“Free inversion” as predication
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1. Goals

It is well known that “free inversion” is one of the defining features of the null subject languages (NSLs) of the rich agreement (Italian) type. Take the following European Portuguese examples:

(1) a. A Maria resolveu o problema.  
    b. Resolveu o problema a Maria.  
    c. Resolveu a Maria o problema.

The V-initial sentences (1b-c) have an interpretation that is very similar to that of a cleft, equivalent to ‘The one who solved the problem was Maria’, with exhaustive focus on the post-verbal subject. Exhaustivity can be demonstrated using a test provided by Szabolcsi (1981). The test sentences have two versions. In one sentence, the subject is a conjoined DP and, in the other, one of the members of the conjoined DP has been dropped. If the latter version contradicts the former, then the subject is interpreted exhaustively. Bearing this in mind, let us consider (2a,b) with a conjoined subject:

(2) a. Resolveram o problema o Pedro e a Maria.  
    b. Resolveram o Pedro e a Maria o problema.

According to the informants consulted, (1b) and (2a) sound contradictory, thus indicating that the postverbal subject is interpreted exhaustively. The same effect obtains in VSO order (1c vs. 2b).

Even though the literature on “free inversion” is abundant, its proper analysis is still an open issue. One influential analysis (Belletti 2002) assumes that the postverbal subject occupies the Spec position of a FocusP situated to the right of T, above VP. This analysis has shortcomings, as argued in Cardinaletti (1998) and Costa (2004). These authors propose that the postverbal subject remains in situ, inside the VP. VOS order is derived by means of V-raising to T and object scrambling to the left of VP; in this case, the subject is assigned Focus by virtue of being the most deeply embedded constituent. In VSO, focus on the subject is derived via the Contrastive Stress Rule (CSR) (Zubizarreta 1998). Under this analysis, it is not clear why the CSR is obligatory for subjects though only optional in the case of objects. Moreover, this rule appears to be obligatory only when the subject is definite. If the subject is a non-specific indefinite or a bare plural, exhaustivity is no longer enforced. (4a,b) are not contradictory and neither are (5a,b):

(4) a. Resolveram o problema crianças e adultos.  
    b. Resolveram o problema crianças.

(5) a. Resolveram crianças e adultos o problema.  
    b. Resolveram crianças o problema.

This difference between definites and indefinites/bare plurals does not follow in either of the theories of inversion mentioned. Finally, the relation between the availability of “subject inversion” and the Null Subject Property is not immediately clear on either account. In this talk, we will propose a novel analysis of postverbal subject constructions in the NSLs that aims to capture the problems noted.

2. Analysis

2.1 Motivation

Our analysis takes the asymmetry between definites and indefinites regarding exhaustivity as particularly telling. These patterns are remarkably similar to those that have been described by É. Kiss (2006) for preverbal Foci in Hungarian. Hungarian has a preverbal Focus position which can be filled by any constituent, as illustrated in (6):

(6) János EGY KÖNYVET vett. ‘It was a book that John bought.’

János a book bought

(6) is equivalent to a cleft. É. Kiss (2006) observes that there is a contrast between definite DPs and (nonspecific) singular or plural indefinites sitting in the preverbal Focus position. While the former must be interpreted exhaustively, the latter do not necessarily express exhaustive identification. In the spirit of Higgins (1973), É. Kiss assumes that the focus interpretation of pseudoclefted/clefted constituents is a consequence of their predicative function. Concerning Hungarian, she argues that the preverbal Focus constituent occupies a predicative position, namely Spec, PredP:

(7) [PredP PéTER, [ [vp t, olvasta el a levelet]]]  ‘It was Peter who read the letter.’

According to É. Kiss (2006:182), the filler of Spec, PredP must be interpreted as a predicate. Since Péter, a definite DP, cannot be interpreted as a property, it can only be understood as a specificational predicate. As such, it requires an open sentence as its subject, which is provided by the VP. Thus (7) expresses that the set of people who read the letter includes Peter and no one else. Exhaustivity follows
from the specificational role of the nominal predicate. É. Kiss’s theory has the advantage of accounting for the asymmetry between definite DPs and specific indefinites, on the one hand, and bare nominals or nonspecific indefinites, on the other. As discussed in Higgins (1973), a nominal can function as a predicational, identificational or specificational predicate. Any type of nominal can express specification. Predication, however, can only be expressed by a bare nominal or a nonspecific indefinite. Since only specification presupposes exhaustive listing, only definite DPs are necessarily interpreted exhaustively.

Evidence supporting the predicative nature of structural Focus is the following (Szabolcsi (1981)): a DP in the preverbal Focus position allows a nonreferential, “qualitative” interpretation, in which the contrasted DPs can have the same referent. This interpretation is not possible whenever the contrasting DPs occupy any other position (É. Kiss 2006).

(8) AZ ÖREGEMBERNEK, adtam át a helyem, nem A PROFESSZORNAK,
the old.man.to gave.1SG over my seat not the professor.to
‘It was to the old man that I gave my seat, not to the professor.’

Coming back to Romance V-initial VSO/VOS sentences (1b,c), they have striking features in common with the Hungarian structural Focus. Besides the asymmetry between definite and nonspecific indefinites or bare plurals, the non-referential, “qualitative” interpretation is available to a DP subject in post-verbal position (9a), in contrast to a subject in pre-verbal position (9b).

(9) a. Falou [o velho homem], e não [o professor].
b. #[O velho homem], falou; [o professor], não.
spoke the old man and not the professor the old man spoke the professor not

In our view, these contrasts constitute evidence in favor of an analysis along the lines of É Kiss’s proposal for Hungarian, i.e., in favor of the predicative nature of the DP subject in postverbal position.

In spite of the similarities noted, there are important differences between Hungarian structural Focus and postverbal subjects in the Romance NSLs. First, any constituent can be focused in Hungarian, not just subjects; second, there is a dedicated position for structural Focus in Hungarian. For this reason, we will try to derive the predicative interpretation of postverbal subjects from a different source.

2.2 Proposal

One other key feature of our analysis is that “free inversion” is a corollary of the Null Subject Property. In the spirit of Alexiadou & Anagnostopoulou (1998), we assume that what characterizes the NSLs of the rich agreement type is that T contains a D feature (an index) and interpretable phi-features (the basic insight is that subject agreement behaves as an incorporated clitic). For this reason, there is no EPP related movement to Spec-TP and the subject remains in its VP internal position (here we follow Costa 1998 and Cardinali 1998). The second key ingredient of the analysis is that the focus interpretation of the postverbal subject in (1b,c) follows from the fact that it must be interpreted as a predicate (a property) applied to (interpretable) D1 in T. Reconsider the syntax of (1c)

(10) [\( \lambda x. V \text{resolveu} [T <D1, i:φ>]] [vP [a Maria], Λ o problema]]

The DP a Maria is merged in subject position within the vP and bears a Case feature. Thus, it is active as a goal. T and the subject enter an Agree relation and their φ-features match. Since the subject and T belong within the same Phase (the CP Phase) both are present when the derivation is handed over to the semantics. At this point, D1 and DP2 are both interpretable, in violation of Full Interpretation. Type shifting applies to the denotation of a Maria yielding the property \( λx. x=\text{Maria} \). This property combines with the verbal predicate by Predicate Modification to yield the complex property \( λx. x \text{ solved the problem} \land x=\text{Maria} \). This property is applied to the individual variable introduced by D. Crucially, the element that truly saturates the verbal predicate is this variable. We contend that the exhaustive focus interpretation arises whenever the semantic representation is such that the identity statement falls under the Nuclear Scope (or is asserted) and the rest of the material in the clause is presupposed. Thus, in the case of (1b,c), what is being identified with Maria is the set of individuals that solved the problem. This yields the interpretation ‘the entity x, such that x solved the problem is Maria’. Interpreting the verbal predicate as presupposed, as in (1c,d), appears to be a property of V initial sentences containing a transitive verb (in the talk, we will go over other types of sentences).
Overview. The paper proposes a novel analysis for desiderative object control verbs (OCVs) in Russian. Following Jackendoff and Culicover (2003), Landau (2015), a.o., we assume that object control verbs do not form a homogeneous class and suggest a desiderative vs. implicative subcategorization that corresponds to the selection of a dative vs. an accusative argument. We argue that, while implicative accusative verbs are ‘ordinary’ transitive predicates, establishing control relations between the matrix object and the embedded PRO subject, desiderativity is derived if a verb selects a single constituent, headed by a silent deontic modal element, that includes a non-finite clause and a dative DP. In Russian, this modal belongs to the class of deontic modal predicatives; it is responsible for such properties of desiderative dative constructions as semantic ambiguity and the unexpected ability to pass raising tests at least in some contexts.

Desiderative OCVs properties. (i) For desiderative OCVs (velet ‘order’, razresit ‘allow’, etc.), a dative argument is obligatory. Unlike constructions with accusative OCVs, sentences with desiderative verbs, at least in some contexts, pass the raising diagnostics, for example, idiom chunk (1) and passivization tests (similar properties have been reported for English desideratives by Barrie and Pittman (2010)).

(1) a. Ja zastavil černu košku probežat’ meždu nimi.
I.NOM force.PST black cat.ACC run.INF between them
'I forced a black cat to run between them.' Intended idiomatic (not available) ‘I forced them to quarrel.’

b. Ja ne vevel černoj koške probegat’ meždu nimi.
I.NOM not order.PST black cat.DAT run.INF between them
Idiomatic available: ‘I did not order them to quarrel.’

(ii) According to the constituency tests results, the dative DP forms a single constituent with the embedded clause, unlike the accusative object which belongs to the matrix predicate (2).

(2) Čto ja razrešil, tak eto [Pete pojti v kino].
what I.NOM allow.PST so that Peter.DAT go.INF to cinema

‘What I allowed is that Peter would go to the cinema.’

(iii) Only accusative OCVs allow split coreference between an embedded subject and matrix elements (3a). Verbs like razojtis’ ‘disperse’, which require a plural or a collective subject, are prohibited with desiderative dative OCVs (3b). This contradicts the attitude vs. non-attitude distinction suggested in the Two-Tiered theory of control (Landau 2015), which predicts that it is attitude desiderative predicates that should allow partial control.

(3) a. Ivan ubedil’ direktora razojtis’ v sem’.
Ivan.NOM persuaded director.ACC disperse.INF at seven
‘I persuaded the director that they should disperse at seven.’

b. *Direktor razresil Ivanu razojtis’ v sem’.
Director.NOM allowed Ivan.DAT disperse.INF at seven
Intended ‘The director allowed Ivan to disperse at seven.’

Analysis. We assume that the dative argument and an infinitive clause form a single constituent. We further argue that the embedded clause is fully saturated and cannot function as a predicate of the dative argument. This is supported by the availability of embedded finite clauses and (partially) the results of raising diagnostics. The clause is embedded into a predicate headed by a lexical modal element. This corresponds to the general intuition that semantically desiderative OCVs imply deontic modality. Our claim is that this modality is added structurally. Support for this comes, first, from the possibility of ambiguous scope interpretation of the sentential negation. In (4) there have to be two separate predicates for a negation to interact with each of them. Importantly, the negation cannot scope just above the infinitival clause, and our analysis can account for this: the hidden modal does not support Neg-Raising (typically for modals of permission (Iatridou and Zeijlstra, 2013)). Second, almost all predicates of information transfer can be ‘transformed’ into desideratives, at least in colloquial Russian (5). We argue that desiderativity is derived exactly when a verb selects a constituent with an embedded modal instead of, for example, a finite-indicative clause.

