# Perspective is syntactic: evidence from anaphora<sup>1</sup>

Sandhya Sundaresan, University of Leipzig

## 1 Introduction

The goal of this paper is to argue that perspective, expressed along the mental and spatio-temporal dimensions, is syntactically represented and can, as such, drive syntactic dependencies. To this end, I present evidence from a linguistic phenomenon where grammatical perspective has long been observed to play a central role — namely, non-local anaphora (a cover-term not only for long-distance anaphora and backward anaphora but also for logophora). I refer to this class of items as "perspectival anaphora":

#### (1) Definition of perspectival anaphora:

In every instance of perspectival anaphora, the anaphor is properly contained within a predication which is evaluated relative to the perspective, mental or spatial, of some sentient individual. This individual must be aware of the eventuality described by this predication, at the time it happens. The antecedent of the anaphor must denote this individual.

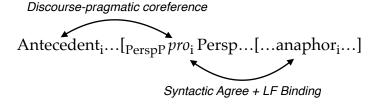
The evidence that I provide comes primarily from Tamil, a language of the Dravidian family, spoken predominantly in South India. In this paper, I will argue that the agreement marking that obtains on the clausemate verb of the anaphor in Tamil, when this anaphor occurs in nominative case (the case that generally feeds agreement), seems to be anomalously triggered, not by the anaphor or by its antecedent, but by a silent pronoun (*pro*), local to the verb, introduced in the specifier of a perspectival head, Persp. Assuming that agreement is a morphosyntactic process, such a thesis, if correct, then leads to the conclusion that perspectival information must be visible early enough to drive this morphosyntactic process: i.e. this perspectival information must itself be syntactically (i.e. structurally and featurally) represented.

Building on this idea, I will additionally propose that this pronoun plays a central role in deriving the perspectival nature of anaphoric dependencies in Tamil, proposing that it mediates the relationship between the anaphor and its antecedent, coreferring with them in different ways. The pronoun's relationship with the anaphor is distinguished by its being local: as such, it Agrees with the anaphor in syntax, which triggers binding at LF. However, the antecedent of the anaphor is not local to the anaphor or to the pronoun:

<sup>&</sup>lt;sup>1</sup>All Tamil data in the paper reports judgments from author's own native dialect of Tamil, consolidated by results of personal fieldwork conducted among other native speakers in Tamil Nadu, India.

thus, the pronoun-antecedent relationship is a discourse-pragmatic one (essentially just pronominal reference) that is not structurally constrained in any way. The anaphor and its antecedent thus corefer only by transitivity — purely by virtue of their independent referential relationships with *pro*. This is illustrated below:

#### (2) Two stage model of perspectival anaphora:



Non-local anaphora is infamous for its hybrid syntactic-pragmatic behavior which resists a unified analysis: certain properties, like the crosslinguistically robust anti-locality constraint on anaphoric antecedence, suggest that the dependency is structurally regulated; but yet others, like the fact that the antecedent of the anaphor need not c-command the anaphor, or that minimality restrictions on antecedence are not obeyed, or the nonlocality itself, or the fact that discourse-pragmatic factors such as perspective or empathy govern choice of antecedent, suggest that structure does not play a role after all. A two-stage model of non-local anaphora such as the one I propose here, with one stage being purely formal/structural, and the other being discourse-pragmatic, derives this dual nature in a unified manner. This model can potentially also be extended to other languages with perspectival anaphora like Icelandic (Hellan 1988, Sigurðsson 1991, Reuland 2001), Italian (Bianchi 2003, Giorgi 2006; 2010), Japanese (Kuno 1987, Oshima 2004, Nishigauchi 2014) Norwegian (Hellan 1988, Lødrup 2007), Abe (Koopman and Sportiche 1989), French (Charnavel 2017), and Ewe (Pearson 2013), among others. Toward the end of the paper, I provide independent evidence for the existence of a perspectival pro with a mediating role such as that described above. If this proposal is correct, the anaphorantecedence relationship should display the empirical fingerprint of pronominal reference, rather than anaphora. At the same time, the anaphor should itself not behave like a regular pronoun, but like a bound variable. I show that both these predictions are fulfilled using empirical diagnostics like split antecedence tests and bound variable vs. strict readings under definite DPs on the one hand, and anti-locality effects under reflexivity and structural constraints on binding domains, on the other.

## 2 Background: perspectival anaphora

I use the moniker "perspectival anaphora" as a cover-term for all (nominal) anaphoric dependencies that are regulated by their sensitivity to grammatical perspective, defined along the mental and spatial dimensions. Below, I present some of the background on perspectival anaphora and also discuss why this phenomenon has long posed such a unique challenge for generative linguists seeking to provide a unified analysis for its curious medley of discourse-pragmatic and syntactic properties.

## 2.1 Perspectival anaphora: core properties

In the realm of anaphora, the notion of perspective is perhaps typically invoked in the context of logophoric dependencies, the term "logophor" denoting a designated proform referring to an entity "whose speech, thoughts, feelings, or general state of consciousness are reported" (Clements 1975, 141). (3) illustrates this for Tuburi, a Chadic language (Sells 1987, 447): the plural logophor  $s\bar{a}:r\bar{a}$  represents the mental perspective of the sayer denoted by the matrix subject "they":

(3) à (ríng) wò gā tí **sā:rā** t∫Í **sā:rā** pro (say) PL СОМР head LOG hurt LOG "They<sub>i</sub> said [<sub>CP</sub> that they<sub>i</sub> had headaches]."

The term has since been appropriated to refer to dependencies where the anaphor corefers with an extra-sentential nominal that denotes a discourse-salient individual from whose "inner mind" the narrative is reported, as in the free indirect discourse scenario (Banfield 1982, Schlenker 2004) from Jane Austen's *Emma* (Austen 1816, Chapter XVIII, 321) in (4):

(4) "With Tuesday came the agreeable prospect of seeing him again, and for a longer time than hitherto; of judging of his general manners, and by inference, of the meaning of his manners towards **herself**; of guessing how soon it might be necessary for her to throw coldness into her air ..."

"Long-distance anaphora" — i.e. dependencies involving bound variable pro-forms that are anteceded by another nominal in the same sentence (albeit, crucially, not in the same local clause) — can also be similarly perspectival. This is illustrated by the striking contrast in the Icelandic sentences below (taken from Reuland 2001, 345):

(5) Barnið<sub>i</sub> lét ekki í ljós [að það hef-ði verið hugsað vel um  $sig_{\{i,*j\}}$ ]. child.def put not in light that there had-sbyv been thought well about anaph "[The child]<sub>i</sub> didn't reveal [CP that  $she_{\{i,*j\}}$  had been taken good care of]."

(6) \*Barnið<sub>i</sub> bar þess ekki merki [að það hef-ði verið hugsað vel um child.Def bore of it not signs that there had-sbjv been thought well about  $sig_i$ ].

**ANAPH** 

"[The child]<sub>i</sub> didn't look [CP as if she<sub>i</sub> had been taken good care of]."

Reuland (2001, p. 345), describing the sentences in (5)-(6), reports that:

"The difference in acceptability between [(5)] and [(6)] can be attributed to the fact that in [(5)] the report is made from the child's point of view, i.e., it is the child, and not the speaker, who didn't reveal that he/she had been taken good care of, whereas in [(6)], it is the speaker who reports that the child didn't look as if he/she had been taken good care of."

The role of mental perspective in long-distance anaphora has been observed for a range of other languages (see e.g. Koopman and Sportiche 1989, Pearson 2013, Kuno 1987, Oshima 2007, Bianchi 2003, Giorgi 2010, Jayaseelan 1997, for data and discussion on Abe, Ewe, Japanese, Italian, Malayalam, respectively). Anaphoric dependencies may be governed by their sensitivity to spatial perspective, as well, as in Norwegian where "the simple reflexive [seg] is used when the physical aspect of the referent of the binder is in focus" (Lødrup 2007, 183, see also Rooryck and vanden Wyngaerd 2011 for data and discussion on the role of spatial perspective in Dutch anaphora). This is nicely illustrated in the pairing below, involving the preposition *mot* which is homophonous between a spatial vs. a more abstract, non-spatial meaning:

- (7) *mot* (TOWARD, AGAINST):
  - a. Han<sub>i</sub> drar den mot  $seg_{\{i,*j\}}$ . He[NOM] pull.PRS it towards ANAPH "He<sub>i</sub> pulls it towards himself<sub> $\{i,*j\}$ </sub>."
  - b. Forbrukerråd-et argumenterer mot [seg selv] $_{\{i,*j\}}$  consumer.council-DEF argue.PRS against ANAPH self. "[The consumer council] $_i$  argues against itself $_{\{i,*i\}}$ ."

The simplex *seg* form is used only when the preposition is interpreted as spatial, and its antecedent is obligatorily interpreted as the spatial perspective-holder with respect to the spatial PP containing the anaphor. In all other cases, *seg selv* is used, making this form the elsewhere case. In the rest of the paper, I label all pro-form dependencies where the antecedence of the pro-form is regulated by perspective, in the manner illustrated above, as instances of "perspectival anaphora" and the pro-form in question in each case as a "perspectival anaphor".

Finally, it has been pointed out that perspectival anaphors in languages like Japanese (Kuno 1973, Nishigauchi 2014) are subject to an "awareness condition". Kuno (1973, 322) describes that the Japanese anaphor *zibun* in a subordinate clause may corefer with another nominal in the matrix only if the former "represents an action or state that the referent of [the nominal] is aware of at the time it takes place or has come to be aware of at some later time." Thus, Japanese *zibun* is licit in (8) where Takasi is aware of the election happening, but not in (9), where he is asleep, and therefore not (Nishigauchi 2014, 167, Exx. 24-25):

- (8) Iinkai-ga zibun<sub>i</sub>-o erab-i soo ni nat-ta toki, Takasi<sub>i</sub>-wa huanni committee[NOM] ANAPH-ACC elect likely become-PST when Takasi-TOP worried nat-ta.
  - become-pst
  - "When it came to be likely that the committee might elect  $self_i$ , Takashi $_i$  became anxious."
- (9) \* Iinkai-ga zibun $_i$ -o erab-i soo ni nat-ta toki, Takasi $_i$ -wa committee[nom] anaph-acc elect likely become-pst when Takasi-top fast gussuri nemut-te-i-ta. asleep be-pst

"When it came to be likely that the committee might elect  $self_i$ , Takashi $_i$  was fast asleep."

It is also important to note that the individual denoted by the antecedent of a perspectival anaphor doesn't need to *actually hold* a (mental or spatial) perspective with respect to the predication containing the anaphor. Rather, the predication containing this anaphor must be evaluated (or determined) relative to the perspective of this individual. To appreciate the distinction, observe that it is possible in English to bind an anaphor under a negated attitude verb, as in (10), below:<sup>2</sup>

(10) (Due to her advanced Alzheimer's) Susan<sub>i</sub> doesn't realize yet that there's a letter from herself<sub>{i,\*i}</sub>, from 40 years ago, that will be opened on her 90th birthday.

In (10), Susan has no realization, thus no perspective, on the fact that there's a letter from herself. Yet, her perspective is still involved in evaluating the predication containing *herself*. Similar arguments can be made for anaphora that is regulated by spatial perspective (for discussion, see Levinson 2003, Kracht 2008, Barlew 2016).

Given these considerations and the rest of the discussion above, I define perspectival anaphora as in (11) below:

<sup>&</sup>lt;sup>2</sup>I thank an anonymous reviewer for bringing this important distinction to my attention, and for the suggestion of the example given here.

#### (11) Definition of perspectival anaphora:

In every instance of perspectival anaphora, the anaphor is properly contained within a predication which is evaluated relative to the perspective, mental or spatial, of some sentient individual. This individual must be aware of the eventuality described by this predication, at the time it happens. The antecedent of the anaphor must denote this individual.

## 2.2 Structural vs. pragmatic approaches to perspectival anaphora

There is a fundamental analytic tension in the literature between conceptual and structural approaches to perspectival anaphora. The perhaps more traditional conceptual view is motivated by considerations like: (i) a tacit assumption that discourse-pragmatic notions like "perspective" do not belong in the domain of syntax proper but are, in some sense, peripheral to it; and (ii) the observation that perspectival anaphora seems to violate cornerstones of structural wellformedness (in generative frameworks like GB and Minimalism), making a syntactic analysis seem in turn rather far-fetched. To elaborate on the latter, in sentences like Icelandic (5), the antecedent is not local to the anaphor; since syntactic relationships are held to be fed by locality, such structures pose a nontrivial challenge. In multiply embedded sentences, the anaphor may be anteceded by a nominal across another one that is closer to it, in apparent blatant violation of Relativized Minimality (Rizzi 1990), another structural wellformedness condition. In such sentences, there is often also more than one individual that satisfies the perspectival conditions laid out in (11), thus more than one potential antecedent; the choice of antecedent in such cases is thus also indeterminate, which violates the idea that syntactic derivations yield a deterministic output. In so called "backward binding" constructions (Minkoff 2003), which occur in psych predications, the antecedent, which takes on the role of experiencer in the psych predication, doesn't even c-command the anaphor on the surface — as shown for Italian (12) (Giorgi 2006) and English (13) (Minkoff 2003):<sup>3</sup>

- (12) La-propria moglie preoccupa molto Gianni. self's wife worries a lot Gianni "Gianna is worried by self's wife."
- (13) That slanderous article about herself $_i$  tipped Sue $_i$  over the edge.

<sup>&</sup>lt;sup>3</sup>One could, of course, claim that the surface objects of psych-predicates were base-generated as (c-commanding) subjects and that anaphors may target antecedents in either position (along the lines of Beletti and Rizzi 1988). Such an analysis would need to derive this difference as a function of the thematic status (psych vs. non-psych) of the predicate. The idea that anaphors may target base-generated antecedents is also difficult to reconcile with the notion that binding is an LF-phenomenon.

Finally, the problem with logophoric relationships like that in English (4) above is, if anything, even more challenging. Here, the antecedent of the perspectival anaphor is extra-sentential which poses a non-trivial challenge to a model of syntax that can only deal with sentence-bounded dependencies.

The obvious solution, given these challenges, would seem to be to derive perspectival anaphora through purely non-structural, discourse-pragmatic means . The problem is that the role of structure cannot be dismissed entirely: its relevance already makes itself known in one interesting way. There is a robust and systematic *anti-locality* effect observed with most perspectival anaphors crosslinguistically. That is, long-distance anaphors (so called "se" anaphors in the Reinhart and Reuland 1993, parlance), many of which show perspectival properties of the kind discussed here, resist being bound reflexively (i.e. by a co-argument of the verb). Given that locality is a *structural* concept, the sensitivity to locality entails sensitivity to structure, by transitivity.<sup>4</sup>

Motivated in part by such observations<sup>5</sup>, the structural view within the generative framework (e.g. the movement approach in Chomsky 1986a, Pica 1987, Huang and Tang 1991, and the Relativized Subject hypotheses in Manzini and Wexler 1987, Progovac 1993) argues that the involvement of perspective in anaphora is syntactically implemented. The other kind of argumentation for a structural treatment is a weaker one—namely that, in many cases, perspectival anaphora *cannot* be understood discourse-pragmatically. Koopman and Sportiche (1989) argue that perspectival anaphora in the Kwa language of Abe must be syntactically implemented because the types of verbs that select logophoric complements cannot be straightforwardly distinguished in terms of their lexical meaning. Rather, they all have the property that they select a proposition with a particular kind of overt complementizer. Sells (1987) and Baker (2008) conclude the same, based on similar types of data from languages like Tuburi and Slave, respectively. Of course, underlying this type of reasoning is again the premise that

<sup>&</sup>lt;sup>4</sup>An anonymous reviewer notes that long-distance anaphors that display such properties are, first, not all perspectival (see e.g. discussion of long-distance anaphora into infinitives in Reuland 2011) and, second, that purely structural analyses for such phenomena already exist, which do not appeal to their perspectival properties (e.g. Reuland 2001; 2011, would derive this as a function of the monomorphemicity of the anaphor). With respect to the first point, the current paper has nothing to say: the focus of this paper is on the specific class of anaphora I am calling "perspectival anaphora" which behave distinctly from standard anaphora in a number of (other) respects. With respect to the second, I will propose, at the end of this paper (in Section 6.2.1) an analysis for the antilocal behavior of perspectival anaphora and argue that the data presented here cannot be easily accommodated by purely structural approaches like Reuland (2011).

