Deriving post-verbal copular agreement in English

an interaction-satisfaction account

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1. Introduction

- The investigation of agreement patterns in copular clauses has been of significant inquiry in the past decade of generative linguistics (Heycock 2009; Hartmann & Heycock 2017, 2023; Keine et al. 2019; Coon & Keine 2021; Béjar & Kahnemuyipour 2023)
- We discuss an unexpected pattern of English copular agreement with *th*-clefts as in (1)

(1) [The thing I love seeing when I get home] **are** those cute dogs

- English copular agreement is consistently preverbal, which raises the question of how postverbal agreement is possible in (1), while also ruling out patterns as in (2)

(2) *[The thing I love seeing when I get home] **are** you

1. Introduction

- An immediate consequence of the data presented here questions **the underspecification of 3rd-person relative to local persons** (i.e., 1st- and 2nd-person)
- We pursue an approach that not only allows 3rd-person to be agreed with but forces the probe to bypass 1st- and 2nd-persons (Grishin 2023)
  - In order to achieve this result, we rely on the specification of the probe once it has interacted with the cleft
- The approach we take here is purely syntactic, as we believe that the morphological output of an Agree relation is predicated on the syntax proper (i.e., the *morphology-as-syntax* movement)
  - We also recognize that there are other syntax-based, as well as morphology-based, mechanisms that may be able to account for these patterns

1. Introduction

- A note about our data:
  - There is considerable inter-speaker variation in these constructions, but we have found salient patterns of distinction between speakers younger and older than 35-40 years old
  - Our focus lies in the speakers above the age of 35-40, as they have firm and consistent *is*/*are* alternations in these constructions, as well as in *there*-expletives
  - Our judgements displayed here are for these speakers, not the totality of all speakers, which allow us to thoroughly examine one pattern of variation and understand its derivational mechanisms
  - For a comprehensive analysis of differing patterns, see Storment (2024)

1. Introduction

- §2 Outline of copular types
- §3 Data of copular agreement with clefts
- §4 The syntax of clefts
- §5 Outline of the syntax of copulas
- §6 Syntactic agreement with clefts
- Concluding remarks

2. Copular types

- Since Higgins (1973), there have been four primary copular patterns investigated cross-linguistically:

(3) a. *Predicational*
You are my best friend

b. *Specificational*
My best friend is **you**

c. *Identificational*
That is **me**

d. *Equative*
Bruce Banner is **the Hulk**

- We highlight the notional noun (bolded), which will be important for our data and theoretical account to come

2. Copular types

- The variability found in natural language that concerns us here deals with **which nominal agrees with the verb** in copular constructions
- There are two known agreement patterns:
  - Preverbal nominal patterns (English-type languages)
  - Most-specified nominal patterns (Italian/Spanish-type languages)
- In contrast to what we saw in (3a-3d), the notional subject will almost always show agreement on the verb in Spanish-type languages

* We leave aside equatives and what have been deemed *assumed-identity* patterns here, as these agreement patterns do not always pair with the other copular patterns intralinguistically

2. Copular types

(4) a. *Predicational*

Tú eres el sintactista
you.NOM be.PRS.**2SG** the syntactician

'You are the syntactician.'

b. *Specificational*

El sintactista eres **tú**
the syntactician be.PRS.**2SG** **you.NOM**

'The syntactician is you.'

c. *Identificational*

Ése soy **yo**
that.DEM be.PRS.**1SG** **I.NOM**

'That is me.'

2. Copular types

- There has been a plethora of work focusing on how these patterns are derived (e.g. Dikken 2006), as well as those focusing on how verbal agreement, particularly postverbally, may be accounted for (e.g. Moro 1997; Hartmann & Heycock 2016)
- We assume that all copular constructions entail a 'one probe, two targets' derivational structure
- Depending on the agreement system of the language (i.e., the specification of the probe and that of the targets), we may assume that copular agreement is primarily borne out when the probe finds a viable goal

3. Copular Agreement with Clefts

- English copular agreement is fairly straightforward: regardless of the copular type, the verb typically bears agreement with the preverbal nominal
- However, there is intralinguistic variation in specificational copulas when the predicating nominal is of a certain type of cleft

(5) a. *th*-cleft
[The thing I love most in this world]$_{3.SG}$??is/**are** [my cats]$_{3.PL}$

b. *wh*-cleft
[What I dislike]$_{3.SG}$ **is**/**are** [Daniel's pedantic rants]$_{3.PL}$

c. *all*-cleft
[All I know]$_{3.SG}$???is/**are** [these country roads]$_{3.PL}$

3. Copular Agreement with Clefts

- This variation has been observed in the functional/corpus-based literature (Berg 1998; Lee 2016)
  - It has also been recognized in the generative literature (Heycock 2012:212, fn. 3; Percus 1997:350) but with no commitment on how this pattern may be derived syntactically
- We focus on *th*-clefts, as they are the only type that show overt plural number marking, which will be important for our analysis moving forward
- *th*-clefts are also the least investigated in the literature
- While most examples are generalized nouns ('the things', 'the ones'), *th*-clefts are not restricted to ambiguous classes: 'the people', 'the animals', 'the members', etc.

3. Copular Agreement with Clefts

- In order for the potential variation to surface, the cleft must be in preverbal position (6b)
  - When it is in postverbal position, agreement is shown with the preverbal nominal regardless of its featural specification (6a)

(6) a. Books **were**/*was [what he asked for]

b. [What he asked for] ??**was**/**were** books

- What we do not find, however, is agreement with local pronouns (1st- or 2nd-person) when they appear postverbally after a cleft
  - In fact, agreement is default regardless of the number specification of the cleft

3. Copular Agreement with Clefts

(7) a. *SG head noun*
[The friendliest guy (that) I know] **is**/*am me

b. *PL head noun*
[The colleagues (that) I see every day] **is**/*are y'all

- There are a few noteworthy aspects of these data:
  - The local pronoun is not in nominative Case but accusative/dative (7a)
  - Even when the relative head nominal is plural (7b), singular agreement is still borne out
- This last observation is not restricted to local persons in the postverbal position; we find this pattern with third-person singular nominals, as well (8b)

