On the syntax and semantics of allocutivity and indexical shift

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Abstract In this paper, we undertake one of the first detailed comparisons of allocutive agreement and indexical shift, two clause-peripheral phenomena that engage with contextual participants in different ways which, for all their similarities, are seldom discussed in the same breath, much less compared (but see Alok & Baker 2018; Alok 2021). We showcase interactions between these phenomena in two languages: Magahi (evaluating prior work in Alok & Baker 2018; Alok 2021) and Tamil (Sundaresan 2012a; 2018a; McFadden 2020). These interactions show that allocutive agreement and indexical shift share a deeper connection than may initially be suspected. Certain types of allocutive agreement in embedded clauses and indexical shift, in fact, involve the same underlying mechanism in syntax and semantics. In addition, we will provide new primary data on Tamil for exceptions to Shift Together (Anand 2006; Deal 2020) involving shifted and unshifted instances of 'I' and 'you' in the same embedded clause. These facts will force us to engage with the semantic underpinnings of allocutive agreement, on the one hand, and the syntactic underpinnings of indexical shift, on the other, and to compare the two using the same grammatical toolbox and vocabulary. We conclude by outlining two ways to model the close parallels between allocutive agreement and indexical shift. Ultimately, however, no definitive analysis of these patterns can be put forth without investigating many more such languages.

Keywords: indexical shift, allocutive agreement, contextual participants, speech act phenomena, Magahi, Tamil

1 Introduction

In this paper, we will undertake one of the first detailed comparisons of allocutive agreement and indexical shift (see also Alok & Baker 2018). Both of these phenomena target the speech act participants of the context of evaluation for a grammatical structure, but they do so in systematically different ways, the nature of which can shed valuable insight into their syntactic underpinnings. In cases of allocutive agreement, we find grammatical agreement marking that covaries with properties of the addressee rather than an argument (cf. Basque (1)):

(1) Pettek lan egin di-n.
Peter.E work.A do.PRF 3A.3E-ALLF
'Peter worked.' *Uttered to a close female friend* (Basque, Oyharçabal 1993)

Since agreement is (morpho)syntactic, it is commonly argued that allocutive agreement bears an indelible syntactic component (e.g. Oyharçabal 1993; Miyagawa 2012; McFadden 2020; Alok 2021). In cases of indexical shift, so-called indexical pronouns like 'I', 'you', 'here' and 'now' in a clause embedded under an attitude predicate (e.g. 'say') target the *Speaker*, *Addressee*, *Location* and *Time* of the intensional context associated with the attitude described by this predicate rather than the context of the utterance. For instance, in a language where 'I' can be shifted in this manner, a sentence like 'Leela said that I am sleepy' has the interpretation that Leela said that *Leela* is sleepy. As with allocutive

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agreement, it has been argued (Sundaresan 2012a; b; 2018b; Shklovsky & Sudo 2014; Deal 2020, a.o.) that indexical shift is not just a semantic phenomenon but has a syntactic component. At the same time, a full fledged syntactic derivation of indexical shift is, to our knowledge, still lacking; most treatments of this phenomenon focus on its semantic properties.

In this paper, we introduce the typological properties of both phenomena in detail and also provide an overview of prominent analyses of these patterns in the syntax and semantics. We will see that, because allocutive agreement is handled primarily in the syntax while indexical shift is treated mostly in the semantics, the properties of one cannot be straightforwardly mapped onto the other. We then present a detailed description of interactions between allocutive agreement and indexical shift in two languages: Magahi (Indo-Aryan, Alok & Baker 2018; Alok 2021) and Tamil (Dravidian, Sundaresan 2012a; 2018a; McFadden 2020). The patterns of interaction in these languages supports the conclusion that certain types of allocutive agreement instantiate a form of indexical shift for 2nd-person. Against this background, we present novel primary data, collected from consultations with speakers of the Kongu dialect of Tamil, which show exceptions to Shift Together, a constraint that forces all shiftable indexicals in a local domain to shift.

These results force us to use the same grammatical machinery and vocabulary to handle both phenomena: our treatment of allocutive agreement must also make reference to semantics and our treatment of indexical shift must also be syntactically grounded. We conclude by presenting two preliminary analytic directions we might take to model the isomorphism between certain types of allocutive agreement and indexical shift and end with what looks like a promising way to syntactically model the difference between inherently shiftable and inherently unshiftable indexicals in a given language.

2 Primer on indexical shift

In this section, we provide a brief primer on the phenomenon of indexical shift. For a more detailed overview, see Sundaresan (2021).

2.1 Introducing indexical shift

In a seminal paper (Kaplan 1989), the philosopher David Kaplan postulates that indexical pronouns like 'I', 'you', 'here' and 'now' are uniquely characterized by the following properties:

(2) CONTEXT-SENSITIVITY: Indexicals are *purely context-sensitive* expressions: they derive their meaning purely from a speech or thought context.

(3) INTENSIONAL INSENSITIVITY: Indexicals are *rigid designators*: i.e. their reference is *rigidly* fixed to the utterance-context and cannot be shifted under an intensional operator.

(2) is meant to capture the fact that, in a language like English, *I* always denotes the unique *Speaker*, *you* always denotes the unique *Addressee(s)*, *Now* the unique time, and *Here* the unique location, of an utterance context. (3) has to do with the fact that indexicals in English cannot be interpreted *de dicto*, in the scope of an attitude verb but must always denote the various coordinates, i.e. *Speaker*, *Addressee*, *Time*, *World*, *Location* of the utterance-context. Kaplan further proclaims (Kaplan 1989, 510-11) that a contextual operator which can manipulate the reference of an indexical simply doesn't exist in English, calling it a "monster". The only way to alter the reference of an indexical, per Kaplan, is to enclose it inside a quotation.

One of the most exciting linguistic discoveries of the last two decades has been that Kaplan's conjecture regarding intensional insensitivity in (3) is empirically falsified in a number of languages in cases of so-called *indexical shift*. Consider the example from the Turkic language Uyghur in (4):

(4) Ahmet [men ket-tim] di-di.
Ahmet [1SG leave-PST.1SG say-PST.3
'Ahmet$_i$ said that Ahmet$_i$ left.' (literally 'Ahmet$_i$ said that I$_i$ left.')

Unlike English *I*, the 1st-person indexical *men* in (4) is interpreted against the parameters of the matrix speech verb *di* ('say') and must denote its agent, Ahmet (Shklovsky & Sudo 2014, 383, Ex. 4b). We can also show that this is not due to the embedded clause being a direct quote, as it is demonstrably an indirect speech report. For instance, the embedded clause is transparent to *wh*-movement. A speaker may thus question something *inside* the clause as in (5), (Shklovsky & Sudo 2014), Ex. 7, 384:

(5) Tursun [men kim-ni kör-dim] di-di?
Tursun 1SG who-ACC see-PST.1SG say-PST.3
'Who did Tursun$_i$ say that Tursun$_i$ saw?' (literally, 'Who did Tursun$_i$ say that I$_i$ saw?') (Shklovsky & Sudo 2014, Ex. 7, 384)

Notice that this would be impossible if the embedded proposition were in fact quoted (cf. **Who did Ahmet say "I saw"?*). The first-person indexical *men* in Uyghur is thus obligatorily shifted: i.e. it derives its reference from the intensional context, rather than the utterance context.

2.2 Shifty variation

Indexical shift shows rich variation, along multiple dimensions. Shifty variation can obtain across languages and intensional domains on the one hand, and across classes of indexical on the other. It can also obtain with respect to whether shifting is optional, obligatory or impossible for a given indexical and to what extent the shifting of one indexical has implications for that of another that locally co-occurs with it.

A fundamental property of shifty variation across these dimensions is that it is *implicational* in nature. I.e. the availability of indexical shift in a given intensional domain or for a given class of indexical may entail its availability in another intensional domain and for a different class of indexical, respectively. Similarly, the shiftability of a particular indexical has implications for the shiftability of another in the same domain. We briefly discuss shifty variation along its different dimensions below.

2.2.1 Variation in shifty environments

Indexical shift does not seem to be a universal phenomenon across languages.[1] In a language like English, indexicals like *I*, *you*, *here* and *now* are rigid designators in the sense of (3) and thus remain stubbornly anchored to the utterance-context, even in the scope of intensional predicates. This behavior contrasts with that of indexicals in other languages like Uyghur (cf. Ex. (4)) and other Turkic languages like Balkar (Koval 2014), Mishar Tatar (Podobryaev 2014), Turkish (Gültekin Şener & Şener 2011; Özyıldız 2012), as well as languages outside the Turkic family, like Magahi (Indo-Aryan, Baker To Appear, &

[1] The research on indexical shift is still quite incipient — although we have amassed considerable knowledge of this phenomenon in the last two decades, there are still notable gaps in the range of our knowledge: we need, in particular, to investigate the availability and nature of this phenomenon across many more languages.

Deepak Alok (p.c.)), Buryat (Mongolic, Wurmbrand 2016; Todorović & Wurmbrand To Appear) and Nuer (Nilotic, Messick & Monich 2016), among others. In all these languages, indexical shift of one or more indexicals is possible.

Shifty variation also occurs within individual languages, across different types of structures. The individual languages mentioned above have been reported to be generous in allowing indexical shift in a wide range of intensional environments. Other languages, e.g. Amharic (Semitic, Schlenker 1999; 2003a, et seq.), Zazaki (Iranian, Anand & Nevins 2004; Anand 2006), are more restrictive — shifting indexicals in some intensional environments, but not others (cf. Appendix for a full list). For instance, Amharic (Semitic, Schlenker 1999; 2003a, et seq.), Zazaki (Iranian, Anand & Nevins 2004; Anand 2006), and Navajo (Athapaskan, Speas 1999) allow indexical shift only under 'say'; Laz (Kartvelian, Demirok & Öztürk 2015), Nez Perce (Sahaptian, Deal 2017), Slave (Athapaskan, Rice 1989) and, for some dialects, in Tamil (Dravidian, Sundaresan 2018a) allow indexical shift under 'say' and 'think'. Nez Perce & Slave also allow indexical shift under 'know' and 'want', respectively, for specific classes of indexical.

What is immediately apparent from even just a cursory study is that shifty variation across different intensional domains is not random. Based on primary data collected via fieldwork from six dialects of Tamil and secondary data reported for twenty-eight languages spanning twenty (sub-)families, Sundaresan (2018a) shows that shifty variation is *implicationally restricted* as in (6):

(6) For a given grammar (language or dialect), if indexical-shift is effected in the scope of a non-speech attitude predicate, it must also be effected in the scope of a speech predicate.

Deal (2017; 2020) corroborates this conclusion and proposes that the implicational dependency may be even more articulated, as described under (7):

(7) INTENSIONAL HIERARCHY FOR INDEXICAL-SHIFT:
Speech > Thought > Knowledge
IMPLICATION: if an indexical shifts in the scope of a certain predicate-class, it necessarily also shifts in the scope of all predicate-classes to its left on the hierarchy.

2.2.2 Variation in shifty indexicals

Variation also obtains with respect to which indexicals may shift in a given language or intensional domain. Languages like English are again the most restricted, and don't allow any indexicals to shift. Others like Dargwa (Northeast Caucasian, Ganenkov 2016), Donna Sɔ and Tamil (Dravidian, Sundaresan 2018a) allow only 1st-person (agreement) to shift;[2] Uyghur (Turkic, Shklovsky & Sudo 2014), Amharic (Semitic, Schlenker 1999; 2003a, et seq.), Slave (Athapaskan, Rice 1989), Navajo (Athapaskan, Speas 1999), and Kurmanji (Iranian, Koev 2013) shift both 1st- and 2nd-person. Finally, Matsés (Panoan, Munro et al. 2012) and Zazaki (Iranian, Anand & Nevins 2004; Anand 2006) stand at the other end of the spectrum and may shift all classes of indexical.

Here again, we see evidence that shifty variation is not random, but restricted by implicational dependencies holding between indexical-classes, as in 8:

(8) Hierarchy of shifty indexicals: 'I' > 'you' > 'here':

[2] Though see our discussion in Section 6.1 about the possibility that shifted interpretations of allocutive agreement in Tamil could be instances of indexical shift for 2nd person in the language.

	Shifty 1st	Shifty 2nd	Shifty 'here'
Matses	✓	✓	✓
Uyghur	✓	✓	_
Tamil	✓	_	_
English	_	_	_

What the table in (8) shows is that there is no language that shifts 'you' to the exclusion of 'I' or 'here' to the exclusion of 'you' (and 'I'). These implicational restrictions are also mirrored language-internally. For instance, Nez Perce allows shifty 'here', 'you', and 'I'. In an intensionally embedded proposition containing all three, 'you' cannot shift to the exclusion of 'I', and 'here' cannot shift to the exclusion of 'you' (and 'I'). But the reverse patterns are amply attested across both languages and individual structures.

2.2.3 Variation in shifty behavior for a given indexical

An individual indexical may shift optionally, obligatorily or not at all. Based on the small sample of 30-odd languages which we know to evidence indexical shift, most languages seem to exhibit optional indexical shift for different classes of indexical and across distinct intensional environments. For a much smaller handful of languages, indexical shift seems to be obligatory in relevant environments. For instance, in Laz (Kartvelian, Demirok & Öztürk 2015), 'I' and 'you' obligatorily shift. In other languages, obligatory shift obtains only for particular classes of indexical and only under particular intensional verbs. For instance, in Slave (Athapaskan, Rice 1989), 'I' shifts obligatorily under 'say' but shifts optionally under 'think' and 'want'; both 'I' and 'you' shift optionally under 'ask' and 'tell'.

2.2.4 Variation in shifty behavior across indexicals: Shift Together

For a given indexical taken in isolation, it is impossible to know *a priori* whether it will shift obligatorily, optionally, or not at all. But patterns of shiftability may be diagnosed *across* indexicals within a single local domain.

A crosslinguistically robust "Shift Together" restriction (Anand & Nevins 2004; Anand 2006; Sudo 2012; Deal 2017; 2020) has been observed to regulate shifting of locally co-occurring indexicals as follows:

(9) Shift Together restriction: "All shiftable indexicals within an attitude-context domain must pick up reference from the same context" (Anand 2006, Ex. 297, 100).

For instance, in Zazaki (Iranian; Turkey) (Anand & Nevins 2004, 4, Ex. 13), all indexicals shift optionally, leading us in theory to predict four possible interpretations for the utterance in (10):

(10) *Scenario:* Ali tells Hasima:
Vɨzeri Rojda Bill-ra va kɛ ɛz 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 said to Bill that I_{Rojda} am angry at you_{Bill}.'
READING 2: ✓ Yesterday Rojda said to Bill that I_{Ali} am angry at you_{Hasima}.
READING 3: ✗ Yesterday Rojda said to Bill that I_{Ali} am angry at you_{Bill}."
READING 4: ✗ Yesterday Rojda said to Bill that I_{Rojda} am angry at you_{Hasima}.

However, only two of these four readings are actually attested: either both indexicals must shift (Reading 1), or both must remain unshifted (Reading 2). The two remaining readings (Readings 3-4), corresponding to structures where only one indexical shifts, are illicit.

