Bound variables, person constraints and distributivity in Czech: An experimental study

Background. Slavic languages have anaphors of both the argumental and the possessive type. Regarding locality, both kinds must be bound within their minimal finite clause, and split antecedents are never allowed, the tell-tale signs of non-logophoric expressions (Charnavel, 2019). Despite this, the pattern of anaphoric binding in Slavic languages is intricate and underivable from the standard Binding Theory (Chomsky (1981) and subsequent work). The majority of the previous work on anaphoric binding in Slavic languages has been theoretical and focused on Russian (Padučeva (1983); Avrutin (1994); Zubkov (2018); Reuland and Zubkov (2022) a.o. but see Mertins (2021)). The previous work discovered effects like animacy requirement on the antecedents of non-local binding, interpretive effects (distributivity and awareness), and decreased complementarity between anaphors and pronouns. We add to this research our experimental findings on anaphoric binding in Czech and bring new data and a first experimentally supported generalization concerning the distributive vs. collective predication and its effect on anaphoric binding.

Method. We ran two experiments on separate samples of native speakers of Czech. They judged the acceptability of sentences on a scale from 1 (unacceptable) to 5 (acceptable). Both experiments were of the 2×2 factorial design, sharing the factor of +/- reflexivity: sentences either contained a reflexive or a non-reflexive possessive bound within a plural antecedent's domain, and differed in the other factor. Experiment A (N = 67) additionally examined how the factor of overt collectivity/distributivity affects native speakers' intuitions about the acceptability of both types of possessives. With collectivity, we expected higher acceptability ratings for non-reflexive possessives than reflexive ones, but for the distributive items the opposite. Experiment B (N = 65) used the first/third grammatical person as the second factor to test if the acceptability of non-/reflexive binding is affected by person. We hypothesised that in the first person context, non-reflexives would be more accepted.

Example item from Experiment A:

(1) a. *Já a Petr jsme společně venčili našeho psa.*
I and Petr AUX.1PL together walk.3PL.PST our.ACC dog.ACC
'Petr and I walked our dog together.' `collective` & `non-reflexive`

b. *Já a Petr jsme společně venčili svého psa.*
I and Petr AUX.1PL together walk.3PL.PST our.ACC dog.ACC
'Petr and I walked our dog together.' `collective` & `reflexive`

c. *Já a Petr jsme každý venčili našeho psa.*
I and Petr AUX.1PL each walk.3PL.PST our.ACC dog.ACC
'Petr and I each walked our dog.' `distributive` & `non-reflexive`

d. *Já a Petr jsme každý venčili svého psa.*
I and Petr AUX.1PL each walk.3PL.PST our.ACC dog.ACC
'Petr and I each walked our dog.' `distributive` & `reflexive`

Example item from Experiment B:

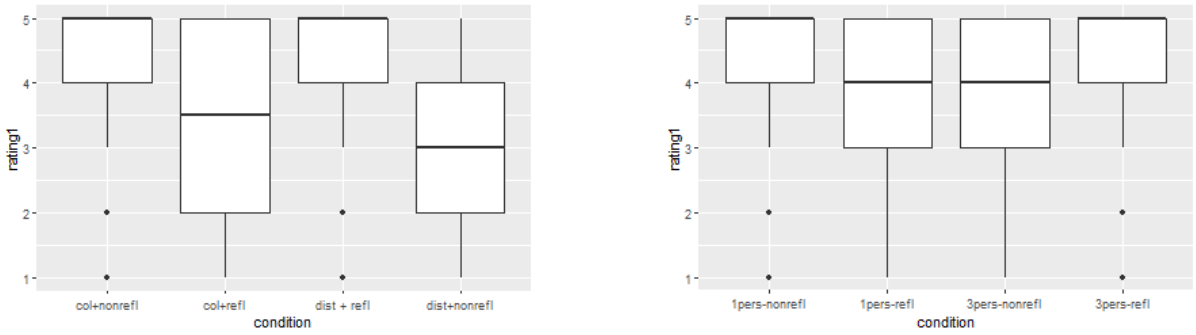
(2) a. *Adama jsme zaměstnávali v naší malé firmě.*
Adam.ACC AUX.1PL employ.3PL.PST in our.LOC small.LOC business.LOC
'We employed Adam in our small business.' `1st-person` & `non-reflexive`

b. *Adama jsme zaměstnávali ve své malé firmě.*
Adam.ACC AUX.1PL employ.3PL.PST in *svůj*.LOC small.LOC business.LOC
'We employed Adam in our small business.' `1st-person` & `reflexive`

c. *Adama zaměstnávali v jejich malé firmě.*
Adam.ACC employ.3PL.PST in their.LOC small.LOC business.LOC
'They employed Adam in their small business.' `3rd-person` & `non-reflexive`

d. *Adama* *zaměstnávali* *ve své* *malé* *firmě.*
Adam.ACC employ.3PL.PST in *svůj*.LOC small.LOC business.LOC
'They employed Adam in their small business.' `3rd-person` & `reflexive`

Results. For each experiment, a sum contrast-coded linear mixed model was created with the conditions' factors and their interaction as fixed effects and participants and items as random effects. Random slopes were added, but they only converged in Experiment B. In Experiment A, we found two significant effects. Distributivity had a negative effect ($\beta = -0.19$, SE = 0.04, t = -4.24, p < 0.001***). The interaction between distributivity and reflexivity had a positive effect (β = 0.62, SE = 0.07, t = 8.94, p < 0.001***). In Experiment B, reflexivity had a negative effect (β = -0.12, SE = 0.05, t = -2.31, p = 0.0256*). The interaction of first person with reflexivity showed a negative effect (β = -0.27, SE = 0.05, t = -5.94, p = < 0.001***). Person did not have a significant effect on its own.



(a) Experiment A.

(b) Experiment B.

Figure 1: Box plots of condition ratings on a scale of 1–5. Conditions 1a–d for Experiment A and 2a–d for Experiment B, in the respective orders.

Discussion. Our study provides new data on Czech binding in plural contexts and comes to the following conclusions. Firstly, non-reflexive possessives are preferred to reflexive ones when bound inside the domain. Secondly, the opposite applies if the antecedent is in the third person or if the sentence's proposition is overtly distributive. It follows that Czech binding patterns cannot be accounted for by traditional binding theory, which does not take a grammatical person or the difference between collective and distributive interpretations into account. While a comprehensive analysis of these data is still missing, we tentatively sketch a proposal based on the amalgamation of Avrutin (1994) and Heim et al. (1991) with Moskovsky (2004). Following Heim et al. (1991), we assume that distributive interpretations of anaphors/pronouns require their bound variable construal. Avrutin (1994) argues that Russian local subjects are not able to act as operators binding pronouns (unlike anaphors – for reasons of their different LF movement targets), this together is compatible with the positive interaction effect between distributivity and reflexivity in Experiment A. Moskovsky (2004) hypothesizes that in the 1^{st}/2^{nd} persons anaphors and pronouns complementarity is reduced since the 1^{st}/2^{nd} person (unlike 3^{rd} person) pronouns are not ambiguous and proposes that this can be explained pragmatically via Gricean 'avoid ambiguity' reasoning. Such explanation is compatible with the negative interaction effect between reflexivity and 1^{st} person in Experiment B. Finally, we propose that this argumentation is superior to Zubkov (2018); Reuland and Zubkov (2022) since it can account for the lack of the distributivity prohibition in case of non-local pronouns binding (resulting in their distributive interpretation) – non-local data patterns will be provided.

