

# Predicate-Raising Languages

Julianne Doner, University of Toronto

julie.doner@mail.utoronto.ca

## 1 Introduction

### Main Claims

- There is a distinction between languages where the EPP is checked by a predicate, and languages where it is checked by an argument.
- Verbal and non-verbal predicates form a natural class that is formally encoded in the syntax in such a way that the EPP can probe for it, independent of syntactic category (i.e., they share a single feature).
- The EPP results in the raising of either a predicate or an argument; from its new high position, the element that raises enters into a high predication relationship with an element lower in the structure.

The Extended Projection Principle (EPP) was first proposed by Chomsky (1981, 1982) to account for why a subject is obligatory in initial position in English clauses. For this paper, I define the EPP as the obligatory move of some element into the inflectional domain.

Throughout the years, a variety of EPP types have been identified cross-linguistically:

- Massam and Smallwood (1997) argue that the EPP in Niuean is checked by VPs.
- Alexiadou and Anagnostopoulou (1998) argue that the EPP can vary in the size ( $X^\circ$  or XP) of the element that checks it by considering Greek and Romance.
- Davies and Dubinsky (2001) argue for a contrast between D- and V-prominent languages, which have an EPP checked by nominals and verbs, respectively.
- Richards and Biberauer (2005) propose that the EPP pied-pipes the entire  $vP$  in several Germanic languages.
- Johns (2007) argues for a  $\sqrt{\text{-EPP}}$  in Inuktitut.

Combining these types of EPP results in the typology in Table 1.

	<b>Min Pied-Piping</b>	<b>Max Pied-Piping</b>
<b>D-on-V</b>	Greek, Italian (A&A 1998)	German, Icelandic (R&B 2005)
<b>DP</b>	English	Dutch, Afrikaans (R&B 2005)
<b>Predicate</b>	Celtic (except Breton) (Biberauer 2010)	Niuean (M&S 1997)

Table 1: **The EPP Typology**

I use the following criteria to determine what element checks the EPP in a given language:

- The operation moving the element in question occurs obligatorily in every instance of the head that bears the EPP feature, including in clauses of every type (e.g., non-finite clauses).
- The operation in question can be shown to be independent of other processes, such as case-checking or raising to topic, at least some of the time.
- The element in question is in complementary distribution with an element which is known to check the EPP in the language, such as an expletive.

## Overview

2. Languages where the EPP is checked by a predicate
3. Languages where the EPP is checked by an argument
4. Analysis
  - Since there is this contrast between argument- and predicate-EPP languages, we can infer that, whatever the role of the EPP, moving either the argument or the predicate can satisfy it.
  - The only thing that predicates and arguments have in common is the predication relation.
  - I therefore propose that the EPP functions to establish a (second) predication relation between the predicate and the argument.
5. Potential challenges to the high predication analysis
6. Conclusion

## A terminological note:

- I will refer to the process that triggers the movement of either the argument or the predicate as *the EPP*.
- I will refer to the relationship that is established between the predicate and the argument upon movement (i.e., between the moved element and the one it c-commands) as *high predication*.

## 2 Languages where predicates raise

A verb-sensitive EPP has been proposed for several languages, including Irish, Inuktitut, and Niuean, in which the raised constituent does not necessarily contain any nominal features. I argue that, in these languages, the EPP probes for the predicate, based on two observations:

- **Claim 1:** The raised constituent does not necessarily include nominal features.
- **Claim 2a:** Non-verbal predicates belong to the class of constituents that raise.
- **Claim 2b:** Functional verbal elements, such as auxiliaries, light verbs, and the copula, do not belong to the class of constituents that raise.

I will end this section by showing that these patterns do not apply to French and Finnish, two languages which have verb-raising but also have an EPP checked by a DP.

### 2.1 Claim 1: The raised constituent does not necessarily include nominal features

In this section, I show that the fronted constituent in predicate-EPP languages does not contain nominal features, such as:

- A phrasal DP, as in Dutch and Afrikaans (Richards and Biberauer 2005).
- Agreement, as in Greek (Alexiadou and Anagnostopoulou 1998), or German and Icelandic (Richards and Biberauer 2005).

Phrasal predicate-raising occurs in Niuean and checks the EPP (Massam and Smallwood 1997), although the verbs do not agree with the subject, nor is there always a nominal in the fronted constituent (1-b). When there is a nominal (1-a), it is a bare NP. Thus, there is never an overt [D] feature in the fronted constituent.

- (1) a. [<sub>vP</sub> **Takafaga ika**] tūmau nī a ia.  
           hunt fish always EMP ABS he  
           ‘He is always fishing.’
- b. **Takafaga** tūmau nī e ia e tau ika.  
           hunt always EMP ERG he ABS PL fish  
           ‘He is always fishing.’
- [Niuean; Massam 2001: 157]

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

- (2) **Leanann** an t-ainmní an briathar i nGaeilge  
 follow.PRES the subject the verb in Irish  
 ‘The subject follows the verb in Irish.’ [Irish; H&C 1997]

Finally, Johns (2007) proposes a  $\sqrt{\text{EPP}}$  for Inuktitut, which is manifested by the verb root appearing initially in the verbal complex, as in (3). Although Inuktitut has rich agreement, the nominal features of the suffix are not part of the constituent that raises, and do not participate in EPP-checking.

- (3) **Niri-** gaju- lau- nngit- tunga.  
 eat- always- DIST.PST- NEG- DEC.1SG  
 ‘I wasn’t always eating.’ [Inuktitut (North Baffin); C&P 2010: 2172]

Since the constituents that raise in Irish, Inuktitut, and Niuean do not necessarily contain nominal features, the EPP cannot be probing for a nominal feature in these languages.