Of course, Shift Together is explicitly defined over *shiftable* indexicals. This means that, in a language like Amharic where only 'I' and 'you' may shift but not 'here', 'here' will continue not to shift even when it locally co-occurs with shifted 'I' and 'you'. Such cases only seem to violate Shift Together on the surface; they don't genuinely do so.

A genuine instance of Shift Together would be one where e.g. both 'I' and 'you' may shift in theory, but in an intensional domain where both 'I' and 'you' occur, 'I' shifts but 'you' does not. Sundaresan (2018a) argues that under highly specific conditions in languages like Tamil, Korean and Slovenian, genuine exceptions to Shift Together of a particular kind may obtain (pace Deal 2020). The Tamil example presented by Sundaresan is repeated below:

(11) SHIFT TOGETHER EXCEPTION – TAMIL MONSTROUS AGREEMENT:
Raman$_i$ [$_{CP}$ taan$_{\{i,*j\}}$ enn-æ paartt-een-nnŭ] ottŭŋḍ-aan.
Raman ANAPH.NOM me-ACC saw-1SG-COMP admitted.-3MSG

LIT: "Raman admitted [$_{CP}$ that self had seen me]."
READING 1: ✓ "Raman$_i$ admitted that he$_{\{i,*j\}}$ had seen me$_{c*}$]"
READING 2: ✗ "Raman$_i$ admitted that he$_{\{i,*j\}}$ had seen me$_i$."

In (11), we have an overt *unshifted* 1st-person indexical *naan* ('I') which co-occurs in the embedded clause with "monstrous" (or shifty) 1st-person agreement triggered by a silent, shifted 1st-person indexical (Sundaresan 2012a). Sundaresan further presents structural arguments to show that both indexicals must lie in the scope of a context-shifting operator (or 👻). Under the assumption that both instances of 'I' are inherently shiftable, constructions like (11) genuinely violate Shift Together, and not just superficially. If this is correct, Shift Together emerges not as a universal, but as a robustly tendential restriction on shifting across (shiftable) indexicals in a local domain. Shift Together patterns and exceptions thereto will turn out to be relevant for the primary concern of this paper. In particular, we will see novel evidence for a new exception to Shift Together in interactions between indexical shift and allocutive agreement in Tamil.

Any theory of indexical shift must be able to derive not only the mere fact of its existence in particular environments but also the patterns of shifty variation we have mentioned here. Such a theory must in particular be able to capture the implicational nature of this variation. The dimensions of shifty variation outlined in the previous section thus serve as an analytical litmus test for the robustness of the various theories that are available. Among theories that treat indexical shift as involving a core grammatical component implemented in the syntax and semantics, we can distinguish two main approaches: the context-overwriting approach and the quantifier-binding approach. While both theories are agreed that indexical shift involves the presence of a Kaplanian monster (👻) – i.e. an operator that manipulates contexts – they fundamentally differ both with respect to assumptions about the nature of this 👻 and of the indexicals in their scope. As a result, they differ not only with respect to how indexical shift is fundamentally derived but also with regards to what the locus of shifty variation is. We turn to a brief discussion of these below.

2.3 Indexical shift via context-overwriting

Under context-overwriting accounts (see e.g. Anand 2006; Shklovsky & Sudo 2014; Deal 2020, a.o.) of indexical shift, the monster is a context-overwriting operator selected by an

attitude predicate. It takes an unshifted proposition as input and outputs a shifted one by replacing the utterance-context that the proposition would have been evaluated against with the intensional-context of the attitude verb. This is formally shown in (12) below:

(12) $[\![\text{👻}\alpha]\!]^{c,i,g} = [\![\alpha]\!]^{i,i,g}$, for a given proposition α

All indexicals are treated as functions over contexts. Thus, the lexical entries for 'I' and 'you' in all languages are as in (13) and (14), respectively:

(13) $[\![I]\!]^{c,g} = \lambda c.Author(c)$
(14) $[\![you]\!]^{c,g} = \lambda c.Addressee(c)$

Since the contextual value associated with an indexical is always unspecified in this way, indexicals are, in principle, always shifty. If an indexical occurs in the scope of a 👻, it will necessarily be evaluated against the intensional context associated with the attitude verb, since the utterance-context will have been overwritten by the 👻. Such an indexical will thus necessarily be shifted. Because of this, context-overwriting approaches model variation pertaining to indexical shift within and across languages in terms of variation in the presence and nature of the monsters. We'll see that this contrast to other approaches that locate variation in the properties of specific indexicals.

2.3.1 Deriving variation in shifty environments

Under the context-overwriting view, whether an indexical shifts or not depends solely on whether it occurs in the scope of a context-overwriting 👻 or not. This, in turn, reduces to the selectional properties of the associated attitude verb. When an indexical like 'I' in (13) is merged in a structure that has no 👻, *Author* is evaluated against c^*, the utterance context, by default, yielding an unshifted indexical; when 'I' is merged in the scope of a 👻, *Author* is evaluated against a "shifted" context, yielding a shifted indexical.

English has no indexical shift, then, simply because attitude verbs in this language never introduce a 👻 in their scope. In Uyghur, on the other hand, an attitude verb like *di* ('say') in (4) must introduce a 👻 in a finite clausal complement, yielding obligatory shift of any indexicals that lie in its scope. Shklovsky & Sudo (2014) report that indexicals in non-finite propositions embedded under 'say' may not be shifted. This, in turn, means that non-finite propositions must instantiate a distinct structure where a context-overwriting 👻 is absent.

To derive the fact that selectional variation for indexical shift is implicational (cf. Ex. (6)-(7)), something additional must be said. Following work in Sundaresan (2012a), Deal (2017; 2020) proposes that context-overwriting operators may be hosted on distinct complementizers along the clausal functional sequence summarized in (15).

(15) Cinque Hierarchy (see also Cristofaro 2005):
SPEECH ACT ≫ EVALUATIVE ≫ EVIDENTIAL ≫ EPISTEMOLOGICAL ≫ ...

Different attitude verbs select clauses which vary in size according to how much of this functional sequence they project. Under a strong version of this idea, this variation is curtailed by structural monotonicity. A speech verb like 'tell' selects a clause with a SpeechAct head, which then automatically entails the presence of the rest of the heads on (15). In contrast, an epistemic verb like 'know' selects the smallest clause which contains an Epistemic head but not the sequence of heads to its left. Given this structural monotonicity, a 👻 that is hosted on the SpeechAct head will only be available in the scope of speech verbs. Indexical shift will thus obtain under 'say' but not under any other classes of attitude verb. But a 👻 on Eval head will occur not only in the scope of an evaluative predicate (e.g. 'think') but also in that of a speech predicate (whose complement also

contains Eval). Consequently, indexical shift will occur not only under 'think' but also under 'say'. This yields the implication in (6).

2.3.2 Deriving variation in shifty indexicals

Under a context-overwriting view, the choice of which indexicals may be shifted reduces to the nature of the 👻 they scope under (Anand 2006; Deal 2020). Deal (2020) proposes that context-overwriting operators come in three distinct shapes which are parametrized across languages and individual structures. OP_{auth} overwrites only the *Author* coordinate; OP_{addr} overwrites only the *Addressee* coordinate, and OP_{loc} overwrites the *Location* coordinate alone.

To capture the implicational hierarchy of shifty indexicals in (8), Deal proposes that these operators (👻s) must occur in the rigid functional sequence shown below, on the clausal spine:

(16) $\text{OP}_{loc} >> \text{OP}_{addr} >> \text{OP}_{auth}$

A clause that hosts OP_{loc} will necessarily also contain OP_{addr} and OP_{auth}; a structure that hosts OP_{addr} will necessarily contain OP_{auth} but need not also contain OP_{loc}; finally, a clause that hosts OP_{auth} bears no implications about also hosting OP_{addr} and OP_{loc}. Thus the shifty implicational hierarchy in (8) falls out of independent conditions of monotonic structural containment for functional heads along the clausal spine.

2.3.3 Deriving variation in shifting behavior

We have seen that a given indexical may shift optionally, obligatorily, or not at all. Under the context-overwriting approach, this choice simply reduces to whether the 👻 it scopes under is obligatorily, optionally, or never selected under the associated attitude verb, yielding obligatory, optional and impossible shift, respectively.

It is in its ability to account for Shift Together patterns (cf. (10)-(9)) that the context-overwriting view truly shines. Recall that, under this view, *all* indexicals are, in theory, capable of shifting. The 👻 overwrites the utterance context and replaces it with the intensional one associated with the attitude verb. This ensures that, if two or more indexicals lie in the scope of a context-overwriting 👻 of the right shape, they will have no choice but to all shift, because there is only one context accessible against which they can be interpreted.

The problem is that this is too strong. Shift Together is not just explained; it is predicted to be the only possible outcome. But as we saw in Section 2.2.4, genuine exceptions to Shift Together do seem to obtain in configurations like (11). The only way to handle such exceptions under this view is to argue that they don't constitute genuine exceptions to Shift Together, e.g. because the shifty element is not an indexical to begin with (see Deal 2017, for such arguments & counter-arguments thereto in Sundaresan 2018a). We will return to this issue when we consider interactions between indexical shift and allocutive agreement in Section 6.1 below.

2.4 Indexical shift via quantifier binding

The alternative quantifier-binding view stems from the following core insight Schlenker (from 1999, 2): "In traditional model-theoretic accounts, attitude verbs are essentially construed as quantifiers over possible worlds. '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 [tuples of indices <Speaker, Addressee, Time, World, Location>] of thought- or of speech.*" A crucial consequence of construing attitude verbs as quantifiers over contexts, rather than mere worlds, is that a proposition embedded under an attitude verb is formally indistinguishable from a root proposition which is bound by a root quantifier associated with the utterance context.

If the context variable associated with an indexical in an embedded proposition is bound by the attitude verb, the indexical is evaluated against the attitude-context and is thus "shifted"; if, on the other hand, it is bound by the root quanfier or directly mapped to a participant of the utterance-context by the assignment function, it remains unshifted. This choice rests on the individual make-up of the indexical in question which is lexically prespecified as to whether it may be contextually bound or not. Hence, whereas context-overwriting approaches locate variation in the availability and make-up of monsters, quanifier-binding approaches typically locate it in the specifications on indexicals.

2.4.1 Deriving variation in shifty environments

Under the quantifier binding view, the difference between English and Uyghur rests solely on the nature of the indexical in each. The underlying properties of the structural environment in which both appear remains otherwise the same: i.e. in both, the corresponding indexical is merged under a "monstrous" attitude verb which quantifies over intensional contexts.

In the classic Schlenkerian approach to indexical shift, indexicals come in three inherent varieties. An indexical like *I* in English is lexically specified to denote the *Speaker* of c^*, the utterance context. Such an indexical serves as an island for contextual quantification, as the assignment function directly maps it to the (unique) author of the utterance-context. In contrast, 'I' in Uyghur is lexically specified *not* to denote the utterance-context, thus is obligatorily shifted. Finally, in a language like Amharic or Zazaki, where indexical shift is optional, 'I' is lexically underspecified wrt. the context it is evaluated against. In recent work, Sundaresan (2018a) suggests a variant of this approach which reduces to varieties of indexicals to two: UNSHIFTABLE which is specified not to shift, and SHIFTABLE which is specified to shift. Optional shift is dealt with in this approach by other means.

The Schlenkerian view cannot straightforwardly capture *selectional* variation in indexical shift across classes of attitude verb within a given language, much less the implicational nature of such variation. This is because the 👻, under this approach, is not selected by an attitude verb; rather, *every* attitude verb is assumed to be fundamentally monstrous. One way to capture such variation under this view is to posit that intensional quantification over contexts is not due to the verb directly, but is "outsourced" to an intensional complementizer selected by this verb. This is proposed in Sundaresan (2018a, following insights on the modeling of intensionality in Kratzer 2006; Moulton 2009; Elliott 2017 a.o.). Under this revised view, the 👻 is still a contextual quantifier but it is, nevertheless, selected by an attitude verb: selectional shifty variation can thus be captured. The implicational hierarchy in selectional variation in (6)-(7) is then captured in essentially the same way as under the context-overwriting approach, with the 👻 occurring at different heights along the functional hierarchy in (15).

2.4.2 Deriving variation in shifty indexicals

Under the classic Schlenkerian view of quantifier binding, the question of which indexicals (may) shift in a given language or structure reduces, again, to the lexical properties of the

specific indexicals. Such a system cannot, however, deal with the implicational hierarchy of I > YOU > HERE for shifting across indexicals, described in (8).

To accommodate this hierarchy, Sundaresan (2018a) argues that both 👻s and individual indexicals come in different shapes with the implicational hierarchies built into their definitions. A "trivial" 👻 abstracts over singleton context sets containing just a *World*, $👻_{Auth}$ abstracts over *Worlds* and *Authors* (or centered worlds), $👻_{Addr}$ over *Worlds*, *Authors* & *Addressee(s)* and $👻_{\forall}$ over all types of indexical. An inherently shiftable 'you' will thus never be shifted to the exclusion of 'I', though the reverse is possible. This hierarchy is replicated in the structure of individual indexicals and restricts variation in whether an individual indexical is shiftable or not. The structure of *you* contains that of *I* & the structure of *here* contains that of *you*. Thus the shiftability of 'you' is computed based on that of 'I'; the shiftability of 'here' is similarly parasitic on that of 'you'. Together with the family of 👻s, this yields the hierarchy in (8).

2.4.3 Deriving variation in shifty behavior

We have already seen that the choice of whether an indexical shifts obligatorily, optionally, or not at all, is built into the lexical specification of that indexical under the quantifier binding approach. But while capturing variation in shifty behavior for a given indexical is fairly straightforward, capturing varying in shifty behavior across indexicals, i.e. the Shift Together restriction, is less so.

Recall that, under this approach, the utterance-context is not overwritten in cases of indexical shift, but may co-occur with the intensional one. In a local intensional domain where two or more shifty indexicals (i.e. indexicals that are lexically underspecified wrt. to their context of evaluation) are merged, it is thus entirely licit for one to be bound by the intensional quantifier and for the other to be bound by the root quantifier associated with the utterance-context. The first indexical would then be shifted and the second would not, yielding a genuine exception to Shift Together. Shift Together thus does not fall out naturally under this approach and something additional must be stated to make it come about.

Sundaresan (2018a) proposes to derive Shift Together via the minimality constraint on contextual-binding in (17):

(17) LOCALITY RULE ON CONTEXT-BINDING: The silent context variable that is associated with an indexical must be coindexed with the λ that *locally* c-commands it.

(17) ensures that all indexicals in a local domain that are inherently capable of being shifted will be bound by the same quantifier. If this is the quantificational 👻 associated with the attitude verb, they will all shift; otherwise, they will all remain unshifted. They will thus shift or not shift together. Such an approach has the additional advantage that, unlike the context-overwriting view, it can also accommodate legitimate exceptions to Shift Together. Recall that Shift Together only applies to indexicals that are shiftable to begin with.

