\}$
- c. $c_{addressee} = \{World, Author, Addressee\}$
- d. $c_{all} = \{World, Author, Addressee, Time, Location\}$
- e. $c_{utterance}$ always corresponds to c_{all}

(34) Some ill-formed contexts:

- a. $c_1 = \{Addressee\}$
- b. $c_2 = \{Location, World\}$
- c. $c_3 = \{Author, Location\}$
- d. $c_4 = \{World, Addressee, Time\}$

Attitudes are potentially indistinguishable from contexts under this view:⁸

(35) Definition of an attitude:⁹

For all $s_v \in D_v$. w is the unique *World* of s , x is the unique *Author* of s , y is the *Addressee* of s (if there is one), t is the unique *Time* of s , and l is the unique *Location* of s .

- ☞ A $\hat{\omega}$ is just a type of intensional complementizer, which quantifies over contexts: i.e. it introduces a proposition which is a set of contexts, rather than a set of worlds.
- ☞ $\hat{\omega}$ s come in different shapes matching the shape of the context ($\{c_{world}, c_{author}, c_{addressee}, c_{all}\}$) in their scope.
- ☞ Compatibility relations regulate correct mappings between eventive and intensional arguments, ensuring e.g. that a shifted 1st-person indexical under *say* denotes the *sayer* rather than the *sayee*.

(36) All possible $\hat{\omega}$ s:

- a. A $\hat{\omega}_{World}$ quantifies over trivial c_{world} contexts, thus quantifies over *World* alone.
 $\llbracket \hat{\omega}_{World} \rrbracket^{c,i} = \lambda p_{\langle k,t \rangle} \lambda x. \forall c' \in World_{x_s} \rightarrow p(c')$, where $World_{x_s} =_{def} \{c' : \text{it is compatible with } x, \text{ the content of the attitude that } Author(s) \text{ holds in } World(s) \text{ for } World(s) \text{ to be } World(c')\}$
- b. A $\hat{\omega}_{Auth}$ quantifies over “centered worlds” (Lewis 1979, Chierchia 1989) corresponding to c_{author} .
 $\llbracket \hat{\omega}_{Auth} \rrbracket^{c,i} = \lambda p_{\langle k,t \rangle} \lambda x. \forall c' \in Author_{x_s} \rightarrow p(c')$, where $Author_{x_s} =_{def} \{c' : \text{it is compatible with } x,$

⁷ Such an assumption derives (i) (Deal 2017):

i. Hierarchy of shifty indexicals: 1st > 2nd > HERE

	Shifty 1st	Shifty 2nd	Shifty HERE
Matses	✓	✓	✓
Uyghur	✓	✓	—
Tamil	✓	—	—
English	—	—	—

A $\hat{\omega}_{Addr}$, which introduces $c_{addressee}$, will thus quantify not only over *Addressee*, but also over *Author* and *World*. Thus, we will never get a scenario where 2nd-person alone is shifted to the exclusion of a shiftable 1st-person indexical in the same domain. On the other hand, the reverse scenario is possible.

⁸This is not an accident. It makes intuitive sense to think of an utterance-context as a speech event that embeds the root proposition (cf. also the Performative Hypothesis in Ross 1970). For now, I will maintain a notional distinction between “context” and “eventuality” — but it is important not to lose sight of their deep parallels.

⁹The *Author* is roughly the *Agent* or *Experiencer* of the eventuality; the *Addressee* roughly the *Goal*, if there is one.

the content of the attitude that *Author(s)* holds in *World(s)*, for *World(s)* to be *World(c')* and *Author(s)* to be *Author(c')* in *World(c')*}}