3. Copular Agreement with Clefts

- As expected, when the (singular) notional subject is preverbal (i.e., a predicational pattern), singular agreement is borne out
- However, when a cleft headed by a plural noun is the subject of a specificational construction, a postverbal singular nominal may agree with the verb

(8) a. Her happiness **is**/*are [the things that matter most]

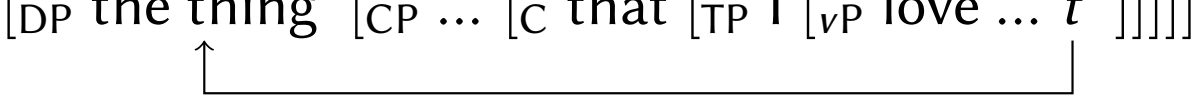
b. [The things that matter most] *are/**is** her happiness

- It is important to note that the subordinating verb in the relative clause ('matter') does, in fact, agree with the relative nominal head ('the things')

4. The Syntax of Clefts

- There are a multitude of proposals and strategies to deriving the structures of the various types of clefts, all centered around one of two approaches:

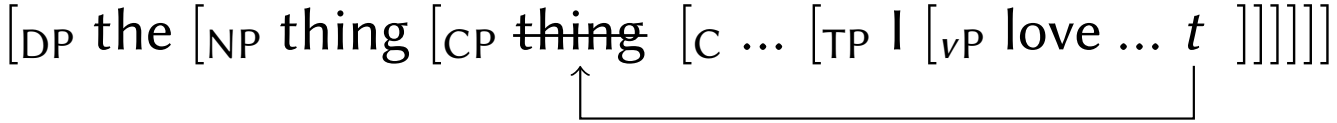
(9) *Raising approach*



- There is overt movement of the nominal from its base-generated position within the subordinating clause
  - The exact landing site and mechanisms vary (Kayne 1994; Bianchi 1999; Bhatt 2002; Donati & Cecchetto 2011), although all of these proposals assume that, minimally, the relative 'head' (i.e., the nominal) moves

4. The Syntax of Clefts

(10) *Matching approach*

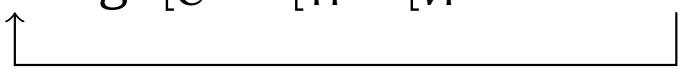


- The matching approach does involve movement, its derivational mechanisms are closer to what we find in ellipsis, as the internal head and external head do not belong to a movement chain (Kayne 1975; Sauerland 2003)
- Based on our findings, we assume that there must be two types of derivable cleft structures:
  - One that involves extraposition via movement (e.g. 9)
  - One that involves movement but not outside of the CP domain

4. The Syntax of Clefts

- The latter is exemplified in (a modified version of) Belletti (2015):

(11) $[_{CP}$ the thing $[_{C}$ ... $[_{TP}$ I $[_{vP}$ love ... t]]]]



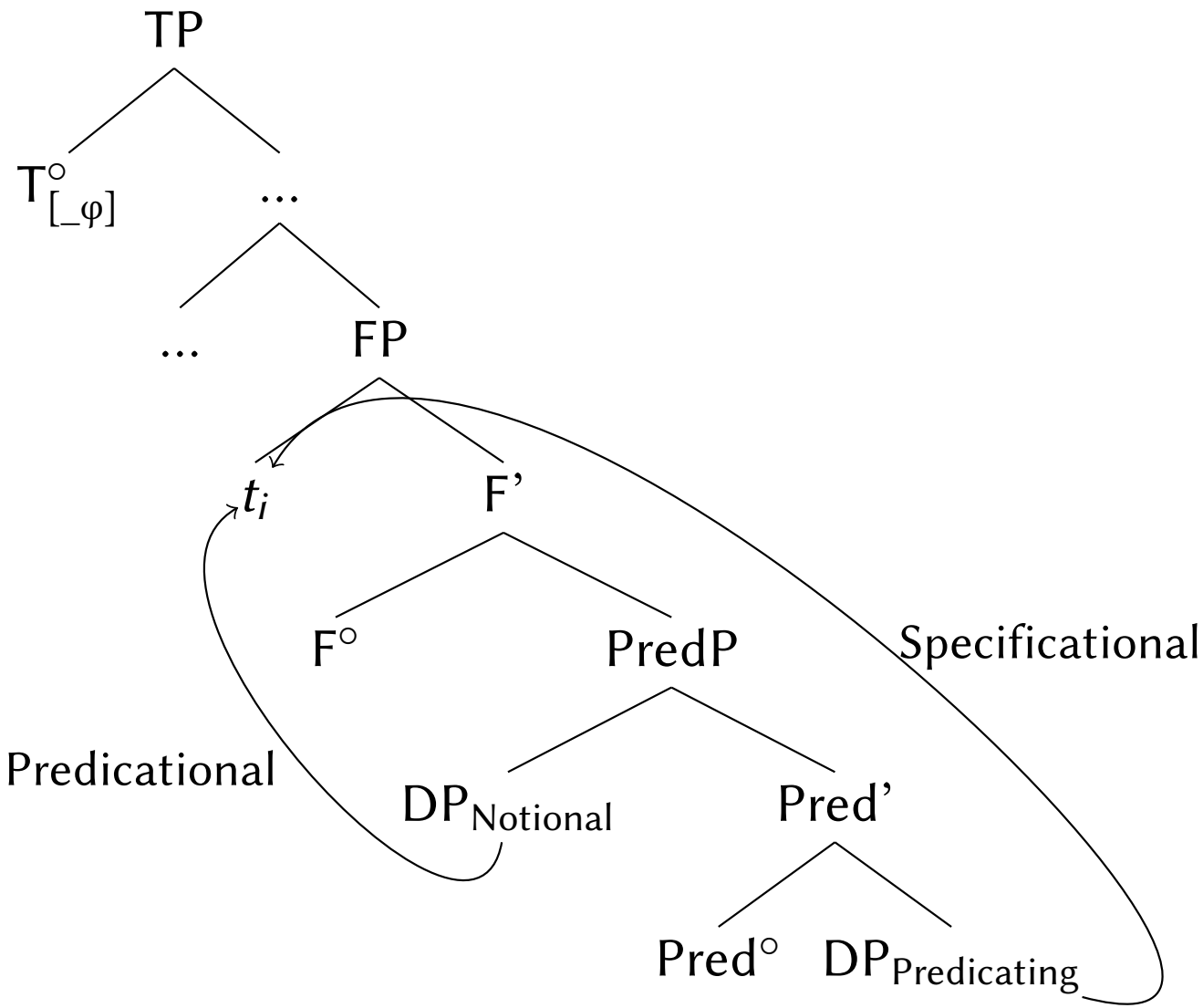
- In the same vein as Belletti, we take the structure in (11) to be specific to a certain information-structure function
  - For our purposes here, it will be that of predicating *th*-clefts
- Most importantly, we assume that this structure, unlike that of, e.g. *it*-clefts, only bears a person feature ([3])
  - We predict that this will have ramifications for agreement patterns with *th*-clefts