Under a quantifier binding view, indexicals inherently vary in whether they are lexically specified to shift or not. The Shift Together exception in (11) is naturally explained if we assume that overt instances of 'I' in Tamil are specified never to shift while covert instances of 'I' are specified to always do so (Sundaresan 2018a). To summarize, the quantifier binding view predicts Shift Together to obtain tendentially, not universally. Shift Together obtains whenever two or more shiftable indexicals in a local domain are bound by the minimally closest contextual quantifier (that is capable of shifting them). But in configurations where some indexicals are shiftable but others are not, legitimate

exceptions to Shift Together will obtain because the latter will serve as islands to contextual binding.

While the goal of this paper is not to adjudicate between theories of indexical shift, we will see that interactions between AllAgr and indexical shift in Tamil provide crucial empirical insights which, in turn, help adjudicate the debate between these approaches.

3 Primer on allocutive agreement

3.1 Basic description of allocutive agreement

Allocutive agreement (henceforth AllAgr) is a pattern where clause-level agreement marking reflects properties of the *Addressee* of a context rather than those of an argument of the clause. This is illustrated by the examples from the Souletin variety of Basque in (18)-(21), reported by Antonov (2015).

(18) Etʃe-a banu
house-ALL 1.SG.go
'I am going to the house.'

(19) Etʃe-a banu-k
house-ALL 1.SG.go-ALLOC:M
'I am going to the house.' (familiar male addressee)

(20) Etʃe-a banu-n
house-ALL 1.SG.go-ALLOC:F
'I am going to the house.' (familiar female addressee)

(21) Etʃe-a banu-sy
house-ALL 1.SG.go-ALLOC:RSP
'I am going to the house.' (respected addressee)

All four examples express the same propositional content, but they vary in the morphology on the verb in a way that tracks the identity of the *Addressee* and their relationship with the *Speaker*. (18) shows the basic form of the verb with 1.SG agreement with the subject. The others each add an allocutive suffix, restricting them to use with *Addressees* with specific gender, number and politeness status.

AllAgr has been most extensively described and studied in Basque (see e.g. Bonaparte 1862; Oyharçabal 1993; Alcázar & Saltarelli 2014), but has now been identified in a considerable number of other languages (see e.g. Amritavalli 1991; Antonov 2015; Zu 2015; Bhattacharya 2016; Miyagawa 2017; Alok & Baker 2018; Kaur 2019; McFadden 2020; Alok 2021). Following Antonov (2015), we can identify three defining properties of AllAgr. First, as noted, it marks properties of the *Addressee*. Second, it doesn't only occur when the *Addressee* is an argument, i.e. it is crucially distinct from 2nd person argument agreement. Third, it involves grammaticalized inflectional morphology at the verbal or clausal level. This last point distinguishes it from special vocative markers and clitics, which may serve similar functions but show different morpho-syntactic behavior.

3.2 Distribution of and variation in allocutive agreement

While there is of course non-trivial variation across languages in the details of AllAgr, some recurring patterns have been identified which are likely to be relevant for any theoretical treatment (see Antonov 2015, for an initial typology). First, while the information reflected about the *Addressee* falls under a suitably broad conception of ϕ-features, the distinctions

marked in a given language typically differ from and are reduced relative to those made by argument agreement. Categories of honorificity and familiarity are especially common, gender is also common, while number seems to be less so. Person, on the other hand, is usually not marked at all, or is only present in a fixed form without distinctions.[3]

Second, AllAgr is often blocked in cases where there is also 2nd person argument agreement. In other words, in any given clause we can have agreement with the *Addressee* in its capacity as an argument, i.e. garden variety 2nd person argument agreement, or in its capacity as as speech act participant, i.e. AllAgr, but not both. There is a question of whether this is a relatively surface-oriented restriction against two instances of overt agreement or something deeper that blocks AllAgr when there is a 2nd person argument, completely independent of whether the latter triggers argument agreement. The evidence that we are aware of seems to suggest the former. See Antonov (2015); Alok & Baker (2018); McFadden (2020); Alok (2021) and references there for discussion.

Third, AllAgr is typically restricted to appear only in clauses of certain types. There is significant cross-linguistic variation on the details here, but some important trends can be identified. The central environment, where it appears in all languages that have it, is in finite root declarative clauses. Languages then differ in the extent to which it can appear in other clause types. Regarding other types of unembedded clause, Basque e.g. excludes it in interrogatives, exclamatives and imperatives, while Japanese allows it in interrogatives and exclamatives, but not imperatives, and Tamil allows it in all of them. In embedded environments, Basque bans AllAgr quite generally, whereas Japanese and Tamil allow it, but only in what look like embedded root clauses, e.g. those in the complements of a restricted class of attitude verbs (so-called 'bridge verbs') (Miyagawa 2012; McFadden 2020). Magahi, finally, allows AllAgr in an even wider range of embedded clause types, but restricts it to those that are finite (Alok & Baker 2018; Alok 2021).

A final point, which will be of central important to us here, concerns the details of AllAgr when it does appear in embedded environments. As we have seen, AllAgr targets the representation of the *Addressee*. In unembedded clauses, matters are straightforward: there is only one notional *Addressee*, the *Addressee* of the utterance, so this is what AllAgr invariably reflects, a pattern we will refer to as $\text{AllAgr}_{\text{unshifted}}$ going forward. In embedded clauses, in particular ones that come under an intensional predicate, matters are more interesting.

Growing evidence from a number of sources shows that at least some embedded clauses which describe an indirect speech act and display various syntactic properties of main clauses may host information pertaining to the indirect speech act, including a representation of its *Addressee* (see e.g. Aelbrecht et al. 2012; Krifka 2017). In principle, this yields a choice: does AllAgr in such an embedded clause reflect the properties of the *Addressee* of the overall utterance, or does it target the *Addressee* of the matrix speech act?

In at least some languages, like Magahi, we see that embedded AllAgr can under certain circumstances reflect the latter. In (22a), both matrix and embedded clause bear the same high honorific allocutive marking, reflecting the fact that the sentence as a whole is addressed to a teacher, even though the matrix speech event is between two peers. But in (22b), we see that the AllAgr in embedded clause *can* be sensitive to the speech context set up by that matrix predicate.

[3] Thus the forms used in Basque are (nearly) the same as those used for argument agreement with 2nd person ergatives (see Antonov 2015, p. 66f. for discussion of the forms), but no alternation is possible with other persons. This makes sense, given that the *Addressee* is by definition 2nd person, or rather, 2nd person is defined on the basis of the *Addressee*.

(22) a. Santeeaa Banteeaa-ke kahk-ain ki Ram-ke Sita-se baat kark-e
Santee Bantee-DAT told-HH.AL that Ram-DAT Sita-INS talk do-INF
chah-ain.
should-HH.AL
'Santee told Bantee that Ram should talk to Sita.' (said to a teacher) (Alok & Baker 2018, ex. (26), p. 23)

b. Santeeaa Banteeaa-ke kahk-ain ki Ram-ke Sita-se baat kark-e
Santee Bantee-DAT told-HH.AL that Ram-DAT Sita-INS talk do-INF
chah-au.
should-NH.AL
'Santee told Bantee that Ram should talk to Sita.' (said to a teacher) (Alok & Baker 2018, ex. (27)a, p. 23)

The matrix verb *kahk-ain* 'tell' still bears a high honorific AllAgr marker, again reflecting that the entire sentence has been uttered to a teacher. However, the embedded verb *chah-au* now bears distinct, non-honorific AllAgr, befitting of the fact that it reflects the status of Bantee, the *Addressee* of the speech act described in the matrix clause, who is a peer of the matrix subject speaker Santee. Taking inspiration from indexical shift, we will refer to this kind of AllAgr that targets the intensional *Addressee* rather than the *Addressee* of the utterance as $\text{AllAgr}_{\text{shifted}}$.[4]

3.3 On theoretical approaches to allocutive agreement

AllAgr has received considerable attention in recent years in work adopting a generative approach because of the theoretical implications it seems to have. A fairly neutral conception of agreement is as a dependency between the form of one grammatical element and one or more properties of some other grammatical element. Assuming that AllAgr really is agreement in this sense, it must be agreement *with* something, hence there must be a representation of the *Addressee* that is accessible at whatever level of grammar is responsible for agreement. Now, it is probably uncontroversial that the *Addressee* and the *Speaker* must be represented at a level that can be accessed by the semantics and pragmatics, given their uncontroversial role in the interpretation of various indexical items. It is normally assumed, however, at least in current Minimalist work, that agreement is implemented in the morphosyntax. All of this means that AllAgr, if it is analyzed correctly, can provide a strong argument in favor of the syntactic representation of the speech act and its participants.

There is thus a general consensus in recent Minimalist work that AllAgr should be analyzed as (morpho-)syntactic agreement with a syntactic representation of the *Addressee*, which we will refer to henceforth as ADDR_{syn}.[5] This leaves open a number of possibilities with respect to what this ADDR_{syn} looks like and where exactly it appears, as well as the precise nature of the locus of agreement itself. Oyharçabal (1993), for example, proposes that AllAgr targets an allocutive operator that is adjoined to TP, which subsequently moves up to C. Most subsequent work has retained the idea that AllAgr is associated with the C domain, but has abandoned the idea of adjunction to TP.[6] Some version of

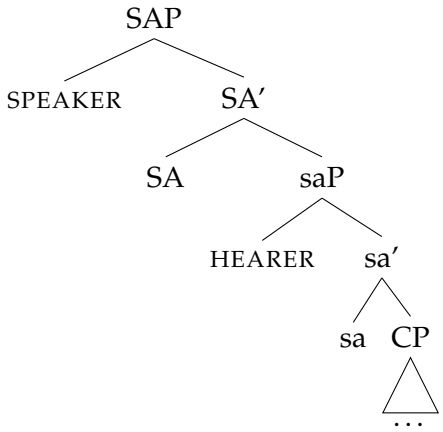
[4] Framing such AllAgr as shifted is purely descriptive, at least for the moment. In what comes below we will engage seriously with the question of whether AllAgr really involves a monster, i.e. is a genuine kind of indexical shift, or just something that looks superficially similar.

[5] We do this both to abbreviate a wordy formulation, and to make explicit the contrast with *Addressee*, the semantic notion of the particular contextual parameter.

[6] The relationship with C was assumed in order to capture restrictions on AllAgr in embedding and questions in Basque, and has been taken over in some form in most subsequent work. Having the operator adjoined

the so-called neo-performative hypothesis of Speas & Tenny (2003) (building on Ross (1970)) is typically assumed, whereby the speech act and its participants are represented by (typically silent) syntactic material in the clausal periphery, i.e. in the upper C domain (see e.g. Hill 2007; Haegeman & Hill 2013; Miyagawa 2012; Zu 2015; Haegeman & Miyagawa 2016; Miyagawa 2017; Krifka 2017; McFadden 2020). One particular instantiation of this (from Miyagawa 2017) is shown in 23:

(23)



The idea then is that AllAgr boils down to a type of ϕ-agreement that happens to be with the ADDR$_{syn}$, in the clausal periphery. In terms of the operation Agree, ADDR$_{syn}$ is the Goal, which leads to the question of what the Probe is. And indeed, specific analyses in the literature differ depending on the identity and location of the Probe and the way in which it interacts with the Goal. For Miyagawa (2017), for example, the probe starts out in C, then moves up into SAP, from where it can probe downward to Agree with the HEARER. McFadden (2020), on the other hand, assumes that the allocutive probe remains in C and can probe upward to find the HEARER. Alok & Baker (2018); Alok (2021) depart most strongly in that they place both the probe and the goal for the Agree operation that underlies AllAgr in the T domain rather than the C domain, at least for Magahi.

For all of these accounts, it is primarily on the Probe side that cross-linguistic variation is situated. That is, it is the availability of the right kind of probe that determines whether a language has AllAgr at all, and the specific properties of that probe are responsible for the distribution of and distinctions made by AllAgr in a given language.[7] And even among languages with AllAgr, there seems to be variation in where the probes appear, which is at least plausibly orthogonal to whether a clause contains a SpeechActP or not. This is presumably (part of) the explanation for the variation we find in whether languages which do have AllAgr allow it in non-declarative root clauses or embedded clauses.

The system proposed by McFadden & Sundaresan (2021) for example builds on McFadden (2020)'s analysis of AllAgr to develop an integrated theory that also covers upward and downward complementizer agreement. McFadden & Sundaresan propose that AllAgr involves a ϕ-probe relatively high in the C-domain, in a position crucially above the clausal phase boundary. Assuming downward probing to be the default, this ϕ-probe first tries to probe downward. However, it cannot find a goal because of the intervening phase

to TP, on the other hand, was meant to explain why it could not be pronounced overtly or bind anaphors and why the agreement is realized as a verbal suffix, but depended quite a bit on the particular theoretical assumptions about agreement, Case and government, which have been superseded.

[7] Note that this is essentially parallel to related theories of argument agreement. While the syntactic position and properties of particular arguments in a given language will affect certain details of its agreement system, the bare fact that a language has argument agreement for a particular subset of the ϕ-features appearing in a particular place in the clause is largely determined by the presence and properties of the relevant probes.

boundary (PIC). This results in the probe searching upward as a last resort (involving a mechanism like those proposed by Béjar & Rezac 2009; Carstens 2016; Clem 2018). If this happens in an embedded clause that has root syntax, i.e. contains a SpeechActP, the probe finds the ADDR_{syn} hosted in this phrase as a closer Goal than anything in a higher clause. Successful Agree between these elements yields AllAgr with the *Addressee* of the intensional context, yielding $\text{AllAgr}_{\text{shifted}}$ like we saw in (22b) above.[8] This is templatically illustrated in (24):

(24) $\text{AllAgr}_{\text{shifted}}$ – AllAgr with the "shifted" *Addressee*:
(Subj$_{Matrix}$) [$_{SAP}$ ADDR_{syn} [ϕ:] [$_{phase}$ Subj$_{Embedded}$]]

But this ϕ-probe may also be hosted on a matrix C head or on a C head in an embedded clause that itself lacks a SpeechActP, as we saw in (22a) above. In both these scenarios, its closest goal will be the ADDR_{syn} hosted of the *matrix* SpeechActP, denoting the *Addressee* of the utterance-context, i.e. we get $\text{AllAgr}_{\text{unshifted}}$. We illustrate how $\text{AllAgr}_{\text{unshifted}}$ is derived in root clauses in (25a) and in embedded clauses lacking a SpeechActP in (25b):

(25) $\text{AllAgr}_{\text{unshifted}}$ – AllAgr with the "unshifted" *Addressee*:

a. On root SpeechActP:
[$_{RootSAP}$ ADDR_{syn} [ϕ:] [$_{phase}$ Subj$_{Matrix}$]]

b. On embedded CP:
[$_{Root-SAP}$ ADDR_{syn} (Subj$_{Matrix}$) [$_{CP}$ ϕ: [$_{phase}$ Subj$_{Embedded}$]]]

The representation of a SpeechActP including ADDR_{syn} is guaranteed in root clauses. In embedded clauses, it depends at least in part on the thematic properties of the selecting attitude verb, as we have seen. There are no handy shortcuts for knowing these *a priori*. Not all speech verbs always select a SpeechActP in their complement. Conversely, clausal complements of non-speech act verbs do not automatically lack a SpeechActP. In fact, it is even slightly more complicated than this. It is at least possible that certain non-communication predicates like 'think' can function as 'bridge'-verbs, i.e. that they can embedd clauses with root syntax, including their own SpeechActP (see Hooper & Thompson 1973; Meinunger 2006; Krifka 2014, for some related discussion). Since, however, the relevant intensional act doesn't involve an *Addressee*, this embedded SpeechActP is defective in the sense that it doesn't contain an ADDR_{syn}. Hence in such a situation, even though we have an embedded SpechActP, if there is an allocutive probe we will still get $\text{AllAgr}_{\text{unshifted}}$ rather than $\text{AllAgr}_{\text{shifted}}$.