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NPIs, inferences and double licensing: experimental evidence

Background. Negative Polarity Items (NPIs) are often seen as markers of downward inferences (DIs) Ladusaw (1979). However, the first experimental study (Szabolcsi et al., 2008) found no evidence for this link. Later studies (Chemla et al., 2011; Denić et al., 2021) suggested a relationship between DIs and NPIs based on subjective judgments and acceptability ratings. Despite this, the evidence remains mixed, and their relationship is not fully understood. We provide new experimental evidence by examining double licensing of NPIs in Czech, specifically in sentences like *Subj doubts [that Subj neg-V NPI]*. Our research question is: *Does NPI licensing in double licensing environments correlate with the facilitation of downward inferences?* A positive answer would support the DIs-NPIs link.

Experiment. We chose double licensing environments because NPI licensing varies in such contexts (Schmerling, 1971; Barker, 2018; Homer, 2021). Despite being intuitively upward entailing, some studies suggest double licensing fails when licensors are syntactically close (Homer, 2021), supported by experimental data (Mayer et al., 2019). We conducted two experiments: the first (exp1) focused on NPI licensing in double licensing environments with a 1x3 design (BASELINE, DOUBT-NEG, NEG-DOUBT), (1), the NPI in italics. The second (exp2) examined inference reasoning in these environments with a 2x2 design (DE-DOWN, DE-UP, UE-DOWN, UE-UP), (2). Both were acceptability judgment tasks on a 7-point Likert scale, run online on *L-Rex* with 57 (out of 70) native Czech speakers who passed the fillers. We controlled for order effects by reversing the order of exp1 and exp2 in two versions.

(1)a. Policie nemá *sebemenší* *důvod* tu stopu zahladit.
Police neg-have.3sg slightest reason that.acc trail.acc cover.
'The police have no reason to cover the trail.' BASELINE

b. Petr pochybuje, že policie nemá *sebemenší důvod* tu stopu zahladit.
Petr doubts that police neg-have.3sg slightest reason that.acc trail.acc cover.
'Petr doubts that the Police have no reason to cover the trail.' DOUBT-NEG

c. Petr nepochybuje, že policie má *sebemenší důvod* tu stopu zahladit.
Petr neg-doubts that police have.3sg slightest reason that.acc trail.acc cover.
'Petr does not doubt that the Police have the slightest reason to cover the trail.' NEG-DOUBT

(2)a. Petr pochybuje, že si Marie nepořídila kočku.
Petr doubts that SE Marie neg-buy.3sg cat.acc.
'Peter doubts that Marie didn't get a cat.'
(i) → siamese cat DE-DOWN
(ii) → animal DE-UP

b. Petr nepochybuje, že si Marie pořídila kočku.
Petr neg-doubts that SE Marie buy.3sg cat.acc.
'Petr does not doubt that Marie has got a cat.'
(i) → siamese cat UE-DOWN
(ii) → animal UE-UP

Results. Descriptive statistics are shown in Fig. 1 and Fig. 2. We used aggregated data from

both experiment versions, as there were no significant interactions. Data were analyzed using mixed-effects Bayesian linear regression models with the *rstanarm* package in *R*. Two models were constructed: one comparing NPIs licensing in double licensing environments (DOUBT-NEG, NEG-DOUBT) with the baseline (BASELINE), and another comparing subset-superset inferences in four environments (DE-UP, DE-DOWN, UE-UP, UE-DOWN). The dependent variable was the Likert scale response. The first model used default *R* dummy coding; the second used sum-coded contrasts. Both models included random intercepts and slopes for subjects and items, with default priors, run in 4 chains with 8000 iterations each. The first model showed the main effect of double licensing on NPIs: DOUBT-NEG was the reference level ($\hat{\mu} = 4.40$, 95% CrI=[4.02, 4.77]). BASELINE was more natural ($\hat{\beta} = 2.46$, 95% CrI=[2.19, 2.73], BF 1.01e+18). NEG-DOUBT was less natural ($\hat{\beta} = -1.98$, 95% CrI=[-2.26, -1.71], BF 2.25e+15). The second model showed a strong main effect of inferences (INF: $\hat{\beta} = 1.63$, 95% CrI=[1.44, 1.81], BF 1.38e+16), with upward inferences preferred. Negation position had no effect (ENV: $\hat{\beta} = 0.14$, CrI=[-0.05,0.33], BF 0.044). An interaction between inferences and environments was found (ENV:INF – $\hat{\beta} = 0.45$, CrI=[0.26,0.64], BF 96.47). Main and interaction effects are shown in Fig. 3.

Discussion. The first experiment supports the environment-based approach to NPI licensing Homer (2021), where double licensing is acceptable if the NPI occurs in the same polarity domain as its licensor (DOUBT-NEG). If the polarity reversing expressions are in one domain and the NPI in another (NEG-DOUBT), licensing is broken. The second experiment shows that inferences are not affected by domains: whether double licensing was spread across two sentences (DE-UP,DE-DOWN) or within a single sentence (UE-UP,UE-DOWN), upward inference was always preferred (strong main effect INF). Thus, NPI licensing in DL environments is domain sensitive, but reasoning for inferences is not (BF of the main effect INF (1.38e+16)). This answers negatively the research question and aligns with Szabolcsi et al. (2008) and Barker (2018), but contrasts with Chemla et al. (2011); Denić et al. (2021). Nevertheless, there is also minor support for the link between DIs and NPIs licensing: the interaction effect (ENV:INF), but – BF 96.47 suggests a weak facilitation effect of NPI licensing on inferences. We also checked (by the speaker) normalized correlations between conditions of exp1 and exp2 and found no credible correlation between the NPIs licensing and the inferences. That weakens the evidence for the DIs-NPIs link again, supporting that NPI licensing signals a narrow scope within its local polarity domain Barker (2018) and is not a reliable marker of downward inferences. However, the evidence from our experiments is not totally conclusive w.r.t. framework selection.

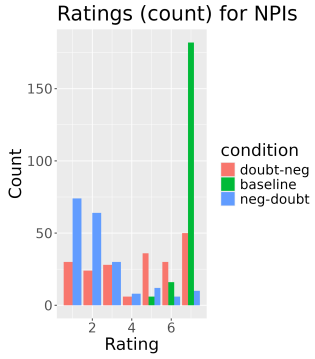

Figure 1: Ratings of NPIs licensing in doubly licensed environments, experiment 1

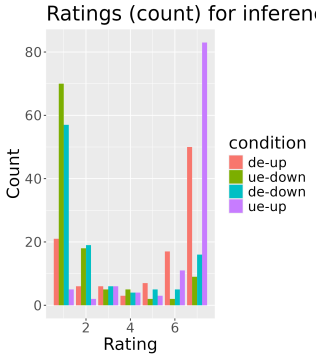

Figure 2: Ratings of inferences in doubly licensed environments, experiment 2

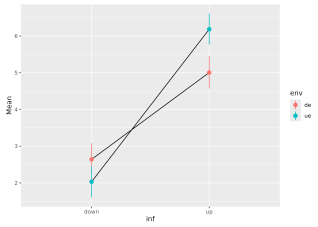

Figure 3: The interaction effects, experiment 2

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Comparing Theories of Subcomparatives - Arne Goelz

The goal of my presentation shall be a reevaluation of the claim that the data on subcomparatives argues in favor of a degree approach to constructions of gradability, in contrast to a delineation approach. I show that this claim is build on an incorrect or incomplete set of empirical observations. Taking into account a bigger set of observations, the degree theoretical predictor of acceptability of subcomparatives - namely lexically encoded (in)commensurability - is shown to be insufficient. A more adequate predictor (based on a notion of informativity) is proposed and implemented within a delineation framework.