<sup>&</sup>lt;sup>5</sup>And in part by other, actually fallacious ones, like the so-called "subject orientation" — namely the idea that perspectival anaphors must be anteceded by syntactic subjects and not objects — a generalization that has, however, been shown to be neither necessarily nor sufficiently true, with many systematic exceptions being attested crosslinguistically (see Giorgi 2006, a.o. for discussion).

discourse-pragmatic sensitivity and structural sensitivity are mutually incompatible.

In contrast to these theories, I will propose to make sense of this dual nature of perspectival anaphora by developing a model that exploits both structural and discourse-pragmatic aspects of grammar, interacting in a sequential derivation. In particular, I will argue that *every* instance of perspectival anaphora involves two types of dependency: a structural (i.e. syntactic and LF-semantic) one involving anaphoric binding by a perspectival null pronoun (*pro*) and a discourse-pragmatic one, building on this, involving coreference between the anaphor's antecedent and *pro* (see Nishigauchi 2014, Charnavel 2017, for similar proposals).

## 3 Perspectival anaphora in Tamil: a (very!) quick primer

Here, I show that non-local anaphora in Tamil is indeed perspectival, as defined in (11) and that it displays the hybrid syntactic-pragmatic properties described above for perspectival anaphora crosslinguistically.

## 3.1 Anaphora in Tamil is perspectival

Here, I focus on the properties of the Tamil anaphor *taan*, a morphologically simplex form whose basic case and number paradigms are given below:<sup>6</sup>

#### (14) Case and number paradigms for Tamil taan:

	Singular	Plural
Noм	taan	taan-gal
Acc	tann-æ	taŋ-gal-æ
Dat	tan-akkй	taŋ-gal-ŭkkŭ
Gen	tann-oodæ	taŋ-oodæ
Ins	tann-aal	taŋ-gal-aal
Сом	tann-oodй	taŋ-oodй
Loc/All	taŋ-giţţæ	tan-gittæ
Abl	taŋ-giţţæ-rйndй	taŋ-giţţæ-rŭndŭ

ta(a)n can only take 3rd-person antecedents (gender irrelevant)<sup>7</sup>, as shown below:

## (15) Ban on antecedence by Author\* and Addressee\*:8

<sup>&</sup>lt;sup>6</sup>As the table in (14) shows, the nominative form is taan, but all other case forms are built on a shortened stem-form, tan. I will thus henceforth refer to all surface forms of the anaphor as ta(a)n.

<sup>&</sup>lt;sup>7</sup>This is strictly natural gender in Tamil, grammatical gender not being marked in this language.

<sup>&</sup>lt;sup>8</sup>I follow standard parlance in the literature on Kaplanian indexical shift (see e.g. Schlenker 2003b, a.o.) in using the notations Author\* and Addressee\* to represent the Author and Addressee of the utterance context. Thus, Author\* = Author(c\*), and Addressee\* = Addressee(c\*), for c\* = Utterance-Context.

- a. \*Naan $_{Auth*}$  [ $_{CP}$  Seetha $_i$  tann-æ $_{\{Auth*,i\}}$  paar-tt-aa[ ŭnnŭ] so-nn-een. I[NOM] Seetha[NOM] ANAPH-ACC see-PST-3FSG- COMP say-PST-1SG "I $_{Auth}$  said [ $_{CP}$  that Seetha loved me $_{Auth*}$ .]" (Intended)
- b. \*Nii $_{Addr*}$  [ $_{CP}$  pasa $_{1}$  tann- $_{Addr*,i}$  adi-tt-aa $_{1}$  ga[-ŭnnŭ] nene-tt-aaj. You[NoM] boys-PL[NOM] anaph-acc hit-pst-3m-pl-comp think-pst-2sg "You $_{Addr*}$  thought [ $_{CP}$  that the boys hit you $_{Addr*}$ .]" (Intended)

The anaphor ta(a)n in Tamil co-exists with other pro-forms (I classify these as pronouns) which differ from it in being able to refer deictically. Consider (16) below:

(16) Raman tann-oodæ edædŭ-pakkattŭ-læ irŭ-nd-æ paamb-æ ko-nn-aan.
Raman ANAPH-DAT left-side-LOC be-PST-REL snake-ACC kill-PST-3MSG
"Raman killed the snake that was to his left."

The obligatorily non-deictic nature of ta(a)n can be illustrated by comparing its behavior across the minimally contrasting discourse-scenarios below:<sup>9</sup>

- (17) **Scenario 1:** Raman and Vivek are standing next to one another, when a snake slithers between them near Vivek's left foot and Raman's right foot. Raman kills it. Seetha, who is watching, points to Vivek and utters the sentence in (16) to her friend.
- (18) **Scenario 2:** Raman and Vivek are standing next to one another, when a snake slithers between them near Vivek's right foot and Raman's left foot. Raman kills it. Seetha, who is watching tells her friend the sentence in (16).

Native speakers judge (16) ungrammatical in Scenario 1, where there is both pointing and the spatial relations are reversed with respect to Raman's spatial coordinates (the snake is to Raman's right, not to his left). But (16) is judged perfectly acceptable in Scenario 2 where there is no pointing and the leftness of the snake is evaluated relative to Raman.<sup>10</sup> A systematic difference arises when one contrasts (16) with a minimally varying sentence containing a deictic pronoun instead of the anaphor, as in (19):

(19) Raman $_i$  avan-ŭkkŭ $_{\{i,j\}}$  edædŭ-pakkattŭ-læ irŭ-nd-æ paamb-æ ko-nn-aan. Raman he-DAT left-side-LOC be-PST-REL snake-ACC kill-PST-3MSG "Raman $_i$  killed the snake (that was) to his $_{\{i,j\}}$  left."

In (16), the "left-ness" of the snake is evaluated from Raman's spatial perspective; in (19), however, this leftness is evaluated from the spatial perspective of the (utterance-context) speaker or is underspecified (with respect to the perspective of the speaker vs. Raman). But the anaphor ta(a)n may only be licitly used in (16), where the spatial perspective-holder is the individual denoted by the antecedent and the antecedent alone. These

<sup>&</sup>lt;sup>9</sup>I thank an anonymous reviewer for suggesting these discourse scenarios to me.

<sup>&</sup>lt;sup>10</sup>As might be expected, if Seetha were to point to Raman in Scenario 2, the sentence would be considered degraded again.

examples show that perspective-holding plays a central role in regulating anaphoric dependencies in such languages.

The perspective-sensitivity of anaphora along the mental dimension, e.g. in attitude contexts, in Tamil, can be illustrated by its interaction with other perspectivally-sensitive elements, like epithets. Epithets have been observed to be *anti*-attitudinal in the sense that an epithet occurring in the scope of an attitude holder cannot denote the attitude-holder (Dubinsky and Hamilton 1998, a.o.). If mental perspective-holding regulates anaphora in Tamil, then we predict that an anaphor in the scope of an attitude verb should be able to denote the attitude-holder introduced by the agent of that verb. Such an anaphor should then also be unable to corefer with an epithet in the scope of that attitude verb (see Charnavel 2017, for parallel tests in perspectival anaphora in French). (20) below illustrates that these predictions are met:

(20)  $\operatorname{Sri}_i$  [ $\operatorname{taan}_{\{i,*j\}}$  kettæ kanavuka-nd-aan-nnŭ] nenæ-čč-aan. andæ muttaal $_{\{*i,j\}}$   $\operatorname{Sri}[\operatorname{NoM}]$  anaph[ $\operatorname{NoM}]$  bad dream-pst-3msg-comp think-pst-3msg. That  $\operatorname{idiot}[\operatorname{NoM}]$  nedamaa-vee school-æ vitt-aan-aa? really-emph school-acc leave-pst-3msg-q Literal:" $\operatorname{Sri}_i$  thought [ $\operatorname{CP}$  that  $\operatorname{self}_{\{i,*j\}}$  had had a bad dream. Had that  $\operatorname{idiot}_{\{*i,j\}}$  really left school?"

Reading  $1 \checkmark$ : "Sri<sub>i</sub> thought [ $_{CP}$  that  $he_{\{i,*j\}}$  had had a bad dream. Had that  $idiot_{\{*i,i\}}$  really dropped out of school?"

READING 2 X: "Sri<sub>i</sub> thought [CP] that he<sub>i</sub> had had a bad dream. Had that idiot<sub>i</sub> really dropped out of school?"

Perspectival anaphora in Tamil obtains "long-distance" (across multiple clauses — modulo processing, the actual distance doesn't matter), logophorically, and in psych predications (yielding backward-binding structures involving a non-c-commanding experiencer antecedent). In all these structures, it can be shown with respect to diagnostics like those above that anaphora is perspectivally regulated along the mental or spatial dimensions. Additional supporting evidence comes from the fact that there is an animacy constraint on anaphoric antecedence: this follows naturally if antecedence is perspectivally regulated (see also Sundaresan and Pearson 2014, for further discussion and formalizations of this constraint for perspectival anaphora). I will thus take it to be uncontroversial that anaphora in Tamil is perspectival in the sense defined in (11) above.

Perspectival anaphora in Tamil is also subject to the awareness condition described for Japanese above. The following sentences are rough analogs to the Japanese minimal pairs in (8)-(9), and make the same point:<sup>11</sup>

- [Kuu:dam $_i$  [PRO $_i$  tann-æ $_{\{i,*j\}}$  elect-sejj-æ] varam-polŭdŭ] Raman committee[NOM] ANAPH.NOM elect-do-INF come-when Raman[NOM] kavalæ-padæ-aaramb-ičč-aan. worry-do-start-PST-3MSG "When the committee was about to elect  $\lim_{\{i,*j\}}$ , Raman $_i$  started worrying."
- \* [Kuu:dam<sub>i</sub> [pro<sub>i</sub> tann-æ<sub>i</sub> elect-sejj-æ] varam-polŭdŭ] Raman committee[nom] Anaph.nom elect-do-inf come-when Raman[nom] tuuŋg-i-kkoηd-iru-nd-aan. sleep-pst-asp-cop-pst-3msg
  Intended: "When the committee was about to elect him<sub>i</sub>, Raman<sub>i</sub> slept."

Finally, ta(a)n may be licitly bound under a negated attitude verb as in (23) below: 12

(23) Raman-ŭkkŭ [taan ˈɡejčč-æ višijam-ee] teri-jaadŭ. Raman-dat anaph[nom] win-inf news-emph know-neg "Raman $_i$  didn't even know [ $_{GerP}$  of his $_{\{i,*j\}}$  having won]."

The discussion here shows that anaphora in ta(a)n is perspective-sensitive, that it is regulated by sensitivity to spatial as well as mental perspective and, more specifically, that the role of perspective in anaphora in this language is as defined in (11).

## 3.2 Dual syntactico-pragmatic behavior

It was noted in Section 2.2 that perspectival anaphora crosslinguistically is characterized by a hybrid mixture of structural and discourse-pragmatic properties. Here, I present evidence to show that perspectival anaphora in Tamil exhibits the same behavior in this respect, as well.

Below, I show that long-distance anaphors in Tamil violate locality and, frequently, minimality and antecedence determinacy. In (24), *Krishnan* antecedes *ta(a)n* across several other DPs that are structurally closer to the anaphor, at least one of which (namely *Raman*) also readily qualifies as a potential antecedent to it. Being two clauses higher,

<sup>&</sup>lt;sup>11</sup> A native speaker tested on the acceptability of (22) said that the sentence sounded bad to his ear because the person uttering the proposition that the committee was about to elect Raman, was me (and not Raman): since Raman himself was asleep, he could have had no knowledge of this eventuality. He suggested that I replace the anaphor with the regular pronoun *avan* ('he') instead, which would then licitly allow coreference with *Raman* in such a scenario.

 $<sup>^{12}</sup>$ When I asked the same native speaker from Fn. 11 why a sentence like (23) was licit given the explicitly stated lack of awareness, he responded that ta(a)n is licit in this sentence (corroborated by another native speaker) because Raman is aware that "he has two possibilities, to win or not to win, even if he doesn't know which one turned out to be true." In (22), this isn't the case: being asleep, Raman is completely oblivious to the very act of the committee being about to elect him.

*Krishnan* is also clearly non-local to the clause containing ta(a)n. Thus, (24) attests to apparent violations of non-locality and non-minimality and also to antecedence optionality. The latter is more clearly illustrated in (25): here, either *Krishnan* or *Raman* may antecede ta(a)n as the referential indices indicate. Backward binding structures involving psych predications show us apparent violations of c-command: in (26), *Raman* can antecede ta(a)n despite being embedded as a possessor DP inside the experiencer – thus clearly not c-commanding the anaphor. Finally, logophoric dependencies such as that illustrated in (27) show that the antecedent doesn't need to be in the same sentence as the anaphor – but can be elsewhere in the salient discourse:

#### (24) Antecedent: non-local and non-minimal:

[CP] Raman Anand-kittæ [CP] Seetha tann-æ $_i$  kaappaatt-in-aal-ŭnnŭ] Raman[NOM] Anand-All Seetha[NOM] ANAPH-ACC save-PST-3FSG-COMP] so-nn-aan-nnŭ] Krishnan $_i$  paar-tt-aan. say-PST-3MSG-COMP Krishnan[NOM] saw-PST-3MSG "Krishnan $_i$  saw [CP] that Raman told Anand [CP] that Seetha saved him $_i$ .] ]"

#### (25) Choice of antecedent: indeterminate:

Krishnan $_i$  [ $_{CP}$  Seetha tann- $\mathfrak{A}_{\{i,j\}}$  kaadali-kkir-aa[- ŭnnŭ] Raman- $\mathfrak{A}_{j}$  Krishnan[NOM] Seetha[NOM] ANAPH-ACC love-PRS-3FSG- COMP Raman-ACC nenekka-vej-tt-aan. think-CAUS-PST-3MSG "Krishnan $_i$  made Raman $_j$  believe [ $_{CP}$  that Seetha loved  $\lim_{\{i,j\}}$ ]"

#### (26) Antecedent: non c-commanding:

 $[CP]_{DP}$  Taan $_{\{i,j\}}$  avvalavŭ ee æ-jaaga ir ŭnd-adŭ]  $[DP]_{DP}$  Raman-oodæ $_i$  ANAPH[NOM] so poor-ADJ be-PST-3NSG.NOM Raman-GEN annaav-æ] $_j$  rombæ-vee baadi-jir ŭ-kkir-adŭ.] brother-ACC very-EMPH affect-be-PRS-3NSG " $[DP]_{DP}$  His $_{\{i,j\}}$  having been so poor] has really affected  $[DP]_{DP}$  Raman $_i$ ]'s brother] $_i$ ."

#### (27) Antecedent: extra-sentential (logophoric):

Seetha-vŭkkŭ $_i$  onnum purija-læ. Taan $_{\{i,*j\}}$  mattum een ivvalavŭ Seetha-dat anything understand-neg. Anaph.nom alone why this.much kaštappada-num? suffer-must?