- c. A $\hat{\omega}_{Addr}$ quantifies over *Addressee* and *Author* and *World* coordinates, encoded in $c_{addressee}$.
 $\llbracket \hat{\omega}_{Addr} \rrbracket^{c,i} = \lambda p_{\langle k,t \rangle} \lambda x. \forall c' \in Addressee_{x_s} \rightarrow p(c')$, where $Addressee_{x_s} =_{def} \{c': \text{it is compatible with } x, \text{ the content of the attitude that } Author(s) \text{ holds in } World(s), \text{ for } World(s) \text{ to be } World(c'), \text{ for } Author(s) \text{ to be } Author(c') \text{ in } World(c'), \text{ and for } Addressee(s), \text{ if there is one, to be } Addressee(c') \text{ in } World(c') \text{ (and for } Addressee(c') \text{ to be undefined if } Addressee(s) \text{ is absent)}\}$
- d. Finally, a $\hat{\omega}_{\forall}$ quantifies over *Location*, *Addressee*, *Author*, *Time*, and *World*, encapsulated in c_{all} .
 $\llbracket \hat{\omega}_{\forall} \rrbracket^{c,i} = \lambda p_{\langle k,t \rangle} \lambda x. \forall c' \in Location_{x_s} \rightarrow p(c')$, where $Location_{x_s} =_{def} \{c': \text{it is compatible with } x, \text{ the content of the attitude that } Author(s) \text{ holds in } World(s) \text{ for } World(s) \text{ to be } World(c'), \text{ for } Author(s) \text{ to be } Author(c') \text{ in } World(c'), \text{ for } Addressee(s), \text{ if there is one, to be } Addressee(c') \text{ in } World(c') \text{ (and for } Addressee(c') \text{ to be undefined if } Addressee(s) \text{ is absent), for } Time(s) \text{ to be } Time(c') \text{ and for } Location(s) \text{ to be } Location(c')\}$

Crucial advantage:

- ☞ *All intensional quantification is fundamentally monstrous*, i.e. obtains over contexts, with the precise nature of such quantification simply being conditioned by the shape of the $\hat{\omega}$.
- ☞ A sentence where neither participant nor spatial/temporal indexicals is shifted is thus simply one where intensional quantification applies due to a trivial $\hat{\omega}_{World}$ alone.

7.2 A typology of indexicals

- ☞ The availability of Shift Together Exceptions shows not only that dual contexts are possible, but that an indexical can “decide for itself” not to shift even in a clause where a $\hat{\omega}$ is available to shift it.

I thus propose that an indexical may be inherently SHIFTABLE or UNSHIFTABLE:¹⁰

UNSHIFTABLE indexicals: $\llbracket I_{unshiftable} \rrbracket^{c,g} = \left[\begin{array}{c} \wedge \\ \mathbf{I}_5 \quad \mathbf{i}_k \end{array} \right]^{c,g} = g(5) \text{ iff } g(5) = Author(c)$.

Yields rigid unshifting; ‘I’ in English *nevers shifts* because it is never bound: it is lexically specified to be evaluated wrt. the utterance-context.

SHIFTABLE indexicals: $\llbracket I_{shiftable} \rrbracket^{c,g} = \left[\begin{array}{c} \wedge \\ \mathbf{I}_5 \quad \mathbf{i}_k \end{array} \right]^{c,g} = Author(g(i_k))$, iff there is a unique speaker of $g(i_k)$

A SHIFTABLE indexical is underspecified wrt. its context of evaluation: it is simply bound the closest c-commanding $\hat{\omega}$.

Optional shift (Zazaki ‘I’): ‘I’ in Zazaki/Amharic optionally shifts because it only optionally occurs in the scope of a matching intensional $\hat{\omega}$.

Obligatory shift (Uyghur ‘I’): ‘I’ in Slave/Uyghur always shifts because it always occurs in the scope of a matching intensional $\hat{\omega}$.

¹⁰I additionally assume that indexicals like *you* and *here* are structurally complex – specifically *you* contains the structure of *I* & *here* monotonically contains the structure for *you*. Together with our typology of $\hat{\omega}$ s, this derives the hierarchy in Fn. 7, Ex. (i).

7.3 Deriving shift and unshift

How do we get rules and counter-examples (to Shift Together) to co-exist in harmony? Strategy:

☞ Overgenerate exceptions to Shift Together;

☞ Then syntactically restrict.

- Our new $\overset{\circ}{\lambda}$ is a contextual quantifier: the utterance-context may thus co-occur with the intensional one, allowing legitimate exceptions to Shift Together.
- At the same time, we will ensure that exceptions to Shift Together are not overgenerated via the syntactic rule in (37) (see also Percus 2000, for semantic motivations):

(37) **Context-Minimality Generalization:** The silent context pronoun that is associated with an indexical must be coindexed with the λ that *minimally* c-commands it.