## 2.2 Claim 2a: Non-verbal predicates belong to the class of constituents that raise

Since non-verbal predicates can raise to check the EPP (Claim 2a) and functional verbs cannot (Claim 2b), we can conclude that the EPP is not sensitive to a feature that is specific to verbal elements.

In the Niuean example in (4) and the Irish example in (5), a nominal predicate fronts. Note that Carnie argues that the *is* particle in Irish is in C, while Massam argues that the Niuean particle *ko* is not a verb, but is instead probably a preposition.

- (4) [Ko e fale ke lima aki ] e fale i ko.  
 PRED ABS house SBJ five INST ABS house LOC there  
 ‘That house over there is the fifth house.’ [Niuean; Massam 2005]
- (5) Is [fear mór] Seán  
 C man big John  
 ‘John is a big man.’ [Irish; Carnie 1995: 203]

## 2.3 Claim 2b: Functional verbs do not belong to the class of constituents that raise

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.

- (6) a. Saali **ilisaiji-** u- juq  
 Sally teacher- be- INTR.PART.3S  
 ‘Sally is a teacher.’ [Inuktitut (Mittimatalingmiutit); Johns 2007: 548]
- b. **pi-** qa- nngit- tuq  
 EXPL- have- NEG- INTR.PART.3S  
 ‘He has nothing.’ [Inuktitut (South Baffin); Johns 2007: 559]

Thus, we see that all three of these languages consistently exhibit the raising of a predicate, but do not target either verbal or nominal elements for raising.

## 2.4 When verb-raising does not check the EPP

In French and Finnish, although there is verb-raising (a), the insertion of an expletive is obligatory (b), indicating a requirement for a DP subject. Davies and Dubinsky (2001) also demonstrate that French exhibits the properties of a D-prominent language, parallel to English.

- (7) a. Jean **embrasse** souvent Marie.  
 John kiss.3SG.PRES often Mary  
 ‘John often kisses Mary.’ [French; Pollock 1989: 367]
- b. **Il** est arrivé trois filles.  
 EXPL is arrived three girls  
 ‘There have arrived three girls.’ [French; Burzio 1986: 85]
- (8) a. Jussi (?ehkä) **osta-a** (ehkä) sen kirja-n.  
 Jussi buy-3SG perhaps 3SG.GEN book-GEN  
 ‘Jussi will perhaps buy that book.’ [Finnish; Holmberg et al. 1993: 194]
- b. **Sitä** meni nyt hullusti.  
 EXPL go.PST.3SG now crazily  
 ‘Now things went wrong.’ [Finnish; Holmberg 2005: 541]

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.

The French and Finnish requirement for verb raising is truly a requirement for verbs, rather than predicates. In both these languages, non-verbal predicates do not raise, but functional verbal elements like light verbs, auxiliaries, and modals do.

- (9) a. Nyt **on** kyllä mennyt hullusti.  
 now be.3SG indeed go.PST.PTPL.SG crazily  
 ‘Things have indeed gone wrong.’ [Finnish]

- b. Jussi **ei** ehkä osta sitä kirjaa.  
 Jussi NEG.3SG perhaps buy 3SG.PAR book.PAR  
 ‘Jussi won’t maybe buy that book.’ [Finnish]
- c. Nyt **alkoi** ehkä mennä huonosti.  
 now begin.PST.3SG perhaps be.NFIN wrongly  
 ‘Maybe things began to go wrong now.’ [Finnish]
- (10) a. Il **a** souvent mangé des pommes.  
 he has often eaten of.the apples  
 ‘He has often eaten apples.’
- b. Les États-Unis **lanceront** toujours des attaques contre les  
 the.PL US throw.FUT.3PL always of.the attack.PL against the.PL  
 pays soupçonnés de soutenir le terrorisme.  
 country.PL suspect.PAST.PTPL.PL of support.NFIN the.M terrorism  
 ‘The United States will always start attacks against the countries suspected of  
 supporting terrorism.’ [French; J. Carrier, p.c.]

In contrast, non-verbal predicates do not raise.

- (11) a. Jean est un professeur.  
 John is.3SG a.M teacher  
 ‘John is a teacher.’
- b. \*Est un professeur Jean.  
 is.3SG a.M teacher John
- c. ?Un professeur est Jean.  
 a.M teacher is.3SG John [French; J. Carrier, p.c.]
- (12) a. Jean est drôle.  
 John is.3SG funny  
 ‘John is funny.’
- b. \*Est drôle Jean.  
 is.3SG funny John
- c. \*Drôle est Jean.  
 funny is.3SG John [French; J. Carrier, p.c.]
- (13) a. Olen onnellinen.  
 be.1SG happy.NOM  
 ‘I am happy.’
- b. Olen lääkäri.  
 be.1SG doctor.NOM  
 ‘I am a/the doctor.’ [Finnish; R. Craioveanu, p.c.]

### 3 Languages where arguments raise

In the second class of languages, the EPP is checked by one of the following:

- the subject of the clause (either the external argument or a derived subject, as in passives).
- rich agreement inflection on the verb that indexes the subject (Alexiadou and Anagnostopoulou 1998).
- other arguments in the clause.

The first two categories are well known from English and *pro*-drop languages, respectively, shown below in (14)-(15).

- (14) a. Mary ate soup for lunch.  
b. Soup was eaten for lunch.