"Seetha<sub>i</sub> didn't understand at all. Why must she<sub>{i,\*j}</sub> alone suffer this much?" The larger take-home message from these empirical patterns is the same as before: such

structures pose a genuine challenge to analyses that seek to derive these anaphora through purely structural means. But here again, as before, the role of structure cannot be dismissed out of hand. As has been noted elsewhere (see e.g. Annamalai 1999, Schiffman 1995), Tamil ta(a)n cannot be locally bound as is, without something extra, specifically a verbal suffix kol on ta(a)n's clausemate verb, being added:<sup>13</sup>

(28) \* Raman<sub>i</sub> tann- $\alpha_i$  paar-tt-aan. Raman[NOM] ANAPH-ACC see-PST-3MSG Intended: "Raman<sub>i</sub> saw himself<sub>i</sub>"

A similar situation seems to hold in the related Dravidian language Kannada, as discussed in detail in Lidz (2001; 2004, et seq). I discuss perspectival reflexives at the end of this paper in detail and try to derive the antilocality in terms of the model of perspectival anaphora developed here. At this point, it suffices to note that the mere existence of this pattern suggests that a structural restriction (some form of antilocality) is at work.

To sum up, then, we are left with the same mixed bag of properties in the case of perspectival anaphors in Tamil, as we were with the others: i.e. dependencies involving seemingly unruly syntactic behavior that nevertheless show sensitivity to structure (specifically to syntactic locality) and are simultaneously regulated by their sensitivity to discourse-pragmatic perspective.

## 4 Insights from Tamil verbal agreement

This section presents and discusses the core data of the paper. The main goal is to argue, on the strength of evidence from verbal agreement triggered in the scope of the nominative anaphor *taan* in Tamil, that grammatical perspective is represented in the syntax, in the form of a silent pronoun (or *pro*), in the same local perspectival predication as the anaphor. This *pro* is visible to, thus can participate in syntactic processes, including but not limited to anaphora. On the strength of this conclusion, I will propose a two-step model of perspectival anaphora whereby *only one stage* of the perspectival anaphoric dependency is instantiated in the syntax proper, involving an Agree relation between *pro* and the anaphor in syntax which in turn triggers binding at LF. The perspectival *pro*, not the antecedent, is thus the true binder of the anaphor. The second stage of the process is not implemented in the syntax at all, but at the broader interpretive and discourse-pragmatic levels, and involves discourse-pronominal coreference between *pro* and the

<sup>&</sup>lt;sup>13</sup>This seems to be the case for many dialects of Tamil, including my own. Exceptions to these include reflexives in certain types of psych predications.

antecedent. Such a model allows us to elegantly capture the hybrid syntactico-pragmatic nature of perspectival anaphora in Tamil and other languages, described above.

## 4.1 Verbal agreement under ta(a)n in Tamil

In Tamil, verbal agreement for person, number, and gender (i.e.  $\phi$ -agreement) is typically triggered by a local nominal in the nominative. Thus, in (29), the matrix verb reflects 3MSG agreement and is triggered by the nominative pronoun *avan* ('he') whereas the embedded verb, marked 2sG, matches the 2sG features of the embedded nominative subject *nii* ('you'). In (30), the embedded subject has been changed to *aval* ('she') and reflects 3FSG features on its clausemate verb:

- (29) [Nii paris-æ tookkapoo- r-æ-nnŭ] avan namb-in-aan. you[NoM] prize-ACC lose.go- PRS-2SG-COMP he[NOM] believe-PST-3MSG "He $_i$  believed [ $_{CP}$  that you would lose the prize]."
- (30) [Aval<sub>j</sub> paris-æ tookkapoo- r-aal-ŭnnŭ] avan<sub>i</sub> namb-in-aan. she[NoM] prize-ACC lose.go- PRS-3FSG-COMP he[NOM] believe-PST-3MSG "He<sub>i</sub> believed [ $_{CP}$  that she<sub>j</sub> would lose the prize]."

But when the nominative nominal is the anaphor *taan*, the agreement on its clause-mate verb varies in an interesting way. Consider the sentences below:

- (31) $Ava|_i$  $[CP avan_i]$ [CP taan $\{i,*i,*k\}$ paris-æ tookkapoo-gir-aa]-nnŭ] she[NOM] ANAPH[NOM] prize-ACC lose.go-prs-3fsg-comp he[NOM] namb-in-aan-ŭnnŭ] [pasan-ga]-kittæ] $_k$  kaatt-in-aa]. believe-pst-3msg-comp boy-3pl-all show-pst-3fsg "She<sub>i</sub> showed [the boys]<sub>k</sub> [ $_{CP}$  that he<sub>j</sub> believed [ $_{CP}$  that herself<sub>i</sub>/\*himself<sub>j</sub>/\*themselves<sub>k</sub> would lose the prize]]." (literal)
- (32) Ava $_i$  [ $_{CP}$  avan $_j$  [ $_{CP}$  taan $_{\{j,*i,*k\}}$  paris-æ tookkapoo-gir-aan-nnŭ] she[NOM] he[NOM] ANAPH[NOM] prize-ACC lose.go-PRS-3MSG-COMP namb-in-aan-ŭnnŭ] [pasa $_{1}$ -ga $_{1}$ -kit[tæ] $_{k}$  kaat[t-in-aa]. believe-PST-3MSG boy-3PL-ALL show-PST-3FSG "She $_{i}$  showed [the boys] $_{k}$  [ $_{CP}$  that he $_{j}$  believed [ $_{CP}$  that himself $_{j}$ /\*herself $_{i}$ /\*themselves $_{k}$  would lose the prize]]." (literal)
- (33) **Kolændæ**<sup>i</sup> nadandadæ-patti joosi-čč-adŭ. **Taan**<sup>i</sup> een kaštappatt-**adŭ**? the.child[NoM] happening-ACC-about reflect-PST-3NSG. ANAPH[NOM] why suffer-PST-3NSG "The child reflected about what had happened. Why had itself<sub>{i,\*j}</sub> suffered?" When the intended antecedent is *ava*[ ('she') (as in (31)), the agreement under *ta(a)n* is 3FSG. (32) varies minimally from (31) with the only difference lying in the choice of

antecedent for ta(a)n — the medial subject avan ('he') instead of the matrix subject aval

('she'). Here, the verbal agreement under the anaphor tracks this choice, with the agreement changing to 3MsG to (32). In (33), ta(a)n refers logophorically to the extra-sentential attitude-holder  $ko_1 \approx nd \approx$  ('child') which triggers neuter agreement on its clausemate verb; although ta(a)n is in a different sentence, the agreement under it must still reflect the  $\phi$ -features of this antecedent: if  $ko_1 \approx nd \approx$  were replaced by avan ('he'), the agreement-marking in the following ta(a)n-sentence would be 3MsG -aan instead. The agreement patterns above thus suggest the following:

(34) **Antecedence tracking generalization:** Nominatives trigger agreement in Tamil. When the anaphor ta(a)n occurs in the nominative, the agreement on its clausemate verb tracks the antecedent of ta(a)n.

## 4.2 Agreement is not triggered by the antecedent

An obvious candidate for the source of agreement, given the antecedent-tracking effect of the agreement, given in (34), is the antecedent of the anaphor. Following e.g. Kratzer (2009) and others, we might propose that this is a case of  $\phi$ -feature transmission from the antecedent to the embedded verb in the ta(a)n-clause (perhaps cyclically, via intermediate functional heads).

An immediate, potentially fatal problem for this view is that, in Tamil perspectival anaphora, the antecedent may be several clauses away, need not c-command the ta(a)n-clause and, in structures involving the logophoric use of ta(a)n, is extra-sentential (cf. (24)-(25)). Further evidence against such an account comes from seemingly mismatched agreement in sentences like (35):

- (35) Raman $_i$  [ $_{CP}$  taan $_{\{i,*j\}}$  viitt-ŭkkŭ tanijaa poo-r-een-nnŭ] so-nn-aan. Raman  $_{ANAPH}$ [ $_{NOM}$ ] $_i$  house-dat alone go-prs-1sg-comp say-pst-3msg-comp Literal: "Raman $_i$  said [ $_{CP}$  that self $_{\{i,*j\}}$  am going home alone]." Reading: "Raman $_i$  said [ $_{CP}$  that he $_{\{i,*j\}}$  is going home alone]."
- (35) obtains under tightly constrained structural conditions, specifically only in the clausal complement of a speech predicate. The anaphor ta(a)n is its nominative subject and it takes an antecedent, the matrix subject Raman, which has 3MsG features, and triggers 3MsG agreement on the matrix verb. But the  $\phi$ -agreement on the clausemate verb of ta(a)n is 1sg. A feature-transmission account cannot explain (much less derive) the mismatch between the features of the antecedent and those on the embedded verb.
- (35) superficially seems to violate the antecedence-tracking generalization, described in (34). But a closer look at such examples shows that this is not the case:

- (36) Raman $_i$  [ $_{CP}$  Krishnan $_j$  [ $_{CP}$  taan $_j$  Seetha-væ kaadali-kkir-een/\*aan-nnŭ] Raman[NOM] Krishnan[NOM] ANAPH[NOM] Seetha-ACC love-PRS-1SG/\*3MSG-COMP so-nn-aan-nnŭ] keelvipa-tt-aan. say-PST-3MSG-COMP overhear-PST-3MSG

  "Raman $_i$  overheard [ $_{CP}$  that Krishnan $_i$  said [ $_{CP}$  that he $_i$  loves Seetha.]]"
- (37)  $\mathbf{Raman}_i$  [ $_{CP}$  Krishnan $_j$  [ $_{CP}$  taan $_i$  Seetha-væ kaadali-kkir-aan/\*een-nnŭ] Raman[NOM] Krishnan[NOM] ANAPH[NOM] Seetha-ACC love-PRS-3MSG/\*1SG-COMP so-nn-aan-nnŭ] kee[vipa-tt-aan. say-PST-3MSG-COMP overhear-PST-3MSG

"Raman<sub>i</sub> overheard [ $_{CP}$  that Krishnan<sub>i</sub> said [ $_{CP}$  that  $\mathbf{he}_i$  loves Seetha.]]"

- (36) shows that, when the antecedent is Krishnan, the agent of the selecting speech predicate, agreement on the clausemate verb of ta(a)n is 1sg. But in (37), the antecedent ta(a)n is Raman, which denotes an attitude-holder but not a speaker, and is also not an argument of the predicate selecting the ta(a)n clause. Here, the agreement under ta(a)n cannot be 1sg but must match the  $\phi$ -features of Raman, thus be 3msg. What this contrast shows is that the thematic properties and structural position of the antecedent directly affect the nature of agreement on the embedded verb. Additional supporting evidence for this same point comes from number marking on the verb. When the agent of the selecting speech predicate (which also serves as the antecedent of the anaphor) is marked plural, the agreement on the verb under ta(a)n is 1pl not 1sg:
- (38) Pasaŋ-ga $|_i$  [taaŋ-ga $|_{\{i,*j\}}$  viittŭkkŭ tanijaa poo-r-oom-ŭnnŭ] so-nn-aaŋ-ga $|_i$  boy-pl.nom [anaph-pl.nom $_i$  home-dat alone go-prs-1pl-comp] say-pst-3m-pl Literal: "The boys $_i$  said [ $_{CP}$  that themselves $_{\{i,*j\}}$  are going home alone.]" Reading: "The boys $_i$  said [ $_{CP}$  that they $_{\{i,*j\}}$  are going home alone.]"

Sundaresan (2012) argues that sentences like (35), (36), and (38) involve indexical shift (von Stechow 2002, Schlenker 2003a, Anand 2006, Shklovsky and Sudo 2014) for 1st-person in the embedded clause: i.e. the 1st-person forms are evaluated against the speech index introduced by a selecting speech predicate, rather than against the utterance context. Such sentences show that the antecedent-tracking generalization in (34) is uniformly obeyed: but the nature of agreement triggered in each case is different. In the standard (or elsewhere) case, antecedent-tracking yields  $\phi$ -matching. In the more tightly constrained clausal complement of a speech verb (where indexical shift obtains), and where the antecedent denotes the agent of the speech verb, agreement is 1st-person.

### 4.3 Agreement is not triggered by the anaphor

Given that agreement is uniformly triggered by the nominative elsewhere in Tamil (see again (29)), a more reasonable claim might be that agreement under nominative ta(a)n is simply triggered by ta(a)n itself. Here, I argue against this conclusion on two grounds:

- (i) This would require us to claim that there is an anaphor and a 1st-person shifted indexical, both of which syncretize as ta(a)n to deal with agreement contrasts like that between (31)-(33), (37), on the one hand, and (35), (36), and (38), on the other. While not impossible, this would be a difficult syncretism to capture formally because these categories do not seem to form a natural class.
- (ii) 1st-person agreement can also be triggered under a 2nd-person indexical *nii* in Tamil. It is not possible to extend a syncretism account to deal with this pattern because this would involve claiming that *nii* is *simultaneously* an unshifted 2nd-person indexical and a shifted 1st-person indexical.

Turning to (i), we have just seen that the agreement on the clausemate verb under ta(a)n always tracks the antecedent of the anaphor (as described in (34)) but does so in different ways. In the clausal complement of a speech predicate, it matches the number of the antecedent but not its person; rather it shows up as 1st-person. In all other scenarios (the elsewhere case), it fully matches the  $\phi$ -features of the antecedent. As mentioned, Sundaresan (2012) treats the 1st-person agreement cases as involving indexical shift in the complement of the speech predicate. Assuming this is correct, proposing that ta(a)nis the agreement trigger in such sentences would entail that ta(a)n is a shifted 1st-person indexical. Furthermore, recall that ta(a)n itself cannot take a 1st-person or 2nd-person antecedent (cf. (15a)-(15b)). This means that ta(a)n wouldn't just be a 1st-person form that can be shifted: rather, it would have to be the spell-out of an obligatorily shifted 1stperson indexical. Of course, this wouldn't yield the  $\phi$ -matching agreement pattern in the elsewhere case. So here, we would have to propose that ta(a)n spells out a 3rd-person pro-form (with additional gender and number features). In other words, if ta(a)n is the controller of both patterns verbal agreement, it should be able to bear either a 3rd-person feature (+ gender and number features) or an obligatorily shifted 1st-person feature. While we could set up post-syntactic spell-out rules that yield this kind of syncretism, it would be quite difficult to do so in a principled way, as 3rd-person and obligatorily shifted 1st-person do not seem to form a natural class (which could e.g. be defined in terms of a common set of features, with underspecification for all others).<sup>14</sup>

<sup>&</sup>lt;sup>14</sup>Schlenker (2003a, et seq.) proposes that an anaphor is really nothing other than an obligatorily shifted 1st-person indexical. However, Schlenker's approach cannot be extended to these cases precisely because

Moving now to (ii), even more compelling evidence that the shifted indexical triggering 1st-person agreement in sentences like (35)-(38) is not ta(a)n, comes from (39) below:

- (39) Nii<sub>Addr(c\*)</sub> [CP nii<sub>Addr(c\*)</sub> viitt-ŭkkŭ tanijaa poo-r-een-nnŭ] so-nn-ij-aa? you.sg.nom you.sg.nom house-dat alone go-prs-1sg-comp say-pst-2sg-Q Literal: "Did you<sub>Addr(c\*)</sub> say [CP that you<sub>Addr(c\*)</sub> am going home alone]?" Reading: "Did you<sub>Addr(c\*)</sub> say [CP that you<sub>Addr(c\*)</sub> are going home alone]?" In (39), we have the 2nd-person indexical nominative pronoun nii ('you') in the clausal complement of a speech verb which it is coreferent with the agent of this speech predicate, and (38)), here also nii. Crucially, the agreement triggered under nii in the embedded clause is 1sg. Such seemingly mismatched 1sg agreement only obtains under ta(a)n and under nii, under highly constrained structural conditions (namely, in the clausal complement of a speech predicate), as illustrated here; it doesn't obtain under other nominative DPs (e.g. a 3rd-person pronoun like avan ('he') or aval ('she')) in the same structural configuration:
- (40) \* Ava $_i$  [ $_{CP}$  ava $_i$  viitt-ŭkkŭ tanijaa poo-r-**een**-nnŭ] so-nn-aa $_i$ . she.sg.nom she.sg.nom house-dat alone go-prs-1sg-comp say-pst-3fsg Literal: "She $_i$  said [ $_{CP}$  that she $_i$  am going home alone]." Intended reading: "She $_i$  said [ $_{CP}$  that she $_i$  is going home alone]."

