# Meaningful Agreement Features: Evidence from indexical binding<sup>\*</sup>

Isabelle Charnavel, Tom Meadows and Dominique Sportiche isabelle.charnavel@unige.ch | tom.meadows@unige.ch | dominique.sportiche@ucla.edu Université de Genève | UCLA

October 17th 2024, NELS55 @ Yale University

# 1 Introduction

- Verbal agreement: correspondence between verbal forms and the  $\varphi$ -feature values of a local nominal (1).
- ▶ In this talk we explore an LF-heavy analysis of verbal agreement, with two key commitments (2).
- a. Semantic Activity: Correspondence in φ-values is enforced at LF.
   b. Value Symmetry: projections like T are first-merged already specified for φ-values.
- ▶ We motivate (2) by examining the interaction between agreement and bound indexicals in French.
- Bound indexical (Heim 1991): a personal pronoun interpreted like a bound variable (3).
- (3) I'm the only one who is proud of my students. Free reading of my: Nobody else is proud of my students. Bound reading of my: Nobody else is proud of their students.
   (Context: Divisive Students) (Context: Mean Colleagues)
- ▶ We identify two restrictions on binding indexicals in certain kinds of relative clauses (RCs) in French.
- ${\tt ISS}$  SUBJECT RESTRICTION: the relativised element must be a syntactic subject.
- ${\tt ISS}$  AGREEMENT RESTRICTION: agreement inside the RC must match the value of the bound pronouns.

(4)	Je suis le seul [qui <sub>i</sub> { suis / est } $\mathbf{t}_i$ fier de mes étudiants.]	
	I be.1SG DET only.one who be.1SG be.3SG proud of my student.PL	
	'I am the only one who is proud of my students.'	
	Free reading: Nobody else is proud of my students.	suis 🗸 / est 🗸
	Bound reading: Nobody else is proud of their students.	suis 🗸 / est 🗙

- $\blacktriangleright$  These restrictions follow from the interaction between (2), person underspecification and binding (5).
- (5) a. Wh-elements bind indexicals in certain kinds of relative clauses.
  - b. Wh-elements are underspecified for person, making them bad indexical binders by default.
  - c. Wh-elements local to T can acquire  $[{\tt PERSON:1/2}]$  at LF, under certain semantic conditions, allowing them to bind indexicals.
- ▶ In a nutshell: the LF-process enforcing agreement gives wh-elements the ability to bind indexicals.

# 2 Background: How to analyse verbal agreement

We present a motivation for an alternative to Probe-Goal approaches to agreement, and sketch the basic approach we will be adopting instead, applying this to person agreement in French relative clauses.

# 2.1 Reasons to doubt Probe-Goal approaches

- ▶ A Probe-Goal approach (Chomsky 2000, 2001) to agreement involves two basic ingredients:
- Probes: a feature lacking a value, usually in the clausal spine, which triggers Agree.
- Agree: a syntactic operation supplying a value to the probe from the closest matching feature (6).

$$\beta = \frac{1}{2} + \frac{1}{2} +$$

()

① Search in c-command domain

- b. [<sub>ТР</sub> [φ:1SG] [<sub>VP</sub> [<sub>DP</sub> [φ:1SG]]... ② Copy back values
- $\blacktriangleright$  Such an approach comes with two commitments that we ultimately want to contest:
- Semantic Inertness: the values of probes are not present at LF.
- Value Asymmetry: the values of probes, exponed as agreement, are always supplied by a nominal.
- $\blacktriangleright$  Quantificational agreement (7): a pronoun inside a quantificational DP seems to control agreement.
- QDP: majorité 'majority', minorité 'minority', combien 'how many' ....
- The pronoun must co-occur with the adposition  $d\,{}^{\prime}\!entre$  'among'.
- (7) [QDP Une majorité d'entre <u>nous</u>] est / <u>sommes</u> / sont à Bochum a majority among <u>us</u> be.3SG <u>be.1PL</u> be.3PL at Bochum
   'A majority of us is/are in Bochum.' Charnavel and Sportiche (2024)
- ► An interpretative effect: 1PL *sommes* is infelicitous if the speaker is not part of the semantic subject.
  - i.e. the speaker must herself be in Bochum to felicitously utter that option.
- $\blacktriangleright\,$  Data like quantificational agreement pose analytical problems for Probe-Goal approaches: ^  $^1$   $^2$
- The 1PL pronoun *nous* is not obviously the most local DP to supply person values to T.
- Unclear how to model a choice of agreement options affected by interpretation.
- $\blacktriangleright$  In light of data like (7) we propose an alternative approach to agreement without probes.<sup>3</sup>
- If AGREE exists, it does not enforce value-correspondence; it just decides *where* it could be enforced.