- (15) (Nós) acert-amos a bola.  
we hit-1PL.PST the ball  
'We hit the ball.' [European Portuguese; Bilgin 2017: 110]

The last category is more revealing, however. In some languages, non-nominals are able to check the EPP, so long as they are arguments. For example, Holmberg (2005) shows that referential adverbs are able to check the EPP in Finnish and locative PPs are able to check the EPP in locative inversion structures in English (Bruno 2016).

#### 3.1 Finnish adverbials and predicates

There are several words which are classified as adverbs in many languages, but which are case-marked in Finnish. However, even adverbials which do not bear case morphology are able to check the EPP, such as those in (16).

- (16) a. *nyt* 'now'  
b. *kerran* 'once'  
c. *nykyään* 'nowadays'  
d. *eilen* 'yesterday'

In a clause without an external argument, the fronting of referential adverbs such as *nyt* 'now' is obligatory, as in (17). The sentence may not remain verb-initial (cf. Holmberg 2005).

- (17) a. Nyt meni hullusti.  
now go.PST.3SG crazily  
b. ?Meni hullusti nyt.  
go.PST.3SG crazily now  
c. ?Meni nyt hullusti.  
go.PST.3SG now crazily  
'Things went wrong now.' [Finnish]

Yet, if another eligible EPP-checker fronts, such as *täällä* 'here' or *onnettomuus* 'accident,' referential adverbs such as *nyt* 'now' or *eilen* 'yesterday' are not required to front.

- (18) Täällä sata-a nyt lunta.  
this.SPRT rain-3SG now snow.PAR  
'It's snowing here now.' [Finnish]

- (19) a. Eilen tapahtui onnettomuus.  
yesterday happen.PST.3SG accident  
b. Onnettomuus tapahtui eilen.  
accident happen.PST.3SG yesterday  
'There was an accident yesterday.' [Finnish]

Fronted referential adverbs must also immediately precede the verb, indicating that they are in the specifier of the TP, and not in some higher position.

- (20) a. (Ehkä) nyt (\*ehkä) sata-a lunta.  
maybe now maybe rain-3SG snow.PAR  
'Perhaps it's snowing now.' [Finnish]  
b. (Ehkä) eilen (\*ehkä) tapahtui onnettomuus.  
maybe yesterday maybe happen.PST.3SG accident  
'Perhaps there was an accident yesterday.' [Finnish]

On the other hand, DPs in Finnish are unable to check the EPP when they are predicative, in stark contrast to the predicate-EPP languages discussed above. In (21)-(22) below, for example, we see a contrast between the behaviour of *onnettomuus* 'accident' when it is complement to the verb *olla* 'to be' versus complement to the verb *tapahtua* 'to happen.'

- (21) a. Oli onnettomuus.  
be.PST.3SG accident  
b. \*Onnettomuus oli.  
accident be.PST.3SG  
'There was an accident.' [Finnish]

- (22) a. Tapahtui onnettomuus.  
 happen.PST.3SG accident  
 b. Onnettomuus tapahtui.  
 accident happen.PST.3SG  
 ‘There was an accident.’ [Finnish]

Likewise, the fronting of objects of weather predicates, such as *sataa* ‘to precipitate’ are sometimes unable to front.

- (23) a. Sata-a lunta.  
 rain-3SG snow.PAR  
 ‘It’s snowing.’  
 b. Lunta sata-a.  
 snow.PAR rain-3SG  
 ‘It’s snowing (surprised).’  
 c. ?Kuulin että lunta sata-a.  
 hear.PST.1SG that snow.PAR rain-3SG  
 ‘I heard that it’s snowing.’ [Finnish]

These constructions show a clear contrast between predicative DPs and argument DPs—predicates are unable to check the EPP; only arguments are able to.

### 3.2 Locative inversion

The EPP can be checked by locative PPs in English light locative inversion constructions such as (24), where the PP targets spec,TP (Culicover and Levine 2001, Bruno 2016).<sup>1</sup>

- (24) Into the room walks Robin.

Bruno (2016) argues for three different types of locative preposing, exemplified in (25). Light inversion (25-c) is the only instance of true inversion and is the one that is relevant here.

- (25) a. *Locative Topicalization*  
 Into the room, Robin walked.  
 b. *Heavy Locative Inversion*  
 Into the room, walked (carefully), a very large caterpillar.  
 c. *Light Locative Inversion*  
 Into the room walked Robin. [Bruno 2016: 1-2]

<sup>1</sup>According to Bruno (2016), Culicover and Levine argue for the distinction between heavy and light inversion, proposing that the locative PP targets the specifier of TP in the latter. Bruno builds on their proposal, by arguing that the locative PP moves again to spec,CP afterwards, on the basis of incompatibility of light inversion with either wh-movement or focus-fronting.



- (30) a. Into her house danced Mary.  
 b. \*In her house danced Mary. [Bruno 2016: 9]
- (31) a. On the porch were sitting three men.  
 b. \*On the porch were reading three men. [Bruno 2016: 9]

In (30-a), *into her house* is a goal argument of *dance*, but in (30-b), *in her house* is not an argument. Likewise, in (31-a), *sit* takes a location argument, in this case, *on the porch*, while the verb *read* does not take a location argument, and the same PP is instead an adjunct. In both examples, only the argument is able to invert; inverting the adjunct results in ungrammaticality.

### 3.3 Non-argumental non-predicative EPP checkers?

There are a few elements that can check the EPP which are sometimes argued to be neither predicates nor arguments:

- The preverbal nominal in specificational copular clauses, as in (32).

(32) The murderer is John.

I am assuming, following Heycock (2012) and Romero (2005), that what raises in specificational copular clauses in English is crucially not a predicate. Heycock (2012) argues that they are intensional objects.