(4) Petja ne razrešal Maše ostat’sja.
Peter.NOM not allow.PST Mary.DAT stay.INF
‘Peter didn’t say that for Mary it is possible to stay.’; ‘Peter said that for Mary it is not possible to stay.’
‘Peter said that Mary should wash the dishes.’

‘Peter told Mary that John had washed the dishes.’

♦ The embedded modal element belongs to the existing class of deontic modal predicatives (možno ‘allowed’, nužno ‘necessary’, etc.). Modal predicatives prohibit a nominative subject and require a dative DP argument. They select either a non-finite clause or a finite subjunctive clause as a complement and exhibit default agreement. Deontic modal predicatives allow directed and non-directed interpretations. (6a) has a specific obligation-bearer and an ‘ought-to-do’ directed reading, while in (6b) a modal property is assigned to the whole proposition leading to an ‘ought-to-be’ non-directed reading (Feldman 1986). In sentences with directed interpretation control relations are established between a dative DP and an embedded subject, while the constructions with a non-directed reading pass raising diagnostics.

We propose that a dative DP is an argument in the Spec of a deontic directed / non-directed ModalP, and a Mod head assigns inherent dative case. When a modal head selects a non-finite clause as its complement the latter can contain a PRO, which becomes controlled by the DP in the Spec, ModP. These constructions get deontic directed interpretations. The non-finite clause may also contain an overt subject, which moves out of an embedded clause. This structure gets the deontic non-directed reading. In the full version of this paper we provide the results of raising and constituency tests.

A ModP with a dative DP is a fully saturated proposition and can serve as complement of a lexical verb transforming it into a desiderative OCV.

The contrast between deontic directed and deontic non-directed interpretations is preserved leading to ambiguous interpretations (9) and the ability of at least some sentences with desiderative verbs to pass raising tests (1).

Finally, the proposed analysis accounts for the unavailability of split coreference in case of a desiderative predicate (and a directed interpretation). We adopt a referential approach to control and suggest that semantically reference of the embedded PRO may include other arguments from the same proposition as the controller (i.e. its co-arguments). Since the ModP selected by dative desiderative OCVs is fully saturated and does not contain other arguments except for the dative DP and the embedded clause itself, the coreference is established strictly. The accusative DP controller has the matrix subject as its co-argument and, therefore, PRO can exhibit semantic plurality.

Conclusion. The analysis suggests that the desiderativity can be syntactically derived when a verb of information transfer selects a proposition headed by a silent modal. This accounts for the ability of desiderative so-called ‘object control’ verbs to allow raising and the non-directed interpretation at least in some contexts.
“NOMINALIZATION” AS PREDICATIVIZATION IN LILLOOET AND THE NOMINAL MAPPING PARAMETER

Henry Davis

1. Introduction. This paper argues for a re-conceptualization of the Nominal Mapping Parameter (NMP) of Chierchia (1998) in terms of the application of type-shifting operations, rather than the mapping between syntactic categories and semantic types. Empirical evidence for this claim comes from the Salish language Lillooet (St’at’imcets) which redundantly mark both common and proper nouns with what has previously been termed a “nominalizer”, but which I re-interpret as an overt marker of predicativizing type-shifting operations. The result is that even in ‘radically’ [-arg, +pred] languages such as Salish, nouns are always fundamentally of type e, but are subject to across-the-board predicativization.

2. Background: Lillooet as a ‘radically’ [-arg, +pred] system. In terms of the semantic typology put forward by Chierchia (1998) as part of the NMP, Lillooet, like other Salish languages, counts as an extreme case of a [-arg, +pred] languages. Any lexical category can serve as a predicate without the need for a predicative copula, and conversely, an argument can be freely created from any predicate via the addition of a determiner.

(1) ʔə=ká, (*s-)John go.along DET=NMLZ-cougar=EXIS NMLZ-cougar DET=go.along=EXIS

‘A cougar was going along.’

‘The one going along was a cougar.’

Possible predicates even include proper names (3) and independent (strong) pronouns (4).

(3) s-John ta=ƛák=a NMLZ-John DET=go.along=EXIS NMLZ-1SG.IND DET=go.along=EXIS
‘The one going along was John.’

‘The one going along was me.’

There are no bare NP arguments (5) nor DP predicates (6); cf. (1-2).

(5) * ʔə=ká s-wúwa (6) * ta=s-wúwh=a ta=ƛák=a
go.along NMLZ-cougar DET=go.along=NMLZ-cougar DET=go.along=EXIS

Other [-arg, + pred] characteristics include a count-mass distinction, a singular-plural distinction, the absence of ‘true’ generics, and the presence of various types of predicate modifiers.

3. The problem: why are nouns “nominalized”? Like all other Salish languages, Lillooet has reflexes of a morpheme *s- traditionally known as the nominalizer. The nominalizer has several syntactic functions, including as a clausal subordinator and an argument structure adjuster, but it is also present on a significant proportion (about 30%) of otherwise underived common nouns (7). (Note that the N-V distinction is well-established in Lillooet irrespective of the presence of the nominalizer; see e.g., Demirdache and Matthewson 1995, Davis and Matthewson 1999).

(7)a. s-múləc ‘woman’  b. s-qáxə? ‘dog’  c. s-ečwawx ‘creek’  d. s-‘qʷax̣t ‘leg’

There is strong evidence that the lexical nominalizer is not part of the root: like other prefixes, such as locative *n- (and unlike root-initial [s]), it is never included in processes which target the root, such as plural and diminutive reduplication (8):

(8)

<table>
<thead>
<tr>
<th>root</th>
<th>basic noun</th>
<th>plural</th>
<th>diminutive</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘woman’</td>
<td>√múlac</td>
<td>s-múlac</td>
<td>s-mól•múlac</td>
</tr>
<tr>
<td>‘pool’</td>
<td>√kakʷ</td>
<td>n•kakʷ</td>
<td>n•ƛ•kakʷ</td>
</tr>
<tr>
<td>‘slave’</td>
<td>√sawt</td>
<td>sawt</td>
<td>səw•sawt</td>
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</table>

In Lillooet, lexical nominalization is taken a step further: all proper nouns are nominalized. The nominalizer is present on proper nouns whether in predicate (3) or argument (9) position, but is absent where proper nouns are not integrated into the semantic composition, as in e.g., vocative contexts (10):

(9) ʔə=*=*(s-)John go.along DET=*(NMLZ-)John

‘John went along.’

(10) *ʔə=*=*(s-)John come to=here (s-NMLZ-)John

‘Come here, John!’
Now, given that Lillooet is a radically [-arg, +pred] language, nominalization poses a particular problem for Chierchia’s system. In Chierchia’s framework, nominalization is conceived of as the ‘down’ operator (_\downarrow_), which creates the individual (type e) counterpart of a predicate (Chierchia 1984): but ‘nominalized’ nouns (including proper nouns) in Lillooet are still predicative (and can only be converted into arguments via the addition of a determiner). Nominalization appears to be doing the exact opposite of what we want.

3. A solution: the nominalizer points ‘up’, not ‘down’. I suggest that Chierchia’s framework does in fact provide an elegant solution, but only if we turn the problem upside down, and treat the Lillooet “nominalizer” as a predicativizer. In that case, we can say that nouns (both common and proper) enter the derivation as type e (or <s,e>), and are obligatorily type-shifted by the ‘nominalizer’ into <e,t> (or <s,e>,<s,t>\times) when they enter the composition. For proper nouns, we use the operation Ident (Partee 1986), j \rightarrow \lambda x[x=j], which converts an individual x of type e to its predicative counterpart of type <e,t>.

For common nouns, we adopt the neo-Carlsonian view of Chierchia (1998), where they refer to kinds. We then adopt Chierchia’s (1998) version of ‘up’: _\uparrow_ d = \lambda x [x \leq d], if d is defined, where d is a kind and s is a world/situation. However, since nouns in Salish may be either mass or count, we do not subscribe to the idea that _\uparrow_ necessarily neutralizes the singular-plural distinction: while we maintain Chierchia’s formula for mass nouns, we add a condition for count nouns that restricts x to the set of atoms. The overall result is that both proper and common nouns in Lillooet are predicativized via the lexical “nominalizer” s. The advantages of this approach are that (a) it provides a semantic value for the ‘nominalizer’, whose role otherwise appears to be completely redundant; (b) it permits a standard account of the semantics of proper names in Lillooet as individual-denoting, rather than set- or property denoting, and of basic common nouns as kind-denoting; (c) it maintains a uniform account of argument-creating determiners as functions from predicates to individuals of type <<e,t> e> (Matthewson 1999), or <<s,e> <s,t>> <s,e>> (Matthewson 2008).

4. Cross-linguistic implications. On the perspective taken here, even ‘radically’ [-arg, +pred] languages treat core nouns as fundamentally argumental (of type e). This means that they are not as far from ‘radically’ [+arg, -pred] languages as might initially appear, even though their syntax looks vermarks makes different. Wilhelm (2015), for example, makes a strong case for the Northern Athabaskan language Dëne Sulinë as radically [+arg, -pred]. Dëne Sulinë lacks determiners; nouns are freely interpreted as definite/specific, generic, or existential; predicate modifiers such as adjectives, restrictive relative clauses, and NP-internal PPs are absent; and all non-verbal predicates require a copula. She accounts for these properties by postulating that common nouns refer to kinds, and proper nouns to individuals (both of type e), and verbs come lexically equipped with Carlson’s (1977) ‘realization relation’ R which maps kinds into their instances (and applies vacuously to individuals). In other words, Dëne Sulinë represents the polar opposite value of the NMP to that of Salish languages. However, on the view taken here, at a fundamental level of semantic ontology, the two systems are identical: in both, proper as well as common nouns start out life as type e, with the NMP now reduced to the application of type-shifting operations: Ident and _\downarrow_ apply across the board in Salish to produce a [-arg, +pred] system, while they fail to apply altogether in Dëne Sulinë, yielding a [+arg, -pred] system. As for ‘intermediate’ [+arg, +pred] languages such as English and Russian, here _\downarrow_ applies freely, with local syntactic configurations constraining the distribution of bare (type e) arguments.

5. The Nominal Mapping Parameter and category matching. Whereas for Chierchia, the NMP is expressed in terms of a matching between lexical category and semantic type (N and its projections being alternatively realized as e, <e,t>, or both), on the view taken here, it is the availability of type-shifting operations (more specifically, predicativizing operations such as Ident and _\downarrow_) which is the source of the variation. Thus, at a fundamental level, nouns are always of type e, even in ‘radically’ [-arg, +pred] languages such as Salish where they never surface as such, yielding a universal semantic grounding for the syntactic category of ‘noun’.
**Predicate Raising Languages**  
Julianne Doner, U of Toronto  

**Main Claims.** There is a set of languages where the Extended Projection Principle (EPP; Chomsky 1981, 1982) is checked by raising the predicate, such as Niuean (Massam and Smallwood 1997), Inuktitut, and Irish. I propose a requirement for ‘high predication,’ where the predicate, after it has been saturated, must combine a second time with an argument, and a cross-linguistic parameter based on the ordering of high predication and tense marking.

**A Typology of Verbal EPP.** I define the EPP as a formal requirement for the obligatory movement of some element into the inflectional domain. Alongside the DP-raising EPP of English (Chomsky 1981, 1982), a variety of other types involving raised verbs have been proposed. Although some of these verb-raising languages have nominal features which have been proposed to check the EPP (e.g., Greek, as in Alexiadou and Anagnostopoulou 1998), there are also languages where it can be checked by raising verbal constituents without nominal features; I argue that the EPP is checked by predicate features in these cases. There are thus four classes of EPP checked by the verb, as shown in the table below.