- (37) ensures that a SHIFTABLE indexical will be bound by the *closest* c-commanding $\overset{\circ}{\lambda}$.
- This immediately yields Shift Together: when two or more SHIFTABLE indexicals are merged in the same local domain, they will all necessarily shift, since they must all be bound by the same $\overset{\circ}{\lambda}$.

(38) Final typology of complementizers:

- $\llbracket \overset{\circ}{\lambda}_{World} \rrbracket^{c,i} = \lambda p_{\langle k,t \rangle} \lambda x [\forall c' \in World_{x_s} \rightarrow p(c')]$
- $\llbracket \overset{\circ}{\lambda}_{Auth} \rrbracket^{c,i} = \lambda p_{\langle k,t \rangle} \lambda x [\forall c' \in Author_{x_s} \rightarrow p(c')]$
- $\llbracket \overset{\circ}{\lambda}_{Addr} \rrbracket^{c,i} = \lambda p_{\langle k,t \rangle} \lambda x [\forall c' \in Addressee_{x_s} \rightarrow p(c')]$
- $\llbracket \overset{\circ}{\lambda}_V \rrbracket^{c,i} = \lambda p_{\langle k,t \rangle} \lambda x [\forall c' \in Location_{x_s} \rightarrow p(c')]$

(39) Final typology of indexicals:

- SHIFTABLE indexicals
- UNSHIFTABLE indexicals

Cross-classifying the two parameters of variation yields the typology of indexical shift in (40):

(40) Typology of indexical shift:

$\overset{\circ}{\lambda}_x$	UNSHIFTABLE indexical _x	SHIFTABLE indexical _x + locality
Never	No Shift	No Shift
Optional	No Shift	Optional Shift
Always	No Shift	Obligatory Shift

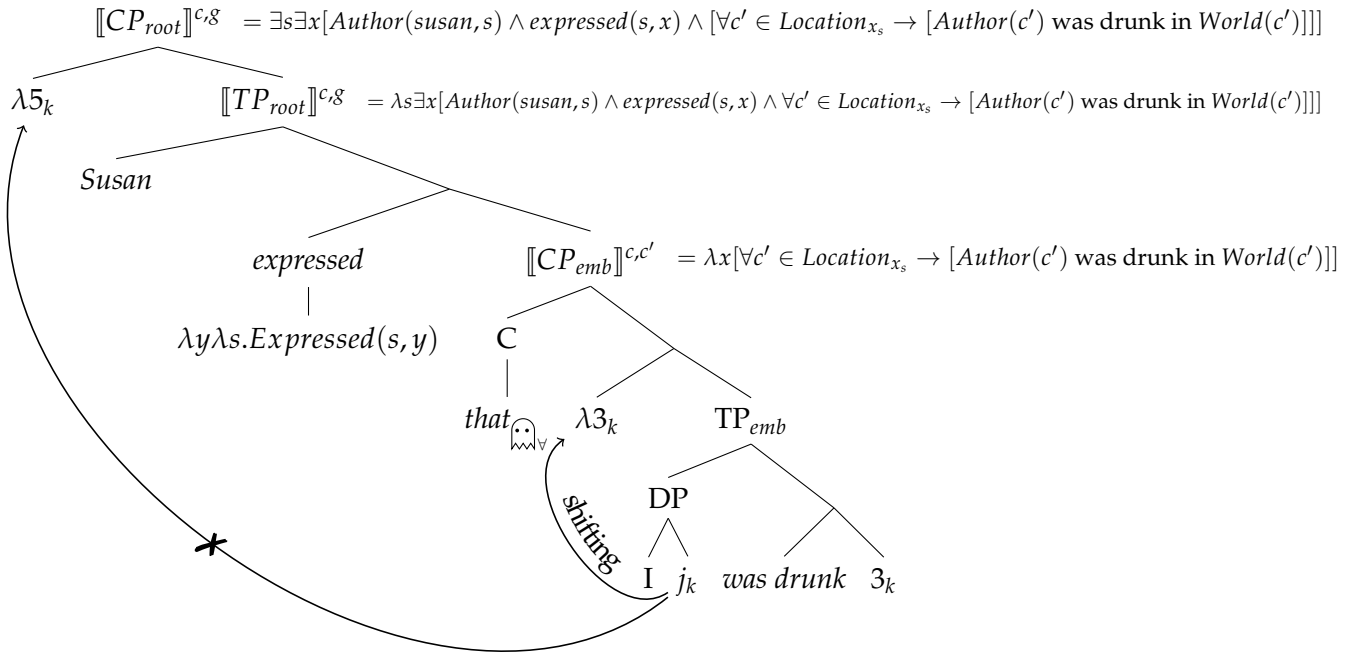
Now consider (41); in Pseudo-Zazaki, it would be ambiguous between the readings in (41a) and (41b):

