Pronoun Agreement Mismatches in Telugu[*]

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1.   Introduction

How languages express *de se* attitude reports in finite clauses is subject to a large amount of cross linguistic variation. For example, English and other Indo-European languages do not distinguish *de se* attitudes from *de re* attitudes. Thus, the utterance in (1) can be used to report an attitude with the attitude holder fully aware that the said attitude is about himself (i.e., *de se*) or unaware that the attitude is about himself (i.e., *de re*). This allows (1) to be used to felicitously report both the scenario in (2a) and (2b).

(1)   John said that he is smart.

(2)   a.   John said, "I am smart."
        b.   John$_i$ said, "he$_i$ is smart."

However a number of authors have recently noted that in many languages, *de se* attitude reports are expressed via *indexical shift*, where a first person pronoun is used to refer to the attitude holder. This is shown in (3) for Zazaki (Anand & Nevins 2004, 21, see this work for evidence that we are not dealing with a quoted clause here.)

(3)   Hɛseni$_j$ va [kɛ   ɛz$_j$ dɛwletia]
        Hesen.OBL said [that I   rich.be-PRES]
        'Hesen said that he was rich.'

A large body of literature has tried to account for such variation (e.g., Schlenker 1999, 2003, von Stechow 2002, 2003, Anand 2006, Sudo 2012). Dravidian languages have shown

an interesting different pattern. For instance, in Tamil, overt first person pronouns do not shift, but the agreement morphology can be first person when the subject refers to the matrix subject under verbs of speech. (Asher 1985, Woolford 1999, Sundaresan 2012). This is shown in (4).

(4)   Murukeesan [taan   var-r-een-nnŭ]   so-nn-aarŭ
       Murugesan   [ANPH come.PRES-1SG-COMP] say-PAST-3MSG
       'Murugesan said that he would come.'

In this paper, I investigate this phenomenon in Telugu.[1] As (5) shows, a *de se* attitude report in Telugu[2] has a third person pronoun controlling first person agreement on the embedded verb very similar to what we find in Tamil.[3]

(5)   Rani [ṭanu exam pass ajj-aa-n-ani]   nam-mu-ṭundi.
       Rani [3SG exam pass happen-PAST-1SG-COMP] believe-PAST-F.SG
       'Rani believed that she passed the exam.'

Following Sundaresan, I will refer to this type of agreement pattern as *monstrous agreement*. I will show that monstrous agreement has the same interpretive properties and syntactic distribution as indexical shift. Despite these similarities, previous accounts of indexical shift cannot straightforwardly account for agreement shift. In this paper, I propose a uniform analysis for the two. The basic idea of the analysis is that in languages like Telugu, when a third person pronoun is interpreted *de se*, it is semantically first person but morphologically third person (in a way to be made explicit later). The agreement probe, responsible for verbal morphology, targets the semantic features of the controller (Corbett 1979, 1983, 2006). Since my analysis attempts to cover similar data to the analysis given in Sundaresan (2012), I will briefly compare the two. I will then show that the analysis can be expanded to account for indexical shift and other forms of *de se* marking while also giving a principled explanation for a previously unnoticed typological gap.

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[1]The Telugu data presented here comes from multiple elicitation sessions with a linguistically untrained Telugu consultant. The semantic judgments were obtained using a Truth Value Judgment Task procedure where the consultant was presented with a scenario and a sentence and was asked to judge whether the sentence was true in the given scenario. These judgments were stable across multiple consultation sessions.

[2]A reviewer notes that there is cross linguistic variation in which embedding predicates allow for indexical shift/logophors/monstrous agreement, with some languages only allowing these phenomena to happen in a subset of attitude contexts. As we will see in section 2.3, Telugu appears not have these restrictions and monstrous agreement can occur in any attitude context.

[3]Curnow (2002) notes what seems to be the same agreement pattern in the Nilo-Saharan languages Karimojong and Lotuko. I also present data that the related language Nuer also has this phenomenon in Messick (in preparation). There are also languages like Donno Sɔ (Culy 1994), where first person agreement appears to be controlled by logophors. I discuss this in section 5.

2. Agreement in Telugu embedded attitudes

In this section, I will introduce the Telugu monstrous agreement data. Where relevant, I will compare agreement shift to the better studied cases of indexical shift. I will show that like other cases of indexical shift, monstrous agreement in Telugu can only be used to express *de se* attitudes; also, as with indexical shift in Uyghur, the syntactic distribution of agreement shift is tied to a special type of complementizer.

2.1 Background on Telugu agreement

Telugu displays verbal agreement with non-case marked subjects. The agreement paradigm for matrix clauses is given in (6) (putting aside number).

(6)　　a.　neenu parigeṭṭ-ææ-nu
　　　　　　1SG　run-PAST-1SG
　　　　　　'I ran.'

　　　　b.　nuvvu parigeṭṭ-ææ-vu
　　　　　　2SG　run-PAST-2SG
　　　　　　'You ran.'

　　　　c.　ṭanu parigeṭṭ-ææ-Du
　　　　　　3SG run-PAST-M.SG
　　　　　　'He ran.'

　　　　d.　ṭanu parigeṭṭ-in-di
　　　　　　3SG run-PAST-F.SG
　　　　　　'She ran.'