<table>
<thead>
<tr>
<th>Head</th>
<th>Nominal Features</th>
<th>Predicate Features</th>
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<tbody>
<tr>
<td>Greek, pro-drop Romance (A&amp;A 1998)</td>
<td>Celtic (not Breton) (Biberauer 2010)</td>
<td></td>
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<tr>
<td>Some Germanic (R&amp;B 2005)</td>
<td>Niuean (M&amp;S 1997)</td>
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**Predicate EPP.** There is a set of languages in which the EPP probes for the predicate. For example, phrasal predicate-raising occurs in Niuean and checks the EPP (Massam and Smallwood 1997), although the verb does not agree with the subject, nor is there always a nominal in the fronted constituent. If the entire vP fronts, the object is a bare noun (1a); otherwise, only a remnant vP fronts (1b). The constituent that checks the EPP is underlined.

1. a. [vP Takafaga ika] tūmāu nī a ia. b. Takafaga tūmāu nī e ia e tau ika. ‘He is always fishing.’ (Niuean; Massam 2001)

   Likewise, Biberauer (2010) suggests that Irish verbs, which raise to T, also check the EPP, although verbs in Irish appear without subject agreement in a variety of contexts, as in (2).

2. **Leannann an t-aimhni an briathar i nGaeilge** ‘The subject follows the verb in Irish.’

   Finally, Johns (2007) proposes a √-EPP for Inuktitut, which is manifested by the verb root appearing initially in the verbal complex (3). Although Inuktitut has rich agreement, the nominal features are not part of the constituent that raises, and do not check the EPP.

3. **Niri-gaju- lau- nngit- tunga.** ‘I wasn’t always eating.’ (Inuktitut; C&P 2010)

   In all three of these languages, however, it can be shown that these are in fact predicates which raise, rather than verbs. For example, in the Niuean example in (4), a locative predicate may front to initial position instead of a verbal constituent, while in the Irish example in (5), a nominal predicate fronts. Note that Carnie argues that the is particle in Irish is in C.

4. **[PredP Hā he fale] a ia.** (Niuean)  
   ‘She is in the house.’ (Massam 2001)  
   ‘John is a big man.’ (Carnie 1995)

5. **Is [fear mór] Seán** (Irish)  
   ‘He has nothing.’ (Inuktitut; Johns 2007)

   Johns (2007) demonstrates that light verbs are unable to check the EPP in Inuktitut. In clauses with light verbs, a noun root must take the initial position in the verbal complex instead, resulting in phenomena such as argument doubling (6a) or even the insertion of the √-expletive *pi* (6b).

6. a. **Saali iilisajj- u- juq**  
   ‘Sally is a teacher.’  
   (Inuktitut; Johns 2007)

   b. **pi- qa- nngit-tuq**  
   ‘He has nothing.’  
   (Inuktitut; Johns 2007)

**When V-raising doesn’t check the EPP.** In contrast, there are some languages that have
verb raising (e.g., Finnish in (7) and French in (8)) but also still have an independent requirement for a DP subject, similar to English. Thus, either these languages require two separate EPP-triggered movements, for some reason, or verb-raising is insufficient for checking the EPP. I argue for the latter.

(7) Jussi (ehkä) osta-a (ehkä) sen kirja-n. (Finnish)
    Jussi buy-3SG perhaps 3SG.GEN book-GEN ‘Jussi will perhaps buy that book.’

(8) Jean embrasse souvent Marie. (French; Pollock 1989)
    John kiss.3SG.PRES often Mary ‘John often kisses Mary.’

These languages require expletives, which indicates an EPP checked by DPs (9)-(10).

(9) Sità meni nyt hullusti. (Finnish) (10) Il est arrivé trois filles. (French)

    EXPL was now crazily EXPL is arrived three girls
    ‘Now things went wrong.’ (Holmberg 2005) ‘There have arrived three girls.’ (Burzio 1986)

Unlike Irish, Inuktitut, and Niuean, the French and Finnish requirement for verb raising is truly a requirement for verbs, rather than predicates. Non-verbal predicates do not raise, but light verbs, auxiliaries, and modals do. For example, the negative auxiliary ei raises in the Finnish example in (11), and HAVE raises in the French example in (12).

(11) Jussi ei ehkä osta sitä kirjaa. (12) Il a souvent mangé des pommes.

    Jussi NEG perhaps buy 3SG.PAR book.PAR he has often eaten of the apples
    ‘Jussi won’t maybe buy that book.’ ‘He has often eaten apples.’

Verb-raising does not satisfy the EPP; only predicate-raising satisfies the EPP.

Why? I hypothesize that the EPP is a form of ‘high predication’ where the predicate must form a second link with an argument. In English, French, and Finnish, the predicate first combines with tense via merge, and then an argument is moved to the specifier of T, where it c-commands the predicate. In Irish, Niuean, and Inuktitut, on the other hand, the predicate raises to a position where it c-commands an argument, and then tense is merged afterwards. In these cases, the raised predicate still requires an argument, although the argument may be low. This can be seen in weather predicates. For example, in Irish, either an expletive or an existential marker is required (Kenji Oda, p.c.), while in Niuean, a case-marked nominal appears to be required, as shown in brackets in the examples in (13). (Niuean; Massam, p.c.)

(13) a. Makalili [ e aho nei ]. b. Kua tō [ e uh a ]
    cold ABS day this ‘It's cold today.’ PERF fall ABS rain ‘It's raining.’

This requirement for high predication can occur only after the predicate has been saturated and the nominal has been case-marked. The two types of languages differ in (a) the order of operations (14), and (b) the directionality of c-command between the argument and predicate.


Summary. In predicate-EPP languages, the EPP is checked by the raising of predicates without nominal features, which must then c-command an argument lower in the structure, fulfilling the requirement for high predication. In contrast, nominal-EPP languages check the EPP by raising an argument so that it c-commands the predicate lower in the structure.

From properties to predicates; from projections to propositions

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In this paper we propose a notion of predication which is unitary and relevant both for primary and secondary predication, which is correlated with a particular predicational mechanism that is expressed syntactically in a PredP, and which is non-inclusive, meaning that not everything that has been subsumed under predication is predication in the proper sense favored by our analysis.

Concerning the latter, we first argue against the claim, common in logical semantics, that attributive and predicative adjectives should both be analyzed as expressing predication. Here we exploit the distinction between junction and nexus (Jespersen 1924), arguing that only the nexus relation (e.g., predicative adjectives, but not attributive adjectives) expresses predication properly. Among other things, we show that the fact that attributive adjectives can be stacked whereas predicative adjectives cannot (*the car is small German vs. *the car is small German), follows from this analysis.

Next, focusing on the predicational mechanism itself, we essentially adopt an analysis in terms of predication operator and propositional function (e.g., Bowers 1993), which claims more specifically that a predicate is formed from a property element by means of a predication operator that turns a property item into a propositional function, that is, an unsaturated predicate. We then show (i) that the EPP follows from the workings of predication, (ii) that the non-existence of expletive PRO follows from the same, and (iii) that the unitary mechanism of predication that we argue for is syntactically accommodated in a PredP both in primary and secondary predication.

Concerning (i), the EPP, we show that proposition formation necessarily means that a subject argument position must be created whether the subject is contentful or not. Thus, the existence of the EPP is derived from proposition formation, i.e., ultimately from the workings of the predication operator. Among other things, deriving the EPP from predication explains why an EPP requirement is restricted to subject positions only (Rothstein 1995). All natural languages have this EPP requirement, but its effects can be observed as phonetically realized expletive subjects in certain languages only, namely in those that license overt expletive subjects.

Concerning (ii), the non-existence of expletive PRO, we argue that a subject (or actually any argument) must be licensed either formally (e.g., Case) or semantically (e.g., semantic role). For instance, expletive small pro and visible expletive subjects are formally licensed only, whereas PRO is semantically licensed only. We argue that expletive PRO is prohibited because it is a subject that is licensed neither formally nor semantically, cf. *It is nice to snow vs. It is nice that it snows. The crucial premise is that there is an EPP requirement in the first place, which in our analysis is derived from the workings of predication. Related to this is the fact that a subject position cannot be non-existent, whereas an object position may be non-existent, a fact that is directly predicted by our analysis.

Concerning (iii), we offer an analysis of some of the intricacies of small clauses, seeking to explain the structure of small and full clauses on the basis of the same predicational mechanisms accommodated in PredP, and simultaneously explaining the differences. The PredP structure that we assume is a rudimentary structure with a simple inherent semantics. This makes it very useful for the language faculty, as PredP can serve as a fundamental building block for all types of predicational structures, among these copular clauses and small clauses. These two construction types are often headed by designated predicational elements, such as verbal or non-verbal copulas (or predication particles). Although we will mention and discuss verbal copulas in our talk, we will focus mainly on small clauses headed by non-verbal copulas. These structures are either selected e.g. by a matrix verb, in which case the specific particle is also selected (cf. (1a-c); Starke 1995). Note also the expletive (or rather cathaphoric) subjects occurring in these small clause structures; pointing to the fact that even small
clauses have expletive subjects and hence a proper subject requirement unrelated to finiteness or tense (cf. also *We made [it a bit colder in the living room]*)

(1) (a) Ich betrachte es als / * für / * Ø gut, dass...
(b) Ich halte es *als / für / Ø gut, dass...
(c) Ich finde es *als / für / Ø gut, dass...

’I consider it as / for / Ø good that…’

These particles (English *as*, German *als*, Norwegian *som*, Russian *kak*) are often described as prepositions, but in fact they are clearly different from these, as these predication particles, unlike prepositions, never impose particular case features onto their complements, but typically inherit the case of their predication subject. Such small clauses (SC) even occur as adjuncts, as their rudimentary semantics allows them to serve as almost any type of adverbial. These adjunct SCs are clearly very sensitive to the syntactic adjunct position they occur in, but they also interact with tense, mood/modality and aspectual marking of the matrix clause for their apprehended meanings. The SC predicate’s status as stage-level or individual-level (Carlson 1977) also plays a part, e.g. in causal v. temporal readings.

(2) (a) [Som student] fikk Jon alltid rabatt på fly. (temporal /causal)

‘As a student, John always obtained a discount on flights.’

(b) [Som student] får Jon alltid rabatt på fly. (causal)

‘As a student, John always obtains a discount on flights.’

(c) [Som student] ville Jon alltid ha fått rabatt på fly. (counterfactual)

‘As a student, John always would have obtained a discount on flights.’

(d) [Som vert] / [Som alkoholiker] sier jeg alltid skål og velkommen. (temporal/causal)

‘As the host / Being an alcoholic, I always say cheers and welcome.’

When stacking these constructions, their stacking and extraction behavior point to what might be a universal adverbial hierarchy *Causal > Temporal > Locative > Manner > V* consistent with scope-based or other hierarchical approaches to adverbial stacking; Cf. also Pittner & Frey (1998, 1999), Pittner (1999), Haider (2000) and Ernst (2002, 2014). The readings arising from these structures when occurring as adjuncts cannot solely stem from the predicational structure itself, their semantics is too underspecified to trigger readings as causal, temporal, or manner. Instead, the adverbial positions where these structures occur clearly determine the possible readings of the predicational structure at hand.

(3) Er war [causal als Muttersprachler] schon [temporal als 17-Jähriger] [locative bei Siemens]

‘A native speaker, he was employed as a translator at Siemens already as a 17 year old.’