5. The Syntax of Copulas

- Our assumptions of derivational movement within double-nominal copular clauses are:
  - There is an intermediate landing site between its base-generated position and T° that one nominal must reach
    - We call the intermediate landing site F° for expository purposes
  - The movement of either the notional subject or its predicating counterpart is dependent on which has a movement-based feature
  - It is from here that the preverbal nominal must move (although not obligatory in all languages)
    - The result is either a predicational or specificational clause

5. The Syntax of Copulas

(12)



5. The Syntax of Copulas

- The presence of a projection such as F° is seen in the patterns in Spanish where both nominals may remain in a postverbal position

(13) a. *Post-verbal 'predicational' pattern*

Son [$_{FP}$**los niños de este tipo**]$_i$ t_i un problema
be.PRS.3PL **the.PL boy.PL of this guy** a problem

b. *Post-verbal 'specificational' pattern*

Son [$_{FP}$un problema]$_i$ **los niños de este tipo** t_i
be.PRS.3PL a problem **the.PL boy.PL of this guy**

'This guy's kids are a problem.'

5. The Syntax of Copulas

- Further movement in (13a-13b) results in the predicational and specificational patterns discussed above

(14) a. *Predicational*

Los niños de este tipo son un problema
the.PL boy.PL of this guy be.PRS.3PL a problem

b. *Specificational*

Un problema son los niños de este tipo
a problem be.PRS.3PL the.PL boy.PL of this guy

'This guy's kids are a problem.'

5. The Syntax of Copulas

- In Gravely et al. (2024), we highlighted that copular T° often bears a different set of featural specifications than (in)transitive T°
- For Spanish, we showed that [PART] and [PL] are the two features that control agreement between the two available targets
- For English, we assume that [π] and [#] (i.e., person and number specifications) are the minimal specifications for agreement
- The difference, we claim, is that Spanish only relies on agreement with one of the salient features, whereas English requires both features to be present

5. The Syntax of Copulas

- In Gravely et al. (2024), we called the Spanish-type probe *inosculate*, as the number feature is predicated on the person feature
  - That is, even a lesser number specification will be borne out if a salient person feature is copied to the probe

(15) a. **Yo** soy [todos tus problemas]$_{3PL}$
I.NOM be.PRS.**1SG** all your.PL problem.PL
'I am all of your problems.'

b. [Todos tus problemas]$_{3PL}$ soy **yo**
all your.PL problem.PL be.PRS.**1SG** **I.NOM**
'All of your problems are me.'

c. *[Todos tus problemas]$_{3PL}$ somos **yo**
all your.PL problem.PL be.PRS.**1PL** **I.NOM**
Intended: 'All of your problems are me.'

5. The Syntax of Copulas

- For English, we shall show that predicating nominal clefts in preverbal position bear only a person feature, which does not satisfy the probe's number specification
- We propose that this forces the probe to change: although the probe is in search of a salient number feature (i.e., singular or plural), the probe will only agree with a subsequent 3rd-person nominal after agreeing with a cleft structure bereft of a number feature
- We show how this permits postverbal agreement with a notional subject but only when it bears 3rd-person; agreement with a local person feature is strictly forbidden
- Ultimately, this will entail assuming a feature geometry that differs somewhat from the original proposal in Harley & Ritter (2002)

6. Agreement with Clefts

- We assume an *interaction-satisfaction* model of Agree
- Probes have two conditions: an *interaction* condition (i.e., what the probe may interact with) and a *satisfaction* condition (i.e., what forces the probe to halt)
- These specifications need not be the same featurally (and, in the case of copular T° in English, are not)
- This theory also assumes that either specification (or both) may fail to be found without a derivational penalty (Preminger 2014)
- Couched within this theory is the concept of *dynamic interaction*, which claims that, upon interaction with a goal, the specification of the probe may change

6. Agreement with Clefts

- We claim that English copular T° bears the probe in (16)

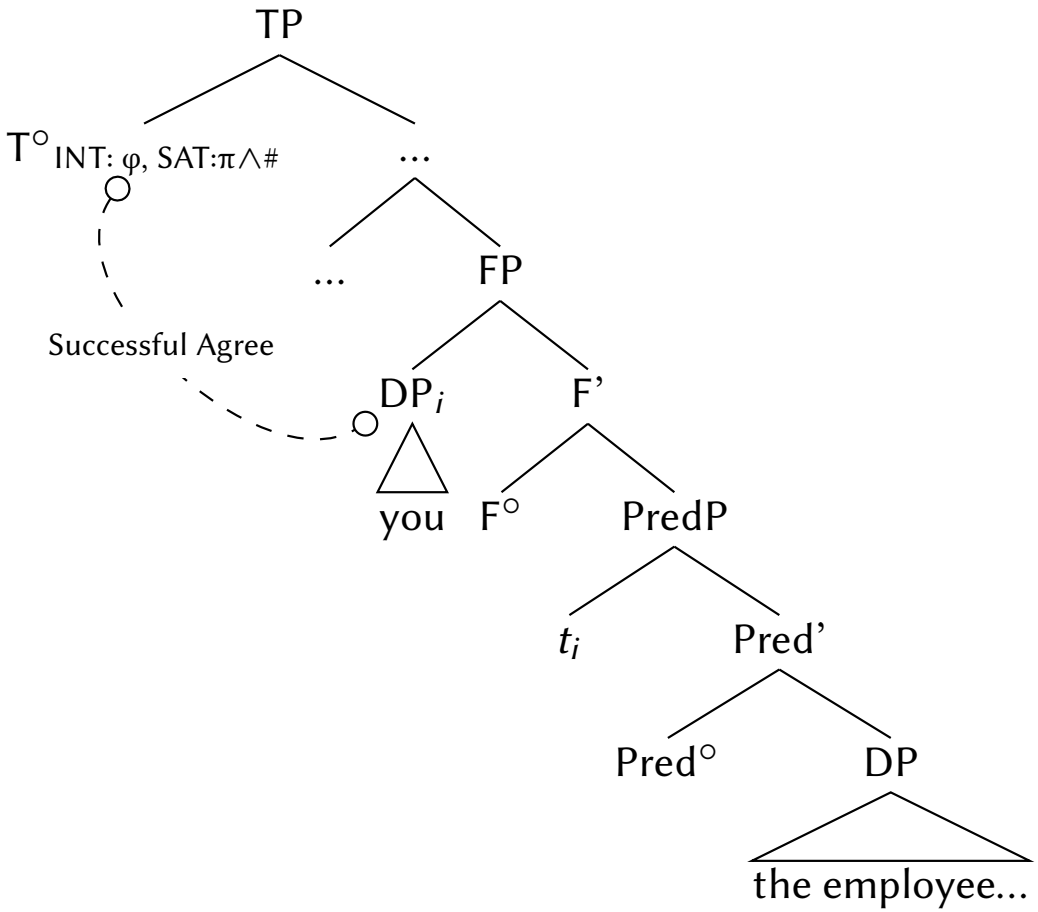
(16) *English copular T°*: INT: φ, SAT: π∧#