Before we continue, I would like to note that what I gloss as the third person pronoun *ṭanu* is cognate to *ṭa(a)n* found in other Dravidian languages such as Malayalam (Anand 2006) and Tamil (Sundaresan 2012). *Ṭa(a)n* in these languages is usually not treated as a third person pronoun, but a logophoric pronoun or a long-distance anaphor. *Ṭanu* was evidently also once logophoric, however in current usage, speakers use it as a non-logophoric third person pronoun (Krishnamurti & Gwynn 1985, 73).

　　This can be seen by examining the distribution of *ṭanu*. Logophoric pronouns are typically found in embedded attitude reports; they cannot be the matrix subject of an out of the blue sentence. This is shown in (7) for the logophoric pronoun *yè* in Ewe. *Yè* can be used in attitude reports (7a), but not as the matrix subject of an out-of-the-blue context (7b) (data taken from Pearson in press).

(7)　　a.　kofi be　yè-dzo
　　　　　　Kofi say LOG-leave
　　　　　　'Kofi$_i$ said that he$_i$ left'

b. *yè dzo
 LOG leave
 Intended: 'He left'

Ṭanu, on the other hand, can be used in both environments as shown in (8). Not only can *ṭanu* be used in embedded attitudes (8a), but also in matrix clauses in out-of-the-blue contexts (8b).

(8) a. Raju ṭanu parigeṭṭ-ææ-nu ani čepp-ææ-Du
  Raju 3SG run-PAST-1SG COMP say-PAST-M.SG
  'Raju said that he ran.'

  b. ṭanu parigeṭṭ-ææ-Du
  3SG run-PAST-M.SG
  'He ran.'

(8b) can even used deictically (i.e., accompanied by a pointing gesture). So I take the treatment of *ṭanu* as a third person pronoun to be empirically well-founded.

As noted in section 1, Telugu allows for monstrous agreement with pronouns with embedding in attitude reports. When the report expresses an attitude about the attitude holder, the agreement on the embedded verb can be either third person (9a) or first person (9b).

(9) a. Raju [ṭanu parigeṭṭ-ææ-Du ani] cepp-ææ-Du
  Raju 3SG run-PAST-M.SG COMP say-PAST-M.SG
  'Raju said that he ran.'

  b. Raju [ṭanu parigeṭṭ-ææ-nu ani] cepp-ææ-Du
  Raju 3SG run-PAST-1SG COMP say-PAST-M.SG
  'Raju said that he ran.'

In order to rule out the possibility that the embedded clause is (partially) quoted, I provide two diagnostics from matrix question formation and NPI licensing. As has been noted in the literature on indexical shift (e.g., Anand & Nevins 2004, 21), grammatical dependencies cannot cross quotation marks. This is shown for English in (10). In (10a), a *wh*-element is moved out of the quoted clause into the matrix clause and the resulting utterance is ungrammatical. Likewise, the ungrammaticality of (10b) is caused by the fact that the matrix negation cannot license the NPI in the quoted clause.

(10) a. *What$_i$ did Bob say, "I ate t_i"?
  b. *Bob didn't say, "I ate any bananas."

As is the case with monstrous agreement in Tamil and indexical shift in languages like Zazaki, Telugu allows such dependencies between the embedded and matrix clauses indicating that the embedded clause is not a quotation. This is shown in (11). In (11a), a

wh-element *eemi* in the embedded clause can scope into the matrix clause and receive matrix question interpretation. In (11b), negation in the matrix clause can license the NPI in the embedded clause.

(11) a. Raju [ṭanu eemi tinn-aa-nu   ani]   cepp-ææ-Du
           Raju [3SG what eat-PAST-1SG COMP] say-PAST-M.SG
           'What did Raju say I ate?'
      b. Raju [ṭanu ee aratipanD-lu tinn-aa-nu   ani]   cepa-leeḍu
           Raju [3SG any banana-PL   eat-PAST-1SG COMP] say-NEG
           'Raju did not say that he ate any bananas.'

Having ruled out a quotation analysis of monstrous agreement in Telugu, let us turn to investigating what elements can control monstrous agreement. In addition to *ṭanu*, the second person pronoun *nuuvu* can also control monstrous agreement. As shown in (12), *nuuvu* can control either second person (12a) or first person (12b) agreement.[4]

(12) a. nuuvu parigeṭṭ-ææ-vu ani   nuuvu cepp-ææ-vu
           2SG   run-PAST-2SG COMP 2SG   say-PAST-2SG
           'You said that you ran.'

      b. nuuvu parigeṭṭ-ææ-nu ani   nuuvu cepp-ææ-vu
           2SG   run-PAST-1SG COMP 2SG   say-PAST-2SG
           'You said that you ran.'

Monstrous agreement is only acceptable in embedded clauses. Mismatches are disallowed in matrix clauses, as in (13).