<sup>\*</sup>For helpful comments, many thanks to Anouk Dieuleveut, Marcel den Dikken, David Müller and Ur Shlonsky and audiences at ZAS Berlin and UNIGE. All mistakes remain our own. This research is funded by the SNSF (grant  $\#10001F_212936$ ).

 $<sup>^{1}</sup>$ There are purely Number related version of this general phenomenon, e.g. plural agreement with *committee* NPs in varieties of English (Smith 2017) and plural agreement with coordinated singular NPs (Krifka and Modarresi 2024).

<sup>&</sup>lt;sup>2</sup>Probe-Goal compatible solutions, e.g. hidden goals or effectively loosening locality restrictions on Agree, do not seem appealing as a general strategy even if they might work in specific cases.

<sup>&</sup>lt;sup>3</sup>A version of Agree could nonetheless be maintained, along the lines of (i).

 $<sup>{\</sup>rm (i)}\qquad {\rm Agree*: \ defines \ local \ matching \ types \ of \ features, \ facilitating \ manipulation \ of \ their \ values \ at \ PF/LF.}$ 

### 2.2 Our take: agreement is value-symmetrical and active at LF

- ▶ Intuition: DPs that bear a local relationship with T must have compatible person-presuppositions.
- For concreteness: an LF-rule in (8) inspired by a similar proposal in Ackema and Neeleman (2018).
- (8) **Person Spreading**: Add a copy of the person feature on T to a *local* DP (defined by Agree).



- ▶ Correspondence in values is enforced if DPs specified with contradictory values cannot be interpreted.
- i.e. the semantic component cannot compute a suitable restriction on the domain of individuals.
- Certain value mismatches are permitted between Agree-paired features are filtered out at LF.



- ▶ Some mismatches if the local DP is syntactically underspecified for e.g. Person.
- Implementation: Person features on certain nominals lack values (13).<sup>4</sup>
- Person Spreading to these nominals cannot create uninterpretable combinations of features.
- (13)  $\left[_{\text{DP}}\left[_{\text{FP}}\left[_{\text{F}}\left[\pi:\_\right]\right]\right]\left[_{\text{NP}}\ldots\right]\right]$  Specified:  $\left[\pi:1/2/3\right]$  Underspecified:  $\left[\pi:\_\right]$
- ▶ Person features spread to underspecified nominals need *identification*, reflected in 'external conditions'.
  - Identification: predicational relationship with a (c-commanding) DP with matching person value.

### 2.3 Person agreement in French subject relatives

'We are the only ones who are happy.'

▶ French permits local person agreement in certain kinds of subject relatives.

• Light-headed (14): head is a not a lexical NP, e.g. seul 'only one', celle 'the/that one' ...

- (14) a. Je suis le seul qui suis/est content I be.1SG the only.one who be.1SG/3SG happy 'I am the only one who is/\*am happy.'
  b. Nous sommes les seuls qui sommes/sont/\*est contents We be.1SG the only.one who be.1PL/3PL/3SG happy.PL
- ▶ Local person agreement in (14) depends on being embedded in certain copular constructions (c.f. 15)
- These constructions are necessary for the identification of spread person features.<sup>5</sup>
- (15) a. J'ai trouvé le seul qui est/\*suis content I AUX.1SG find.PTCP the only.one who be.3SG/1SG happy 'I found the only one who is happy.'
  b. Le seul qui est/\*suis content c'est moi The only.ones who be.3SG/1SG happy EXPL.be.3SG me 'The only one who is happy is me.'
  No c-commanding identifier
- ▶ In light of (14) we assume that relativised DPs/wh-elements are underspecified for Person.
- ▶ We illustrate schematically in (16, 17) how Person Spreading plays out in relatives like (14a).<sup>6</sup>



▶ See Appendix 1 for more details about the relative head and underspecification.