Under this approach, then, the particular details of the distribution of AllAgr in a language — i.e. whether it yields $\text{AllAgr}_{\text{unshifted}}$ or $\text{AllAgr}_{\text{shifted}}$— depend on whether the clause hosting the relevant ϕ-probe projects a SpeechActP with an ADDR_{syn} or not. However, the basic fact of whether a language has the phenomenon of AllAgr at all is determined by whether or not a clause in this language may host the right kind of agreement probe, in McFadden & Sundaresan (2021)'s terms, a ϕ-probe on a C head above the CP phase. Most languages don't seem to have AllAgr at all, and even in those that do, it is frequently optional even in the contexts where it is possible (Antonov 2015; Alok & Baker 2018; McFadden 2020). This explains why, at least as of now, allocutive agreement data have only been reported for a small number of languages.[9]

[8] Tweaking different details in this set up yields upward and downward complementizer agreement patterns in this system, relating to the precise position of the probe and the details of the surrounding structure.

[9] Of course, as with indexical shift, we as a field have barely scratched the surface in this regard. Because it has only recently been widely enough discussed in the literature for a significant number of linguists to know of

4 Theoretical comparisons and predictions

In this section we want to take a first step at working out the space of possibilities for interactions between allocutive agreement and indexical shift based on what we already know about the workings of each phenomenon in isolation.

4.1 Distributional similarities & differences

The discussion so far should make clear that there are strong parallels between the two phenomena. Both target contextual participants and have been argued to have a syntactic component. The ultimate question, given these parallels, is to what extent indexical shift and AllAgr involve shared underlying mechanisms. To the extent that they do, we would predict for them to show clear implicational interactions, and there is enough overlap in the respective properties and distributions of the two phenomena to allow us to make informed predictions about such possible interactions.

However, there are also systematic differences between AllAgr and indexical shift. AllAgr is largely a phenomenon of root clauses, appearing in a cross-linguistically variable but typically restricted set of embedded environments, and specifically involves the *Addressee*. Indexical shift, on the other hand, *only* appears in environments embedded under attitude predicates, but under a wider range (again subject to cross-linguistic variation) of such predicates, and can involve the full range of contextual parameters, i.e. *Speaker*, *Time*, *World* and *Location* in addition to *Addressee*.

Given these distributional differences, we can already set aside a number of irrelevant cases where the two phenomena will trivially fail to interact, e.g. in unembedded clauses where shift is simply impossible, or in clauses that simply lack an indexical of the right kind or don't have AllAgr at all. Nonetheless, there is enough overlap that the two should be able to interact in those embedded environments where both are licensed. In particular, we expect potential interactions between indexical shift and $\text{AllAgr}_{\text{shifted}}$ in clauses embedded under an intensional predicate, which furthermore actually contain a shiftable indexical and AllAgr. The question we are now concerned with is what the nature of such an interaction might be. In particular, what does shift of either one lead us to expect regarding shift of the other? We will consider two scenarios below.

4.2 Scenario A: Does shifted 'you' entail $\text{AllAgr}_{\text{shifted}}$?

Consider a language that has AllAgr and also allows indexical shift for 2nd-person. If we find that 'you' is indexically shifted in an embedded proposition, this tells us of course that 'you' is in principle shiftable in this language, and also that in this clause it lies under the scope of a 👻 targetting the *Addressee* parameter of the intensional speech context, i.e. a $👻_{Addr}$ or $👻_{\forall}$ in the sense of Sundaresan (2018a) or an OP_{addr} and OP_{auth} in the sense of Deal (2020).

The position of the 👻 on the clausal spine may itself vary, depending on which attitude verbs allow indexical shift in their scope, in this language (cf. Sections 2.3.1 & 2.4.1). For instance, if this is a language like Amharic (Schlenker 2003b) or Zazaki (Anand 2006) where indexical shift only obtains under speech verbs, $👻_{Addr}$ will be hosted on the embedded

its existence and be on the look-out for it, and because it can easily be confused with functional similar but formally distinct phenomena like special vocative clitics, it is quite possible that AllAgr is actually there and waiting to be properly identified in a far winder collection of languages. Hence a good deal more careful empirical and typological work will be needed before we can venture statements as to how infrequent or "normal" the phenomenon may be.

SpeechAct head). If, on the other hand, this is a language like Uyghur (Shklovsky & Sudo 2014) or Mishar Tatar (Podobryaev 2014) where it can obtain under other attitude verbs as well, 👻$_{Addr}$ will be hosted lower on the functional spine, e.g. on an Eval(uative), Evid(ential) or Epist(emic) head. But regardless of where along the clausal spine the 👻 is hosted, 'you' is only expected to shift in propositions selected by a verb of communication, like 'tell', since again, only such verbs delineate events with *Addressee* in addition to a *Speaker*.

Concretely, this means the embedded clause must contain a 👻$_{Addr}$, and of course must be large enough to include whichever head hosts 👻$_{Addr}$ in the relevant language.[10] This is shown for the model sentence in (26a) with the structure in (26b):

(26) Embedded CP with indexically-shifted 'you':

a. Leela told Ravi that you are a pest.
≈ Leela told Ravi that Ravi is a pest.

b. Leela$_i$ told $\boxed{\text{Ravi}_j}$ [$_{CP}$ … 👻$_{Addr}$ … that $\boxed{\text{you}_j}$ are a pest].

If a version of this embedded clause now also displays AllAgr, this means it must also have an allocutive probe in the embedded clausal periphery, as illustrated below:[11]

(27) Embedded CP with indexically-shifted 'you' & AllAgr:

a. Leela told Ravi that you are a pest.
≈ Leela told Ravi that Ravi is a pest + AllAgr.

b. Leela$_i$ told $\boxed{\text{Ravi}_j}$ [$_{CP}$ … 👻$_{Addr}$ … [Probe$_{alloc}$ [$_{phase}$ that $\boxed{\text{you}_j}$ are a pest]]]

Given the configuration laid out in (27b), will we get AllAgr$_{\text{shifted}}$, reflecting the properties of the *Addressee* of the matrix speech context, Ravi, or AllAgr$_{\text{unshifted}}$, reflecting the properties of the *Addressee* of the utterance-context?

The answer is unclear, because the choice between AllAgr$_{\text{shifted}}$ and AllAgr$_{\text{unshifted}}$ ultimately depends on the presence vs. absence of an intensional ADDR$_{syn}$ in the embedded clause. If such an ADDR$_{syn}$ is locally present, any allocutive agreement will necessarily be shifted since Probe$_{alloc}$ will Agree with it. But if ADDR$_{syn}$ is absent, we will get unshifted AllAgr$_{\text{unshifted}}$, since Probe$_{alloc}$ will instead Agree with the ADDR$_{syn}$ of the utterance context. In the two main approaches of indexical shift we have discussed here, the 👻 is either a context-overwriting operator in the scope of a quantificational attitude verb or it is itself a contextual quantifier. It must ultimately associate all instances of shifted 'you' in its scope with the addressee (or goal) argument of the attitude verb. But neither approach, as

[10] We might reasonably expect this to be a SpeechActP, given that we're talking about the complement of a verb of communication, but as we have said in Section 3.3, not all speech verbs always select a SpeecActP (and see also Sundaresan 2018a, for some relevant discussion). Of course in a language where 👻$_{Addr}$ is only hosted on the SpeechAct head, an indexically shifted 'you' does guarantee that we have a SpeechActP. But in ones where it can appear in a lower head like Eval, it is at least possible that what we are dealing with here is only an EvalP. Hence our cautious formulation in the main text.

[11] We set aside the question of what precisely the nature of the allocutive probe is, whether it is simply a ϕ-probe in a particular structural position (as proposed by McFadden & Sundaresan 2021), an uninterpretable honorificity feature (as proposed by Alok 2021) or something that more explicitly targets the ADDR$_{syn}$, and simply label it Probe$_{alloc}$. We also set aside the question of the relative positions of the 👻 and the ADDR$_{syn}$. The representation in (27) is purely illustrative for now, and shows one possible version of how things could be. Finally, the two-way arrows between *Ravi*, 👻 and shifted 'you' are merely meant to show that the three are linked, with such linking being understood purely descriptively, for now.

far as we are able to discern, requires the addressee itself to be locally represented in the syntactic structure for such an association to obtain, i.e. 👻$_{Addr}$ does not necessarily entail ADDR$_{syn}$.

To summarize then, there is no obvious entailment that a clause that hosts shifted 'you' as well as an allocutive probe should yield AllAgr$_{\text{shifted}}$, and not AllAgr$_{\text{unshifted}}$.[12]

4.3 Scenario B: Does AllAgr$_{\text{shifted}}$ entail shifted 'you'?

Let us now consider the reverse case. Again, take a language that, in principle, allows both 2nd-person indexical shift and AllAgr. If we get AllAgr$_{\text{shifted}}$ occurring in a particular embedded clause in such a language, do we now predict that any 2nd-person indexicals in this SpeechActP will necessarily also be shifted? Recall furthermore from Section 2.2 that no language allows shifting of 'you' without shifting of 'I' (cf. Ex. (8) and the discussion in Section 2.2.2). Does this then mean that any 1st-person indexical in the SpeechActP will also be shifted?

In the analytic terms we have described so far, an embedded clause that exhibits AllAgr$_{\text{shifted}}$ must host an allocutive probe as well as an intensional ADDR$_{syn}$ on a local SpeechAct head, as shown in (28b) for the model sentence in (28a) below:

(28) Embedded CP with AllAgr$_{\text{shifted}}$:

a. Leela told Ravi that you are a pest.
POTENTIAL SHIFTED READING: ≈ Leela told Ravi that Ravi is a pest + AllAgr.
POTENTIAL UNSHIFTED READING: ≈ Leela told Ravi that you$_{c*}$ are a pest + AllAgr.

b. Leela$_i$ told $\boxed{\text{Ravi}_j}$ [$_{SAP}$ $\boxed{\text{ADDR}_{syn\_j}}$ … [Probe$_{alloc}$ [$_{phase}$ that you are a pest]]]

For such a clause to also shift any instances of (shiftable) 'I' and 'you', it must also contain a 👻 of the right contextual shape to shift these elements, e.g. a 👻$_{Addr}$. So the question we are really asking is whether the presence of such a 👻 is entailed in a clause with AllAgr$_{\text{shifted}}$.

Such a question is again difficult to answer because theories of allocutive agreement do not discuss the relevance (or lack thereof) of a 👻, and that too one that can shift 'you' (and, by implication, 'I') in a given clause, for the availability of AllAgr$_{\text{shifted}}$ in that clause. The input conditions for AllAgr$_{\text{shifted}}$ to obtain are delineated in syntactic terms: i.e. we need a Probe$_{alloc}$ and the intensional ADDR$_{syn}$ on the local SpeechAct head. It is also not the case that the embedded CP in (28b) represents the kind of intensional environment that would automatically ensure the presence of 👻$_{Addr}$. Under a context-overwriting view to indexical shift, as we have seen, the presence of a 👻 in an intensionally embedded proposition is not guaranteed, but depends solely on the selectional properties of the associated attitude verb, i.e. of 'tell' in (28a). If this is a language where indexical shift for 'you' and 'I' is obligatory, then the presence of an OP$_{addr}$ and OP$_{auth}$ which can shift these indexicals is assured and we do predict indexical shift to obtain. But if this language belongs to the (much more common) group of shifty languages that shifts indexicals optionally, it is not. Under the quantifier-binding view, a 👻, being a contextual quantifier, must be present in any intensional environment; but we cannot know ahead of time if this 👻 will be of the right contextual shape to shift 'I' and 'you'. Again, this depends, at least partly, on

[12] Note that we are not saying that such an entailment doesn't hold, only that it is not immediately obvious, given what we know, that it should. Also note that the availability of shifted 'you' by itself bears no consequences for the availability of AllAgr, shifted or otherwise: this depends solely on whether a Probe$_{alloc}$ is also hosted in the clause or not.

whether indexical shift for 'you' (and 'I') is optional or obligatory, which we cannot know in advance.

4.4 Summary & sneak peek

The fundamental problem we face in asking questions about the interactions between AllAgr and indexical shift is this. The two phenomena are framed in very different terms, one syntactically and the other (predominantly) semantically, so it is not obvious how they align.

AllAgr is analyzed as an Agree dependency between an agreement probe and an ADDR_{syn} in SpeechActP or some other clausal functional projection. This ADDR_{syn} is straightforwardly syntactic, crucially containing ϕ-features associated with a particular individual, and may even simply be a (silent) DP. Indexical shift is, on the other hand, at least in the two main approaches we have discussed, handled in terms of a monster, at core a semantic element which manipulates contextual information against which indexical elements will be interpreted at LF. Rather than dealing in individual participants, it deals in contexts, and thus may not even contain information about specific individuals like their ϕ-features.[13] As for indexical shift, we have seen that there are theories of what structural positions a 👻 may occupy with important syntactic implications for shifty variation that hinges on this choice (Sundaresan 2012a; 2018a; Deal 2020). But, as far as we are aware, there is no fully worked-out theory of whether and how indexical shift is derived in the syntax (see Shklovsky & Sudo 2014, for an initial discussion), which engages with *syntactic* questions like what kind of Agree dependency is involved, for what syntactic features and between which specific elements.

To sum up, we have no straightforward way to map the concept of an allocutive probe and the ADDR_{syn} onto that of a 👻, and vice-versa. This makes it difficult for us to immediately determine whether the presence of a 👻 that shifts 'you' entails that of *Addressee*in the local SpeechActP in a clause that also hosts a Probe_{alloc} (Scenario A). Conversely, it also makes it difficult to determine whether the presence of Probe_{alloc} and *Addressee* in the SpeechActP in an intensionally embedded clause entails the presence of $👻_{Addr}$ in this clause (Scenario B). Thus we have no clear expectation that $\text{AllAgr}_{\text{shifted}}$ should entail shifted 'you', nor do we have an expectation that shifted 'you' should entail $\text{AllAgr}_{\text{shifted}}$.