- This entails that the probe on T° will interact with any nominal with φ-features
- However, in order for the probe to be satisfied, the potential goal must bear both a person and number specification (i.e., conjunctive satisfaction; Coon & Bale 2014; Scott 2021; Oxford 2022)

6. Agreement with Clefts - Standard agreement

- For standard double-nominal copular clauses, T° will interact with the first nominal in its search space, which will also satisfy it

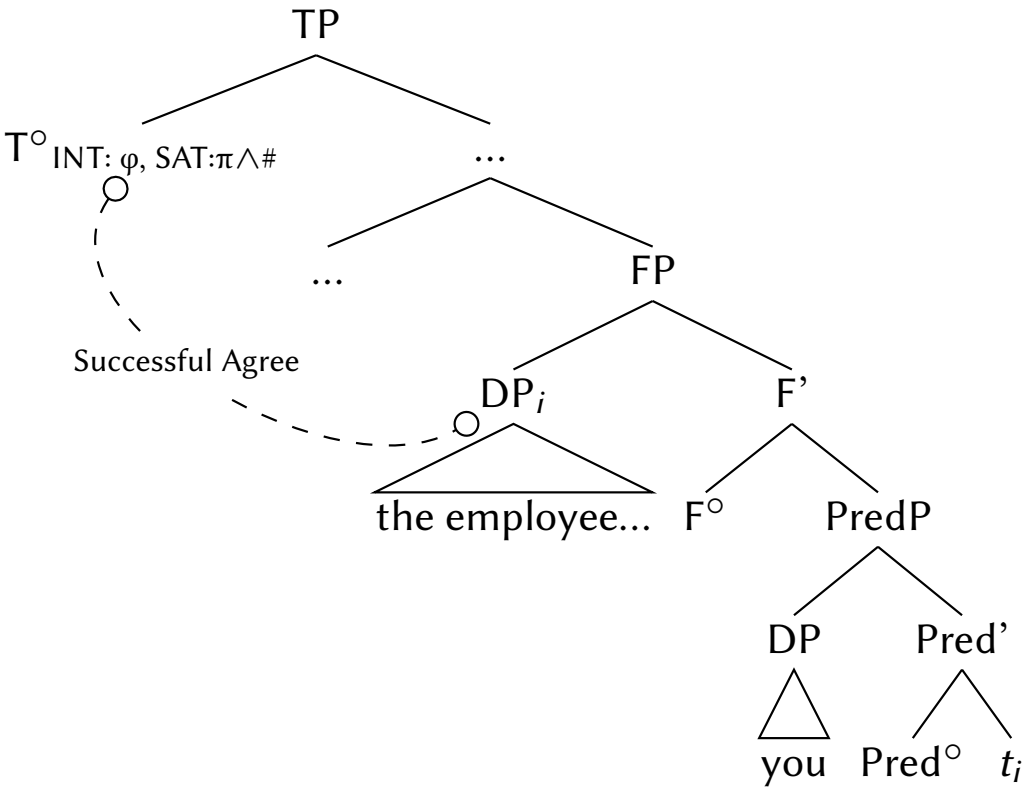
(17) **You** are the employee of the month



6. Agreement with Clefts - Standard agreement

- In the specificational pattern, verbal agreement is with the predicating nominal, which moves to Spec,F°

(18) **The employee of the month** is you



6. Agreement with Clefts

??? How does the derivation of predicating cleft sentences unfold?