(13) a. ṭanu parigeṭṭ-ææ-Du
           3SG run-PAST-M.SG
           'He ran.'

      b. *ṭanu parigeṭṭ-ææ-nu
           3SG run-PAST-1SG
           'He ran.'

A final note: what sets monstrous agreement apart from indexical shift is the fact that pronouns do not shift. In other words, first person pronouns must always refer to the current speaker and cannot refer to the attitude holder. This is shown in (14). The embedded first person pronoun, *neenu*, obligatorily refers to the current speaker.

(14) Raju neenu eemi tinn-aa-nu   ani   čepp-ææ-Du?
       Raju$_i$ 1SG$_{*i/s}$ what eat-PAST-1SG COMP say-PAST-M.SG
       'What did Raju say that I ate?'

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[4]A reviewer notes that monstrous agreement with second person pronouns may also occur in some dialects of Tamil as well. I leave the investigation of this possibility a matter for future research.

2.2 The interpretation of monstrous agreement

Moving on to the interpretation of attitudes with monstrous agreement; monstrous agreement is only allowed if the report is a *de se* attitude. For that, it must meet the criterion in (15) (from Pearson 2012).

(15)   a.   *Aboutness condition*: the attitude is about the attitude holder *and*
       b.   *Awareness condition*: the attitude holder is aware that the attitude is about herself

To test whether monstrous agreement only occurs in *de se* attitudes, a scenario must be constructed where the condition in (15b) is not met to see if the sentence is judged felicitous in such a situation. This is done in (16). In this scenario, Rani is not aware that she has an attitude about herself; the sentence with monstrous agreement is judged to be infelicitous while the sentence without monstrous agreement is judged to be acceptable.

(16)   SCENARIO: Rani took an exam, and later saw the top 10 scores with the scorer's student ID numbers. She forgot her own ID number, so did not know who was who. Looking to the top score, she thinks: "This student definitely passed!" But it turned out she was that student.

(17)   a.   raani [ṭanu exam pass ajj-in-anḍ-ani]   nam-mu-ṭundi
            Rani [3SG exam pass happen-PAST-F.SG-COMP] believe-PAST-F.SG
            .'Rani believes that she passed the exam.

       b.   #raani [ṭanu exam pass ajj-aa-n-ani]   nam-mu-ṭundi
            Rani [3SG exam pass happen-PAST-1SG-COMP] believe-PAST-F.SG
            'Rani believes that she passed the exam.'

A similar interpretative restriction has been found for languages that allow for indexical shift: clauses with indexical shift can only express *de se* attitudes. This is shown for Amharic in (18) (Schlenker 1999, 97; see also Sudo (to appear) for Uyghur).

(18)   SCENARIO: Jon, who is a candidate in the election, is so drunk he doesn't remember who he is. He watches TV and sees a candidate he finds terrific, thinking that this guy must be a hero. This candidate happens to be Jon himself though he doesn't realize it.

(19)   a.   #Jon ʤəgna nə-ññ   yil-all
            John hero   COP.PF-1sO 3M.say-AUX.3M
            'John says that he is a hero.'

       b.   Jon ʃwyew ʤəgna näw alä
            John the-man hero   is   said

'John said the man is a hero.'

A question one may have at this point is: do attitude reports without monstrous agreement like those in (9a) and (12a) also have a *de se* reading or are they always read *de re*? This is a more difficult question than it appears at first because in simple cases, utterances with a *de se* attitude entail the one with a *de re* attitude. Despite this, there are ways to test whether an attitude has a *de se* reading. Below I deploy a test developed in Percus & Sauerland (2003). This test involves the scenario in (20).

(20)   SCENARIO: Rani, Raju, Rahul, and Troy all took an exam. Later the exam scores were posted next to the student's ID numbers. Rani was the only confident one and thought, "I passed the exam." Raju and Troy had forgotten their ID numbers and both were pessimistic about how they did, thinking they had failed. They saw the two top scorers and thought that those students definitely passed. It turned out they were those students. Rahul also thought he had failed, but was confident about Rani and thought she had passed.

In this scenario, there are four individuals: one has a *de se* thought, two have *de re* thoughts about themselves, and one has a *de re* thought about the first individual. The test sentence then reports that only the first individual has the attitude. The prediction of the test is that if a report has a *de se* reading, then the sentence will be judged true in this scenario because it is true that she is the only one who has the *de se* attitude, but if the report only has a *de re* reading, then it would be judged as false because other people in the scenario have *de re* beliefs about themselves or the first individual. As indicated by the judgements in (21), both clauses with monstrous agreement and clauses without monstrous agreement are judged to be true in such scenarios, suggesting that both reports have a *de se* reading.

(21)   a.   raan-e   [ṭanu exam pass ajj-in-anḍ-ani]   nam-mu-ṭundi
                Rani-FOC [3SG exam pass happen-PAST-F.SG-COMP] believe-PAST-F.SG
                'Only Rani believes that she passed the exam.'

         b.   raan-e   [ṭanu exam pass ajj-aa-n-ani]   nam-mu-ṭundi
                Rani-FOC [3SG exam pass happen-PAST-1SG-COMP] believe-PAST-F.SG
                'Only Rani believes that she passed the exam.'