Subcomparatives and Incommensurability

A longstanding debate in the domain of gradability semantics regards the question of whether a degree semantic framework[1] or a delineation framework[2] is preferable. General considerations about parsimony and the syntax-semantics interface might favor delineation semantics,[3] however empirical adequacy has been argued to be on the side of degree semantics.[4]

Subcomparatives - comparatives comparing across two different properties, as in (1) - have been brought forth as showing the inadequacy of delineation semantics (Kennedy 1997). Degree semantics accounts for the difference between (1-a) and (1-b) by associating gradable predicates with scales of measurement, which can either be the same (scale of linear measurement in (1-a)) or different (scale of age and scale of dirtiness in (1-b)), thereby accounting for the acceptability difference. For delineation semantics, where we don't compare degress but rather the positive and negative extensions of the predicates involved, there's no obvious way to differentiate the two constructions.

(1) a. The boat is longer than it is wide.
b. #Your book is older than mine's dirty.

New empirical data

I want to add three empirical observations which show that subcomparison constructions with incommensurable predicates are acceptable under specific circumstances. One such circumstance is the creation of what I call a decision context.

(2) QUESTION: *Should Peter be a model or an engineer?*
He is more beautiful than he is intelligent.

Another circumstance under which subcomparison constructions are judged to be acceptable is when embedded under the particles *even* or *at least*. However in such cases the constructions come with evaluativity inferences (compare Rett 2014).

[1] Compare Cresswell (1976), Stechow (1984), Kennedy (1997) and many others.
[2] Compare Klein (1980), van Rooij (2011), Burnett (2017).
[3] For arguments of this sort, compare Klein (1980).
[4] Compare Kennedy (1997), Rett (2022).

(3) a. I hope my paper was ?(even) more informative than it was dense.
⇝ The paper was dense.
b. ?(At least) your car is faster than it is beautiful.
⇝ The car is not beautiful.

And lastly we can observe a general contrast between comparatives and equatives. And again we see a (defeasible) inference to the positive predication of the complement clause.

(4) a. The concert was as beautiful as it was long.
⇝ The concert was long.
b. ?The concert was more beautiful than it was long.

Addressing questions

I argue that in view of the data presented a lexical prohibition against subcomparisons of incommensurable predicates is undesirable. In contrast, I will show that taking the delineation semantic assumption that any subcomparison construction expresses a well defined content as our basis and enriching the semantics by well know pragmatic effects of question sensitive assertability (Roberts 2012), we will arrive at an adequate predictor. The evaluativity inferences of subcomparatives with scalar particles and subequatives allows these constructions to address a degree question (*How A is x?*). And a decision context makes salient a comparison between entities not easily conceptualized as standing in comparison with each other (*Does Peter's beauty exceed his intelligence?*). Thus I propose to reduce the relative unacceptability of examples like (1-b) to the difficulty (but importantly not impossibility!) of finding a proper context.

Conclusion

Having demonstrated that delineation semantics leads to a more comprehensive and arguably more elegant account of the data, we're confronted with two question. Firstly, is one account empirically superior to the other? Here it is difficult to draw a conclusion, as many topics have not been properly studied under the delineation framework, e.g. superlatives. Secondly, assuming that equal empirical coverage is given, is one approach superior on purely theoretical terms? Here I will I show that different notions of theoretical simplicity give rise to different conclusions.

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SPLIT FEATURE INHERITANCE AND THE LABELING OF ROOT INFINITIVES

THE ISSUE: Root Infinitives (RIs) are a widespread non-target phenomenon in language acquisition, attested in many languages, but crucially not all. A first important generalization is between Early languages that present the phenomenon (e.g., Swedish, German, French, Dutch) and languages that do not (Spanish, Catalan, Italian). As reviewed in Rizzi (1993), RIs typically appear without a subject (1), when the subject is present it is often erroneously case-marked (2), they are incompatible with tense and modal markers, they are in complementary distribution with wh-questions (3), and their decrease follows that of null subjects in finite environments - also a non-target phenomenon in non Null-Subject Languages (4).

(1) Voir l'auto papa (French; Wexler (1994))
See.INF the car daddy

(2) Him fall down (English; Schütze & Wexler (1996))

(3) (*) Was Hans essen? (German; Weissenborn (1992))
What Hans eat.INF

(4) Va sous le tabouret (French; Crisma (1992))
goes under the stool

A VIEW FROM LABELING THEORY: RIs have been widely studied within the course of the generative framework (for an overview see Hamann, 2002), but although theoretical advancements typically provide novel angles to view long-standing empirical issues, little has been said regarding the role RIs may play within the most recent developments of the Minimalist Program. A notable exception is Murasugi (2020), who argues that the RI stage is a consequence of the challenge that children face in labeling {XP,YP} structures (specifically, {DP, TP} at the ultimate landing site of the clausal subject) through φ-feature sharing. Languages vary in the way {XP,YP} structures are labeled. If English tensed clauses are labeled through φ-sharing between D(P) and T(P) (Chomsky 2013), Saito (2016) proposed a labeling mechanism for Japanese based on suffixal Case markers acting as "anti-labeling device" (i.e., items bearing Case are rendered inactive for labeling), (5) and (6) respectively.

(5) α determines the label of γ = {α, β} if
   a. α is a head and β is a phrase or (ii) γ fully contains α but not β.
   b. The label of γ = {α, β} is < F, F > if α, β are both phrases and their heads share a significant feature.

(6) γ = {αP-Case, βP}, where Case is suffixal – βP provides the label.

Murasugi's account however does not explain why RIs do not occur in specific syntactic environments (cf. 3), nor all languages. We aim to build upon her proposal and argue that if RIs arise as a failure at the interface with the Labeling Algorithm (LA), their crosslinguistic distribution must be accounted for by a separate mechanism: the process of split feature inheritance (Citko et al., 2018; Germain, 2015).

A SPLIT FEATURE INHERITANCE APPROACH: It has been shown that children struggle with the computation of different degrees of featural intervention configurations (cf. Rizzi 2018). Given that, if probing features are born as a bundle within phase heads and then inherited by lower heads, e.g., from C to T (Chomsky 2008), it is reasonable to assume such operation to be computationally complex in acquisition – given the synchronic transmission of features belonging to the same class. To obviate this challenge, we propose that children rely on a device independently proposed by Citko et al. (2018), who argued for the separate, independent transmission of distinct features born in C (Fin) and then inherited by T (*Split Feature Inheritance,* or SFI).

OUR PROPOSAL:We propose that children's grammar goes through a stage in which not all features get inherited by the lower heads, but a subset of them remains on the phase head to avoid the parallel transmission of different feature classes (Rizzi 2011). Given the focus of this

paper on RIs, we focus on φ-features (inherited by T), and EPP (inherited by the subject position, e.g. SubjP – cf. Rizzi & Schlonsky 2006, a.o.).
Adopting the model of Citko et al. (2018), the following alternatives are then logically possible: partial inheritance where only φ-features are inherited by T (7a), and full inheritance (7b).