 $<sup>^{4}</sup>$ This implementation is the one that preserves some version of Agree most easily. Alternatively, one could imagine that some nominals lack the structure hosting person features.

<sup>&</sup>lt;sup>5</sup>In the case of (7), we hypothesize that the *d'entre nous* 'among us' plays the same role. Without it *une majorité* can only control third-person agreement. Note that *majorité* can function a light head as in (13b) with [PERSON:1/2] agreement.

 $<sup>^{6}</sup>$ We assume that if any part of a movement chain is enriched by Person Spreading, the whole chain is. This fits most easily with a Multidominance approach to movement, where the chain is single syntactic object (e.g. Epstein et al. 1998).

# 3 Person underspecification and bound indexicals

We present a configurational restriction on indexical binding. This restriction follows from Personunderspecification and Local person-sharing at LF, assuming a particular approach to bound indexicals.

### 3.1 A Subject Restriction on binding indexicals in relatives

- $\blacktriangleright \frac{\text{Bound indexicals are first/second person pronouns, such mes in (18), which can be be interpreted like bound variables in constructions typically associated with focus.}$
- ▶ If the head of the RC is an argument of a reverse-specificational copular constructions, (19) applies.<sup>7</sup>

#### (19) The Subject Restriction

An indexical within an RC can only be bound if the syntactic subject is relativised.

- ▶ The best evidence for (19): cases where the relative trace clearly c-commands the indexical.<sup>8 9</sup>
- E.g. RCs with a base-position c-commanding an indexical separated by a clause boundary (20, 21).<sup>10</sup>
- (20)  $\mathbf{DP}_{Wh}$  Subj V  $\mathbf{t}_{Wh}$  [CP  $\underline{DP}_{Indexical}$ ]
- (21) a. Je suis le seul [à qui David a annoncé t [ que mes étudiants 1SG be.1SG DET only.one to who David AUX.3SG announced that 1SG.POSS student.PL étaient contents ] ]
  be.3PL.PST happy.PL
  'I am the only one to whom David announced that my students are happy.'

Free reading: David didn't announce to anyone else that my students were happy. #Bound reading: David didn't announce to anyone else that their students were happy.

- b. Je suis le seul [que David a informé t [que mes étudiants 1SG be.1SG DET only.one that David AUX.3SG announced that 1SG.POSS student.PL étaient contents ]]
  be.3PL.PST happy.PL
  'I am the only one who David informed that my students are happy.'
  - Free reading: David didn't inform anyone else that my students were happy. #Bound reading: David didn't inform to anyone else that their students were happy.
- ▶ See Appendix 2 for more detailed discussion of the Subject Restriction in French and English.

## 3.2 Deriving the Subject Restriction

▶ We assume an 'Ignored Indexicals' approach to the bound reading, the intuition is summed up in (22).<sup>11</sup>

#### (22) Ignored Indexicals

LF can ignore for interpretation the person features of pronouns under focus or binding (von Stechow 2003; Jacobson 2012; Sauerland 2013; Charnavel and Sportiche 2024).

- ▶ We assume a version of the Ignored Indexicals approach in which:
- ☞ Bound indexicals are genuine syntactically and semantically bound pronouns with [PERSON:1/2].
- $\mathbb{I}$  The bound reading results from an interaction between semantic binding and focus on the binder.
- ▶ The Subject Restriction arises from conditions arising from our Ignored Indexicals approach (23).
- (23) a. Locality Condition: Choose the most local binder of the indexical.<sup>12</sup>
   b. Matching Condition: Binding only applies to elements with matching [PERSON] values.
- ▶ The conditions in (23) interact with Underspecification and Person Spreading, schematized in (24, 25).
- ▶ In (24) we are dealing with relativised DPs local to T, i.e. subject relatives.
- Direct binding of the pronoun by the matrix subject is ruled out by (23a)
- Relativised DP is underspecified for person, but can acquire [PERSON:1] at LF since it is local to T.
- Consequently: ① matrix subject binds wh-element, ② wh-element in turn binds pronoun.