In the next two sections we will discuss actual interactions between indexical shift and AllAgr in two languages which play out the hypothetical scenarios above, namely in Magahi (Alok & Baker 2018; Alok 2021) and Tamil (Sundaresan 2012a; 2018a; McFadden 2020). The nature of these interactions strongly suggests that the two phenomena are intimately related and may even involve the same underlying mechanism. In particular, we will see that, in Magahi, the shifting of 'you' in a given clause entails that any allocutive agreement in that clause will be $\text{AllAgr}_{\text{shifted}}$. We will also see that the reverse dependency, outlined in Scenario B, holds true in Magahi: i.e. the presence of $\text{AllAgr}_{\text{shifted}}$ in a given clause, in a language which, in principle, allows 'you' (and, thus, by implication 'I') to be shifted, also entails that any instances of 'you' or 'I' in that clause will be shifted. In other

[13] I.e. we can imagine a monster meaning something like 'the speech act participants against which this clause will be interpreted are those of the matrix speech predicate', not, 'the speaker is Mary, and the addressee is John'. Note that there is a principled reason for this potential disconnect between 2nd person indexical shift and $\text{AllAgr}_{\text{shifted}}$, even though both involve the *Addressee*. The former deals in contexts and the latter deals in individuals. So, what is needed to implement indexical shift is, strictly speaking, just an interpretive adjustment regarding which context's *Addressee* a pronoun is interpreted against, without necessarily fixing the specific identity or properties of that *Addressee*. AllAgr, on the other hand, needs to get specific ϕ-features valued, and so it requires an ADDR_{syn} that picks out a specific individual, or at the very least indicates concrete ϕ-features characterizing that individual.

words, there is a biconditional dependency between $\text{AllAgr}_{\text{shifted}}$ and shifted 'you' in this language. Matters are a bit more nuanced in Tamil. Here, we will see that a biconditional dependency between $\text{AllAgr}_{\text{shifted}}$ and shifted 2nd-person holds only for covert instances of 'you' in this language; overt instances of 'you' may continue to be unshifted in a clause with $\text{AllAgr}_{\text{shifted}}$.

Given the paucity of crosslinguistic data,[14] we will treat the implications of these results as significant guidelines for future research on these issues, but not as conclusively prefiguring an ultimate cross-linguistically valid analysis of these phenomena. Nonetheless, these results already force us to find a common analytic vocabulary and machinery with which to re-evaluate indexical shift and allocutive agreement, and to question in these terms the relevance of a 👻 for cases of $\text{AllAgr}_{\text{shifted}}$, on the one hand, and the relevance of the ADDR_{syn} for cases of indexical shift, on the other. Ultimately, we will also see that a comparison of the Magahi and Tamil data will provide us with useful empirical diagnostics involving Shift Together patterns which, in turn, will allow us to critically reappraise the comparative merits of the context-overwriting & quantifier-binding theories of indexical shift discussed in this paper.

5 Indexical shift & allocutive agreement in Magahi

Magahi (Indo-Aryan) is a language that shows both indexical shift and AllAgr. We describe the nature of these phenomena and their interactions here, based on the discussion in Alok & Baker (2018); Alok (2021).

5.1 Background on indexical shift & AllAgr in Magahi

Both 1st and 2nd person pronouns shift optionally in Magahi, and the choice of intensional predicate under which such shift may obtain is not limited to 'say', but also includes e.g. 'think' and 'dream', though shift of 2nd person is restricted to the complements of predicates that take *Addressee* arguments, like 'tell', 'ask', 'convince' and 'remind'. Example (29) demonstrates (optional) shift of both 'I' and 'you' under 'ask'.

(29) Ram John-se puuchh-kai ki kaa ham toraa dekh-l-i he.
Ram John-INS ask-3.NH.S that what I you.ACC see-PRF-1.S be
'Ram asked John whether I saw you.' (whether Ram saw John, or whether I saw you) (Alok & Baker 2018, ex. (33), p. 27)

Given the discussion of the two monster-based theories of indexical shift in Section 2, this means that Magahi must have a 👻 which is capable of shifting 'I' and 'you': i.e. either a context-overwriting OP_{addr} which in turn selects OP_{auth}, as under Deal (2020), or a quantificational $👻_{Addr}$ which is lexically specified to shift both *Addressee* and *Speaker*, as in Sundaresan (2018a). This 👻 must be situated on an Eval(uative) head on the clausal spine and will thus be selected under both verbs of speech like 'tell' and 'ask' and under verbs

[14] We are not aware of other languages where systematic interactions between the two have been reported and discussed, so start our investigations in a cautious spirit. Since our language sample is so small, we cannot adduce any broad generalizations about the nature of indexical shift and AllAgr based on the interactions observed for these languages alone. Further empirical work on other languages is urgently needed to fill out the empirical picture and corroborate or disconfirm the generality of the patterns reported for these languages. Indeed, even for Tamil, the data currently available specifically on the interactions between indexical shift and AllAgr are quite fragmentary.

of thought, like 'dream'. However, 'you' will still be shifted only under speech verbs that take an addressee (or goal) argument.[15]

Turning now to AllAgr, in Magahi it marks honorificity, making the same three-way distinction between nonhonorific, honorific and high honorific that is found with argument agreement in the language (see Alok 2021, for detailed discussion). Though often preferred, it is generally optional, with its absence simply leaving the honorificity of the *Addressee* unspecified. Consider the four possibilities in (30) (Alok & Baker 2018, ex. (8), p. 7f.):

(30) a. Santee jaa-it h-ai. (Addressee unspecified)
Santee go-PROG be-3.NH.S
'Santee is going.'

b. Santee jaa-it h-au. (Addressee nonhonorific, a peer)
Santee go-PROG be-3.NH.S-NH.AL
'Santee is going.'

c. Santee jaa-it h-o. (Addressee honorific, e.g. a parent, grandparent)
Santee go-PROG be-3.NH.S-H.AL
'Santee is going.'

d. Santee jaa-it h-ain. (Addressee high honorific)
Santee go-PROG be-3.NH.S-HH.AL
'Santee is going.'

Given the analysis of allocutive agreement in Section 3.1, we will take this to mean that the allocutive probe is optionally present in embedded clauses in Magahi. In addition to matrix clauses as above, AllAgr can occur in most types of finite embedded clauses. As briefly noted in Section 3.2, under embedding it can either target the utterance context, yielding $\text{AllAgr}_{\text{unshifted}}$, as in (31a) or the intensional context, yielding shifty $\text{AllAgr}_{\text{shifted}}$, as in (31b).

(31) a. Santeeaa Banteeaa-ke kahk-ain ki Ram-ke Sita-se baat kark-e
Santee Bantee-DAT told-HH.AL that Ram-DAT Sita-INS talk do-INF
chah-ain.
should-HH.AL
'Santee told Bantee that Ram should talk to Sita.' (said to a teacher) (Alok & Baker 2018, ex. (26), p. 23)

[15] Under both the accounts in Deal (2020) and Sundaresan (2018a), the definition of the relevant 👻 accommodates hypothetical scenarios where there is no intensional Addressee parameter available for it to shift. For instance, (Sundaresan 2018a, Ex. 60, 32) defines $👻_{Addr}$ as in (i):

i. $👻_{Addr}$ quantifies over *Addressee*, *Author* and *World*, encoded in $c_{addressee}$.
$[\![👻_{Addr}]\!]^{c,i} = \lambda p_{<k,t>}\lambda x.\forall c' \in Addressee_{x_s} \rightarrow p(c')]$, where $Addressee_{x_s} =_{def} \{c'$: it is compatible with x, the content of the attitude that $Author(s)$ holds in $World(s)$, for $World(s)$ to be $World(c')$, for $Author(s)$ to be $Author(c')$ in $World(c')$, and for $Addressee(s)$, if there is one, to be $Addressee(c')$ in $World(c')$ (and for $Addressee(c')$ to be undefined if $Addressee(s)$ is absent)$\}$

In the clausal complement of a verb like 'think' or 'dream', the $👻_{Addr}$ monster, hosted on Eval, would shift all instances of (shifty) 'I' in its scope. But since such verbs take no *Addressee* argument, there is no *Addressee* parameter available to shift; i.e. $Addressee(c')$ would be undefined. Any instances of 'you' in the scope of $👻_{Addr}$ would thus remain unshifted and denote the *Addressee* of the utterance-context.

b. Santeeaa Banteeaa-ke kahk-ain ki Ram-ke Sita-se baat kark-e
Santee Bantee-DAT told-HH.AL that Ram-DAT Sita-INS talk do-INF
chah-au.
should-NH.AL
'Santee told Bantee that Ram should talk to Sita.' (said to a teacher) (Alok & Baker 2018, ex. (27)a, p. 23)

Analytically, the choice between $\text{AllAgr}_{\text{shifted}}$ and $\text{AllAgr}_{\text{unshifted}}$ in an embedded clause that also hosts the allocutive probe should boil down to the presence vs. absence of the intensional ADDR_{syn} in this clause.

5.2 Interactions between indexical shift & AllAgr in Magahi

Against this background we can now look for potential interactions between indexical shift and AllAgr. Recall from our discussion in Section 4 that, while we might pre-theoretically expect such interactions due to the similar purview of the two phenomena, our existing theories for them do not deliver clear predictions due to the disparate terms in which they are formulated. Interactions between AllAgr and indexical shift in Magahi, however, present evidence for an intimate connection between the two phenomena.

In the complement of verbs like 'tell', 'ask', 'convince' or 'remind', $\text{AllAgr}_{\text{shifted}}$ is possible. If a 2nd person pronoun appears in the same clause as $\text{AllAgr}_{\text{shifted}}$, it *must* get a shifted interpretation, as demonstrated by the examples in (32) (Alok & Baker 2018, ex. (37), p. 30).

(32) a. Santeeaa Banteeaa-ke kahk-ain ki Ram toraa dekhl-i-au ha-l.
Santee Bantee-DAT told-HH.AL that Ram you.ACC saw-1.S-NH.AL be-PRF
'Santee told Bantee that Ram saw you (=Bantee, not hearer).' (said to a teacher)

b. Santeeaa profesar saaheb-ke kah-au ki Ram apne-ke
Santeeaa professor HH-DAT told-NH.AL that Ram you.HH-ACC
dehkl-i-ain ha-l.
saw-1.S-HH.AL be-PRF
'Santee told the professor that Ram saw you (=the professor, not hearer).' (to a peer)

Conversely, if the allocutive marking on an embedded clause is *not* shifted, then 'you' cannot be shifted either (Alok & Baker 2018, ex. (38), p. 30):

(33) * Santeeaa Banteeaa-ke kahk-ain ki Ram-ke toraa-se baat karke
Santee Bantee-ACC told-HH.AL that Ram-DAT you-INS talk do.INF
chah-ain.
should-HH.AL
'Santee told Bantee that Ram should talk to you (=Bantee).' (said to a teacher)

This same restriction applies to 1st-person indexical shift. I.e. if there is shifted 'you' and $\text{AllAgr}_{\text{shifted}}$ in a given environment, any instances of 'I' in that environment must also be shifted (Alok & Baker 2018, ex. (39), p. 31):

(34) a. Santeeaa Banteeaa-ke kahk-ain ki ham toraa dekhl-i-au ha-l.
Santee Bantee-DAT told-HH.AL that I you.ACC saw-1.S-NH.AL be-PRF
'Santee told Bantee that I (=Santee) saw you (=Bantee).' (said to a teacher)

b. Santeeaa profesar saaheb-ke kah-au ki ham apne-ke
Santeeaa profesar HH-DAT told-NH.AL that I you.HH-ACC
dekhl-i-ain ha-l.
saw-1.S-HH.AL be-PRF
'Santee told the professor that I (=Santee) saw you (=the professor).' (to a peer)

5.3 Analytic implications: a deeper connection

The dependency between the shifting of 'you' and AllAgr on the one hand and the shifting of 'I' on the other isn't surprising, given the cross-linguistic patterns discussed in Section 2.2. Indeed, given that (32) holds, we also expect (34) to hold, given the shifty hierarchy of 'I' > 'you' > 'here' in Ex. (8). However, taken together, the patterns in (32)-(34) present evidence for a biconditional dependency between $\text{AllAgr}_{\text{shifted}}$ and 2nd-person indexical shift in Magahi, as under (35):

(35) Biconditional dependency between $\text{AllAgr}_{\text{shifted}}$ & indexical shift in Magahi:
Within a given CP, $\text{AllAgr}_{\text{shifted}} \leftrightarrow$ indexical shift for 'you' (and thus for 'I')

This is an unexpected result. In Section 4, we posited that $\text{AllAgr}_{\text{shifted}}$ in an embedded clause requires only that that clause project a SpeechActP with an intensional ADDR_{syn} in addition to having an allocutive probe. The availability of indexical shift in a given clause, on the other hand, requires that the clause host a shiftable indexical as well as a c-commanding 👻 of the right contextual-type to shift it. As we noted, given existing formulations, these two sets of conditions are orthogonal to each other, and thus could be expected to be able to appear independently of each other. The biconditional dependency in (35) shows, however, that this statement of things is too weak.

The pattern in (32) instantiates Scenario A in Section 4.2. Given the discussion there, the fact that 'you' must also shift in a clause with $\text{AllAgr}_{\text{shifted}}$ analytically entails the following. The embedded CP in (32), which hosts an intensional ADDR_{syn} and Probe_{alloc}, must necessarily also host a 👻 which can shift instances of 'you' in its scope, at least in languages like Magahi. (33) instantiates Scenario B in Section 4.3. Analytically, this pattern shows that if the embedded CP in (33) lacks an intensional ADDR_{syn}, it must also lack a 👻 that can shift instances of 'you' in its scope. Taken together, this means that, in a language like Magahi which, in theory, allows $\text{AllAgr}_{\text{shifted}}$ and shifted 'you' (and 'I'), the licensing conditions for $\text{AllAgr}_{\text{shifted}}$ and shifted 'you' in a given embedded clause, are one and the same. Such a clause must host ADDR_{syn} denoting the intensional *Addressee* in SpeechActP and also host the relevant kind of 👻, as shown in (36):[16]

(36) Identical licensing conditions for $\text{AllAgr}_{\text{shifted}}$ & shifted 'you' (and 'I') in Magahi:
a. Leela told Ravi that you are a pest.
≈ Leela told Ravi that Ravi is a pest + AllAgr.

b. Leela_i told $\boxed{\text{Ravi}_j}$ $[_{SAP}$ $\text{ADDR}_{syn-j} \ldots$ 👻$_{Addr} \ldots [\text{Probe}_{alloc}$ $[_{phase}$ that $\boxed{\text{you}_j}$ are a pest]]]
UPWARD AGREE

[16] For now, we are keeping the dependencies involved in $\text{AllAgr}_{\text{shifted}}$ and indexical shift separate. I.e. the former is shown, via the dashed arrow, to be an upward Agree dependency between Probe_{alloc} and the ADDR_{syn} denoting the intensional *Addressee*. The latter is shown, via the undashed two-way arrow, as a descriptive link between the shifty 'you', 👻$_{Addr}$ and, ultimately, the referent of 'you', namely *Ravi*.

5.3.1 The same underlying mechanism

Why should these phenomena involve identical licensing conditions? There are two logical possibilities. One is that it could be a happy accident arising from a conspiracy of independent grammatical factors. We can more or less dismiss this option summarily. As discussed in Section 4, the theories of indexical shift and allocutive agreement that we have described here do not independently predict the structure in (36b). The theories of indexical shift do not require that a 👻 of the right contextual shape to shift 'you' be present in the kind of intensional environment that $\text{AllAgr}_{\text{shifted}}$ occurs in. Conversely, the theories of allocutive agreement we have looked at do not require that the intensional ADDR_{syn} needed for $\text{AllAgr}_{\text{shifted}}$ be present in all environments where 2nd person indexical shift obtains.