- Expletives.

I assume, following Richards and Biberauer (2005), that expletives are actually merged in *spec,vP*, and are subsequently moved to *spec,TP*. Thus, the EPP does not need to explain the existence of expletives, but rather only their position. Under such a view, presumably the expletives are merged under some sort of selectional requirement within the *vP*, and are therefore an argument in some sense. They certainly participate in A-movement (e.g., they undergo subject-to-subject raising).

Both of these elements are normally considered to be nominal.

### 3.4 Interim summary

- There is a distinction between predicate-sensitive EPP languages (such as Inuktitut, Irish, and Niuean) and argument-sensitive EPP languages (such as English, French, Finnish, Greek, and several other Germanic languages).
- In predicate-EPP languages, a predicate must raise. Functional verbal elements like light verbs do not raise. Non-verbal predicates do.

- In argument-EPP languages, an argument must raise. Predicative DPs do not raise, but non-nominal arguments do.
- **There is thus a dichotomy here based not on syntactic category, but based on the distinction between *predicates* and *arguments*.**

What does this mean for the syntax?

- Assuming that the EPP is a syntactic operation, this means that **predicates and arguments must each operate as natural classes independent of syntactic category *in the syntax*.**
- Furthermore, since there is this contrast between argument- and predicate-EPP languages, we can infer that, whatever the role of the EPP, moving either the argument or the predicate can satisfy it. In other words, although arguments and predicates are in some sense opposites, in this case, they are somehow equivalent.
- The only thing that predicates and arguments have in common is the predication relation.
- This calls to mind the idea that the EPP is a requirement for clausal bifurcation (Massam 2005). That is, that the EPP requires *either* the predicate or an argument to raise.

## 4 High predication

In this section, I explore the hypothesis that the EPP is a requirement for combining an argument with a predicate. Whereas the nominal EPP languages do this by moving the argument to the highest position in the inflectional domain, predicate EPP languages do the reverse.

This contrast aligns with the order of operations between EPP-checking and tense-marking. The predicate must combine with two different things in order to make a well-formed sentence:

- tense<sup>2</sup>
- an argument.

However, the two types of languages perform the same operations in a different order, as shown in (33).

- (33) a. argument-EPP languages: [ [ PRED + TENSE ] + ARGUMENT ]  
 b. predicate-EPP languages: [ [ PRED + ARGUMENT ] + TENSE ]

The exact way that these different elements can combine differs from language to language. Below, I will illustrate the six main patterns (cf. the typology from Table 1).

Since there can be multiple arguments in the clause, I will henceforth refer to the one which participates in high predication as the *anchor*.

---

<sup>2</sup>What I mean by *tense* is really the [ $\pm$ COINCIDENCE] feature of Ritter and Wiltschko (2014), which is only sometimes realized as tense. However, I refer to it here as tense for simplicity.

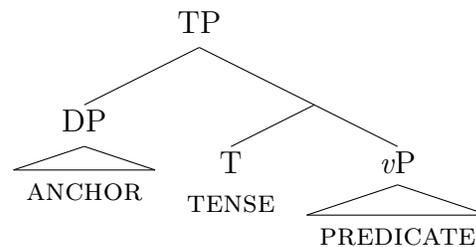
### 4.1 Argument-EPP languages

In the D-prominent languages, the predicate first combines with tense via merge, and then combines with the anchor through move or through agreement. The anchor then c-commands both T and the predicate.

- In the English tree in (34), the predicate combines with tense by being its complement. After the predicate combines with tense, it then combines with an anchor, in the specifier of T.

(34) *English*

a.

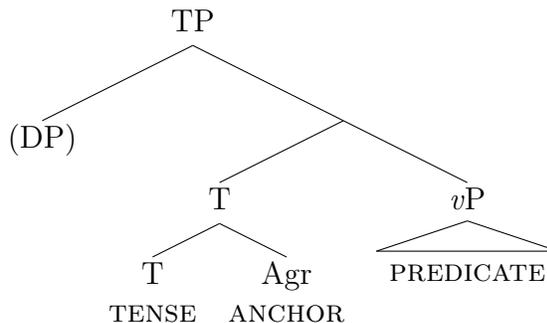


b. Mary was eating an apple.

- In (35), the structure of a language where the EPP is checked by rich inflection on the verb (D-on-V EPP languages), such as Greek, is shown. In these languages, the predicate combines with the tense marker through merge, and then it combines with the anchor by agreeing with the subject. This order of operations is reflected morphologically, since the agreement suffix follows the tense suffix.

(35) *Greek*

a.

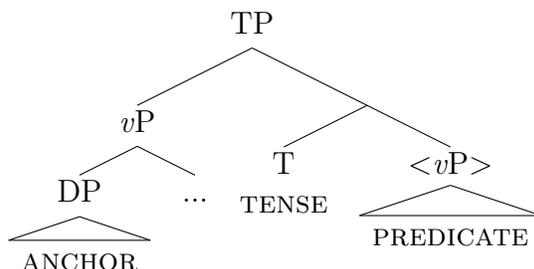


b. O Petros pandreftike tin Ilektra.  
 DEF.M.NOM Peter marry.PST.3SG DEF.F.ACC Ilektra  
 ‘Peter married Ilektra.’ [Greek; Alexiadou and Anagnostopoulou 1998: 492]

- Richards and Biberauer (2005) argue that the EPP is checked in several Germanic languages by pied-piping the entire  $vP$  to spec,TP in order to check the EPP with the nominal features of the subject through either rich inflection on  $v$  or the subject in spec, $vP$ . In these languages, as in (36), the predicate is merged first with tense. Then the entire predicate, including the anchor, is pied-piped to the specifier of T. I assume that the nominal features that check the EPP percolate up to  $vP$  and in this way c-commands tense.