(41) Susan expressed [that I was drunk].

- SHIFTED READING: Susan_i expressed that I_i was drunk.
- UNSHIFTED READING: Susan_i expressed that I_{c*} was drunk.

The shifted reading in (41a) is derived as follows:

(42) Susan_i expressed [_{CP} that _{$\overset{\circ}{\lambda}_V$} I_i was drunk]



- The $C_{\lambda 1_k}$ in (42) creates an abstractor over c_{all} .
- The 1st-person indexical under $\lambda 1_k$ is SHIFTABLE, thus it must simply be bound by the closest c-commanding $\lambda 1_k$ given the Context Minimality Generalization.
- In (42), this is the embedded $\lambda 1_{loc}$.
- The root proposition states that there is an event of saying something by Susan, and that for each context that is compatible with what Susan says, *the author of this context* (i.e. Susan) is drunk in the world corresponding to this context.

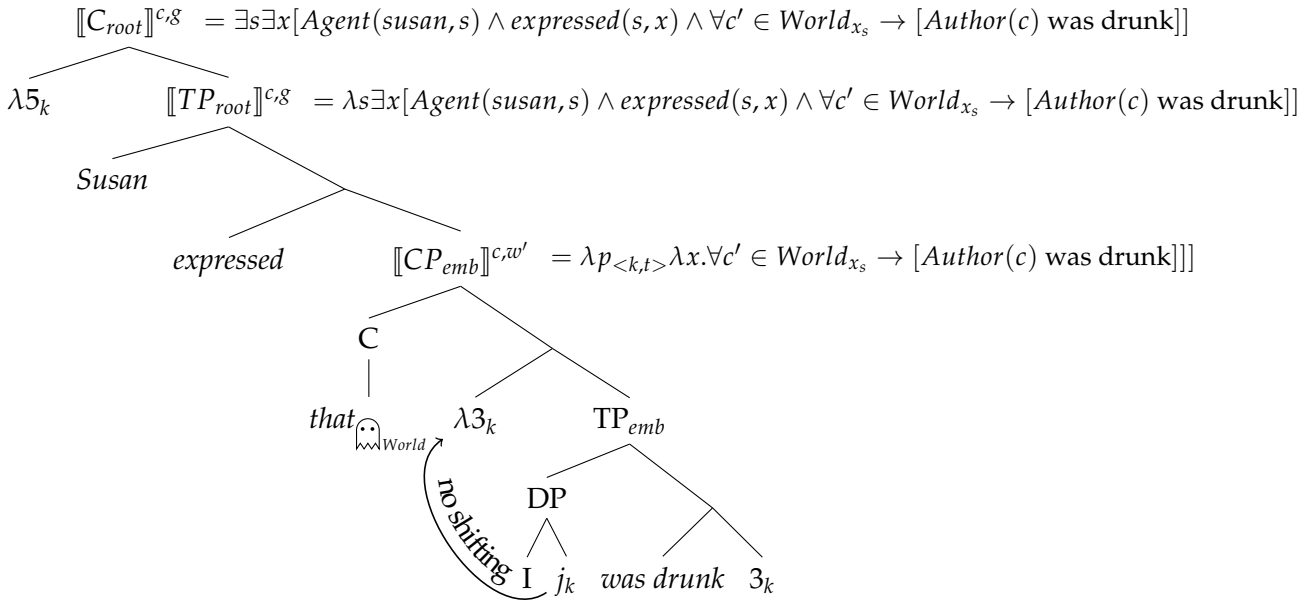
Unshift obtains in one of two ways:

Scenario 1: If the intensional $\lambda 1_k$ is of the “wrong” shape (e.g. be a trivial $\lambda 1_{World}$) wrt. the indexical.