7) a. [Fin $_{EPP}$ [Subj [T_{φ}
b. [Fin [$Subj_{EPP}$ [T_{φ}

Assuming a stage where children can optionally realize (7a-b), consider it from the perspective of RIs. Recall that according to Murasugi (2020), RIs arise as a failure of labeling {XP,YP} through φ-sharing. If in (7a) labeling by φ features fails (as in Murasugi 2020), we predict the absence of a copy in Spec, TP of the subject DP, which is instead attracted by the EPP features on Fin. Then T will bear unvalued φ-features, resulting in a default non-finite morphology. On the other hand, if labeling (and agreement) succeeds, the subject will still be promoted to FinP, a copy will be left behind in Spec,TP, and the valued agreement features will realize the correct finite morphology. If feature inheritance transmits both φ and EPP features (7b), we would reach the same conclusions. The key difference between the two cases relies on the phasehood status of the C head. Only in (7b) the phasehood properties are inherited by Subj, the immediately lower head, as a consequence of the full inheritance of the C features (Chomsky, 2015; Braningan, 2020). This possibility allows for four more logical alternatives for the status of the subject in these configurations. Following Rizzi (2008), we assume that a phase head can spell out its complement leaving aside its specifier. Optional spell-out of the sole phase-head ("truncating" its Spec) accounts for the subjectless structures in the data. We can then account for all the cases attested in the data, and reduce them to the acquisition of the LA and its interaction with the independent feature inheritance of T from C.

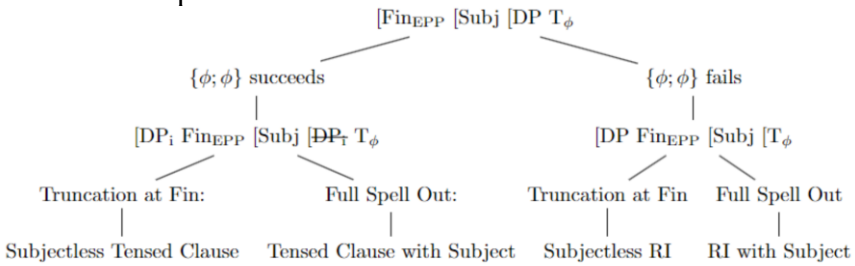

Table 1: Logical possibilities arising from the split inheritance from Fin to T

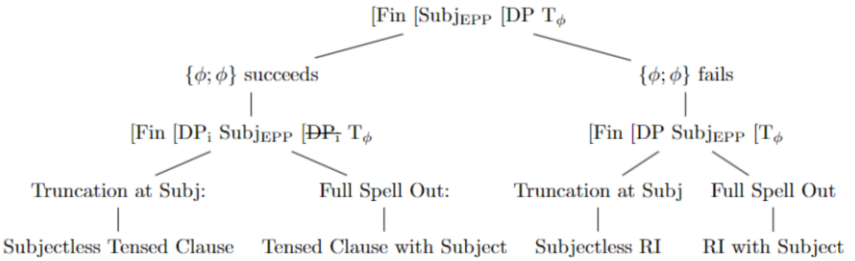

Table 2: Logical possibilities arising from the full inheritance from Fin to T

CASE, CROSSLINGUISTIC VARIATION, AND WH-QUESTIONS: Our system can independently account for the lack of RIs in Italian, Catalan, and Spanish following Chomsky (2015), and assuming that T in these languages is strong enough to not require {φ, φ} checking through its Spec. In other words, Italian children would still struggle with the labeling of {φ, φ} (and occasionally fail it) but since T labels nonetheless, no RI arises when checking fails (note that infinitival embedded clauses would be licensed by a different set of features inherited by non-finite C, essentially lacking φ). We argue that the crosslinguistic variation of RIs arises from the interaction of parametric differences in the LA and the mechanism of *SFI* (Germain 2015). Other aspects such as the incompatibility of RIs with wh-questions and case-marking will be addressed.

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Can *surprise* combine with *whether*-clauses in German?

Overview: This talk explores the puzzle of question embedding under the predicate class of *emotive factives*, using German data from a corpus query and an acceptability study. I argue that unexpected occurrences of *whether*-clauses under *surprise* can be accounted for by a shifted meaning in specific contexts of ignorance, supporting semantic analyses of the issue.

The puzzle: The term *emotive factives* refers to a class of predicates such as "to be surprised", which have been recognized since Karttunen (1977) to embed *wh*-questions (1a), but no polar or alternative questions, i.e. they do not allow subordinate clauses introduced by *whether* as their complements (1b).

(1) a. It surprised Bill who brought cake.
b. *It surprised Bill whether there was cake.

This poses a theoretical problem if *whether*- and *wh*-questions are taken to be of the same "question"-clause type. Grammatical theories have tried to explain the split based on additional properties of emotive factives such as selection for a separate exclamative clause type (Grimshaw 1979) or entailment and exhaustivity inferences (Nicolae 2013, Romero 2015, Theiler 2014, Uegaki 2015). The main argument is roughly that emotive factives can only apply to a non-exhaustive set of answers, which makes them incompatible with *whether*-clauses as those always denote an exhaustive set. However, accounts that categorically rule out *whether*-complements on logical grounds cannot account for some acceptable examples such as (2) (Saeboe 2007, 198).

(2) Don't read this part if you want to be surprised at whether or not Hercules makes it.

On the other hand, there have been pragmatic accounts which attribute the contrast in (1) to systematic competition between the complementizers *whether* and *that* (Guerzoni 2007, Roelofsen et al. 2019), arguing that both yield identical interpretations if embedded under emotive factives. While these accounts may allow for (2), where *that* is not a suitable competitor, the same argument extends to cases of quantification (Abenina-Adar 2019), where acceptability has been heavily debated (3).

(3) a. ?It surprised every boy whether he got a birthday cake.
intended: Some boys were surprised to get cake, some were surprised they didn't.
b. ?It always surprises Bill whether there is cake.
intended: Sometimes it surprise Bill that there is cake, sometimes that there isn't.

Goal of the study: The present study aims to compare existing theories based on empirical observations from German that are reliably tested using larger amounts of data. The data gathering focussed on the propotypical representative of emotive factives, *surprise*, in its German translation *überraschen*. First, an exhaustive corpus query was conducted to determine possible contexts in which *überraschen* can occur unexpectedly with a *whether*-complement. In addition, acceptability judgments were collected in order to determine whether acceptability in these contexts can be attributed to quantification over several events.

Corpus data: The corpus query via the German reference corpus DeReKo found a solid amount (150 cases) of *whether*-clauses embedded under predicates containing *surprise*. This seems to contradict grammatical accounts. However, *whether*-complements only occur in two environments: Either in the construction *sich überraschen lassen* (4a), or with the noun *Überraschung* (4b).

(4) a. Er lässt sich überraschen, ob es Kuchen gibt.
He lets himself surprise, whether it cake gives.
'He lets it be a surprise whether there will be cake.'

b. Es bleibt eine Überraschung, ob es Kuchen geben wird.
It stays a surprise, whether it cake give will.
LIT: 'It stays a surprise, whether there will be cake.'