- $\blacktriangleright$  In (25), the relativised nominal is an object, and is thus not local to T.
  - Direct binding of the pronoun by the matrix subject is ruled out by (23a).
- Unlike in (24), the relativised nominal cannot acquire [PERSON:1] at LF.
- According to (23b) it is consequently a bad binder for pronouns with e.g. [PERSON:1].<sup>13</sup>
- ▶ See Appendix 3 for more information about our general approach to bound indexicals.

<sup>&</sup>lt;sup>7</sup>Kratzer (2009) identifies a connection between external argumenthood and indexical binding.

<sup>&</sup>lt;sup>8</sup>The judgements here must be made relative to cases with third-person pronouns, where the bound reading is accessible. <sup>9</sup>This means that the Subject Restriction cannot be simply replaced by appealing to Weak Crossover.

<sup>&</sup>lt;sup>10</sup>Indexical binding is possible over finite clause boundaries, inside and outside of relatives. The data in (21) contradict Kratzer (2009)'s claim that long-distance indexical binding is always possible.

<sup>&</sup>lt;sup>11</sup>c.f. 'Fake Indexicals': PF makes bound mes look as if it has  $[\pi]$  (Heim 2008; Kratzer 2009; Wurmbrand 2017a).

<sup>&</sup>lt;sup>12</sup>Implementations of the Locality Condition: e.g. Rule H (Fox 2000) or Have Local Binding! (Büring 2005).

<sup>&</sup>lt;sup>13</sup>Even though the underspecified wh-element is a 'bad binder', it still counts for the purposes of the Locality Condition.

# 4 Agreement and indexical binding

Some varieties of French require local person agreement to get the bound reading on matching pronouns. This is expected on our account of the Subject Restriction, and our LF-heavy approach to agreement.

▶ Our proposals about person agreement and indexical binding in relatives predict the existence of (26).

#### (26) The Agreement Restriction

Where indexical binding obeys the Subject Restriction, agreement of the predicate local to the base position ought to match in person with bound indexicals.

- ▶ Why: the agreement effectively gives wh-elements the ability to bind pronouns with [PERSON:1/2].
- Person Spreading at LF can enrich local underspecified subjects with [PERSON:1/2].
- Only those enriched wh-subjects can bind indexicals in certain kinds of relatives.
- What enriches those wh-elements is realised at PF as (part of) verbal agreement.
- ▶ There is a population of speakers for whom bound reading requires matching verbal agreement.<sup>14</sup>
- For these speakers binding mes 'my' requires 1SG agreement, e.g suis (27).
- (27) a. Je suis le seul [<sub>RC</sub> qui est fier de mes enfants ]
   I am the only.one who is proud of my children
   Free reading: Nobody else is proud of my children.
   #Bound reading: Nobody else is proud of their children.

  Pronoun-Agr Mismatch
  - b. Je suis le seul [<sub>RC</sub> qui suis fier de mes enfants ]
    I am the only.one who is proud of my children
    Free reading: Nobody else is proud of my children.
    Bound reading: Nobody else is proud of their children.
    Pronoun-Agr Match
- For the same speakers binding ses 'his/her/their' requires 3SG agreement, e.g. est (28).
- (28) a. Je suis le seul [<sub>RC</sub> qui **est** fier de **ses** enfants ] I am the only.one who is proud of 3SG.POSS children Free reading: Nobody else is proud of my children. Bound reading: Nobody else is proud of their children. Pronoun-Agr Match
  - b. Je suis le seul [<sub>RC</sub> qui suis fier de ses enfants ]
    I am the only.one who is proud of 3SG.POSS children
    Free reading: Nobody else is proud of my children.
    #Bound reading: Nobody else is proud of their children.
    Pronoun-Agr Mismatch
- ▶ See Appendix 4 for discussion of crosslinguistic variation in the Agreement Restriction.<sup>15</sup>

# 5 Conclusion

- ▶ The puzzle: indexical binding in French relative clauses is subject to two restrictions.
  - SUBJECT RESTRICTION: the relativised element must be a syntactic subject.
  - AGREEMENT RESTRICTION: agreement must match the value of the bound pronouns.
- ▶ There is an interaction between DPs underspecified for [PERSON:1/2], agreement and binding.
- T comes prespecified with person values, realized at PF as agreement morphology.
- An LF-process of Person Spreading shares T's person values with a local nominal.
- Relativised elements are underspecified, and can therefore be enriched for [PERSON:1/2].
- The enrichment of wh-elements is necessary for them to be able to bind indexicals.
- ▶ In a nutshell: the LF process enforcing person-agreement feeds indexical binding in certain relatives.
- ▶ Our analysis of the restrictions on indexical binding only holds if verbal agreement involves:
- s correspondence in person values between subject and T being enforced at LF.
- ${\tt ISF}$  functional heads like T are initially specified for person values.