Given the many parallels, the structure in (39) again looks like it involves indexical shift in the embedded clause: note that the 1st-person agreement is not denoting the utterance-context speaker but, rather, the speaker of the intensional index associated with the matrix speech predicate (see Messick 2016, for parallel examples from related Dravidian language Telugu, where this is also analyzed in terms of indexical shift). But claiming that the shifted 1st-person indexical is embedded nii in (39) is even harder to maintain than it was with ta(a)n, since nii has an explicitly 2nd-person form and denotes the Addressee of the utterance-context. I.e. it looks like a well-behaved unshifted 2nd-person indexical in Tamil. This means that, in sentences like (39), the embedded nii cannot be the source of 1sG agreement on its clausemate verb: rather, this suggests that there is some other element in the local domain, specifically a shifted 1st-person indexical, that triggers this agreement.

This should immediately make apparent that any syncretism account adopted to handle agreement under ta(a)n cannot be readily extended to handle agreement under nii. For instance, an analysis that postulated that ta(a)n syncretically spells out an obligato-

the differences in agreement patterns (3rd vs. 1st), both of which appear with ta(a)n, shows that the two cannot be reduced to a single phenomenon. See also Baker (2008), Bylinina et al. (2014) for further empirical arguments that indexicality and perspective-holding are distinctly handled in grammar.

rily shifted 1st-person indexical and a 3rd-person anaphor, while nii spells out 2sG would fail to yield the 1st-person agreement under nii in (39). On the other hand, we could extend the analysis that we are led to posit for (39), namely that 1st-person agreement is triggered by some other shifted 1st-person indexical (presumably silent) in the embedded clause, to the ta(a)n sentences in ((35)-(38)) as well as those in (31)-(33) and (37). I.e. rather than having different flavors of ta(a)n triggering the agreement (3rd vs. 1st) (which is independently non-trivial, as discussed earlier), we could propose that some other nominal in the local domain, which is sometimes a shifted 1st-person indexical, does so. This would yield a unified analysis of verbal agreement in embedded clauses, including in sentences like (39).

## 5 A silent, perspectival pronoun

The previous section has presented evidence suggesting that, in sentences involving perspectival anaphora with ta(a)n, agreement on the clausemate verb of ta(a)n is triggered, not by the nominative anaphor or its antecedent, but by some other nominal. Let us see what this would entail. This nominal must, of course, itself have valued  $\phi$ -features so that it can trigger them on the verb; we don't see it overtly on the surface, so it must be silent. Finally, given that agreement is local (formalized via Agree in Minimalism, see Chomsky 2001, et seq.), this nominal must be syntactically local to the T head that it triggers agreement on. Putting these properties together, we arrive at the conclusion that the nominal must be a silent pronoun or pro (i.e. a silent form of a pronoun like 'he', 'she', 'it' etc.) in the local clause of the verb. This section will explore a theory that takes the existence of such a pronoun at its heart. I will show that this pronoun is perspectival and, furthermore, mediates the relationship between the anaphor and its antecedent, coreferring with the latter in discourse and binding the former in syntaxsemantics. This will allow a straightforward account of perspectival anaphora that gets their hybrid structural and discourse-pragmatic properties as well as their interesting relationship with verbal agreement in Tamil.

In Section 6, I will present *independent* evidence (i.e. independent of agreement) for the existence of this silent pronoun. This evidence will show that the model of perspectival anaphora developed here makes correct empirical predictions with respect to the bound variable nature of the anaphor, on the one hand, and the pronominal nature of the *pro*, on the other. An account that assumes only the presence of an anaphor and its antecedent with no perspectival pronoun such as I describe in this section, will be

unable to describe those properties.

### 5.1 A mediating pronoun

#### Recall that:

- (i)  $\phi$ -agreement triggered under nominative ta(a)n always tracks the antecedent in different ways: in the clausal complement of a speech predicate, it is 1st-person, triggered by a shifted 1st-person pronoun, but still reflects the features of the agent of the speech predicate; everywhere else, it matches the  $\phi$ -features of the antecedent.
- (ii) antecedent-tracking agreement only obtains when the clausemate subject is ta(a)n or, in the clausal complement of speech verbs, nii. In all other instances, agreement reflects the features of its clausemate nominative argument.

The most straightforward way to derive the antecedent-tracking effect in (i) would be to have the pro that (putatively) triggers verbal agreement corefer with the antecedent of the anaphor. In the default scenario, the  $\phi$ -feature sets of the two coreferring nominals are evaluated against the same context (default = utterance-context); thus, coreference entails  $\phi$ -matching. This plays out as follows. In a sentence like (31), the *pro* corefers with the antecedent aval ('she'); since both pro and the antecedent are evaluated against the same evaluation context, coreference entails  $\phi$ -matching, thus *pro* also has 3FSG features. *Pro* thus triggers 3FSG verbal agreement under nominative ta(a)n, and the agreement matches the  $\phi$ -features of the antecedent, by transitivity. In a sentence like (35), we are assuming that the 1sG agreement on the embeded verb is triggered by a clausemate shifted 1st-person indexical. We are proposing that verbal agreement is triggered by pro, so this entails that the shifted 1st-person indexical is pro. But the  $\phi$ -features of the antecedent — namely the agent of the selecting speech predicate — are evaluated against the unshifted utterance-context. I.e. in (35), pro is 1sg and denotes Raman in the shifted context, while Raman has 3MsG features in the unshifted one, and also denotes Raman: thus both nominals corefer. More generally, context-shifting allows us to get coreference between pro and the antecedent (and thus the antecedence-tracking effect with verbal agreement) without the added entailment of  $\phi$ -matching between them.

The observation in (ii) above — i.e. the fact that the perspectival pronoun triggers verbal agreement only when the anaphor (as opposed to some other nominal, e.g. a coreferent pronoun) occurs in the nominative, shows that it must also be sensitive to the presence of the anaphor in some way. This in turn demonstrates that it is not enough to have the *pro* interact with the antecedent alone; it must interact with the anaphor, as well. I propose, specifically, that the perspectival pronoun Agrees with the anaphor in syntax

and binds it at LF — a position I elaborate on more explicitly in Section 2. Since *pro* corefers with the antecedent, we get coreference between the anaphor and its antecedent by transitivity (see Nishigauchi 2014, Charnavel 2017, for similar proposals for exempt anaphora in French and Japanese, respectively). In other words:

(41) The silent pronoun in the local clause of the anaphor enters into two dependencies: one with the antecedent and the other with the anaphor, yielding identical reference with both in difference ways. It thus *mediates* the relationship between the anaphor and the antecedent and the anaphor, which thus corefer only indirectly, via this silent pronoun.

## 5.2 Enter grammatical perspective

Where does perspective fit into all this? Recall that the central property of anaphora in Tamil is that it is perspectival, defined in the sense of (11), repeated below:

#### (42) Definition of perspectival anaphora:

In every instance of perspectival anaphora, the anaphor is properly contained within a predication which is evaluated relative to the perspective, mental or spatial, of some sentient individual. This individual must be aware of the eventuality described by this predication, at the time it happens. The antecedent of the anaphor must denote this individual.

The most elegant way to combine the insights in (41) and (42) would be to propose the following that the silent pronoun that mediates between the anaphor and its antecedent is itself a *perspectival* pronoun.

Let us now try to be precise about what a perspectival pronoun is. Like any other pronoun, the perspectival pro will bear inherent  $\phi$ -features: this is what allows it to trigger verbal agreement in sentences where ta(a)n occurs as the nominative subject. However, unlike standard pronouns, it bears an added restriction that the individual it denotes must be perspectival in the sense defined in (42). I propose that this restriction comes about purely as a function of where this pronoun is merged in the structure. Specifically, I argue that pro is introduced in the specifier of a perspectival head (Persp) which assigns it a perspective-holding "discourse role" with respect to the proposition in its complement, via Event Identification (this analysis takes much of its intuition from the structural implementation of point-of-view (POV) proposed in Speas 2004, see also Nishigauchi 2014, Charnavel 2017 for recent proposals along very similar lines). This is, incidentally, much like the Voice head assigning an Agent  $\theta$ -role to the external argument

in Kratzer (1996)). The Persp head selects the perspectival predication in its complement and has the following denotation:

(43) 
$$[Persp]^{c,g} = \lambda x \lambda e. PerspHolder(e,x)$$

Following Heim and Kratzer (1998), I assume that  $\phi$ -features on pronouns are encoded as presuppositions, formalized as partial functions on their lexical entries. Thus, *pro*, if were to be born with 3FSG features would have the lexical entry given in (44) in Tamil:

(44) 
$$[pro_{3fsg}]^{c,g} = \lambda x_e : \neg Participant(x) \wedge Female(x).x$$

Once the *pro* in [Spec, Persp] composes with Persp — its reference gets restricted both by the presuppositions imposed by its own  $\phi$ -features and the  $\theta$ -role-like discourse information on perspective-holding contributed by the Persp head. The set of possible referents for *pro* is thus twice filtered — yielding a set of individuals who satisfy the  $\phi$ -features on *pro* as well as the perspectival condition given in (42).

We observed at the outset that anaphoric perspective could be defined along the mental or spatial dimensions. Anaphora in Tamil can be regulated by either. Building on prior work concerning the semantics of self-ascription (Lewis 1979, a.o.), Sundaresan and Pearson (2014) propose that all perspectival predicates quantify over elements of a set that are designated by a sentient entity (the judge or perspective center) as candidates for her actual time, location or world. The difference between spatial vs. mental perspective-holding lies merely in the choice (location vs. world, respectively) of this coordinate. Thus, a spatial predicate like *toward* in Norwegian (7a), repeated below, would have a lexical entry like that in (46), with *Khorastic* being analogous to *Doxastic*, but for locations rather than beliefs (Sundaresan and Pearson 2014, 15):

- (45) Han<sub>i</sub> drar den mot  $seg_{\{i,*j\}}$ .

  He[NOM] pull.PRS it towards ANAPH

  "He<sub>i</sub> pulls it towards himself<sub>{i,\*i}</sub>."
- (46)  $[toward]^{c,x,t,w,g} = \lambda x \lambda y \lambda z. \forall s'[s' \in Khorastic_{x,w,t} \rightarrow y \text{ is toward } x \text{ in } w \text{ at } t \text{ relative to } s'].$  Where:
  - a.  $Khorastic_{x,w,t} = Khorastic_{perceptual_{x,w,t}}$  or  $Khorastic_{imagined_{x,w,t}}$ ;
  - b.  $Khorastic_{perceptual_{x,w,t}} = \{s': \text{ it is compatible with } x'\text{s perceptual experience in } w \text{ at } t \text{ for } s_{x,w,t} \text{ to be } s'\}$ , where  $s_{x,w,t} = \text{the spatial coordinate of } x \text{ in } w \text{ at } t$ .
  - c.  $Khorastic_{x,w,t} = Khorastic_{imagined_{x,w,t}}$  only if:
    - a. x = Speaker(c), and
    - b. there is some contextually salient entity u such that for every element s' of  $Khorastic_{imagined_{x,w,t'}}$  it is compatible with what x believes in w at t for u to be located at s'.

Building on this analysis, I further tentatively propose that the choice of these coordinates is made in the Persp head. To be concrete, the Persp head inside the complement of a spatial predicate (e.g. inside a locative PP or DP) will contain only the spatial coordinate, yielding Khorastic alternatives; the Persp head in the complement of an attitude verb will contain the World coordinate (yielding Doxastic alternatives) and so on (see also work on discourse centers in Roberts 2014, for related ideas).

## 5.3 A two-stage model of anaphora

The state of affairs described in (41) sets the stage for a two stage model of anaphora, with a mediating perspectival *pro* at its heart. The dependency between *pro* and the anaphor is distinguished by its being local and structurally constrained while that holding between *pro* and the antecedent of the anaphor is a case of (non-structural) discourse-pragmatic pronominal reference. Below, I describe the nature of this two-stage model of anaphora in detail.

#### 5.3.1 Stage I: The structural stage

Let us now zoom in on the nature of the structural relationship between *pro* and the anaphor, and when the anaphor is the nominative subject, between *pro* and T. I am working within a Minimalist framework (Chomsky 2001, et seq.) which assumes a Y-modular architecture of grammar (with a "narrow" syntactic module feeding the LF and PF interfaces). The *pro* triggers verbal agreement on T when the anaphor is in the nominative (yielding the antecedent-tracking effect); it also Agrees with the anaphor for a different formal feature in syntax — a dependency that triggers binding at LF.

I formalize this state-of-affairs as follows. Agree proceeds upward (see Zeijlstra 2012, Bjorkman and Zeijlstra 2014, for motivations for Upward Agree) with the perspectival pro (Goal) c-commanding the anaphor (Probe) and T (Probe). There are two relevant Agree relations: one between T and pro for  $\phi$ -features, and another between pro and the anaphor, which feeds binding at LF. The main feature inventory consists of  $\phi$ -features (valued/unvalued) on nominals and T; there is also a Dep-feature, defined as follows:

## (47) The DEP feature:<sup>15</sup>

<sup>&</sup>lt;sup>15</sup>This view, which holds that DEP is the syntactic marker of anaphoricity differs markedly from the more traditional one that anaphoricity follows from φ-defectiveness (Reuland 2001; 2011, Kratzer 2009, Rooryck and vanden Wyngaerd 2011, a.o.). The choice made here is a deliberate one. As the table in (48) shows, only two types of nominals may bear DEP: *pro* in [Spec, PerspP] which bears a valued DEP and an anaphor which bears unvalued DEP. This ensures that Agree will hold only between these elements. Unvalued φ-features would yield Agree (+ binding) between the anaphor and *any* DP that minimally c-

- i. A DEP feature marks two DPs that are in a syntactic binding dependency with one another.
- ii. Dep takes integers or letters as value.
- iii. Two elements with matching DEP values are construed to be in a binderbindee relationship with one another at LF, and will thus denote the same entity in the evaluation context.
- iv. An anaphor is a nominal with an unvalued DEP feature this is the syntactic correlate of anaphoricity; the *pro* in [Spec, PerspP] has a valued DEP feature, by virtue of where it is merged in the structure. <sup>16</sup>
- v. The anaphor may have one or more  $\phi$ -features in addition to the DEP feature, some of which may themselves (but need not) be unvalued.<sup>17</sup>

The table in (48) illustrates all possible featural values on T, pro and the anaphor:<sup>18</sup>

(48) Feature-set of key functional and lexical items in syntax:

FUNCTIONAL/LEXICAL ITEMS	Possible Features
$pro_{[Spec,PerspP]}$	[Dep: $\{x, y, z,\}$ ; p: $\{1, 2, 3\}$ ; n: $\{sg, pl\}$ ; g: $\{m, f, n\}$ ]
$Anaphor_{(ta(a)n)}$	[Dep: _, p: _, n: sg, g: _ ]
Anaphor <sub>nii</sub>	[Dep: _, p: 2, n: sg]
T	[P: _; N: _; G: _ ]

Since the anaphor has an unvalued Dep-feature, it probes upward in its local search domain to get this valued: pro in [Spec, PerspP] values this, so the anaphor and pro end up having matching Dep-values. This triggers binding at LF, with pro binding the anaphor, since it asymmetrically c-commands it. The anaphor and pro will thus denote the same individual in the evaluation context. When the anaphor is ta(a)n, pro must be 3rd-person (elsewhere case) or a shifted 1st- or 2nd-person pronoun (1st-person agreement case). We can illustrate these steps as follows for the sentences in

If *pro* is an *un*shifted 1st- or 2nd-person pronoun, it will denote the *Speaker* and *Addressee* of the utterance-context, respectively. While *pro* itself is free to denote any

commands it in the local domain, which is not desired. The same point distinguishes DEP from the VAR feature which Hicks (2009), building on Adger and Ramchand (2005) assumes to derive local anaphora in his system — which otherwise bears many similarities to DEP. Given that perspectival anaphors are different from non-perspectival ones in many ways, however, there is no reason to assume that they should be featurally identical: quite to the contrary. See Sundaresan (2017) for some preliminary discussion and evidence for two featurally distinguished classes of anaphora crosslinguistically.