In both cases, the embedded clauses describe potentially surprising events from the perspective of the affected subject in a prospective manner. The corresponding examples mainly express a state of ignorance or expectation of the experiencer rather than an emotional reaction to an unexpected event, contrary to standard assumptions about the emotive denotation of *surprise*.

Acceptability data: As the prospective reading often co-occurs with quantification over events, the acceptabilty of purely quantificational cases without the shifted "ignorance"-reading was tested using a simple Likert scale acceptability judgment task on predicates containing *überrascht sein*. Via *prolific.com*, 120 participants provided judgments on 4 conditions obtained by manipulating the complementizer used (2 levels: *ob* "whether"/*dass* "that") and the absence or presence of an adverb expressing quantification over events (2 levels: quantificational/non-quantificational) as in (5).

(5) Max ist (oft) überrascht, (ob/dass) das Programm richtig startet.
Max is (often) surprised, (whether/that) the program correctly starts.
'Max is (often) surprised, (whether/that) the program starts correctly.'

Analyzing the results using linear regression as well as CLMMs, no significant effect of quantification was found.

Discussion: At first glance, the data found in the two studies seem to contradict both the grammatical and the pragmatic approaches to emotive factives described above: The fact that quantification has no independent effect on the acceptability of *whether*-clauses under *surprise* suggests that pragmatic reasoning overgeneralizes their acceptability. Conversely, examples found in the German corpus are undergenerated by grammatical accounts if they assert that emotive factives cannot embed *whether*-clauses in any context. Crucially, however, the corpus examples also show that in contexts where *surprise* embeds *whether*, it should not be analyzed as an emotive factive in the first place. As clearly indicated by *sich lassen* in German, *(allowing for) surprise* can express an attitude similar to that of *to wonder*: the subject's expectations are such that they consider all alternatives expressed by the *whether*-clause to be possible. This shifted reading observed in the corpus data explains most examples that have been reported as pragmatic, non-quantificational exceptions of *whether*-clauses under *surprise*. Therefore, these examples do not constitute valid counter-examples to semantic accounts of emotive factives.

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How covert femininity resolves mismatches in Levantine Arabic

Introduction. This paper resolves a puzzling agreement pattern in Levantine Arabic (LA). What seems to be a mismatch at first glance is regular and fully expected adjectival agreement with a silent morpheme that introduces a special group interpretation. Evidence from Modern Standard Arabic supports the analysis. I adopt the framework of *Distributed Morphology* to shed light on the architecture of two different plural nouns in Arabic.

Plural formation. LA shows two different strategies of deriving plural nouns: sound plural formation (1) and broken plural formation (2). Sound plurals (SP) are the result of an affixation rule that attaches the masculine plural suffix *-iin* or the feminine plural suffix *-aat* to the singular nouns which themselves remain.

(1) a. mudarris - mudarris-iin
teacher.M.SG - teacher-M.PL
'male teacher' - 'male teachers'

b. mudarris-a - mudarris-aat
teacher-F.SG - teacher-F.PL
'female teacher' - 'female teachers'

Broken plurals (BP) don't show any plural affixes but are derived via various templatic stem alternations reshaping the entire noun (Ratcliffe 1998, Acquaviva 2008). Masculine as well as feminine nouns can undergo broken plural formation.

(2) a. walad - wlaad
child/boy.M.SG - child/boy.PL
'child/boy' - 'children/boys'

b. ṣabiy-e - ṣabaaya
girl-F.SG - girl.PL
'girl' - 'girls'

(Mis-)matches. In LA, broken plural nouns referring to humans have two agreement options when agreeing with an adjective: full agreement as in (3a) or feminine singular agreement as in (3b). Importantly, the choice in (3b) triggers a change in meaning – the noun is obligatorily interpreted as a generic group.

(3) a. l-wlaad ḥeluw-iin
the-child.PL nice-M.PL
'The children are nice.'

b. l-wlaad ḥeluw-e
the-child.PL nice-F.SG
'Children in general are nice.'

I argue that the agreement mismatch in (3b) is only apparent and what we actually observe is regular and fully expected adjectival inflection. The adjective agrees with a noun that changed from plural into feminine singular because of a covert feminine singular categorizer that causes generic interpretation.

In MSA the feminine singular morpheme *-at/-et* operates overtly and when it attaches to a plural noun the noun is reinterpreted as a generic group where the individuals are no longer distinguishable (*ṣaydalii* 'pharmacist' → *ṣayaadil-at* 'the corps of pharmacists'). The derived group noun - being feminine singular - triggers feminine singular agreement on the predicate (Fassi Fehri 2018). Hence, in MSA we observe the exact same phenomenon, a feminine singular group noun triggering feminine singular agreement on the predicate. In MSA the group morpheme on the noun is visible whereas in LA it is covert.

Interestingly, a further data point shows that only broken plurals (3) but not sound plurals (4) can turn into feminine singular nouns with generic group reading.

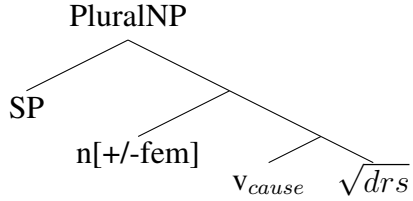
(4) a. al-mudariss-iin muhum-iin
the-teacher-M.PL important-M.PL
'The teachers are important.'

b. *al-mudariss-iin muhum-e
the-teacher-M.PL important-F.SG
'Teachers in general are important.'

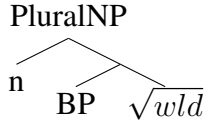
The incompatibility of SP and the feminine singular morpheme is exactly what we expect given the structural properties of SPs.

Structural properties of SPs and BPs. The nouns that trigger SP formation are typically occupational terms with a verbal base. To derive the deverbal singular noun, the verb combines with a nominalizer that is specified for [+/- fem]. Hence, via the process of nominalization the noun acquires its gender. The vocabulary items for SP - being specified for [+/- fem] - are inserted according to the gender information on the singular noun. On the other hand, BP templates combine with bare roots and are nominalized only in the next derivational step. This has to be the case because BP themselves cannot be nominalizers since plural adjectives can undergo BP formation too. Additionally, BPs cannot combine with already nominalized and gendered words since BPs don't show any gender information. Crucially, nouns that are feminine in the singular don't show gender specification in the BP (e.g. *ṣabiy-a* 'girl-F' → *ṣabaaya* 'girls.PL', *ṣuur-a* 'picture-F' → *ṣuwar* 'pictures.PL'). The full derivations are given in (5). In (5a) the root $\sqrt{drs}$ 'learn' first combines with a causative verbalizer resulting in 'cause to learn' before undergoing nominalization. The result is the occupational term *mudarris* 'teacher/ someone who causes to learn'. In (5b) the BP directly combines with the root $\sqrt{wld}$ 'child/boy' and acquires its nominal status form the nominalizer.