Indexical binding helps reveal the meaningful role played by the LF branch in creating verbal agreement.

# References

Ackema, Peter, and Ad Neeleman. 2018. Features of person. MIT Press.

Baier, Nico. 2018. Anti-agreement. Doctoral dissertation, UC Berkeley.

- Bassi, Itai. 2021. Fake features and valuation from context. Doctoral dissertation, MIT.
- Bianchi, Valentina. 1999. Consequences of antisymmetry: Headed relative clauses. DeGruyter.
- Büring, Daniel. 2005. Bound to bind. Linguistic Inquiry 36:259-274.
- Charnavel, Isabelle, and Dominique Sportiche. 2024. Indexical binding, presuppositions and agreement. In *Proceedings of Sin und Bedeutung 2023*. https://ling.auf.net/lingbuzz/007872.
- Chomsky, Noam. 2000. Minimalist Inquiries: The framework. In Step by step: Essays on minimalist syntax in honor of Howard Lasnik, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 89–156. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. by Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.
- Epstein, Samuel David, Erich M. Groat, Ruriko Kawashima, and Hisatsugu Kitahara. 1998. A derivational approach to syntactic relations. OUP.
- Fox, Danny. 2000. Economy and Semantic Interpretation. MIT Press.
- Heim, Irene. 1991. Class Notes on Control. MIT: MIT.

 $<sup>^{14}</sup>$ This includes Isabelle and Dominique, as well as several other French speakers we have consulted. Note that although bound readings in 27a and 28b are both judged #, the bound reading 28b is judged less accessible than that of 27a.

 $<sup>^{15}</sup>$ Marcel den Dikken (p.c.) informs us that his Dutch displays a similar connection between indexical binding and person agreement.

- Heim, Irene. 2008. Features on bound pronouns. In *Phi Theory: Phi Features Across Modules and Interfaces*, ed. by Daniel Harbour, David Adger, and Susanna Béjar, 35–56. OUP.
- Ivan, Rodica, and Zahra Mirrazi. 2019. Minimal pronouns & T-Agreement effects: the case of Farsi Fake Indexicals. In *Talk given at GLOW42, Oslo*.
- Jacobson, Pauline. 2012. The direct compositionality and "Uninterpretability": The case of (sometimes) "Uninterpretable" features on pronouns. *Journal of Semantics* 1–39.
- Kayne, Richard. 1994. The anti-symmetry of syntax. MIT Press.
- Kratzer, Angelika. 2009. Making a pronoun: fake indexicals as windows into the properties of pronouns. Linguistic Inquiry 40:187–237.
- Krifka, Manfred, and Fereshteh Modarresi. 2024. Number Agreement of Coordinated Subjects: Competing Syntactic and Semantic Rules. In *Proceedings of SALT 34*. https://ling.auf.net/lingbuzz/008493.
- Postal, Paul. 1993. Remarks on weak crossover effects. Linguistic Inquiry 24:539–556.
- Rooth, Mats. 1992. A theory of focus interpretation. Journal of Semantics 1:75-116.
- Salzmann, Martin. 2017. Reconstruction and Resumption in Indirect A'-Dependencies. DeGruyter.
- Sauerland, Uli. 1998. The meaning of chains. Doctoral dissertation, MIT.
- Sauerland, Uli. 2003. Unpronounced heads in relative clauses. In The Interfaces: Deriving and interpreting omitted structures, ed. by Kerstin Schwabe and Susanne Winkler, 205–226.
- Sauerland, Uli. 2013. Presuppositions and the alternative tier. In *Proceedings of SALT23*, ed. by Todd Snider, 156–173.
- Smith, Peter. 2017. The syntax of semantic agreement in English. Journal of Linguistics 53:823-863.
- von Stechow, Arnim. 2003. Feature Deletion under Semantic Binding. In *Proceedings of NELS33*, ed. by M. Kadowaki and S. Kawahara, 133–157.
- Wurmbrand, Susi. 2017a. Feature sharing or how I value my son. In The Pesky Set: Papers for David Pesetsky, ed. by Claire Halpert, Hadas Kotek, and Coppe van Urk, 173–182.
- Wurmbrand, Susi. 2017b. Icelandic as a partial null subject language: Evidence from fake indexicals. In Order and structure in syntax II: Subjecthood and argument structure, ed. by Michelle Sheehan and Laura Bailey, 339–345.