2.3   The distribution of agreement shift

As discussed in the previous section, monstrous agreement, like most cases of indexical shift, can only occur in embedded clauses. For many languages with indexical shift, indexicals only shift under certain attitude verbs. For example. indexicals in Amharic only shift under the verb meaning 'to say' (Anand 2006). This is demonstrated in (22). While the embedded first person morphology can refer to the attitude holder in (22a) when embedded under the verb *alə*, this is not the case in (22b) where first person morphology must refer to the speaker of the current utterance.

(22)   a.   John ʤəgna nə-ññ   yil-all
             John hero   COP.PF-1sO 3M.say-AUX.3M
             'John says that he is a hero.'

       b.   John ʤəgna n-ññ   yiSəllig-all
             John hero   COP.PRES-1sO think.IMPERF-3SM
             'John thinks that I am a hero.'

Other languages appear to be more permissive. Uyghur, e.g., allows for shifting to occur under verbs of saying, belief, knowledge and direct perception (Sudo 2012). This is shown in (23).

(23)   a.   Ahmet *pro* kim-ni   jaxshi kör-imen   di-di
             Ahmet *pro* who-ACC well   see-IMPERF.1SG say-PAST.3
             'Who did Ahmet say that he likes?'

       b.   Ahmet *pro* kim-ni   jaxshi kör-imen   dep   bil-du
             Ahmet *pro* who-ACC well   see-IMPERF.1SG COMP believe-IMPERF.3
             'Who did Ahmet believe that he likes?

       c.   Ahmet Aygül-din   *pro* qaysi imtihan-din öt-tim   dep
             Ahmet Aygül-from *pro* which test-from   pass-PAST.1SG COMP
             angla-di
             hear-PAST.3
             'Which test did Amhet hear from Aygül that he passed?'

Sundaresan (2012) conjectures that the licensing environments for indexical shift fall on the implicational hierarchy developed by Culy (1994) for logophoric pronouns, given in (24). (24) should be read as stating that if indexical shift is licensed by a class of embedding verbs then all other verbs to its left will also license it.

(24)   SPEECH > THOUGHT > KNOWLEDGE > DIRECT PERCEPTION

Sundaresan (2012) shows from survey work that there are four dialects of Tamil that differ on where in the hierarchy they fall.

Where does Telugu fall on this hierarchy? It appears to fall on the far right. Not only does it allow for agreement shift with verbs of saying and belief, as demonstrated in the previous section, but also with verbs of knowledge and direct perception. This is shown in (25).[5]

(25)   a.   raani [ṭanu exam pass ajj-aa-n-ani]   ṭelusu-ḵun-di.
             raani [3SG exam pass happen-PAST-1SG-COMP know-REFL-F.SG
             'Rani found out she passed the exam'

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[5]For a comprehensive list of verbs that license agreement shift see Messick (in preparation).

b. raani [ṭanu exam pass ajj-aa-n-ani]   santošanga uṇḍi.
    raani [3SG exam pass happen-PAST-1SG-COMP] happy   COP
    'Rani is happy that she passed the exam'

Interestingly monstrous agreement in Telugu only occurs in complements introduced by the complementizer *ani*. This again patterns with indexical shift in Uyghur. In Uyghur, complements introduced by the complementizer *dep* allow indexical shift. Interestingly, both *ani* and *dep* are forms of the verb meaning *to say* in Telugu and Uyghur.[6]

3.   An analysis of agreement and indexical shift

In this section, I will propose an analysis of monstrous agreement that can also cover the basic cases of indexical shift. The basic idea is that when a pronoun is interpreted *de se*, it is semantically first person. In languages with indexical shift, the morphology allows for those features to be spelled out as first person, but in languages without indexical shift, the morphology forces the features to spelled out as a third person pronoun (putting aside logophors for the time being). What happens in Telugu agreement shift is that the semantic features of the pronoun are able to control agreement on the embedded verb. I will make all these intuitions explicit in the upcoming sections.

3.1   Semantic features and agreement

Descriptively, Telugu agreement shift is a mismatch between agreement controller and the target where it appears that the semantic interpretation of the controller is influencing the agreement target. In a series of typological studies, Corbett (1979, 1983, 2006) has shown that semantic features of nominals can control agreement; in fact, sometimes a nominal can control semantic *and* syntactic agreement in the same utterance. An example of such *semantic agreement* is given in (26). In (26a), a semantically plural noun *committee* can control plural agreement in British English. In (26b) a grammatically masculine noun can control feminine agreement in Russian when the referent of the noun is female. Finally, (26c) shows a case of so called unagreement in Spanish where a third person NP can control first person agreement when the speaker is included in the group the NP is referring to.

(26)   a. The committee has/have decided.

        b. Novyj   vrač   skazala
            new.MASC doctor said.FEM
            'New doctor said...'

        c. Qué desgraciadas somos las mujeres!
            how unfortunate   be.1PL the women
            'How unfortunate (we) women are'

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[6]It has long been speculated that logophoric pronouns are licensed in complements introduced by complementizers that are forms of verbs of saying (e.g., Sells 1987). For the role such complementizers play in licensing indexical and agreement shift see Messick (in preparation).