We argue in our talk that precisely the rudimentary semantics provided by the thus versatile predicational frame is what allows this structure to occur in all these different environments. Hence these structures lend themselves as a diagnostic tool and a building block in the description and analysis for a range of seemingly unrelated phenomena. In our paper we focus on the relative scopes of adjunct secondary predication structures, the underlying similarities between between primary and secondary predication, the subject requirement, and the possible types of silent subjects.
Predication, Thematic Roles, and Tense-Aspect-Mood

David Gil

Gil (2012) defines predication as a complex emergent entity derived from the alignment of two independent elements of conceptual structure: thematic role assignment and headedness. Specifically, a predicate is a thematic-role-assigner head, while its arguments are its thematic-role-bearing modifiers. For example, given a simple juxtaposition of two words, denoting CHICKEN and EAT respectively, if EAT is the head, and EAT assigns a thematic role to CHICKEN, then according to the definition, EAT is the predicate and CHICKEN its argument.

Three interrelated arguments are presented therein in support of the emergent definition of predication. First, it is maximally parsimonious, drawing upon conceptual structures that are independently motivated and not specific to language. Second, it provides a framework for representing the development of predication both ontogenetically, in early child-language acquisition, and phylogenetically, in the evolution of language. Third, it facilitates an account for languages in which the clustering of thematic role assignment and headedness is at best weakly grammaticalized, and which may accordingly be viewed as languages without a prominent notion of predication.

This paper presents a fourth and novel argument in support of the emergent definition of predication, showing how it makes correct empirical predictions about correlations between thematic role assignment and the marking of Tense, Aspect and Mood (TAM) categories, which rely on the notion of headedness and the projection of features prototypically associated with verbs and verb phrases. Specifically, the convergence of thematic role assignment and headedness predicts that the grammatical expression of thematic roles will co-vary with that of TAM categories: where predication is present, the expression of thematic roles and of TAM will be strongly grammaticalized, whereas where predication is absent, their degree of grammaticalization will be lower. One well-known instance is provided by the contrast between finite clauses and various reduced clause types such as small clauses and other defective clause types, as discussed by Progovac (2015) and others. This paper presents evidence that a similar correlation holds cross-linguistically as well.

This paper presents some results of a cross-linguistic experiment conducted on a world-wide sample of over 60 genealogically and structurally diverse languages. Subjects are asked to judge the truth conditions of sentences with reference to test pictures; speakers’ responses provide a measure of the degree to which thematic roles are grammaticalized in their respective languages. The results of the experiment provide evidence for a correlation between the grammaticalization of TAM and of thematic roles: whereas languages with obligatory TAM marking exhibit high grammaticalization of thematic roles, as expressed by word order, flagging, and other morphosyntactic devices, languages with optional TAM marking exhibit little grammaticalization of thematic roles. For example, whereas in English, a sentence such as The chicken is eating, with its obligatory TAM marking, unambiguously assigns the chicken the thematic role of agent, in Tobelo, a language of the North-Halmahera family of Indonesia, the corresponding sentence, O totaleo iyoyomo (ART chicken 3INAN.SJ:3INAN.OBJ:eat), with no TAM marking, allows o totaleo to be associated with either agent or patient roles. The significance of the cross-linguistic correlation is further enhanced by examination of "minimal pairs": languages that are closely related genealogically, structurally, and sociolinguistically, while differing with respect to the expression of TAM. For example, among two related Mayan languages of Guatemala, Tz’utujil, with obligatory TAM marking, has high grammaticalization of thematic roles, whereas Q’anjob’al, with optional TAM marking, emerges with significantly lower grammaticalization of thematic roles.

Thus, the cross-linguistic correlation between the grammaticalization of TAM and of thematic roles provides further support for the convergence of thematic roles and headedness, and ipso facto for the emergent definition of predication. In doing so, it provides evidence for a distinction between two types of languages, those in which predication plays a prominent role in the grammar, such as English and Tz’utujil, and those in which the role of predication is significantly diminished or even absent, such as Tobelo and Q’anjob’al.

The interaction of Focus and Predication in Specificational Copular Clauses and Clefts
Jutta M. Hartmann (IDS Mannheim)

The issue. A number of cross-linguistic observations suggest that there is a close relation between focus and predication. First, some languages exhibit a lexical overlap of focus markers and copular verbs (see e.g. Zoque reported in Faarlund 2007). Second, copulas tend to develop into focus markers, see Hartmann & Veenstra (2013, 7) citing Heine & Reh (1984), Hopper & Traugott (1993), Givon (1990). Third, many languages use copular structures in order to express focus, a fact which is most visible in clefts, see (1). Fourth, specificational copular constructions (=SCCs) have been reported to exhibit a fixed focus structure (Heggie 1988, Heycock 1994, Williams 1997), see (2) (taken from Heycock & Kroch 2002, 148f, focus indicated by small caps): the post-copular DP is necessary focused and focus cannot be shifted to the pre-copular DP. This talk addresses the relationship of focus and predication from the perspective of clefts and SCCs and proposes that the syntactic structure of predication is mapped onto an information-structural (=InfS) division. In clefts and SCCs more generally, this mapping is a focus-background mapping and leads to the specific interpretation of clefts: contrast, exhaustivity, existential presupposition on the cleft clause (see Halvorsen 1978, Percus 1997, É. Kiss 1998, Büring & Križ 2013). This study supports both a syntactic configuration of predication (either PrP as in Bowers 1993 and adopted here, or a headless small clause as in Moro 1997, 2000), as well as its asymmetry in the sense that one element is a function (the predicate) that is applied to the second element (the subject).

Syntax of Clefts. Following Huber (2006), den Dikken (2013), Patten (2010), I take clefts to be a subclass of SCCs. SCCs are inversion structures (see Blom & Daalder 1977, Williams 1983, Heggie 1988, Moro 1997, Mikkelsen 2004, den Dikken 2006 among others), i.e. the underlying complement of PrP, the culprit in (2), ends up as the subject of the clause: [the culprit], was [PrP John Pr t]. This inversion analysis can be applied to clefts, as in (3):

\[ \text{It was } [\text{PrP } \text{Pound } \text{t}] [\text{t} \text{CP who had been thinking of it}]. \]

\( \text{It inverts to Spec,TP (see den Dikken 2013)} \)

Instead, \( \text{it} \) and the cleft clause form a constituent underlyingly, a light-headed relative clause (LHRC), a type of RC described in Citko (2004). LHRC show restrictions on the range of \( \text{wh} \)-operators, as they do in clefts, see (5). LHRC have less strict matching requirements as free relatives, see (6).

\[ \text{a. They want to go to the place [where they went last year ] } \]

\[ \text{b. It’s upstairs *where/that she keeps her records. (Davidse 2000, 1116)} \]

Inversion in (3) and more generally in SCCs is triggered by a focus-background marking in the PrP. This inversion is implemented in a specific model to be described in detail in which an information-structural module and the syntactic module interact during the derivation as sketched in (7). The crucial step is the
mapping of focus-background onto subject-predicate in PrP (Step 2). This mapping comes with a feature bundle that is assigned to the syntactic constituents. These bundles contain features that are readable to syntax, LF or PF. In this mapping, the InfS feature BACKGROUND is bundled with a syntactic edge feature EF (at least in Germanic languages) that drives movement of this constituent to a higher projection (via the edge of the phase in a phase-based approach).

(7) a. Step 1 (syntax): Merger of pivot and cleft clause as predication structure
\[ [Pr \ [DP \ Pound \ ]] \ [Pr_t \ [DP \ it \ [CP \ who \ had \ been \ thinking \ of \ it \ ]]] \]

b. Step 2 (InfS): Assignment of focus background mapping
\[ [Pr \ [DP \ Pound \ ] \ [FOC \ Pr \ [DP \ who \ had \ been \ thinking \ of \ it \ ] \ [BACKGROUND \ \cdot \ \EF]] \]

c. Step 3 (syntax): Inversion and extraposition of the cleft clause
\[ [\ [DP \ \it \ [CP \ who \ had \ been \ thinking \ of \ it \ ] \ [BACKGROUND \ ]]] \]

Focus, Syntactic Predication and Symmetry The mapping of focus-background onto the syntactic predication structure models the main similarity between the two domains: predication can be understood as functional application along the lines of Frege (1891) and functional application has been developed for the focus-background division (see Krifka 1992, 2006). The research presented here adopts Bowers (1993), but it is also compatible with a headless small clause as presented in Moro (1997, 2000). In Moro’s analysis, the small clause consists of two DP’s and movement is necessary for symmetry breaking. In contrast to Moro, in the approach presented here, inversion is not necessary for symmetry breaking, but it is the result of the InfS mapping of the focus-background division. The concept of symmetry breaking is relevant on a different level: in SCCs two non-properties (a definite DP and a proper name in (2)) have to be interpreted in a syntactic configuration of predication. The focus-background mapping allows for an interpretation of functional application and thus, ‘breaks’ the symmetry between the two concepts. Additionally, the mapping analysis allows for an explanation of the facts introduced above. The peculiar focus properties of SCCs are a result of linking inversion and focus marking. With the tight relationship of focus-background mapping on PrP, it is possible to reinterpret the copula as focus marker. Finally, the overlap of copula and focus marker can be understood as a marker for functional application in the non-verbal domain.

STAGING SECONDARY PREDICATION
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One way properties have been argued to acquire the syntactic (and semantic) status of predicates is via the contribution of main clause functional material directly above the domain of the property. Depictive adjunct predicates (DPreds) do not seem to have the direct benefit of such elements, yet can still function as predicates, albeit predicates whose argument also plays another thematic role (Williams 1980/1985; Simpson 1983; Stowell 1983; Rapoport 1990, Rothstein 1985/2001; Bowers 1995, Larson 1989, Himmelmann & Schultz Berndt 2005, a.o.). For example:

(1)a. Jane ate dinner drank. / b. Jane ate the corn raw. (subject- & object-oriented DPred, respectively)

We propose an analysis of depictive constructions in which the derivation of the various relations involved is both economical and precise, while also allowing a cross-linguistic applicability. Our Parallel Merge analysis adapts aspects of Rapoport’s (1999) 3-D ATB account, Irimia’s (2012) Complex Predicate and Multiple Agree, and You’s (2016) extension of Grafting.

Assumptions. The DPred structure is distinguished by the fact that it is assembled in parallel to the main independent clause, of which no element selects or requires it. The two structures are nonetheless fundamentally interconnected: the DPred is both predicated of a main-clause argument and event-related to the main-clause predicate—there is temporal overlap (Simpson 1983, Rapoport 1993, a.o). These facts are responsible for the distinct mode of integration of the DPred with the main structure.

Merge at σ head. This integration is driven by the DPred head σ, a Situation/Stage head, containing time and place coordinates (unspecified in DPred when first merged), as shown in 2. We propose that the DPred AP must merge with σ in order to be linked to the main structure (as in den Dikken 2005). This σ-linking requires that the DPred be stage-level, deriving a basic property of this construction.

The DPred’s contingent nature is embodied in the σ head that drives the merge with the main clause: σ is unvalued for the Stage coordinates, and carries unvalued (φ, C) features that have been transmitted to it at the point of Merge with a.

Formal implementation. σ, in addition, functions as the locus of the type of Merge we propose: a Grafting operation (following van Riemsdijk 2006/2010; see also You 2016) that grafts the contingent head σ onto a σ head in the main clause, as shown for object-oriented DPreds in (2). (Linearization follows van Riemsdijk, with the added motivation of a locality constraint on the σ grafted head and grafted complement.). The implementation of all cross-structural relations is mediated by the fused head σ that results from Grafting.