(36) *Afrikaans*

a.



- b. ... dat [ $vP$  [ $DP$  'n skip ] gister gesink] het.  
 that a ship yesterday sunk has  
 ‘...that a ship sank yesterday.’ [Afrikaans; Richards and Biberauer 2005: 142]

## 4.2 Predicate-EPP languages

In V-prominent languages, on the other hand, the predicate moves to the position of prominence, instead of an argument. In this position, the predicate c-commands the anchor to create the high predication relationship. Tense is merged after the EPP is checked and c-commands both the predicate and the anchor. In all these languages, T is somewhat impoverished, with the following properties:

- Non-finite clauses do not exist.<sup>3</sup>
- T, if it exists, is merged with C and precedes the verb. This can be either as an independent word or particle, or as a prefix.
- They have defective tense morphology.<sup>4</sup>
- Since nominal structure tends to mirror clausal structure, they also tend to have a defective D, which is realized by the lack of a definiteness contrast.

The V-prominent languages have the following structures:

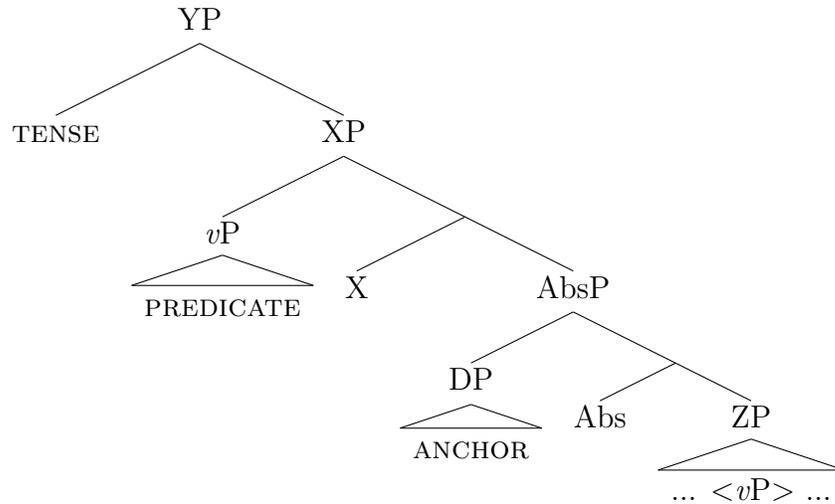
<sup>3</sup>For my purposes here, a non-finite clause is embedded and is clausal (not nominal), but does not have the ability to assign subject case and the verb does not agree with the subject (cf. Cowper 2016).

<sup>4</sup>For example, tense is optional in Niuean and does not exist in all in some dialects of Inuktitut.

- In Niuean, as shown in in (37), the predicate raises to the specifier of XP, where it c-commands the anchor in its case position. Afterwards, tense is merged.

(37) *Niuean*

a.



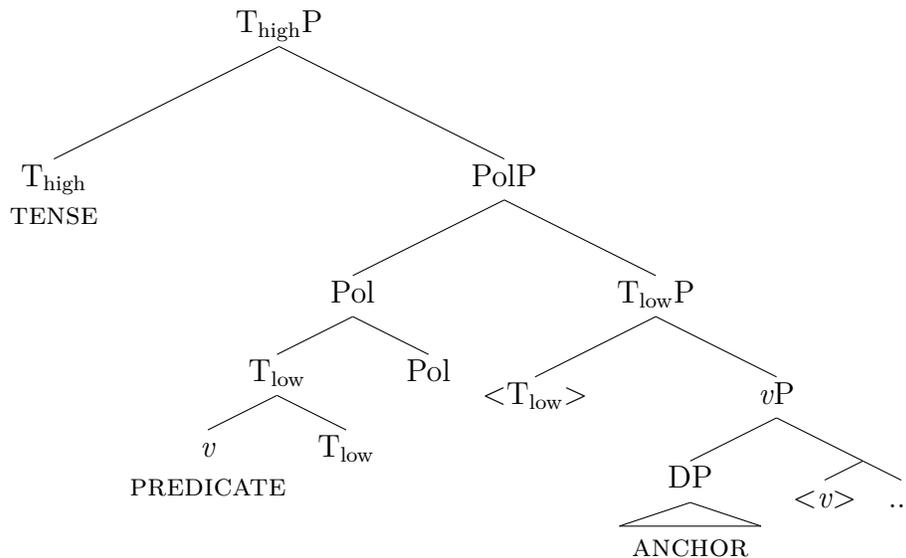
b. Ne [inu kofe kono] [a Mele].  
 PST drink coffee bitter ABS Mele  
 ‘Mary drank bitter coffee.’

[Niuean; Massam 2001: 158]

- Irish has two tense heads (McCloskey, Bennett, and Elfner 2014, as cited in Ostrove 2015). The head of the predicate raises through the lower T to Pol°; from this position, it c-commands the anchor. Afterwards, the higher tense is merged, where it c-commands both the predicate and the anchor. It is the higher tense head which shares the properties of impoverished T with Inuktitut and Niuean.

(38) *Irish*

a.