Scenario 2: If the indexical is of the wrong shape (i.e. be lexically specified not to shift) wrt. the $\lambda 1_k$.

(41b) shows Scenario 1:

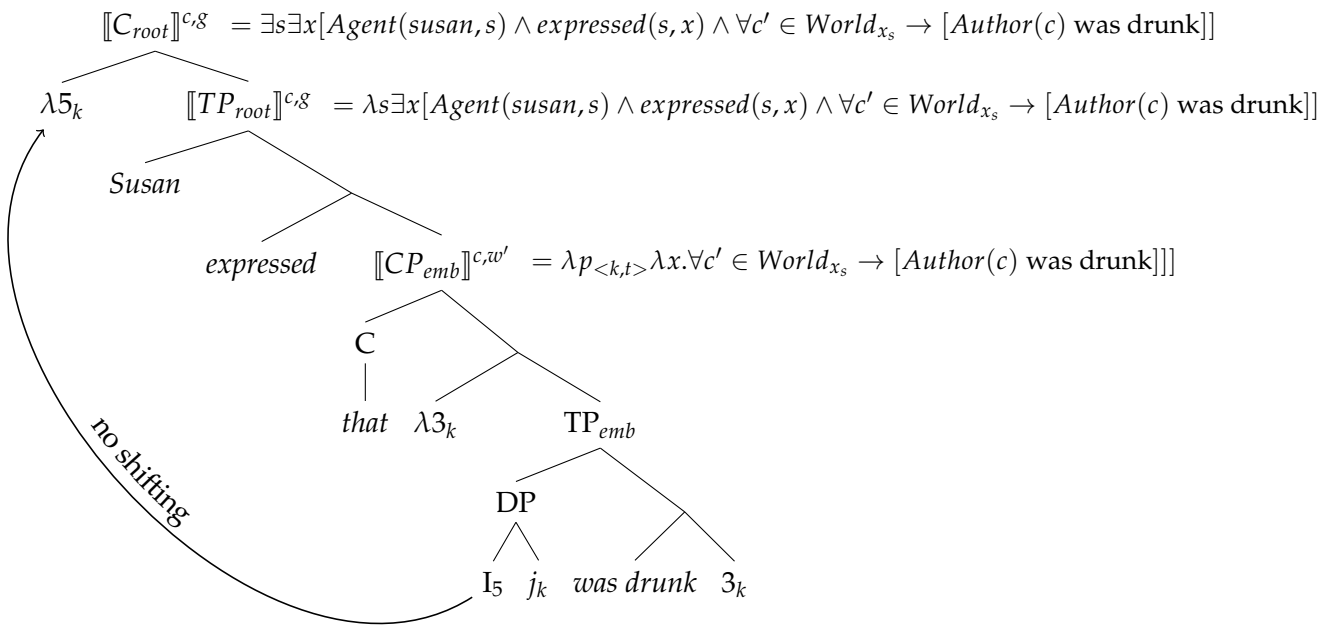
(43) Susan_i expressed [_{CP} that I_{c*} was drunk]



- While the SHIFTABLE indexical is also necessarily bound by the closer λ_{World} , this will crucially not result in shift, since the λ_{World} quantifies only over *Worlds*, corresponding to c_{world} .
- The root proposition in (43) thus states that there is an event of saying something by Susan, and that for each context that is compatible with what Susan says in the *World* of the actual context, the *Author of the utterance-context* is drunk in the *World* corresponding to that context.

(44) depicts Scenario 2:

(44) Susan_i expressed [_{CP} that I_{c*} was drunk]



- As (44) shows, the 1st-person indexical is UNSHIFTABLE, thus is specified not to be bound by any λ_{World} .

- It is thus an “island” to binding, and ends up denoting the utterance-context by default.