The relevance to Telugu is apparent. I suggest that agreement shift is part of this larger paradigm where semantic features are available as agreement controllers. How do we model the ability of semantic features to control agreement? A common way is to allow for nominal elements to carry two sets of ϕ-features, one that interfaces with the semantics and the other with the morphology (e.g., Wechsler & Zlatić 2000, 2003, Smith 2015, Landau 2015). The same can be done to account for Telugu agreement shift. For concreteness, let's adopt the system developed in Smith (2015). Smith proposes that in the narrow syntax, all nominal elements come with interpretable features that interface with the semantics and uninterpretable features that interface with the morphology. In most cases, the two are the same, but this is not always the case. Thus, *committee* nouns in British English have the feature set in (27).

(27) ϕ_{number} = [uF:singular, iF:plural]

When the nominal is sent to spell-out, the features are split; the uFs are sent to the PF interface, and the iFs are sent to the LF interface.

Once we have two sets of features, we must explain how agreement probes can target both uFs and iFs. Following Chomsky (2000, 2001), let's assume that the locus of the agreement probe for subject agreement is on the T(ense) head, and also that ϕ-features on T are uninterpretable. In this system, this will mean that T only has one set of ϕ-features, which furthermore do not need to be sent to the LF interface. Following Arregi & Nevins (2012) and Bhatt & Walkow (2013), let's also assume that Chomsky's AGREE operation is decomposed into two sub-operations: MATCH and VALUATION. I assume the definition of MATCH in (28) (from Bhatt & Walkow 2013, 972).

(28)   MATCHING is a relation that holds of a probe P and a goal G. Not every link induces VALUATION. To do so G must (at least) be in the domain D(P) of P and satisfy locality conditions. The simplest assumptions for the probe-goal system are shown below:

(29)   a.   Matching is feature identity.
         b.   D(P) is sister of P.
         c.   Locality reduces to "closest c-command"

While MATCH is a syntactic relation, the authors above argue that the other sub-operation VALUATION, the actual sharing of features between the probe and the goal, can occur either in syntax or PF. Smith (2015) argues that when VALUATION occurs in the syntax, it may target either the interpretable iF or the uninterpretable uF of the goal, but if it occurs in the PF component, then only the uninterpretable uF is available as a target.[7]

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[7]For discussion of and extension to the locality of semantic agreement in the system, see Smith (2015).

3.2   De se attitudes

Following Lewis (1979), Chierchia (1989), Schlenker (1999), von Stechow (2002, 2003), Pearson (2012); a.o., I assume that the complement of an attitude verb is not a proposition, but rather a property of type $\langle e\langle st\rangle\rangle$, as shown in (30).[8]

(30)   ATT $[\lambda x.\ \lambda w.\ [\ldots x \ldots \text{in } w]]$

Attitude verbs then quantify over individual-world pairs, or *centered worlds*. The denotation of *believe* in this system is given in (31).

(31)   a. $[\![believe]\!]^g = \lambda P_{\langle e\langle s,t\rangle\rangle}.\lambda x_e.\ \lambda w_s.\ \forall\langle y, w'\rangle \in \text{DOX}(x, w)[P(y)(w')]$
        b. $\text{DOX}(x,w) = \{\langle y, w'\rangle: w'$ is compatible with x's beliefs in w and x identifies as y in w'$\}$

To illustrate how *de se* interpretations arise, I provide a sample LF and semantic derivation in (32). The abstractor over individuals in the embedded clause binds the pronoun in its scope; this, along with the meaning postulate in the verbal denotation in (31), will result in the pronoun being interpreted *de se*.

(32)   a. $[_{CP1}\ \lambda w_1.\ [w_1$ Pete believes $[_{CP2}\ \lambda x_2.\ \lambda w_3.\ [w_3$ he$_2$ is smart$]]]]$
        b. $[\![CP2]\!]^g = \lambda x.\ \lambda w.\ x$ is smart in w
        c. $[\![CP1]\!]^g = \lambda w.\ \forall\langle y, w'\rangle \in \text{DOX}(Pete, w)[\ y$ is smart in w'$]$.

I will assume that the LF for *de se* attitude reports for languages that have indexical shift as well as languages with monstrous agreement is that of (32a). How then do we account for the variation? I follow here a modified version of the system developed in Schlenker (1999, 2003) (see also Baker 2008).[9] I assume, following Kratzer (2009), that bound pronouns may be born as variables without any feature values (Kratzer's minimal pronouns). The features are then valued during the course of the derivation. The minimal pronoun is shown in (33).

(33) $x_{[uF:\_;iF:\_]}$

When the minimal pronoun is bound by the abstraction over individuals in the left periphery of the embedded clause, its *u*F and *i*F are valued [AUTHOR; $-$C*] (cf. Kratzer's

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[8]I am putting aside tense as it is inconsequential for my analysis.