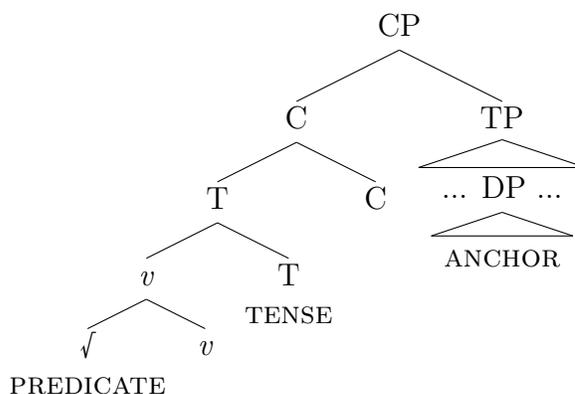


- b. ní-or ól...  
 NEG-PST drink.PST  
 ‘...didn’t drink...’

[Irish; Ostrove 2015]

- Finally, in Inuktitut, I am assuming that the verbal complex is a complex head created by roll-up into C (Johns 2007), as shown in (39). The roll-up is triggered by the EPP feature in C, which attracts the  $\sqrt{\quad}$ ; the complex head is formed by means of head-to-head movement. The complex head, containing the predicate, c-commands the anchor in its base position. Tense is merged later than both the predicate and the anchor, and c-commands them both in its surface position as part of the complex head.<sup>5</sup> Note that although semantic tense is somewhat low, many of the grammatical functions of T° are performed by C, such as Case licensing and agreement (Compton 2017).

- (39) a. *Inuktitut*



- b. takulauqsimanngippinga(a)?  
 taku- lauq- sima- nngit- pinnga(a)?  
 see- DIST.PST- PERF- NEG- Q.2SG.1SG  
 ‘Haven’t you seen me before?’ [Inuktitut (Baffin Island); Compton 2017: 1]

This hypothesis predicts that even predicate EPP languages require some sort of argument in the structure, although it doesn’t necessarily move, but can stay in its merge position.

Weather predicates are one construction which typically lacks an argument cross-linguistically. Interestingly, weather predicates do appear to contain an argument in these languages:

- In Niuean there appears to always be a case-marked nominal in weather predicates, as shown in square brackets in (40).

- (40) a. Makalili [ e aho nei ].  
 cold ABS day this  
 ‘It’s cold today.’

<sup>5</sup>The absolutive argument takes wide scope in Inuktitut (Bittner 1987), and is commonly assumed to occupy spec,CP. I assume that it moves to spec,CP to check case and to agree, after the high predication relation is established. Note that this movement does not satisfy my criteria to be an EPP-triggered movement, since it is not independent of case and agreement.

- b. Kua tō [ e uha ].  
 PERF fall ABS rain  
 ‘It’s raining.’

[Niuean; Diane Massam, p.c.]

- In Irish, either an expletive *é* or an existential marker *ann* is required (Kenji Oda, p.c.), as shown in (41).

- (41) a. má tharla é fuar amuigh an oíche seo  
 if happen.PST it.ACC cold out this-night  
 ‘if it happened to be cold out tonight’ [Irish; McCloskey 2014: 346]
- b. ó tharla trathnóna breá ann  
 since happen.PST evening fine EXIST  
 ‘since it happened to be a fine evening.’ [Irish; McCloskey 2014: 348]

- In Inuktitut, it is more problematic. Weather predicates appear in structures similar to noun incorporation structures, which will be discussed in more detail in the next section. However, note that there is an argument in initial position, although it is the root that presumably checks the  $\sqrt{\text{-EPP}}$ .

- (42) a. Sila- lu- guma- juk.  
 outside- bad- want- DEC.3SG  
 ‘It looks like it’s going to rain.’  
 [Inuktitut (Labrador); Johns 1999, as cited in Compton and Pittman 2010: 2175]
- b. Anuri- juq.  
 wind- PART.3SG  
 ‘It’s windy.’ or ‘The wind blows.’  
 [Inuktitut (Baffin); Alorut 2017, Spalding 1998]

At the beginning of this section, I indicated that, under this hypothesis, two properties of language appear to be linked:

1. Whether the EPP is checked by moving a predicate to prominence, or an argument.
2. The order in which the predicate combines with the argument and with tense.

This correlation can be explained as follows. The predicate is normally closest to T, and so, if all else is equal, is the most local potential EPP-checker and should be targeted for movement. However, in argument-EPP languages, the predicate is no longer a predicate once it has combined with tense; instead, it becomes referential, as indicated by Broschart (1997). Since in these languages the predicate must combine with tense before the EPP probes, the predicate will never be able to check the EPP.

## 5 Potential challenges to high predication

### 5.1 When the only argument is an incorporated nominal

There is an existential construction in Niuean where there is not necessarily any argument other than an incorporated object, as shown in (43).

- (43) a. na ai fai aoga fakatufono.  
 PST NEG be school government  
 ‘There were no government schools.’ [Niuean; Massam 2009: 175]
- b. fa mahani ke fai aho mitaki mo e fai aho kelea  
 SBJ exist time good and exist time bad  
 ‘usually there are good times and bad times’ [Niuean; Massam, p.c.]

However, the incorporated nominal<sup>6</sup> has different properties in the existential *fai* construction than in regular pseudo-noun-incorporation constructions of Niuean (Massam 2009):

1. It is obligatorily incorporated.
2. It does not have the semantics of noun incorporation.
3. It can be modified by an (extraposed?) relative clause.
4. It can be referred to later in the discourse.

I think point 4 is telling—this may crucially allow it to function as an anchor.

Likewise, Johns (2007) shows that nominal roots that have been incorporated are also able to be referred to later in the discourse in Inuktitut, as shown in (44).