(5) a. derivation of SP noun

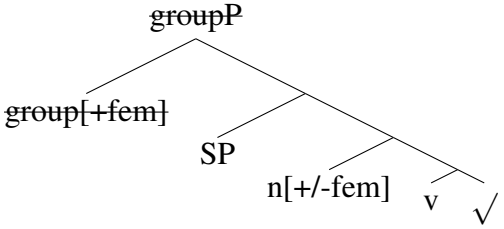


b. derivation of BP noun

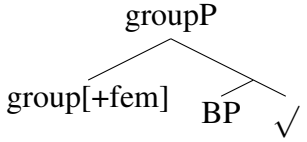


Analysis. I argue that the feminine singular group operator is a in fact a nominalizer that can attach to BPs but not to SPs. The incompatibility of SP and the feminine singular nominalizer is expected given the structural properties of SPs. A word that has already been nominalized and specified for gender cannot undergo a further nominalizing process. In contrast, BPs precisely demand further nominalization and can felicitously combine with the feminine singular group nominalizer.

(6) a. derivation of SP noun



b. derivation of BP noun



The present discussion does not only shed light on a fragment of the LA agreement pattern but contributes to a broader discussion about the organization of morphosyntactic features and word formation in general.

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Dissociating Copy Invisibility from Structure Building

Issue: In the Minimalist Program, the properties of syntactic objects (SOs) that used to be attributed to Merge have been dissociated from structure building. For example, labels are no longer part of structure building but are determined independently by "Minimal Search" (MS) (Chomsky 2013, 2015); likewise, movement or Internal Merge (IM) no longer forms a chain between a moved element and its copy, which is established by an independent operation called "Form Copy" (Chomsky 2021). In this paper, I argue for one more dissociation from structure building by Merge. It has been argued that once an element is moved from a position, its copy in the original position will become invisible or inaccessible. This copy invisibility is indicated, say, by labeling and intervention effects (Chomsky 2013:44). For instance, in (1), α can be labeled "*v*P" because *John*$_1$ is an invisible copy for movement out of Spec-*v*, thanks to which MS locates *v* as the label (the closest head); if *John*$_1$ is visible, α will not be labeled because it is a phrase-phrase (XP-YP) structure but *John*$_1$ does not agree with *v* (Chomsky 2013, 2015):

(1) John$_2$ will $\{_\alpha$ <John$_1$> $\{v$ {buy apples}$\}\}$

We can see that copy invisibility is due to movement; in other words, it is associated with structure building unlike labeling and chain formation.

Proposal: I claim that copy invisibility, just like labels and chain relations, is not part of structure building but is dissociated from Merge or IM. I propose that it is due to the operation *Make Inaccessible* (MI), which is defined as follows:

(2) MI applies to two structurally identical SOs in the Workspace and functions to make either one of them inaccessible to further computational operations.

With (2) in mind, go back to (1). In (1), two *John*'s are structurally identical SOs in the Workspace (i.e., the current derivation, indicated here with square brackets) and given (2), either one of the two *John*'s can be made inaccessible via MI. Suppose that *John*$_1$ is made inaccessible by MI. In this case, copy invisibility in the traditional sense (that is, the invisibility of a lower copy) follows and the labeling of α is possible thanks to MS locating *v*.

In (1), the generation of *John*$_2$ (or the structure) is the job of Merge (or IM) but the copy invisibility of *John*$_1$ is not part of it but independently follows from MI. The properties once considered part of structure building (labels, chain relations and copy invisibility) all stem from operations other than Merge, with Merge reduced to the simplest or barest form (i.e., to put any two distinct elements together to form a set out of them: period – cf. Collins and Stabler 2016).

Given the proposal, the next question is how MI is computationally motivated. In relation to this, Chomsky (2021) argues that Merge should satisfy the condition of Minimal Yield (MY):

(3) Minimal Yield: Merge should construct the fewest possible new items that are accessible to further operations, thereby limiting Search (Chomsky 2021:19).

To consider (3), take (4), which is a case of IM. When Merge generates (4b) from (4a), it adds more than one new accessible item (i.e., z_2 and the object γ), which violates MY:

(4) a. $[\{ \ldots \{x, \{y, z\}\}\}] \rightarrow$ b. $[\{_\gamma z_2, \{ \ldots \{x, \{y, z_1\}\}\}\}]$

But suppose that either z_1 or z_2 is made inaccessible by MI. Then only one new accessible item will be added to (4b) (that is, the object γ). Provided that MY is required for third-factor considerations such as computational efficiency (Fong 2021), I argue that MI, which guarantees MY, is a third-factor operation; it deduces the condition of MY.

I further show that MI can also explain why the output of EM satisfies MY. Chomsky (2020, 2021) says that External Merge (EM) as well as IM creates copies when it applies. Consider (5), where *x* and *y* are EMed, which yields the SO $\{x, y\}$ in (5b):

(5) a. $[x, y] \rightarrow$ b. $[\{x, y\}]$

When EM applies, a copy of *x* and a copy of *y* are produced first and then merged into $\{x, y\}$. Chomsky suggests that $\{x, y\}$ comes out as an output of EM (=(5b)), instead of $[\{x, y\}, x, y]$ as a consequence of MY. However, the question remains of how this is possible. *x* and *y* cannot be removed as deletion is not a possible choice given third-factor considerations (cf. No

Tampering – Chomsky 2008). I claim that this is due to MI: MI renders structurally identical SOs (in this case, *x* and *y*) inaccessible and satisfies MY. Under the proposal here, the output of EM is not {*x*, *y*} but (6), where the other *x* and the other *y* remain in the derivation, being simply invisible or inaccessible (the outline font indicating invisibility/inaccessibility):

(6) [{*x*, *y*}, *x*, *y*]

Under our proposal, the output of EM and that of IM can satisfy MY thanks to MI.

Consequences: Recall from (2) that either one of the two structurally identical SOs can be made inaccessible. This means that unlike Merge-based copy invisibility, which says that a lower copy always gets invisible, a higher copy can also be subject to MI (e.g., *John*$_2$ in (1)). I argue that which one is made inaccessible by MI follows from independent considerations. Suppose that in (1), *John*$_2$ is made inaccessible by MI. Notice, however, that this will lead to labeling failure since T requires an visible/accessible Spec for labeling (Chomsky 2013); moreover, if *John*$_1$, a lower copy, is accessible, α will not be labeled in the absence of agreement between *John*$_1$ with *v*, as I have discussed. Both (7a) and (7b) are "grammatical" structures (i.e., SOs that can be created by IM + MI) but their "well-formedness" is up to Full Interpretation at the Conceptual-Intentional (CI) and Sensory-Motor (SM) systems as the result of labeling:

(7) a. John$_2$ will {$_\alpha$ John$_1$ {*v* {buy apples}}} b. John$_2$ will {$_\alpha$ John$_1$ {*v* {buy apples}}}

This endorses the idea that the Faculty of Language (FL) is a simple computational system embedded in the organism-internal performace systems such as CI and SM (Chomsky 1995).

The second consequence is that the Phase Impenetrability Condition (PIC)/Transfer is eliminated. Chomsky (2021) argues that PIC, with which Transfer can be unified, is a principle that guarantees MY. Recall I have argued that MI warrants MY and deduces the condition, hence copy invisibility. In other words, MI and PIC/Transfer are redundant with one another in guaranteeing MY. If redundancy suggests that something is wrong with the theory, it should not be the case that both are present for MY. Given that copy invisibility is achieved by MI while it is not always attained by PIC/Transfer (notice that in A-movement like (7), PIC/Transfer cannot apply to make either one of the two *John*'s inaccessible in the absence of a phase head), I argue that MI is chosen over PIC/Transfer to warrant MY or copy invisibility.