7.4 Deriving exceptions to Shift Together

Consider again the monstrous agreement example from Tamil, repeated from (14):

- (45) Raman_i [CP taan_{i,*j} kaṇṇaadi-læ enn-æ paar-tt-een-nnū] ottuṇṇi-aan.
 Raman.NOM ANAPH.NOM mirror-LOC me-ACC see-PST-1SG-COMP admit.PST-3MSG
 LIT: “Raman admitted [CP that self saw me in the mirror].”
 READING 1: ✓ “Raman_i admitted that he_{i,*j} had seen me_{c*} in the mirror”
 READING 2: ✗ “Raman_i admitted that he_{i,*j} had seen me_i in the mirror.” i.e. “Raman_i finally admitted that he_{i,*j} had seen himself_i in the mirror.”

Under the current model, the sentence in (45) has the structure in (46):

- (46) Raman_i admitted_{3msg} [CP that_{Auth} $\overbrace{pro_{1st,i} \dots [TP taan_i \dots T_{1st} me_{c*} \text{ in the mirror}]}^{\text{Shifted}}$]]
 $\underbrace{\hspace{10em}}_{\phi\text{-Agree}}$

- The *pro*.1SG indexical that triggers monstrous agreement is a SHIFTABLE indexical: given our locality condition on binding, it will thus simply be bound by the closest c-commanding $\hat{\omega}$.
- This is the intensional *that*_{Auth} under ‘say’: the indexical is thus obligatorily shifted.
- However, the direct object ‘me’ is an UNSHIFTABLE indexical which lexically specified to be unbound by any $\hat{\omega}$.
- Thus, despite the presence of the *that*_{Auth}, it is evaluated against the utterance-context.

☞ Exceptions to Shift Together thus obtain whenever an UNSHIFTABLE and SHIFTABLE indexical are merged in the same local domain under a $\hat{\omega}$ whose shape matches that of the SHIFTABLE indexical.

7.4.1 Deriving Shift Together

- ☞ Shift Together is forced when two or more SHIFTABLE indexicals are merged in the same intensional domain in the scope of an matching $\hat{\omega}$.
- ☞ This is a direct outcome of the locality condition on binding, in (37).

To see how this works, consider again the instance of Shift Together, in Zazaki (11):

- (47) Vizeri Rojda Bill-ra va ke ez to-ra miradiša
 Yesterday Rojda Bill-to said that I you-to angry.be-PRES
 LIT. “Yesterday Rojda said to Bill that I am angry at you.”
 READING 1: ✓ “Yesterday Rojda_i said to Bill_j that he_i is angry at him_j.”
 READING 2: ✓ “Yesterday Rojda_i said to Bill_j that I_{Auth(c*)} am angry at you_{Addr(c*)}.”
 READING 3: ✗ “Yesterday Rojda_i said to Bill_j that I_{Auth(c*)} am angry at him_j.”
 READING 4: ✗ “Yesterday Rojda_i said to Bill_j that he_i is angry at you_{Addr(c*)}.”

Reading 1 in (47) corresponds to the structure in (48):¹¹

- (48) “Yesterday Rojda_i said to Bill_j [_{SpeechActP} that_{Auth} I_i am angry at you_j].”

¹¹Zazaki is a language that optionally shifts all indexicals, so we need a maximally enriched $\hat{\omega}_{\forall}$.

- Both the 1st and 2nd person indexicals are shifted: this diagnoses the presence of a C_{World} in the local domain.
- The 1st and 2nd person indexicals are both SHIFTABLE indexicals, thus must be bound by the closest c-commanding World , regardless of which this is, yielding Shift Together.

Reading 2 corresponds to the structure in (49):

(49) “Yesterday Rojda_i said to Bill_j [SpeechActP that World I_{c^*} am angry at you c^*].”

- The only difference is that the speech predicate selects a trivial World that quantifies over *Worlds* corresponding to c_{world} .
- The locality condition on binding still forces the 1st- and 2nd-person indexicals to be bound by this World , which is the closest.
- But such a World will never shift *Author* or *Addressee* coordinates.
- The result is the unshifted reading in (49) which also obeys Shift Together.