[9]As a reviewer notes, there are also similarities between the proposed analysis and the analyses presented in von Stechow (2002, 2003). As noted above, both analyses assume the same LF for *de se* interpretations; however, the locus of variation differs in both analyses. In von Stechow, the locus is the ability for verbs in some languages to check features of embedded pronouns. In the current analysis, the locus of variation is the vocabulary insertion rules of the embedded pronouns.

discussion of relative pronouns and PRO receiving features when bound).[10] The AUTHOR feature marks the pronoun as the *de se* center of some speech context, while the $-C*$ feature indicates that the pronoun is not the author of the actual speech context. Following Schlenker (1999, 2003), the variation between languages discussed here comes from how these features are spelled out. In Telugu, the spell out rule for the first person pronoun specifies that the pronoun must refer to the author of the actual speech act. In languages with indexical shift, the first person pronoun is unspecified for which speech act the pronoun refers to. This is shown in (34).

(34) a. *Telugu* [AUTHOR] [$+C*$] $\leftrightarrow$ *neenu*
      b. *Zazaki* [AUTHOR]$\leftrightarrow$ *ɛz*

Since the first person pronoun cannot be used in Telugu to refer to the author of an embedded speech act, the pronoun must be out another way. (9b) and (12b) indicate that the embedded pronoun inherits the features of the matrix subject, i.e., when the matrix subject is third person, then the third person pronoun *ṭanu* is used and when the subject is second person the embedded pronoun is also the second person pronoun *nuuvu*. The relevant examples are repeated below in (35).

(35) a. Raju [ṭanu parigeṭṭ-ææ-nu ani]   cepp-ææ-Du
          Raju 3SG run-PAST-1SG COMP say-PAST-M.SG
          'Raju said that he ran.'
      b. nuuvu parigeṭṭ-ææ-nu ani   nuuvu cepp-ææ-vu
          2SG   run-PAST-1SG COMP 2SG   say-PAST-2SG
          'You said that you ran.'

Although these features are transmitted to the embedded pronoun, they do not seem to be interpreted. For illustration, examine the embedded pronouns in (36). Even though John is a woman in all contexts compatible with his hopes, the masculine pronoun can be used in (36a). Similarly, in (36b), the matrix subjects have the singular *de se* thought (i.e., *I am the smartest student in the world*), but the plural pronoun can be used in the embedded clause.

(36) a. John, a transexual, hopes that he will become a woman and that society will accept him.
      b. We all think that we are the smartest student in the world.

There are a number of proposals that attempt to deal with these facts (e.g., Schlenker 1999, 2003, von Stechow 2002, 2003, Rullman 2003, Anand 2006, Heim 2008, Kratzer 2009, Landau to appear). I will follow Heim (2008) and Landau (to appear) in assuming that these features are transmitted to the pronoun in the PF component of grammar; hence they

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[10]In Baker (2008), the features are lexically specified on the pronoun, however, they must be licensed by being bound by an operator in the left periphery.

are invisible to the interpretation at LF. With the necessary background in place, we can now analyze monstrous agreement.

3.3   Putting it all together

In this section, I will give partial derivations for indexical shift and agreement shift to illustrate how the system developed in the previous sections works. I will begin with indexical shift, as it is simpler. Lets skip ahead to where the embedded TP is already constructed, as this is where the action begins. Assuming the language has subject agreement (like Amharic), the pronoun and T undergo MATCH.

(37) $[_{TP} \ldots T_{u\phi\_} \ldots [_{vP} x_{[uF:\_,iF:\_]}]]$

The pronoun will move from its thematic position and the the left periphery of the embedded clause is then constructed. The abstractor over individuals binds the pronoun and values its *i*F and *u*F with the AUTHOR and -C* feature values.

BINDING

(38) $[_{CP} \lambda x. \lambda w. [_{TP} \ldots x_{[uF:AUTHOR; -C*,iF:AUTHOR; -C*]} \ldots T_{u\phi\_} \ldots]]$

The pronoun and T can undergo VALUATION, copying the value of the *i*F of the pronoun onto T.[11]

VALUATION

(39) $[_{CP} \lambda x. \lambda w. [\ldots x_{[uF:AUTHOR; -C*,iF:AUTHOR; -C*]} \ldots T_{u\phi AUTHOR; -C*} \ldots]]$

The clause is then sent to spell out. The result is that the pronoun and the agreement morpheme are spelled out as first person.[12]

Moving to the more complicated case of agreement shift, recall from the discourse scenarios constructed in (16) and (20), that when a pronoun is interpreted *de se* in Telugu, it can either control first person agreement (i.e., *monstrous agreement*) or third person agreement. All the steps will be the same up until (39) for languages with agreement shift. So let us pick back up there. Recall that in Telugu the first person pronoun, *neenu*, can only be inserted with the feature values [AUTHOR] [+*C**], so unlike languages with indexical shift, the pronoun cannot be spelled out here in Telugu. I propose that in this situation feature transmission with the matrix subject can be invoked as a last resort measure to allow the

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[11]One may have the worry that VALUATION occurs counter cyclically. There are several ways to overcome this technical problem: one way is to assume, following Chomsky (2008), that all operations within a phase occur simultaneously (or that the cycle is defined on phases); another possibility is to follow Frampton & Gutmann (2000) and assume that once the pronoun and T undergo MATCH (their *feature sharing*), their features can be valued simultaneously when the pronoun is bound.