- (44) a. Suulut timmisartu<sub>i</sub>- lior- poq. Suluusa- qar- poq<sub>i</sub>  
 Søren plane- make- INTR.INDIC.3S wing- have- INTR.INDIC.3S  
 aquute- qar- llu- ni<sub>i</sub>- lu.  
 rudder- have- INF- 3REFL.S- and  
 ‘Søren made an airplane<sub>i</sub>. It<sub>i</sub> has wings and a rudder.’  
 [Inuktitut(Kalaallisut); Sadock 1980: 311, as cited in Johns 2007: 539]
- b. Johnny uvirniru<sub>i</sub>- liu- laur- mat. Nulia- nga angirra- rami  
 Johnny shirt- make- PAST- INTR.CAUS.3S wife- POSS3S home- cause.4S  
 taku- llu- ni- uk<sub>i</sub>.  
 see- CONJ- 4S -3S  
 ‘Johnny made a shirt<sub>i</sub>. And his wife came home and she saw it<sub>i</sub>.’  
 [Inuktitut (Kalaallisut); Johns 2007: 539]

Since, in these cases, the incorporated nominal is referential, I propose that it is doing double-duty. It is both the predicate and the anchor.

<sup>6</sup>We know it’s incorporated because the DP is not case-marked, and because the post-predicate particles follow it (Massam, p.c.).

## 5.2 Why movement?

One of the problems with this approach is that the predicate and the anchor already combine once, in the *vP*. Why do they have to do it again?

- I think this may be an ordering issue.
- The predicate is not available for high predication until all of its arguments are saturated.
- The anchor is not available for high predication until it has a determiner (that's when it becomes 'referential').
- For example, in English, when the external argument merges in the specifier of *vP*, it doesn't count as high predication because the predicate's arguments haven't all been saturated until after it has been merged.
- In Niuean, on the other hand, when the external argument merges in the *vP*, it doesn't count as high predication because the external argument hasn't received case yet. It must raise to a case position (specifier of AbsP or ErgP, depending on the transitivity of the clause) before it is available for high predication.

Chierchia (1998) suggests that N-to-D movement of proper names is triggered by a need to type shift from predicate to argument. If the nominal domain mirrors the clausal domain, then we would expect that V-to-T movement (which I argue is an EPP-driven movement in some languages) should have an analogous purpose. Perhaps this movement, along with other EPP-driven movements, occurs in order to type shift from extensional to intensional (i.e., to add an 's' to the semantic type of the constituent), by locating either the predicate or the argument in time and/or space.

## 6 Conclusion

**Recap:**

- The EPP can be checked by a variety of elements cross-linguistically.
- These can be sorted into two main natural classes: predicates and arguments.
- These two classes must operate as natural classes independent of syntactic category in the syntax.
- Presumably, then, whatever the role of the EPP, it can be satisfied by either a predicate or an argument.

- Since the only thing predicates or arguments have in common are the predication relation, I posited that the role of the EPP is to satisfy a *high predication* relation, relating the predicate to an anchor argument.
- Predicate-EPP languages also pattern together by having a high, impoverished T°.
- Incorporated nominals are able to act as both predicate and anchor when they are referential.

In my EPP research, I have entertained two main hypotheses as to the underlying purpose of the EPP:

- That it is a requirement for anchoring (see my poster tomorrow).
- That it is a requirement for asymmetry between subject and the predicate.

This hypothesis is an attempt to connect both of these ideas.

This analysis is also similar in spirit to both Alexiadou and Anagnostopoulou (1998) and Davies and Dubinsky (2001), who propose a contrast between two classes of languages due to the structural order of the Agr and T heads. As with their proposals, the distinction between these two classes of languages has to do with the ordering of heads and operations in the clausal spine.

**Glossing Abbreviations.** 1,2,3,4=first, second, third, fourth (obviative) person; ABS=absolutive case; ACC=accusative case; CAUS=causative mood; CONJ=conjunction; DEC=declarative mood; DEF=definite article; DIST.PST=distant past; EMP=emphatic; ERG=ergative case; EXIST=existential; EXPL=expletive; F=feminine; FUT=future tense; GEN=genitive case; INDIC=indicative mood; INST=instrumental; INTR=intransitive; LOC=locative; M=male; NEG=negation; NFIN=non-finite; NOM=nominative case; PAR=partitive case; PART=participial mood; PERF=perfect aspect; PL=plural; POSS=possessive; PRED=predicative marker; PRES=present tense; PST=past tense; PST.PTPL=past participle; REFL=reflexive s=subject agreement; SBJ=subjunctive mood; SG=singular; SPRE=superessive case; Q=interrogative marker.

**Acknowledgements.** I would like to thank the members of my committee (Diane Massam, M. Cristina Cuervo, and Susana Béjar) for their comments and guidance, as well as Richard Compton, Julien Carrier, Alana Johns, and Kenji Oda for some helpful discussion about the data in Inuktitut and Irish. I would also like to thank my language consultants, Kaisa Partanen for Finnish and Julien Carrier for French. I also used some Finnish data collected by Radu Craioveanu for the Copular Agreement research group, led by Susana Béjar and Arsalan Kahnemuyipour. I would also like to thank Radu Craioveanu and Tomohiro Yokoyama for L<sup>A</sup>T<sub>E</sub>X formatting advice. All errors are, of course, my own. This research was supported

by a SSHRC doctoral award and an OGS. Travel funds were provided by a UTGSU travel grant, GLOW, and a SSHRC Insight Grant awarded to Diane Massam.