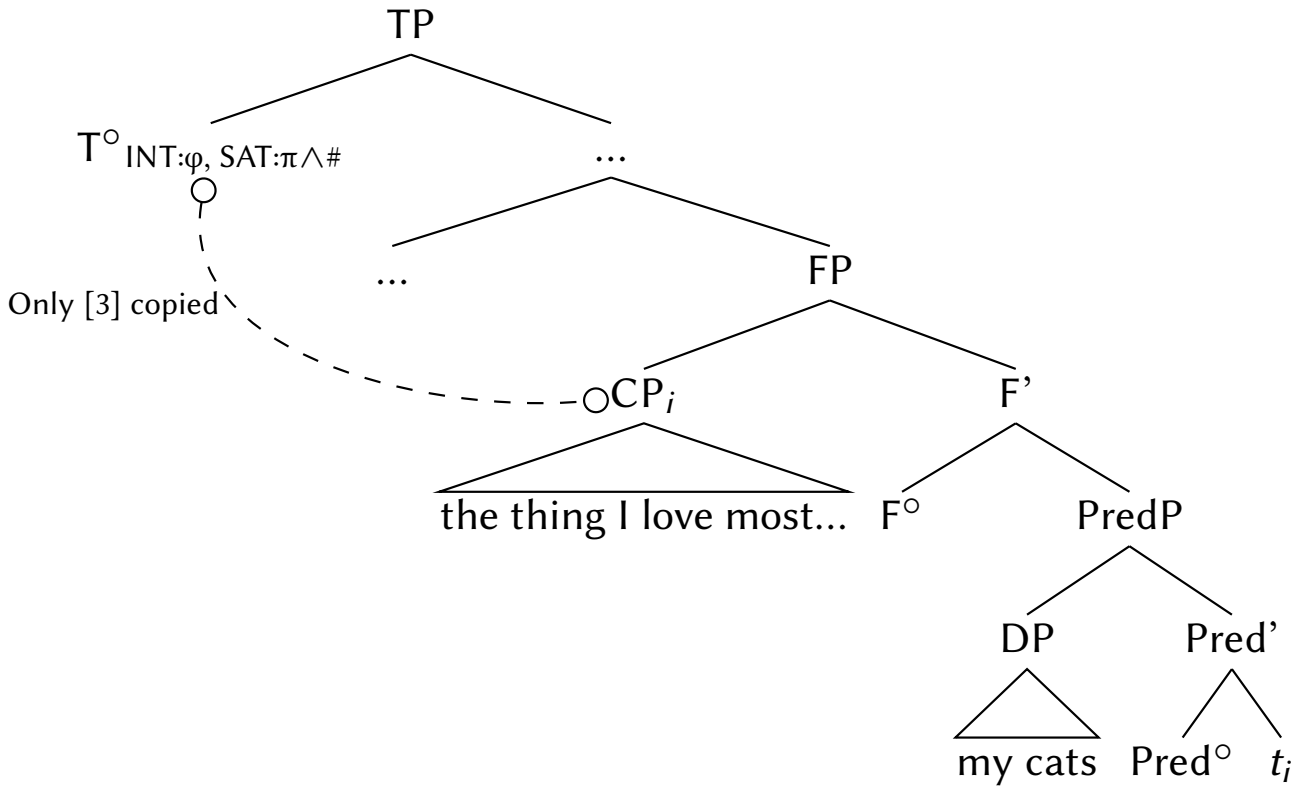
- If the specificational cleft subject does not bear a full φ-set (minimally, person and number) but only [3], we expect the probe to interact with but not be satisfied by it
  - The lack of satisfaction is due to the lack of number specification of these *th*-cleft subjects
- Here, we claim that interacting with only [3] forces the probe to change its interaction specification to only interact with subsequent 3rd-person nominals

(19) *Dynamic interaction in English copular T°*: INT: [φ] →INT: [3]

6. Agreement with Clefts - 3SG>3PL

(20) The thing I love most in this world **are** my cats

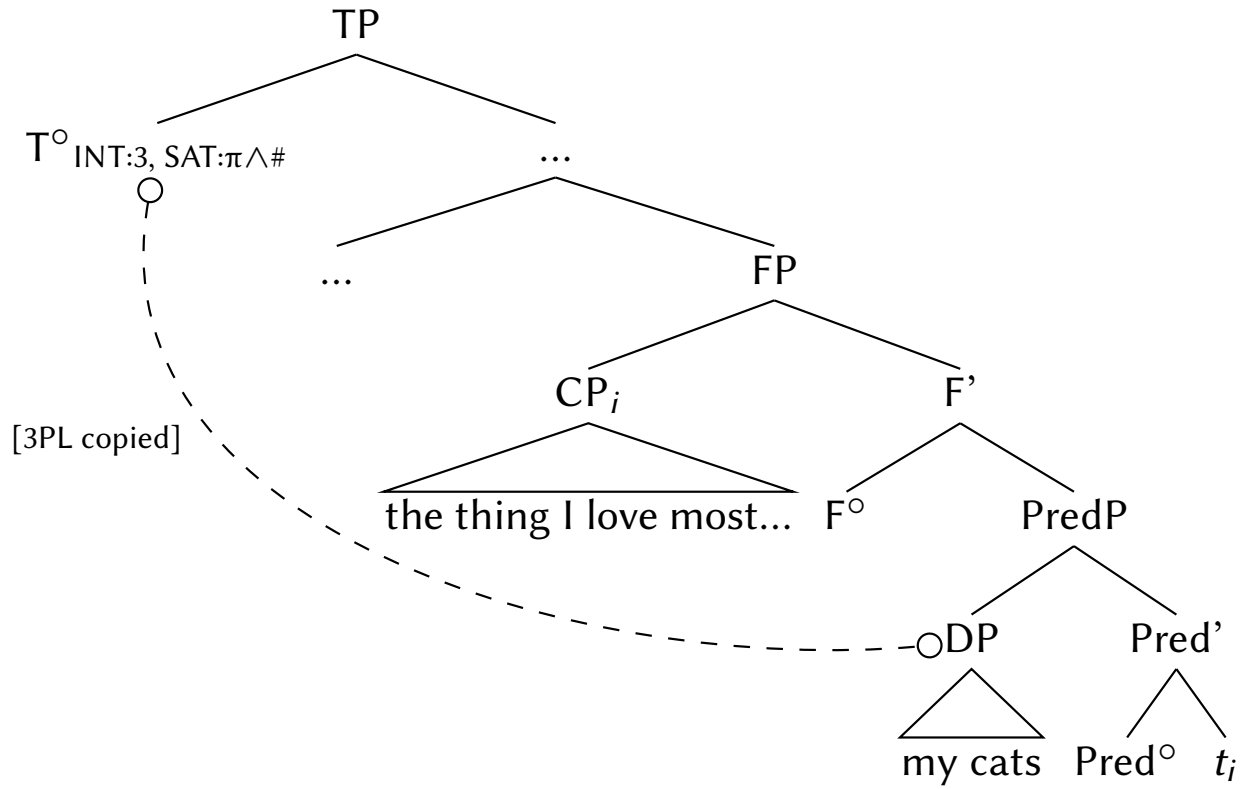
a. *First cycle*



b. *Dynamic interaction*: INT: [φ] →[3]