<sup>&</sup>lt;sup>16</sup>We can think of this as a selectional feature that conditions external Merge (Adger 2003). I.e. a DP that does not bear a valued DEP feature cannot be externally merged in the Spec of PerspP.

<sup>&</sup>lt;sup>17</sup>Thus, φ-features, if any, presuppositionally restrict the domain of mapping possibilities for the reference index at LF (Heim and Kratzer 1998), but don't (directly) have anything to do with flagging a nominal as an anaphor in the syntax.

 $<sup>^{18}</sup>$ In addition to the features listed below, I assume that both ta(a)n and the perspectival pronoun are endowed with a categorial D feature and case feature. These are not included here for reasons of perspicuity.

individual (as long as it fulfills the perspectival condition), we have seen that ta(a)n cannot be take by 1st- and 2nd-person (unshifted) antecedents. This is shown below for 1st-person naan:

(49) \*Naan<sub>i</sub> [ $_{CP}$  taan<sub>i</sub> school-ŭkkŭ poo-r-een-nnŭ] so-nn-een. I[NOM] ANAPH[NOM] school-DAT go-PRS-1SG-COMP say-PST-1SG " $_{I_i}$  said [ $_{CP}$  that  $_{I_i}$  am going to school.]" (Intended)

This restriction cannot come from the DEP feature on ta(a)n (given that nii is anaphoric and can patently denote the *Addressee* of the utterance-context). Rather, I propose that it is related to the notion that ta(a)n has an unvalued PERSON feature.<sup>19</sup> Specifically, I propose that ta(a)n has a presuppositional restriction in its lexical entry preventing it from denoting a Participant of the utterance-context, as in (50):

(50)  $[taan]^{c,g} = \lambda x_e : \neg Participant^*(x).x$ , for  $Participant^* = Participant(c^*)$ 

Thus, ta(a)n can still denote the *Author* of *some other* context  $\neq$  the utterance-context. Specifically, it can denote the *Author* of a *shifted* context, as in sentences like (35), (38), involving 1st-person agreement on the clausemate verb of ta(a)n.

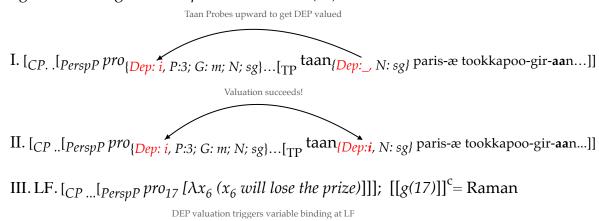
We can illustrate how  $\phi$ -matching agreement is derived in a sentence like (51):

(51) Raman $_i$  [aval $_j$  [ $_{CP}$  [ $_{PerspP}$   $_{Pro}$  [ $_{i,3msg}$ ] taan $_i$  paris-æ tookkapoo-gir-aan-nnŭ]] Raman[NOM] she ANAPH[NOM] prize-ACC lose.go-PRS-3MSG-COMP namb-in-aan-ŭnnŭ] [Krishnan-kittæ] $_k$  kaatt-in-aan. believe-PST-3MSG-COMP Krishnan-OBL show-PST-3MSG "Raman $_i$  showed [Krishnan] $_k$  [ $_{CP}$  that he $_j$  believed [ $_{CP}$  [ $_{PerspP}$   $_{Pro}$  that himself $_i$ /\*herself $_j$ /\*Krishnan $_k$  would lose the prize]]]."

Although the sentence is really complicated, the only string relevant to the computation of the structural component is the local CP (innermost CP) containing ta(a)n and pro. The derivation proceeds as follows:

<sup>&</sup>lt;sup>19</sup>This is a welcome result. Given that other perspective sensitive elements (spatial verbs, taste predicates and the like) can refer to utterance-context participants, it would be a priori unexpected if perspectival anaphors alone could not do so. Furthermore, it is intuitively appealing to derive a referential ban on certain types of person combinations as a function of other properties of person innate to the anaphor.

#### (52) Agree + binding between pro and ta(a)n in (51):



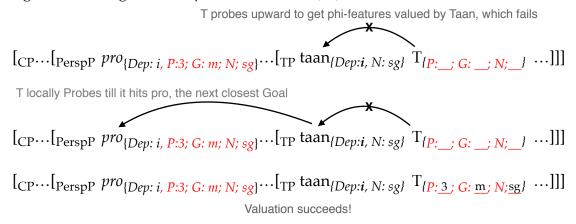
Verbal agreement under nominative ta(a)n is due to  $\phi$ -Agree between T and pro, as mentioned. Nevertheless, such  $\phi$ -agreement must be sensitive to the presence or absence of the anaphor, since pro triggers  $\phi$ -agreement on T only when the nominative subject is an anaphor (i.e. in all other cases, the nominative subject triggers  $\phi$ -agreement, cf. (29)-(30)). I propose, in line with Koopman and Sportiche (1989), Speas (2004, but pace Nishigauchi (2014), Charnavel (2017) who propose it is merged lower in the clausal spine) and others, that the perspectival phrase is merged in the left periphery of the clausal spine, crucially above the subject. The T head probes to get its  $\phi$ -features valued by the nominative DP, typically the subject in [Spec, TP]. Typically (cf. (29)-(30)), this DP has inherently valued  $\phi$ -features and can itself value the features on T. But in sentences like (31)-(33), the nominative subject is the anaphor ta(a)n which has an unvalued DEP feature and unvalued Person and Gender features.<sup>20</sup> As such, it cannot value these  $\phi$ -features on T which thus keeps probing upward in its local domain until it finds the next closest nominal with valued  $\phi$ -features, namely pro in Spec, PerspP.<sup>21</sup> Pro values the unvalued  $\phi$ -features on T with its own inherent features. In sentences, like (31)-(33), pro is a(n) (unshifted) 3rd-person pronoun and thus triggers 3rd-person agreement on T. Since pro refers to the individual denoted by the anaphoric antecedent, antecedence  $\phi$ -matching is the result. In (35) and (38), pro is a shifted 1st-person indexical and thus triggers 1st-person agreement on the verb. Nevertheless, pro still denotes the individual denoted by the anaphoric antecedent in these cases: thus, we still get the antecedenttracking effect of verbal agreement observed in sentences like (36), (37) and (38). The

<sup>&</sup>lt;sup>20</sup>It is possible that ta(a)n also has an unvalued NUMBER feature — i.e. has no inherent φ-features at all and is truly "minimal" (Kratzer 2009). Nothing crucial hinges on this choice, since what makes ta(a)n featurally anaphoric is its unvalued DEP-feature.

<sup>&</sup>lt;sup>21</sup>This presupposes: (i) that ta(a)n is not itself a defective intervener for such probing; (ii) that an initial failed valuation attempt does not lead to crash.

agreement mechanism in the  $\phi$ -matching scenario (Elsewhere case) is illustrated below:

#### (53) Agree + binding between pro and ta(a)n in (51):



When the nominative subject is anaphoric nii (as in a sentence like (39), in the clausal complement of a speech predicate, with 1st-person agreement on the clausemate verb), the derivation proceeds essentially analogously. The perspectival pro is a shifted 1st-person indexical (inherently valued as 1sG) and also has a valued DEP-feature. It values the DEP-feature on its clausemate subject nii (which probes upward to get this feature valued) in the embedded clause: this leads pro to bind nii at LF. T probes upward to get its  $\phi$ -features valued. As with ta(a)n, it first encounters the nominative DP nii in syntactic subject position. Unlike with ta(a)n, nii does have valued  $\phi$ -features. However, it has an unvalued DEP-feature. I propose that this prevents it from serving as a Goal for  $\phi$ -valuation on the T Probe.<sup>22</sup> The T head thus continues probing upward in its local search domain, just like in the ta(a)n case, until it reaches pro (the shifted indexical) in [Spec, PerspP], which values it as 1sG.<sup>23</sup>

<sup>&</sup>lt;sup>22</sup>This is, admittedly, a stipulation. But it is not altogether devoid of independent merit. The Anaphor Agreement Effect (AAE) (Rizzi 1990) observes that anaphors cannot occur in positions construed with  $\phi$ -agreement. Subsequent research (see e.g. Woolford 1999, Legate 2002, Haegeman 2004, Baker 2008, Deal 2010, Tucker 2011, Shiraki To Appear) on a wide range of languages has since revealed that the descriptive generalization is more that anaphors cannot trigger covarying  $\phi$ -agreement. An easy way to derive the AAE would have been to propose that anaphors are themselves  $\phi$ -featurally minimal, thus cannot value  $\phi$ -features on probing heads (T/v), as Kratzer (2009) suggests. But while such an analysis might work for ta(a)n, it will not work for anaphoric nii in sentences like (39), where its clausemate verb surfaces with 1sG agreement, since this would require us to posit that nii must simultaneously be a shifted 1st-person indexical and an unshifted 2nd-person indexical, as discussed in Section 4.3. Thus nii must have inherent 2sG  $\phi$ -features, as indicated in Table 48. But if having any unvalued feature on a nominal prevents it from valuing  $\phi$ -features, then the AAE with nii would follow, since anaphoric nii has an unvalued DEP-feature.

<sup>&</sup>lt;sup>23</sup>Unlike the Agree relation for φ-features between pro and T head which could take place in the post-syntactic PF module (Bobaljik 2008), the Agree relation for DEP between pro and the anaphor must take place in narrow syntax, since its output must feed operations at both LF and PF.

#### 5.3.2 Stage II: The discourse-pragmatic stage

The second stage in the perspectival anaphoric dependency involves the relationship between the perspectival *pro* in [Spec, PerspP] and the individual denoted by the antecedent of the anaphor. As we have seen, there are no (obvious) structural constraints placed on the distribution of the antecedent in Tamil (or Icelandic, or the other languages with perspectival anaphoric systems discussed here): i.e. the antecedent may be extrasentential (logophoric), non-c-commanding, non-local, non-minimal, and indeterminate.

The relationship between the antecedent and the perspectival pro in the local phase of the anaphor must thus necessarily be non-structural. We capture this by proposing that the relationship between the perspectival pro in [Spec, PerspP] and the individual denoted by the antecedent, is just discourse-pronominal reference. The perspectival pro can refer, just like any standard pronoun can, to such an individual, as long as it has been made discourse-salient by another nominal (R-expression or pronoun). Such a nominal could have invoked this individual in the c-commanding syntactic structure (as in standard cases of long-distance anaphora), in non-c-commanding structure (as in psych predications), or in the preceding discourse-context (as in cases of logophora). The  $\phi$ -features inherent to pro will restrict the domain of individuals it may refer to in the context of evaluation. In addition, given the perspectival discourse role pro is assigned in [Spec, PerspP] from Persp, the set of entities it may denote is further perspectivally restricted as described in (42). The nominal (R-expression or pronoun) that introduces the perspectival individual in the sentential structure or salient discourse will thus corefer with pro. In the structural stage of perspectival anaphora, discussed in Section 5.3.1, we observed that pro Agrees with the anaphor in syntax, which then leads to its variablebinding it at LF (see again (52)). The anaphor will thus necessarily take on the same reference as pro and also corefer with this nominal, which will come to be construed as the antecedent of the anaphor.

We can illustrate this concretely with a sentence like (54) below:

(54) Raman $_i$  [aval $_j$  [ $_{CP}$  [ $_{PerspP}$  pro $_{\{i,3msg\}}$  taan $_i$  paris-æ tookkapoo-gir-aan-ŭnnŭ]] Raman[NOM] she ANAPH[NOM] prize-ACC lose.go-PRS-3MSG-COMP namb-in-aan-ŭnnŭ] [Krishnan-kit[tæ] $_k$  kaatt-in-aan. believe-PST-3MSG-COMP Krishnan-OBL show-PST-3MSG "Raman $_i$  showed [Krishnan] $_k$  [ $_{CP}$  that he $_j$  believed [ $_{CP}$  [ $_{PerspP}$  pro $_i$  that himself $_i$ /\*herself $_j$ /\*Krishnan $_k$  would lose the prize]]]."

In (54), *pro* happens to be born with 3MsG features. There are two R-expressions and one pronoun in the sentence structure c-commanding the minimal PerspP containing the anaphor — namely the matrix subject *Raman*, the medial subject *ava*[ ('she'), and

the matrix object *Krishnan*. These denote three salient individuals, Raman, a (previously invoked) female individual, and Krishnan, in the evaluation context. The female individual is automatically ruled out as a possible referent because pro's own  $\phi$ -features presuppositionally restrict its reference to atomic, male individuals. That leaves Raman and Krishnan. However, Krishnan doesn't satisfy the perspectival condition in (42): the PerspP inside the innermost CP is not evaluated relative to Krishnan's perspective, but to Raman's. Thus, pro denotes Raman, and corefers with the matrix subject, the Rexpression Raman. Since pro Agrees with ta(a)n in syntax and binds it at LF (in Stage I), ta(a)n also denotes Raman. Raman is thus construed as the antecedent of the anaphor.

But this is just in the pragmatically unmarked discourse scenario. Let us suppose that the propositional content of (54) is uttered directly after the free indirect discourse scenario in (54), which is reported from Krishnan's inner perspective:

(55) Krishnan $_k$  stayed upset that whole day. Getting that prize would have meant a lot of money for the family. But Raman seemed to have some pretty solid inside knowledge about how the results would turn out.

In this scenario, both Krishnan and Raman fulfill the perspectival condition in (42). Krishnan could be upset because Raman himself lost the prize, as (54) indicates — e.g. if Raman is his son. But Krishnan could also be upset because he himself lost the prize. In the former, we have an instance of long-distance anaphora, in the latter, one of logophora.<sup>24</sup> The advantage of the current model is that both types of dependency are derived in a precisely parallel fashion. The updated referential possibilities against this discourse scenario are thus as given in (56):

(56) Raman $_i$  [aval $_j$  [ $_{CP}$  [ $_{PerspP}$   $pro_{\{i,k,*j,3msg\}}$  taan $_{\{i,k,*j\}}$  paris-æ tookkapoo-gir-aan-ŭnnŭ]] Raman[NOM] she ANAPH[NOM] prize-ACC lose.go-PRS-3MSG-COMP namb-in-aan-ŭnnŭ] [Krishnan-kittæ] $_k$  kaatt-in-aan. believe-PST-3MSG-COMP Krishnan-OBL show-PST-3MSG "Raman $_i$  showed [Krishnan] $_k$  [ $_{CP}$  that he $_j$  believed [ $_{CP}$  [ $_{PerspP}$   $pro_{\{i,k,*j\}}$  that himself $_i$ / Krishnan $_k$ /\*herself $_i$  would lose the prize]]]."

The assignment function at LF can thus have the pro-ta(a)n pairing at LF denote either Raman or Krishnan: the choice of one over the other depends only on speaker-intent and related criteria (just like with standard reference assignment for pronouns). The set {Raman, Krishnan} constitutes the domain of (salient) potential antecedents for ta(a)n, and

<sup>&</sup>lt;sup>24</sup>It makes sense to treat the case of antecedence involving *Krishnan* as an instance of logophora, rather than antecedence by the matrix object *Krishnan*. This is because, in the unmarked discourse scenario, *Krishnan* is degraded as an antecedent (as Patients tend to be, see Mitchell 1986, for discussion). This is further corroborated by the fact that the matrix object in (56) is optional: i.e. we would get *Krishnan*-antecedence even if this object were omitted.

the one that is actually chosen, *Raman* in (54) and *Krishnan* in (56), its actual antecedent in a given context.