8 Some fulfilled empirical predictions

8.1 A prediction met: indexical shift in Mishar Tatar

Mishar Tatar displays both Shift Together and superficial exceptions to it, but these have morphological reflexes on the indexicals themselves (Podobryaev 2014, but see Deal 2018 for a recent treatment of these facts in terms of “indexiphors” and agreement reprogramming):

- Superficial exceptions to Shift Together obtain when a shifted 1st-person indexical (*covert*) co-occurs with an unshifted one (*overt*), as in (50):

(50) Als_i [[[*pro* *sestra*-m] mine *kür*-de] *diep*-1] *at'*-t γ .
 Als_i sister-1SG I.ACC see-PST COMP say-PST
 LITERAL: “ Als_i said that my_i sister saw me_{c^*} .”
 READING: “ Als_i said that her_i sister saw me_{c^*} .”

- Interestingly, when *two covert 1st-person indexicals* are in a local domain, they *must* display Shift Together (Podobryaev 2014, 105, Ex. 261):

(51) Marat [[[*pro* *sestra*-m] [*pro* *brat*- γ m-n γ] *sü*-ä *diep*] *kurk*-a.
 Marat sister-1SG brother-1SG-ACC love-ST-IPFV COMP be.afraid-ST.IPFV
 READING : ✓ “ Marat is afraid that my_i sister loves my_i brother.”
 READING : ✗ “ Marat is afraid that my_{c^*} sister loves my_i brother.”
 READING : ✗ “ Marat is afraid that my_i sister loves my_{c^*} brother.”

Under the current model, this behavior is precisely what we predict:

- ☞ A covert 1st-person indexical is SHIFTABLE; an overt 1st-person indexical is UNSHIFTABLE.
- ☞ The Shift Together exception in (50) obtains when the SHIFTABLE and UNSHIFTABLE 1st-person indexicals co-occur under a World , just as in Tamil (14).
- ☞ But when two SHIFTABLE indexicals locally co-occur under a World , they must both shift, due to the locality condition on binding.

☞ Further confirmation: when only one of the two covert indexicals is in the scope of the C_{index} , the exception to Shift Together crops up again (Podobryaev 2014, 105, Ex. 262): again, this is precisely what we predict, since only the SHIFTABLE indexical in the scope of the C_{index} will be shifted.

8.2 Another prediction met: No Intervening Binder

The locality binding condition in (37) yields Relativized Minimality for shifting:

- In a sentence where there is more than one C_{index} , a shiftable indexical must be bound by the closest c-commanding one.

Is such a restriction attested in the literature on indexical shift?

☞ Indeed it is, and widely so; there is even a name for this restriction: it is called No Intervening Binder (Anand and Nevins 2004, Anand 2006), defined as in (52) Deal (2017, 19, Ex. 33):

- (52) A shiftable indexical ind_1 of class ψ cannot pick up reference from a context c if there is an intervening context c' which another indexical ind_2 of class ψ picks up reference from.

The following examples show this constraint at play in Zazaki:

- (53) Illustration of No Intervening Binder in Zazaki (Anand and Nevins 2004, Exx. 31-32, 10):
- Scenario: Ali tells Andrew: “Hesen said that you are Rojda’s brother!” Andrew reports what Ali says to his neighbor.
 - Ali mi-ra va [CP_1 ke Hesen to-ra va [CP_2 ez braye Rojda-o]].
Ali me-to said that Hesen you-to said I brother Rojda-GEN
LIT: “Ali said to me that Hesen said to you that Rojda is my brother.”
READING 1: ✓ “Ali said to Andrew that Hesen said to Andrew that Hesen is Rojda’s brother.”
READING 2: ✓ “Ali said to Andrew that Hesen said to Andrew that Hesen is Ali’s brother.”
READING 3: ✗ “Ali said to Andrew that Hesen said to Andrew that Hesen is Andrew’s brother.”

- When the 2nd-person indexical in CP_1 is shifted, as required by the discourse scenario, the 1st-person indexical lower in CP_2 must be shifted, too.
- Similar facts are reported in Korean (Park 2014) Nez Perce (Deal 2017) and varieties of Zazaki, Kurdish, and Turkish (Akkuş 2018).
- Here, (52) simply reduces to the Relativized Minimality restriction in (37).

8.3 The C_{index} is syntactically encoded in C

If the C_{index} is *always and only* encoded on a C head, as I have proposed here, we expect:

- That indexical shift should never be possible outside of CPs, and that morphological reflexes of indexical shift should show up on C.