6. Agreement with Clefts - 3SG>3PL

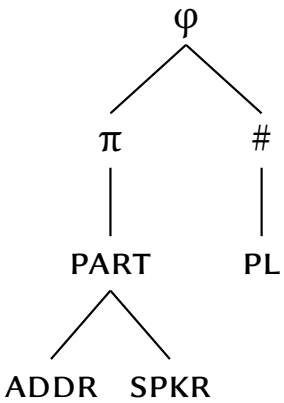
(20c) *Second cycle*



6. Agreement with Clefts - Feature Geometries

- In a standard feature geometry (Harley & Ritter 2002), [3] is assumed to be entailed by a more specified person (e.g. a [PART]-bearing feature)
  - That is, the representation of [SPKR] is actually [φ,π,PART,SPKR]

(21) *Feature geometry (à la Harley & Ritter)*



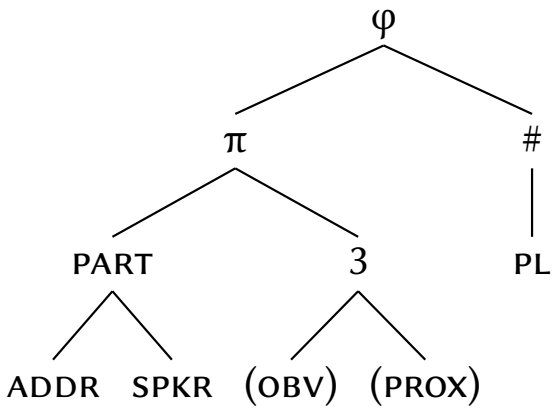
- This predicts that CP-structured *th*-clefts would permit the probe to agree with a noun bearing local person, as they also entail [3], contrary to fact

(22) The person that loves me least **is**/*are you

6. Agreement with Clefts - Feature Geometries

- Since Benveniste (1971), there has been doubt cast on whether 3rd-person constitutes an actual person referent
- The question of whether [3] is present in the syntax is now simply an aspect parametric variation; within agreement systems, this is a matter of probe specification (cf. Nevins 2007; Trommer 2008; Nevins 2011; Bondarenko 2020; Grishin 2023; a.o.)
- In Algonquian, Romance, and several Germanic languages, [3] is more than a default spell-out for multiple functional heads

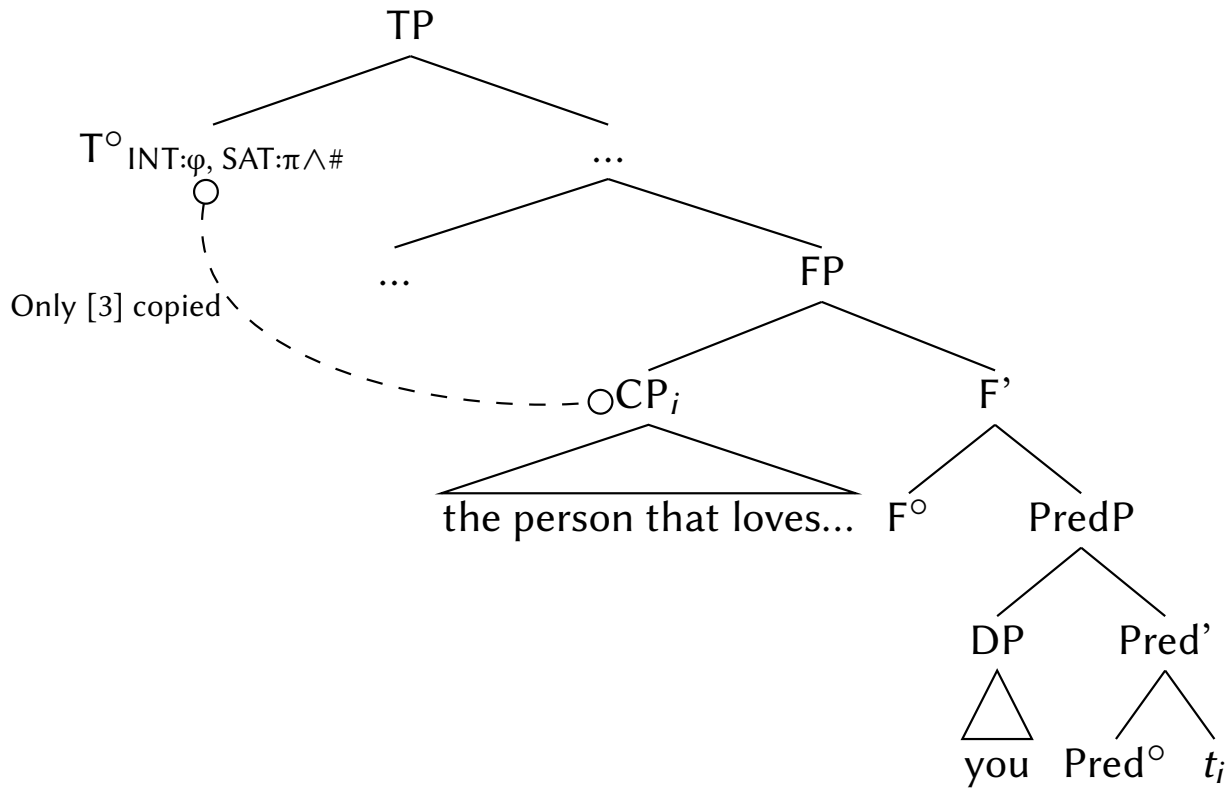
(23) *Divided feature geometry* (Bondarenko 2020:10)