Finally, if *pro* were born with 3FSG features, it would be presuppositionally restricted to denote the female individual denoted by the medial pronominal subject ava[ ('she'), and any other salient atomic female individuals. Raman and Krishnan would be ruled out on  $\phi$ -featural grounds. Additional filtering would be imposed as before by the perspectival condition in (42). Since *pro* is a pronoun with inherent valued  $\phi$ -features, there are no restrictions on the  $\phi$ -features it may be born with. The syntax is assumed to overgenerate; any incompatible combinations (e.g. if *pro* were born with 3NSG features in (54)/(56) and there were no salient individual that could satisfy the presuppositional restrictions of those features) are assumed to be filtered out at the interfaces.

When the context of evaluation of the antecedent and that of *pro* are identical, coreference between the two entails  $\phi$ -matching. We saw an instance of this in (54) and (56). Taking (54) as expository, the context of evaluation for *pro* in the innermost CP = the context of evaluation for the antecedent *Raman* in the matrix CP = the utterance-context. Thus, the  $\phi$ -features of both *pro* and *Raman* are evaluated against the utterance-context. This means that coreference between *pro-ta(a)n* and the antecedent yields  $\phi$ -matching: both must be specified 3MSG, which is what we get.

We have seen (cf. (35) and (38)) that, when ta(a)n is in the clausal complement of a speech predicate, the clausemate verb of ta(a)n shows 1sG agreement. The perspectival pro that triggers 1sG agreement on the embedded verb must thus be born with 1sG  $\phi$ -features. But recall from Section 4.3 that the embedded clause in sentences like (57) involves indexical shift (Sundaresan 2012): I will assume that formally, indexical shift is due to the presence of a "monster" (()) operator (Kaplan 1989, Schlenker 2003a, Anand 2006, Shklovsky and Sudo 2014) introduced by the selecting speech predicate soll ('say') in its complement. This operator replaces the context of utterance-context with the intensional index of this predicate: i.e. [()]  $\alpha$ ] $^{c,i,g} = [[\alpha]]^{i,i,g}$ . Pro, a 1st-person indexical, must thus be merged in the scope of this monster, causing it to be shifted. (57) presents the resulting underlying structure of such a sentence:

(57) Sai
$$_i$$
 [ $_{CP}$   $\stackrel{\frown}{\bowtie}$  [ $_{PerspP}$   $pro_{\{i,1sg\}}$  [ $_{TP}$  taan $_{\{i,*j\}}$  dej-pp-een-nnŭ]]] so-nn-aan. Sai ANAPH[NOM] $_i$  win-fut-1sg-comp say-pst-3msg "Sai $_i$  said [ $_{CP}$  that he $_{\{i,*j\}}$  would win]"

As a result of indexical shift, the 1sG  $\phi$ -feature on pro in (57) will denote, not the (unique) *Author* of the utterance-context, but the *Author* of the index associated with the speech-predicate, namely Sai. As always, in addition to the presuppositional  $\phi$ -restriction, the perspectival condition must also be fulfilled: given that Sai is an attitude-holder with

respect to the PerspP containing ta(a)n, this condition is also met. The referential assignment of ta(a)n (which pro has already bound at LF in the structural stage) to Sai is thus felicitous. Sai is introduced as a possible referent in the discourse by the matrix subject, the R-expression Sai, and pro thus corefers with it; ta(a)n takes Sai as its antecedent. Crucially, however, Sai, being in the root clause, is evaluated against the utterance-context. It denotes a non-participant in the utterance-clause, thus has  $3 \text{MSG} \phi$ -features (as also indicated by the  $3 \text{MSG} \phi$ -features it triggers on its clausemate matrix verb soll ('say')). Thus, here we have a scenario involving coreference between pro/ta(a)n and the anaphor's antecedent Sai without the added entailment of  $\phi$ -matching between the two.

Now consider (58):

(58)  $\operatorname{Nii}_{Addr(c*)}$  [ $_{CP} \ \widehat{\square}$  [ $_{PerspP} \ pro_{\{i,1sg\}}$  [ $_{TP} \ \operatorname{nii}_{Addr(c*)}$  &ej-pp-een-nnŭ]]] so-nn-aan. you[sg.nom] Anaph[sg.nom]\_i win-fut-1sg-comp say-pst-2sg "You\_Addr(c\*) said [ $_{CP}$  that you\_Addr(c\*) would win]."

The structure in (58) varies from that in (57) only to the extent that the matrix and embedded subjects are now the unshifting 2nd-person indexical pronoun nii ('you') instead of Sai and ta(a)n, respectively. But the structure of the embedded CP remains unchanged. I.e. the embedded CP, which is selected by the matrix speech predicate is contextually shifted by a monster ((iii)). pro, which again has 1sG features is merged in the scope of this monster as before and gets shifted, as before. Thus, instead of denoting the unique Author of the utterance-context, pro denotes the unique Author of the index associated with soll ('say') — namely, nii (which also happens to be the Addressee of the utterance-context). As before, nii also fulfills the perspectival condition with respect to the PerspP containing embedded nii: thus, pro and embedded nii, which it binds (due to nii's unvalued Dep-feature), can felicitously denote matrix nii. Embedded nii thus takes matrix nii as its antecedent.

#### 5.3.3 Summing up

We observed at the outset of this paper that perspectival anaphora displays hybrid syntax-pragmatic properties that seem to resist a unified analysis. At times, these properties were shown even to flagrantly violate what are considered cornerstones of structural wellformedness (c-command, (Relativized) Minimality, syntactic determinacy, and sentence-boundedness).

The two stage model of perspectival anaphora proposed here allows us to reconcile these hybrid properties with one another, by arguing that *every instance* of perspectival anaphora (logophoric, long-distance, backward etc) is serially restricted by *both* syntactic and discourse-pragmatic factors. Perspectival anaphora, in other words, represents a hybrid syntactico-pragmatic phenomenon that is comprised of two separate, sequential dependencies, as depicted below:

(59) Two stage model of perspectival anaphora:

- **Stage I:** A local, structural (i.e. "narrow" syntactic and LF-semantic) relationship between the anaphor and the perspectival *pro* introduced in specifier of the minimal Perspectival Phrase (PerspP) containing the anaphor. This minimal PerspP characterizes the local binding domain of the anaphor. The *pro* Agrees with the anaphor for a DEP feature which triggers binding at LF.
- **Stage II:** A discourse-pragmatic relationship, holding between the perspectival *pro* and the individual denoted by the antecedent of the anaphor. The denotation of *pro* to this individual is restricted in two ways:
  - (i) There is a presuppositional restriction on reference assignment, contributed by the inherent  $\phi$ -features on pro.
  - (ii) In addition, there is a perspectival restriction relative to the minimal PerspP containing *pro* and the anaphor, contributed by the perspectival discourse-role that the Persp head assigns to *pro* in its specifier.

Thus, the denotation of *pro* is twice filtered: as such, it denotes an individual that is both well-formed wrt. its  $\phi$ -features and characterizes the perspective of the minimal PerspP containing itself and the anaphor. The nominal (call it XP) that introduces this individual in the sentence structure or salient discourse corefers with *pro*. If XP and *pro* are both evaluated against the same context, such coreference entails  $\phi$ -matching. But if they are evaluated against different contexts (e.g. if one of them is in a domain that is shifted), then coreference can obtain in the absence of  $\phi$ -matching.

**Stage I feeds into Stage II:** The structural component (Stage I) feeds into the discourse-pragmatic one (Stage II) in the derivation. As a result, the anaphor which is bound by *pro* in Stage I also ends up coreferring with XP from Stage II. XP is construed as the antecedent of the anaphor. There is thus no structural relationship between the antecedent on the one hand, and the anaphor/*pro*, on the other. This relationship is

just discourse reference. C-command, Relativized Minimality, and lack of optionality for antecedence are thus not expected. The relationship between the anaphor and pro is structural. Thus, structural sensitivity (e.g. the agreement patterns in Tamil when ta(a)n is in the nominative) can be explained.

## 6 Independent predictions of a two-stage model

The two stage model of anaphora centrally revolves around the notion of a mediating, perspectival pro, as we have seen. Indeed, one of the main empirical goals of the paper thus far has been to motivate, through a careful investigation of the agreement patterns on the clausemate verb of the anaphor, the existence of such an element in syntax. Nevertheless, it is important to be explicit about what this model entails. In particular, it is potentially hazardous in two ways. First, it could violate Occam's Razor. All the mediating burden needed to make the current model work is carried on the shoulders of a silent nominal. All else being equal, it would be simpler to remove pro from the equation altogether and have the anaphor take over the agreement-triggering properties that are now being attributed to it. But as discussed in detail in Section 4.3, such a stance is independently problematic. To briefly reiterate, this would require us to postulate an inelegant sycretism between an obligatorily shifted 1st-person indexical (for 1st-person agreement under ta(a)n as in (57) and a 3rd-person pro-form). Additional evidence comes from 1st-person agreement triggered under nii ('you'), as in (58, where even such an analysis, however inelegant, fails: i.e. nii itself is patently 2sg in this sentence, thus couldn't have triggered 1st-person agreement on the verb (short of us postulating that *nii* is simultaneously 2nd-person and 1st-person).

Section 4 thus addresses the Occam's Razor challenge by arguing that all else is not equal: there is independent motivation for why the elements that are superficially visible — namely the anaphor's antecedent and the anaphor itself — are not sufficient to derive the agreement patterns, and why a third element, even if it is silent, has to be postulated to derive these patterns. But if we simply propose an element that precisely meets the needs of that motivation, we potentially run into the second problem, namely that of circularity: i.e. assuming an empty element with tailor-made properties to fit the observed phenomena (in this case, the embedded agreement patterns observed for Tamil under the nominative ta(a)n and under nii). Ideally, therefore, we should find confirmation or evidence that is *independent of the agreement patterns* for the existence of a mediating nominal with the properties ascribed to pro.

We take these challenges seriously. In this section, I thus present independent evidence from anaphora in Tamil, and crosslinguistically, for the presence of a mediating perspectival pronoun with properties precisely such as those proposed here.<sup>25</sup> The two-stage model predicts that perspectival anaphora should display dual referential behavior. The relationship between the antecedent and *pro* should exhibit the properties of pronominal coreference, since the *pro*, being on the "outside" discourse-pragmatically corefers with the antecedent the way a regular pronoun does. At the same time, the anaphor should behave like a bound variable, since it is locally bound by *pro* at LF. Below I present empirical diagnostics to show that these predictions are met. Furthermore, I show that a model that does *not* presuppose the existence of a mediating *pro* would be incapable of making these same predictions.

### 6.1 "On the outside": pronominal

Under the two-stage model, the relationship between *pro* in [Spec, PerspP] and the individual denoted by the anaphor's antecedent is just one of discourse-pronominal pronominal reference (restricted by a perspectival presupposition introduced by the Persp head). The antecedent of the anaphor and *pro* corefer as a result, as does the anaphor (since *pro* binds it). This predicts that the relationship between the antecedent and the anaphor shouldn't fulfill any of the standard tests associated with standard bound-variable anaphora since the anaphor, in fact, has no direct relationship with the antecedent. Rather, it should display the characteristics of pronominal coreference.

Here, I show that this prediction is fulfilled. Bound-variable anaphors have been observed to be incapable of taking split antecedents. They must also obligatorily yield obligatory bound-variable readings when c-commanded by definite DPs such as R-expressions (Reinhart 1983). In contrast, regular pronouns may take split antecedents and may yield bound-variable as well as "strict" (due to their ability to refer discourse-pragmatically) readings under definite DPs. Such tests are thus commonly used to distinguish between pronominal and anaphoric uses of a term, when this is difficult to diagnose on the surface. Below, I show that the antecedence-*ta*(*a*)*n* relationship displays the characteristics of pronominal reference with respect to these diagnostics, rather than those of bound-variable anaphora (see Charnavel 2017, for similar evidence from exempt anaphora in French).

In Tamil, sentences involving ta(a)n can take split antecedents (see also Annamalai

<sup>&</sup>lt;sup>25</sup>Thanks to an anonymous reviewer for pointing out that a previous version of this discussion was potentially susceptible to these criticisms.

- 2000) and can also yield bound-variable or strict readings:<sup>26</sup>
- (60) Split antecedents under ta(a)n (Annamalai 2000, 207, Ex. 100):

```
Kumar_i [_{DP} [_{PerspP} PRO_i [tan_i manaivi-kkŭ]]] [_{DP} [_{PerspP} PRO_i [tang-æ_{\{i+j\}} Kumar[NOM] ANAPH.GEN wife-DAT] self-PL.GEN viiţt-æ]]] kaaţt-in-aan. house-ACC] show-PST-3MSG Literal:"Raman_i showed self's_i wife selves_{\{i+j\}} house." Reading: "Raman_i showed his_i wife their_{\{i+j\}} house."
```

Turning now to the bound-variable vs. strict reading contrast, see below:

- (61) Only Sue<sub>i</sub> tried [PRO<sub>{i,\*i</sub>} to ride the roller-coaster].
  - a. Bound-variable reading  $\checkmark$ :  $\forall x.[Try(x,RideRollerCoaster(x)) \rightarrow (x = Sue)]$
  - b. Strict reading **X**:  $\forall x.[Try(x,RideRollerCoaster(Sue)) \rightarrow (x=Sue)]$
- (62) Only Sue<sub>i</sub> thought [she<sub>{i,j}</sub> was riding the roller-coaster].
  - a. Bound-variable  $\checkmark$ :  $\forall x [Think(x, RideRollerCoaster(x)) \rightarrow (x = Sue)]$
  - b. Strict  $\checkmark$ :  $\forall x[Think(x,RideRollerCoaster(Sue)) \rightarrow (x = Sue)]$
- (61) involves an obligatory control dependency that has only a bound-variable reading, as shown. On the other hand, both bound-variable and strict readings are available with regular pronominal reference, as in (62). When we apply this diagnostic to Tamil, we see that both bound-variable and strict readings are available, in a sentence like (63):
- (63) Raman-ŭkkŭ daan andæ teacher-ŭkkŭ tann-æ pudikk-aadŭ-nnŭ neneppŭ. Raman-dat only that teacher-dat anaph-acc like-neg-comp thought Literal: "Only Raman<sub>i</sub> thinks the teacher doesn't like  $self_{\{i,*j\}}$ ."

  Bound-variable  $\checkmark$ :  $\forall x[Think(x,Dislike(iy.teacher(y),x)) \rightarrow (x=Raman)]$ Strict  $\checkmark$ :  $\forall x[Think(x,Dislike(iy.teacher(y),Raman)) \rightarrow (x=Raman)]$

The strict reading is more readily available, if anything, and can be enforced with a continuation to (63) like: "...but everyone else knew that Raman was the teacher's favorite."

These are not isolated patterns: similar facts as in (63) have been reported for Japanese (Nishigauchi 2014) and French (Charnavel 2017). For instance, Nishigauchi shows that Japanese *zibun* can likewise yield non-bound-variable readings, as in (64) below (Nishigauchi 2014, 172, Ex. 45, formatting mine):

(64) Takasi $_i$ -dake-ga sensei-ga zibun $_i$ -o suisen suru to omow-te iru. Takasi-only-nom teacher-nom anaph-acc recommend do that think be

 $<sup>^{26}</sup>$ See Sundaresan (2012) for discussion that possessor DPs constitute their own perspectival domains in Tamil.

"Only Takashi thinks the teacher will recommend self."

```
BOUND-VARIABLE \checkmark: \forall x[Think(x, Recommend(iy.teacher(y), x)) \rightarrow (x = Takashi)]
STRICT \checkmark: \forall x[Think(x, Recommend(iy.teacher(y), Takashi)) \rightarrow (x = Takashi)]
```

As discussed earlier, the facts in (60) and (63) are precisely what we predict if the relationship between the antecedent is and ta(a)n not anaphoric, but pronominal, because the actual relationship is one holding between the antecedent and pro; ta(a)n's anaphoric needs are handled independent of the antecedent.