The logical alternative we are left with is that the biconditional dependency in (35) stems from the two phenomena being, underlyingly, one and the same in some crucial respect. What this means conceptually is that $\text{AllAgr}_{\text{shifted}}$ instantiates (or at least involves) a kind of indexical shift, i.e. it is shifty agreement with a shifted *Addressee*. The question this will raise is how to get our theories of indexical shift and AllAgr to work together to yield this result, given that, as they stand, they depend on two distinct and orthogonal elements, $👻_{Addr}$ and intensional ADDR_{syn}, respectively. In order to derive the bi-conditional dependency in (35), we need to either reduce one of these two the other, or ensure that they mutual require each other's presence. We will turn to this issue in Section 7, offering some initial discussion of some potential strategies for resolving it. First though, it is important to make clear how achieving such a unification would allow us to account for the empirical patterns presented in Section 5.2.

5.3.2 Biconditional dependency is a case of Shift Together

A concrete advantage of treating $\text{AllAgr}_{\text{shifted}}$ as shifted agreement is that the biconditional dependency between the shifting of AllAgr and 'you' (cf. (32)) can be derived as an instance of Shift Together (cf. Section 2.2.4). In other words, if $\text{AllAgr}_{\text{shifted}}$ diagnoses indexical shift for the *Addressee* coordinate in some way, then any instances of shiftable 'you' in that same clause should necessarily be shifted too, and vice-versa.[17]

Further empirical support for such a conclusion comes from the following pattern. Indexical shift in Magahi is incompatible with embedded AllAgr (shifty or otherwise) in the complement of verbs that don't take an *Addressee*, like 'think' and 'say' (in contrast with 'tell') (Alok & Baker 2018, ex. (36), p. 28).

(37) John kahk-au ki ham tej h-i-(#au).
John say-NH.AL that I smart be-1.S-#NH.AL
Not possible as: 'John said that I (=John) am smart.' (spoken to a peer)

This is entirely parallel to the fact, as Alok & Baker further report, that in this same intensional environment, the presence of a shifted 'I' precludes the presence of 'you' altogether, regardless of whether this is interpreted as shifted or not (Alok & Baker 2018, ex. (54), p. 39):

(38) # Santeeaa soch-it ho-t-ai ki ham toraa kal dekh-l-i.
Santee think-PROG be-FUT-3.S that I you.ACC yesterday see-PRF-1.s

[17] As we have seen in Section 2.3.3, Shift Together falls out for free as the only possible outcome under the context-overwriting approach; under the quantifier binding approach, the locality condition on context-binding proposed in Sundaresan (2018a) ensures Shift Together for inherently shiftable indexicals in a local domain, but predicts exceptions to Shift Together when a shiftable indexical locally co-occurs with an inherently unshiftable one (cf. Section 2.4.3).

Not: 'Santee must be thinking that I (=Santee) saw you (any meaning) yesterday.'
Only OK as: 'Santee must be thinking that I (=*Speaker*) saw you (=*Addressee*) yesterday.'

If $\text{AllAgr}_{\text{shifted}}$ is an instance of indexical shift involving the *Addressee* parameter, then the entirely parallel unavailability of embedded AllAgr and embedded 'you' can receive a unified explanation. Shifted readings of 'you' and $\text{AllAgr}_{\text{shifted}}$ are impossible here since the relevant attitude predicates lack a thematic *Addressee* that could provide the reference for a shifted *Addressee* coordinate. But unshifted 'you' is impossible in conjunction with $\text{AllAgr}_{\text{shifted}}$ because this would violate Shift Together. As a result, both shifted and unshifted instances of 'you' are banned in such clauses.

6 Indexical shift & allocutive agreement in Tamil

In this section, we turn to another case of interaction between AllAgr and indexical shift, this time in Tamil. While this interaction initially seems to parallel that in Magahi, a closer look reveals some significant differences which in turn restrict the space of possible explanations in important ways.

6.1 Background on indexical shift & AllAgr in Tamil

AllAgr in Tamil is quite impoverished in terms of the distinctions it makes as compared to argument agreement in the language. Whereas the former distinguishes person, number, gender and, in the 2nd and 3rd persons honorificity, AllAgr must make do with a single suffix, -ŋgæ, in alternation with the lack of a suffix. The contrast is demonstrated in (39):[18]

(39) a. Naan ʤaangiri vaang-in-een-ŋgæ.
I jangri buy-PST-1sg.sbj-ALLOC
'I bought jangri' (plural or honorific *Addressee*)
b. Naan ʤaangiri vaang-in-een.
I jangri buy-PST-1sg.sbj
'I bought jangri' (unmarked *Addressee*)

Both examples have the same propositional content, reporting that the speaker has bought a delicious sweet, and both have 1SG argument agreement on the verb, targeting the subject. (39a) additionally has the allocutive suffix -ŋgæ, which indicates that the *Addressee* is honorific, or for some speakers of Kongu Tamil, a plural non-honorific *Addressee*.[19] (39b) lacks the suffix, and thus does not carry any explicit marking of the properties of the *Addressee*. In many colloquial varieties of Tamil, this is simply understood as underspecified, which in effect means that AllAgr is optional, since (39b) can be felicitously used even where (39a) would be possible. In Kongu Tamil, on the other hand, AllAgr seems to be obligatory when the conditions for it are met, which means that (39b) without the suffix can only be felicitously used with a singular, non-honorific *Addressee*.

AllAgr in Tamil is most frequently found in root clauses, and is not in any way restricted to declaratives. It is extremely common in interrogatives, both polar and *wh*-, as well as

[18] The AllAgr data that we report here for Tamil, where not otherwise indicated, are drawn from McFadden (2020) which discusses primary data culled from fieldwork on the Kongu dialect of Tamil, spoken in parts of western Tamil Nadu in India. We have collected some additional data from consultations with two native speakers of this variety, which are explicitly marked as such.

[19] Tamil often uses plural forms for singular honorific referents, and indeed -ŋgæ is a plural suffix elsewhere in the language. See McFadden (2020) for detailed discussion.

in fragmentary utterances. There are also some interesting patterns of variation in the ordering of the allocutive suffix relative to the polar question particle, but we will set these points aside as they are not directly relevant to current concerns. AllAgr is more restricted in embedded clauses, but it is far from ruled out. It is licit for example in the complements of 'bridge verbs' like 'say', as in (40), and also in some adverbial clauses, including temporal participial adjuncts like the one in (41):

(40) Maya [avæ pooʈʈi-le ɖʒejkkæ-poo-r-aaɭ-ŋgæ-nnŭ] so-nn-aa
Maya [she contest-LOC win-go-PRS-3SF-ALLOC-COMP] say-PST-3SF
'Maya said that she would win the contest.'

(41) [naan viʈʈ-ukkŭ poo-ji-ʈʈŭ-ŋgæ], call paɳɖ-r-een-ŋgæ
[I house-DAT go-PTCP-COMPL-ALLOC] call do-PRS-1SG.SBJ-ALLOC
'When I get home, I'll call.'

Like Magahi, Tamil displays both $\text{AllAgr}_{\text{unshifted}}$ and $\text{AllAgr}_{\text{shifted}}$ readings with embedded AllAgr, but we will delay discussion of examples until after we have introduced the indexical shift patterns in the language.

Turning now to indexical shift, Sundaresan (2012a; b; 2018a; 2021) argues that Tamil shows indexical shift for 1st-person. Interestingly, this is visible only on verbal agreement triggered in the scope of an anaphor. This anaphor, *taan*, itself takes only 3rd-person antecedents; in clauses embedded under verbs other than 'say' (and in some dialects, also 'think'), the verbal agreement triggered under *taan* is 3SG/PL reflecting the person and number features of *taan*'s extra-clausal antecedent. But in clauses embedded under 'say' (and, for some speakers, also under 'think'), the verbal agreement triggered under 'taan' continues to match *taan*'s antecedent for number but is marked 1st-person, even though the antecedent is a 3rd-person form. (42) instantiates this agreement in Tamil (Sundaresan 2018a, Ex. 15, 10):

(42) Raman_i [$\text{taan}_{\{i,*j\}}$ Sudha-væ virŭmb-ir-een-nnŭ] so-nn-aan.
Raman ANAPH.NOM.SG Sudha-ACC love-PRS-1SG-COMP say-PST-3MSG
"Raman_i said [$_{CP}$ that $\text{he}_{\{i,*j\}}$ is in love with Sudha]."
Lit: "Raman_i said [$_{CP}$ that $\text{self}_{\{i,*j\}}$ am in love with Sudha]."

Sundaresan argues that, in configurations like (42), the embedded CP hosts a silent shifted 1st-person indexical in its clausal periphery, which binds *taan*, and triggers shifted 1st-person agreement on its clausemate verb as an instance of indexically shifted or "monstrous" agreement. Given that monstrous agreement predominantly obtains under 'say', Sundaresan further proposes that the context-shifting 👻 is hosted on a SpeechActP on the embedded CP.

6.2 Interactions between allocutive agreement and indexical shift

McFadden (2020) shows that monstrous agreement interacts in systematic and telling ways with embedded allocutive agreement in Tamil, precisely in the availability of $\text{AllAgr}_{\text{shifted}}$ vs. $\text{AllAgr}_{\text{unshifted}}$. Consider the context in (43):

(43) Maya has told Leela, her boss, that she (Maya) is going to win a contest. Anand witnessed this and wants to report it to Venkat, his boss, who wasn't there.

Anand may tell Venkat what Maya said to Leela in two different ways, as in (44) or (45):

(44) Maya$_i$ Leela$_j$-ʈʈæ [taan$_i$ pooʈʈi-le ʤejkkæ-poo-r-een$_i$-ŋgæ$_j$-nnŭ]
Maya Leela-LOC [ANAPH contest-LOC win-go-PRS-1S-ALLOC-COMP]
so-nn-aa.
say-PST-3SF
'Maya$_i$ told Leela that she$_i$ would win the contest.' (Maya being polite to Leela)

(45) Maya$_i$ Leela$_j$-ʈʈæ [avæ$_{i,j}$ pooʈʈi-le ʤejkkæ-poo-r-aal$_j$-ŋgæ$_{Venkat}$-nnŭ]
Maya Leela-LOC [she contest-LOC win-go-PRS-3SF-ALLOC-COMP]
so-nn-aa.
say-PST-3SF
'Maya told Leela that she would win the contest.' (Anand being polite to Venkat)

The utterances above involve the following salient players. We have Anand as the *Speaker* of the utterance-context and Venkat as its *Addressee*. Since Venkat is Anand's boss, Anand invariably uses the allocutive marker, indicating respect, when speaking to him. Leela is the *Speaker* of the intensional context associated with the matrix verb *soll* ('tell') and Leela its *Addressee*. Maya also invariably uses the allocutive marker showing respect when addressing Leela. The question we must now ask is this: is the allocutive marker on the embedded clause AllAgr$_{\text{unshifted}}$, referring to Venkat, or is it shifty AllAgr$_{\text{shifted}}$, targetting Leela?

The answer, it turns out, directly depends on whether we get monstrous agreement on the embedded clause or not. In (44), where the embedded clause shows first person monstrous agreement, the allocutive agreement it marks *must* be shifty AllAgr$_{\text{shifted}}$. Such agreement indexes the intensional *Addressee*, Leela, indicating an honorific relationship between Maya and Leela. In (45), where the embedded clause shows unshifted 3rd-person agreement, the allocutive agreement *must* be unshifted AllAgr$_{\text{unshifted}}$, targetting the *Addressee*, Venkat, of the utterance context and indicating an honorific relationship between Anand and Venkat.

6.3 Analytic implications: Shift Together in Tamil

The sentence in (44) instantiates Scenario A in Section 4.2: it shows that, in a clause that has indexical shift for 'I', any AllAgr that surfaces must also be shifted. Conversely, (45) instantiates the reverse dependency from Scenario B in Section 4.3: it shows that, in a clause that does not exhibit indexical shift for 'I', any AllAgr that shows up must remain unshifted, as well. The interactions between monstrous agreement (for 1st-person) and AllAgr$_{\text{shifted}}$ in Tamil thus immediately call to mind the interactions between indexical shift and allocutive agreement in Magahi. Just like we stated for in Magahi (35), indexical shift & AllAgr$_{\text{shifted}}$ in Tamil are biconditionally linked and must involve identical licensing conditions. The difference is that the indexical shift we are talking about for Tamil is for 'I', not 'you', a distinction that will turn out to be crucial. This yields the biconditional dependency in (46) for Tamil:

(46) Biconditional dependency between AllAgr$_{\text{shifted}}$ & indexical shift in Tamil:
Within a given CP, AllAgr$_{\text{shifted}}$ $\leftrightarrow$ indexical shift for 'I'

What we have said for those Magahi patterns is thus far also applicable to the Tamil data above. In other words, the shifty patterns in (44) vs. (45) suggest that the intensional ADDR$_{syn}$ required for AllAgr$_{\text{shifted}}$, and the 👻 required for the indexical shift of monstrous agreement always co-occur.

This can be accomplished by proposing, as we did for Magahi, that AllAgr$_{\text{shifted}}$ in Tamil also instantiates indexical shift involving the *Addressee* coordinate. Assuming this is

correct, it expands the typology of indexical shift in Tamil, showing that it has indexical shift not only for 1st person, as reported in Section (2.2.2), but for 2nd person as well. $\text{AllAgr}_{\text{shifted}}$ in Tamil obtains when Probe_{alloc} occurs in a clause that projects a SpeechActP hosting ADDR_{syn} as well as a 👻 that shifts 2nd-person. But as discussed in Section 2.2.2, no language or structure shifts 'you' to the exclusion of 'I' (see also Table (8)). In Sections 2.3.2 & 2.4.2, we saw that both context-overwriting and quantifier-binding approaches derive this implicational hierarchy by proposing that 👻s come in different contextual shapes. The 👻 that shifts 'you' is set up to also shift 'I'. Concretely, this means that the 👻 that shifts the *Addressee* coordinate in a clause in Tamil, yielding $\text{AllAgr}_{\text{shifted}}$, will necessarily also shift any instances of shifty 'I' in its scope, yielding monstrous 1st-person agreement on the clausemate verb.[20] Thus, again as with Magahi, the co-occurrence of $\text{AllAgr}_{\text{shifted}}$ and monstrous agreement in Tamil, in a clause that contains both a Probe_{alloc} and shifty 'I', can be treated as an instance of Shift Together.

6.4 A potential confound: new exceptions to Shift Together

At the same time, Tamil differs from Magahi in one important respect. As we noted above, the difference between the biconditional dependencies in Magahi (35) and Tamil (46) is that the former involves indexical shift for 'you' on one end of the dependency, while the latter involves indexical shift for 'I'. This turns out to be a non-trivial distinction. As it turns out, overt 2nd person pronouns in Tamil cannot undergo indexical shift, regardless of where they occur and regardless of the presence or absence of AllAgr. They can only refer to the *Addressee* of the top-level utterance context. Thus in (47), *nii* 'you' in the embedded clause can only refer to the *Addressee* of the utterance, not to Leela, *Addressee* of the matrix speech predicate.