(2) Anchor σ
[φ:VAL, p:VAL]                    C
[........]                        MAIN STRUCTURE               DRED STRUCTURE
                        Voice
                        σ               σ
                        Obj              σ
                        τ: √raw  ν: √raw
[τ:ir, τ:ip] [uφ: -, [uC: _]]
V: √raw <Obj> [ν:ir, ν:ip] [uφ: -, [uC: _]]

A Stage head σ thus drives the fusion, is the locus of fusion, mediates integration, and defines the domain of all cross-structural relations. We suggest further that such a domain is required to constrain multiple thematic relations, as in the case here, in which an argument is thematically related to more
than one predicate. \( \sigma \) thus also defines the domain for DPred predication (and the related topic-focus relation). Given that the predication domain is established at \( \sigma \), it follows that only a DP local to \( \sigma \) can act as an argument for the DPred. Thus, raising of the object DP to Spec,\( \sigma \) is required. The raised DP must be of a type that can raise to escape incorporation with the verb. This obligatory non-incorporation is signalled by the distinctive marking we find on the object in depictive constructions: in Turkish, DOM is required irrespective of specificity (3a); while Romanian, like all Romance, forces the definite even on mass nouns (see especially Belletti 1988), and even with an indefinite interpretation (3b).

\[
(3) \quad \text{a. Ali (bir) balığ-*(i) qıq yer.} \quad \text{b. A băut lapte-*(le) rece.}
\]

\[
\begin{array}{ll}
\text{Ali (a) fish-DOM raw eats.} & \text{has drunk milk-DEF cold.}
\end{array}
\]

\text{‘Ali is eating/eats (the) fish raw. ‘S/he has drunk (the) milk cold.’}

Our analysis thus predicts the exclusion as DPred arguments of some prepositional objects as well as other DPs that cannot raise or are otherwise unavailable.

**Double object constructions.** We derive the impossibility of DPreds oriented to the possessor in double-object constructions: \textit{*Mary gave Jane the book drunk.} We use the structure in (4), headed by a functional head (see Pylkkänen 2012, Harley and Jung 2015, a.o.), here Poss.

\[
(4) \quad \text{Double-object construction}
\]

As standardly assumed, the functional head checks case (DAT, etc.) on IO, which is thus no longer available to the (case- and \( \varphi \)-agreeing) predicate; however, the unchecked DO is still available. The entire PossP structure raises to Spec,\( \sigma \) (see Runner 2001), \( \sigma \) checks case on DO, which can thus act as an argument for DPred: \textit{Mary gave Jane the book used.}

**Stage valuation and interactions.** ANCHOR \( \sigma \) is the syntactic implementation of the Stage Topic (e.g. Erteschik-Shir 1997), the discourse element that specifies the spatio-temporal parameters of the sentence. This element is one of the permanently-available topics (in the sense of Erteschik-Shir; similar to Bianchi’s 2003 \textit{Logophoric Centre}), others being speaker and addressee. This layer of discourse (\( \delta \)) heads is located on the highest left periphery following, for example, Speas &Tenny’s 2003 \textit{Speech Act} layer, or Wiltchko’s 2014 \textit{Anchoring Projection}. The lower \( \sigma \) position also matches proposals of other low \( \delta \) heads (Topic, Focus) by Belletti (2004), Jayaseelan (2000), Darlymple and Nikolaeva (2011). Anchor \( \sigma \) values any unvalued \( \sigma \) heads in a clause, here the fused (main and DPred) \( \sigma \). Thus, it follows that the adjunct cannot be interpreted as true of a different time/place than the main predicate. Another effect of valuation is the activation of \( \sigma \)’s discourse Case assigning capacity.

Since \( \sigma \) is related, both configurationally and conceptually, to other \( \delta \) elements, it would be expected to interact with them. And this is what we find illustrated by Russian case distinctions (see Bailyn 2001, Grebenyova 2005, Richardson 2007, a.o.), which demonstrate \( \sigma \)’s interaction with Speaker Perspective:

\[
(5) \quad \text{a. Kakaj Ivan vernulja iz puteshestvija? b. Kakim Ivan vernulja iz puteshestvija?}
\]

\[
\begin{array}{ll}
\text{which-NOM} & \text{which-INS}
\end{array}
\]

\[
\begin{array}{ll}
\text{Ivan returned from trip} & \text{Ivan returned from trip}
\end{array}
\]

\[
\begin{array}{ll}
\text{‘How did Ivan return from his trip?’} & \text{‘How INS did Ivan return from his trip?’}
\end{array}
\]

\[
\begin{array}{ll}
\text{[OK in out-of-the blue situation;} & \text{[well-defined perspective about Ivan’s state,}
\end{array}
\]

\[
\begin{array}{ll}
\text{no expectation]} & \text{given speaker’s knowledge of Ivan/trips]}
\end{array}
\]

The assumption of grafting implementation at \( \sigma \) (a discourse element), as opposed to other possible loci (such as Aspect), predicts the existence of such phenomena. Thus, our analysis has broader coverage than accounts involving situation-head merge (such as Keshet 2001, Percus 2010).

**Conclusion.** The analysis here employs a grafting mechanism for DPred integration into the main structure. The low \( \sigma \) locus of Merge allows the implementation of all cross-structural relations. The \( \sigma \)-led analysis explains a variety of properties exhibited by depictive constructions and provides insight into the composition of the Pred head/projection (Bowers 1995, Roy 2013) in certain contexts.
Control into nonfinite adjuncts presents a number of theoretical challenges that have not received much attention. The first challenge is the co-existence of indisputable evidence both for Obligatory Control (OC) and Non-Obligatory Control (NOC) in seemingly parallel environments (English is used for convenience; the facts hold in many other languages).

(1) a. This book, was written [in order PRO to be read].
   b. There won’t be any progress without [PRO requiring assistance from the outside].

In this context, I show that so-called "implicit agent control" (under passive matrix clauses) is a misnomer for another instance of NOC.

The solution offered in Landau 2017 to this problem exploits the idea that adjunct control employs the same mechanisms that complement OC does. In Landau 2015 I distinguish between predicative and logophoric control. Adjuncts as well may project either a predicative FinP or a larger, propositional CP (embedding that FinP and saturating it with a pro that denotes the logophoric center, or "doxastic counterpart" of the matrix controller). The predicative adjunct forces OC by predication and is indifferent to the [human] feature, as in (1a). The logophoric adjunct allows any perspective-bearing antecedent to control PRO (hence, limited to [+human] PRO). Because the adjunct is not selected, the context of evaluation for PRO is not restricted to the matrix context, resulting in the familiar non-local character of NOC.

Some notion of preference or "default strategy" chooses OC over NOC when both yield coherent interpretations, given that a sentence-external controller is disallowed in cases like (2).

(2) *John, excelled [in order PRO requiring admiration].

In Landau 2017 it was suggested (following Kawasaki 1993 and Lyngfelt 1999) that NOC may "kick in"only if OC produces an anomalous reading, where "anomalous" is understood in terms of selectional violations. Thus, because subject control in (3) is anomalous, the implicit agent is a legitimate controller (recall that this will be shown to be NOC).

(3) The ship was sunk to collect the insurance.

However, there remained a glaring problem. A little-know observation made independently in Jaeggli 1986 and Roeper 1987 states that passive-under-passive rationale clauses do not license implicit agent control (4a). I extend their point to all adjunct and all matrix environments that provide no semantically appropriate controller in the subject position, like copular clauses (4b) (cf. (1b)).
Landau (2017) proposed that passive adjuncts denote predicates and thus can only avail themselves of predicative OC, resulting in a forced semantic anomaly. However, why passive adjuncts must be predicative was left an open question. I would now like to argue that this suggestion cannot be upheld, as passive clauses make perfectly good propositional arguments in bona fide NOC environments.

Even more tellingly, once rationale adjuncts are expressed as postcopular clauses in a separate sentence, passive does not impede NOC (6). In these inverted constructions, the infinitive is the subject and the precopular DP is the predicate. This implies that NOC in (4) is blocked not because passive per se forces predication but for some other reason. Likewise, it follows that semantic anomaly produced by OC is not sufficient to license NOC (otherwise, implicit agent control in (4) would have been possible).

A tentative proposal. Following Farkas 1988, we assume that the notion initiator (an intentional causer, broadly construed) delimits the range of potential controllers. Thematic agents, as well as extra-sentential controllers, are [+init]. By contrast, direct objects are [-init]. The OC-NOC competition in adjuncts is resolved as follows: NOC is allowed only if there is a mismatch between the [init] values of PRO and the matrix subject (the OC controller). In (3) PRO is [+init] and the subject is [-init], hence NOC is licensed. In (4) both are [-init], hence NOC is blocked (OC is forced, resulting in incoherence). As for (6), since there is no OC derivation for the postcopular infinitive (the goal can't be a controller, being an inverted predicate), NOC is unhindered.

Conclusion. This study reinforces the role of predication in understanding patterns of control in adjuncts and copular constructions. At the same time, it demonstrates that OC and NOC are fundamentally different processes, operating in different grammatical components, and yet may enter competition under highly restricted circumstances.

References

Within the generative tradition, predication has been the driving force behind several analyses of obligatory control (henceforth OC). Such theories are typically built upon the empirical effects of control into infinitival – and to a lesser extent, gerundive – complements. In this paper, I investigate control into nominal complements, and argue (i) that OC manifests in this environment and (ii) that the relevant data pose a non-trivial problem for syntactic predicative approaches to OC, such as Landau (2015). I suggest that the data are best accounted for with an analysis along the lines of Chierchia (1984), in which all control complements are ‘nominalised’, referential entities.

I focus this investigation of nominal complement control around the empirical divide between exhaustive control (EC) and partial control (PC). I observe first that EC does obtain into nominals, while PC does not:

(1) a. The Vandals\textsubscript{i} began \[ \text{PRO}_{ij}^{+} \text{ARB} \text{ the destruction of Rome } \] (EC)
   b. The Vandals\textsubscript{i} promised \[ \text{PRO}_{ij/\text{ARB} \text{ the destruction of Rome } \] (PC)

I then demonstrate that several empirical correlates of the EC/PC distinction obtain within the nominal domain. For example, the tense mismatch distinction manifests wholesale in nominal complements to control predicates:

(2) a. Yesterday, the Vandals\textsubscript{i} began the destruction of Rome (*\text{tomorrow}). (EC)
   b. Yesterday, the Vandals\textsubscript{i} promised the destruction of Rome (\text{tomorrow}). (PC)

Similarly, the overt embedded subjects correlation obtains in nominal complements. As demonstrated in (3), overt by-phrase subjects are prohibited in EC nominal complements, while those same subjects are licensed in PC nominal complements.

(3) a. The Vandals\textsubscript{i} began the destruction of Rome (*\text{by the Goths}). (EC)
   b. The Vandals\textsubscript{i} promised the destruction of Rome (\text{by the Goths}). (PC)

I show that these empirical facts of control apply uniformly to all nominal complement types (morphologically complex vs. simplex, argument-projecting vs. non-argument-projecting, etc.), so long as that nominal refers to an event.

These observations pose a problem for predicative approaches to control in which predication is represented syntactically. For such theories, The Vandals\textsubscript{i} began to destroy Rome instantiates a syntactic predication relation between a subject (in this case, the Vandals) and the property \( \lambda x. x\text{ destroys Rome} \).

(4) \[ \text{The Vandals}_i [ \text{VP}_i \text{v-began}_j [ \text{VP}_j [ \text{XP}_x \text{ to destroy Rome } ] ] ] \]

Such a relation is only possible given an appropriate analysis of the infinitival XP: either as (i) a naturally predicative lexical VP, or (ii) an extended clausal projection with movement creating a lambda abstraction.

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1 I adopt PRO here as a purely notational tool, and make no claims concerning the presence of a null pronoun within the control complement.
It is immediately evident, however, that the nominal complements at hand are not paradigmatic syntactic predicates. Aside from their participation in control constructions, they behave like typical argument NPs; they may saturate a predicate in copula structures (*the destruction of Rome was a great achievement*), and similarly participate in predicate inversion and consider-to-be constructions:

(5)  
   a. Their great achievement was **the destruction of Rome**.
   b. I consider **the destruction of Rome** (to be) a great achievement.
   c. I consider a great achievement *(to be) **the destruction of Rome**.