## 6.2 "On the inside": anaphoric

Strictly speaking, the patterns given above are perfectly consistent with the notion that there is no mediating pro. They could also result from the idea that the perspectival pronoun is ta(a)n itself. Under such a model, ta(a)n, being a free pronoun, would have inherent  $\phi$ -features and no unvalued DEP (or other unvalued) feature, since it wouldn't enter into an Agree relation that feeds binding in syntax-semantics. It would thus also be able to trigger agreement on the verb when it occurs in the nominative. The only hiccup in the analysis would be the independent difficulties with a syncretism analysis that would go hand in hand with having ta(a)n be the source of agreement, as discussed in Section 4.3. Nevertheless, the fact that we get strict and sloppy reference under ellipsis, and that ta(a)n can take split antecedents would both be predicted.

Here, I present empirical arguments against this alternative. To this end, I show that, despite the pronominal nature of the relationship between ta(a)n and its antecedent, the pronoun is not ta(a)n itself. Rather, ta(a)n is a locally bound anaphor (a bound variable), which is bound by a pro in its local PerspP, just as argued in this proposal. There are two kinds of evidence I present to this end:

- (i) Multiple occurrences of ta(a)n within a single PerspP cannot take distinct antecedents: they are forced to take the same antecedent.
- (ii) The notion that ta(a)n is bound by a pro in [Spec, PerspP] coupled with the idea that the structural position where pro is merged is higher than [Spec, TP], the syntactic position of the clausal subject predicts that object ta(a)n should not be capable of being locally anteceded by its clausemate subject. I.e. it predicts that surface reflexivity should be banned with ta(a)n.

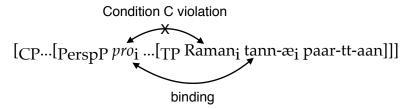
In the sections below, I show that both predictions are met.

#### 6.2.1 Antilocality restriction

If ta(a)n is bound by a pro in its local domain which is, furthermore, merged in the clausal left periphery, higher than the subject as argued here — then it is predicted that  $object\ ta(a)n$  should not be capable of being anteceded by its clausemate subject. This is because, in such a configuration, pro would asymmetrically c-command this antecedent in addition to coreferring with it. If the antecedent is an R-expression, this would yield a Condition C violation; if it is also a pronoun, this would yield a Condition B violation. Thus, we predict that ta(a)n should not be capable of being locally anteceded.

This prediction is fulfilled (see also Annamalai 2000), as we have already seen in (28), repeated here:<sup>27</sup>

- (65) Antilocality as a Condition C violation:
  - a. \*Raman<sub>i</sub> tann- $æ_i$  paar-tt-aan. Raman[NOM] ANAPH-ACC see-PST-3MSG Intended: "Raman<sub>i</sub> saw himself<sub>i</sub>"
  - b. Structural configuration:



- (66) Antilocality as a Condition B violation:
  - a. \* Avan<sub>i</sub> tann- $æ_i$  paar-tt-aan. he[sg.nom] ANAPH-ACC see-PST-3MSG Intended: "He<sub>i</sub> saw himself<sub>i</sub>"

Condition B violation

b. Structural configuration:

[CP...[PerspP proi ...[TP avani tann-æi paar-tt-aan]]]

The only way to salvage sentences like (65)-(66) within the perspectival model proposed here would be if the perspectival binding domain (the PerspP) were smaller than

<sup>&</sup>lt;sup>27</sup>As mentioned earlier, (65a)-(66a) can become grammatical with the addition of a verbal suffix "kol" on the verb. See Sundaresan (2016) for an analysis of the derivation of reflexivity in Tamil with kol and Lidz (2001; 2004, et seq.) for analyses of similar patterns in the related Dravidian language, Kannada.

a CP, and could, specifically, intervene between the subject and the anaphor. Assuming that the subject is merged as the external argument in [Spec, VoiceP] (or [Spec, vP]) and the internal argument (which is the anaphor) is merged as the complement of V, as is standard, this would thus be a position between v/Voice and V.

However, relevant crosslinguistic evidence has been recently brought to bear in Bylinina et al. (2014) and Bylinina and Sudo (2015), based on data involving perspectiveshifting with respect to various structural domains, arguing precisely against this possibility. A central notion of these works is that certain structural domains involve the presence of a perspectival operator (which would instantiate the Persp head in this model) which shifts the perspective of a perspective sensitive item (PSI) in its scope from the default perspective (that of the utterance-context speaker) to that of the attitude-holder associated with this operator.<sup>28</sup> The shiftability of a PSI in a given structural domain can thus be taken to be diagnostic of the presence or absence of a perspectival center/Persp. Crucially, such diagnostics show that VP is not a shifting domain because, when a perspectival item appears as the main predicate, it cannot shift its perspectival center to the subject of that sentence. The authors provide examples like "John is handsome", where the (perspectival) TASTE- predicate handsome has to be evaluated from the utterance-context speaker's perspective and cannot be evaluated from that of John.<sup>29</sup> Under the current proposal, this would translate to saying that there is no Persp between v/Voice and V, i.e. between the internal and external arguments. In reflexive structures, the anaphor and its co-argument are thus contained inside the same minimal PerspP (or binding domain). The structural configurations of sentences like (65a) and (66a), as given in (65b) and (66b) above, thus predict ungrammaticality.

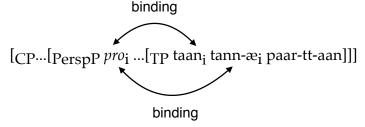
Potential further evidence that the ungrammaticality of sentences like (65a) and (66a) has to do with the antilocality of the relationship between *pro* and the antecedent rather than that between the antecedent and the anaphor (as is more traditionally assumed), comes from the fact that, when the antecedent is another anaphor, the antilocality restriction is lifted and reflexive binding becomes possible (crucially without the addition of the verbal suffix *kol*). Compare (67a) with (65a)/(66a):<sup>30</sup>

<sup>&</sup>lt;sup>28</sup>The idea takes its intuitions from context-overwriting approaches of indexical shift due to monstrous operators, as we have already seen (Anand 2006, Shklovsky and Sudo 2014).

<sup>&</sup>lt;sup>29</sup>In contrast, in a sentence like "If a handsome man comes in, John will be startled", the PSI *handsome* is ambiguous and may be evaluated either from the speaker's perspective or from John's, showing that there is a perspectival center introduced at the level of the CP by the attitude verb.

<sup>&</sup>lt;sup>30</sup>It is tempting to dismiss (67a) as just another instance of long-distance anaphora. But assuming that derivations are built bottom-up, the lower CP will be computed before the antecedent is merged, thus any anti-locality effect between the structural positions of the antecedent and the anaphor in the embedded CP should kick in first. Furthermore, even if this is a case of long-distance anaphora, there is still a local

- (67) No Anti-locality with anaphoric subject:
  - a. Raman $_i$  [ $_{CP}$  taan $_{\{i,*j\}}$  tann-æ $_{\{i,*j\}}$  paar-tt-aan-nnŭ] nenæ-čč-aan. Raman[NOM] ANAPH[NOM] ANAPH-ACC see-PST-3MSG-COMP think-PST-3MSG LITERAL: "Raman $_i$  thought [ $_{CP}$  that self $_{\{i,*j\}}$  saw self $_{\{i,*j\}}$ ]." READING: "Raman $_i$  thought [ $_{CP}$  that he $_{\{i,*j\}}$  saw himself $_{\{i,*j\}}$ ]."
  - b. Structural configuration:



Under the current proposal, this is exactly as predicted. There is no Condition B or Condition C violation, since the antecedent, being itself an anaphor, can be locally bound by the perspectival *pro* in (67a).

#### 6.2.2 Unique binder restriction

A tacit assumption of the current proposal is that there is a unique *pro* per PerspP (the binding domain of the anaphor). There is independent empirical evidence for this idea coming from a "Shift Together" constraint on perspective-sensitive items (PSIs): "i.e. PSIs in the same [local] domain must refer to the same PC [perspectival center]" (Bylinina et al. 2014, 10) — illustrated below (Bylinina et al. 2014, 12, Ex. 40):

- (68) John read a book by a **talented**<sub>EvidentialPSI</sub> **foreigner**<sub>PronominalPSI</sub>.
  - a.  $\checkmark$  John read a book by an author who I think is talented and who is from a different country than me. (*talented*: Persp<sub>Utt-Speaker</sub>; *foreigner*: Persp<sub>Utt-Speaker</sub>)
  - b. ✓ John read a book by an author who John thinks is talented and who is from a different country than John. (*talented*: Persp<sub>John</sub>; *foreigner*: Persp<sub>John</sub>)
  - c. X John read a book by an author who I think is talented and who is from a different country than John. (*talented*: Persp<sub>Utt-Speaker</sub>; *foreigner*: Persp<sub>John</sub>)
  - d.  $\mbox{\ensuremath{\mathcal{X}}}$  John read a book by an author who John thinks is talented and who is from a different country than me. (*talented*: Persp<sub>John</sub>; *foreigner*: Persp<sub>Utt-Speaker</sub>)

reflexive relation between subject and object instances of ta(a)n which should trigger anti-locality. As far as I can see, sentences like (67a) would thus be problematic under an analysis like Reuland (2011) which would treat the antilocality in ta(a)n-reflexives as resulting from the monomorphemic status of ta(a)n — specifically, as resulting from the notion that it would form an irrecoverable A-chain with its antecedent. Note that such an analysis would also need to account for the independent use of kol and the perspectival properties of ta(a)n throughout, including in reflexive structures.

This restriction automatically follows if there is a unique perspectival center per binding domain (the PerspP).

Given this, a prediction that the two-stage approach for anaphora proposed here makes, is that multiple occurrences of an anaphor within a single PerspP should be restricted to taking the same antecedent. This would be an instance of Shift Together for anaphora. Below, I show that this prediction is indeed fulfilled:

(69) Sri $_i$  [Mia $_j$  [GerP [PerspP pro $_{\{i,j\}}$  ta(a) $n_{\{i,j\}}$  tann-æ $_{\{i,j\}}$  adi-čč-adaagæ]] kanavuka-nd-aal-йnnŭ] Sri $_i$  Mia $_j$  Anaph[nom] anaph-acc hit-pst-nmlz dream-pst-3fsg-comp so-nn-aan. say.3msg

Literal: "Sri<sub>i</sub> said [ $_{CP}$  that Mia<sub>j</sub> dreamed [ $_{GerP}$  of self<sub>{i,j}</sub> hitting self<sub>{i,j}</sub>]]"

Reading  $1 \checkmark$ : "Sri<sub>i</sub> said that Mia<sub>j</sub> dreamed that she<sub>j</sub> hit herself<sub>j</sub>."

Reading 2  $\checkmark$ : "Sri<sub>i</sub> said that Mia<sub>j</sub> dreamed that he<sub>i</sub> hit himself<sub>i</sub>."

Reading 3 X: "Sri<sub>i</sub> said that Mia<sub>i</sub> dreamed that she<sub>i</sub> hit him<sub>i</sub>."

Reading 4 X: "Sri<sub>i</sub> said that Mia<sub>j</sub> dreamed that he<sub>i</sub> hit her<sub>j</sub>."

Although there are four logical readings for the sentence in (69), only two are attested, as demonstrated above. Under a proposal where ta(a)n is a free (albeit perspectivally restricted) pronoun, the lack of covarying readings for the two ta(a)n-s is unexpected. Indeed, if we replace the anaphor ta(a)n with the deictic avan ('he') and aval ('she') variants, Readings 3-4 become available. The availability of Reading 3 is shown below:

(70)  $\operatorname{Sri}_i[\operatorname{Mia}_j[_{CP} \operatorname{aval}_j \quad \operatorname{avan-} \text{$\mathbb{Z}_i$ adi-čč-adaag$@]} \operatorname{kanavuka-} \text{$\mathbb{Z}_i$ aal-ŭnnŭ] so-nn-aan.}$   $\operatorname{Sri}_i[\operatorname{Mia}_j \quad \operatorname{she}[\operatorname{NoM}] \operatorname{he-ACC} \quad \operatorname{hit-PST-NMLZ} \quad \operatorname{dream-PST-3FSG-COMP} \quad \operatorname{say.3MSG}$  " $\operatorname{Sri}_i[\operatorname{Said}[_{CP} \text{ that } \operatorname{Mia}_i] \operatorname{dreamed}[_{CP} \text{ that } \operatorname{she}_i]$ ]."

Conversely, when the multiple occurrences of ta(a)n belong to distinct structural domains, the restriction is lifted: the different occurrences can now denote distinct antecedents, just as predicted:

(71) Raman $_i$  [ $_{CP}$  [ $_{PerspP}$   $pro_{\{i,j\}}$  Seetha $_j$  tann-oodæ $_{\{i,j\}}$  panatt-æ [ $_{PP}$  [ $_{PerspP}$   $pro_{\{i,j\}}$  Raman[NOM] Seetha ANAPH-GEN money-ACC tan-akkŭ $_{\{i,j\}}$  pakkatt-ŭlæ]] oli-čč-aal-ŭnnŭ]] nenæ-čč-aan. ANAPH-DAT near-LOC hide-PST-3FSG-COMP think-PST-3MSG Literal: "Raman $_i$  thought [ $_{CP}$  [ $_{PerspP}$   $pro_{\{i,j\}}$  that Seetha $_j$  hid self's $_{\{i,j\}}$  cash [ $_{PP}$  [ $_{PerspP}$   $pro_{\{i,j\}}$  near self $_{\{i,j\}}$ ]]]]."

Reading  $1 \checkmark$ : "Raman<sub>i</sub> thought that Seetha<sub>j</sub> hid her<sub>j</sub> cash near him<sub>i</sub>."

Reading 2  $\checkmark$ : "Raman<sub>i</sub> thought that Seetha<sub>j</sub> hid his<sub>i</sub> cash near her<sub>j</sub>."

Reading 3  $\checkmark$ : "Raman<sub>i</sub> thought that Seetha<sub>j</sub> hid his<sub>i</sub> cash near himself<sub>i</sub>."

Reading 4  $\checkmark$ : "Raman<sub>i</sub> thought that Seetha<sub>j</sub> hid her<sub>i</sub> cash near herself<sub>i</sub>."

The sentence above involves a mental Persp introduced by the matrix attitude-predicate nenæ ('think') and a spatial Persp introduced by the locative preposition  $pakkatt\~u$  ('near'). Each instance of ta(a)n is crucially in the scope of a different Persp, as indicated. Under the current model, this means that each will be bound by a different perspectival pro and will thus be able to corefer with a different antecedent. This prediction is again fulfilled, as illustrated above. In contrast to (69, the sentence in (71) is four-ways, not two-ways, ambiguous.

### 6.3 Summing up

In this section, I have presented independent evidence to support the proposal that perspectival anaphora involves a two-stage process with a mediating *pro* at its core: a structural one involving a variable-binding relation between the anaphor and a perspectival *pro* in its local domain and a discourse pragmatic one involving regular pronominal (co)reference between *pro* and the antecedent of the anaphor.

Although the initial motivation for this proposal was evidence involving verbal agreement triggered under anaphora in Tamil, I have argued in this section that this model makes the right empirical predictions with respect to perspectival anaphora in Tamil and languages like it. In particular, it predicts that the relationship between the antecedent and pro should display the empirical fingerprint of (discourse-)pronominal reference while that between pro and the anaphor should display that of bound-variable anaphora. I have attempted to show at length that these predictions are fulfilled. With respect to the former, ta(a)n can take split antecedents and yield strict readings in the domain of definite DPs. With respect to the latter, I show that multiple occurrences of ta(a)n within a single PerspP (binding domain) cannot take distinct antecedents: this follows from the independently supported notion that each PerspP has exactly one pro binder. I also argued that the two-stage model predicts that standard reflexivity should be ruled out within a perspectival system, as a function of anti-locality (violations of Conditions B or C). This prediction is also borne out.