[12]VALUATION could occur at PF as well, however the result would be the same because for languages with indexical shift there is never a mismatch between *u*F and *i*F.

pronoun to be spelled out (see Messick (in preparation) for discussion of the last resort nature of feature transmission). Following Heim (2008) and Landau (to appear), I assume that feature transmission is post syntactic feature sharing between two DPs.[13] This is shown for a third person matrix subject in (40).[14]

FEATURE TRANSMISSION

(40) Subject$_{\text{M.SG}}$ ATT [[. . . x$_{[uF:\text{M.SG}]}$ . . . T$_{u\phi}$AUTHOR; -C* . . .]]

As a result of feature transmission with the matrix subject, the pronoun can now be spelled out, but as a third person pronoun. However, the T probe and the pronoun had already undergone VALUATION in the syntax, resulting in the iF features of the pronoun being copied onto T. Since these features were [AUTHOR] [$-C$*], in this derivation, the agreement morpheme is spelled out as first person. Recall from the previous section that VALUATION can be delayed until PF. What would happen if VALUATION between the pronoun and the embedded agreement probe on T is delayed until PF? For languages with indexical shift, it is inconsequential (see footnote 12). For languages with agreement shift, since feature transmission results in a mismatch between uF and iF, if VALUATION took place in PF this means that it would only have access to the uF of the pronoun. In (40), this would result in the M.SG being copied onto T, as shown in (41).

VALUATION

(41) Subject$_{\text{M.SG}}$ ATT [[. . . x$_{[uF:\text{M.SG}]}$ . . . T$_{u\phi}$M.SG . . .]]

This will result in both the pronoun and agreement morpheme being spelled out as third person. The optionality of agreement shift occurring with *de se* pronouns then boils down to the timing of VALUATION: if VALUATION takes place in the syntax, the iFs of the pronoun are copied onto T, resulting in the agreement morpheme being spelled out as first person. If VALUATION takes place in PF, the uFs of the pronoun are copied onto T; this results in the agreement morpheme being spelled out as third person in the cases above, as the pronoun had its uF valued by feature transmission with the third person matrix subject. Now recall from (16) that when the pronoun is not read *de se*, it crucially cannot control agreement shift (i.e., it must control third person agreement). The system developed here also accounts for this; if the pronoun is not *de se*, this means that it was not bound by the abstraction over individuals in the embedded clause, hence cannot receive the AUTHOR feature. Hence, the

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[13]A reviewer notes that there needs to be some way to ensure that the embedded pronoun will undergo feature transmission with the matrix subject and not some other DP (e.g., a matrix object). This could potentially be done through the use of Pearson (2012)'s [ATT] feature.

[14]One may worry that feature transmission appears to cross a finite CP boundary which constitutes a phase. There are several ways to get around this technical problem. One way is to follow Kratzer (2009) and assume that feature transmission chains are broken into smaller steps: the matrix subject shares its features with v which in turn shares them with C which can then transmit them to the pronoun. Another alternative is to follow Bošković (2007) and assume that agreement operations (but not movement operations) can occur across phases.

T probe will never have access to the first person features unless the pronoun is read *de se*.[15]

4.   Comparison to Sundaresan (2012)

Since this paper attempts to cover similar data as Sundaresan (2012), I will briefly compare the two analyses. Sundaresan (2012) treats monstrous agreement as a sub type of the phenomenon known as the anaphor agreement effect (AAE) (Rizzi 1990) stated in (42).

(42)   Anaphors do not occur in syntactic positions construed with agreement.

Sundaresan treats Tamil *taan* as a long distance reflexive anaphor, hence it is subject to the condition in (42). Sundaresan further assumes that the left periphery of complements of verbs of communication contains a perspective phrase that contains a null pronoun in its specifier. In the case of monstrous agreement, this null pronoun will have first person features. When the ϕ-probe on T undergoes search, it encounters *taan*, however it cannot agree with it due to (42). It continues to probe upwards until it reaches the null pronoun in the specifier of the Perspective projection. This null pronoun will value the ϕ-probe on T. This is shown schematically in (43).

AGREE

(43)   [$_{PerP}$ *pro*$_{\phi:1st}$ [$_{Per'}$ [$_{TP}$ taan [$_{T'}$ [$_{vP}$...] T$_{\phi:\_}$]] Per]]

The main difference between the analysis presented in Sundaresan (2012) and the one presented here is what we take the controller of agreement to be. The analysis presented here allows for the matrix subject of the embedded clause to be the controller, while Sundaresan (2012) argues that it is a null pronoun. These different analytical choices lead to different empirical predictions. Specifically, Sundaresan (2012) predicts that monstrous agreement should only occur when the embedded subject is an anaphor as that is the only time the ϕ-probe on T would probe beyond the subject.