Furthermore, if they do predicate, they do so as predicative NPs: they require the help of a copula, and their argument can never be construed as the external argument of the underlying nominal event (e.g., *John invaded my privacy* vs. *(??)*John is an invasion of my privacy).

We may further demonstrate that such nominals do not possess the necessary predicative properties within the nominal itself. If the extension of *destruction of Rome* were the property $\lambda x. x \text{ destroys Rome}$, we should expect any non-minimal referential DP projected as a prenominal possessor to obligatorily saturate the open subject position. However, an appropriate discourse context may instead license an abstract possessor/beneficiary reading of this argument ((6a), contra Grimshaw (1990)). Crucially, EC is still enforced in such a context (6b).

(6)  
   a. Nero was advised to keeps his hands clean. As such, **Nero’s destruction of Rome** was carried out by the Vandals.
   b. The Vandals $\text{b} \text{egan } [\text{Nero’s} \, \text{PRO}_{\lambda j/j/\text{ARB} \text{destruction of Rome }].}$

In order to generalise across infinitival and nominal complements, I suggest an analysis extending Chierchia’s (1984) notion of verbal argument (VA) to include nominalisations. In this way, *to destroy Rome, destroying Rome* and *the destruction of Rome* all constitute VAs: individual projections (entities) which refer to the action of destroying Rome. The EC relation must then be built into the lexical semantics of the selecting predicate. I take Chierchia’s meaning-postulate analysis as a starting point:

(7)  
   begin’ (P) (x) $\rightarrow \Box_j P(x)$
   whenever x begins to bring about P, then in all contextually relevant situations, x does P.

Further, I argue that the lack of PC into nominal complements is expected if PC, unlike EC, is mediated by a syntactic relation, and that the observations considered in this paper are in line with the split semantic/syntactic approach proposed in Wurmbrand (2002).

I conclude by discussing our earlier observations concerning the tense mismatch correlation. The fact that the temporal orientation of PC predicates is preserved in nominal complements – despite the lack of any control – poses a serious problem for any analysis of PC in which control and tense are packaged together. Furthermore, any account of temporal orientation in nominal complements faces several challenges; these nominal complements behave as though they contain a syntactic temporal operator (with regards to tense-shift diagnostics) – a functional element generally reserved for the extended verbal projection.

**References:**  
(Im-)personal passives and implicit control into propositional and property-denoting CPs

Marcel Pitteroff & Florian Schäfer

1. Synopsis. We investigate obligatory control into complement clauses by the implicit external argument (IA) of passives (cf. 2a, b), comparing eight languages from three language families (Dutch, English, German, Icelandic, Norwegian, French, Hebrew, Russian). Pace Landau (2015), languages differ in whether or not they license Implicit Predicative Control (IPC; (2b)) (Predicative control corresponds to Landau’s 2000 et seq. exhaustive control). We show that this difference cannot be reduced to different types of IAs and their (in-)ability to enter a predication relation: in all languages above, the IA can be modified by a secondary predicate. Instead, there is a correlation with the status of impersonal passives: Only languages with impersonal passives allow IPC. We account for this by arguing that in languages without impersonal passives, the pronominal element present in implicit (logophoric) control structures is not an expletive, but a CP-placeholder, i.e. a pro-form that is merged in the internal argument position and is cataphorically linked to the infinitival CP (e.g. Ruys 2010). In passives, the pro-form moves to SpecTP, thus deriving a personal passive. Since via this pro-form, the embedded clause indirectly acts as the subject in SpecTP, and propositions but not properties are allowed to occur in this position (Rotoshi 2004), languages without impersonal passives lack IPC.

2. (Implicit) Predicative and Logophoric Control. Landau (2015) distinguishes two types of obligatory control: logophoric, and predicative control. The two types differ in terms of the matrix predicate (attitude vs. non-attitude verb; Pearson 2016), and the way the control relation is established: logophoric control involves binding of a variable at the edge of CP (thus CP denotes a proposition), whereas predicative control builds on a predication relation between the controller and the infinitival complement (thus CP denotes a property) (cf. Williams 1980, Chierchia 1984). Based on the assumption that implicit arguments cannot be predicated over (cf. the depictives in (1a, b)), Landau predicts that Implicit Predicative Control (IPC) is impossible across languages, whereas Implicit Logophoric Control (ILC) should be licit. This prediction is borne out in English (2a, b).

(1) a. John likes to eat *(the meat) raw.
   b. The room was left *(angry). (Chomsky 1986)
(2) a. It was decided/agreed/pref[erred \([CP_{<p}>\) to raise taxes again]. (ILC)
   b. *It was managed/tried/dared/stopped \([CP_{\leq<p>}\) to raise taxes again]. (IPC)

3. Two Types of Languages. We tested Landau’s prediction in eight languages by means of questionnaire studies. While ILC indeed turned out to be acceptable in all eight languages, we found that the ban against IPC only holds in a subset of these languages (English, French, Hebrew, Russian). In Dutch, German, Icelandic, and Norwegian, by contrast, IPC is licit, cf. (3).

(3) weil versucht/begonnen/ gewagt wurde [PRO die Steuern zu erhöhen]. (IPC, German)
   as tried begun/ dared was the taxes to raise (cf. 2b)

4. Implicit Arguments and Predication. Based on recent investigations of the nature of implicit arguments, one potential way of accounting for this cross-linguistic split is to assume that only in some but not all languages, the implicit agent of passives may be predicated over, e.g. because it is syntactically projected in SpecVP as PRO (Collins 2005), a covert φP (Landau 2010), or a covert DP (van Urk 2013). We show that such an explanation in terms of the syntactic status of the implicit argument fails: The results of our questionnaire studies show that the (un-)availability of IPC (2b vs. 3) does not correlate with the (un-)acceptability of depictives predicated over the implicit agent (1b).

E.g., in French, IPC is not acceptable, whereas depictive predication over the implicit agent is (4). Similarly, our English consultants accepted depictives in passives, contrary to the claim based on (1b) (see also Roep 1987, Safir 1987, Collins 2005, Müller 2008 for many counterexamples to (1b)).

(4) La lettre a sans doute été écr[ite] saoul. (French)
   the letter has without doubt been written drunk

In languages where examples such as (4) are indeed rated unacceptable (Icelandic, Russian, Hebrew), this has independent reasons: these languages require an adjectival depictive to agree with its subject in φ-features (and sometimes case). If the implicit argument is not syntactically projected (e.g. Bruening 2012a, Legate 2014, Alexiadou et al. 2015), the features on the depictive will go unvalued and the derivation crashes. Interestingly, non-agreeing PP-depictives are acceptable in passives in these languages (cf. (5)). Note that such PPs describe the state the agent was in during the event;
thereby, they are interpreted exactly like adjectival depictives as in (4), not like adverbials (see Rothstein 2004 for the claim that such a “state” reading distinguishes depictives from adverbials).

(5) Lagið var samið í drykkiu. (Icelandic)

song was composed in drunkenness

We thus conclude that the IA of passives is cross-linguistically accessible to secondary predication. Note that this is expected if we combine the semantics of depictives in Pyllkkänen (2008) with Bruening’s (2012a) theory of passives. According to Pyllkkänen, depictives are of type <e<s,t>> and combine via Predicate Modification with constituents of the same type. For Bruening, passive Voice is also of type <e<s,t>> and is therefore predicted to be compatible with agent-modifying depictives. But if implicit agents can be the target of a predication relation, why is IPC banned in some languages?

5. Impersonal Passives. We show that the acceptability of IPC correlates with the availability of strict impersonal passives as in (6): none of the languages without IPC allow for this type of passive.

(6)a. Er wordt gedanst. (Dutch)  
b. I går ble *(det) danset. (Norwegian)

there is danced (‘People danced.’) in yesterday was it danced

The lack of impersonal passives reduces either to an EPP-violation, or to a non-valuation of T’s φ-features. Languages with impersonal passives either lack the EPP and allow default-valuation of T (German), have a locative expletive checking the EPP and allow default-valuation of T (Dutch; Ruys 2010), or have an expletive with inherent φ-features (Norwegian; Holmberg 2001). To explain the contrast between (7a) and (7b), Bruening (2012) proposes that English ‘it’ is a dummy that c-selects for a CP. The difference in acceptability between (7b) and (7c), then, could be due to ‘it’ s-selecting for CP<φ,φ> – and such a CP is only present in ILC. Yet, since nothing rules out a dummy selecting for CP<φ,φ> – which would render IPC acceptable – such an account treats the correlation between IPC and impersonal passives as accidental. More importantly, since subject clauses in (7b) and (7c) show the same contrast, it is unlikely that the problem in (2b/7c) is related to properties of a dummy ‘it’.

(7)a. *It was danced.  
b. It was decided [cpφ<φ,φ> to solve the problem].  
c. *It was tried [cpφ<φ,φ> to solve the problem].  

6. Analysis. We argue that in languages without impersonal passives, ‘it’ in ILC-structures is not a dummy but a placeholder pro-form categorically linked to the embedded clause (it’... CP’) (while the pro-form is overt in English or French, it is covert in Russian and Hebrew; see Shlonsky 1990, Haider 2017). As such, it is base generated in an argument position, where it acts as a regular Case marked and theta-marked variable operator-bound by the CP (e.g. Ruys 2010; cf. Rosenbaum 1967, Bennis 1986, Vikner 1995, Müller 1995). We provide three arguments to support this claim: i) The pro-form moves in pseudo-passives (8), ii) it can bear lexical case (9) and iii) it can control into and be controlled in adjunct clauses involving obligatory control (10) (cf. Bennis 1986 for Dutch). Crucially, in German implicit control the pro-form is optional; but to establish control, it must be present (11).

(8) a. They counted [pp on it] [that ...].  
b. It was counted [pp on it] [that ...]

(9) I gěr var því, frestð [aþ hálshöggva fangana], (Icelandic; cf. Wood 2012)

yesterday was it.DAT postponed to execute the.prisoners

(10) It was decided [without PRO, being announced] [PROimpl.aff to raise taxes next year],

(11) weil ?(es) beschlossen wurde [ohne PRO, bekannt gemacht zu werden], [daß die Steuern ...],

as it decided was without known made to become that the taxes raise

ILC as in (7b) thus involves A-movement of the pro-form and qualifies as a personal passive (cf. 12).

(12) [TP It T [PassP Pass [VoiceP Voice [xP decided it] ... [cp to solve the problem]]]

IPC, by contrast, can never be construed in this way, and is therefore only licit in languages with impersonal passives. Here is why: With e.g. Heycock (1994, 2013), Rothstein (1995, 2001), Eide & Åfarli (1999) or Åfarli (2017), we assume that the kernel of a proposition is a predication relation, potentially established via T in EPP-languages. In this context, Rothstein (2004:55) argues that properties/predicates may not function as subjects. Since through a placeholder pro-form, the denotation of the CP in an EPP-language enters the semantic computation in SpecTP, and the CP denotes a property in predicative control, such a pro-form in IPC illegitimately leads to a property in subject position (see also (7b′) vs. (7c′)). Since in languages with impersonal passives, SpecTP is either not projected (e.g. German; Haider 1993; Wurmbrand 2006) or filled by a dummy expletive not categorically linked to a CP (e.g. Dutch, Norwegian), IPC is grammatical (cf. 3). ILC (7b, b′), by contrast, is well-formed in all languages, as the pro-form in SpecTP denotes a proposition. This
explanation is independently supported by the contrast in (13), which shows that if a non-attitude predicate in English can be combined with a propositional finite CP, the passive is well-formed.