The removal of PIC/Transfer is supported by the following arguments: as discussed in Bošković (2007), Chomsky et al. (2019) and Lee (2003) a.o., there is evidence showing that operations other than Merge (say, Agree) are not constrained by PIC/Transfer. For instance, in the following Chukchee example, the matrix *v* agrees with the object in the embedded finite clause (i.e., in the embedded phase):

(8) ənan qəlɣiļu ləŋərkə-nin-et [iŋqun Ø-rətəm'ŋəv-nen-at qora-t].
he-inst regrets-3-pl that 3sg-lost-3-pl reindeer-pl(nom)
'He regrets that he lost the reindeers.' (Bošković 2007:57)

This demonstrates that the domain of a phase is indeed accessible. Then if Merge is bound, it is not PIC but something else that constraints the operation. Moreover, it has been argued that access by CI and SM can dynamically take place at any stage of the computation, with there being no interface levels mediating between the computation and CI and SM (Chomsky 2021, Shim 2022, 2024), suggesting that Transfer need not be postulated. If Transfer does not occur, no domain will be invisible via Transfer.

Now that PIC/Transfer, which relies on phases, is gone, it implies that phases are not relevant to derivation. Then a question is what they are for. I argue that phases are only for interpretation, claiming that (9) follows as another consequence of MI:

(9) Interpretation is at the phase level. (Chomsky 2021:23, [G])

Conclusion: In this paper, I propose to dissociate copy invisibility from structure building by proposing a third-factor operation MI. With MI in place, the properties of SOs that used to be considered to be part of Merge are all dissociated from structure building, making the operation the barest form possible.

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On the *Scopal* Interactions between Japanese Focus and Topic Particles and Negation

It has been generally assumed that Japanese focus particles or *toritate-si* occur restricted by the structural hierarchy, which is schematized in Ido (2021:52) and many others. The English glosses are taken from Noda (2017).

(1) [[[dake bakari]made] sae] wa sika mo]
only just even extending to even contrast any also

It is also well known that the focus particles show the scopal ambiguities with negation.

(2) a. Taro-wa oyani-made soodan-si-nakat-ta **Negation>*made***
T-Top parent-even talk over-do Neg-Past
'Taro talked to his friends, for example, about the issue, but he didn't go far and talk to his parent(s).'
b. Taro-wa oyani-made soodan-si-nakat-ta ***Made*>Negation**
T-Top parent-even talk over-do Neg-Past
'Taro did not talk to anybody about the issue, and he didn't even talk to his parent(s), either.'
c. [$_{TP}$ [$_{NegP}$ [$_{vP}$ [$_{VP}$ oya-ni made soodan-si]]nakat]ta]

In (2a), the focus particle *made* (=even) has narrower scope than negation. In contrast, in (2b) negation scopes over the particle. Although the structure shown in (2c) nicely explains the scopal interaction between *made* and negation presented in (2a), it cannot predict the scopal interaction shown in (2b). The aim of this paper is to argue, within the syntactic cartographic investigations advocated by Rizzi (1997, 2004) and Endo (2007) among many others, that the DPs like (2b) marked by a particle move into Spec-Focus Phrase (FocP) and Spec-Topic Phase (TopP).

Let us begin our discussion with an example with another focus particle, *sae* (=even).

(3) a. Taro-wa oyani-sae soodan-si-nakat-ta ***Sae*>Negation**
T-Top parent-even talk over-do Neg-Past
'Taro did not talk to anybody about the issue, and he didn't even talk to his parent(s), either.'
b. *Taro-wa oyani-sae soodan-si-nakat-ta **Negation>*Sae***
T-Top parent-even talk over-do Neg-Past
'Taro talked to his friends, for example, about the issue, but he didn't go far and talk to his parent(s).'

In (3a), with the interpretation in which the particle *sae* has wider scope, is acceptable. On the other hand, we cannot detect the interpretation shown in (3b), with negation-wide-scope reading. Still, the DP marked with the focus particle *sae* in (3a) seems to be under the scope of negation. Let us move on to another set of examples below. Here, the particle *wa* with a focal stress on it is presented as *WA*.

(4) a. Taro-wa oyani-made-wa soodan-si-nakat-ta **Negation>*made***
T-Top parent-even Top talk over-do Neg-Past
'Taro talked to his friends, for example, about the issue, but he didn't go far and talk to his parent(s).'
b. Taro-wa oyani-made-WA soodan-si-nakat-ta **Negation>*made***
T-Top parent-even-Top talk over-do Neg-Past
'Taro talked to his friends, for example, about the issue, but he didn't go far and talk to his

parent(s).'

As far as the scopal interactions between wa and *WA* marked phrases are concerned, negation seems to take wider scope. Still, the scrutiny of the phenomena reveals that these are matters of topic and focus. This is shown by providing another set of paraphrases for (4a&b).

(5) a. As for talking to his parent(s) about the issue, Taro did not do so.
b. Talking over to even to his parent(s), Taro did not do.

In both *oyani-made-wa* in (4a) and *oyani-made-WA* in (4b) scope over negation. Put differently, they are in the Topic and Focus positions, respectively, which are shown below.

(6) a. [$_{TopP}$ Taro-wa [$_{FocP}$ [$_{TopP}$ oyani-made-wa [$_{TP}$ t_{subj} [$_{NegP}$ [$_{vP}$ t_{subj} [$_{VP}$ $t_{oyani\text{-}made\text{-}wa}$ soodan-si]] nakat] ta]]]]
b. [$_{TopP}$ Taro-wa [$_{FocP}$ oyani-made-WA [$_{TopP}$ [$_{TP}$ t_{subj} [$_{NegP}$ [$_{vP}$ t_{subj} [$_{VP}$ $t_{oyani\text{-}made\text{-}WA}$ soodan-si]] nakat] ta]]]]

If we are on the right track, we can provide another paraphrase for (3a) and its structure below.

(7) a. Talking even to his parent(s) about the issue, Taro didn't do so.
b. [$_{TopP}$ Taro-wa [$_{FocP}$ oyani-sae [$_{TopP}$ [$_{TP}$ t_{subj} [$_{NegP}$ [$_{vP}$ t_{subj} [$_{VP}$ $t_{oyani\text{-}sae}$ soodan-si]] nakat]ta]]]]

We can demonstrate the final piece of example of the scopal interactions between manner adverbs and negation.

(8) a. Taro-wa kuwasiku-wa mondai-o setumee-si-nakat-ta
T-Top in detail-Top problem-Acc explain-do-Neg-Past
'Taro did not explain the issue in detail.'
b. Taro-wa kuwasiku-WA mondai-o setumee-si-nakat-ta
'Taro did not explain the issue in detail. He mentioned the issue only briefly.'
(9) a. [$_{TopP}$ Taro-wa [$_{FocP}$ [$_{TopP}$ kuwasiku-wa [$_{TP}$ t_{subj} [$_{NegP}$ [$_{vP}$ t_{subj} [$_{VP}$ $t_{kuwasiku\text{-}wa}$ mondai-o setumee-si]]nakat]ta]]]]
b. [$_{TopP}$ Taro-wa [$_{FocP}$ kuwasiku-WA [$_{TopP}$ [$_{TP}$ t_{subj} [$_{NegP}$ [$_{vP}$ t_{subj} [$_{VP}$ $t_{kuwasiku\text{-}WA}$ mondai-o setumee-si]]nakat]ta]]]]

In (8a&b) and their structures in (9a&b), again, although both the *wa*-marked DP and *WA*-marked DP seemingly are under the scope of negation, they actually move into Spec-TopP and Spec-FocP respectively.