(47) Maya Leela-ʈʈæ [nii ɖʒejkkæ-poo-r-æ-nnŭ] so-nn-aa.
Maya Leela-LOC [you win-go-PRS-2SG-COMP] say-PST-3SF
'Maya told Leela that you would win' you = $Addressee_{utt}$, ≠ Leela

As we saw in Section 2.2.4, the same holds for occurrences of the overt 1st person pronoun *naan* in the language, as well. The discussion there also reported findings from Sundaresan (2018a) involving an exception to Shift Together in a clause containing *naan* and monstrous agreement. The relevant example is repeated in (48) below:

(48) SHIFT TOGETHER EXCEPTION – TAMIL MONSTROUS AGREEMENT:
Raman_i [$_{CP}$ $\text{taan}_{\{i,*j\}}$ enn-æ paartt-een-nnŭ] ottŭɳɖ-aan.
Raman ANAPH.NOM me-ACC saw-1SG-COMP admitted.-3MSG

LIT: 'Raman admitted [$_{CP}$ that self had seen me].'
READING 1: ✓ 'Raman_i admitted that $\text{he}_{\{i,*j\}}$ had seen me_{c*}]'
READING 2: ✗ 'Raman_i admitted that $\text{he}_{\{i,*j\}}$ had seen me_i.'

In (48), an overt instance of 'I' (*naan*) co-occurs with the covert one responsible for triggering monstrous 1st-person agreement in the same intensional domain.

Assuming with Sundaresan (2018a) that (48) constitutes a genuine exception to Shift Together involving an overt 'I' that may remain unshifted even in environments that make shifting available to it, we now make another prediction. In a clause containing $\text{AllAgr}_{\text{shifted}}$ and *naan*, *naan* should again remain unshifted. Now, given the implication

[20] McFadden (2020) hints at a version of precisely this in his analysis. While McFadden doesn't propose a specific account of indexical shift, he posits that the presence of monstrous agreement in an embedded clause in Tamil diagnoses the presence of an embedded SpeechActP.

hierarchy 'I' > 'you' > 'here', for shifty indexicals, 'you' cannot be shifted to the exclusion of 'I' in a given language or structure. Logically, then, if an instance of 'I' *cannot* be shifted in a language or structure, then there must also be a corresponding instance of 'you' that may not be shifted either. Concretely, then, we predict that an instance of unshifted 'you' can locally co-occur with $\text{AllAgr}_{\text{shifted}}$ in a given clause. These predictions are fulfilled and constitute new exceptions to Shift Together in Tamil.

The data we present below has been collected from consultations with two native speakers of Kongu Tamil, a dialect that allows significant AllAgr. Consider the context described in (49), noting crucially that the cousins all use honorific forms with their grandfather, but non-honorific forms with each other. Against this background, both (49a) and (49b) are possible:

(49) Raman, Maya, Leela and Venkat are cousins. Leela and Venkat are aspiring actors who have recently appeared in their first movie roles. Maya has seen one of these movies, and Raman has conveyed this fact to their grandfather. Leela is now telling this fact to Venkat, i.e. Leela is the *Speaker* of the following sentences and Venkat the *Addressee*.

a. SHIFT TOGETHER EXCEPTION – TAMIL $\text{ALLAGR}_{\text{SHIFTED}}$+ 'I':

Raman taattaa-kiʈʈæ [Maya enn-æ paa-tt-aa-ŋgæ-nnŭ]
Raman Grandpa-LOC [Maya me-ACC see-PST-3SF-ALLOC-COMP]
so-nn-aan.
say-PST-3SM
LIT: 'Raman told Grandpa that Maya saw me.'
READING 1: ✓ 'Raman$_i$ told Grandpa that Maya saw me$_{c*}$.'
READING 2: ✗ 'Raman$_i$ told Grandpa that Maya saw me$_i$.'

b. SHIFT TOGETHER EXCEPTION – TAMIL $\text{ALLAGR}_{\text{SHIFTED}}$+ 'YOU':

Raman taattaa-kiʈʈæ [Maya onn-æ paa-tt-aa-ŋgæ-nnŭ]
Raman Grandpa-LOC [Maya you-ACC see-PST-3SF-ALLOC-COMP]
so-nn-aan.
say-PST-3SM
'Raman told Grandpa that Maya saw you.'
READING 1: ✓ 'Raman$_i$ told Grandpa that Maya saw you$_{c*}$.'
READING 2: ✗ 'Raman told Grandpa$_j$ that Maya saw you$_j$.'

In each of these examples, we have AllAgr showing up in the embedded clause. Note that it is clear from the context that this must in fact be $\text{AllAgr}_{\text{shifted}}$ rather than $\text{AllAgr}_{\text{unshifted}}$. Again, the Tamil AllAgr suffix indicates honorificity, but Leela does not use honorific forms with Venkat, so the AllAgr must be with the intensional *Addressee*, Grandpa, with whom the intensional *Speaker* Raman *does* use honorific forms. Crucially, in each of the embedded clauses we find an overt indexical pronoun, and like all overt indexicals in the language, these receive unshifted interpretations. 'I' in (49a) can only refer to Leela, and 'you' in (49b) can only refer to Venkat. If $\text{AllAgr}_{\text{shifted}}$ is, as both we and Alok & Baker (2018) have argued, a type of indexical shift, then we again have a particular type of genuine exception to Shift Together in these examples. In parallel to what we saw in 48 involving monstrous agreement together with overt pronouns, we have here $\text{AllAgr}_{\text{shifted}}$ together with overt pronouns.

The generalization for Tamil seems to be that normal indexical pronouns may not shift, but silent indexical elements in clause-peripheral positions can do so.

7 Modelling interactions between AllAgr$_{\text{shifted}}$ & indexical shift

Given the Magahi and Tamil patterns above, we have good reason to assume that AllAgr$_{\text{shifted}}$ involves indexical shift, and thus makes use of the same mechanisms as indexical shift for 2nd person. As noted above, the question is how to actually model this state of affairs, given that existing accounts of indexical shift and AllAgr do not actually deliver this result. Our goal in this section is not to develop a full-fledged mechanics for this analysis which, indeed, deserves many more pages than we are able to devote here and, above all, will require empirical research into a wider range of languages than is currently available. This is clearly a project for future work. Here, we briefly present the main issues that any unified model of indexical shift and AllAgr must contend with and offer some initial thoughts on avenues for addressing them.

The biconditional dependencies between AllAgr$_{\text{shifted}}$ and indexical shift for 'you' & 'I' in Magahi (35) and between AllAgr$_{\text{shifted}}$ and indexical shift for 'I' (46) in Tamil force us to conclude that these phenomena have identical input conditions in these languages. As discussed in Section 5.3 for Magahi & Section 6.3 for Tamil, this is a surprising outcome. Since prior theories of these phenomena do not *a priori* motivate implicational relationships between 👻, required for indexical shift, and ADDR$_{syn}$, required for AllAgr$_{\text{shifted}}$, we have no basis for the biconditional. The Tamil data brings a further variable to the table, in the form of exceptions to Shift Together, as in (48)-(49). Any account of the phenomenon that requires all indexicals to be in principle shiftable is at a loss to deal with these systematic exceptions. This includes context-overwriting theories (Anand 2006; Shklovsky & Sudo 2014; Deal 2020, a.o.) which derive variation in which indexicals shift solely as a function of whether a given indexical lies in the scope of an appropriate 👻 or not. Such an approach, as we have seen, thus predicts Shift Together to obtain exceptionlessly for shifty indexicals in a local domain. Similarly, as we will discuss in Section 7.3, the obligatory binding account of Alok & Baker (2018) also predicts Shift Together to hold exceptionlessly, thus also cannot deal with the Tamil data.

Our task is thus two-fold, as described below:.

(50) Desiderata:
   a. We need to motivate a two-way implicational dependency between the presence of a 👻 which can shift 'you' (and 'I') and that of ADDR$_{syn}$.[21], and;
   b. Such a system must also allow different indexical elements that target the same contextual parameter in a single language to differ in their shiftability, while still enforcing Shift Together among those which are shiftable.

We start our discussion by asking what it even means to say that a case of agreement is shifty. Below, we discuss two possible ways this question may be answered, yielding two different ways to model our analytic desiderata.

7.1 Option A. AllAgr$_{\text{shifted}}$ is monstrous agreement involving a ϕ-probe

The first option would be to say that, in cases of shifty agreement like AllAgr$_{\text{shifted}}$, agreement per se is not shifty. Rather, it reflects the shiftiness of the element that triggers

[21] One way to achieve this outcome, which we explore here, would be to maintain that a 👻 and ADDR$_{syn}$ are separate elements but show that the presence of one always implies the presence of the other, and vice-versa. The other logical option, which we don't discuss here, would be to reduce our two distinct mechanisms to one, so that 👻$_{Addr}$ and an intensional ADDR$_{syn}$ reduce to the same thing. We can imagine many different ways to implement either alternative, and the current state of our empirical understanding will not be sufficient to decide among them.

this agreement. This would, in fact, be parallel to standard analyses of monstrous 1st-person agreement for Tamil, discussed above. Analogously, we could say that $\text{AllAgr}_{\text{shifted}}$ arises when we have a run-of-the-mill Probe_{alloc} Agreeing with ADDR_{syn}, but the ADDR_{syn} itself is a shifted indexical. Given that AllAgr involves the *Addressee*, it would make sense to think of ADDR_{syn} as a shifty 'you'.

Syntactically, we could model ADDR_{syn} as a nominal with inherently specified 2nd-person and other ϕ-features. This would allow us to treat Probe_{alloc} as a simple ϕ-probe (as proposed in McFadden & Sundaresan 2021). Semantically, ADDR_{syn} would be a variable, denoting the *Addressee* of an underspecified context. If it lies in the scope of a 👻 that can shift the *Addressee* parameter, like $👻_{Addr}$, it will necessarily be shifted, and AllAgr will be interpreted as $\text{AllAgr}_{\text{shifted}}$. But if ADDR_{syn} doesn't lie in the scope of such a 👻, AllAgr will be interpreted as unshifted $\text{AllAgr}_{\text{unshifted}}$.

All of this would mean that the availability of $\text{AllAgr}_{\text{shifted}}$ in a given clause would imply that any shifty 2nd-person indexicals in the same clause would get a shifted interpretation. This is because it is the same $👻_{Addr}$ that is responsible for shifting both. Such a 👻 must also be able to shift all instances of shifty 'I' in its scope, given again that 'you' cannot be shifted to the exclusion of 'I' (cf. the implicational hierarchy in Table (8)). This explains one side of the biconditional in both Magahi & Tamil: i.e. a clause with a local ADDR_{syn} (yielding $\text{AllAgr}_{\text{shifted}}$) must also host a 👻 that can shift instances of shifty 'you' and 'I' in its scope (yielding obligatory indexical-shift for these elements). But this doesn't yet deliver the other half of the implication, namely that the presence of shifted 'you' or 'I' in a given clause entails that any AllAgr in that clause must be shifted $\text{AllAgr}_{\text{shifted}}$. Concretely, we need to derive the implication that the presence of a 👻 that can shift 'you' & 'I' in an intensionally embedded clause entails the presence of ADDR_{syn} in that clause.

As things stand, there is nothing to require this, and in its absence, even if we have a Probe_{alloc}, it will simply Agree with ADDR_{syn} in the next higher clause, which will be outside the scope of $👻_{Addr}$, yielding $\text{AllAgr}_{\text{unshifted}}$. One quite reasonable way to approach this would be to take a page out of the book of dealing with implicational variations found with indexical shift in terms of structural containment relations (cf. Sections 2.3.1 and 2.3.2). That is, we would say that ADDR_{syn} is found on a projection that is lower in the clausal functional sequence than where $👻_{Addr}$ is found. Thus, any clause that includes the functional projection that hosts $👻_{Addr}$ must also include the projection that hosts ADDR_{syn}. Taken together, this yields the two-way implicational dependency between ADDR_{syn} and the relevant kind of 👻, as outlined in desideratum (50a).

To derive the desideratum in (50b), this system needs to further be able to distinguish amongst classes of indexical. Semantically, this is fairly straightforward under the quantifier binding approach to indexical shift (Schlenker 2003b; Sundaresan 2018a), where indexicals are assumed to in shiftable and unshiftable lexical shapes. As discussed in Section 2.4.3, Sundaresan (2018a) derives the exception to Shift Together in (48) by proposing that overt instances of 'I' involving *naan* are lexically specified to be inherently unshiftable, making them islands to contextual quantification; covert instances of 'I', however, are capable of shifting. Since, again 'you' cannot be shifted to the exclusion of 'I', the presence of unshiftable 'I' entails that of unshiftable 'you'. Similarly, the presence of shiftable 'I' entails that of shiftable 'you'. This leads us to predict exceptions to Shift Together whenever a covert 'I' or 'you' locally co-occurs with an overt 'I' or 'you', which is what we see for Tamil.

The challenge such a model faces is how to capture these distinctions syntactically. The proposed analysis treats ADDR_{syn} as a nominal with valued 2nd-person and other ϕ-features. But it leaves unclear whether and how its shiftiness, which crucially distinguishes

it from its unshiftable counterpart *nii* ('you'), is syntactically modelled. Having ADDR$_{syn}$ itself be 2nd person would also potentially introduce a kind of infinite regress if it is meant to be the standard against which 2nd person features in its scope are defined and interpreted. Finally, AllAgr does not crosslinguistically express person distinctions, as noted in Section 3.2 (and especially fn. 3). So it would be reasonable from a morphological perspective to think of it as Agree for all ϕ-features *but* person. At the same time, if we leave off the 2nd person feature from ADDR$_{syn}$, we would have to do some additional work to make it sensitive to shifting by 👻$_{Addr}$.

We merely note these challenges as desiderata for future work. Our alternative analytic approach, which we describe below, looks more promising with respect to these issues.

7.2 Option B. AllAgr$_{\text{shifted}}$ involves a shifty probe

A different option would be to say that AllAgr is itself shifty, i.e. it is the functional equivalent of a shifty 'you' pronoun. The trick to getting this to work would be figuring out how to implement the Probe$_{alloc}$ under this conception. One idea would be to treat it as being like a pronoun in the sense that it would have its ϕ-features pre-specified. But it would also have some unvalued contextual feature responsible for managing its interaction with the context. I.e. rather than a ϕ-probe, it would be something like a an affixal addressee bearing a context probe.

Recent work in Raynaud (2020) argues for a treatment of 1st & 2nd-person indexicals that is very much along these lines. Raynaud investigates a wide range of crosslinguistic evidence from reference-oriented agreement and person-based intervention effects (like the Person Case Constraint) obtaining across the verbal (i.e. v), clausal (C) and nominal (D) domains. Such evidence shows that, contrary to conventional taxonomies which partition anaphors together with 3rd-person nominals, and in opposition to 1st- and 2nd- person pronouns – anaphors actually pattern together with 1st and 2nd-person. To account for this clustering, Raynaud proposes that these elements are all defined in terms of their need to be syntactically bound in different ways and thus have similar feature-specifications. Anaphors need to be referentially licensed. 1st- and 2nd-person indexicals, on the other hand, must be context-linked with the syntactic representation of *Speaker* and *Addressee* in the clausal periphery or elsewhere (adapting initial insights in Baker 2008).