## References

- Alexiadou, Artemis, and Elena Anagnostopoulou. 1998. Parametrizing AGR: Word order, V-movement and EPP-checking. *Natural Language and Linguistic Theory* 16:491–539.
- Alorut, Raigelee. 2017. Introduction to Nunavut Inuktitut language and culture. Class Notes, University of Toronto.
- Biberauer, Theresa. 2010. Semi null-subject languages, expletives, expletive *pro* reconsidered. In *Parametric variation: Null subjects in Minimalist Theory*, ed. Theresa Biberauer, Anders Holmberg, Ian Roberts, and Michelle Sheehan, 153–199. Cambridge University Press.
- Bilgin, Çağrı. 2017. Synchro-diachronic approach to null subjects: An account of null subject language diversity and associated diachronic change. Master’s thesis, University of Toronto.
- Bittner, Maria. 1987. On the semantics of the Greenlandic antipassive and related constructions. *International Journal of American linguistics* 53:194–231.
- Broschart, Jürgen. 1997. Why Tongan does it differently: Categorical distinctions in a language without nouns and verbs. *Linguistic Typology* 1:123–165.
- Bruno, Chris. 2016. Three kinds of locative preposing. *Toronto Working Papers in Linguistics* 36.
- Burzio, Luigi. 1986. *Italian syntax*. Dordrecht: D. Reidel Publishing Company.
- Carnie, Andrew. 1995. Non-verbal predication and head-movement. Doctoral Dissertation, MIT.
- Chierchia, Gennaro. 1998. Reference to kinds across languages. *Natural Language Semantics* 6:339–405.
- Chomsky, Noam. 1981. *Lectures on Government and Binding*. Dordrecht: Foris Publications.
- Chomsky, Noam. 1982. *Some concepts and consequences of the theory of Government and Binding*. Cambridge, MA: MIT Press.
- Compton, Richard. 2017. Left periphery  $\phi$ -agreement and A-movement in Inuktitut. Canadian Linguistics Association.
- Compton, Richard, and Christine Pittman. 2010. Word formation by phase in Inuit. *Lingua* 120:2167–2192.
- Cowper, Elizabeth. 2016. Finiteness and pseudofiniteness. In *Finiteness matters: On finiteness-related phenomena in natural languages*, ed. Kristin Eide, 47–78. Amsterdam: John Benjamins.
- Culicover, Peter, and Robert Levine. 2001. Stylistic inversion in English. *Natural Language and Linguistic Theory* 19:283–310.

- Davies, William D., and Stanley Dubinsky. 2001. Functional architecture and the distribution of subject properties. In *Objects and other subjects: Grammatical functions, functional categories, configurationality*, ed. William D. Davies and Stanley Dubinsky, 247–279. Netherlands: Kluwer Academic Publishers.
- Harley, Heidi, and Andrew Carnie. 1997. PRO, the EPP and nominative case: evidence from Irish infinitivals. *University of Pennsylvania Working Papers in Linguistics* 4:71–86.
- Heycock, Caroline. 2012. Specification, equation, and agreement in copular sentences. *Canadian Journal of Linguistics* 57:209–240.
- Holmberg, Anders. 2005. Is there a little *pro*? evidence from Finnish. *Linguistic Inquiry* 36:533–564.
- Holmberg, Anders, Urpo Nikanne, Irmeli Oraviita, Hannu Reime, and Trond Trosterud. 1993. The structure of INFL and the finite clause in Finnish. In *Case and other functional categories in Finnish syntax*, ed. Anders Holmberg and Urpo Nikanne, 177–206. Berlin: Mouton de Gruyter.
- Johns, Alana. 2007. Restricting noun incorporation: Root movement. *Natural Language and Linguistic Theory* 25:535–576.
- Massam, Diane. 2001. Pseudo noun incorporation in Niuean. *Natural Language and Linguistic Theory* 19:153–197.
- Massam, Diane. 2005. Lexical categories, lack of inflection, and predicate fronting in Niuean. In *Verb first: on the syntax of verb-initial languages*, ed. Andrew Carnie, Heidi Harley, and Sheila Ann Dooley, volume 73 of *Linguistik Aktuell/Linguistics Today*, 227–242. Amsterdam: John Benjamins.
- Massam, Diane. 2009. Existential incorporation constructions. *Lingua* 119:166–184.
- Massam, Diane, and Carolyn Smallwood. 1997. Essential features of predication in English and Niuean. In *Proceedings of NELS 27*, ed. Kiyomi Kusumoto, 263–272. Amherst: Graduate Linguistics Student Union, University of Massachusetts.
- McCloskey, James. 2014. Irish existentials in context. *Syntax* 17:343–384.
- McCloskey, James, Ryan Bennett, and Emily Elfner. 2014. Prosody, focus, and ellipsis in Irish. Talk at UCSC for the LRC Workshop on Syntax and Information Structure.
- Ostrove, Jason. 2015. Allomorphy and the Irish verbal complex.
- Pollock, Jean-Yves. 1989. Verb movement, Universal Grammar, and the structure of IP. *Linguistic Inquiry* 20:365–424.
- Richards, Marc, and Theresa Biberauer. 2005. Explaining *expl*. In *The function of function words and functional categories*, ed. Marcel den Dikken and Christina Tortora, 115–154. Amsterdam: John Benjamins.
- Ritter, Elizabeth, and Martina Wiltschko. 2014. The composition of INFL: An exploration of *tense*, *tenseless* languages, and *tenseless* constructions. *Natural Language and Linguistic Theory* 32:1331–1386.

Romero, Maribel. 2005. Concealed questions and specificational subjects. *Linguistics and Philosophy* 28:687–737.

Spalding, Alex. 1998. *Inuktitut: A multi-dialectal outline dictionary*. Nunavut Arctic College.