(13)  

a. It was forgotten (*to solve the problem)/(that the problem had already been be solved)

b. (*to solve the problem)/(that the problem had already been be solved) was forgotten again
Heim and Kratzer in their influential 1998 textbook (pg 2-3) use the term ‘Frege’s Conjecture’ to refer to the idea that function-argument composition is the only semantic glue that combines one element of the syn-sem representation with another to create a complex meaningful form. ("And it is a natural conjecture that logical combination of parts into a whole is always a matter of saturating something unsaturated.” translation Heim and Kratzer, from Gottlob Frege 1923. ”Logische Untersuchungen. Dritter Teil:Gedankengefüge”). But the principle of compositionality as thus stated is reduced to vacuity once higher order functions are admitted without constraint into the system of formal semantic representation (cf. also Higginbotham 2007), where any object of arbitrary high type can be the saturator in the function-argument composition. The sheer power of the unfettered lambda calculus (in many ways a blessing) makes it unsuitable for deriving constraints on natural language. Rather, semanticists must turn to the constraints and generalizations discovered by syntacticians to impose limits on kinds of semantic primitives and combinations that are explanatory for complex concept building in language. In one important strand of research Paul Pietroski for example (Pietroski 2005, 2006, 2007) has explored a much more austere combinatory glue for semantic composition, namely the conjunction of monadic predicates. Once of the consequences of this move is that as the modes of combination become more genuinely austere, the underlying ontology of sorts and the kinds of relations that are stored as monadic predicates gets somewhat richer. In particular, Pietroski is forced to assume a rich set of Thematic Role predicates as individual elements of the lexicon that connect individuals denoted by DPs to event individuals constructed by verbal items. This, I argue, is problematic in the light of the failure so far to give a precise characterization of what these relations should be, and also because it poses severe learnability problems.

In this paper, I will go back to the original intuition behind the idea of predication in an attempt to rescue it from implementational triviality and restore it to its central position. I will show that if suitably constrained to apply only to atomic individuals in the ontology, it is a good candidate for being one of the principal forms of semantic glue by which concepts are integrated in the syn-sem computation. Specifically, I will argue that event decomposition (required independently from generalizations over verbal concepts) combined with predication, can completely eliminate the need for explicit thematic role relations. I will argue that this considerably simplifies the overall system and moreover argues for the centrality of this most basic kind of cognitively plausible predication relation as being a genuine primitive of the symbolic system, one that is crucial for the integration of the independent functional sequences corresponding to the nominal and verbal extended projections.
Syntax of CE in French copular sentences

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Introduction  French copular sentences are constructed with the copula être ‘be’ which may sometimes be preceded by a pronominal element ce. In some cases, ce+être alternates with être alone (1); while in other cases, only ce+être is possible 0.

(1)  a. Jean (c’)est mon meilleur ami.  b. Jean (c’)est un beau mec
    Jean (CE).is my best friend     Jean (CE).is a handsome guy
    ‘Jean is my best friend.’       ‘Jean is a handsome guy.’

(2)  a. Mon meilleur ami *(c’)est Jean.  b. Ce que j’aime chez toi *(c’)est ton regard.
    my best   friend (CE).is Jean      CE that I like about you (CE).is your gaze
    ‘My best friend is Jean.’        ‘What I like about you is your gaze.’

Following Roy & Shlonsky (to appear), we first argue against distributional explanations for ce based on Higgins’ (1973) well-known classification of copular sentences into equatives / identificational / specificational / predicational sentences; and in particular Amary-Coudreau (2014, 2012, 2010) who claims that ce is obligatory in the first three types of copular sentences and excluded in predicational ones. We take the existence of clearly predicational sentences in which ce+être occurs to the exclusion of être alone (3) as evidence that the predicational vs. non-predicational dichotomy lacks adequate explanatory power:

(3)  a. Les légumes *(c’)est vert.  b. La musique *(c’)est beau.
    the vegetables (CE).is green       the musique (CE).is beautiful
    ‘Vegetables are green.’        ‘Musique is beautiful.’

Moreover, in cases where ce is optional, e.g. (1), we note that the presence of ce does not trigger a change of type in Higgins’ notional typology; and clearly predicative interpretations are possible.  

Claim  We argue then that the distribution of ce is structurally conditioned. Specifically, we argue that ce is inserted whenever an agreement relationship fails to be established between the ‘thematic’ contentful subject and an element from the PredP bearing active, interpretable phi-features. We assume that all copular sentences derive from a uniform underlying asymmetric ‘small clause’ structure (den Dikken 2006, Roy 2013 a.o.) and that small clauses are headed by a functional head Pred (Bowers 1993, Svenonius 1994). We also assume that the functional domain of the clause involves two distinct subject positions, a lower position Subj1 and a higher Subj2, each with their own interpretive properties (cf., Cardinaletti 1997, 2004, Manzini & Savoia 2005, Poletto 2000, Shlonsky 2000, a.o.). The sources of agreement failure in copular sentences may be diverse, we consider here two cases. In one case, syntactic constraints (Relativized Minimality and criterial freezing) together with focalization (optional in the case of canonical copular sentences (Moro 1997) or obligatory as in the case of inverse ones (Moro 1997)) lead to the inability to move the subject to Subj1 resulting in failure of agreement checking. In the other case, agreement failure results, not from focalization, but from the absence of accessible phi-features on the subject, possibly as the result of a grammatical shift at the interface. What the two have in common is that they force the movement of the subject into the higher of the two subject positions, yielding particular interpretive properties (i.e., presuppositional / generic but not existential).

Canonical copular sentences  We assume that canonical copular sentences start out from an asymmetrical PredP small clause to which être is merged (in TP) (4). In a canonically-ordered copular sentence (without ce), the small clause subject is then raised at least as high as Spec/Subj1(5). Subj1, the ‘lower’ subject position, has unvalued phi-features. In French, we argue, phi-features must be valued by movement (EPP requirement) rather than feature matching (Agree), at is the case in (5).

(4)  \[  [TP est [\text{PredP} \text{Jean [PRED [mon meilleur ami]]}]]  \]
(5)  \[  \text{Jean SUBJ1}  [TP est [\text{PredP} \text{Jean [PRED [mon meilleur ami]]}]]  \]

Ce is not required in canonical sentences but may be present (cf., (1)). The difference between the variant with and without ce is not truth-conditional but informational: the post-copular element in a
ce+être sentence is systematically focalized (Amary-Coudreau 2012). The question is then why ce is obligatory in a focal configuration? Focus is rigidly associated with the post-copular position of ce sentences, hence is not a freely-assigned feature but must be encoded in the structure. Extending Rizzi’s (2015) analysis of Italian inverse copular sentences and Rizzi & Shlonsky’s (to appear) analysis of Hebrew ones, we argue that in this configuration the complement of Pred is moved to a low focus position in the clause (6). Spec/Foc, however, is a criterial position (in the sense of Rizzi 2006). A criterial position is criterially-frozen for further movement—cf.(7a vs b). Accordingly, the closest candidate for agreement with SUBJ1, i.e. the agreement goal, cannot move to Spec/SUBJ1.

(6) SUBJ1 [TP est [FocP [DP mon meilleur ami] FOC [PredP [DP Jean] [PRED [DP mon meilleur ami]]]]]

(7) a. *Que penses-tu que Jean c'est___? b. Que penses-tu que Jean est___?

We argue that it is precisely the failure of agreement in this configuration, combined with the requirement to check the phi-features on SUBJ1 that triggers external merge of the pronominal expletive ce in Spec/Subj1. The merge of ce has one consequence, however, namely it blocks the movement of the nominal in Spec/Pred to a position higher than ce. This problem can be bypassed by assuming, we argue, smuggling (Collins 2005a, 2005b) of this nominal by PredP-raising. As a final step, the subject is moved out of the specifier position in the raised PredP and comes to occupy Spec/Subj2. (8)

(8) [DP Jean] SUBJ2 [PredP [DP Jean] [PRED [DP mon meilleur ami]]] ... ce SUBJ1 [TP est [FocP [DP mon meilleur ami] Foc [PredP [DP Jean] [PRED [DP mon meilleur ami]]]]]

Interpretationally, SUBJ2 is presuppositional (Cardinaletti 1997, 2004, a.o.) and, as expected, only permits strong presuppositional subjects eschewing non-presuppositional ones (cf., 9a vs b).

(9) a. Une femme est la directrice du labo. b. *Une femme c’est la directrice du labo.

'A woman is the director of+the lab' 'A woman CE.is the director of+the lab'

In reverse copular sentences In reverse copular sentences ce is obligatory (Amary-Coudreau 2010). The analysis proposed above for canonical ce sentences is straightforwardly extended to inverse ones, although in the latter case it is the subject of the PredP small clause that is moved to Spec/focus. We assume these sentences start out from the same asymmetrical predP as in (4) above. However, movement of the predicate out of the small clause violates Relativized Minimality (den Dikken 2006, Mikkelsen 2005, Heycock 2012, a.o.). It has independently been observed that the post-copular element in an inverse copular sentence is focal (Heycock op.cit), this is also true for French (Amary-Coudreau 2012). Thus, the subject of the PredP moves to Spec/Foc. As earlier, low focalization in French has the consequence of barring movement to Spec/Subj1. External merge of ce and PredP smuggling generate the right structure:

(10) [DP mon meilleur ami] SUBJ2 [PredP [DP Jean] [PRED [DP mon meilleur ami]]] ... ce SUBJ1 [TP est [FocP [DP Jean] Foc [PredP [DP Jean] [PRED [DP mon meilleur ami]]]]]

Predicational ce sentences with adjectival predicates In the last case we consider (cf., (3)) the complement of Pred is adjectival and ce is obligatory. These structures present two salient properties: absence of agreement between the subject and the adjective and necessary generic reading (e.g. (3b) La musique.FEM c'est beau.MASC ‘Music is beautiful’ (no agreement); vs. La musique.FEM est belle.FEM ‘This music is beautiful’ (agreement)). Following an insight from Danon’s (2012) treatment of sentences involving the pronoun ce in Hebrew (which manifest a similar blocking of agreement), and developing Roy & Shlonsky (to appear), we argue that subjects of adjectival ce-sentences are phi-opaque and thus cannot satisfy Subj1’s agreement features. As in other cases where an agree operation cannot be successful, ce is introduced to satisfy the phi-features of Subj1; this leads to the movement of the subject DP to the high subject position Subj2. As expected, these subjects can only have a strong interpretation, here that of a generic.
Predication in tough constructions
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Introduction: One of the contexts of predication that has resisted a straightforward analysis is tough-movement (TM). I propose that in TM, the null operator (NO) moves to the matrix predicate and forms a new predicate that assigns a theta role to the subject. This analysis is shown to unify verbal and non-verbal predicates that exhibit TM, tough predicates with pretty and too/enough predicates and accounts for why certain other predicates do not exhibit TM.

Background and proposal: TM is challenging because of the following alternation.
1a) It was tough to please John. 1b) John was tough to please ___.
(1a) shows that tough does not assign a subject theta role but allows the embedded object to appear as the matrix subject. TM also licenses parasitic gaps (PG) (eg. Hicks 2009). Two approaches to TM are in (2).
2a) John, was tough [<John,> to please <John,>]. 2b) John was tough [Op, to please <Op,>].
(2a) shows a movement analysis (eg. Brody 1993) where John is A’-moved to the edge of the clause and then A-moved to Spec, TP. (2b) shows a base-generation analysis of John (eg. Chomsky 1977) where an NO A’-moves to the clause-edge. The following shows the possible entries for tough in these analyses.