# Appendix

### A1 Person agreement and the head of the relative

- ▶ We presented one kind of subject relative which permits local person agreement; those with light heads.
- Local person agreement regular lexical NP heads like étudiants 'students' (29) is highly degraded.
- (29) Nous sommes les étudiants qui \*sommes/sont/\*est d' accord avec la décision. We be.1SG DET.PL student.PL who be.1PL/3PL/3SG of agreement with DET.F decision 'We are the students who agree with the decision.'
- ▶ In addition to light-head RCs, local person agreement is possible with pronominally-headed RCs (30).
- (30) a. Moi, qui suis/?est content, t' aiderai. Me, who be.1SG/3SG happy you help.FUT.1SG 'I, who am happy, will help you.' Non-restrictive RCs
  - b. C'est moi qui suis/est content EXPL.be.3SG me who be.1SG/3SG happy 'It's me who is/\*am happy.'

RC in Prominal Cleft

- ▶ The with lexical NPs heads follows these NPs being specified for [PERSON:3].
- 'Third person' is not the absence of person: it is the specification excluding author/addressee.
- ▶ How, mechanistically, this incompatibility arises depends on the exact derivation of relative clauses, e.g. matching (e.g. Sauerland 1998, 2003; Salzmann 2017) vs. raising (e.g. Kayne 1994; Bianchi 1999).
- ▶ Suppose what undergoes movement inside the relative clause is only realised as the wh-element.
- Under this analysis it is the wh-element that is enriched by Person Spreading.
- The RC denotes a set of individuals with properties including [PERSON:1].
- An incompatibility arises in the predicational relationship with a head with [PERSON:3].
- ▶ Suppose what moves to [Spec, TP] is a constituent containing the wh-element and the head.
- This complex DP contains a part which is not underspecified for person,
- This is sufficient to create an incompatible combination of features once Person Spreading applies.

### A2 A closer look at the Subject Restriction

- ▶ We motivated the Subject Restriction using cases of long-distance binding and simple object relatives.<sup>16</sup>
- ▶ Asymmetries like this have been noticed before by Kratzer (2009).
- Kratzer's approach is somewhat like the PF-mirror image of what we propose at LF.
- For her, a local relationship with external argument introducing v which itself is specified for person.
- This allows syntactically minimal pronouns to be enriched with person features at PF.

<sup>&</sup>lt;sup>16</sup>Although this could be attributed to Weak Crossover, note that French relatives do not display regular Weak Crossover effects in analogous contexts (Postal 1993).

- ▶ One empirical difference between these approaches concerns the subjects of small clauses (31, 32).
- In French and English relativised small-clause subjects do not permit the bound reading on indexicals.<sup>17</sup>
- This follows if small clauses lack TP, something independently motivated, and thus do not provide the right environment to enrich underspecified DPs for person.
- (31) Je suis le seul que David considère t comme un bon mentor pour mes étudiants. I be.1SG DET only.one who David consider.3SG as a good mentor for my student.PL 'I am the only who David considers a good mentor for my students.' Free reading: David considers nobody else a good mentor for my students. # Bound reading: David considers nobody else a good mentor for their students.
- (32) Je suis le seul que David a vu t faire de mon mieux.
  I be.1SG DET only.one who David AUX.3SG seen do.INF of my best
  'I am the only who David has seen do my best.'
  # Bound reading: David has seen nobody else do their best.
- ► To maintain Kratzer's account, one needs the external argument introducer of small clauses to lack [PERSON]. This seems to us difficult to independently motivate.