6. Agreement with Clefts - Local pronouns

(24) The person that loves me least **is**/*are you

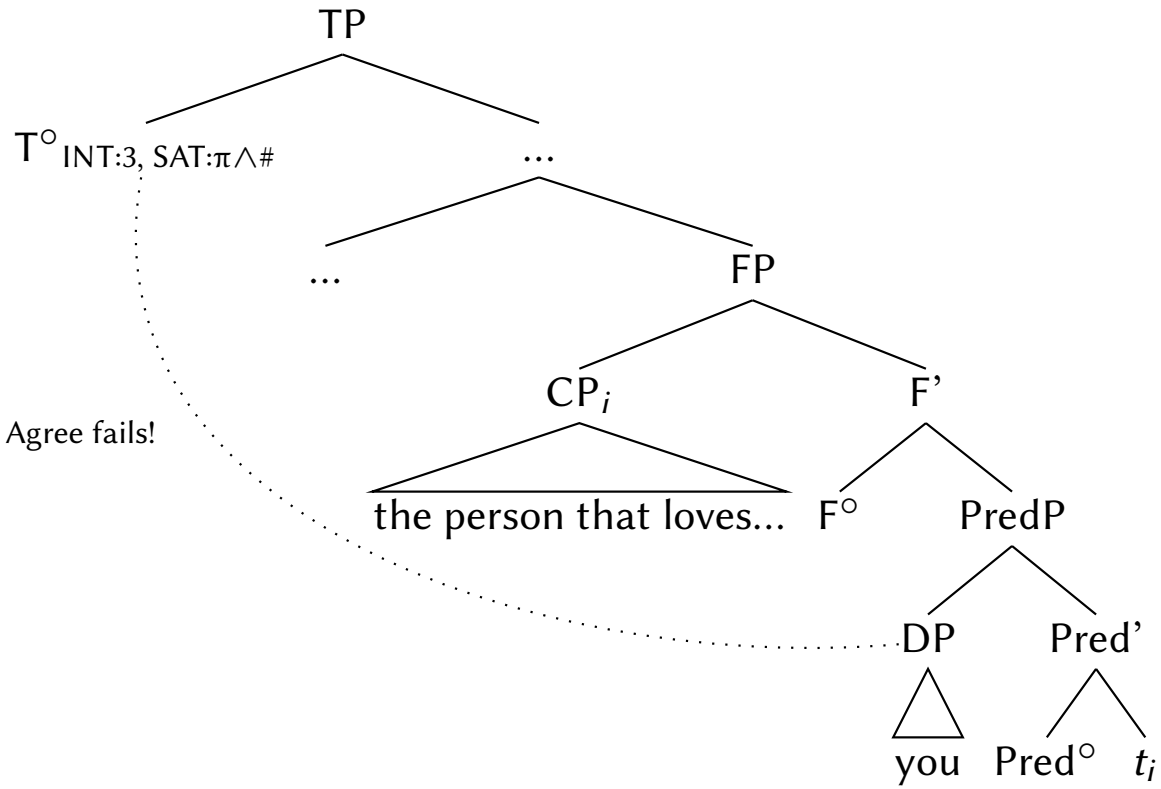
a. *First cycle*



b. *Dynamic interaction*: INT: [φ] →[3]

6. Agreement with Clefts - Local pronouns

(24c) *Second cycle*



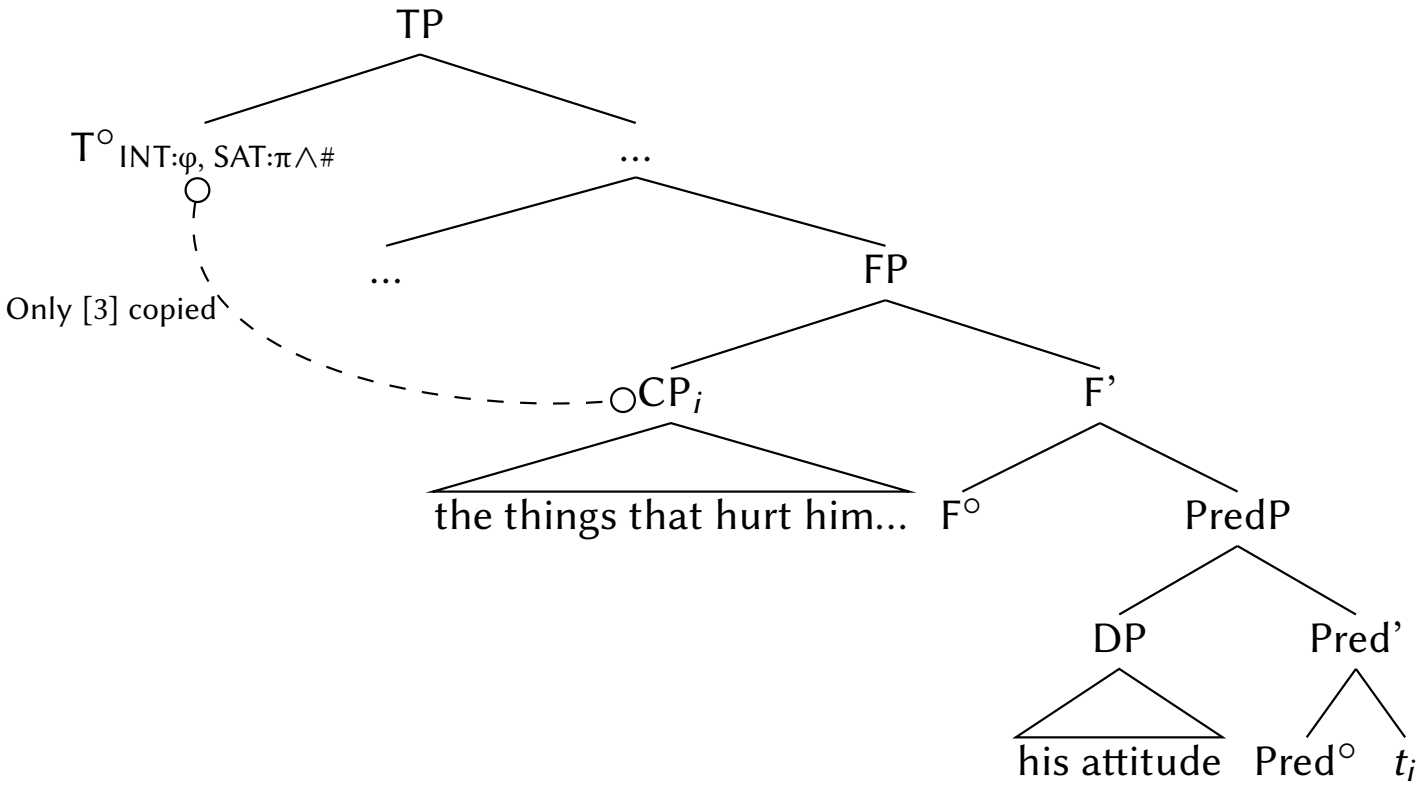
(24d) *Default number spell-out*: π: [3], #: **[SG]**