3) λpTOUGH(p) Movement Analysis (eg. Hicks 2009)
4a) λpTOUGH(p) 4b) λPλxTOUGH(P(x)) Base-generation Analysis (eg. Keine & Poole 2017)
5a) λpTOUGH(p) 5b) λPλxTOUGH(x, P) Base-generation Analysis (eg. Lasnik & Fiengo 1974)

In the movement analysis [(2a)], tough takes a propositional complement [(3)] which means that in (1a) and (1b), John receives a theta role from the embedded verb. In the base-generation analysis [(2b)], there are two possibilities for how John gets a theta role. One possibility is in (4), where John always receives a theta role from the embedded verb, albeit in different orders of composition, shown in (4a) and (4b).
Another possibility is (5). Here tough is ambiguous, alternating between one where John receives a theta role from the embedded verb [(5a)] and one where John receives a theta role from tough itself [(5b)]. My proposal is as such: tough only has the denotation in (3) but NO movement to the matrix predicate creates a new predicate that assigns John a theta role. This analysis has a precedent in Mulder & den Dikken (1992) but the empirical coverage and details of the proposal here is novel.
6a) John was [Op, tough [<Op,> to please <Op,>]]
In (6a), the NO lands at the edge of the adjective. This movement, following Nissenbaum (2002), creates a new predicate which assigns John a theta role [(6b)]. In this analysis of TM, improper movement, smuggling or multiple lexical entries of tough is not required. Such complex predicates are also seen in clauses like News about the election are what I need to avoid, albeit with overt operator movement.

Subject Theta roles in TM: First, I rule out (3) and (4), following Lasnik & Fiengo (1974: 543).
7a) *It is intentionally easy to please John. 7b) John is intentionally easy to please.
In (7a), the expletive easy construction does not allow intentionally but the TM variant in (7b) does. While not all tough predicates with TM allow this, L&F argues that the ones that do indicate that in TM, there is a subject theta role. Some of these theta roles are compatible with intentionality. In contrast, raising predicates, which never assign a subject theta role, never allow this. If this is correct, then (3) and (4) where no subject theta role exists can be ruled out. In contrast, (6a) provides a straightforward account for these facts. (7a) is bad because easy never assigns a subject theta role but the complex predicate easy-to-please does and it is this predicate that is being modified by intentionally in (7b).

Control and Raising: Although (5) is compatible with (7), (5) does not explain why the argument structure in (1a) is a necessary condition for the structure in (1b). In other words, only predicates which
allow an expletive subject and take an infinitival complement exhibit TM. Others, like control predicates, do not have homonyms with a (1b) structure. The proposed analysis in (6a) can explain this.

**Ruling out control predicates:** There is no predicate which on one meaning is a control predicate and on another, has the structure in (1b), eg. (9a). While (5) doesn’t explain this, (6a) does. Note that control predicates (eg. *eager*) assign subject theta roles given that they cannot have expletive subjects. If the NO moved to the edge of the matrix adjective to form a complex predicate as shown in (9b), two predicates, *eager* and *eager_to PLEASE* have to assign a subject theta role. This is a violation of the Theta Criterion.

9a)  *John is eager [to see __].

9b)  John is [Op, eager [<Op>, to see <Op>].

Thus, (6a) explains why TM predicates which are homophonous with control predicates do not exist.

**A potential problem with raising predicates:** If the account of why (9a) is bad is correct, the proposed account wrongly predicts that (11a) with the representation in (11b) is good. Note that (11a) has a raising predicate which does not assign a subject theta role. Since there is no such theta role, (11b) should be fine.

11a)  *Tom is likely that John saw __.

11b)  Tom is [Op, likely <Op> that John saw <Op>].

However, (11) can be ruled out independently as the gap in a TM construction cannot be in a finite clause.

12a)  The project was easy [to remember [to complete __]].

12b)  *The project was easy [to remember [that John completed __]].

Only (12a) is grammatical due to a finiteness restriction (L&F). Note, however, that expletive forms of (12a) and (12b) are good. Thus (11a) is ruled out independently and so not a problem for (6a) after all.

**Verbal predicates with TM:** The analysis in (6a), and the discussion of control/ raising predicates indicates that a predicate that exhibits TM is necessarily one that allows an expletive subject and has an infinitival complement clause. Thus, verbal predicates that have such an argument structure are predicted to allow TM. This is correct. (13) shows *take*, although *need, require* and *cost* behave the same way.

13a)  It took (me) 3 hours [to shovel the snow].

13b)  The snow took (me) 3 hours [to shovel __].

14a)  John took us 3 hours [to convince Sally [to date __]].

14b)  John took us 3 hours [to groom __] [before introducing pg to Sally].

Long distance

Parasitic gap

Notably, such predicates can have a long-distance gap [14a)] and license parasitic gaps [(14b)], thus these are TM predicates on par with (1), and the analysis in (6a) applies to these as well.

**Pretty and too/enough predicates:** The following look quite similar to (1b) on the surface.

15a)  Mary is pretty [to look at __].

15b)  The rock is too heavy [to carry __].

Such predicates also have an infinitival clause with an object gap like the TM in (1b). In addition, the gaps in the embedded clauses of these predicates have a similar finite clause restriction seen in (12) in the TM constructions (Ross 1967). However, these differ from tough predicates by assigning a subject theta role seen in the fact that they disallow expletive subjects. I propose the following structures for these.

16a)  Mary is pretty [Op, to look at <Op>]  16b)  The rock is too heavy [Op, to carry <Op>].

In (16), the embedded clause is an adjunct of type <e, t> that modifies the matrix predicate through predicate intersection. Note that the NO in these cases cannot move to the adjective-edge as this would create the predicates *pretty_to look at* and *too_heavy_to carry*. Given that these and the matrix predicates both assign subject theta roles, this violates the Theta Criterion. In the proposed account of TM, these predicates and tough predicates have an NO that is licensed similarly and moves to form complex predicates. The main difference between tough and these predicates lies in the distance to which the NO moves, which is constrained by whether the predicate assigns a subject theta role or not.
The syntax of content
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Overview. I argue that complementizers are not semantically transparent, but serve an important role in mediating predicational relations in semantic composition. I follow a theoretical thread built by Kratzer (2006, 2016); Hacquard (2006); Moulton (2009, 2015), but provide the first overt empirical linguistic evidence in support for it thanks to data from Bulgarian.

Data. Bulgarian has two morphologically distinct declarative complementizers, deto and če, that both serve to introduce finite embedded clauses. They are almost never in complementary distribution: če but not deto can introduce embedded clauses under attitude predicates, as in (1). Če but not deto can introduce noun modifying clauses, (3). Deto but not če is the complementizer used in relative clauses, (4). The only case where both če and deto are allowed is in the complements of emotive factive predicates, such as regret, be upset, be happy, be angry, etc., as shown in (2).

(1) Ivan misli/ kaza [če/*deto Maria e tuk].
   Ivan thinks/ said ČE/DETO Maria is here
   ‘Ivan thinks/said that Maria is here.’
(2) ...sūžaljava [če/deto...].
   ...regrets ČE/DETO
   ‘...regrets that...’
(3) idejata, če/*deto Ivan e tuk
   idea.DEF ČE/DETO Ivan is here
   ‘the idea that Ivan is here’
(4) idejata, kojato/deto/*če Ivan zapisa v beležnika
   idea.DEF which/DETO/ČE Ivan wrote in notebook.DEF
   ‘the idea that Ivan wrote down in the notebook’

Theoretical background. I follow a theory starting with Kratzer (2006) that, while some complementizers are trivial (semantically empty), others can encode domain projection functions (Moulton, 2009). One such function projects content. According to Hacquard (2006), mental states have content, which is the set of beliefs, desires, etc. that attitude predicates refer to. Moulton (2009) extends this to the nominal domain, to what he calls content nouns - nouns that denote individuals with propositional content, like idea, fact, belief. Content nouns are identified by the property that their content can be overtly described by a predication, (5-b) and can be modified by a CP, (5-a), while in the case of non-content nouns, such as apple, denote individuals that have a counterpart in the world of evaluation. Content cannot be predicated of them in any way, (6).

(5) a. the idea that John is a spy
   b. The idea is that John is a spy
   Moulton proposes the following content complementizer (called ‘logophoric’ in Kratzer, 2006) that combines with content nouns in cases like (5-a):
   (7) fCONT = \{ w : w is compatible with x\}
   Moulton (2009): 27, (17)
   (8) [ COMP ] = \lambda p.\lambda x_e.fCONT(x_e) = p
   Moulton (2009): 27, (18)

Analysis. I. Complementizers. According to Moulton, English that in noun modifying clauses like (5-a), is a complementizer specialized for content. This means that there must be at least two homophonous that-complementizers with different syntactic and semantic makeup. I propose that Bulgarian provides the first overt morphological evidence in support of this theory, če being a content complementizer. Deto, on the other hand, is the spelled out trivial complementizer. This explains why it is allowed in relative clauses. Because it does not host the content function as in (7), deto cannot be used in noun modifying clauses, (3).

II. Relative clauses. The proposal informs a puzzle on the nature of noun modifying and factive clauses that has instigated a debate in the literature beginning with Kiparsky and Kiparsky (1970), later developed in Kayne (2008), who propose that noun modifying clauses, (3), are relative clauses, and that emotive factive verbs contain a silent noun ‘fact’ that is being relativized by what only
looks like a complement clause. This means that all of (2), (3), and (4), are the same construction.

I present three arguments against this view. First, the data from Bulgarian in (3) shows empirically that the ‘relative’ complementizer deto, cf. (4), cannot be used in the noun modifying case, (3). Second, in order for a noun modifying clause to be a relative clause, it needs a gap, which has to be stipulated, there is no overt evidence for it. Third, intuitively there is a very tangible difference in meaning between the idea that John is here, (3), and the idea that John wrote down in his notebook, (4). This difference is lost in the Kaynean unification theory. Under my analysis, it is preserved: relative clauses cannot tap into content, even when they are relativizing content nouns. Noun modifying clauses, on the other hand, serve exclusively to identify content. This also accounts for the fact that all non-content nouns can be relativized (the apple that I ate) but they do not take content clauses, cf. (6), while the Kaynean view overgenerates this to be possible.

III. Emotive factives. What remains to be explained is the double nature of emotive factives, (2), which can combine with either če or deto - another fact that would be problematic for the Kaynean and Kiparskean views.

According to Kratzer (2006) and Hacquard (2006), be angry and other emotive predicates do not have content and cannot be uniquely identified with the embedded proposition. Predicates like believe, think are all about propositional content, which goes in line with the Bulgarian data in (1) under the analysis that think combines with the complementizer that invokes content, če.

The data in (2), however, suggest that a more fine-grained picture of emotives is needed. I propose that these predicates have two readings, one in which the embedded clause serves as a justification for the emotion, and one in which the embedded clause explains the nature of the emotion. The nature reading is essentially a content reading, making emotive predicates behave similarly to propositional attitude predicates and allowing them to take če, while the justification reading takes deto, similar to the use of because in English:

(9) John is happy because Mary is here.

I propose that deto in emotives has a similar function to because, thus preserving the difference between relative clauses and emotive complements, contrary to Kiparsky and Kiparsky (1970).

Conclusion and cross-linguistic extensions. This paper shows empirical evidence in support of the idea that predication is represented at the morphosyntactic level of natural language. While the data here is from Bulgarian, the analysis can be extended to other languages with two declarative complementizers with similar behavior, such as Greek, Basque, Swedish, Icelandic (de Cuba, 2017), thus forming a crosslinguistically robust pattern.

Mood or C? Kratzer (2016) suggests that domain projection functions are hosted by Mood, not C. In the case of Bulgarian, there is overt evidence for C, as shown above. It remains open for further research whether in other languages content can be represented by Mood.

References