## A3 An Ignored Indexicals model for indexical binding

- ▶ In §3 we mentioned that we are adopting an Ignored Indexicals approach to the bound reading based on Charnavel & Sportiche (2023). Here we sketch in more detail the ingredients of that account.
- ▶ One major part of the account concerns the status of presuppositions on F-marked elements (33).
  - In particular that the presuppositions of F-marked elements do not project in focus alternatives. <sup>18</sup>
- On a Roothian approach to focus (Rooth 1992) this is an essential assumption.
- Only the F-marked element that varies for elements of the same semantic type on the alternative tier.
- By hypothesis the rest of S is held constant across alternatives.
- (33) Only [s [I]<sub>F</sub> did my homework]. [Dominique] did my homework. [Isabelle] did my homework (Adjectival only excludes all alternatives of S)
- ▶ The other major part concerns the interaction between semantic binding and presuppositions.
- The basic idea is that presuppositions of bindees are only interpreted on binders.
- One way to implement this is the economy conditions below (34).
- (34) **Economy of Representation Principle (ERP)**: presuppositions must unify whenever possible, i.e., under binding or predication. (Charnavel & Sportiche 2023)
- One independent motivation for this presupposition unification approach would be matching in  $\varphi$ -features between binder and bindee, aka pronominal agreement (35).

- This fact may follow from presupposition unification combined with the assumption that certain combinations of features are contradictory and cannot be computed by the semantic component.
- I.e. bindees better match binders, else the binders end up with an uninterpretable combination.
- (35) I love myself/\*himself
- ▶ Taken together the two major parts of the account lead to (36).<sup>19</sup>
- (36) The Focus-Binding Interaction

A pronoun bound by an F-marked element will have its presuppositions interpreted only on binder, and these presuppositions do not project in focus-alternatives as a consequence.

## A4 Handling (crosslinguistic) variation

- ▶ Ensuring that our model can account for all varieties of French and English raises additional puzzles.<sup>20</sup>
- ▶ The English Puzzle: the existence of the Subject Restriction without the Agreement Restriction.
- Note: English does not permit local person agreement in relevant kinds of relative clauses (37).
- (37) I'm the only one who is/\*am proud of my\_{\rm BV} , children.
- Subject Restriction reflects Person Spreading to local underspecified wh-element, i.e. T has person.
- If T has local person in these relatives, why is this not reflected in person morphology?
- Hypothesis: impoverishment of [PERSON:1/2] at PF triggered by proximity to  $[\overline{A}]$  (e.g. Baier 2018).
- ▶ Another French Puzzle: a population of French speakers, FrenchB, without the Agreement Restriction.
- These speakers allow local person agreement in relevant RCs, and seem to show the Subject Restriction.
- Yet they tolerate mismatches in person between bound pronouns and agreement (38).
- (38) a. Je suis le seul [<sub>RC</sub> qui est fier de mes enfants ] I am the only.one who be.3SG proud of 1SG.POSS children Bound reading: Nobody else is proud of their children.
  b. Je suis le seul [<sub>RC</sub> qui suis fier de ses enfants ] I am the only.one who be.1SG proud of 3SG.POSS children Bound reading: Nobody else is proud of their children.
- FrenchB
- (39a) looks like English: in FrenchB we could appeal to optional person impoverishment at PF.
- (39b) looks like a violation of our Feature-Matching condition on binding (21b).
- Hypothesis: some 'third-person' pronouns (e.g. ses) in FrenchB are actually underspecified for person.
- ▶ Interactions between agreement and bound indexicals have also been observed in German (Kratzer 2009), Hebrew (Bassi 2021), Farsi (Ivan and Mirrazi 2019) and Icelandic (Wurmbrand 2017b).

 $<sup>^{-17}</sup>$ The availability of bound readings for third person pronouns in these contexts leads us to believe that at a late stage in LF, underspecified elements can be specified as [PERSON:3] as an elsewhere case.

<sup>&</sup>lt;sup>18</sup>This account assumes that [PERSON] features, amongst others, are presuppositional modifiers of nominals.

<sup>&</sup>lt;sup>19</sup>Given that the bound reading is generally optional, we need to assume that semantic/ $\lambda$ -binding is optional. <sup>20</sup>A salient alternative to what we suggested in the talk is that languages like French actually have null subjects in limited environments, and these are the controllers for local person agreement in our relatives (Wurmbrand 2017b).