6. Agreement with Clefts - 3PL>3SG

- We should expect the inverse of (20) where the plural relative head is inaccessible to the copular probe

(25) The things that hurt him is **his attitude**

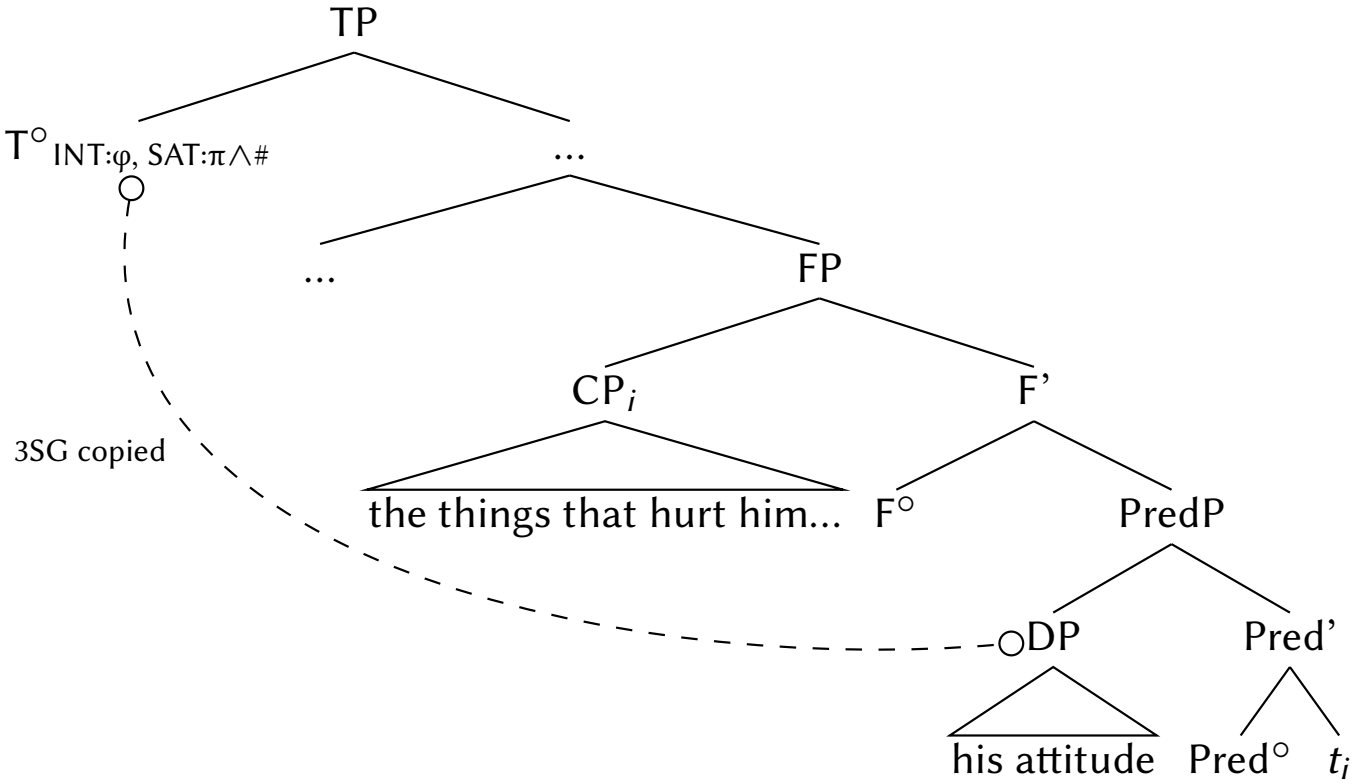
a. *First cycle*



6. Agreement with Clefts - 3PL>3SG

(25b) *Dynamic interaction*: INT: [φ] →[3]

(25c) *Second cycle*



Conclusion

- We have argued that the non-canonical patterns in English copular agreement are directly related to the probe's interaction with the cleft
- We claimed that the probe's interaction with this structure does not satisfy it; instead, it changes the interaction condition so that the probe may only agree with additional targets bearing [3]
- This prevents subsequent agreement with a nominal bearing local person
- Our understanding of the modified feature geometry in Bondarenko (2020) permits [3] to interact independently of [PART]-bearing nouns
- This work sheds light on both unexpected patterns in well-known agreement systems as well as the presence and impact of 3rd-person syntactic features in the syntax

Acknowledgements

We would like to recognize John David Storment for his many helpful discussions concerning a lot of the more obscure data presented here, as well as our informants for their time and judgements. A special thanks goes to Amy Rose Deal for the numerous conversations concerning the *interaction-satisfaction* model.

7. Predicational Clefts, Specificational Clefts

- Commonly, the semantic interpretation of each noun in double-nominal copular constructions leads to the understanding of its function in the sentences as either the notional or predicating noun in the sentence
- In particular for specificational subjects, Hartmann & Heycock (2020:3) note that they most commonly have a definite description as the preverbal subject and a referring expression as the postverbal noun
- Although most clefts serve as the predicating nominal, there are situations in which they serve as the notional subject
  - We will exemplify this with a double-cleft copular structure
- We subsequently show that this prediction is borne out, providing evidence for the different structures of clefted nominals in natural language

7. Predicational Clefts, Specificational Clefts

- We begin by providing context in order to disambiguate predicational and specificational structures
- Hartmann & Heycock (2020:5) cite that the same sentence may be used in both predicational and specificational structures
  - The disambiguating factor is the given topic, highlighted in, e.g. a question

(26) a. *Has your favorite horse won the race or has it lost?*

b. *Which horse do you like best, the one that won or the one that lost?*

- Both questions may be answered with the following sentence

(27) My favorite horse is the winner

7. Predicational Clefts, Specificational Clefts

??? What does the theory proposed here predict in these instances?

- If the predicating nominal is preverbal (i.e., specificational clause), verbal agreement with the φ-set of the notional subject in the postverbal position will take place (regardless of the featural specification of the preverbal noun)
  - This includes patterns of 3PL>3SG
- However, if the structure is a predicational one (i.e., the notional subject is preverbal), agreement with the first nominal will be realized
  - This is regardless of the φ-features of the postverbal nominal (e.g. **3SG**>3PL or **3PL**>**3SG**)

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