Indexical shift in Uyghur is only possible in finite clausal complements of speech predicates, never under their gerundival counterparts (Shklovsky and Sudo 2014, 383, Exx. 4a-b) — a pattern repeated in Turkish (Gültekin Şener and Şener 2011, 273-274), Mishar Tatar (Podobryaev 2014, 88-89) and Buryat (Wurmbrand 2016, 2017):

While it is tempting to conclude from this that “Indexical shift is restricted to finite complement clauses.” (Deal 2017, 22, Ex. 38) – the Balkar (Turkic) data in (54)-(55) from Koval (2014) shows us that it’s really about the presence/absence of an embedded complementizer:

- (54) Boris men mešina(-ni) al-al-li q-im-mi suna-di.
 Boris 1SG.NOM car-ACC buy-MOD-PFCT-1SG-ACC think-PST
 LITERAL: “Boris thought that I could buy a car.”
 SHIFTED ✓: “Boris_i thought that I_i could buy a car.”
 UNSHIFTED ✗: “Boris_i thought that I_{Auth(c*)} could buy a car.”
- (55) Boris men-ni mešina(-ni) al-al-li q-im-mi suna-di.
 Boris 1SG-GEN/ACC car-ACC buy-MOD-PFCT-1SG-ACC think-PST
 LITERAL: “Boris thought that I could buy a car.”
 SHIFTED ✗: “Boris_i thought that I_i could buy a car.”
 UNSHIFTED ✓: “Boris_i thought that I_{Auth(c*)} could buy a car.”

- The accusative nominalization in (55) seems to lack a C head (based on constituency, scrambling & focus diagnostics); conversely, the nominative nominalization in (54), exhibits the properties of a CP.
- Crucially, indexical shift is possible in the latter, but not the former.

8.4 Indexical shift without attitude verbs

Given that the $\hat{\mu}$ is distinct from the attitude verb, and also not *selected* by the verb:

- Indexical shift should be possible even in a structure that lacks an attitude verb, *as long as the monstrous C head has access to the content of an attitude*.

This prediction seems to be confirmed, as well:

- Clausal embedding in Tigrinya can occur in one of two ways (Spadine To Appear) — with an attitude predicate as in (56) or with an *il*-marker as in (57):

- (56) Clausal Embedding with attitude verb:
 Naomi [Aman siga kim-zi-sarhət] ti-ħasib.
 Naomi(F) Aman(M) meat COMP-REL-cook 3FS-think

‘Naomi thinks that Aman cooked meat.’

- (57) Truncated *il*-construction:
 Naomi [Aman siga sariħə-u il-a].
 Naomi(F) Aman(M) meat cook-3MS il-3FS

‘Naomi says/thinks that Aman cooked meat.’ (meaning: According to Naomi, Aman cooked meat).

- The truncated *il*-variant in (57) expresses attitude (via an evidential) but lacks an overt attitude verb (Spadine To Appear, presents detailed morphosyntactic arguments that the verb is not concealed/covert in these cases, but is really absent).

Crucially, the truncated *il*-construction also optionally allows indexical shift, as in (58) (Spadine To Appear, Ex. 10, 3):

- (58) Hiwət [ane nətš’ħambib-e il-a] (ti-ħammin).
 Hiwet.F 1S DET book read-1S il-3FS 3FS-believe
 Unshifted Reading: ✓ ‘Hiwet_i believes that I_{c*} read the book.’
 Shifted Reading: ✓ ‘Hiwet_i believes she_i read the book.’

These Tigrinya facts are precisely what we expect to be possible in the current system (other potential candidates involve monstrous agreement in Telugu & Assamese, cf. Balusu 2018, Rajkhowa 2018, respectively).

9 Conclusion

I have motivated a new model of indexical shift that has the following properties:

- The $\hat{\mu}$ is a dedicated complementizer that quantifies over varieties of context ($\in \{c_{world}, c_{auth}, c_{addr}, c_{all}\}$)
- The presence of a $\hat{\mu}$ as well as the shiftability of individual indexicals may be independently parametrized.
- All intensional quantification, including quantification over worlds, is fundamentally monstrous.

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