As I discussed in section 2.1, Telugu appears to violate this prediction since *ṭanu* is no longer used as an anaphoric element as evidenced by the fact it can used in larger range of environments than anaphors. Outside of Dravidian there are a number of other languages that allow for non-anaphoric third person pronouns to control first person agreement. Karimonjong for instance allows for this agreement pattern, as shown in (44) (Curnow 2002). (45) shows that the pronoun can be the subject of an out of the blue context suggesting again that this is not an anaphor.

(44)   àɓù papà tlim ɛɓè àlózì   iŋèz morotó.
        AUX father say that 1SG-go-NEST 3SG Moroto
        'The father said that he was going to Moroto.'

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[15]For *de se* interpretations of *de re* pronouns, it is possible to have the relation between the attitude holder and the *res* be one of identity. This way we can also have the interpretation with the centered world semantics.

(45) íkítacapi   iŋèz ìwɔn
      weed.CAUSE 3SG 1INCL
      'He will cause us to weed.'

Even putting aside the status of *ṭanu*, the Telugu data presented here is problematic for the account given in Sundaresan (2012) since it was shown that the second person pronoun *nuuvu* also had the ability to control monstrous agreement, as the repeated example shows below:[16]

(46) nuuvu parigeṭṭ-ææ-nu ani   nuuvu cepp-ææ-vu
      2SG   run-PAST-1SG COMP 2SG   say-PAST-2SG
      'You said that you ran.'

This type of example is unproblematic on the account presented here as the embedded pronoun and matrix subject will share features via the feature transmission mechanism discussed in section 3.[17]

5.   Extended typology

Let us now examine two other ways that languages use to mark *de se* attitudes. One way is through the use of logophoric pronouns.[18] Now if logophors can also be read *de se*, this means that they can also be bound by the *de se* center. Under the current system, this would lead us to expect to find logophors which can control first person agreement in some languages, as they would also receive AUTHOR features when bound by the embedded abstraction over individuals. And indeed, we do find such languages, as shown in (47) for Donno Sɔ (Culy 1994).

(47) Oumar inyemɛ jɛmbɔ paza bolum miñ   tagi
      Oumar LOG   sack.DF drop left.1SG 1SG.OBJ informed
      'Oumar told me that he had left without the sack'

We have seen that the system in place can account for languages with indexical shift, languages with agreement shift, and languages with logophors (with and without first person agreement). Now how does the system handle a language like English, where there is no

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[16]A reviewer points out that only bound uses of these pronouns are able to control monstrous agreement. In order for the data presented here to fall under the AAE, either the condition in (42) would have to be amended to block agreement with bound uses of pronouns or we would have to posit an ambiguity between bound uses of pronouns and their free uses.

[17]If the controller of monstrous agreement is indeed *taan* in Tamil, we still need a explanation of why it appears to violate the anaphor agreement effect. One option is to claim that the AAE is paramaterized and agreement with anaphors is allowed in Tamil. Another option would be to treat *taan* not as an anaphor but rather a logophoric like pronoun along the lines of *taan* in Malayalam (Anand 2006).

[18]Note that I am not saying that logophoric pronouns are *obligatorily de se*, as Pearson (in press) has shown that logophors can be read *de re*. I am making the weaker claim that such pronouns *can* be used to express *de se* attitudes.

marking of *de se*? There are two potential ways: one way is to follow Anand (2006), and assume that *de se* readings in English only occur as a special form of *de re*; another way is to assume that the LF for English *de se* is the same as for other languages, but that agreement in English only occurs in the PF component for person agreement. This would mean VALUATION of the probe on T would only have access to the *u*F of the pronoun. Both options are fully compatible with the system developed here. Taking into account all the languages discussed here, we have the following typology of embedded *de se* marking.

(48)   *Typology of de se marking*

Language	*de se* marking
English	Third person pronoun
Amharic, Zazaki	Indexical shift
Ewe	Logophor
Donno Sɔ	Logophor with first person agreement
Telugu	Third person pronoun with first person or third person agreement

The system developed here has been shown to have the flexibility to account for all of this variation. Notice, however, that there is a gap in the typology in (48). In this hypothetical language, a *de se* attitude would be expressed with a first person pronoun and third person agreement, as shown in (49).[19]

(49)   John said I is a hero.
        Intended: 'John said that he*dese* is a hero'

In the current system, in order to be interpreted as *de se* and be spelled out as a first person pronoun both the *u*F and *i*F would be first person, so no matter when VALUATION takes place first person features will always be copied onto T. Hence, the agreement pattern from (49) is underivable under the system developed here, allowing for a principled explanation of this typological gap.

To conclude, this paper presented new data from Telugu that showed a new way of marking *de se* attitudes. It was shown that monstrous agreement behaves in many respects like indexical shift. The system developed here to account for monstrous agreement can also account for other ways languages mark *de se*, additionally explaining a hitherto unnoticed typological gap.

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[19]It is not the case that this surface pattern does not exist; it does in e.g., Golin (Papuan). However, when a first person pronoun controls third person agreement in such languages, it is always interpreted as a *de re* attitude about the current speaker. See Messick (in preparation) for an analysis.

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