Summing up, in this paper, we have argued that DPs marked with focus particles such as *made* and *sae* move into Spec-FocP. We have also demonstrated that DPs marked with *wa*-and *WA*-marked phrases move into Spec-TopP and FocP Phrases respectively.

Finally, the theoretical implications this paper invokes are in order. Although the Japanese literature on focus and topics particles have investigated (only) the scopal interactions between these particles and negation, we have shed new light on the phenomena. That is to say, we have brought up the syntactic cartographic view over the phenomena and have scrutinized the notion of movement of particle-marked DPs into Specifiers of Focus Phrase and Topic Phrase.

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The expletive interpretation of Ethical Dative: a syntactic approach

Languages display two different types of dative DPs: those that are part of the thematic grid of predicates – i.e., the core/argumental dative DPs – and those that are not – i.e., the non-core/ argumental datives – which do not seem to participate in the sentential semantics (Hale and Keyser 2002; Horn 2008), being semantic expletive (Tsiakmakis and Espinal 2022). The former might realize the argument of ditransitive constructions, such as with verbs like "give", while the latter are usually freely added to sentences, referring in some way to an entity who takes part in the event described by the sentence. Among the non-core datives, one of the most puzzling is the Ethical Dative (ED), which is a non-argumental clitic pronoun (Jaeggli 1982) occurring in several languages. It is usually considered an instance of dative case and has the specific function to pick out a person who is affected by the event expressed by the sentence (Roberge and Troberg 2009), encoding the role of affectee (Berman 1982) (Italian data will be discussed):

(1) a. Tommaso **mi/ti/gli/le/ci/vi** ha vinto il primo premio!
Thomas ED.to me/you/him/her/us/you has won the first prize
'Thomas won the first prize (and this affects me / you/ him /her/us/you)

ED possesses several distinctive features that set it apart from other non-argumental dative clitics, such as the Benefactive, including its obligatory clitic nature:

(2) a. Gianni ***gli*** ha stirato le camicie (Benefactive)
John CL.to him has ironed the shirts
'John has ironed the shirts for him'

c'. Gianni ha stirato le camicie ***a lui***
John has ironed the shirts to him
'John has ironed the shirts for him'

b'. Tommaso ***ti*** ha vinto il primo premio! (ED)
Thomas ED.to you has won the first prize
'Thomas won the first prize (and this affects you)'

b. *Tommaso ha vinto il primo premio ***a te***!
Thomas has won the first prize to you

Additionally, ED cannot appear in causative clauses, whereas the Benefactive can:

(3) a. ***Ti*** ho (ED) fatto vincere il primo premio a Lucia
ED.to me I.have make.1SG to.win the first prize to Lucia

b. ***Le*** (Ben.) ho fatto stirare le camicie dalla mamma
Ben.to her I.have make.1SG to.iron the shirts by.the mom
'I make mam to iron the shirts for her'

Based on the contrast in (2-3), and many other, I will propose that ED calls for a proper syntactic derivation. More specifically, I will propose to adopt a version of the Applicative Phrase framework where individual are introduced into the syntactic spine by an applicative head, which selects and licenses the non-core dative (Marantz 1993; Pylkkänen 2008; Cuervo 2020). More specifically, I will follow Cuervo when she proposes that the variety of meanings that a dative clitic displays relies on (i) what the complement of the applicative head is and (ii) what the applicative phrase is a complement of. We can ask which kind of ApplP the ED corresponds to. In fact, again following Pylkkänen (2002), an ApplP could be either high or low: High ApplPs describe a relationship between an individual and an event; low ApplPs describe a relationship between two individuals, one of which is introduced by the applicative,

while the other is the direct object of the verb, such as in ditransitive constructions. More specifically, Pylkkänen (2002) shows that low ApplP heads cannot occur if the direct object is absent since they denote the relationship between the direct object and the indirect object of a verb; and they cannot occur with verbs that are completely static since they imply a transfer of possession. High applicative heads do not have these limitations. Crucially, ED seems to depart from such twofold pattern since it cannot stay in stative constructions with both the verbs *to have* and *to be* (4a-a') – following the low applicatives –but it can stay in unergative ones (4b) – following the high applicatives:

(4) a. *Luca ***mi/ti/gli/le/ci/vi*** ha due macchine
Luca ED.to me/you/him/her/us/you has two cars
a'. *Luca ***mi/ti/gli/le/ci/vi*** è affamato
Luca ED.to me/you/him/her/us/you is hungry
b. Tommaso ***mi/ti/gli/le/ci*** ha dormito tutto il pomeriggio
Thomas Ben.for me/you/him/her/us has slept all the afternoon
'Thomas slept all afternoon long for my/you/his/her/our/your benefit'

We thus cannot totally apply Pylkkänen's distinction between high and low applicatives to EDs. Pylkkänen's tests have been thought for ApplPs inside VP; the fact they cannot be applied to sentences with EDs may suggest that they are not in such positions. I want here to follow this intuition, and suggest that EDs are generated in a higher position, namely in the CP domain, above TP – in a similar spirit than the high-low applicative *a là* Wood (2015). Assuming that CP consists of an array of functional heads, as in the cartographic approach (see Rizzi 1997 and subsequent works), I propose that ED is an applicative head externally merged in the lowest part of the CP:

(5) [CP ForceP … (TopP*) … FocP … (TopP*) … FinP …. ApplP…[TP …]

If ED is a head that is directly generated outside the TP, then we can easily explain why it is not an argument of the verb and, consequently, why it doesn't affect the propositional meaning of the sentence (*à la* Jouitteau and Rezac 2008). This is similar to what Jaeggli (1982:18) proposes on EDs, i.e., they represent a category of clitics that do not originate in object position, challenging Kayne's (1975) movement theory of clitics - where clitics are initially generated in NP position and then moved obligatorily to the verb. Moreover, it lacks of a full-PP structure, being forced to appear in a clitic fashion. From this also follow the impossible occurrence in causative clauses: being causative an "impoverished functional structure," i.e., lacking the C-I phase (Roussou and Manzini, 2024), there is no space for ED. Finally, this analysis takes into account also the behavior with the stative constructions. More specifically, EDs maintain the core property of high applicatives as discussed by Pylkkänen (2008) – namely, (i) being merged above the VP and (ii) linking an entity to an event by some relation. However, if there is no event to be related to, as in stative constructions, ED cannot appear in such contexts. Assuming that "affectedness" is the semantic relation introduced by ED (see Berman 1982) between an individual – such as the speaker or the hearer of the utterance – and an event, we can interpret ED as follows:

(6) ED: $\text{Appl}_{\text{affectedness}} = \lambda x.\lambda e.$ affectedness (e, x)

This condition can only be applied if there is an eventive verb phrase complement that ED can take. Following a well-established tradition (Ramchand 2008), we can assume that stative predicates do not display such an event and, coherently, "there is no dynamicity/process/change involved in the predication, but simply a description of a state of affairs" (Ramchand 2008: 33). ED cannot therefore select them. Overall, the proposal advanced here will be able to

account for the numerous properties of EDs, including their expletive semantic nature, and many other that I will discuss in the paper.

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