### 7 Conclusion

The goal of this paper has been to argue that grammatical perspective, instantiated either mental or spatio-temporally, is structurally represented. Evidence for this came from the Dravidian language Tamil where it was argued that grammatical perspective could direct affect the shape of morphosyntactic agreement on the verb. On the strength of this,

I have proposed a two-stage model of perspectival anaphora mediated by a perspectival pronoun that corefers discourse-pragmatically with the antecedent of the anaphor, and variable-binds the anaphor in its local domain at LF. The antecedence-anaphora relationship is thus actually an epiphenomenon of two independent referential relationships. In addition to explaining the agreement facts that motivated the analysis in the first place, this model also has the independent advantage of being able to explain hitherto problematic aspects of perspectival anaphora, to wit that it is structurally well-behaved in some respects (e.g. with respect to respecting locality domains for anaphors) and ill-behaved in all others (e.g. with respecting to violating locality, minimality, c-command, antecedent determinism and so on) — properties which make it hard to analyse in either purely structural or purely discourse-pragmatic terms. It also predicts that such anaphora should be pronominal "on the outside" (i.e. with respect to anaphora)

Although the analysis here has been based primarily on evidence from Tamil, it can be easily extended to model (mental or spatial) perspectival anaphora in other languages. For instance, it has been noted (see e.g. Hicks 2009) for Icelandic, that the identity of the perspective-holder also seems to condition the choice of subjunctive vs. indicative marking on the clausemate verb of the chosen antecedent. Interestingly, the role of the subjunctive in Icelandic seems to be "to signal that the perspective-holder of a given construction is distinct from the [utterance-context] speaker" (Hellan 1988, 89) or, as Sigurðsson (2010, 50): "In modern Icelandic, the most important factor that triggers subjunctive marking in these complements is that the speaker does not take *responsibility* for their truthfulness" (Sigurðsson 2010, 50). An elegant way to model these facts would be to propose that, in Icelandic, the "Persp" head that introduces the perspectival *pro* and associates it with a perspective-holder role is, in fact, nothing other the Mood head that is responsible for yielding subjunctive marking. In the indicative, the perspectival pronoun is pre-set to denote the utterance-context speaker, but in the subjunctive this default is *obviated* or shifted, allowing it to corefer with the antecedent of the anaphor.

Claiming that perspective is structurally represented, however, has the implication that it should be able to influence not only anaphoric dependencies but also other types of (morpho)syntactic phenomena. A striking parallel to this phenomenon is found in the realm of control — broadly speaking another kind of referential dependency between nominals. Landau (2015) indeed argues that instances of non-obligatory control crosslinguistically should be analysed as a kind of "logophoric control" (see also Frascarelli 2007) involving a perspectival pronoun which has a mediating function that is strikingly similar to that of the perspectival *pro* in the current model. The precise extent

and nature of the differences between these phenomena will require careful empirical investigation which also take seriously the roles of clausal finiteness and predicate selection into consideration. In principle, every predication that is evaluated relative to a judge or perspectival center should include the representation of a Perspectival Phrase (PerspP) with a Persp head that introduces a *pro* in its specifier. This suggests that this model could, in theory, be extended to derive other perspectival phenomena in grammar such as "taste" predications (Stephenson 2007), modal auxiliaries (Speas and Tenny 2003), evidentials (though see Korotkova 2016, for a discussion of why a judge-based treatment of evidentials is problematic), and so on.

### References

Adger, David. 2003. Core syntax. Oxford: Oxford University Press.

Adger, David, and Gillian Ramchand. 2005. Merge and Move: *Wh*-dependencies revisited. *Linguistic Inquiry* 36:161–193.

Anand, Pranav. 2006. De de se. Doctoral Dissertation, Massachusetts Institute of Technology.

Annamalai, E. 1999. Lexical anaphors and pronouns in Tamil. In *Lexical and anaphors and pronouns in selected South Asian languages: a principled typology*, ed. Barbara C. Lust, Kashi Wali, James W. Gair, and K.V. Subbarao, 169–216. Mouton de Gruyter.

Annamalai, E. 2000. Lexical anaphors and pronouns in Tamil. In *Lexical anaphors and pronouns in Selected South Asian Languages*, ed. Barbara C. Lust, Kashi Wali, James W. Gair, and K.V. Subbarao, volume Part I, 169–216. New York: De Gruyter.

Austen, Jane. 1816. Emma. .

Baker, Mark C. 2008. *The syntax of agreement and concord*. United Kingdom: Cambridge University Press.

Banfield, Ann. 1982. *Unspeakable sentences: Narration and representation in the language of fiction*. Boston: Routledge and Kegan Paul.

Barlew, Jefferson. 2016. Point of view and the semantics of spatial expressions in Mushunguli and English. *Journal of semantics* 33:215–267.

Beletti, Adriana, and Luigi Rizzi. 1988. Psych verbs and  $\theta$ -theory. Natural Language and Linguistic Theory 6:291–352.

Bianchi, Valentina. 2003. On finiteness as logophoric anchoring. In *Temps et point de vue/Tense and Point of View*, ed. Jacqueline Guéron and L. Tasmovski, 213–246. Nanterre: Université Paris X.

- Bjorkman, Bronwyn, and Hedde Zeijlstra. 2014. Upward Agree is superior. Http://ling.auf.net/lingbuzz/002350. Göttingen/Toronto.
- Bobaljik, Jonathan David. 2008. Where's phi? Agreement as a postsyntactic operation. In *Phi Theory: phi-features across modules and interfaces*, ed. Daniel Harbour, David Adger, and Susana Béjar, Oxford Studies in Theoretical Linguistics, 295–328. Oxford University Press.
- Bylinina, Lisa, Eric McCready, and Yasutada Sudo. 2014. The landscape of perspective shifting. Talk given at Pronouns in Embedded Contexts at the Syntax-Semantics Interface, Tübingen.
- Bylinina, Lisa, and Yasutada Sudo. 2015. The semantics of perspective sensitivity. ESSLLI 2015 course lectures.
- Charnavel, Isabelle. 2017. Logophoricity and locality: the view from French anaphors. Http://ling.auf.net/lingbuzz/002683.
- Chomsky, Noam. 1986a. *Knowledge of language: its nature, origin, and use.* New York: Praeger.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz. Cambridge, Mass.: MIT Press.
- Clements, G.N. 1975. The logophoric pronoun in Ewe: its role in discourse. *Journal of West African Languages* 2:141–177.
- Deal, Amy Rose. 2010. Ergative case and the transitive subject: a view from Nez Perce. *NLLT* 28:78–120.
- Dubinsky, Stanley, and Robert Hamilton. 1998. Epithets as antilogophoric pronouns. *Linguistic Inquiry* 29:685–693.
- Frascarelli, Mara. 2007. Subjects, topics and the interpretation of referential *pro. Natural Language and Linguistic Theory* 25:691–734.
- Giorgi, Alessandra. 2006. From temporal anchoring to long distance anaphors. *Natural Language and Linguistic Theory*.
- Giorgi, Alessandra. 2010. *Towards a syntax of indexicality*. Oxford Studies in Theoretical Linguistics. Oxford: Oxford University Press.
- Haegeman, Liliane. 2004. A dp-internal Anaphor Agreement Effect. *Linguistic Inquiry* 35:704–712.
- Heim, Irene, and Angelika Kratzer. 1998. *Semantics in Generative Grammar*. Oxford: Blackwell Publishers.
- Hellan, Lars. 1988. *Anaphora in Norwegian and the theory of grammar*, volume 32 of *Studies in Generative Grammar*. Dordrecht: Foris Publications.

- Hicks, Glyn. 2009. *The derivation of anaphoric relations*. Linguistik Aktuell. John Benjamins.
- Huang, C.C. James, and C.T. Jane Tang. 1991. The local nature of the long-distance reflexive in Chinese. In *Long-distance anaphora*, ed. Eric Reuland Jan Koster, 263–282. Cambridge University Press.
- Jayaseelan, K.A. 1997. Anaphors as pronouns. Studia Linguistica 51:186–234.
- Kaplan, David. 1989. Demonstratives: An essay on the semantics, logic, metaphysics, and epistemology of demonstratives and other indexicals. In *Themes from Kaplan*, ed. John Perry, Joseph Almog, and Howard Wettstein, 481–563. Oxford: Oxford University Press.
- Koopman, Hilda, and Dominique Sportiche. 1989. Pronouns, logical variables, and logophoricity in Abe. *Linguistic Inquiry* 20:555–588.
- Korotkova, Natalia. 2016. Heterogeneity and uniformity in the evidential domain. Doctoral Dissertation, UCLA, Los Angeles, CA.
- Kracht, Markus. 2008. The fine structure of spatial expressions. In *Syntax and semantics* of spatial *P*, ed. Anna Asbury, Jakub Dotlačil, Berit Gehrke, and Rick Nouwen, 35–62. Philadelphia: John Benjamins.
- Kratzer, Angelika. 1996. Severing the external argument from its verb. In *Phrase structure* and the lexicon, ed. Johan Rooryck and Laurie Zaring, 109–137. Dordrecht: Kluwer.
- Kratzer, Angelika. 2009. Making a pronoun: fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40:187–237.
- Kuno, Susumo. 1973. The structure of the Japanese language. Cambridge, MA: MIT Press.
- Kuno, Susumo. 1987. Functional syntax anaphora, discourse and empathy. Chicago: Chicago University Press.
- Landau, Idan. 2015. A two-tiered theory of control. Cambridge, MA: MIT Press.
- Legate, Julie Anne. 2002. Walpiri: Theoretical implications. Doctoral Dissertation, MIT, Cambridge, MA.
- Levinson, Stephen C. 2003. *Space in language and cognition: Explorations in cognitive diversity*. Cambridge: Cambridge University Press.
- Lewis, David. 1979. Attitudes de dicto and de se. *Philosophical Review* 88:513–43.
- Lidz, Jeffrey. 2001. The argument structure of verbal reflexives. *Natural Language and Linguistic Theory* 19:311–353.
- Lidz, Jeffrey. 2004. Causation and refexivity in Kannada. In *Clause structure in South Asian languages*. Springer.
- Lødrup, Helge. 2007. A new account of simple and complex reflexives. *Journal of comparative Germanic Linguistics* 10:183–201.

- Manzini, Rita, and Ken Wexler. 1987. Parameters, binding theory, and learnability. *Linguistic Theory* 18:413–444.
- Messick, Troy. 2016. Pronouns and agreement in Telugu embedded contexts. In *Proceedings of the 33rd West Coast Conference on Formal Linguistics*, 309–319.
- Minkoff, Seth. 2003. Consciousness, backward coreference, and logophoricity. *Linguistic Inquiry* 35:485–494.
- Mitchell, Jonathan. 1986. The formal semantics of point of view. Doctoral Dissertation, University of Massachusetts, Amherst, MA.
- Nishigauchi, Taisuke. 2014. Reflexive binding: awareness and empathy from a syntactic point of view. *Journal of East Asian Linguistics* 23:157–206.
- Oshima, David. 2007. On empathic and logophoric binding. *Research on language and computation* 5:19–35.
- Oshima, David Y. 2004. *Zibun* revisited: empathy, logophoricity, and binding. *University of Washington Working Papers in Linguistics* 23:175–190.
- Pearson, Hazel. 2013. The sense of self: Topics in the semantics of de se expressions. Doctoral Dissertation, Harvard University, Cambridge.
- Pica, Pierre. 1987. On the nature of the reflexivization cycle. In *Proceedings of NELS 17*, ed. J. McDonough and B. Plunkett. University of Massachusetts, Amherst, GLSA.
- Progovac, Liljana. 1993. Long-distance reflexives: movement to Infl versus relativized SUBJECT. *Linguistic Inquiry* 24:755–772.
- Reinhart, Tanya. 1983. Anaphora and semantic interpretation. London: Croom Helm.
- Reinhart, Tanya, and Eric Reuland. 1993. Reflexivity. Linguistic Inquiry 24:657–720.
- Reuland, Eric. 2001. Primitives of binding. *Linguistic Inquiry* 32:439–492.
- Reuland, Eric. 2011. Anaphora and language design. Cambridge, Mass.: MIT Press.
- Rizzi, Luigi. 1990. On the anaphor-agreement effect. Rivista di Linguistica 2:27–42.
- Roberts, Craige. 2014. Indexicals: de se semantics and pragmatics. Ms., The Ohio State University.
- Rooryck, Johan, and Guido vanden Wyngaerd. 2011. *Dissolving binding theory*. Oxford Studies in Theoretical Linguistics. Oxford: Oxford University Press.
- Schiffman, Harold. 1995. Online grammar of spoken Tamil.
- Schlenker, Philippe. 2003a. Indexicality, logophoricity, and plural pronouns. In *Research* in Afroasiatic grammar II (selected papers from the fifth conference on Afroasiatic languages, Paris, 2000), ed. J. Lecarme, 409–428. Philadelphia: Benjamins.
- Schlenker, Philippe. 2003b. A plea for monsters. *Linguistics and Philosophy* 26:29–120. Kluwer Academic Publishers.

- Schlenker, Philippe. 2004. Context of thought and context of utterance: a note on free indirect discourse and the historical present. *Mind and language* 19:279–304.
- Sells, Peter. 1987. Aspects of logophoricity. Linguistic Inquiry 18:445–479.
- Shiraki, Hitoshi. To Appear. The Anaphor Agreement Effect and argument marking. In *Proceedings of NELS 35*.
- Shklovsky, Kirill, and Yasutada Sudo. 2014. The syntax of monsters. *Linguistic Inquiry* 45:381–402.
- Sigurðsson, Halldór Ármann. 1991. Icelandic Case-marked PRO and the licensing of lexical arguments. *Natural Language and Linguistic Theory* 9.
- Sigurðsson, Halldór Ármann. 2010. Mood in Icelandic. In *Mood in the languages of Europe*, ed. Björn Rothstein and Rolf Thieroff, 33–55. Amsterdam: John Benjamins.
- Speas, Margaret. 2004. Evidentiality, logophoricity and the syntactic representation of pragmatic features. *Lingua* 114:255–276.
- Speas, Peggy, and Carol Tenny. 2003. Configurational properties and point-of-view roles. In *Asymmetry in grammar*, ed. Anna Maria Di Sciullo, volume I: Syntax and semantics, 315–344. Amsterdam: John Benjamins.
- von Stechow, Arnim. 2002. Feature deletion under semantic binding: tense, person, and mood under verbal quantifiers. In *Proceedings of NELS 33*.
- Stephenson, Tamina. 2007. Judge dependence, epistemic modals, and predicates of personal taste. *Linguistics and philosophy* 30:487–525.
- Sundaresan, Sandhya. 2012. Context and (co)reference in the syntax and its interfaces. Doctoral Dissertation, University of Tromsø and University of Stuttgart, Tromsø.
- Sundaresan, Sandhya. 2016. Perspectival reflexivity and the *ko*l morpheme. In *Proceedings* of FASAL 5, ed. Rahul Balusu and Sandhya Sundaresan, 123–142.
- Sundaresan, Sandhya. 2017. Person: a four-way distinction and binary features. Poster presentation at GLOW-in-Asia, National University of Singapore.
- Sundaresan, Sandhya, and Hazel Pearson. 2014. Towards a syntax-semantics of linguistic perspective. Talk given at LAGB Annual Meeting 2014.
- Tucker, Matthew A. 2011. Even more on the anaphor agreement effect: when binding does not agree. Manuscript written at UCSC.
- Woolford, Ellen. 1999. More on the anaphor agreement effect. *Linguistic Inquiry* 30:257–287.
- Zeijlstra, Hedde. 2012. There is only one way to agree. The Linguistic Review 29:491–539.