For Raynaud, 'I' and 'you' bear valued ϕ-features but are probes by virtue of bearing an interpretable, unvalued ID feature, i.e. [iID: _]. The syntactic representations of *Speaker* and *Addressee* bear uninterpretable but valued ID features. Leaving aside the interpretable vs. uninterpretable distinction for now, let us now propose that AllAgr is the functional equivalent of shifty 'you', and is thus specified [ID: _]. ADDR$_{syn}$ in SpeechActP is specified as [ID: A]. AllAgr probes upward and is successfully valued by ADDR$_{syn}$. The advantage of this system is that indexical shift for 'you' may be derived in precisely parallel fashion. Any instances of shifty 'you' will also be featurally specified as [ID: _], just like Probe$_{alloc}$, with the only difference between them having to do with their respective grammatical categories. Agree will again proceed upward and terminate upon successful valuation with ADDR$_{syn}$. In both cases, the reference of the contextual value of ID, A, on ADDR$_{syn}$ will be computed at LF. If ADDR$_{syn}$ lies in the scope of a 👻 like 👻$_{Addr}$, A is ultimately mapped onto the *Addressee* of the intensional predicate; otherwise, it is understood as the *Addressee* of the utterance-context. In the former case, AllAgr will be interpreted as AllAgr$_{\text{shifted}}$ and 'you' will be interpreted as being shifted; in the latter, AllAgr will be interpreted as AllAgr$_{\text{unshifted}}$ and 'you' will remain unshifted. Thus, semantically, both shifted 'you' & AllAgr$_{\text{shifted}}$ require the presence of a relevant 👻. Syntactically, they both

require the presence of ADDR$_{syn}$, as a Goal for Agree. Taken together, this derives the two-way implication described in desideratum (50a).

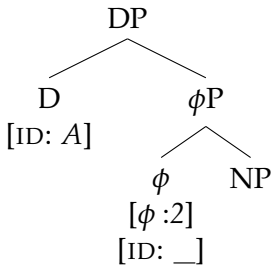
The system developed in Raynaud (2020) also has the significant advantage of being able to handle our second desideratum in (50b), involving exceptions to Shift Together, in structural terms.[22] Prior literature on the structure of pronouns (Cardinaletti & Starke 1999; Déchaine & Wiltschko 2002; Gruber 2013) has convincingly shown that 1st- and 2nd-person indexicals, crosslinguistically, do not behave uniformly with respect to person restrictions. Rather, they come in "strong" and "weak" varieties. The latter class, involving not only weak pronouns but also clitics and agreement markers, is syntactically active (e.g. participates in PCC effects) and has also been shown to be compatible with generic and deictic readings in languages like Dutch (Gruber 2013). The former, in contrast, is only associated with deictic readings and seems syntactically inert for person restrictions (e.g. is not subject to PCC effects).

Raynaud proposes that these distinctions stem from structural distinctions in the internal make-up of these indexicals (see also Stegovec 2020, for a similar proposal). Strong 1st- and 2nd-person pronouns have a D layer which, furthermore, is itself a locus for contextual anchoring (as independently argued in Gruber 2013, and further suggested by proximal vs. distal distinctions among pronouns). A strong 'you' pronoun, for instance, hosts ADDR$_{syn}$ on D with an [ID: A] feature. Such a pronoun also hosts a probe specified [ID: _] deeper in the DP. But this probe never ends up probing outside the DP because it is valued by *Addressee* on D. Strong indexicals are thus syntactic islands and cannot be manipulated further (but see Kaur 2016, for potential counter-examples in Punjabi). A weak indexical 'you', in contrast, lacks the D projection altogether; so the [ID: _] probe inside this indexical must search outside the DP to be valued, rendering the indexical syntactically active.

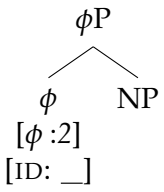
We can now simply adopt this model to derive distinctions between shiftable and unshiftable instances of 'you' and 'I'. Let us propose that shiftable indexicals are weak in the sense described above. Such an indexical is thus syntactically active and its probe Agrees with ADDR$_{syn}$ in SpeechActP. But unshiftable indexicals are strong indexicals and thus syntactically inert. The needs of the ID probe in such an indexical are met by ADDR$_{syn}$ within the DP rendering it indifferent to the presence of a clausal ADDR$_{syn}$ (or, indeed, any other clausal element, like a 👻). Adapting this idea, we can now illustrate the structural distinction between a shiftable and unshiftable 'you', as follows (Raynaud 2020, Exx. 36a-b, 129):

[22] Again, deriving this semantically is fairly straightforward under a quantifier binding approach to indexical shift.

(51) a. Unshiftable, strong 'you':



b. Shiftable, weak 'you':



This approach also explains a curious pattern in languages like Tamil, with "indexical doublets", i.e. containing a shiftable and unshiftable indexical in a given contextual class. Other languages like Turkish (Gültekin Şener & Şener 2011), varieties of Zazaki (Akkuş 2018) and Mishar Tatar (Podobryaev 2014) (pace Deal (2018)) have been reported to show indexical doublets. Interestingly, in all these cases, the shifty indexical is covert while its unshifty counterpart is overt. For instance, in Mishar Tatar (Podobryaev 2014), covert indexicals shift but overt indexicals do not. When two covert 'I's locally co-occur, they *must* Shift Together (Podobryaev 2014, 105, Ex. 261). But when a covert 'I' locally co-occurs with an overt one, we get an exception to Shift Together. We know of no languages where the reverse is true: i.e. the overt indexical shift while its covert counterpart may not be shifted. Interestingly, as the literature on pronoun classes has shown, weak pronouns tend to be silent, while strong pronouns are overt. Thus, whatever the underlying explanation for this discrepancy, under the current account where the shiftable vs. unshiftable contrast is reframed in terms of strong vs. weak, respectively, this curious restriction on indexical doublets is to be expected.[23]

7.3 Brief excursus into Alok & Baker (2018)

Before we conclude this section, we present a brief excursus into the only other unified analysis of indexical shift and AllAgr that we are aware of, namely that in Alok & Baker (2018, et seq.) and explain why we do not simply adopt it wholesale here. Alok & Baker also conclude that $\text{AllAgr}_{\text{shifted}}$ in Magahi is just another instance of indexical shift.

For them, the shifting of the *Addressee* in $\text{AllAgr}_{\text{shifted}}$ essentially amounts to obligatory control (OC). Certain embedded clauses host silent DP representations of *Speaker* (Sp) and *Addressee* (Hr) in Spec-FinP.[24] These silent DPs behave like OC PRO and have their reference fixed in relation to the thematically appropriate arguments of an intensional predicate in the next higher clause yielding subject and object OC. AllAgr in general involves a probe in T/Fin agreeing with Hr, and when Hr is controlled in this way, the result is $\text{AllAgr}_{\text{shifted}}$.

Alok & Baker (2018) then propose that the mechanisms for AllAgr, and $\text{AllAgr}_{\text{shifted}}$ in particular, can be straightforwardly extended to indexical shift, as well. The necessary additional assumption is that 1st and 2nd person pronouns in general are 1st or 2nd person by virtue of being locally bound by Sp and Hr (or by higher 1st/2nd person pronouns), respectively (Baker 2008). Since binding is subject to relativized minimality, an indexical

[23] Note, too, that the existence of a morphological distinction between shiftable and unshiftable indexicals itself underscores the idea that they are structurally different.

[24] The reasoning for using FinP rather than SpeechActP as the locus for these DPs depends on patterns in Magahi that strongly suggest a lower locus of the phenomenon than in, say, Basque or Tamil. There are interesting questions as to whether the representations of *Speaker* and *Addressee* and the location of the allocutive probe c are parametrized or whether the cross-linguistic variation we see is due to something else, but we will set them aside as they are orthogonal to the concerns of the current paper. See Alok (2021, Section 6) for relevant discussion.

that appears in an embedded clause which also has Sp/Hr in its periphery controlled by the argument(s) of a matrix intensional predicate, will be interpreted as 1st/2nd person relative to the context defined by that predicate. This yields indexical shift.

On the face of it, the account looks attractive. It looks parsimonious, deriving AllAgr and indexical shift via standardly assumed operations like control & binding, and without positing special semantic mechanisms or operators in the form of 👻s. In further providing a unified account of these phenomena, it can also derive the Magahi facts: i.e. AllAgr & indexical shift in Magahi are in lock-step with each other because they target the same bits of structure — Sp/Hr shifted via control by arguments of the matrix predicate. Finally, the account can derive Shift Together effects for indexical shift in terms of syntactic minimality on the binding dependencies between indexicals and Sp/Hr and Agree between the Probe_{alloc} and Hr.

At the same time, there is a genuine concern that this account may be too simple, undergenerating some patterns while overgenerating others. For one thing, Alok & Baker discuss indexical shift in terms of variable binding over *individuals*, when what is needed is abstraction over *contexts*. Indexical pronouns like 'I' and 'you' are individual anaphors that are bound by Sp & Hr. The latter are instances of OC PRO and are thus themselves anaphoric, involving abstraction over individuals (Chierchia 1989). Anaphors are bound variables: their reference is fixed by variable assignment and not from a dependence on the context. Treating indexicals as anaphors ignores the Kaplanian arguments that indexicals are pure context-designators, i.e. functions over contexts. Sp & Hr, in Alok & Baker's system, are defined as the *Speaker* and *Addressee* solely by virtue of their structural positions inside FinP, by structural fiat, as it were.

Such an approach also faces empirical challenges. As discussed in Deal (2017; 2020), indexicals (shifted or otherwise) show a very different empirical profile from 1st- & 2nd-person anaphors (or indexiphors, as Deal calls them). Shifted indexicals do not need to obey syntactic locality. They thus need not obey the De Re Blocking Effect, a relativized minimality constraint on the binding of *de se* elements (Percus & Sauerland 2003; Anand 2006; Deal 2020). But if these elements were indeed anaphoric, we would expect them to do so. Similarly, in cases of multiple clausal embedding, shifted indexicals may be licensed long distance. Again, if these were anaphoric elements, this would be unexpected. These are empirical patterns that the Alok & Baker approach cannot deliver, as far as we can see.

A further problem is that this approach cannot obviously deal with the implicational hierarchies for shifty variation across intensional environments cf. Section 2.2.1) and classes of indexical (cf. Section 2.2.2).[25] If e.g. Sp is deemed the *Speaker* of a context solely by virtue of occupying a dedicated structural position inside FinP, it is unclear how it is determined in clauses that lack a FinP altogether. We also cannot so easily say, as under the context-overwriting & quantifier binding approaches, that Sp can occupy distinct functional heads along the clausal spine, yielding shifty variation across attitude verbs. After all, it is its dedicated structural position inside FinP that defines it as the *Speaker*, to begin with. Finally, given that the theory traffics in individuals and not contexts, it is unclear how shifting for other contextual coordinates like *Location* and *World* are determined (an additional null DP for each, parallel to Sp and Hr?), much less how implicational dependencies between *Author*, *Addressee* and *Location* should be derived.

Finally, as mentioned above, Shift Together falls out under this account purely by syntactic means, as a result of Relativized Minimality restrictions on the binding of individual indexicals by Sp & Hr. Such a system thus predicts Shift Together to hold

[25] Though see some speculative discussion in their fn. 10, p. 32f.

universally. This means that such an account, much like the context-overwriting approach, cannot easily deal with exceptions to Shift Together like those discussed here for Tamil.

8 Assessment and outlook

The central goal of this paper has been to study the interaction between two phenomena that involve the representation of contextual participants in the clausal periphery but are seldom discussed in the same breath, namely allocutive agreement and indexical shift. In presenting the typology and discussing prominent analyses of these phenomena, we have observed that the two phenomena are analyzed in very different ways which, in turn, makes the task of comparing them anything but straightforward. Where AllAgr is discussed predominantly in morpho-syntactic terms, indexical shift is handled primarily in the semantics. This obscures the existence of deep parallels in the grammatical underpinnings of these phenomena, parallels that come to light when we closely study interactions between AllAgr and indexical shift in languages like Magahi and Tamil.

These investigations showed that, in both languages, there is a biconditional dependency between the availability of $\text{AllAgr}_{\text{shifted}}$ and indexical shift for person, in a given clause. This, in turn, shows that the licensing conditions for both are identical. We have seen that it is unlikely for this state-of-affairs to be coincidental, due to independent properties of intensionally embedded clauses and are thus forced to conclude that $\text{AllAgr}_{\text{shifted}}$ and indexical shift must involve the same mechanism underlyingly, a move that also allows us to treat the identical patterning of $\text{AllAgr}_{\text{shifted}}$ and indexical shift as a case of Shift Together. The interactions between $\text{AllAgr}_{\text{shifted}}$ and indexical shift in Tamil bring further nuance to these results, showing that exceptions to Shift Together can obtain for both 1st- and 2nd-person.

In making sense of these patterns, we are forced to engage with the semantic properties of AllAgr and, conversely, with the syntactic properties of indexical shift, a welcome result. We have outlined two ways to model these insights. Under the first option, $\text{AllAgr}_{\text{shifted}}$ comes out as a case of monstrous agreement for 2nd-person (analogous to monstrous agreement for 1st-person in Tamil, Sundaresan 2012a; 2018a) involving a vanilla ϕ-probe Agreeing with ADDR_{syn} in SpeechActP. ADDR_{syn}, under this view, is itself a shifty 'you' that lies in the scope of a 👻 which can shift 2nd-person. But while this approach gives us the desired parallels between indexical shift and $\text{AllAgr}_{\text{shifted}}$, it is not without its challenges. E.g. AllAgr crosslinguistically does not share morphosyntactic properties with 2nd-person agreement. A more promising alternative exploits insights in Raynaud (2020) to propose that the allocutive probe and shifty 'you' are featurally identical, both being contextually deficient rather than ϕ-deficient. These must both be context-linked with ADDR_{syn} in the syntax and shifted by the appropriate 👻 in semantics, explaining why $\text{AllAgr}_{\text{shifted}}$ and indexical shift for 'you' must co-occur in clauses that contain both these elements. Raynaud's approach also gave us a way to model exceptions to Shift Together in languages like Tamil, by exploiting independent observations in the literature that pronouns come in two shapes, strong and weak. We adopted Raynaud's proposal that strong indexicals are structurally inert by virtue of having a D layer which hosts its own ADDR_{syn} that can internally value its shifty probe, and that weak indexicals are structurally transparent by virtue of lacking this D layer. Extending these insights to the case of indexical shift, we argued that unshiftable indexicals are strong while shiftable indexicals are weak, which explains why the former are indifferent to the presence of ADDR_{syn} and a 👻, but the latter are not. Such an analysis looks promising because it also explains (by analogy if not principle) why, in languages with indexical doublets, the shifty

indexical is often silent while its unshifted counterpart is overt, while the reverse is never the case.

We see a clear agenda for future work on these issues. The most urgent guideline for future work is that we need to collect data from more languages that show both phenomena. Additional data will allow us to test the empirical predictions that fall out of the two types of analyses we have suggested here. For instance, if we are correct that unshiftable indexicals pattern with strong pronouns while shiftable ones pattern with weak ones, we expect the latter but not the former to be sensitive to other person restrictions, like the PCC. Having predictions like this be confirmed or disconfirmed will, in turn, restrict the space of analytic possibilities and shape future work on these phenomena.

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